YAZAKI

TECHNICAL DATA

• 6th Edition •

MASCI

ISO 9000 QMS03196/800
TIS 18001 OHS07012/210
OHSAS 18001 OHSAS07009/130

ISO 14001 TH009912
ISO 14001 TH013591

TIS 11-2553
TIS 85-2548
TIS 293-2541
TIS 2202-2547

TIS 64-2517
TIS 118-2522
TIS 2143-2546
TIS 386-2531
TIS 2341-2564

THAI-YAZAKI ELECTRIC WIRE COMPANY LIMITED

YAZAKI

THAI-YAZAKI ELECTRIC WIRE CO., LTD.

Technical Data

For
Electric Wires
and Cables

Publication : 6th Edition JUNE 2024

This catalog provides a comprehensive descriptions of the main products of Thai-Yazaki Electric Wire Co., Ltd.

These products are manufactured in conformity to the Thai Industrial Standard (TIS), Thai-Yazaki Standard, and IEC 60502 Standard.

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Technical Data and General Information

A

A

Wire Gauges

Gauge				Diameter		Sectional Area			Weight	
B.W.G.	A.W.G.	S.W.G.	mm.G	Mil	mm.	Cir.Mil	in^2	mm^2	lb/1,000 ft	kg/km
5/0	-	710	-	500	12.700	250,000	0.1964	126.7	756.9	1,126
-	-	-	12	472.4	12.000	223,162	0.1753	113.1	675.6	1,005
-	-	6/0	-	464	11.786	215,296	0.1691	109.1	651.7	969.9
-	4/0	-	-	460	11.684	211,600	0.1662	107.2	640.5	953.0
4/0	-	-	-	454	11.532	206,100	0.1619	104.4	624.0	928.1
-	-	5/0	-	432	10.973	186,624	0.1466	94.56	565.0	840.6
3/0	-	-	-	425	10.795	180,600	0.1419	91.52	546.9	813.6
-	3/0	-	-	409.6	10.404	167,772	0.1318	85.03	508.0	755.9
-	-	4/0	-	400	10.160	160,000	0.1257	81.07	484.5	720.7
-	-	-	10	393.7	10.000	155,000	0.1217	78.54	468.0	698.2
2/0	-	-	-	380	9.652	144,400	0.1134	73.17	437.1	650.5
-	-	3/0	-	372	9.440	138,384	0.1087	70.12	418.9	623.4
-	2/0	-	-	364.8	9.266	133,079	0.1045	67.42	402.7	599.4
-	-	-	9	354.3	9.000	125,528	0.09859	63.62	380.0	565.6
-	-	2/0	-	348	8.839	121,104	0.09512	61.36	366.6	545.5
0	-	-	-	340	8.636	115,600	0.09079	58.58	349.9	520.8
-	0	-	-	324.9	8.250	105,560	0.08291	53.49	319.5	475.5
-	-	0	-	324	8.230	104,976	0.08245	53.19	317.8	472.8
-	-	-	8	315	8.000	99,225	0.07793	50.27	300.3	446.9
1	-	1	-	300	7.629	90,000	0.07069	45.60	272.4	405.4
-	1	-	-	289.3	7.348	83,694	0.06573	42.41	253.3	377.0
2	-	-	-	284	7.214	80,660	0.06335	40.87	244.2	363.3
-	-	2	-	276	7.010	76,176	0.05983	39.60	230.6	343.2
-	-	-	7.0	275.6	7.000	75,955	0.05966	38.48	229.9	342.1
3	-	-	-	259	6.579	67,080	0.05269	33.99	203.1	302.2
-	2	-	-	257.6	6.544	66,358	0.05212	33.63	200.9	299.0
-	-	-	6.5	255.9	6.500	65,485	0.05143	22.18	189.2	295.0
-	-	3	-	252	6.401	63,504	0.04988	32.18	192.2	286.1
4	-	-	-	238	6.045	56,640	0.04449	28.70	171.5	255.1
-	-	-	6.0	236.2	6.000	55,790	0.04382	28.27	168.9	251.1
-	-	4	-	232	5.893	53,824	0.04227	27.27	162.9	242.4
-	3	-	-	229.4	5.827	52,624	0.04133	26.66	159.3	237.0
5	-	-	-	220	5.588	48,400	0.03801	24.52	146.5	218.0
-	-	-	5.5	216.5	5.500	46,872	0.03681	23.72	141.9	210.9
-	-	5	-	212	5.385	44,944	0.03530	22.77	136.0	202.4
-	4	-	-	204.3	5.189	41,738	0.03278	21.15	126.3	188.0
6	-	-	-	203	5.156	41,210	0.03237	20.88	124.8	185.6
-	-	-	5.0	196.9	5.000	38,770	0.03045	19.63	117.4	174.5
-	-	6	-	192	4.877	36,864	0.02895	18.68	111.6	166.3
-	5	-	-	181.9	4.621	33,088	0.02599	16.77	100.2	149.1
7	-	-	-	180	4.572	32,400	0.02545	16.42	98.08	146.0
-	-	-	4.5	177.2	4.500	31,400	0.02466	15.90	95.04	141.4
-	-	7	-	176	4.470	30,976	0.02433	15.70	93.77	139.6
8	-	-	-	165	4.191	27,220	0.02138	13.80	82.40	122.7
-	6	-	-	162	4.115	26,244	0.02061	13.30	79.43	118.2

Wire Gauges

Gauge				Diameter		Sectional Area			Weight	
B.W.G.	A.W.G.	S.W.G.	mm.G	Mil	mm.	Cir.Mil	in^2	mm^2	lb/1,000 ft	kg/km
-	-	8	-	160	4.064	25,600	0.02011	12.97	77.50	115.30
-	-	-	4.0	157.5	4.000	24,806	0.01948	12.57	75.08	111.80
9	-	-	-	148	3.759	21,900	0.01720	11.10	66.29	98.68
-	7	-	-	144.3	3.665	20,822	0.01635	10.55	63.01	93.79
-	-	9	-	144	3.658	20,736	0.01629	10.52	62.78	93.52
-	-	-	3.5	137.8	3.500	18,989	0.01491	9.621	57.46	85.53
10	-	-	-	134	3.404	17,960	0.01410	9.098	54.34	80.88
-	8	-	-	128.5	3.264	16,512	0.01297	8.368	49.99	74.39
-	-	10	-	128	3.251	16,384	0.01287	8.302	49.60	73.81
-	-	-	3.2	126	3.200	15,876	0.01247	8.042	48.06	71.49
11	-	-	-	120	3.048	14,400	0.01131	7.297	43.59	64.87
-	-	11	-	116	2.946	13,456	0.01057	6.818	40.74	60.61
-	9	-	-	114.4	2.906	13,087	0.01028	6.632	39.62	58.96
-	-	-	2.9	114.2	2.900	13,042	0.01024	6.605	39.47	58.72
12	-	-	-	109	2.769	11,880	0.009331	6.020	35.96	53.52
-	-	12	-	104	2.642	10,816	0.008495	5.481	32.74	48.73
-	-	-	2.6	102.4	2.600	10,486	0.008246	5.309	31.78	47.29
-	10	-	-	101.9	2.588	10,384	0.008156	5.262	31.43	46.78
13	-	-	-	95	2.413	9,025	0.007088	4.573	27.32	40.65
-	-	13	-	92	2.337	8,464	0.006648	4.289	25.62	38.13
-	11	-	-	90.74	2.305	8,234	0.006467	4.172	24.92	37.09
-	-	-	2.3	90.55	2.300	8,199	0.006439	4.155	24.82	36.94
14	-	-	-	83	2.108	6,889	0.005411	3.491	20.85	31.04
-	12	-	-	80.81	2.053	6,530	0.005129	3.309	19.77	29.42
-	-	14	-	80	2.032	6,400	0.005027	3.243	19.37	28.83
-	-	-	2.0	78.74	2.000	6,200	0.004869	3.142	18.77	27.93
15	-	15	-	72	1.829	5,184	0.004072	2.627	18.46	27.36
-	13	-	-	71.96	1.828	5,178	0.004067	2.624	15.67	23.33
-	-	-	1.8	70.87	1.800	5,023	0.003945	2.545	15.20	22.63
16	-	-	-	65	1.651	4,225	0.003318	2.141	12.79	19.03
-	14	-	-	64.08	1.628	4,106	0.003225	2.081	12.43	18.50
-	-	16	-	64	1.626	4,096	0.003217	2.075	12.40	18.45
-	-	-	1.6	62.99	1.600	3,968	0.003116	2.011	12.01	17.88
17	-	-	-	58	1.473	3,364	0.002642	1.705	10.18	15.16
-	15	-	-	57.07	1.450	3,257	0.002558	1.650	9.859	14.67
-	-	17	-	56	1.422	3,136	0.002463	1.589	9.493	14.13
-	-	-	1.4	55.12	1.400	3,038	0.002386	1.539	9.196	13.68
-	16	-	-	50.82	1.291	2,583	0.002029	1.309	7.820	11.64
18	-	-	-	49	1.245	2,401	0.001886	1.217	7.269	10.82
-	-	18	-	48	1.219	2,304	0.001810	1.167	6.976	10.38
-	-	-	1.2	47.24	1.200	2,232	0.001753	1.131	6.756	10.06
-	17	-	-	45.26	1.150	2,048	0.001608	1.037	6.197	9.219
19	-	-	-	42	1.067	1,764	0.001385	0.8938	5.388	7.946
-	18	-	-	40.3	1.024	1,624	0.001275	0.8226	4.914	7.313
-		19	-	40	1.016	1,600	0.001257	0.8107	4.845	7.207
-	-	-	1.0	39.37	1.000	1,550	0.001217	0.7854	4.690	6.982
-	-	20	-	36	0.914	1,296	0.001018	0.6576	3.923	5.838

Wire Gauges

Gauge				Diameter		Sectional Area			Weight	
B.W.G.	A.W.G.	S.W.G.	mm.G	Mil	mm.	Cir.Mil	in^2	mm^2	lb/1,000 ft	kg/km
-	19	-	-	35.89	0.9116	1,288	0.001012	0.6529	3.900	5.804
-	-	-	0.90	35.43	0.9000	1,255	0.0009857	0.6362	3.799	5.656
20	-	-	-	35	0.8890	1,225	0.0009621	0.6207	3.708	5.518
21	-	21	-	32	0.8128	1,024	0.0008042	0.5189	3.099	4.613
-	20	-	-	31.96	0.8118	1,021	0.0008019	0.5174	3.091	4.600
-	-	-	0.80	31.50	0.8000	992.3	0.0007794	0.5027	3.004	4.469
-	21	-	-	28.46	0.7229	810	0.0006362	0.4105	2.452	3.649
22	-	22	-	28	0.7112	784	0.0006158	0.3973	2.373	3.532
-	-	-	0.70	27.56	0.7000	759.6	0.0005966	0.3848	2.299	3.421
-	-	-	0.65	25.59	0.6500	654.8	0.0005143	0.3318	1.982	2.950
	22	-	-	25.35	0.6438	642.6	0.0005047	0.3256	1.945	2.895
23	-	-	-	25	0.6350	625	0.0004909	0.3167	1.892	2.816
-	-	23	-	24	0.6096	576	0.0004524	0.2919	1.744	2.595
-	-	-	0.60	23.62	0.6000	557.9	0.0004382	0.2827	1.689	2.513
-	23	-	-	22.57	0.5733	509.4	0.0004001	0.2581	1.542	2.295
24	-	24	-	22	0.5583	484	0.0003801	0.2452	1.465	2.180
-	-	-	0.55	21.65	0.5500	468.7	0.0003681	0.2376	1.419	2.112
-	24	-	-	20.10	0.5106	404	0.0003173	0.2047	1.223	1.820
25	-	25	-	20	0.5080	400	0.0003142	0.2027	1.211	1.802
-	-	-	0.50	19.69	0.5000	387.7	0.0003045	0.1963	1.174	1.745
26	-	26	-	18	0.4572	324	0.0002545	0.1642	0.9809	1.460
-	25	-	-	17.90	0.4547	320.4	0.0002516	0.1623	0.9697	1.443
-	-	-	0.45	17.72	0.4500	314	0.0002466	0.1590	0.9504	1.414
-	-	27	-	16.4	0.4166	269	0.0002113	0.1363	0.7844	1.212
27	-	-	-	16	0.4064	256	0.0002011	0.1297	0.7750	1.153
-	26	-	-	15.94	0.4049	254.1	0.0001996	0.1288	0.7693	1.145
-	-	-	0.40	15.75	0.400	248.1	0.0001949	0.1257	0.7512	1.118
-	-	28	-	14.8	0.3759	219	0.0001720	0.1110	0.6629	0.9868
-	27	-	-	14.20	0.361	201.6	0.0001583	0.1021	0.6101	0.9077
28	-	-	-	14	0.3556	196	0.0001539	0.09932	0.5931	0.8330
-	-	-	0.35	13.78	0.3500	189.9	0.0001491	0.09621	0.5746	0.8553
-	-	29	-	13.6	0.3454	185	0.0001453	0.09372	0.5600	0.8332
29	-	-	-	13	0.3302	169	0.0001327	0.08563	0.5114	0.7613
-	28	-	-	12.64	0.3211	159.8	0.0001255	0.08097	0.4837	0.7198
-	-	-	0.30	12.60	0.3200	158.8	0.0001246	0.08042	0.7806	0.7149
-	-	30	-	12.4	0.3150	153.8	0.0001208	0.07791	0.4656	0.6926
30	-	-	-	12	0.3048	144	0.0001131	0.07297	0.4359	0.6487
-	-	31		11.6	0.2946	134.6	0.0001057	0.06818	0.4074	0.6061
-	-	-	0.29	11.42	0.2900	130.4	0.0001024	0.06605	0.3947	0.5872
-	29	-	-	11.26	0.2859	126.8	0.00009959	0.06425	0.3838	0.5712
-	-	32	-	10.8	0.2743	116.6	0.00009158	0.05913	0.3530	0.5257
-	-	-	0.26	10.24	0.2600	104.9	0.00008239	0.05309	0.3175	0.4720
-	30	-	-	10.03	0.2546	100.6	0.00007901	0.05097	0.305	0.4531
31	-	33	-	10	0.2540	100	0.00007954	0.05067	0.3027	0.4505
-	-	34	-	9.2	0.2337	84.64	0.00006648	0.04289	0.2562	0.3813
-	-	-	0.23	9.055	0.2300	81.99	0.00006440	0.04155	0.2482	0.3694

Wire Gauges

Gauge				Diameter		Sectional Area			Weight	
B.W.G.	A.W.G.	S.W.G.	mm.G	Mil	mm.	Cir.Mil	in^2	mm^2	lb/1,000 ft	kg/km
32	-	-	-	9	0.2286	81.102	0.00006362	0.04104	0.2452	0.3649
-	31	-	-	8.928	0.2238	79.71	0.00006260	0.04039	0.2413	0.3591
-	-	35	-	8.4	0.2134	70.56	0.00005542	0.03575	0.2136	0.3178
33	-	-	-	8	0.2032	64	0.00005027	0.03243	0.1937	0.2883
-	32	-	-	7.950	0.2019	65.20	0.00004964	0.03203	0.1913	0.2847
-	-	-	0.20	7.874	0.2000	62	0.00004869	0.03142	0.1877	0.2793
-	-	36	-	7.6	0.1930	57.76	0.00004536	0.02927	0.1748	0.2602
-	-	-	0.18	7.087	0.1800	50.23	0.00003945	0.02545	0.1520	0.2263
-	33	-	-	7.080	0.1798	50.13	0.00003937	0.02540	0.1517	0.2258
34	-	-	-	7.	0.1778	49	0.00003848	0.02483	0.1483	0.2207
-	-	37	-	6.8	0.1727	46.24	0.00003632	0.02343	0.1400	0.2083
-	34	-	-	6.305	0.1601	39.75	0.00003122	0.02014	0.1203	0.1790
-	-	-	0.16	6.299	0.1600	39.68	0.00003116	0.02011	0.1201	0.1788
-	-	38	-	6	0.1524	36	0.00002827	0.01824	0.1090	0.1622
-	35	-	-	5.615	0.1426	31.53	0.00002476	0.01597	0.09543	0.1420
-	-	-	0.14	5.512	0.1400	30.38	0.00002386	0.01539	0.09196	0.1368
-	-	39	-	5.2	0.1321	27.04	0.00002124	0.01370	0.08186	0.1218
35	36	-	-	5.000	0.1270	25	0.00001963	0.01267	0.07565	0.1126
-	-	40	-	4.8	0.1219	23.04	0.00001810	0.01167	0.06976	0.1037
-	-	-	0.12	4.724	0.1200	22.32	0.00001753	0.01131	0.06756	0.1006
-	37	-	-	4.453	0.1131	19.83	0.00001557	0.01005	0.06001	0.08934
-	-	41	-	4.4	0.1118	19.36	0.00001521	0.009810	0.05812	0.08721
36	-	42	-	4	0.1016	16.00	0.00001257	0.008107	0.04845	0.07207
-	38	-	-	3.965	0.1007	15.72	0.00001235	0.007968	0.04760	0.07084
-	-	-	0.10	3.937	0.1000	15.50	0.00001217	0.007854	0.04690	0.06982
-	-	43	-	3.6	0.09114	12.96	0.00001018	0.006567	0.03923	0.05838
-	39	-	-	3.531	0.08969	12.47	0.000009794	0.006319	0.03775	0.05618
-	-	44	-	3.2	0.08138	10.24	0.000008042	0.005819	0.03099	0.04613
-	40	-	-	3.145	0.07987	9.891	0.000007768	0.005012	0.02994	0.04456
-	41	45	-	3.800	0.07113	7.842	0.000006159	0.003973	0.02374	0.03532
-	42	-	-	2.494	0.06334	6.219	0.000004884	0.003151	0.01882	0.02801
-	-	46	-	2.4	0.06096	5.760	0.000004528	0.002929	0.01744	0.02595
-	43	-	-	2.221	0.05641	4.932	0.000003873	0.002495	0.01498	0.02222
-	-	47	-	2	0.05080	4.000	0.000003142	0.002027	0.01211	0.01802
-	44	-	-	1.987	0.05023	3.911	0.000003072	0.001982	0.01184	0.01762
-	-	-	0.05	1.969	0.05000	3.877	0.000003045	0.001963	0.01174	0.01745
-	45	-	-	1.761	0.04473	3.102	0.000002436	0.001572	0.009383	0.01398
-	-	48	-	1.6	0.04064	2.560	0.000002011	0.001297	0.007750	0.01153
-	46	-	-	1.568	0.03984	2.460	0.000001931	0.001246	0.007446	0.01108
-	47	-	-	1.397	0.03547	1.951	0.000001532	0.0009884	0.005904	0.008787
-	48	-	-	1.224	0.03159	1.547	0.000001215	0.0007838	0.004683	0.006968
-	-	49	-	1.2	0.03048	1.440	0.000001131	0.0007297	0.004359	0.006487
-	49	-	-	1.108	0.02813	1.227	0.000009635	0.0006216	0.003713	0.005526
-	-	50	-	1	0.02540	1.000	0.000007854	0.0005067	0.003027	0.004505
-	50	-	-	0.986	0.02505	0.9728	0.000007641	0.0004929	0.002945	0.004382

NOTE B.W.G. - Birmingham Iron Wire Gauge
A.W.G. - American Wire Gauge
S.W.G. - British Standard Wire Gauge
mm.G. - Millimeter Gauge

Conversion table AWG/MCM (kcmil) to the metric cross-section area

Conductor Cross-swection area AWG/MCM (kcmil)		Theoretical Cross-Section area mm²	Advised Cross-Section area lb/1,000 ft
AWG	20	0.51	0.5
	18	0.82	1
	16	1.31	1.5
	14	2.08	2.5
	12	3.31	4
	10	5.27	6
	8	8.40	10
	6	13.30	16
	4	21.20	25
	3	26.70	25
	2	33.60	35
	1	42.40	so
	1/0	53.40	so
	2/0	67.50	70
	3/0	85.00	95
	4/0	107.02	120
MCM (kcmil)	250	126.70	120
	300	152.00	150
	350	177.40	185
	400	202.70	240
	500	253.40	240
	600	304.00	300
	700	354.00	400
	750	380.00	400
	800	405.40	400
	900	456.00	500
	1000	506.70	500
	1250	633.40	630
	1500	760.10	800

A

SI Prefixes

Multiply factor								Prefix	Symbol
	1	000	000	000	000	=	10^{12}	tera	T
		1	000	000	000	=	10^{9}	giga	G
			1	000	000	=	10^{6}	mega	M
				1	000	=	10^{3}	kilo	k
					100	=	10^{2}	hecto	h
					10	=	10^{1}	deca	da
					0.1	=	10^{-1}	deci	d
					0.01	=	10^{-2}	centi	c
					0.001	=	10^{-3}	milli	m
				0.000	001	=	10^{-6}	micro	μ
			0.000	000	001	=	10^{-9}	nano	n
		0.000	000	000	001	=	10^{-12}	pico	p
	0.000	000	000	000	001	=	10^{-15}	femto	f
0.000	000	000	000	000	001	=	10^{-18}	atto	a

Properties of Insulation and Jacket Materials

Resistance to Industrial Chemicals

A

Reagent	Relative Rating							Reagent	Relative Rating						
	BR	CR	ERC	PVC	PE	XLPE	NYLON		BR	CR	ERC	PVC	PE	XLPE	NYLON
Acetone	◎	○	◎	×	◎	◎	○	Chlorine Gas	△	△	×	×	×	×	◎
Aniline	○	×	○	○	○	○		Ozone	○		○	○	◎	◎	×
Ethanol	◎	◎	◎	△	○	○	○	Bromine	×	×	×	×	×	×	
Ethyleneglycol	○	◎	○	△	◎	◎	○	Nirtic Acid, conc.	×	×	×	×	△	△	×
Xylene	×	×	×	×	○	○	○	Nitric Acid, 10%	×	×	△	○	○	○	△
Glycerin	◎	◎	◎	○	◎	◎	○	Fuming Nitric Acid	×	×		×	×	×	
Cresol	○	△	○	△	○	○	×	TapWater	◎	◎	◎	◎	◎	◎	◎
Chloroform	×	×	×	×	△	△	×	Seawater	○	◎	◎	◎	◎	◎	
Acetic Acid, conc.	○	△	○	×	○	○	△	Sulfuric Acid, conc.	×	×	×	△	△	△	×
Acetic Acid, 10%	○	×	○	△	◎	◎	○	Sulfuric Acid, 10%	○	○	○	◎	○	○	○
Ethyl Acetate	○	×	△	×	○	○	○	Phosphoric Acid	○	△	○	×	◎	◎	○
Carbon Tetrachloride	×	×	×	×	×	×	△	Sodium Hydroxide, 10%	○	○	○	○	○	○	◎
Cyclohexane	△	×	×		△	△		Freon	×	×		○	○	○	
Dioctyl Phthalate	◎	×		×				Formic Acid	△	×		○	○	○	◎
Trichloroethylene	×	×	×	△	△	△	△	JIC No.1 Oil (OF Oil)	×	△	×	△	○	○	
Trichlorobenzene	×	×	×		△	△		ASTM No.1 Oil	○	○	△	△	○	○	
Toluene	×	×	×	×	△	△	○	ASTM No.2 Oil	△	○	△	△	○	○	
Carbon Disulfide	×	×	×	△	○	○		ASTM No.3 Oil	×	△	×	△	△	△	
Phenol	○	△	○	×	○	○	×	Gasoline	×	△	×	×	○	○	○
Furfural	◎	○	◎	△	◎	◎		Creosote Oil	△	×	×	×	△	△	
Hexane	×	△	×	△	○	○		JIS No.2 Oil	×	×	×	△	○	○	
Benzene	×	×	×	×	△	△	○	Heavy Oil	×	×	×	△	△	△	
Methanol	◎	◎	◎	×	○	○	△	Lube Oil	×	△	△	△	△	△	○
Methyl Ethyl Ketone	△	×	△	×	○	○		Silicone Oil	◎	◎	◎	○	◎	◎	
Dioxane				×	○	○		Vegetable Oil	◎	◎	○		◎	◎	
Nitrobenzene	○	×	○	×	○	○		Petroleum Ether	△	△		×	◎	◎	
Formaline	○	○		○	○	○	△	Trans Oil	×	△	×	○	○	○	
Ammonia, conc.	○	△	○	△	○	○	○	Naphtha	×	×	×	○	○	○	○
Ammonia,10%	○	△	○	○	○	○	◎	Coal Tar					○	○	
Sodium Chloride	○	○	○	○	◎	◎	◎								
Hydrochloric Acid, conc.	○	○	○	△	○	○	×								
Hydrochloric Acid, 10%	◎	○	○	○	◎	◎	○								

Where: ◎ : High Resistance ○ : Fair Resistance
× : Not Applicable △ : Poor Resistance, care on use

Properties of Insulation and Jacket Materials

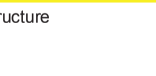
General Comparison Data

Material		Polyvinyl Chloride	Low Density Polyethylene	Cross-liked Polyethylene	Polyisoprene	Styrene Butadiene Copolymer	Polyisprene	Chlorosulphonated Polyethylene
Designation		**PVC**	**PE**	**XLPE**	**NR**	**SBR**	**CR**	**CSM**
Chemical structure		$-(CH_2-\underset{Cl}{CH})_n-$	$-(CH_2-CH_2)_n-$	$\sim CH_2-\underset{}{CH}-CH_2\sim$ $\sim CH_2-CH-CH_2\sim$	$-(CH_2-\underset{CH_3}{C}=CH-CH_2)_n-$	$-[(CH_2-CH=CH-CH_2)_x-(CH_2-\underset{}{CH})_y]-_n$ 	$-(CH_2-\underset{Cl}{C}=CH-CH_2)_n-$	$-(CH_2)_x-CH-(CH)_y\,CH)]_n$ SO_2Cl
Density		1.3 - 1.5	0.91 - 0.93	0.91 - 0.93	0.93 - 0.94	0.93 - 0.94	1.15 - 1.23	1.10
Hardness (Shore)		D30 - 90	D45 - 60		30 - 90	10 - 95	20 - 90	50 - 90
Max. Operating Temp.	°C	70	75	90	60	75	80	90
Emergency Temp. Rating	°C	85	90	130	85			
Short Circuit Temp. Rating	°C	120	150	250	150			
Brittleness Temp.	°C	~ -40	< - 70	< - 70	-55 ~ -58	-30 ~ -65	-30 ~ -50	-20 ~ -50
Softening Temp.	/°C	120 - 140	100 - 115					
Thermal Expansion	°C	0.7 - 2.5 x 10^{-4}	1.6 - 1.8 x 10^{-4}	1.6 - 1.8 x 10^{-4}	1.8 x 10^{-4}	1.8 x 10^{-4}	1.9 x 10^{-4}	1.8 x 10^{-4}
Thermal Conductivity Cal / cm•sec•	°C	3.0 - 4.0 x 10^{-4}	8.0 x 10^{-4}	8.0 x 10^{-4}	5.1 x 10^{-4}	5.8 x 10^{-4}	5.6 x 10^{-4}	6.3 x 10^{-4}
Specific Heat	Cal /°C•g	0.3 - 0.5	0.55	0.55	0.52	-	0.52	
Tensile Strength	kg / mm^2	1.5 - 2.5	1.5 - 2.0	1.8 - 3.0	0.8 - 3.0	0.4 - 3.0	0.7 - 3.0	0.5 - 2.0
Elongation	%	200 - 400	300 - 700	300 - 700	300 - 700	100 - 700	400 - 900	100 - 500
Abrasion Resistance		Excellent	Good	Excellent	Good	Good	Good	Good
Voltage Breakdown	kv / mm	20 - 30	30 - 50	30 - 50	16 - 32	16 - 30	15 - 25	16 - 32
Volume Resistivity	Ω•cm	10^{12} - 10^{15}	>10^{16}	>10^{16}	10^{15}	10^{14} - 10^{15}	10^{10} - 10^{12}	10^{13} - 10^{14}
Dielectric Constant		5.7	2.2 - 2.4	2.2 - 2.4	3 - 5	3 - 5	7 - 10	
Dissipation Factor (tan δ)		0.1 - 0.03	<0.0005	<0.0005	0.3 - 0.5	2 - 5	1.7 - 4	-
Weathering		Good	Inferior*	Inferior*	Poor	Poor	Excellent	Good
Ozone Resistance		Excellent	Excellent	Excellent	Poor	Inferior	Good	Good
Flame Resistance		Self - Extinguish	Burns	Burns	Burn	Burn	Self - Extinguish	Self - Extinguish
Track Resistance		Inferior	Excellent	Excellent	Fair	Fair	Inferior	Good
Water Resistance		Fair	Excellent	Excellent	Fair	Fair	Fair	Fair
Acid Resistance		Excellent	Good	Good	Good	Fair	Excellent	Good
Alcari Resistance		Excellent	Excellent	Excellent	Good	Good	Excellent	Excellent
Oil Resistance		Good	Excellent	Excellent	Poor	Inferior	Good	Fair
Solvent Resistance		Fair	Excellent	Excellent	Inferior	Inferior	Fair	Fair

* Improved to "good" with mixture of carbon black.

Properties of Insulation and Jacket Materials

General Comparison Data (Continued)

Material		Ethylene Propylene Copolymer	Hexafluoropropylene Vinylidenefluoride Copolymer	Polyorganosiloxane	Polypropylene	Polytetra Fluoroethylene	Polychloro Trifluoroethylene	Polyamide
Designation		**EPM, EPDM**	**FPM**	**Q**	**PP**	**PTFE**	**PCTFE**	**Nylon(12)**
Chemical structure								
Density		0.86 - 0.87	1.82 - 1.85	0.97 - 1.40	0.9 - 0.915	2.13 - 2.2	2.1	1.01 - 1.02
Hardness (Shore)		40 - 85	60 - 90	50 - 85	R85 - 110	D50 - 65	R110 - 115	R100 - 110
Max. Operating Temp.	°C	90	200	180	80	260	180	90
Emergency Temp. Rating	°C							
Short Circuit Temp. Rating	°C				150	310		120
Brittleness Temp.	°C	-40 ~ -60	-44 ~ -60	-70 ~ -100		<-70	<-70	-70
Softening Temp.	/°C						210	170 - 180
Thermal Expansion	°C		1.6×10^{-4}	2.6×10^{-4}	$6.0 - 8.5 \times 10^{-4}$	1.0×10^{-5}	$4.5 - 7.0 \times 10^{-5}$	12×10^{-5}
Thermal Conductivity Cal / cm•sec•	°C		5.5×10^{-4}	5.7×10^{-4}	2.8×10^{-4}	6×10^{-4}	6×10^{-4}	$5.9 - 8.3 \times 10^{-4}$
Specific Heat	Cal /°C•g				0.46	0.25	0.22	0.62
Tensile Strength	kg / mm²	0.5 - 1.5	1.5 - 2.5	0.3 - 1.0	2.0 - 4.0	1.4 - 2.1	2.8 - 3.5	5.0 - 6.0
Elongation	%	300 - 700	200 - 600	50 - 300	200 - 700	200	10 - 100	180 - 285
Abrasion Resistance		Good	Good	Fair	Excellent	Excellent	Excellent	Excellent
Voltage Breakdown	kv / mm	20 - 35	24	20 - 40	20 - 32	15 - 30	10 - 20	20 - 30
Volume Resistivity	Ω•cm	$10^{14} - 10^{15}$	$10^{12} - 10^{14}$	$10^{14} - 10^{15}$	$>10^{16}$	$>10^{18}$	$1.2 - 10^{18}$	$10^{14} - 10^{15}$
Dielectric Constant		3 - 5	6 - 7	3 - 4	2.0 - 2.2	2.0	2.24 - 2.8	3.5 - 4.5
Dissipation Factor (tan δ)		0.2 - 0.8		0.1 -1.0	0.0002 - 0.0006	<0.0002	0.0012 - 0.0036	0.03 - 0.06
Weathering		Excellent	Good	Good	Inferior*	Excellent	Excellent	Inferior*
Ozone Resistance		Excellent	Good	Excellent	Excellent	Excellent	Excellent	Good
Flame Resistance		Burn	Self - Extinguish	Burn	Burn	No Burn	No Burn	Burn
Track Resistance		Excellent	Fair	Excellent	Excellent	Excellent	Excellent	Good
Water Resistance		Good	Excellent	Fair	Excellent	Excellent	Excellent	Excellent
Acid Resistance		Excellent	Excellent	Poor	Excellent	Excellent	Excellentt	Good
Alcari Resistance		Excellent	Excellent	Good	Excellent	Excellent	Excellent	Excellent
Oil Resistance		Inferior*	Excellent	Fair	Excellent	Excellent	Excellent	Excellent
Solvent Resistance		Poor	Excellent	Fair	Excellent	Excellent	Excellentt	Good

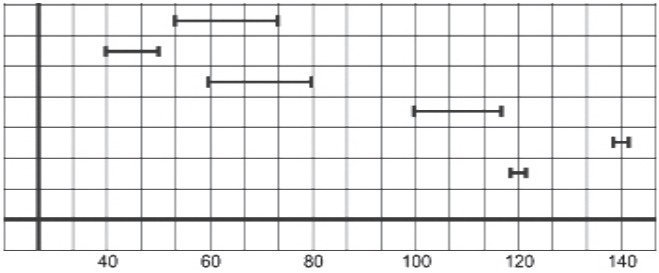
* Improved to "goodH with mixture of carbon black.

Properties of Insulation and Jacket Materials

Thermal Properties

Deflection temperature of plastics under load [ASTM D648]

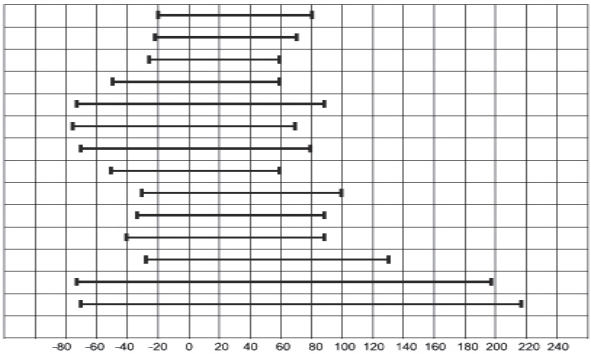
Polyvinyle Choloride (Hard Type)
Low Density Polyethylene
High Density Polyethylene
Polypropylene Polyamide
Polytetrafluoroethylene



Temperature - degrees C

Operating Temperature

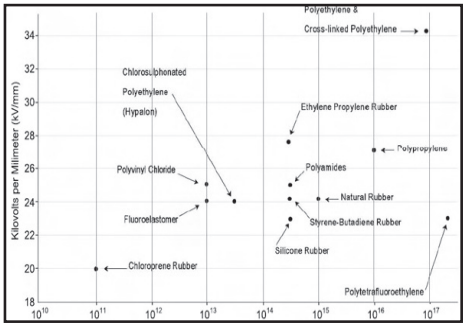
[Max. point : Max Continuous Operating Temperature
Min.point : Brittleness Temperature]



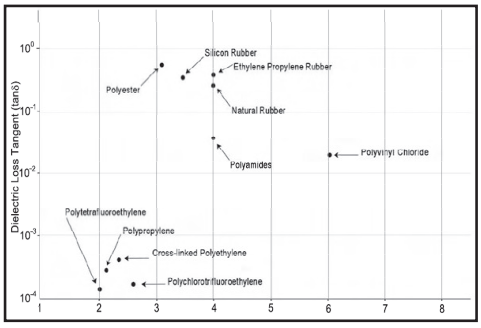
Temperature - degrees C

Polyvinyle Chloride, 80°C Grade
Polyvinyle Chloride, 75°C Grade
Polyvinyle Chloride, 60°C Grade Cold Resisting Polyvinyle Chloride
Cross-Linked Polyethylene Polyethylene
Nylon
Synthetic Natural Rubber
Chloroprene
Styrene-Butadiene Rubber
Ethylene-Propylene Rubber
Chlorosulphonated Polyethylene (Hypalon)
Silicone
Teflon

Electrical Properties



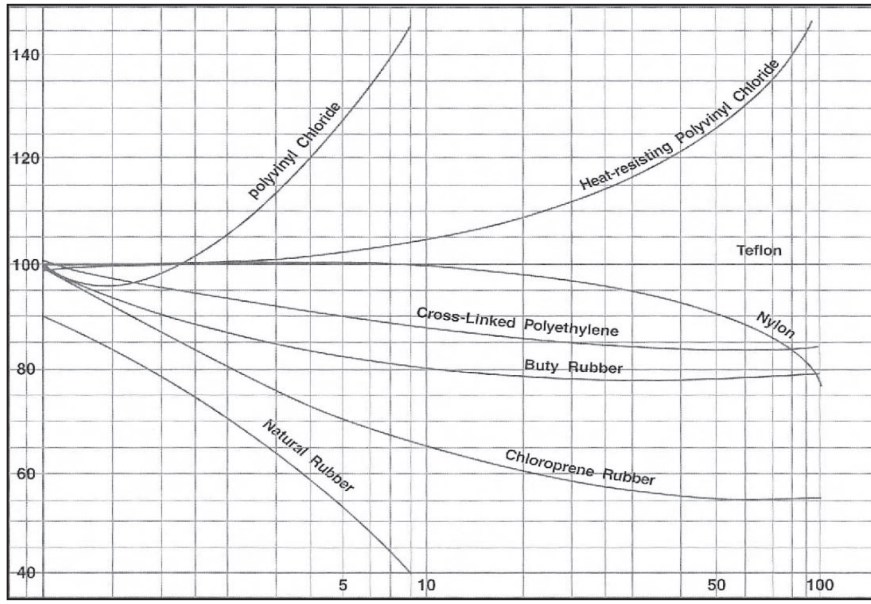
Volume Resistivity [Ω•cm]

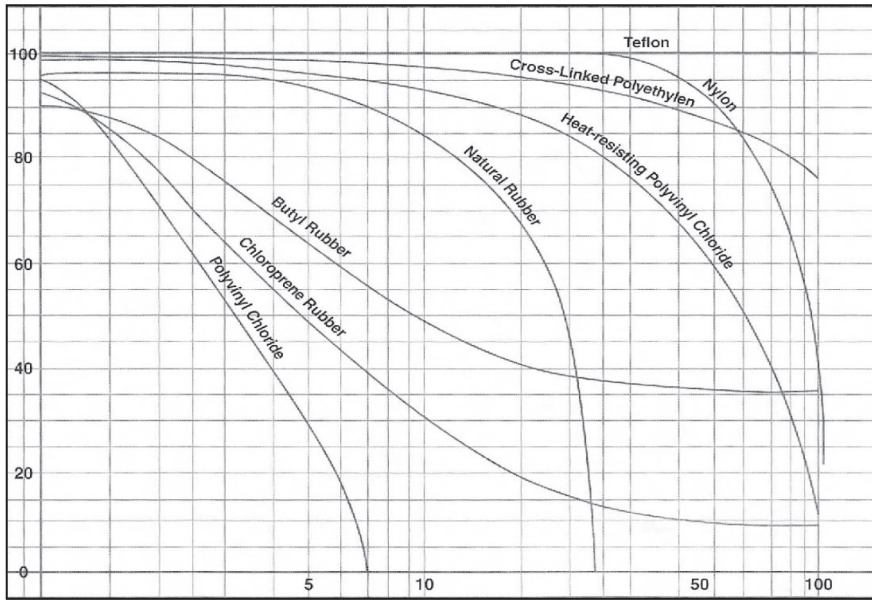


Dielectric Constant [ε]

Properties of Insulation and Jacket Materials

Long - Time Heat Aging Curves





Condition of Installation

Minimum Bending Radius

Type of cable \ Number of core		Single core		Multi cores
		Round conductor	Sector shape conductor	
PVC & PE Sheath	Unshield cable	8D	12D	6D
	Shield Cable	10D	12D	8D
Wire armoured cable		10D	12D	10D
Lead sheathed		10D	12D	10D
Corrugated metal armouredcable		-	-	8D
Flattape armoured cable		-	-	8D
Al. flat sheathed cable		20D	20D	20D
Al. corrugated sheathed cable		15D	15D	15D
Al. solidconductor		-	-	10D
Cabtyre cable		6D	-	4D

D: Overall diameter of cable

A

Pennissible Maximum Pulling Tension

Pulling tool	Material of conductor	Permissible maximum pulling tension (kgf)
Pulling eye	Copper	7 x (Number or core) x (Cross-sectional area of conductor)
	Aluminium	4 x (Number of core) x (Cross-sectional area of conductor)
Cable grip	Copper & Aluminium	The same as using the pulling eye, but the maximum tension should be less than 1.5 tons.

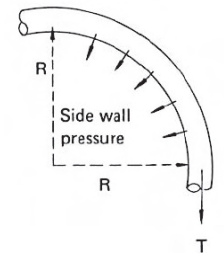
Note : When cable grip is used is should cover more than 500 mm. in length of the cable end and be bound to the cable sheath

Side Wall Pressure to cable

Permissible maximum side wall pressure to the cable at bending point during installation is

500 kg/m for at cable (Single core and multi core)
300 kg/m for PVC insulated PVC sheathed cable
250 kg/m for at triplex type

Side wall pressure to cable = $\frac{\text{Pulling tension (kgf)}}{\text{bending radius (m)}}$



Symbols of Electrical Units

Electrical Unit		Symbol
CURRENT	(AMPERE)	A
VOLTAGE	(VOLT)	V (kV)
RESISTANCE	(OHM)	Ω (kΩ, MΩ)
ELECTRIC POWER	(WATT)	W (kW, MW.)
ELECTRIC ENERGY	(WATT HOUR)	Wh (kWh.)
HORSE POWER		HP
POWER FACTOR	(COS 0)	P.F.
FREQUENCY	(HERTZ)	Hz
CAPACITANCE	(FARAD)	F (μF, pF.)
APPARENT POWER	(VOLTAMPERE)	VA (kVA)
DIRECT CURRENT		DC
ALTERNATING CURRENT		AC
EFFICENCY		Eff.
MAXIMUM VALUES	(VOLTAMPERE)	Em, Im
AVERAGE VALUES	(VOLTAMPERE)	Eav, Iav
EFFECTIVE VALUES	(VOLTAMPERE)	E. I
INSTANTANEOUS VALUES	(VOLTAMPERE)	e, I

Electrical Formulas

Direct Current	Alternating Current	
	Single Phase	Three Phase
$A = \frac{kW \times 1000}{V}$	$A = \frac{kW \times 1000}{V \times P.F.}$	$A = \frac{kW \times 1000}{1.73 \times V \times P.F.}$
$A = \frac{kVA \times 1000}{V}$	$A = \frac{kVA \times 1000}{V}$	$A = \frac{kVA \times 1000}{1.73 \times V}$
$A = \frac{HP \times 746}{V \times (\%Eff.)}$	$A = \frac{HP \times 746}{V \times (\%Eff.) \times P.F.}$	$A = \frac{HP \times 746}{1.73 \times V \times (\%Eff.) \times P.F.}$
$kW = \frac{A \times V}{1000}$	$kW = \frac{A \times V \times P.F.}{1000}$	$kW = \frac{A \times V \times 1.73 \times P.F.}{1000}$
$kVA = \frac{A \times V}{1000}$	$kVA = \frac{A \times V}{1000}$	$kVA = \frac{A \times V \times 1.73}{1000}$
$HP = \frac{A \times V (\%Eff.)}{746}$	$HP = \frac{A \times V \times (\%Eff.) \times P.F.}{746}$	$HP = \frac{A \times V \times 1.73(\%Eff.) \times P.F.}{746}$

Approximate Motor Amperes per Terminal

1 phase	220 V ac = 4	amps/HP
3 phase	200 V ac = 2.5	amps/HP
3 phase	380 V ac = 1.41	amps/HP
3 phase	440 V ac = 1	amps/HP
3 phase	550 V ac = 1	amps/HP

Table of The Dimesions for The Motor Starters

The figures are based on normal 3 - phase motor for a.c. at 50 c.p.s. 1400 - 1450 r.p.m.

Moter ratings in HP at searvice voltage						Rating of motor starter (A)	Relay setting (A)	Max. quick-blow back-up fuse (A)	Min cross section of cables (mm^2)
220 V		380 V		440 V					
HP	Full load current (A)	HP	Full load current (A)	HP	Full load current (A)				
		0.05		0.05		15	0.15 - 0.25	1	1.5
0.05		0.1		0.1		15	0.25 - 0.4	2	1.5
		0.15		0.20		15	0.4 - 0.65	4	1.5
0.1		0.2		0.25	0.5	15	0.4 - 0.65	4	1.5
0.15		0.25	0.6	0.50	0.9	15	0.6 - 1	6	1.5
0.25	1.1	0.5	1.0			15	1.0 - 1.6	6	1.5
		0.75	1.5	0.75	1.2	15	1.0 - 1.6	6	1.5
0.5	1.8	1.0	1.9	1.0	1.6	15	1.5 - 2.5	15 (10)	1.5
0.75	2.5	1.5	2.6	2	3.2	15	2.5 - 4	25 (15)	1.5
1.0	3.2	2	3.4	2.5	3.9	15	2.5 - 4	25 (15)	1.5
1.5	4.4	2.5	4.2	3	4.5	15	4 - 6.5	25 (20)	1.5
2.0	5.8	3	4.9	4	6.0	15	4 - 6.5	25 (20)	1.5
2.5	7.3	4	6.3	5	7.5	15	6 - 10	35 (25)	1.5
3	8.4	5	7.8	6	8.5	15	6 - 10	35 (25)	1.5
4	11	6	9.3	7.5	11.0	15	9 - 14	35	1.5
5	13.5	7.5	11.5			15	9 - 14	35	1.5
		10	15	10	14	25	13 - 20	60	2.5
7.5	19.5	15	22	15	21	25	16 - 25	60	4
10	26	20	29	20	27	60	20 - 31	100	6
15	39	25	36	30	39	60	28 - 43	125	10
20	51	30	42			60	40 - 60	160	16
		35	50	35	46	60	40 - 60	160	16
		40	56	40	52	60	40 - 60	160	16
25	63	50	69	50	65	100	50 - 75	200	16
35	91	60	83	60	76	100	70 - 100	200	25
40	100	75	104	75	96	200	84 - 120	400	35
50	125	100	136	100	125	200	105 - 150	500	50
75	184	125	167	125	155	200	140 - 200	500	95
		150	200	150	180	350	175 - 250	600	120
100	245	175	245	175	215	350	175 - 250	600	120
120	295	200	268	200	240	350	210 - 300	850	150
150	370	250	335	250	300	600	280 - 400	850	240
175	425	300	400	300	360	600	350 - 500	1000	400
200	475	350	470	350	410	600	350 - 500	1000	400
225	540	400	535	400	450	600	420 - 600	1000	

Figures in brackets apply to hand operated motor starters.

Standard Coefficient of Conversion

Items		Description			
1. LENGTH	1 micron	= 0.001 mm	= 3.94 X 10^{-5} in.		
	1 mil	= 0.0254 mm	= 0.001 in		
	1 mm	= 39.37 mils	= 0.03937 in.		
	1 cm	= 0.3937 in	= 0.0328 ft.		
	1 inch	= 25.4 mm	= 0.083 ft.	= 0.0278 yd.	= 2.54 cm.
	1 feet	= 0.305 m	= 0.33 yd.		
	1 yard	= 0.914 m	= 91.44 cm.		
	1 meter	= 39.37 in	= 3.28 ft.	= 1.094 yd.	
	1 kilometer	= 3,281 ft.	= 1,094 yd.	= 0.6213 mile	
	1 mile	= 5,280 ft.	= 1,760 yd.	= 1,609 m	= 1.609 km
2. AREA	1 MCM	= 1000 CM	(Circular Mil)	= 0.5067 mm^2	= 1/1000 in^2
	1 CM	= 0.0005067 mm^2	= 0.0000007854 in^2		= 0.7854 sq. mil.
	1 mm^2	= 1973 CM	= 0.00155 in^2	= 1,550 sq. mil.	
	1 in^2	= 1273240 CM	= 645.1 mm^2	= 0.0069 $ft.^2$	
	1 yd^2	= 1,296 in^2	= 0.83613 m^2		
	1 m^2	= 1,550 in^2	= 10.7 $ft.^2$	= 1.195 $yd.^2$	
	1 km^2	= 0.001562 $mile^2$			
	1 $mile^2$	= 27,880,000 $ft.^2$	= 3,098,000 $yd.^2$	= 2,590,000 m^2	= 2.59 km^2
3. VOLUME	1 cm^3	= 0.061 in^3			
	1 in^3	= 16.39 cm^3	= 0.0036 gal.	= 0.0005787 $ft.^3$	
	1 l	= 1,000 cm^3	= 61.023 in^3	= 0.2642 gal	= 0.03531 $ft.^3$
	1 gal.	= 3,785 cm^3	= 231 in^3	= 0.1337 $ft.^3$	= 0.004951 $yd.^3$
	1 $ft.^3$	= 28,317 cm^3	= 1,728 in^3	= 28.32 l.	= 7.48 gal
	1 yd^3	= 46,656 in^3	= 0.7646 m^3		
	1 m^3	= 61,023 in^3	= 35.31 $ft.^3$	= 1.308 yd^3	
4. WEIGHT	1 g.	= 15.43 gr.	= 0.03527 oz.	= 0.002205 lb.	
	1 oz.	= 437.5 gr.	= 28.35 g.	= 0.0625 lb.	
	1 lb.	= 7,000 gr.	= 453.6 g.	= 16 oz.	= 0.4536 kg.
	1 kg.	= 15,432 gr.	= 35.27 oz.	= 2.205 lb.	
	1 ton (short)	= 2,000 lb.	= 907.2 kg.	= 0.8928 ton (long)	
	1 ton (long)	= 2,240 lb.	= 1.12 ton (short)	= 1.016 ton (metric)	
	1 ton (metric)	= 2,204.62 lb.			
5. ENERGY	1 Btu.	= 1,055 joules	= 778.1 ft.-lb	= 252 g-cal.	= 107.6 kg.-m.
		= 0.2930 watt-hr.			
	1 watt-hr.	= 3,600 joules	= 2,655.4 ft. -lb.	= 860 g-cal.	= 367.1 kg.-m.
		= 3.413 B.t.u.	= 0.001341 hp.-hr.		
	1 hp.-hr.	= 2,684,000 joules	= 1,980,000 ft.-lb	= 273,700 kg.-cm.	
		= 745.6 watt-hr.			
	1 kw - hr.	= 2,655,000 ft.-lb.	= 367,100 kg.-m.	= 1.34 hp.-hr.	
6. POWER	1 watt	= 44.26 ft.-lb./min	= 6.199 kg-m/min	= 0.001341 hp.	
	1 hp	= 33,000 ft.-lb./min		= 745.6 watts	= 550 ft.-lb./sec.
		= 76.04 kg-m/sec			
	1 kw	= 44,256.7 ft-lb./min		= 101.979 kg-m/sec	= 1.341 hp.
		= 1,000 watts.			
7. TEMPERATURE	Temp °C	= 5/9 (temp °F-32)			
	Temp °F	= (9/5 x temp °C) +32			

Conductivity and Density of Metals

Kind	Symbol	Conductivty (% IACS)	Density (g/cm^3)
Silver	Ag	108.6	10.50
Stranded Copper (Annealed)	Cu	100.0	8.89
Gold	Au	72.5	19.30
Aluminium	Al	61.0	2.70
Iron	Fe	13.0	7.78
Tin	Sn	12.2	7.29
Steel	-	11.6	7.78

Conductor Materials

Material	Specific resistance 20°C			Temperature coefficient, 20°C	Density (g/cm3)
	μΩ-cm	μΩ-in	Ω-cmil/ft		
Annealed copper	1.724	0.6788	10.37	0.00393	8.89
Hard-drawn copper	1.79	0.695	10.77	0.00378	8.89
Annealed aluminium	2.82	1.113	17.0	0.0039	2.70
Hard-drawn aluminium	2.92	1.15	17.5	0.0038	2.70
Pure iron	10.0	3.93	60.0	0.006	7.86
Steel wire	10.7-17.5	4.2-6.9	64-106	0.006-0.00036	7.78
Cast iron	75-100	29.5-39.4	450-600	0.001-0.00074	7.32

Temperature Correction Factors for Conductor Resistance

Factors for correcting resistances at various temperatures of conductor to the standard reference temperature of 20°C and reciprocals of the factors for calculating resistances at other temperatures from the value at 20°C

Temperature °C	Correction Factor		Reciprocal of Factor	
	Copper	Aluminum	Copper	Aluminum
0	1.085	1.088	0.921	0.919
5	1.063	1.064	0.941	0.940
10	1.041	1.042	0.961	0.960
15	1.020	1.021	0.980	0.980
20	1.000	1.000	1.000	1.000
25	0.981	0.980	1.020	1.020
30	0.962	0.961	1.039	1.040
35	0.944	0.943	1.059	1.060
40	0.927	0.925	1.079	1.081
45	0.911	0.908	1.098	1.101
50	0.895	0.892	1.118	1.121
55	0.879	0.876	1.138	1.141
60	0.864	0.861	1.157	1.161
65	0.850	0.846	1.177	1.181
70	0.836	0.832	1.197	1.202
75	0.822	0.819	1.216	1.222
80	0.809	0.805	1.236	1.242
85	0.797	0.792	1.255	1.262
90	0.784	0.780	1.275	1.282

A

The correction factor is given by:

$$k = \frac{1}{k_1} = \frac{1}{1 + \alpha(\theta - 20)}$$

Where:

k = temperature correction factor of conductor

k_1 = reciprocal of k

α = constant mass temperature coefficient at 20°C per °C
= 0.00393 for copper (based on 100% conductivity)
= 0.00403 for aluminum (based on 61% conductivity)

θ = referred temperature, °C

Electrical Formulas

D.C. resistance

Method of calculation of conductor maximum d.c. resistance

$$R_{dc} = \frac{4A}{n\pi d^2} \times K_1 \times K_2 \times K_3$$

Where:

R_{dc} = the d.c. resistance at 20°C, Ω/km

A = the standard resistivity of the conductor metal at 20°C
- 17.241 for annealed copper
- 28.264 for aluminium alloy 1350
- 17.654 for tinned copper

K_1 = a factor dependent on the diameter of the wire in the conductor, on the kind of metal and on whether or not the copper wires are tinned or nickel-coated.

K_2 = A factor dependent on the conductor construction.
- 1.00 for Solid conductors
- 1.02 for stranded or uniaxial conductors in fixed cables, where the diameter of wires exceeds 0.6 mm
- 1.03 for stranded or bunched conductors in all cables where the diameter of wires<= 0.6 mm
- 1.04 for stranded or bunched conductors in all cables where the diameter of wires>= 0.6 mm

K_3 = A factor dependent on whether or not the conductor is, typically, used also in multicore cables.
- 1.00 for conductors in fixed cables of< 500 mm² (typically single core cables)
- 1.02 for conductors in fixed cables of< 500 mm² (typically multi core cables)
- 1.05 for conductors in all flexible cords and cables

n = the number of wires in the conductor

d = the diameter of wires in the conductor

Diameter of wire in conductor		K_1			
		Soild Conductor		Stranded Conductor	
mm		Plain or silver plated copper	Tinned copper or plain aluminium	Plain or silver plated copper	Tinned copper or plain aluminium
	≤0.10	-	-	1.07	1.12
>0.10	≤0.31	-	-	1.04	1.07
>0.31	≤0.91	1.03	1.05	1.02	1.04
>0.91	≤3.60	1.03	1.04	1.02	1.03
>3.60	≤4.50	1.03	1.04	-	-
>4.50		1.03	1.03	-	-

Inductance

The inductance, L, per core of a 3-core cable or of three single-core cables comprises two parts namely the self-inductance of the conductor and the mutual inductance with other cores.

The formula for calculating the Inductance of a cable is given by:

$$L = K + 0.2\log_{10}\left(\frac{2S}{d}\right) \text{ (mH/km)}$$

Where:

L = Inductance of cable in (mH/km)
K = Constant relating to the conductor formation (see table below)
5 = Axial spacing between conductors within the cable (mm) or axial spacing between Conductors of a trefoil group of single core cables (mm) or
= 1.26 x phase spacing for a flat formation of three single-core cables (mm)
d = conductor diameter or for shaped designs the diameter of an equivalent circular conductor (mm)

Typical Values for K for Different Stranded Conductors (at 50Hz)

Number of Wires in Conductor	K
9	0.0642
7	0.0554
37	0.0528
61 and Over	0.0514
1 (Solid)	0.05
Hollow core conductor, 12 mm duct	0.0383

A

Reactance (Inductive Reactance)

$$X = 2 \times \pi \times f \times L \text{ (}\Omega\text{/km)}$$

Where:

f = Frequency (Hz)
L = Inductance (mH/km)

Impedance

$$Z = \sqrt{R^2 + X^2} \text{ (}\Omega\text{/km)}$$

Where:

R = Conductor Resistance (Ω/km)
X = cable Inductive Reactance (Ω/km)

Dielectric loss (A.C. cables only)

The dielectric loss per unit length in each phase is giving by :

$$W_d = \omega C U_0^2 \tan\delta \text{ (W/m)}$$

Where:

ω = 2πf
C = capacitance per unit length (F/m)
U_o = voltage to earth (V)

Type of cable	Permittivity (ε)	tanδ	U_0
PVC	8	0.1	6
PE (HD and LD)	2.3	0.001	127
XLPE			
• up to and including 18/30 (36)kV cable (unfilled)	2.5	0.004	127
• greater 18/30 (36)kV cable (unfilled)	2.5	0.001	127
• greater 18/30 (36)kV cable (filled)	3	0.005	63.5

Capacitance

The capacitance of circular conductor is giving by :

$$C = \frac{\varepsilon}{18 \ln\left(\frac{D_i}{d_c}\right)} 10^{-9} \text{ (F/m)}$$

Where:

ε = relative permittivity of the insulation
D_i = external diameter of the insulation (excluding screen) (mm)
d_c = diameter of conductor, including screen, if any (mm)

The same formula can be used for oval conductors if the geometric mean of the appropriate major and minor diameters is substituted for D_i and d_c

AC resistance at temperature :

$$R_{ac} = R_{dc_t}(1 + y_s + y_p)$$

Where:

R_{dc_t} = DC resistance at operating temperature
y_s = Skin effect factor
y_p = Proximity effect factor

Skin effect factor y_s

$$y_s = X_s^4 /(192 + X_s^4)$$

Where:

$$X_s^4 = 8 \times \pi \times f \times 10^{-7} \times \frac{k_s}{R_{dc_t}}$$

k_s = Factor determined by conductor construction

Type of conductor	Wheather dried and impregnated or not	k_s	k_p
Copper			
Round, stranded	Yes	1	0.8
Round, stranded	No	1	1
Aluminium	Either		see note
Round, stranded	Either	1	

f = Frequency (Hz)
R_{dc_t} = DC resistance at operating temperature

Proximity effect factor y_p

1. For 2 core and 2 single core cables :

$$y_p = X_p^4/(192+0.8X_p^4) \times \left(\frac{d_c}{S}\right)^2 \times 2.9$$

2. For 3 core and 3 single core cables :

$$y_p = X_p^4/(192+0.8X_p^4) \times \left(\frac{d_c}{S}\right)^2 \times \left[0.312 \times \left(\frac{d_c}{S}\right)^2 + \frac{1.18}{[X_p^4/(192+0.8X_p^4)0.27]}\right]$$

Where:

$$X_p^4 = 8 \times \pi \times f \times 10^{-7} \times \frac{k_p}{R_{dc_t}}$$

R_{dc_t} = DC resistance at operating temperature
k_p = Factor determined by conductor construction
d_c = Diameter of conductor (mm)
S = Spacing between conductor centres (mm)

A

Charging Current

$$I_c = \omega CV \times 10^{-6} (A)$$

Where:

I_c = charging current (A/km)
ω = 2π time the frequency of the applied voltage
C = capacitance between the electrodes between which the voltage is applied (μF/km)
V = applied voltage (V)

Insulation Resistance

$$IR \text{ at } 20°C = 3.67 \times 10^{-12} \times p \times \log_{10}\left(\frac{D_2}{D_1}\right) \ (M\Omega\text{- km})$$

Where:

R_i = insulation resistance of one kilometer of cable in Meggaohms (MΩ-km)
D_1 = inner diameters of the insulation (mm)
D_2 = outer diameters of the insulations (mm)
p = resistivity (Ω-cm)

XLPE : 2.5×10^{15}

PVC : 1×10^{13} - 1×10^{14}

A

Short-Circuit Current Rating

Copper Conductor $$I = A \times \sqrt{\left(\frac{0.0297}{t}\right) \log\left(\frac{234 + T_2}{234 + T_1}\right)} \times 1.973$$

Aluminium Conductor $$I = A \times \sqrt{\left(\frac{0.0125}{t}\right) \log\left(\frac{228 + T_2}{228 + T_1}\right)} \times 1.973$$

Where:

I = Short circuit current (kA)
A = Cross-section area (mm^2)
t = Short circuit duration (sec)
T_1 = Max. permissible continuous operating temp (°C); PVC=70, XLPE=90
T_2 = Max. permissible temperature at short circuit (°C); PVC=160, XLPE=250

Short-Circuit Current 1 sec at conductor (kA)

Size (mm^2)	Copper		Aluminium	
	XLPE	PVC	XLPE	PVC
1.5	0.21	0.17	-	-
2.5	0.35	0.29	-	-
4	0.57	0.46	-	-
6	0.85	0.68	-	-
10	1.42	1.14	0.93	0.75
16	2.27	1.83	1.48	1.19
25	3.55	2.85	2.32	1.87
35	4.97	3.99	3.25	2.61
50	7.10	5.71	4.64	3.73
70	9.94	7.99	6.50	5.23
95	13.5	10.8	8.82	7.09
120	17.0	13.7	11.1	8.96
150	21.3	17.1	13.9	11.2
185	26.3	21.1	17.2	13.8
240	34.1	27.4	22.3	17.9
300	42.6	34.2	27.8	22.4
400	56.8	45.6	37.1	29.9
500	71.0	57.1	46.4	37.3
630	89.4	71.9	58.5	47.0
800	113.6	91.3	74.2	59.7
1000	142.0	114.1	92.8	74.7

Short Circuit Performance of Metallic Shields and Sheath of Insulated Cable

$$I = \frac{A}{\sqrt{t}}\sqrt{K \log\left[\frac{T_2 + \lambda}{T_1 + \lambda}\right]}$$

$$M = \sqrt{K \log\left[\frac{T_2 + \lambda}{T_1 + \lambda}\right]}$$

$$I = \frac{MA}{\sqrt{t}}$$

I = Short-circuit current of copper shield (A)
A = Effective cross-sectional area of shield or sheath (circular mils) see table below
t = Time of short circuit (second)

Type of shield or sheath	Formula for calculating A
1. Wires applied either helically. as a braid or serving or longitudinally with corrugations.	nd_s^2
2. Helically applied tape. not overlapped.	1.27nwb
3. Helically applied flat tape. overlapped. See note 3.	$4bd_m \times \sqrt{\frac{100}{2(100 - L)}}$
4. Corrugated tape. longitudinally applied.	$1.27[\pi(d_{is} + 50) + B]b$
5. Tubular sheath.	$4bd_m$

Where:

A = Effective cross-sectional area. shield or sheath, cmil.
B = Tape overlap. mils (usually 375)
b = Thickness of tape. mils.
d_{is} = Diameter over extruded insulation screen, mils.
d_m = Mean diameter of shield or sheath. mils.
d_s = Diameter of wires. mils.
w = Width of tape. mils.
n = Number of serving or braid wires. or tapes.
L = Overlap of tape. percent.

Voltage Drop Calculation

For single phase:

$$V_{1\phi} = \frac{2I(R\cos\theta + X\sin\theta)L}{1000}$$

Where:

I is the nominal full load or starting current as applicable (A)
R is the ac resistance of the cable (Ω/km)
X is the ac reactance of the cable (Ω/km)
$\cos\theta$ is the load power factor (pu)
L is the length of the cable (m)

For three phase:

$$V_{3\phi} = \frac{\sqrt{3}I(R\cos\theta + X\sin\theta)L}{1000}$$

Where:

I is the nominal full load or starting current as applicable (A)
R is the ac resistance of the cable (Ω/km)
X is the ac reactance of the cable (Ω/km)
$\cos\theta$ is the load power factor (pu)
L is the length of the cable (m)

Calculating Maximum Cable Length Due to Voltage Drop

It may be more convenient to calculate the maximum length of a cable for a particular conductor size given a maximum permissible voltage drop (5% of the at full load Ref. NEC Standard) rather than the voltage drop itself. The maximum cable length that will achieve this can be calculated by re-arranging the voltage maximum permissible voltage drop:

For single phase:

$$L_{max} = \frac{1000V_{3\phi}}{2I(R\cos\theta + X\sin\theta)}$$

Where:

I is the nominal full load or starting current as applicable (A)
R is the ac resistance of the cable (Ω/km)
X is the ac reactance of the cable (Ω/km)
$\cos\theta$ is the load power factor (pu)
$V_{1\phi}$ is the maximum permissible single phase voltage drop (V)

For three phase:

$$L_{max} = \frac{1000V_{3\phi}}{\sqrt{3}I(R\cos\theta + X\sin\theta)}$$

Where:

I is the nominal full load or starting current as applicable (A)
R is the ac resistance of the cable (Ω/km)
X is the ac reactance of the cable (Ω/km)
$\cos\theta$ is the load power factor (pu)
$V_{3\phi}$ is the maximum permissible single phase voltage drop (V)

CURRENT-CARRYING CAPACITIES OF CABLE

(Refer EIT Standard 022001-22)

Table 5-8 : Correction factor for a group of circuits, or a group of multi-cores cable

No. of circuits or multi-cores cable	In cable raceway	Single layer on wall or floor
2	0.80	0.85
3	0.70	0.79
4	0.65	0.75
5	0.60	0.73
6	0.57	0.72
7	0.54	0.72
8	0.52	0.71
9	0.50	0.70
10·12	0.45	0.70
13-16	0.41	0.70
17-20	0.38	0.70

Table 5-20: Current rating of copper conductor, PVC insulated with/without sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 70ºC, ambient temperature 40ºC, installed in raceway in air.

Installation Group	Group 1				Group 2			
No. of loaded Conductor	2		3		2		3	
Conductor Type	Single-core	Multi-cores	Single-core	Multi-cores	Single-core	Multi-cores	Single-core	Multi-cores
Installation Method								
Electrical system	AC or DC		AC		AC or DC		AC	
Cable Code	60227 IEC 01, 60227 IEC 02, 60227 IEC 05, 60227 IEC 06, 60227 IEC 10, NYY, NYY-G, VCT, VCT-G, IEC 60502-1 and special cable such as fire resistant (FRC), low smoke and halogen free (LSHF) etc.							
Size (mm²)	Current rating (A)							
1	10	10	9	9	12	11	10	10
1.5	13	12	12	11	15	14	13	13
2.5	17	16	16	15	21	20	18	17
4	23	22	21	20	28	26	24	23
6	30	28	27	25	36	33	31	30
10	40	37	37	34	50	45	44	40
16	53	50	49	45	66	60	59	54
25	70	65	64	59	88	78	77	70
35	86	80	77	72	109	97	96	86
50	104	96	94	86	131	116	117	103
70	131	121	118	109	167	146	149	130
95	158	145	143	131	202	175	180	156
120	183	167	164	150	234	202	208	179
150	209	191	188	171	261	224	228	196
185	238	216	213	194	297	256	258	222
240	279	253	249	227	348	299	301	258
300	319	291	285	259	398	343	343	295
400	-	-	-	-	475	-	406	-
500	-	-	-	-	545	-	464	-

Remark: *1. For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*
2. For installation more than one circuit in raceway, correction factor given in Table 5-8 shall be applied.
3. The current rating are applicable to DC electrical system with a maximum voltage of 1.5 kV DC.

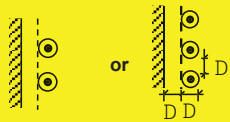
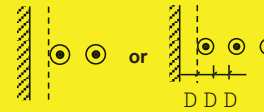
Table 5-21: Current rating of copper conductor, PVC insulated with sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 70ºC or 90ºC, ambient temperature 40ºC, installed on wall.

Installation Group	Group 3								
Cable Type	Flat	Round				Round			
Conductor Type	Multi-cores	Single-core				Multi-cores			
Insulation Type	PVC	PVC		XLPE		PVC		XLPE	
Conductor temperature	70°C	70°C		90°C		70°C		90°C	
No. of loaded conductor	2	2	3	2	3	2	3	2	3
Installation Method									
Electrical system	AC	AC, DC	AC	AC, DC	AC	AC, DC	AC	AC, DC	AC
Cable Code	VAF, VAF-G	NYY, IEC 60502-1		IEC60502-1		NYY, NYY-G, VCT, 60227 IEC 10, IEC 60502-1		IEC 60502-1	
Size (mm²)	Current rating (A)								
1	14	13	12	17	16	13	12	17	15
1.5	17	17	16	23	21	17	15	22	20
2.5	23	23	22	31	29	23	21	30	27
4	32	32	29	42	37	31	28	41	36
6	41	41	37	54	49	40	36	53	47
10	56	57	51	74	67	55	50	73	65
16	74	76	69	99	90	74	66	97	87
25	-	99	90	130	118	97	84	126	108
35	-	123	112	160	147	120	104	156	134
50	-	158	145	207	190	146	125	190	163
70	-	204	186	267	244	185	160	245	208
95	-	247	227	323	297	224	194	298	253
120	-	287	264	375	345	260	225	348	293
150	-	331	304	433	397	299	260	401	338
185	-	379	348	496	455	341	297	460	386
240	-	448	411	586	537	401	351	545	455
300	-	517	474	676	620	461	404	630	524
400	-	604	552	790	722	-	-	-	-
500	-	689	629	900	823	-	-	-	-

Remark: *1. For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*
2. The current rating are applicable to DC electrical system with a maximum voltage of 1.5 kV DC.
3. For installation more than one circuit in raceway, correction factor given in Table 5-8 shall be applied.

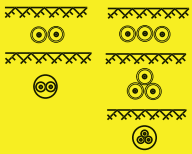
A

Table 5-22: Current rating of copper conductor, PVC insulated TIS 11-2553 for $U_0/U \leq 450/750V$, conductor temperature 70ºC or 90ºC, ambient temperature 40ºC installed on insulator in air.

Installation Group	Group 4	
Installation Method		
Cable Code	60227 IEC 01, NYY	
Size (mm²)	Current rating (A)	
4	30	37
6	39	48
10	56	67
16	78	92
25	113	127
35	141	157
50	171	191
70	221	244
95	271	297
120	315	345
150	365	397
185	418	453
240	495	535
300	573	617
400	692	741

Remark: *For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied*

Table 5-23: Current rating for copper conductor, PVC insulated with sheathed for $U_0/U \leq 0.6/1kV$, conductor temperature 70ºC, ambient temperature 30ºC, installed underground conduit or direct burial.

Installation Group	Group 5		Group 6
No. of loaded conductors	2	3	≤ 3
Conductor Type	Single-core/Multi-cores	Single-core/Multi-cores	Single-core/Multi-cores
Installation Method	 or	 or	 or or
Cable Code	NYY, VCT, and cable according with IEC 60502-1		
Size (mm²)	Current rating (A)		
1	17	15	21
1.5	21	19	26
2.5	28	25	35
4	36	33	45
6	46	41	57
10	62	55	76
16	81	72	99
25	106	94	128
35	129	114	154
50	153	136	181
70	190	168	223
95	232	204	267
120	265	234	304
150	303	266	342
185	344	303	386
240	404	361	448
300	462	404	507
400	529	462	577
500	605	527	654

Remark :

1. *For ground temperature other than 30ºC, correction factor given in Table 5-44 shall be applied.*
2. *For installation more than one circuit, correction factor given in Table 5-45 or 5-46 shall be applied.*
3. *For installation more than one circuit in raceway, correction factor given in Table 5-8 shall be applied.*
4. *The installation of the electrical system which is belong to MEA or PEA, Please consider current rating according to MEA or PEA standard except that no current rating is specified.*

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Table 5-24: Current rating for copper conductor, PVC insulated single-core TIS 11-2553 for $U_0/U \leq 300/500V$, conductor temperature 70ºC or 90ºC, ambient temperature 40ºC, installed in air.

Conductor temperature	70°C	90°C
Cable Code	60227 IEC 05, 60227 IEC 06	60227 IEC 07, 60227 IEC 08
Size (mm²)	Current rating (A)	
0.5	3	3
0.75	6	6
1	10*	10
1.5	-	16
2.5	-	25

Remark :

1. For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.

*2. *Current rating for 60227 IEC 06 cable only.*

Table 5-25: Current rating for flexible copper conductor, PVC insulated with sheathed TIS 11-2553 for U0/U ≤ 300/500V, conductor temperature 70ºC or 90ºC, ambient temperature 40ºC, installed in air.

No. of loaded conductors	2	3
Cable Code	60227 IEC 52, 60227 IEC 53, 60227 IEC 56, 60227 IEC 57	
Size (mm²)	Current rating (A)	
0.5	3	3
0.75	6	6
1	10	10
1.5	16	16
2.5	25	20

Remark : *For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*

Table 5-26: Current rating for flexible copper conductor, PVC insulated with/without sheathed TIS 11-2553 for $U_0/U \leq 450/750V$, conductor temperature 70ºC, ambient temperature 40ºC, installed in air.

Conductor Type/ No. of loaded conductor	2 Single-core cable or 2 Cores cable with/without ground	3, 4, 5 Cores cable
Cable Code	60227 IEC 02, VCT, VCT-G	VCT, VCT-G
Size (mm^2)	Current rating (A)	
1	13	11
1.5	16	14
2.5	25	21
4	30	26
6	39	34
10	51	47
16	73	63
25	97	83
35	140	102
50	175	-
70	216	-
95	258	-
120	302	-
150	347	-
185	394	-
240	471	-

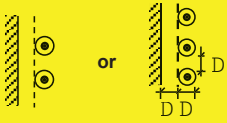
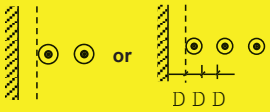
Remark : *For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*

Table 5-27: Current rating for copper conductor, XLPE insulated with/without sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 90ºC, ambient temperature 40ºC, installed in raceway in air.

Installation Group	Group 1				Group 2			
No. of loaded Conductor	2		3		2		3	
Conductor Type	Single-core	Multi-cores	Single-core	Multi-cores	Single-core	Multi-cores	Single-core	Multi-cores
Installation Method								
Electrical system	AC or DC		AC		AC or DC		AC	
Cable Code	IEC 60502-1 and special cable such as fire resistant (FRC), low smoke and halogen free (LSHF) etc.							
Size (mm²)	Current rating (A)							
1	13	13	12	12	15	15	14	14
1.5	17	17	15	15	21	20	18	18
2.5	24	23	21	20	28	27	25	24
4	32	30	28	27	38	36	34	32
6	41	38	36	35	49	46	44	40
10	56	52	49	46	68	63	60	55
16	74	69	66	62	91	83	80	73
25	96	90	86	81	121	108	106	96
35	119	110	106	99	149	133	131	116
50	144	132	128	118	180	159	159	140
70	182	167	163	149	230	201	202	177
95	219	200	197	179	278	241	245	212
120	253	230	227	207	322	278	284	244
150	289	264	259	236	358	304	311	273
185	329	299	295	268	409	349	349	309
240	386	351	346	315	480	418	410	362
300	442	402	396	360	549	484	468	414
400	-	-	-	-	622	-	531	-
500	-	-	-	-	713	-	606	-

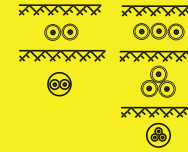
Remark: *1. For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*
2. For installation more than one circuit in raceway, correction factor given in Table 5-8 shall be applied.
3. The current rating are applicable to DC electrical system with a maximum voltage of 1.5 kV DC.

Table 5-28: Current rating for copper conductor, XLPE insulated with/without sheathed for U_0/U ≤ 0.6/1kV, conductor temperature 90ºC, ambient temperature 40ºC, installed on insulator in air.

Installation Group	Group 4	
Installation Method		
Cable Code	Cable according with IEC 60502-1	
Size (mm²)	Current rating (A)	
4	47	54
6	60	68
10	82	90
16	110	124
25	147	166
35	183	206
50	224	250
70	289	321
95	354	391
120	413	455
150	480	525
185	551	602
240	654	711
300	758	821
400	917	987
500	1,064	1,140

Remark: *For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied*

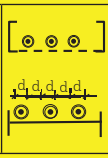
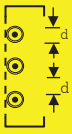
Table 5-29: Current rating for copper conductor, XLPE insulated with sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 90ºC, ambient temperature 30ºC, installed underground conduit or direct burial.

Installation Group	Group 5		Group 6
No. of loaded conductors	2	3	≤ 3
Conductor Type	Single-core/Multi-cores	Single-core/Multi-cores	Single-core/Multi-cores
Installation Method	 or	 or	 or or
Cable Code	Cable according with IEC 60502-1		
Size (mm²)	Current rating (A)		
1.5	25	22	33
2.5	33	29	43
4	43	38	55
6	54	47	70
10	71	63	92
16	94	83	119
25	124	109	152
35	150	132	184
50	180	159	217
70	223	196	266
95	271	238	318
120	313	275	362
150	355	312	406
185	406	356	459
240	477	418	533
300	543	475	601
400	625	545	684
500	717	623	777

Remark :

1. *For ground temperature other than 30ºC, correction factor given in Table 5-44 shall be applied.*
2. *For installation more than one circuit, correction factor given in Table 5-45 or 5-46 shall be applied.*
3. *For installation more than one circuit in raceway, correction factor given in Table 5-8 shall be applied.*
4. *The installation of the electrical system which is belong to MEA or PEA, Please consider current rating according to MEA or PEA standard except that no current rating is specified.*

Table 5-30: Current rating of copper conductor, PVC insulated with sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 70ºC, ambient temperature 40ºC, installed on perforated cable tray or cable ladder without cover.

Installation Group	Group 7						
No. of loaded conductors	2		3				
Conductor Type	Single-core/Multi-cores		Single-core				Multi-cores
Installation Method							
Electrical system	AC or DC		AC				
Cable Code	60227 IEC 10, NYY, VCT, IEC 60502-1 and special cable such as fire resistant (FRC), low smoke and halogen free (LSHF) etc.						
Size (mm²)	Current rating (A)						
1	-	15	-	-	-	-	13
1.5	-	19	-	-	-	-	16
2.5	-	26	-	-	-	-	22
4	-	35	-	-	-	-	30
6	-	44	-	-	-	-	37
10	-	61	-	-	-	-	52
16	-	82	-	-	-	-	70
25	114	104	99	96	127	113	88
35	141	129	124	119	157	141	110
50	171	157	151	145	191	171	133
70	218	202	196	188	244	221	171
95	264	245	239	230	297	271	207
120	306	285	279	268	345	315	240
150	353	330	324	310	397	365	278
185	403	378	371	356	453	418	317
240	475	447	441	422	535	495	374
300	547	516	511	488	617	573	432
400	656	-	599	571	741	692	-
500	755	-	686	652	854	800	-

Remark: *1. For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*
2. For installation more than one circuit in raceway, correction factor given in Table 40 or 5-41 for single core and multi cores cable respectively shall be applied.
3. The current rating are applicable to DC electrical system with a maximum voltage of 1.5 kV DC.

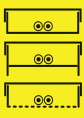
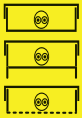
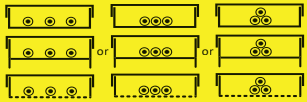
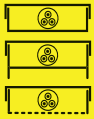
A

Table 5-30 (a): Current rating of copper conductor, PVC insulated with sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 70ºC, ambient temperature 40ºC, installed on unperforated cable tray without cover.

Installation Group	Group 7			
No. of loaded conductors	2		3	3 or 4
Conductor Type	Single-core	Multi-cores	Single-core	Multi-cores
Installation Method				
Electrical system	AC or DC		AC	
Cable Code	60227 IEC 10, NYY, VCT, IEC 60502-1 and special cable such as fire resistant (FRC), low smoke and halogen free (LSHF) etc.			
Size (mm²)	Current rating (A)			
1	-	13	-	12
1.5	-	17	-	15
2.5	-	23	-	21
4	-	31	-	28
6	-	40	-	36
10	-	55	-	50
16	-	74	-	66
25	99	97	90	84
35	123	120	112	104
50	158	146	145	125
70	204	185	186	160
95	247	224	227	194
120	287	260	264	225
150	331	299	304	260
185	379	341	348	297
240	448	401	411	351
300	517	461	474	404
400	604	-	552	-
500	689	-	629	-

Remark: *1. For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*
2. For installation more than one circuit in raceway, correction factor given in Table 5-40 or 5-41 for single core and multi cores cable respectively shall be applied.
3. The current rating are applicable to DC electrical system with a maximum voltage of 1.5 kV DC.

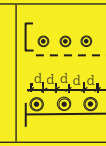
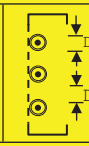
Table 5-31: Current rating for copper conductor, PVC insulated with sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 70ºC, ambient temperature 40ºC, installed on perforated or unperforated cable tray or cable ladder with cover.

Installation Group	Group 7			
No. of loaded conductors	2		3	
Conductor Type	Single-core	Multi-cores	Single-core	Multi-cores
Installation Method				
Electrical system	AC or DC		AC	
Cable Code	60227 IEC 10, NYY, VCT, IEC 60502-1 and special cable such as fire resistant (FRC), low smoke and halogen free (LSHF) etc.			
Size (mm²)	Current rating (A)			
1	-	11	-	10
1.5	-	14	-	13
2.5	-	20	-	17
4	-	26	-	23
6	-	33	-	30
10	-	45	-	40
16	-	60	-	54
25	88	78	77	70
35	109	97	96	86
50	131	116	117	103
70	167	146	149	130
95	202	175	180	156
120	234	202	208	179
150	261	224	228	196
185	279	256	258	222
240	348	299	301	258
300	398	343	343	295
400	475	-	406	-
500	545	-	464	-

Remark *(Table 5-31)*

1. *For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*
2. *For installation more than one circuit, correction factor given in Table 5-40 or 5-41 for single core and multi cores cable respectively shall be applied.*
3. *The current rating are applicable to DC electrical system with a maximum voltage of 1.5 kV DC.*

Table 5-32: Current rating for copper conductor, XLPE insulated with sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 90ºC, ambient temperature 40ºC, installed on perforated cable tray or cable ladder without cover.

Installation Group	Group 7						
No. of loaded conductors	2		3				
Conductor Type	Single-core	Multi-cores	Single-core				Multi-cores
Installation Method							
Electrical system	AC or DC		AC				
Cable Code	Cable according with IEC 60502-1 and special cable such as fire resistant (FRC), low smoke and halogen free (LSHF) etc.						
Size (mm²)	Current rating (A)						
1	-	19	-				16
1.5	-	24	-				21
2.5	-	33	-				29
4	-	45	-				38
6	-	57	-				49
10	-	78	-				68
16	-	105	-				91
25	147	136	128	123	166	147	116
35	182	168	160	154	206	183	144
50	220	205	197	188	250	224	175
70	282	263	254	244	321	289	224
95	343	320	311	298	391	354	271
120	398	374	364	349	455	413	315
150	459	430	422	404	525	480	363
185	523	493	485	464	602	551	415
240	618	583	577	552	711	654	490
300	713	674	670	640	821	758	564
400	855	-	790	749	987	917	-
500	986	-	908	861	1,140	1,064	-

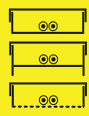
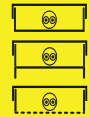
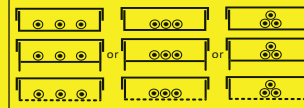
Remark: *1. For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*
2. For installation more than one circuit in raceway, correction factor given in Table 5-40 or 5-41 for single core and multi cores cable respectively shall be applied.
3. The current rating are applicable to DC electrical system with a maximum voltage of 1.5 kV DC.

Table 5-32 (a): Current rating for copper conductor, XLPE insulated with sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 90ºC, ambient temperature 40ºC, installed on unperforated cable tray without cover.

Installation Group	Group 7			
No. of loaded conductors	2		3	
Conductor Type	Single-core	Multi-cores	Single-core	Multi-cores
Installation Method				
Electrical system	AC or DC		AC	
Cable Code	Cable according with IEC 60502-1 and special cable such as fire resistant (FRC), low smoke and halogen free (LSHF) etc.			
Size (mm²)	Current rating (A)			
1	-	17	-	15
1.5	-	22	-	20
2.5	-	30	-	27
4	-	41	-	36
6	-	53	-	47
10	-	73	-	65
16	-	97	-	87
25	130	126	118	108
35	160	156	147	134
50	207	190	190	163
70	267	245	244	208
95	323	298	297	253
120	376	348	345	293
150	433	401	397	338
185	496	460	455	386
240	586	545	537	455
300	676	630	620	524
400	790	-	722	-
500	901	-	823	-

Remark: *1. For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*
2. For installation more than one circuit, correction factor given in Table 5-40 or 5-41 for single core and multi cores cable respectively shall be applied. .
3. The current rating are applicable to DC electrical system with a maximum voltage of 1.5 kV DC.

Table 5-33: Current rating for copper conductor, XLPE insulated with sheathed for $U_0/U \leq 0.6/1$ kV, conductor temperature 90ºC, ambient temperature 40ºC, installed on unperforated or perforated cable tray or cable ladder with cover.

Installation Group	Group 7			
No. of loaded conductors	2		3	
Conductor Type	Single-core	Multi-cores	Single-core	Multi-cores
Installation Method				
Electrical system	AC or DC		AC	
Cable Code	IEC 60502-1 and special cable such as fire resistant (FRC), low smoke and halogen free (LSHF) etc.			
Size (mm²)	Current rating (A)			
1	-	15	-	14
1.5	-	20	-	18
2.5	-	27	-	24
4	-	36	-	32
6	-	46	-	40
10	-	63	-	55
16	-	83	-	73
25	121	108	106	96
35	149	133	131	116
50	180	159	159	140
70	230	201	202	177
95	278	241	245	212
120	322	278	284	244
150	358	304	311	273
185	409	349	349	309
240	480	418	410	362
300	549	484	468	414
400	622	-	531	-
500	713	-	606	-

Remark: *1. For ambient temperature other than 40ºC, correction factor given in Table 5-43 shall be applied.*
2. For installation more than one circuit, correction factor given in Table 5-40 or 5-41 for single core and multi cores cable respectively shall be applied. .
3. The current rating are applicable to DC electrical system with a maximum voltage of 1.5 kV DC.

Table 5-40: Correction factor for current rating of single-core cable installed on cable tray for more than one circuit.

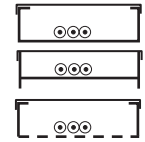
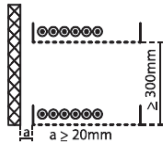
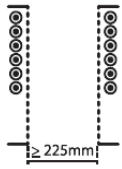
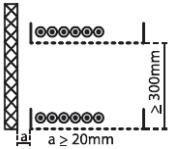
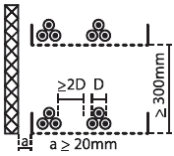
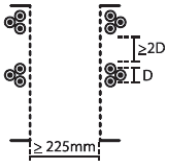
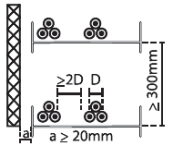
Installation method		No. of trays or ladders	No. of circuits / tray or ladder						Method of wiring
			1	2	3	4	5-6	7-9	
Perforated or unperforated cable tray or cable ladder with cover		1	See Table 5-40(a), Column 2						Flat laying, touching, Trefoil
Perforated cable tray (Note 2)		1	1.00	0.91	0.87	0.82	0.78	0.77	Flat laying, touching
		2	0.96	0.87	0.81	0.78	0.74	0.69	
		3	0.95	0.85	0.78	0.75	0.70	0.65	
Vertical perforated cable tray (Note 3)		1	1.00	0.86	0.80	0.75	0.71	0.70	Flat laying, vertical, touching
		2	0.95	0.84	0.77	0.72	0.67	0.66	
Cable ladder (Note 2)		1	1.00	0.97	0.96	0.94	0.93	0.92	Flat laying, touching
		2	0.98	0.93	0.89	0.88	0.86	0.83	
		3	0.97	0.90	0.86	0.83	0.80	0.77	
Perforated cable tray (Note 2)		1	1.00	0.98	0.96	0.93	0.89	-	Trefoil laying, space between group ≥ 2 times of the overall diameter of cable
		2	0.97	0.93	0.89	0.85	0.80	-	
		3	0.96	0.92	0.86	0.82	0.76	-	
Vertical perforated cable tray (Note 3)		1	1.00	0.91	0.89	0.88	0.87	-	
		2	1.00	0.90	0.86	0.85	0.83	-	
Cable ladder (Note 2)		1	1.00	1.00	1.00	1.00	1.00	-	
		2	0.97	0.95	0.93	0.92	0.91	-	
		3	0.96	0.94	0.90	0.89	0.86	-	

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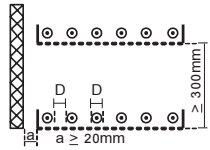
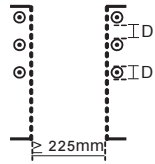
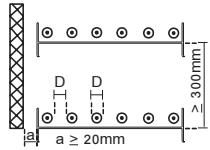
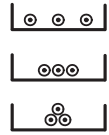
Table 5-40 (Continuous)

Installation method		No. of trays or ladders	No. of circuits / tray or ladder						Method of wiring
			1	2	3	4	5-6	7-9	
Perforated cable tray (Note 2)		1	1.00	0.93	0.90	0.87	0.83	-	Space between cable not less than diameter of cable
		2	0.97	0.89	0.85	0.81	0.76	-	
		3	0.96	0.88	0.82	0.78	0.72	-	
Vertical perforated cable tray (Note 3)		1	1.00	0.91	0.89	0.88	0.87	-	
		2	0.94	0.90	0.86	0.85	0.83	-	
Cable ladder (Note 2)		1	1.00	0.97	0.96	0.96	0.96	-	
		2	0.97	0.94	0.93	0.92	0.91	-	
		3	0.96	0.93	0.92	0.91	0.88	-	
Unperforated cable tray without cover		1	See Table 5-40(a), Column 3						Flat laying, touching

Remark: *1. Correction factors are given for single layer of cable.*
2. Correction factors are given for vertical spacing between trays of 300 mm and at least 20 mm between trays and wall.
3. Correction factors are given for horizontal spacing between trays of 225 mm with trays mounted back to back.
4. In case of more than one cable tray, correction factors shall be used from the cable tray which has highest number of cable circuits.
5. In case of one cable tray with more than 9 circuits, correction factor for 9 circuits shall be used.

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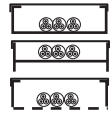
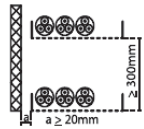
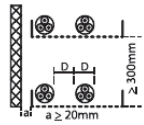
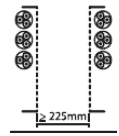
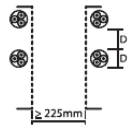
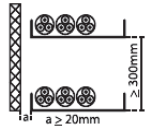
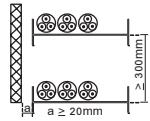
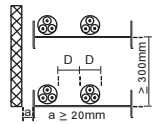
Table 5-40(a): Correction factor for current rating of single-core cable installed on cable tray for more than one circuit.

Column 1	Column 2	Column 3
Group of circuit	**Correction factor for cable tray or cable ladder with cover**	**Correction factor for unperforated cable tray without cover**
1	1.0	1.0
2	0.8	0.85
3	0.7	0.79
4	0.65	0.75
5	0.60	0.73
6	0.57	0.72
7	0.54	0.72
8	0.52	0.71
9	0.50	0.70
10-12	0.45	0.70
13-16	0.41	0.70
17-20	0.38	0.70

Table 5-41: Correction factor for current rating of single-core cable installed on cable tray for more than one circuit.

Installation method		No. of trays or ladders	No. of circuits / tray or ladder					
			1	2	3	4	5-6	7-9
Perforated or Unperforated cable tray or cable ladder with cover		1	See Table 5-40(a), Column 2					
Perforated cable tray (Note 2)		1	1.00	0.88	0.82	0.77	0.73	0.72
		2	1.00	0.87	0.80	0.77	0.73	0.68
		3	1.00	0.86	0.79	0.76	0.71	0.65
		4-6	1.00	0.84	0.77	0.73	0.68	0.64
		1	1.00	1.00	0.98	0.95	0.91	-
		2	1.00	0.99	0.96	0.92	0.87	-
		3	1.00	0.98	0.95	0.91	0.85	-
Vertical perforated cable tray (Note 3)		1	1.00	0.88	0.82	0.77	0.73	0.72
		2	1.00	0.88	0.81	0.76	0.71	0.70
		1	1.00	0.91	0.89	0.88	0.87	-
		2	1.00	0.91	0.88	0.87	0.85	-
Unperforated cable tray (Note 2)		1	0.97	0.84	0.78	0.75	0.71	0.68
		2	0.97	0.83	0.76	0.72	0.68	0.63
		3	0.97	0.82	0.75	0.71	0.66	0.61
		4-6	0.97	0.81	0.73	0.69	0.63	0.58
Cable ladder (Note 2)		1	1.00	0.87	0.82	0.80	0.79	0.78
		2	1.00	0.86	0.80	0.78	0.76	0.73
		3	1.00	0.85	0.79	0.76	0.73	0.70
		4-6	1.00	0.84	0.77	0.73	0.68	0.64
		1	1.00	1.00	1.00	1.00	1.00	-
		2	1.00	0.99	0.98	0.97	0.96	-
		3	1.00	0.98	0.97	0.96	0.93	-

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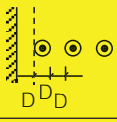
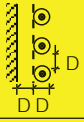
Remark *(Table 5-41)*

1. *Correction factors are given for single layer of cable.*
2. *Correction factors are given for vertical spacing between trays of 300 mm and at least 20 mm between trays and wall.*
3. *Correction factors are given for horizontal spacing between trays of 225 mm with trays mounted back to back.*
4. *In case of more than one cable tray, correction factors shall be used from the cable tray which has highest number of cable circuits.*
5. *In case of one cable tray with more than 9 circuits, correction factor for 9 circuits shall be used.*

Table 5-42: Current rating for aluminium conductor, PVC insulated TIS 293-2541 for U_0/U ≤ 450/750V, conductor temperature 70ºC, ambient temperature 40ºC, installed on insulator in air.

Installation Method		
Size (mm^2)	**Current rating (A)**	
25	97	86
35	121	108
50	147	132
70	189	171
95	231	210
120	268	245
150	310	284
185	354	327
240	419	389
300	485	452
400	584	547
500	674	635

Remark: *Where the ambient temperature in other than 40ºC, the correction factor given in Table 5-43*

Table 5-43: Correction factor for ambient temperature other than 40ºC to be applied to the current-carrying capacities for cable in air.

Ambient Temperature (ºC)	Insulation				
	PVC		XLPE or EPR	MI	
	70°C	90°C	90°C	70°C	105°C
11-15	1.34	-	1.23	1.41	1.21
16-20	1.29	-	1.19	1.34	1.16
21-25	1.22	-	1.14	1.26	1.13
26-30	1.15	-	1.10	1.18	1.09
31-35	1.08	1.00	1.05	1.09	1.04
36-40	1.00	1.00	1.00	1.00	1.00
41-45	0.91	1.00	0.96	0.91	0.96
46-50	0.82	1.00	0.90	0.79	0.91
51-55	0.70	0.96	0.84	0.67	0.87
56-60	0.57	0.83	0.78	0.53	0.82
61-65	-	0.67	0.71	-	0.76
66-70	-	0.47	0.64	-	0.70
71-75	-	-	0.55	-	0.65
76-80	-	-	0.45	-	0.59
81-85	-	-	-	-	0.51
86-90	-	-	-	-	0.43
91-95	-	-	-	-	0.35

Table 5-44: Correction factor for ambient air temperatures other than 30°C to be applied to current-carrying capacities for cables in the ground.

Ambient Temperature (ºC)	Insulation	
	PVC	XLPE or EPR
11-15	1.18	1.12
16-20	1.12	1.08
21-25	1.07	1.03
26-30	1.00	1.00
31-35	0.94	0.96
36-40	0.87	0.91
41-45	0.80	0.86
46-50	0.71	0.82
51-55	0.62	0.76
56-60	0.51	0.70
61-65	-	0.65
66-70	-	0.57
71-75	-	0.49
76-80	-	0.41

Table 5-45: Correction factor for more than one circuit, single-core or multi-cores cable U_0/U ≤ 0.6/1kV, Cables laid directly in ground

No. of circuit	Cable-to-cable clearance (mm)				
	Touching	One cable diameter	125	250	500
2	0.75	0.80	0.85	0.90	0.90
3	0.65	0.70	0.75	0.80	0.85
4	0.60	0.60	0.70	0.75	0.80
5	0.55	0.55	0.65	0.70	0.80
6	0.50	0.55	0.60	0.70	0.80

Table 5-46: Correction factor for more than one circuit, single-core or multi-cores cable U_0/U ≤ 0.6/1kV, Cables in duct in ground

No. of circuit	Duct-to-duct clearance (mm.)			
	Touching	250	500	1,000
2	0.85	0.90	0.95	0.95
3	0.75	0.85	0.90	0.95
4	0.70	0.80	0.85	0.90
5	0.65	0.80	0.85	0.90
6	0.60	0.80	0.80	0.90

Table 5-47: Schedule of reference method of installation which form the basis of the tabulated current-carrying capacities

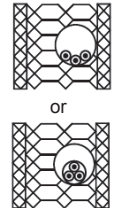
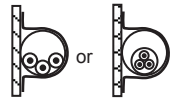
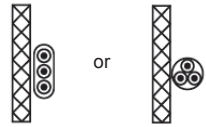
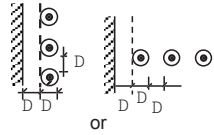
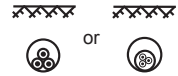
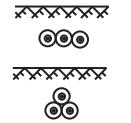
Method of Wiring	Method of Installation	Group of Installation	Note
Single-core or multi-cores insulated cable with/without sheathed installed in metallic or non-metallic raceway in a thermal insulated wall or ceiling.		Group 1	Calling or thermal insulated wall has a thermal conductant not less than 10 W/m²•K
Single-core or multi-cores insulated cable with/without sheathed installed in metallic or non-metallic raceway on wall or ceiling in concrete wall.		Group 2	Ceiling or concrete wall have thermal resistivity not more than 2 K•m/W
Single-core or multi-cores insulated cable with/without sheathed on wall and no enclosre.		Group 3	-
Single-core or multi-cores insulated cable with/without sheathed installed in air on insulators with space.		Group 4	Spacing between cable and cable, wall and cable not less than diameter of cable.
Single-core or multi-cores insulated cable with/without sheathed installed underground in metallic or non-metallic conduit.		Group 5	-
Single-core or multi-cores insulated cable with/without sheathed installed directly underground.		Group 6	-

Table 5-47: (Continuous)

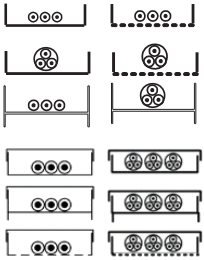
Methods of Wiring	Methods of Installation	Group of Installation	Note
Single-core or multi-cores insulated cable with sheathed installed on perforated or unperforated cable trays or cable ladder.		Group 7	Perforated tray shall have the perforation of not less than 30% of the total surface area of the tray.

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Table 5-48: Requirement for installation copper conductor, PVC insulated cable according to TIS 11-2553 and TIS 11 Part 101-2559

Cable Name	Size (mm^2)	Type of conductor	No. of core	Temp. of conductor	Sheath	Rated voltage Uo/U(V)	Application
60227 IEC 01	1.5-400	Solid or Stranded	Single core	70°C	-	450/750	• Installation exposed • Installation in raceway • Don't allow for underground installing
60227 IEC 02	1.5-240	Flexible	Single core	70°C	-	450/750	• Installation exposed • Installation in raceway • Don't allow for underground installing
60227 IEC 05	0.5-1	Solid	Single core	70°C	-	300/500	• Installation exposed • Installation in raceway • Don't allow for underground installing
60227 IEC 06	0.5-1	Flexible	Single core	70°C	-	300/500	• Installation exposed • Installation in raceway • Don't allow for underground installing
60227 IEC 07	0.5-2.5	Solid	Single core	90°C	-	300/500	• Installation exposed • Installation in raceway • Don't allow for underground installing
60227 IEC 08	0.5-2.5	Flexible	Single core	90°C	-	300/500	• Installation exposed. • Installation in raceway • Don't allow for underground installing

Table 5-48 (Continuous)

Cable Name	Size (mm^2)	Type of conductor	No. of core	Temp. of conductor	Sheath	Rated voltage Uo/U(V)	Application
60227 IEC 10	1.5-35	Solid or Stranded	Multi cores (with/without ground)	70°C	-	300/500	• Installation exposed • Installation on cable tray • Don't allow for underground installing
60227 IEC 52	0.5-0.75	Flexible	Multi cores (with/without ground)	70°C	-	300/300	For mobile-electrical equipment, electrical appliances
60227 IEC 53	0.75-2.5	Flexible	Multi cores (with/without ground)	70°C	o	300/500	For mobile-electrical equipment, electrical appliances
60227 IEC 56	0.5-0.75	Flexible	Multi cores (with/without ground)	90°C	o	300/300	For mobile-electrical equipment, electrical appliances
60227 IEC 57	0.75-2.5	Flexible	Multi cores (with/without ground)	90°C	o	300/500	For mobile-electrical equipment, electrical appliances
NYY	1-500	Solid or Stranded	Single core	70°C	o	450/750	• Installation exposed • Installation in raceway • Can use allow for underground installing
	1-300		Multi cores				
NYY-G	1-300		Multi cores (with/without ground)				
VAF VAF-G	1-16	Solid or Stranded	2 cores 2 cores with ground	70°C	o	300/500	• Installation on a wall • Installation in raceway • Don't allow for underground installing
VCT VCT-G	1-35	Flexible	Single core Multi cores (with/without ground)	70°C	o	450/750	• Installation exposed • For electrical appliances • Installation on cable tray • Can use allow for underground installing

A

Voltage Drop for Single-core and Multi-cores cable

Table 1: Single-core 70°C, Copper conductor, PVC insulated cable

Size (mm²)	Single-phase, AC (mV/A/m)			Three-phase, AC (mV/A/m)			
	Installation method						
	Group 1, 2	Group 3, 7		Group 1, 2	Group 3, 7		
		Touching	Spaced		Trefoil	Flat	Spaced
1.0	44	44	44	38	38	38	38
1.5	29	29	29	25	25	25	25
2.5	18	18	18	15	15	15	15
4	11	11	11	9.5	9.5	9.5	9.5
6	7.3	7.3	7.3	6.4	6.4	6.4	6.4
10	4.4	4.4	4.4	3.8	3.8	3.8	3.8
16	2.8	2.8	2.8	2.4	2.4	2.4	2.4
25	1.81	1.75	1.75	1.52	1.50	1.50	1.52
35	1.33	1.25	1.27	1.13	1.11	1.12	1.15
50	1.00	0.94	0.97	0.85	0.81	0.84	0.86
70	0.71	0.66	0.69	0.61	0.57	0.60	0.63
95	0.56	0.50	0.54	0.48	0.44	0.47	0.50
120	0.48	0.41	0.45	0.40	0.35	0.39	0.43
150	0.41	0.35	0.39	0.35	0.30	0.34	0.38
185	0.36	0.29	0.34	0.31	0.26	0.30	0.34
240	0.30	0.25	0.29	0.27	0.21	0.25	0.29
300	0.27	0.22	0.26	0.24	0.18	0.23	0.26
400	0.25	0.19	0.23	0.22	0.16	0.20	0.24
500	0.23	0.17	0.21	0.20	0.15	0.18	0.22

Refer EIT Standard 022001-22

Table 2: Multi-cores 70°C, Copper conductor, PVC insulated cable

Size (mm²)	Single-phase AC (mV/A/m)	Three-phase AC (mV/A/m)
1.0	44	38
1.5	29	25
2.5	18	15
4	11	9.5
6	7.3	6.4
10	4.4	3.8
16	2.8	2.4
25	1.75	1.50
35	1.25	1.10
50	0.93	0.80
70	0.65	0.57
95	0.49	0.43
120	0.41	0.36
150	0.34	0.29
185	0.29	0.25
240	0.24	0.21
300	0.21	0.18
400	0.17	0.15

Refer EIT Standard 022001-22

Table 3: Single-core 90°C, Copper conductor, XLPE insulation cable

Size (mm²)	Single-phase, AC (mV/A/m)			Three-phase, AC (mV/A/m)			
	Installation method						
	Group 1, 2	Group 3, 7		Group 1, 2	Group 3, 7		
		Touching	Spaced		Trefoil	Flat	Spaced
1.0	46	46	46	40	40	40	40
1.5	31	31	31	27	27	27	27
2.5	19	19	19	16	16	16	16
4	12	12	12	10	10	10	10
6	7.9	7.9	7.9	6.8	6.8	6.8	6.8
10	4.7	4.7	4.7	4.0	4.0	4.0	4.0
16	2.9	2.9	2.9	2.5	2.5	2.5	2.5
25	1.85	1.85	1.85	1.60	1.57	1.58	1.60
35	1.37	1.35	1.37	1.17	1.14	1.15	1.17
50	1.04	1.00	1.02	0.91	0.87	0.87	0.90
70	0.75	0.70	0.73	0.65	0.61	0.62	0.64
95	0.58	0.52	0.56	0.50	0.45	0.46	0.50
120	0.49	0.42	0.47	0.42	0.37	0.38	0.42
150	0.42	0.36	0.40	0.37	0.31	0.33	0.37
185	0.37	0.31	0.35	0.32	0.26	0.27	0.31
240	0.32	0.25	0.30	0.27	0.22	0.23	0.27
300	0.28	0.22	0.26	0.24	0.19	0.20	0.24
400	0.25	0.19	0.23	0.22	0.17	0.18	0.22
500	0.23	0.17	0.21	0.20	0.15	0.16	0.20

Refer EIT Standard 022001-22

Table 34: Multi-cores 90°C, Copper conductor, XLPE insulation cable

Size (mm²)	Single-phase AC (mV/A/m)	Three-phase AC (mV/A/m)
1.0	46	40
1.5	31	27
2.5	19	16
4	12	10
6	7.9	6.8
10	4.7	4.0
16	2.9	2.5
25	1.85	1.60
35	1.35	1.15
50	0.99	0.86
70	0.68	0.60
95	0.52	0.44
120	0.42	0.36
150	0.35	0.31
185	0.30	0.25
240	0.24	0.22
300	0.21	0.18
400	0.19	0.16

Refer EIT Standard 022001-22

Copper Conductor Cables

Building Wires and Cables

TIS 11 Part 3-2553 : Non-Sheathed Cables for Fixed Wiring

60227 IEC 01 THW or YK 60227 IEC 01 THW	450/750V 70°C SOILD AND STRANDED CONDUCTOR PVC INSULATED, SINGLE CORE	B1
60227 IEC 02 THW (f)	450/750V 70°C FLEXIBLE CONDUCTOR PVC INSULATED, SINGLE CORE	B3
60227 IEC 05 IV	300/500 V 70°C SOLID CONDUCTOR PVC INSULATED, SINGLE CORE	B4
60227 IEC 06 IV (f)	300/500 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED, SINGLE CORE	B5
60227 IEC 07 HIV	300/500 V 90°C SOLID CONDUCTOR PVC INSULATED, SINGLE CORE	B6
60227 IEC 08 HIV (f)	300/500 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED, SINGLE CORE	B7

TIS 11 Part 4-2553: Sheathed Cables for Fixed Wiring

60227 IEC 10	300/500 V 70'C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED	B8

TIS 11 Part 5-2553 Flexible Cables (Cords)

B

TIS 11 Part 101-2559: Sheathed Cables for General Purposes

Low Voltage Power Cables

Medium Voltage Power Cables

B

High Voltage Power Cables

Control Cables

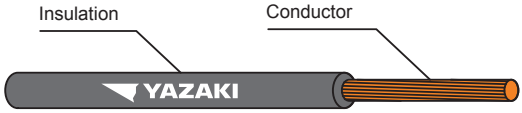
Automobile Wire and Cables

Bare Conductor

B

60227 IEC 01 or YK 60227 IEC 01 THW

450/750V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED, SINGLE CORE



TIS 11 Part 3-2553

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Black
(Other colors available upon request)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 3-2553 Table 1

APPLICATION

Insulation : Polyvinyl chloride (PVC/C)

Cable name	Nominal cross sectional area	Conductor type	Insulation thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating			Cable weight approx.	Standard Length
				minimum	maximum			In free air at (40°C)	In Conduit in air at 40°C			
									Single-phase	Three-phase		
	(mm^2)		(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)			(kg/km)	(m)
60227 IEC 01 THW	1.5	Solid	0.7	2.6	3.2	12.1	0.011	21	15	13	21	100/C
	1.5	Non-compacted	0.7	2.7	3.3	12.1	0.010	21	15	13	22	100/C
	2.5	Solid	0.8	3.2	3.9	7.41	0.010	28	21	18	32	100/C
	2.5	Non-compacted	0.8	3.3	4.0	7.41	0.009	28	21	18	35	100/C
	4	Solid	0.8	3.6	4.4	4.61	0.0085	37	28	24	47	100/C
	4	Non-compacted	0.8	3.8	4.6	4.61	0.0077	37	28	24	50	100/C
YK 60227 IEC 01 THW	6	Non-compacted	0.8	4.3	5.2	3.08	0.0065	49	36	31	70	100/C
	10	Non-compacted	1.0	5.6	6.7	1.83	0.0065	68	50	44	120	100/C
	16	Compacted	1.0	6.4	7.8	1.15	0.0050	91	66	59	180	100/C
	25	Compacted	1.2	8.1	9.7	0.727	0.0050	122	88	77	280	100/C
	35	Compacted	1.2	9.0	10.9	0.524	0.0043	151	109	96	370	100/C
	50	Compacted	1.4	10.6	12.8	0.387	0.0043	184	131	117	500	1000/D
	70	Compacted	1.4	12.1	14.6	0.268	0.0035	234	167	149	700	1000/D
	95	Compacted	1.6	14.1	17.1	0.193	0.0035	292	202	180	1000	1000/D
	120	Compacted	1.6	15.6	18.8	0.153	0.0032	341	234	208	1200	1000/D
	150	Compacted	1.8	17.3	20.9	0.124	0.0032	391	261	228	1500	1000/D
	185	Compacted	2.0	19.3	23.3	0.0991	0.0032	454	297	258	1900	1000/D
	240	Compacted	2.2	22.0	26.6	0.0754	0.0032	543	348	301	2500	1000/D
60227 IEC 01 THW	300	Non-compacted	2.4	24.5	29.6	0.0601	0.0030	628	398	343	3100	500/D
	400	Non-compacted	2.6	27.5	33.2	0.047	0.0028	736	475	406	3900	500/D

C = Packing in Coil
D = Packing in drum

B

60227 IEC 01 or YK 60227 IEC 01 THW

450/750V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED, SINGLE CORE

TIS 11 Part 3-2553

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Black
(Other colors available upon request)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 3-2553 Table 1

APPLICATION

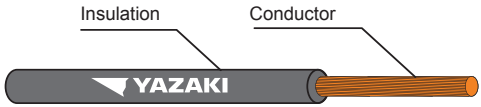
Building wiring for installation on insulator or in raceway dry location.

B

Cable name	Nominal cross sectional area (mm²)	Conductor type	A.C Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
60227 IEC 01 THW	1.5	Solid	14.4777	0.5259	0.1652	14.4786
	1.5	Non-compacted	14.4777	0.5276	0.1658	14.4786
	2.5	Solid	8.8661	0.5121	0.1609	8.8676
	2.5	Non-compacted	8.8661	0.5202	0.1634	8.8676
	4	Solid	5.5159	0.4917	0.1545	5.5181
	4	Non-compacted	5.5159	0.4870	0.1530	5.5180
YK 60227 IEC 01 THW	6	Non-compacted	3.6852	0.5606	0.1761	3.6894
	10	Non-compacted	2.1896	0.5219	0.1640	2.1957
	16	Compacted	1.3776	0.4642	0.1458	1.3853
	25	Compacted	0.8700	0.4594	0.1443	0.8819
	35	Compacted	0.6271	0.4496	0.1412	0.6428
	50	Compacted	0.4633	0.4477	0.1406	0.4842
	70	Compacted	0.3210	0.4354	0.1368	0.3489
	95	Compacted	0.2314	0.4347	0.1366	0.2687
	120	Compacted	0.1836	0.4295	0.1349	0.2278
	150	Compacted	0.1491	0.4292	0.1348	0.2010
	185	Compacted	0.1194	0.4281	0.1345	0.1798
	240	Compacted	0.0914	0.4257	0.1337	0.1620
60227 IEC 01 THW	300	Non-compacted	0.0734	0.4177	0.1312	0.1504
	400	Non-compacted	0.0581	0.4160	0.1307	0.1430

60227 IEC 02 THW (f)

450/750V 70°C FLEXIBLE CONDUCTOR PVC INSULATED, SINGLE CORE



TIS 11 Part 3-2553

CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Black
(Other colors available upon request)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 3-2553 Table 3

APPLICATION

Building wiring for installation on insulator or in raceway dry location.

Nominal cross sectional area	Conductor type	Insulation thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air maximum (40°C)	Cable weight approx.	Standard Length
			minimum	maximum					
(mm^2)		(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
1.5	Flexible	0.7	2.8	3.4	13.3	0.010	16	24	100/C
2.5	Flexible	0.8	3.4	4.1	7.98	0.009	25	37	100/C
4	Flexible	0.8	3.9	4.8	4.95	0.0070	30	54	100/C
6	Flexible	0.8	4.4	5.3	3.30	0.0060	39	75	100/C
10	Flexible	1.0	5.7	6.8	1.91	0.0056	51	130	100/C
16	Flexible	1.0	6.7	8.1	1.21	0.0046	73	185	100/C
25	Flexible	1.2	8.4	10.2	0.780	0.0044	97	285	100/C
35	Flexible	1.2	9.7	11.7	0.554	0.0038	140	400	100/C
50	Flexible	1.4	11.5	13.9	0.386	0.0037	175	555	500/D
70	Flexible	1.4	13.2	16.0	0.272	0.0032	216	765	500/D
95	Flexible	1.6	15.1	18.2	0.206	0.0032	258	1,000	500/D
120	Flexible	1.6	16.7	20.2	0.161	0.0029	302	1,300	500/D
150	Flexible	1.8	18.6	22.5	0.129	0.0029	347	1,600	500/D
185	Flexible	2.0	20.6	24.9	0.106	0.0029	394	1,900	500/D
240	Flexible	2.2	23.5	28.4	0.081	0.0028	471	2,500	500/D

C = Packing in Coil
D = Packing in drum

Nominal cross sectional area	A.C Resistance	Inductance	Reactance	Impedance
	R	L	XL	Z
(mm^2)	(Ω/km)	(MΩ-km)	(MΩ-km)	(MΩ-km)
1.5	15.9135	0.5149	0.1618	15.9143
2.5	9.5481	0.5038	0.1583	9.5494
4	5.9227	0.4846	0.1522	5.9246
6	3.9485	0.4637	0.1457	3.9512
10	2.2854	0.4631	0.1423	2.2898
16	1.4478	0.4537	0.1394	1.4545
25	0.9334	0.4409	0.1385	0.9436
35	0.6630	0.4312	0.1355	0.6767
50	0.4621	0.4294	0.1349	0.4814
70	0.3258	0.4215	0.1324	0.3517
95	0.2469	0.4230	0.1329	0.2804
120	0.1932	0.4174	0.1311	0.2335
150	0.1550	0.4172	0.1311	0.2030
185	0.1277	0.4187	0.1315	0.1833
240	0.0969	0.4164	0.1308	0.1628

60227 IEC 05 IV

300/500 V 70°C SOLID CONDUCTOR PVC INSULATED, SINGLE CORE

TIS 11 Part 3-2553

CABLE STRUCTURE

Conductor : Solid annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Black
(Other colors available upon request)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 3-2553 Table 5

APPLICATION

Building wiring for installation on insulator or in raceway dry location.

B

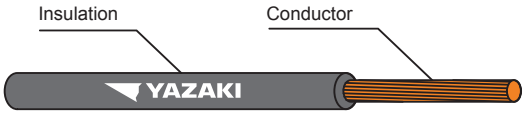
Nominal cross sectional area	Conductor type	Insulation thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air maximum (40°C)	Cable weight approx.	Standard Length
			minimum	maximum					
(mm^2)		(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
0.5	Solid	0.6	1.9	2.3	36.0	0.015	3	8.8	100/C
0.75	Solid	0.6	2.1	2.5	24.5	0.012	6	12	100/C
1	Solid	0.6	2.2	2.7	18.1	0.011	10	14	100/C

C = Packing in Coil

Nominal cross sectional area	A.C Resistance	Inductance	Reactance	Impedance
	R	L	XL	Z
(mm^2)	(Ω/km)	(MΩ-km)	(MΩ-km)	(MΩ-km)
0.5	43.0740	0.5798	0.1821	43.0744
0.75	29.3143	0.5486	0.1723	29.3148
1	21.6567	0.5366	0.1686	21.6573

60227 IEC 06 IV (f)

300/500 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED, SINGLE CORE



TIS 11 Part 3-2553

CABLE STRUCTURE

Conductor : Fiexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Black
(Other colors available upon request)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 3-2553 Table 7

APPLICATION

Building wiring for installation on insulator or in raceway dry location.

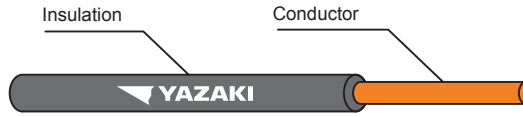
Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Overall diameter minimum (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in free air maximum (40°C) (A)	Cable weight approx. (kg/km)	Standard Length (m)
0.5	Flexible	0.6	2.1	2.5	39.0	0.013	3	9	100/C
0.75	Flexible	0.6	2.2	2.7	26.0	0.011	6	12	100/C
1	Flexible	0.6	2.4	2.8	19.5	0.010	10	15	100/C

C = Packing in Coil

Nominal cross sectional area (mm²)	A.C Resistance R (Ω/km)	Inductance L (MΩ-km)	Reactance XL (MΩ-km)	Impedance Z (MΩ-km)
0.5	46.6635	0.5642	0.1773	46.6638
0.75	31.1090	0.5394	0.1695	31.1095
1	23.3318	0.5225	0.1641	23.3323

60227 IEC 07 HIV

300/500 V 90°C SOLID CONDUCTOR PVC INSULATED, SINGLE CORE



TIS 11 Part 3-2553

CABLE STRUCTURE

Conductor : Solid annealed copper wire

Insulation : Polyvinyl chloride (PVC/E)

Insulation color : Black
(Other colors available upon request)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 3-2553 Table 9

APPLICATION

Building wiring for installation on insulator or in raceway dry location.

B

Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Overall diameter minimum (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 90°C minimum (MΩ-km)	Continuous current rating in free air maximum (40°C) (A)	Cable weight approx. (kg/km)	Standard Length (m)
0.5	Solid	0.6	1.9	2.3	36.0	0.015	3	8.6	100/C
0.75	Solid	0.6	2.1	2.5	24.5	0.013	6	11	100/C
1	Solid	0.6	2.2	2.7	18.1	0.012	10	14	100/C
1.5	Solid	0.7	2.6	3.2	12.1	0.011	16	20	100/C
2.5	Solid	0.8	3.2	3.9	7.41	0.009	25	32	100/C

C = Packing in Coil

Nominal cross sectional area (mm²)	A.C Resistance R (Ω/km)	Inductance L (MΩ-km)	Reactance XL (MΩ-km)	Impedance Z (MΩ-km)
0.5	43.0740	0.5758	0.1809	43.0744
0.75	29.3143	0.5526	0.1736	29.3148
1	21.6567	0.5401	0.1697	21.6573
1.5	14.4777	0.5288	0.1661	14.4786
2.5	8.8661	0.5198	0.1633	8.8676

60227 IEC 08 HIV (f)

300/500 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED, SINGLE CORE

TIS 11 Part 3-2553

CABLE STRUCTURE

Conductor : Fiexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/E)

Insulation color : Black
(Other colors available upon request)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 3-2553 Table 11

APPLICATION

Building wiring for installation on insulator or in raceway dry location.

Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Overall diameter minimum (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 90°C minimum (MΩ-km)	Continuous current rating in free air maximum (40°C) (A)	Cable weight approx. (kg/km)	Standard Length (m)
0.5	Flexible	0.6	2.1	2.5	39.0	0.013	3	9	100/C
0.75	Flexible	0.6	2.2	2.7	26.0	0.012	6	12	100/C
1	Flexible	0.6	2.4	2.8	19.5	0.010	10	15	100/C
1.5	Flexible	0.7	2.8	3.4	13.3	0.009	16	21	100/C
2.5	Flexible	0.8	3.4	4.1	7.93	0.009	25	33	100/C

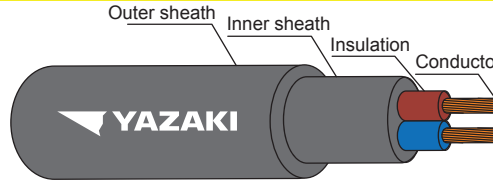
C = Packing in Coil

Nominal cross sectional area (mm²)	A.C Resistance R (Ω/km)	Inductance L (MΩ-km)	Reactance XL (MΩ-km)	Impedance Z (MΩ-km)
0.5	46.6635	0.5642	0.1773	46.6638
0.75	31.1090	0.5394	0.1695	31.1095
1	23.3318	0.5225	0.1641	23.3323
1.5	15.9135	0.5149	0.1618	15.9143
2.5	9.581	0.5038	0.1583	9.5494

B

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED



TIS 11 Part 4-2553

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Blue, Brown

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 4-2553 Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location.

B

Number of cores	Nominal cross sectional area	Conductor Type	Insulation thickness nominal	Inner sheath thickness approx.	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air maximum (40°C) (A)	Cable weight approx.	Standard Length
						minimum	maximum			ladder or treys		
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)		(kg/km)	(m)
	1.5	Solid	0.7	0.4	1.2	7.6	10.0	12.1	0.011	19	120	100/C
	1.5	Stranded	0.7	0.4	1.2	7.8	10.5	12.1	0.010	19	130	100/C
	2.5	Solid	0.8	0.4	1.2	8.6	11.5	7.41	0.010	26	160	100/C
	2.5	Stranded	0.8	0.4	1.2	9.0	12.0	7.41	0.009	26	180	100/C
	4	Solid	0.8	0.4	1.2	9.6	12.5	4.61	0.0085	35	210	100/C
2	4	Stranded	0.8	0.4	1.2	10.0	13.0	4.61	0.0077	35	230	100/C
	6	Stranded	0.8	0.4	1.2	11.0	14.0	3.08	0.0065	44	290	100/C
	10	Stranded	1.0	0.6	1.4	13.5	17.5	1.83	0.0065	61	470	500/D
	16	Stranded	1.0	0.6	1.4	15.5	20.0	1.15	0.0052	82	650	500/D
	25	Stranded	1.2	0.8	1.4	18.5	24.0	0.727	0.0050	104	950	500/D
	35	Stranded	1.2	1.0	1.6	21.0	27.5	0.524	0.0044	129	1,300	500/D

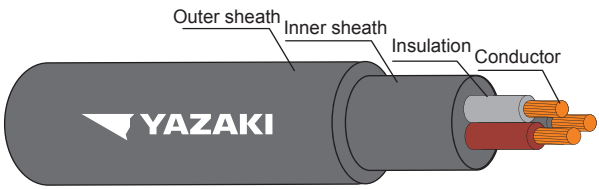
C = Packing in Coil
D = Packing in drum

Number of cores	Nominal cross sectional area	Conductor type	A.C Resistance	Inductance	Reactance	Impedance
	(mm^2)		R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
	1.5	Solid	14.4777	0.3439	0.1081	14.4781
	1.5	Stranded	14.4777	0.3427	0.1077	14.4781
	2.5	Solid	8.8661	0.3350	0.1052	8.8667
	2.5	Stranded	8.8661	0.3405	0.1070	8.8667
	4	Solid	5.5159	0.3135	0.0985	5.5168
2	4	Stranded	5.5159	0.3164	0.0994	5.5168
	6	Stranded	3.6853	0.3011	0.0946	3.6865
	10	Stranded	2.1897	0.2943	0.0925	2.1917
	16	Stranded	1.3761	0.2773	0.0871	1.3789
	25	Stranded	0.8700	0.2748	0.0863	0.8743
	35	Stranded	0.6272	0.2554	0.0803	0.6323

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED

TIS 11 Part 4-2553



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 4-2553 Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location.

B

Number of cores	Nominal cross sectional area (mm²)	Conductor Type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Outer sheath thickness nominal (mm)	Overall diameter maximum minimum (mm)	Overall diameter maximum maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in free air maximum (40°C) (A) ladder or treys	Cable weight approx. (kg/km)	Standard Length (m)
	1.5	Solid	0.7	0.4	1.2	7.6	10.0	12.1	0.011	16	140	100/C
	1.5	Stranded	0.7	0.4	1.2	7.8	10.5	12.1	0.010	16	150	100/C
	2.5	Solid	0.8	0.4	1.2	8.6	11.5	7.41	0.010	22	190	100/C
	2.5	Stranded	0.8	0.4	1.2	9.0	12.00	7.41	0.009	22	210	100/C
	4	Solid	0.8	0.4	1.2	9.6	12.5	4.61	0.0085	30	250	100/C
3	4	Stranded	0.8	0.4	1.2	10.0	13.0	4.61	0.0077	30	270	100/C
	6	Stranded	0.8	0.4	1.2	11.0	14.0	3.08	0.065	37	370	500/D
	10	Stranded	1.0	0.6	1.4	13.5	17.5	1.83	0.0065	52	570	500/D
	16	Stranded	1.0	0.6	1.4	15.5	20.0	1.15	0.0052	70	810	500/D
	25	Stranded	1.2	0.8	1.4	18.5	24.0	0.727	0.0050	88	1,200	500/D
	35	Stranded	1.2	1.0	1.6	21.0	27.5	0.524	0.0044	110	1,600	500/D

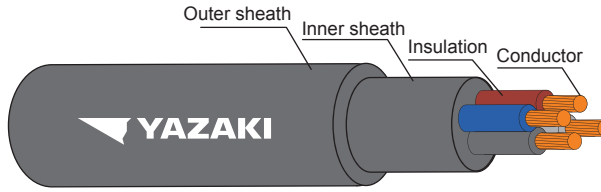
C = Packing in Coil
D = Packing in drum

Number of cores	Nominal cross sectional area (mm²)	Conductor Type	A.C Resistance R (Ω/km	Inductance L (MΩ-km)	Reactance XL (MΩ-km)	Impedance Z (MΩ-km)
	1.5	Solid	14.4777	0.3439	0.1081	14.4781
	1.5	Stranded	14.4777	0.3427	0.1077	14.4781
	2.5	Solid	8.8661	0.3350	0.1052	8.667
	2.5	Stranded	8.8661	0.3405	0.1070	8.667
	4	Solid	5.5159	0.3135	0.985	5.5168
3	4	Stranded	5.5159	3.3164	0.994	5.5168
	6	Stranded	3.6853	0.3011	0.946	3.6865
	10	Stranded	2.1879	0.2943	0.925	2.1916
	16	Stranded	1.3761	0.2773	0.871	1.3788
	25	Stranded	0.8701	0.2748	0.863	0.8743
	35	Stranded	06.273	0.2554	0.803	0.6234

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED

TIS 11 Part 4-2553



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Blue, Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 4-2553 Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location.

B

Number of cores	Nominal cross sectional area (mm²)	Conductor Type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Outer sheath thickness nominal (mm)	Overall diameter maximum minimum (mm)	Overall diameter maximum maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in free air maximum (40°C) (A) ladder or treys	Cable weight approx. (kg/km)	Standard Length (m)
	1.5	Solid	0.7	0.4	1.2	8.6	11.5	12.1	0.011	16	160	100/C
	1.5	Stranded	0.7	0.4	1.2	9.0	12.0	12.1	0.010	16	180	100/C
	2.5	Solid	0.8	0.4	1.2	10.0	13.0	7.41	0.010	22	230	100/C
	2.5	Stranded	0.8	0.4	1.2	10.0	13.5	7.41	0.009	22	250	100/C
	4	Solid	0.8	0.4	1.2	11.5	14.5	4.61	0.0085	30	320	100/C
4	4	Stranded	0.8	0.4	1.2	12.0	15.0	4.61	0.0077	30	340	100/C
	6	Stranded	0.8	0.4	1.2	13.0	17.0	3.08	0.0065	37	470	500/D
	10	Stranded	1.0	0.6	1.4	16.0	20.5	1.83	0.0065	52	700	500/D
	16	Stranded	1.0	0.6	1.4	18.0	23.5	1.15	0.0052	70	1,000	500/D
	25	Stranded	1.2	0.8	1.4	22.5	28.5	0.727	0.0050	88	1,600	500/D
	35	Stranded	1.2	1.0	1.6	24.5	32.0	0.524	0.0044	110	2,000	500/D

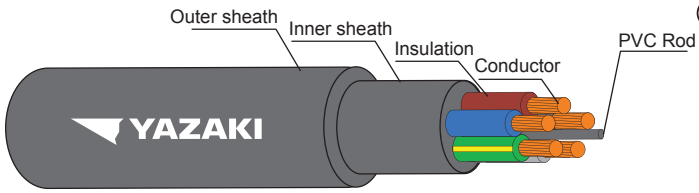
C = Packing in Coil
D = Packing in drum

Number of cores	Nominal cross sectional area (mm²)	Conductor Type	A.C Resistance R (Ω/km)	Inductance L (MΩ-km)	Reactance XL (MΩ-km)	Impedance Z (MΩ-km)
	1.5	Solid	14.4777	0.3439	0.1081	14.4781
	1.5	Stranded	14.4777	0.3427	0.1077	14.4781
	2.5	Solid	8.8661	0.3350	0.1052	8.8667
	2.5	Stranded	8.8661	0.3405	0.1070	8.8667
	4	Solid	5.5159	0.3135	0.0985	5.5168
4	4	Stranded	5.5159	0.3164	0.0994	5.5168
	6	Stranded	3.6853	0.3011	0.0946	3.865
	10	Stranded	2.1897	0.2943	0.0925	2.1916
	16	Stranded	1.3761	0.2773	0.0871	1.3789
	25	Stranded	0.8701	0.2748	0.0863	0.8744
	35	Stranded	0.6273	0.2554	0.0803	0.6324

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED

TIS 11 Part 4-2553



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Blue, Brown, Black, Grey, Green/Yelow

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 4-2553 Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location.

Number of cores	Nominal cross sectional area (mm²)	Conductor Type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Outer sheath thickness nominal (mm)	Overall diameter maximum minimum (mm)	Overall diameter maximum maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in free air maximum (40°C) (A) ladder or treys	Cable weight approx. (kg/km)	Standard Length (m)
	1.5	Solid	0.7	0.7	1.2	9.4	12.0	12.1	0.011	16	200	100/C
	1.5	Stranded	0.7	0.7	1.2	9.8	12.5	12.1	0.010	16	220	100/C
	2.5	Solid	0.8	0.8	1.2	11.0	14.0	7.41	0.010	22	280	100/C
	2.5	Stranded	0.8	0.8	1.2	11.0	14.5	7.41	0.009	22	310	100/C
	4	Solid	0.8	0.8	1.2	12.5	16.0	4.61	0.0085	30	410	100/C
5	4	Stranded	0.8	0.8	1.2	13.0	17.0	4.61	0.0077	30	430	100/C
	6	Stranded	0.8	0.8	1.2	14.5	18.5	3.08	0.065	37	570	500/D
	10	Stranded	1.0	1.0	1.4	17.5	22.0	1.83	0.0065	52	870	500/D
	16	Stranded	1.0	1.0	1.4	20.5	26.0	1.15	0.0052	70	1,300	500/D
	25	Stranded	1.2	1.2	1.4	24.5	31.5	0.727	0.0050	88	1,900	500/D
	35	Stranded	1.2	1.2	1.6	27.0	35.0	0.524	0.0044	110	2,500	500/D

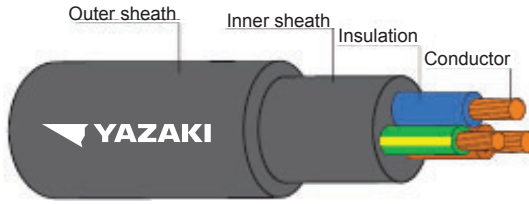
C = Packing in Coil
D = Packing in drum

Number of cores	Nominal cross sectional area (mm²)	Conductor Type	A.C Resistance R (Ω/km)	Inductance L (MΩ-km)	Reactance XL (MΩ-km)	Impedance Z (MΩ-km)
	1.5	Solid	14.4777	0.3439	0.1081	14.4781
	1.5	Stranded	14.4777	0.3427	0.1077	14.4781
	2.5	Solid	8.8661	0.3350	0.1052	8.8667
	2.5	Stranded	8.8661	0.3405	0.1070	8.8667
	4	Solid	5.5159	0.3135	0.0985	5.5168
5	4	Stranded	5.5159	0.3164	0.0994	5.5168
	6	Stranded	3.6853	0.3011	0.0946	3.6865
	10	Stranded	2.1897	0.2943	0.0925	2.1916
	16	Stranded	1.3761	0.2773	0.0871	1.3789
	25	Stranded	0.8701	0.2748	0.0863	0.8744
	35	Stranded	0.6273	0.2554	0.0803	0.6324

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND

TIS 11 Part 4-2553



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown + Green/Yellow

Inner sheath : Black polyvinyl choride (PVC)

Outer sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 4-2553 Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location.

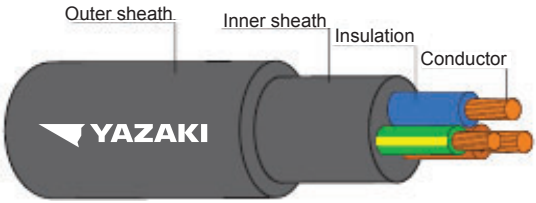
B

Number of cores	Conductor				Insulation thickness nominal	Inner sheath thickness approx.	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous current rating in free air at (40°C)	Cable weight approx.	Standard Length
	Nominal cross section area		Type of Conductor												
	Phase	Ground	Phase	Ground				Minimum	Maximum	Phase	Ground				
	(mm^2)	(mm^2)			(mm)	(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2+G	1.5	1.5	Solld		0.7	0.4	1.2	8.0	10.5	12.1	12.1	0.011	19	140	100/C
	1.5	1.5	Stranded		0.7	0.4	1.2	8.2	11.0	12.1	12.1	0.010	19	150	100/C
	2.5	2.5	Solld		0.8	0.4	1.2	9.2	12.0	7.41	7.41	0.010	26	190	100/C
	2.5	2.5	Stranded		0.8	0.4	1.2	9.4	12.5	7.41	7.41	0.009	26	210	100/C
	4	4	Solld		0.8	0.4	1.2	10.0	13.0	4.61	4.61	0.0085	35	250	100/C
	4	4	Stranded		0.8	0.4	1.2	10.5	13.5	4.61	4.61	0.0077	35	270	100/C
	6	6	Stranded		0.8	0.4	1.4	12.0	15.5	3.08	3.08	0.0065	44	370	100/C
	10	10	Stranded		1.0	0.6	1.4	14.5	19.0	1.83	1.83	0.0065	61	550	500/D
	16	16	Stranded		1.0	0.8	1.4	16.5	21.5	1.15	1.15	0.0052	82	800	500/D

C = Packing in coil
D = Packing in drum

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND



TIS 11 Part 4-2553

CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown + Green/Yellow

Inner sheath : Black polyvinyl choride (PVC)

Outer sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 4-2553 Table 1

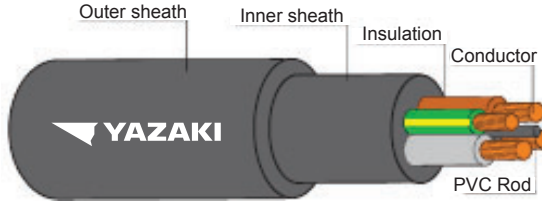
APPLICATION

For installation exposed, or in raceway, wet or dry location.

Number of cores	Nominal cross sectional area		A.C Resistance	Inductance	Reactance	Impedance
	Phase (mm^2)	Ground (mm^2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
2+G	1.5	1.5	14.4777	0.3439	0.1081	14.4781
	1.5	1.5	14.4777	0.3427	0.1077	14.4781
	2.5	2.5	8.8661	0.3350	0.1052	8.8667
	2.5	2.5	8.8661	0.3405	0.1070	8.8667
	4	4	5.5159	0.3135	0.0985	5.5168
	4	4	5.5159	0.3164	0.0994	5.5168
	6	6	3.6853	0.3011	0.0946	3.6865
	10	10	2.1897	0.2943	0.0925	2.1917
	16	16	1.3761	0.2773	0.0871	1.3789

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND



TIS 11 Part 4-2553

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey + Green/Yellow

Inner sheath : Black polyvinyl choride (PVC)

Outer sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 4-2553 Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location.

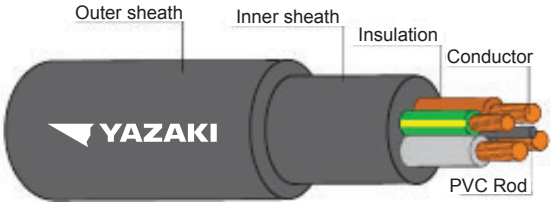
B

Number of cores	Conductor				Insulation thickness nominal	Inner sheath thickness approx.	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous current rating in free air at (40°C)	Cable weight approx.	Standard Length
	Nominal cross section area		Type of Conductor												
	Phase	Ground	Phase	Ground				Minimum	Maximum	Phase	Ground				
	(mm^2)	(mm^2)			(mm)	(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
3+G	1.5	1.5	Solld		0.7	0.4	1.2	8.6	11.5	12.1	12.1	0.011	16	170	100/C
	1.5	1.5	Stranded		0.7	0.4	1.2	9.0	12.0	12.1	12.1	0.010	16	180	100/C
	2.5	2.5	Solld		0.8	0.4	1.2	10.0	13.0	7.41	7.41	0.010	22	230	100/C
	2.5	2.5	Stranded		0.8	0.4	1.2	10.0	13.5	7.41	7.41	0.009	22	250	100/C
	4	4	Solld		0.8	0.4	1.4	11.5	14.5	4.61	4.61	0.0085	30	320	100/C
	4	4	Stranded		0.8	0.4	1.4	12.0	15.0	4.61	4.61	0.0077	30	340	100/C
	6	6	Stranded		0.8	0.6	1.4	13.0	17.0	3.08	3.08	0.0065	37	470	500/D
	10	10	Stranded		1.0	0.6	1.4	16.0	20.5	1.83	1.83	0.0065	52	700	500/D
	16	16	Stranded		1.0	0.8	1.4	18.0	23.5	1.15	1.15	0.0052	70	1000	500/D

C = Packing in coil
D = Packing in drum

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND



TIS 11 Part 4-2553

CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey + Green/Yellow

Inner sheath : Black polyvinyl choride (PVC)

Outer sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 4-2553 Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location.

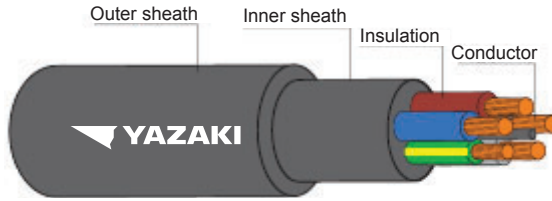
Number of cores	Nominal cross sectional area		A.C Resistance	Inductance	Reactance	Impedance
	Phase (mm^2)	Ground (mm^2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
3+G	1.5	1.5	14.4777	0.3439	0.1081	14.4781
	1.5	1.5	14.4777	0.3427	0.1077	14.4781
	2.5	2.5	8.8661	0.3350	0.1052	8.8667
	2.5	2.5	8.8661	0.3405	0.1070	8.8667
	4	4	5.5159	0.3135	0.0985	5.5168
	4	4	5.5159	0.3164	0.0994	5.5168
	6	6	3.6853	0.3011	0.0946	3.6865
	10	10	2.1897	0.2943	0.0925	2.1917
	16	16	1.3761	0.2773	0.0871	1.3789

B

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND

TIS 11 Part 4-2553



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown, Black, Grey + Green/Yellow

Inner sheath : Black polyvinyl choride (PVC)

Outer sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 4-2553 Table 1

APPLICATION

For installation exposed, or in raceway, wet or dry location.

B

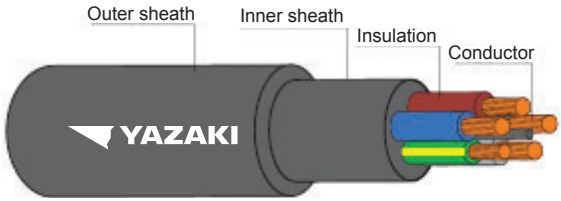
Number of cores	Conductor				Insulation thickness nominal	Inner sheath thickness approx.	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous current rating in free air at (40°C)	Cable weight approx.	Standard Length
	Nominal cross section area		Type of Conductor												
	Phase	Ground	Phase	Ground				Minimum	Maximum	Phase	Ground				
	(mm^2)	(mm^2)			(mm)	(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
4+G	1.5	1.5	Solld		0.7	0.4	1.2	9.4	12.0	12.1	12.1	0.011	16	200	100/C
	1.5	1.5	Stranded		0.7	0.4	1.2	9.8	12.5	12.1	12.1	0.010	16	220	100/C
	2.5	2.5	Solld		0.8	0.4	1.2	11.0	14.0	7.41	7.41	0.010	22	280	100/C
	2.5	2.5	Stranded		0.8	0.4	1.2	11.0	14.5	7.41	7.41	0.009	22	300	100/C
	4	4	Solld		0.8	0.6	1.4	12.5	16.0	4.61	4.61	0.0085	30	400	100/C
	4	4	Stranded		0.8	0.6	1.4	13.0	17.0	4.61	4.61	0.0077	30	430	100/C
	6	6	Stranded		0.8	0.6	1.4	14.5	18.5	3.08	3.08	0.0065	37	550	500/D
	10	10	Stranded		1.0	0.6	1.4	17.5	22.0	1.83	1.83	0.0065	52	850	500/D
	16	16	Stranded		1.0	0.8	1.6	20.5	26.0	1.15	1.15	0.0052	70	1300	500/D

C = Packing in coil
D = Packing in drum

60227 IEC 10

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND

TIS 11 Part 4-2553



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown, Black, Grey + Green/Yellow

Inner sheath : Black polyvinyl choride (PVC)

Outer sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 4-2553 Table 1

APPLICATION

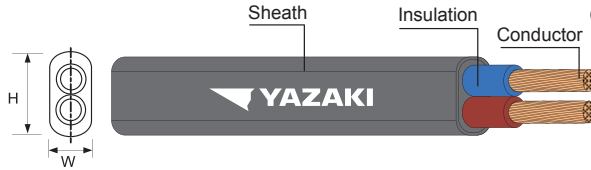
For installation exposed, or in raceway, wet or dry location.

Number of cores	Nominal cross sectional area		A.C Resistance	Inductance	Reactance	Impedance
	Phase (mm^2)	Ground (mm^2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
4+G	1.5	1.5	14.4777	0.3439	0.1081	14.4781
	1.5	1.5	14.4777	0.3427	0.1077	14.4781
	2.5	2.5	8.8661	0.3350	0.1052	8.8667
	2.5	2.5	8.8661	0.3405	0.1070	8.8667
	4	4	5.5159	0.3135	0.0985	5.5168
	4	4	5.5159	0.3164	0.0994	5.5168
	6	6	3.6853	0.3011	0.0946	3.6865
	10	10	2.1897	0.2943	0.0925	2.1917
	16	16	1.3761	0.2773	0.0871	1.3789

B

60227 IEC 52 VKF

300/300 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Core identification : Blue, Brown

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/300 Volts

Rated voltage : 300 Volts between Line to Earth
: 300 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 7

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

B

Number of cores	Nominal cross sectional area	Conductor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
					W x H minimum	W x H maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.5	Flexible	0.5	0.6	3.0 x 4.9	3.7 x 5.9	39.0	0.012	3	28	100/C
	0.75	Flexible	0.5	0.6	3.2 x 5.2	3.8 x 6.3	26.0	0.010	6	35	100/C

C = Packing in Coil

60227 IEC 52

300/300 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE

TIS 11 Part 5-2553

CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Core identification :
2 Cores Blue, Brown
3 Cores Brown, Black, Grey

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/300 Volts

Rated voltage : 300 Volts between Line to Earth
: 300 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 7

APPLICATION

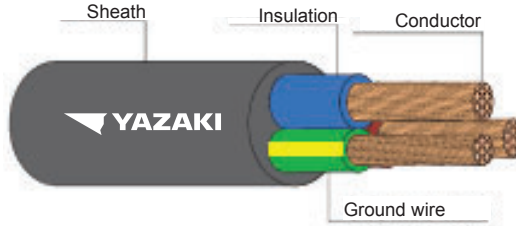
For household appliances, electrical eauipment and electrcal illumination.

Number of cores	Nominal cross sectional area	Conductor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
					minimum	maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.5	Flexible	0.5	0.6	4.6	5.9	39.0	0.012	3	40	100/C
	0.75	Flexible	0.5	0.6	4.9	6.3	26.0	0.010	6	48	100/C
3	0.5	Flexible	0.5	0.6	4.9	6.3	39.0	0.012	3	47	100/C
	0.75	Flexible	0.5	0.6	5.2	6.7	26.0	0.010	6	58	100/C

B

60227 IEC 52

300/300 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATHED WITH GROUND, ROUND TYPE



TIS 11 Part 5-2553

CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Core identification : Blue, Brown + Green/Yellow

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/300 Volts

Rated voltage : 300 Volts between Line to Earth
: 300 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 7

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

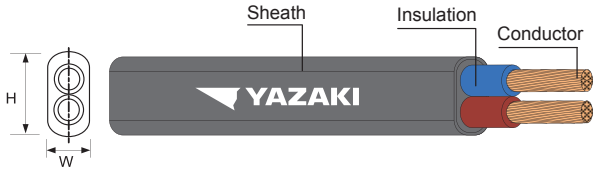
B

Number of cores	Conductor				Insulation thickness nominal	Sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous current rating in free air at (40°C) maximum	Cable weight approx.	Standard Length
	Nominal cross section area		Type of Conductor											
	Phase	Ground	Phase	Ground			Minimum	Maximum	Phase	Ground				
	(mm^2)	(mm^2)			(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2+G	0.5	0.5	Flexible		0.5	0.6	4.9	6.3	39.0	39.0	0.012	3	47	100/C
	0.75	0.75	Flexible		0.5	0.6	5.2	6.7	26.0	26.0	0.010	6	60	100/C

C = Packing in coil

60227 IEC 53 VKF

300/500 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE



TIS 11 Part 5-2553

CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Core identification : Blue, Brown

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 9

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

Number of cores	Nominal cross sectional area	Conductor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
					W x H minimum	W x H maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.75	Flexible	0.6	0.8	3.7 x 6.0	4.5 x 7.2	26.0	0.011	6	43	100/C
	1	Flexible	0.6	0.8	3.9 x 6.2	4.7 x 7.5	19.5	0.010	10	50	100/C

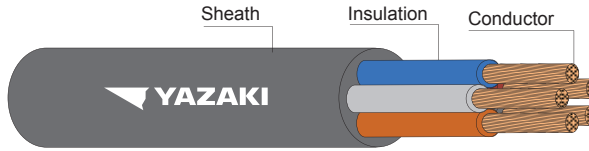
C = Packing in Coil

B

60227 IEC 53

300/500 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE

TIS 11 Part 5-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Core identification :

2 Cores	Blue, Brown
3 Cores	Brown, Black, Grey
4 Cores	Blue, Brown, Black and Grey
5 Cores	Blue, Brown, Black, Grey, Green/Yellow

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 9

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

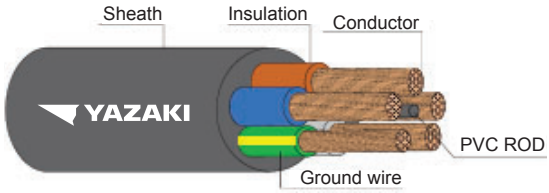
B

Number of cores	Nominal cross sectional area	Conductor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
					minimum	maximum					
	(mm²)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.75	Flexible	0.6	0.8	5.7	7.2	26.0	0.011	6	60	100/C
	1	Flexible	0.6	0.8	5.9	7.5	19.5	0.010	10	70	100/C
	1.5	Flexible	0.7	0.8	6.8	8.6	13.3	0.010	16	93	100/C
	2.5	Flexible	0.8	1.0	8.4	10.6	7.98	0.009	25	140	100/C
3	0.75	Flexible	0.6	0.8	6.0	7.6	26.0	0.011	6	70	100/C
	1	Flexible	0.6	0.8	6.3	8.0	19.5	0.010	10	82	100/C
	1.5	Flexible	0.7	0.8	7.4	9.4	13.3	0.010	16	115	100/C
	2.5	Flexible	0.8	1.0	9.2	11.4	7.98	0.009	20	175	100/C
4	0.75	Flexible	0.6	0.8	6.6	8.3	26.0	0.011	6	84	100/C
	1	Flexible	0.6	0.8	7.1	9.0	19.5	0.010	10	105	100/C
	1.5	Flexible	0.7	0.8	8.4	10.5	13.3	0.010	16	145	100/C
	2.5	Flexible	0.8	1.0	10.1	12.5	7.98	0.009	20	215	100/C
5	0.75	Flexible	0.6	0.8	7.4	9.3	26.0	0.011	6	105	100/C
	1	Flexible	0.6	0.8	7.8	9.8	19.5	0.010	10	125	100/C
	1.5	Flexible	0.7	1.1	9.3	11.6	13.3	0.010	16	175	100/C
	2.5	Flexible	0.8	1.2	11.2	13.9	7.98	0.009	20	265	100/C

C = Packing in Coil

60227 IEC 53

300/500 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE



TIS 11 Part 5-2553

CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Core identification :

2 Cores + G : Blue, Brown + Green/Yellow
3 Cores + G : Brown, Black, Grey + Green/Yellow
4 Cores + G : Blue, Brown, Black, Grey + Green/Yellow

Outer sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 9

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

Number of cores	Conductor				Insulation thickness nominal	Sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous current rating in free air at (40°C) maximum	Cable weight approx.	Standard length
	Nominal cross section area		Type of Conductor											
	Phase	Ground	Phase	Ground			Minimum	Maximum	Phase	Ground				
	(mm^2)	(mm^2)			(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2+G	0.75	0.75	Flexible		0.6	0.8	6.0	7.6	26.0	26.0	0.011	6	70	100/C
	1	1	Flexible		0.6	0.8	6.3	8.0	19.5	19.5	0.010	10	80	100/C
	1.5	1.5	Flexible		0.7	0.9	7.4	9.4	13.3	13.3	0.010	16	120	100/C
	2.5	2.5	Flexible		0.8	1.1	9.2	11.4	7.98	7.98	0.009	25	180	100/C
3+G	0.75	0.75	Flexible		0.6	0.8	6.6	8.3	26.0	26.0	0.011	6	85	100/C
	1	1	Flexible		0.6	0.9	7.1	9.0	19.5	19.5	0.010	10	100	100/C
	1.5	1.5	Flexible		0.7	1.0	8.4	10.5	13.3	13.3	0.010	16	140	100/C
	2.5	2.5	Flexible		0.8	1.1	10.1	12.5	7.98	7.98	0.009	20	220	100/C
4+G	0.75	0.75	Flexible		0.6	0.9	7.4	9.3	26.0	26.0	0.011	6	100	100/C
	1	1	Flexible		0.6	0.9	7.8	9.8	19.5	19.5	0.010	10	120	100/C
	1.5	1.5	Flexible		0.7	1.1	9.3	11.6	13.3	13.3	0.010	16	180	100/C
	2.5	2.5	Flexible		0.8	1.2	11.2	13.9	7.98	7.98	0.009	20	260	100/C

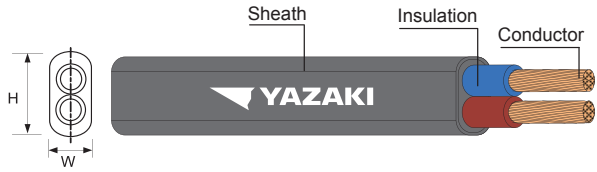
C = Packing in Coil

B

60227 IEC 56 HVKF

300/300 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE

TIS 11 Part 5-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/E)

Core identification : Blue, Brown

Sheath : Black polyvinyl chloride (PVC/ST10)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 300/300 Volts

Rated voltage : 300 Volts between Line to Earth
: 300 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 11

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

B

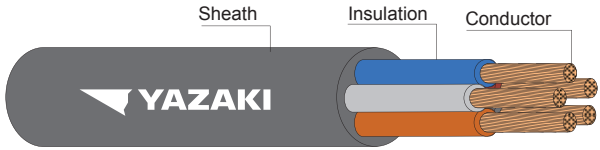
Number of cores	Nominal cross sectional area	Conductor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 90°C minimum	Continuous current rating lin free air 40°C maximum	Cable weight approx.	Standard Length
					W x H minimum	W x H maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.50	Flexible	0.5	0.6	3.0 x 4.9	3.7 x 5.9	39.0	0.012	3	28	100/C
	0.75	Flexible	0.5	0.6	3.2 x 5.2	3.8 x 6.3	26.0	0.010	6	35	100/C

C = Packing in Coil

60227 IEC 56

300/300 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE

TIS 11 Part 5-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/E)

Core identification :
2 Cores Blue, Brown
3 Cores Brown, Black, Grey

Sheath : Black polyvinyl chloride (PVC/ST10)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 300/300 Volts

Rated voltage : 300 Volts between Line to Earth
: 300 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 11

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

Number of cores	Nominal cross sectional area	Conductor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 90°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
					minimum	maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.5	Flexible	0.5	0.6	4.6	5.9	39.0	0.012	3	38	100/C
	0.75	Flexible	0.5	0.6	4.9	6.3	26.0	0.010	6	46	100/C
3	0.5	Flexible	0.5	0.6	4.9	6.3	39.0	0.012	3	44	100/C
	0.75	Flexible	0.5	0.6	5.2	6.7	26.0	0.010	6	55	100/C

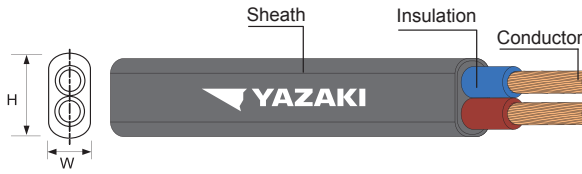
C = Packing in Coil

B

60227 IEC 57 HVKF

300/500 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE

TIS 11 Part 5-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/E)

Core identification : Blue, Brown

Sheath : Black polyvinyl chloride (PVC/ST10)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 13

B

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

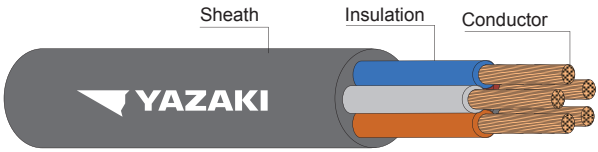
Number of cores	Nominal cross sectional area	Conductor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 90°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
					W x H minimum	W x H maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.75	Flexible	0.6	0.8	3.7 x 6.0	4.5 x 7.2	26.0	0.011	6	42	100/C
	1	Flexible	0.6	0.8	3.9 x 6.2	4.7 x 7.5	19.5	0.010	10	50	100/C

C = Packing in Coil

60227 IEC 57

300/500 V 90°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE

TIS 11 Part 5-2553



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/E)

Core identification :

2 Cores	Blue, Brown
3 Cores	Brown, Black, Grey
4 Cores	Blue, Brown, Black, Grey
5 Cores	Blue, Brown, Black, Grey, Green/Yellow

Sheath : Black polyvinyl chloride (PVC/ST10)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 5-2553 Table 13

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

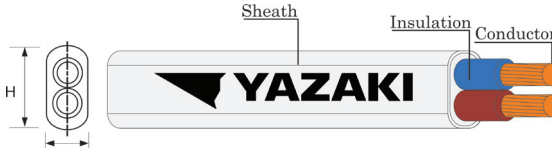
Number of cores	Nominal cross sectional area	Conductor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 90°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
					minimum	maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	0.75	Flexible	0.6	0.8	5.7	7.2	26.0	0.011	6	57	100/C
	1	Flexible	0.6	0.8	5.9	7.5	19.5	0.010	10	66	100/C
	1.5	Flexible	0.7	0.8	6.8	8.6	13.3	0.010	16	89	100/C
	2.5	Flexible	0.8	1.0	8.4	10.6	7.98	0.009	25	135	100/C
3	0.75	Flexible	0.6	0.8	6.0	7.6	26.0	0.011	6	66	100/C
	1	Flexible	0.6	0.8	6.3	8.0	19.5	0.010	10	78	100/C
	1.5	Flexible	0.7	0.9	7.4	9.4	13.3	0.010	16	110	100/C
	2.5	Flexible	0.8	1.0	9.2	11.4	7.98	0.009	20	170	100/C
4	0.75	Flexible	0.6	0.8	6.6	8.3	26.0	0.011	16	80	100/C
	1	Flexible	0.6	0.9	7.1	9.0	19.5	0.010	10	99	100/C
	1.5	Flexible	0.7	1.0	8.4	10.5	13.3	0.010	16	140	100/C
	2.5	Flexible	0.8	1.1	10.1	12.5	7.98	0.009	20	205	100/C
5	0.75	Flexible	0.6	0.9	7.4	9.3	26.0	0.011	6	99	100/C
	1	Flexible	0.6	0.9	7.8	9.8	19.5	0.010	10	120	100/C
	1.5	Flexible	0.7	1.1	9.3	11.6	13.3	0.010	16	170	100/C
	2.5	Flexible	0.8	1.2	11.2	13.9	7.98	0.009	20	250	100/C

C = Packing in Coil

VAF

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND SHEATH, FLAT TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and staranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Blue, Brown

Sheath : White polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 101-2559 Table 1

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

B

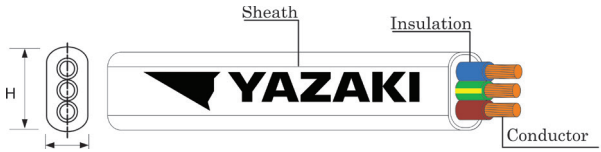
Number of cores	Nominal cross sectional area	Conduc-tor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
					W x H minimum	W x H maximum					
	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2	1	Solid	0.6	0.9	4.0 x 6.2	4.7 x 7.4	18.1	0.0110	14	50	100/C
	1.5	Solid	0.7	0.9	4.4 x 7.0	5.4 x 8.4	12.1	0.0110	17	70	100/C
	2.5	Solid	0.8	1.0	5.2 x 8.4	6.2 x 9.8	7.41	0.0100	23	100	100/C
	4	Standard	0.8	1.1	5.6 x 9.6	7.2 x 11.5	4.61	0.0077	32	150	100/C
	6	Standard	0.8	1.1	6.4 x 10.5	8.0 x 13.0	3.08	0.0065	41	200	100/C
	10	Standard	1.0	1.2	7.8 x 13.0	9.6 x 16.0	1.83	0.0065	56	310	100/C
	16	Standard	1.0	1.3	9.0 x 15.5	11.0 x 18.5	1.15	0.0052	74	450	100/C

C = Packing in Coil

VAF-G

300/500 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND SHEATH WITH GROUND, FLAT TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and staranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Blue, Brown + Green/Yellow

Sheath : White polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 300/500 Volts

Rated voltage : 300 Volts between Line to Earth
: 500 Volts between Line to Line

AC Testing voltage : 2,000 volts

Reference standard : TIS 11 Part 101-2559 Table 1

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

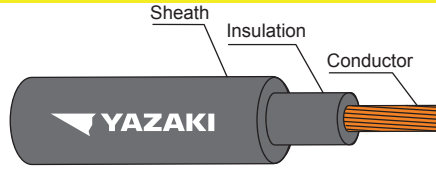
Number of cores	Nominal cross sectional area		Conductor Type	Insulation thickness nominal	Outer sheath thickness nominal	Overall diameter		Conductor re-sistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
	Phase	Ground				W x H minimum	W x H maximum	Phase	Ground				
	(mm^2)	(mm^2)		(mm)	(mm)	(mm)	(mm)	(Ω/km))	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
2+G	1	1	Solid	0.6	0.9	4.0 x 6.2	4.7 x 7.4	18.1	18.1	0.0110	14	75	100/C
	1.5	1.5	Solid	0.7	0.9	4.4 x 7.0	5.4 x 8.4	12.1	12.1	0.0110	17	100	100/C
	2.5	2.5	Solid	0.8	1.0	5.2 x 8.4	6.2 x 9.8	7.41	7.41	0.0100	23	150	100/C
	4	4	Standard	0.8	1.1	5.6 x 9.6	7.2 x 11.5	4.61	4.61	0.0077	32	220	100/C
	6	6	Standard	0.8	1.1	6.4 x 10.5	8.0 x 13.0	3.08	3.08	0.0065	41	290	100/C
	10	10	Standard	1.0	1.2	7.8 x 13.0	9.6 x 16.0	1.83	1.83	0.0065	56	460	100/C
	16	16	Standard	1.0	1.3	9.0 x 15.5	11.0 x 18.5	1.15	1.15	0.0052	74	650	500/D

C = Packing in Coil
D = Packing in drum

B

NYY or YK NYY

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED, SINGLE CORE



TIS 11 Part 101-2559

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Black

Sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 3

APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

B

Cable name	Number x Size of conductor	Conductor Type	Insulation thickness nominal	Sheat thickness nominal	Overall diameter maximum	Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous currunt rating in free air at 40°C maximum (A)			Continuous currunt rating in ground at 30°C maximum	Cable weight approx.	Standard Length
								Spaced	Touching	Trefoil			
	(No. x mm²)	(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)				(A)	(kg/km)	(m)
NYY	1×1	Solid	1.5	1.8	8.6	18.1	0.0207	19	16	15	21	80	100/C
	1×1	Non-compacted	1.5	1.8	8.8	18.1	0.0200	19	16	15	21	80	100/C
	1×1.5	Solid	1.5	1.8	9.0	12.1	0.0184	24	19	19	26	85	100/C
	1×1.5	Non-compacted	1.5	1.8	9.2	12.1	0.0175	24	19	19	26	90	100/C
	1×2.5	Solid	1.5	1.8	9.4	7.41	0.0157	32	24	26	35	100	100/C
	1×2.5	Non-compacted	1.5	1.8	9.8	7.41	0.0146	32	24	26	35	110	100/C
	1×4	Solid	1.5	1.8	10.0	4.61	0.0135	42	33	34	45	120	100/C
	1×4	Non-compacted	1.5	1.8	10.5	4.61	0.0124	42	33	34	45	130	100/C
YK NYY	1×6	Non-compacted	1.5	1.8	11.0	3.08	0.0107	54	42	43	57	160	1000/D
	1×10	Non-compacted	1.5	1.8	12.0	1.83	0.0088	73	57	59	76	210	1000/D
	1×16	Compacted	1.5	1.8	13.0	1.15	0.0074	96	76	78	99	290	1000/D
	1×25	Compacted	1.5	1.8	14.5	0.727	0.0061	127	99	96	128	390	1000/D
	1×35	Compacted	1.5	1.8	16.0	0.524	0.0053	157	124	119	154	490	1000/D
	1×50	Compacted	1.5	1.8	17.0	0.387	0.0046	191	151	145	181	600	1000/D
	1×70	Compacted	1.5	1.8	19.0	0.268	0.0039	244	196	188	223	850	1000/D
	1×95	Compacted	1.7	1.8	21.5	0.193	0.0038	297	239	230	267	1100	1000/D
	1×120	Compacted	1.7	1.8	23.0	0.153	0.0034	345	279	268	304	1300	1000/D
	1×150	Compacted	1.9	2.0	26.0	0.124	0.0034	397	324	310	342	1600	1000/D
	1×185	Compacted	2.1	2.0	28.0	0.0991	0.0034	453	371	356	386	2000	1000/D
	1×240	Compacted	2.3	2.2	31.5	0.0754	0.0033	535	441	422	448	2800	1000/D
NYY	1×300	Non-compacted	2.5	2.2	35.0	0.0601	0.0032	617	511	488	507	3400	500/D
	1×400	Non-compacted	2.7	2.2	38.5	0.0470	0.0030	741	599	571	577	4300	500/D
	1×500	Non-compacted	3.1	2.4	43.0	0.0366	0.0031	854	686	652	654	5400	500/D

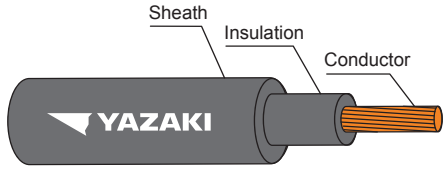
C = Packing in Coil
D = Packing in drum

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY or YK NYY

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED, SINGLE CORE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Black

Sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 3

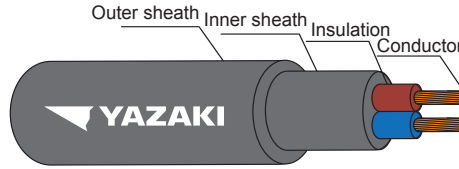
APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

Cable name	Number x Size of conductor (No. x mm²)	Conductor Type	A.C. Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
			Spaced	Touching	Trefoil	Spaced	Touching	Trefoil	Spaced	Touching	Trefoil	Spaced	Touching	Trefoil
NYY	1×1	Solid	21.6567	21.6567	21.6567	0.7840	0.6454	0.5991	0.2463	0.2028	0.1882	21.6581	21.6576	21.6575
	1×1	Non-compacted	21.6567	21.6567	21.6567	0.7740	0.6353	0.5891	0.2432	0.1996	0.1851	21.6581	21.6576	21.6575
	1×1.5	Solid	14.4777	14.4777	14.4777	0.7485	0.6099	0.5637	0.2351	0.1916	0.1771	14.4796	14.4790	14.4788
	1×1.5	Non-compacted	14.4777	14.4777	14.4777	0.7388	0.6001	0.5539	0.2321	0.1885	0.1740	14.4796	14.4789	14.4787
	1×2.5	Solid	8.8661	8.8661	8.8661	0.7063	0.5677	0.5214	0.2219	0.1783	0.1638	8.8689	8.8679	8.8676
	1×2.5	Non-compacted	8.8661	8.8661	8.8661	0.7025	0.5639	0.5176	0.2207	0.1772	0.1626	8.8688	8.8679	8.8676
	1×4	Solid	5.5159	5.5159	5.5159	0.6698	0.5312	0.4850	0.2104	0.1669	0.1524	5.5199	5.5184	5.5180
	1×4	Non-compacted	5.5159	5.5159	5.5159	0.6649	0.5263	0.4801	0.2089	0.1653	0.1508	5.5199	5.5184	5.5180
YK NYY	1×6	Non-compacted	3.6852	3.6852	3.6852	0.6360	0.4974	0.4512	0.1998	0.1563	0.1417	3.6906	3.6885	3.6879
	1×10	Non-compacted	2.1896	2.1896	2.1896	0.5999	0.4612	0.4150	0.1885	0.1449	0.1304	2.1977	2.1944	2.1935
	1×16	Compacted	1.3760	1.3761	1.3761	0.5702	0.4315	0.3853	0.1791	0.1356	0.1210	1.3876	1.3827	1.3814
	1×25	Compacted	0.8700	0.8700	0.8700	0.5450	0.4064	0.3602	0.1712	0.1277	0.1132	0.8866	0.8793	0.8773
	1×35	Compacted	0.6271	0.6272	0.6272	0.5175	0.3789	0.3327	0.1626	0.1190	0.1045	0.6478	0.6384	0.6358
	1×50	Compacted	0.4632	0.4633	0.4634	0.5023	0.3637	0.3175	0.1578	0.1143	0.0997	0.4894	0.4772	0.4740
	1×70	Compacted	0.3210	0.3211	0.3212	0.4862	0.3476	0.3014	0.1527	0.1092	0.0947	0.3555	0.3391	0.3348
	1×95	Compacted	0.2313	0.2315	0.2317	0.4772	0.3386	0.2923	0.1499	0.1064	0.0918	0.2757	0.2548	0.2492
	1×120	Compacted	0.1836	0.1838	0.1840	0.4664	0.3278	0.2816	0.1465	0.1030	0.0885	0.2349	0.2107	0.2420
	1×150	Compacted	0.1490	0.1493	0.1496	0.4663	0.3276	0.2814	0.1465	0.1029	0.0884	0.2090	0.1814	0.1737
	1×185	Compacted	0.1194	0.1198	0.1201	0.4622	0.3235	0.2773	0.1452	0.1016	0.0871	0.1880	0.1571	0.1484
	1×240	Compacted	0.0913	0.0918	0.0922	0.4568	0.3182	0.2719	0.1435	0.1000	0.0854	0.1701	0.1357	0.1257
NYY	1×300	Non-compacted	0.0733	0.0740	0.0745	0.4517	0.3131	0.2668	0.1419	0.0984	0.0838	0.1597	0.1231	0.1121
	1×400	Non-compacted	0.0580	0.0589	0.0596	0.4465	0.3079	0.2617	0.1403	0.0967	0.0822	0.1518	0.1133	0.1015
	1×500	Non-compacted	0.0460	0.0471	0.0480	0.4460	0.3074	0.2612	0.1401	0.0966	0.0821	0.1475	0.1074	0.0951

NYY or YK NYY

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED, TWO CORES



TIS 11 Part 101-2559

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Blue, Brown

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard: TIS 11 Part 101-2559 Table 4

APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

B

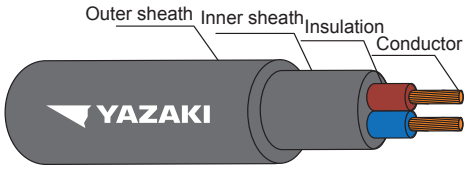
Cable name	Number x Size of conductor (No. x mm²)	Conductor Type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Outer Sheath thickness nominal (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air at 40°C maximum (A)	Continuous currunt rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
NYY	2×1	Solid	0.8	0.8	1.8	12.0	18.1	0.0141	15	21	170	100/C
	2×1	Non-compacted	0.8	0.8	1.8	12.5	18.1	0.0135	15	21	170	100/C
	2×1.5	Solid	0.8	0.8	1.8	12.5	12.1	0.0123	19	27	180	100/C
	2×1.5	Non-compacted	0.8	0.8	1.8	13.0	12.1	0.0116	19	27	200	100/C
	2×2.5	Solid	0.8	0.8	1.8	13.5	7.41	0.0102	26	35	220	100/C
	2×2.5	Non-compacted	0.8	0.8	1.8	14.0	7.41	0.0093	26	35	240	100/C
	2×4	Solid	0.9	0.8	1.8	15.0	4.61	0.0094	35	47	290	100/C
	2×4	Non-compacted	0.9	0.8	1.8	15.5	4.61	0.0085	35	47	310	100/C
	2×6	Non-compacted	0.9	0.8	1.8	17.0	3.08	0.0073	44	60	370	100/C
	2×10	Non-compacted	1.1	0.8	1.8	19.5	1.83	0.0069	61	81	550	500/D
YK NYY	2×16	Compacted	1.1	0.8	2.0	22.5	1.15	0.0057	82	105	1000	1000/D
	2×25	Compacted	1.3	1.2	2.0	27.0	0.727	0.0054	104	136	1000	1000/D
	2×35	Compacted	1.3	1.2	2.0	29.5	0.524	0.0047	129	165	1000	1000/D
	2×50	Compacted	1.5	1.2	2.2	33.5	0.387	0.0046	157	195	1700	1000/D
	2×70	Compacted	1.5	1.5	2.2	38.0	0.268	0.0039	202	239	2300	1000/D
NYY	2×95	Non-compacted	1.7	1.5	2.2	42.5	0.193	0.0038	245	288	3300	500/D
	2×120	Non-compacted	1.7	1.5	2.4	46.5	0.153	0.0034	285	329	4000	500/D
	2×150	Non-compacted	1.9	1.8	2.6	52.0	0.124	0.0034	330	368	4900	500/D
	2×185	Non-compacted	2.1	1.8	2.8	57.0	0.0991	0.0034	378	417	6000	500/D
	2×240	Non-compacted	2.3	2.0	3.0	64.0	0.0754	0.0033	447	481	8000	300/D
	2×300	Non-compacted	2.5	2.0	3.2	70.5	0.0601	0.0032	516	541	9500	300/D

C = Packing in Coil
D = Packing in drum

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY or YK NYY

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED, TWO CORES



TIS 11 Part 101-2559

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Blue, Brown

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 4

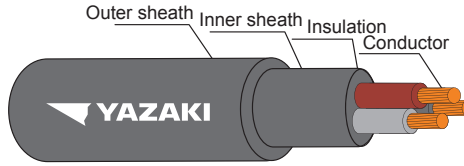
APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

Cable name	Number x Size of conductor (No. x mm²)	Conductor Type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
NYY	2×1	Solid	21.7000	0.3771	0.1185	21.7000
	2×1	Non-compacted	21.7000	0.3651	0.1147	21.7000
	2×1.5	Solid	14.5000	0.3505	0.1101	14.5000
	2×1.5	Non-compacted	14.5000	0.3402	0.1069	14.5000
	2×2.5	Solid	8.8700	0.3238	0.1017	8.8710
	2×2.5	Non-compacted	8.8700	0.3160	0.0993	8.8710
	2×4	Solid	5.5200	0.3135	0.0985	5.5210
	2×4	Non-compacted	5.5200	0.3022	0.0950	5.5210
	2×6	Non-compacted	3.6900	0.2869	0.0901	3.6910
	2×10	Non-compacted	2.1900	0.2801	0.0880	2.1920
YK NYY	2×16	Compacted	1.3800	0.2631	0.0827	1.3820
	2×25	Compacted	0.8700	0.2607	0.0819	0.8738
	2×35	Compacted	0.6272	0.2593	0.0814	0.6325
	2×50	Compacted	0.4634	0.2604	0.0818	0.4706
	2×70	Compacted	0.3212	0.2506	0.0787	0.3307
NYY	2×95	Non-compacted	0.2317	0.2480	0.0779	0.2444
	2×120	Non-compacted	0.1840	0.2409	0.0757	0.1990
	2×150	Non-compacted	0.1495	0.2402	0.0755	0.1675
	2×185	Non-compacted	0.1201	0.2401	0.0754	0.1418
	2×240	Non-compacted	0.0922	0.2361	0.0742	0.1183
	2×300	Non-compacted	0.0744	0.2343	0.0736	0.1047

NYY or YK NYY

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED, THREE CORES



TIS 11 Part 101-2559

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Core identification : Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

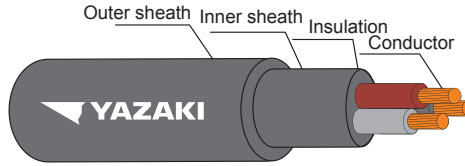
B

Cable name	Number x Size of conductor (No. x mm²)	Conductor Type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Outer Sheath thickness nominal (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air at 40°C maximum (A)	Continuous currunt rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
NYY	3×1	Solid	0.8	0.8	1.8	12.5	18.1	0.0141	13	18	180	100/C
	3×1	Non-compacted	0.8	0.8	1.8	13.0	18.1	0.0135	13	18	190	100/C
	3×1.5	Solid	0.8	0.8	1.8	13.0	12.1	0.0123	16	22	210	100/C
	3×1.5	Non-compacted	0.8	0.8	1.8	13.5	12.1	0.0116	16	22	220	100/C
	3×2.5	Solid	0.8	0.8	1.8	14.0	7.41	0.0102	22	30	260	100/C
	3×2.5	Non-compacted	0.8	0.8	1.8	15.0	7.41	0.0093	22	30	270	100/C
	3×4	Solid	0.9	0.8	1.8	15.5	4.61	0.0094	30	39	340	100/C
	3×4	Non-compacted	0.9	0.8	1.8	16.5	4.61	0.0085	30	39	360	100/C
	3×6	Non-compacted	0.9	0.8	1.8	18.0	3.08	0.0073	37	50	440	100/C
	3×10	Non-compacted	1.1	0.8	1.8	20.5	1.83	0.0069	52	68	650	500/D
YK NYY	3×16	Compacted	1.1	1.2	2.0	24.5	1.15	0.0057	70	87	900	1000/D
	3×25	Compacted	1.3	1.2	2.0	28.5	0.727	0.0054	88	128	1300	1000/D
	3×35	Compacted	1.3	1.2	2.0	31.5	0.524	0.0047	110	154	1600	1000/D
	3×50	Compacted	1.5	1.5	2.2	36.0	0.387	0.0046	133	181	2200	1000/D
	3×70	Compacted	1.5	1.5	2.2	40.5	0.268	0.0039	171	223	2900	1000/D
NYY	3×95	Non-compacted	1.7	1.5	2.4	46.0	0.193	0.0038	207	267	4200	500/D
	3×120	Non-compacted	1.7	1.8	2.6	50.5	0.153	0.0034	240	304	5000	500/D
	3×150	Non-compacted	1.9	1.8	2.8	56.0	0.124	0.0034	278	342	6500	500/D
	3×185	Non-compacted	2.1	2.0	3.0	61.5	0.0991	0.0034	317	386	8000	300/D
	3×240	Non-compacted	2.3	2.0	3.2	69.0	0.0754	0.0033	374	448	10000	300/D
	3×300	Non-compacted	2.5	2.2	3.4	76.0	0.0601	0.0032	432	507	12500	200/D

NYY or YK NYY

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED, THREE CORES

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

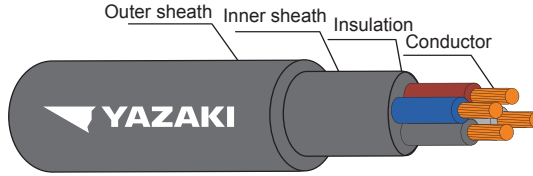
Cable name	Number x Size of conductor (No. x mm²)	Conductor Type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
NYY	3×1	Solid	21.7000	0.3771	0.1185	21.7000
	3×1	Non-compacted	21.7000	0.3651	0.1147	21.7000
	3×1.5	Solid	14.5000	0.3505	0.1101	14.5000
	3×1.5	Non-compacted	14.5000	0.3402	0.1069	14.5000
	3×2.5	Solid	8.8700	0.3238	0.1017	8.8710
	3×2.5	Non-compacted	8.8700	0.3160	0.0993	8.8710
	3×4	Solid	5.5200	0.3135	0.0985	5.5210
	3×4	Non-compacted	5.5200	0.3022	0.0950	5.5210
	3×6	Non-compacted	3.6900	0.2869	0.0901	3.6910
	3×10	Non-compacted	2.1900	0.2801	0.0880	2.1920
YK NYY	3×16	Compacted	1.3800	0.2631	0.0827	1.3820
	3×25	Compacted	0.8700	0.2607	0.0819	0.8738
	3×35	Compacted	0.6273	0.2593	0.0814	0.6326
	3×50	Compacted	0.4635	0.2604	0.0818	0.4707
	3×70	Compacted	0.3213	0.2506	0.0787	0.3308
NYY	3×95	Non-compacted	0.2319	0.2480	0.0779	0.2446
	3×120	Non-compacted	0.1843	0.2409	0.0757	0.1992
	3×150	Non-compacted	0.1499	0.2402	0.0755	0.1678
	3×185	Non-compacted	0.1205	0.2401	0.0754	0.1422
	3×240	Non-compacted	0.0928	0.2361	0.0742	0.1188
	3×300	Non-compacted	0.0751	0.2343	0.0736	0.1052

B

NYY or YK NYY

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED, FOUR CORES

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

B

Cable name	Number x Size of conductor (No. x mm²)	Conductor Type	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Outer Sheath thickness nominal (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous currunt rating in free air at 40°C maximum (A)	Continuous currunt rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
NYY	4×1	Solid	0.8	0.8	1.8	13.5	18.1	0.0141	13	18	210	100/C
	4×1	Non-compacted	0.8	0.8	1.8	14.0	18.1	0.0135	13	18	220	100/C
	4×1.5	Solid	0.8	0.8	1.8	14.0	12.1	0.0123	16	22	240	100/C
	4×1.5	Non-compacted	0.8	0.8	1.8	14.5	12.1	0.0116	16	22	260	100/C
	4×2.5	Solid	0.8	0.8	1.8	15.0	7.41	0.0102	22	30	300	100/C
	4×2.5	Non-compacted	0.8	0.8	1.8	16.0	7.41	0.0093	22	30	320	100/C
	4×4	Solid	0.9	0.8	1.8	17.0	4.61	0.0094	30	39	400	100/C
	4×4	Non-compacted	0.9	0.8	1.8	17.5	4.61	0.0085	30	39	430	100/C
	4×6	Non-compacted	0.9	0.8	1.8	19.0	3.08	0.0073	37	50	550	500/D
	4×10	Non-compacted	1.1	0.8	2.0	23.0	1.83	0.0069	52	68	800	500/D
YK NYY	4×16	Compacted	1.1	1.2	2.0	26.5	1.15	0.0057	70	87	1100	1000/D
	4×25	Compacted	1.3	1.2	2.0	31.0	0.727	0.0054	88	128	1600	1000/D
	4×35	Compacted	1.3	1.5	2.2	35.0	0.524	0.0047	110	154	2100	1000/D
	4×50	Compacted	1.5	1.5	2.2	39.5	0.387	0.0046	133	181	2800	1000/D
	4×70	Compacted	1.5	1.5	2.4	44.5	0.268	0.0039	171	223	3700	800/D
NYY	4×95	Non-compacted	1.7	1.8	2.6	51.5	0.193	0.0038	207	267	5500	500/D
	4×120	Non-compacted	1.7	1.8	2.8	56.0	0.153	0.0034	240	304	6500	500/D
	4×150	Non-compacted	1.9	2.0	3.0	62.0	0.124	0.0034	278	342	8000	300/D
	4×185	Non-compacted	2.1	2.0	3.2	68.0	0.0991	0.0034	317	386	10000	300/D
	4×240	Non-compacted	2.3	2.2	3.4	76.5	0.0754	0.0033	374	448	13000	200/D
	4×300	Non-compacted	2.5	2.2	3.8	85.0	0.0601	0.0032	432	507	16000	200/D

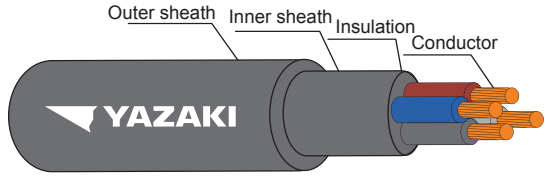
C = Packing in Coil
D = Packing in drum

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY or YK NYY

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED, FOUR CORES

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 4

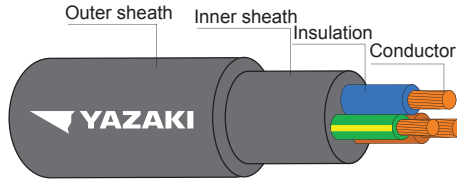
APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

Cable name	Number x Size of conductor (No. x mm²)	Conductor Type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
NYY	4×1	Solid	21.7000	0.3771	0.1185	21.7000
	4×1	Non-compacted	21.7000	0.3651	0.1147	21.7000
	4×1.5	Solid	14.5000	0.3505	0.1101	14.5000
	4×1.5	Non-compacted	14.5000	0.3402	0.1069	14.5000
	4×2.5	Solid	8.8700	0.3238	0.1017	8.8710
	4×2.5	Non-compacted	8.8700	0.3160	0.0993	8.8710
	4×4	Solid	5.5200	0.3135	0.0985	5.5210
	4×4	Non-compacted	5.5200	0.3022	0.0950	5.5210
	4×6	Non-compacted	3.6900	0.2869	0.0901	3.6910
	4×10	Non-compacted	2.1900	0.2801	0.0880	2.1920
YK NYY	4×16	Compacted	1.3800	0.2631	0.0827	1.3820
	4×25	Compacted	0.8700	0.2607	0.0819	0.8738
	4×35	Compacted	0.6273	0.2593	0.0814	0.6326
	4×50	Compacted	0.4635	0.2604	0.0818	0.4707
	4×70	Compacted	0.3213	0.2506	0.0787	0.3308
NYY	4×95	Non-compacted	0.2319	0.2480	0.0779	0.2446
	4×120	Non-compacted	0.1843	0.2409	0.0757	0.1992
	4×150	Non-compacted	0.1499	0.2402	0.0755	0.1678
	4×185	Non-compacted	0.1205	0.2401	0.0754	0.1422
	4×240	Non-compacted	0.0928	0.2361	0.0742	0.1188
	4×300	Non-compacted	0.0751	0.2343	0.0736	0.1052

NYY-G

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND



TIS 11 Part 101-2559

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown + Green/Yellow

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 5

APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

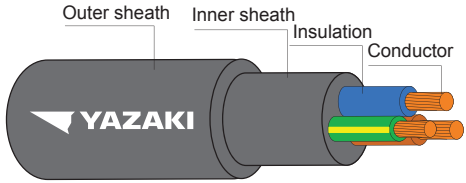
B

Number of coress	Conductor				Insulation thickness nominal	Inner sheath thickness approx.	Outer Sheath thick-ness nominal	Overall diameter maxi-mum	Conductor resistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous currunt rating maxium		Cable weight approx.	Stan-dard Length per drum
	Nominal cross section area		Type of Conductor						Phase	Ground		on cable Ladder at 40°C	direct burial in ground at 30°C		
	Phase	Ground	Phase	Ground											
	(mm^2)	(mm^2)			(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)	(A)	(A)	(kg/km)	(m)
	1	1	Solid		0.8	0.8	1.8	13.0	18.1	18.1	0.0141	15	21	180	500
	1	1	Stranded		0.8	0.8	1.8	13.5	18.1	18.1	0.0135	15	21	190	500
	1.5	1.5	Solid		0.8	0.8	1.8	13.5	12.1	12.1	0.0123	19	27	210	500
	1.5	1.5	Stranded		0.8	0.8	1.8	14.0	12.1	12.1	0.0116	19	27	220	500
	2.5	2.5	Solid		0.8	0.8	1.8	14.5	7.41	7.41	0.0102	26	35	260	500
	2.5	2.5	Stranded		0.8	0.8	1.8	15.0	7.41	7.41	0.0093	26	35	270	500
	4	4	Solid		0.9	0.8	1.8	16.0	4.61	4.61	0.0094	35	47	340	500
	4	4	Stranded		0.9	0.8	1.8	16.5	4.61	4.61	0.0085	35	47	360	500
	6	6	Stranded		0.9	0.8	1.8	18.0	3.08	3.08	0.0073	44	60	450	500
	10	10	Stranded		1.1	0.8	1.8	21.0	1.83	1.83	0.0069	61	81	650	500
2+G	16	16	Stranded		1.1	0.8	2.0	23.5	1.15	1.15	0.0057	82	105	900	500
	25	16	Stranded		1.3	1.2	2.0	28.0	0.727	1.15	0.0054	104	136	1200	500
	35	16	Stranded		1.3	1.2	2.0	30.0	0.524	1.15	0.0047	129	165	1500	500
	50	25	Stranded		1.5	1.2	2.2	34.0	0.387	0.727	0.0046	157	195	2000	500
	70	35	Stranded		1.5	1.5	2.2	38.5	0.268	0.524	0.0039	202	239	2700	500
	95	50	Stranded		1.7	15	2.2	43.5	0.193	0.387	0.0038	245	288	3600	500
	120	70	Stranded		1.7	1.5	2.4	47.5	0.153	0.268	0.0034	285	329	4500	500
	150	95	Stranded		1.9	1.8	2.6	53.0	0.124	0.193	0.0034	330	368	5500	500
	185	95	Stranded		2.1	1.8	2.8	57.5	0.0991	0.193	0.0034	378	417	6500	500
	240	120	Stranded		2.3	2.0	3.0	64.5	0.0754	0.153	0.0033	447	481	8500	500
	300	150	Stranded		2.5	2.0	3.2	71.0	0.0601	0.124	0.0032	516	541	10500	300

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY-G

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND



TIS 11 Part 101-2559

CABLE STRUCTURE

Conductor : Solid and staranded annealed copper

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown + Green/Yellow

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 5

APPLICATION

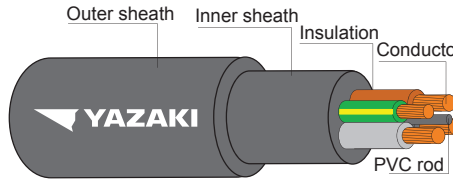
For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of coress	Nominal cross section area		A.C. Resistance	Inductance	Reactance	Impedance
	Phase (mm^2)	Ground (mm^2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
2+G	1	1	21.7000	0.3771	0.1185	21.7000
	1	1	21.7000	0.3651	0.1147	21.7000
	1.5	1.5	14.5000	0.3505	0.1101	14.5000
	1.5	1.5	14.5000	0.3402	0.1069	14.5000
	2.5	2.5	8.8700	0.3238	0.1017	8.8710
	2.5	2.5	8.8700	0.3160	0.0993	8.8710
	4	4	5.5200	0.3135	0.0985	5.5210
	4	4	5.5200	0.3022	0.0950	5.5210
	6	6	3.6900	0.2869	0.0901	3.6910
	10	10	2.1900	0.2801	0.0880	2.1920
	16	16	1.3800	0.2791	0.0877	1.3828
	25	16	0.8700	0.2631	0.0827	0.8739
	35	16	0.6272	0.2593	0.0814	0.6325
	50	25	0.4634	0.2604	0.0818	0.4706
	70	35	0.3212	0.2506	0.0787	0.3307
	95	50	0.2317	0.2480	0.0779	0.2444
	120	70	0.1840	0.2409	0.0757	0.1990
	150	95	0.1495	0.2402	0.0755	0.1675
	185	95	0.1201	0.2401	0.0754	0.1418
	240	120	0.0922	0.2361	0.0742	0.1183
	300	150	0.0744	0.2343	0.0736	0.1047

NYY-G

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey + Green/Yellow

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 5

B

APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

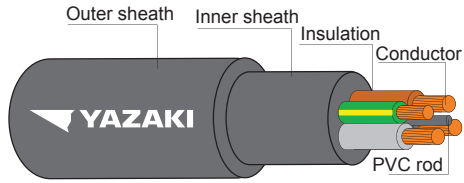
Number of coress	Conductor				Insulation thickness nominal	Inner sheath thickness approx.	Outer Sheath thick-ness nominal	Overall diameter maxi-mum	Conductor resistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous currunt rating maxium		Cable weight approx.	Standard Length per drum
	Nominal cross section area		Type of Conductor						Phase	Ground		on cable Ladder at 40°C	direct burial at 30°C		
	Phase (mm^2)	Ground (mm^2)	Phase	Ground	(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)	(A)	(A)	(kg/km)	(m)
3+G	1	1	Solid		0.8	0.8	1.8	13.5	18.1	18.1	0.0141	13	18	210	500
	1	1	Stranded		0.8	0.8	1.8	14.0	18.1	18.1	0.0135	13	18	220	500
	1.5	1.5	Solid		0.8	0.8	1.8	14.0	12.1	12.1	0.0123	16	22	240	500
	1.5	1.5	Stranded		0.8	0.8	1.8	15.0	12.1	12.1	0.0116	16	22	260	500
	2.5	2.5	Solid		0.8	0.8	1.8	15.5	7.41	7.41	0.0102	22	30	300	500
	2.5	2.5	Stranded		0.8	0.8	1.8	16.0	7.41	7.41	0.0093	22	30	320	500
	4	4	Solid		0.9	0.8	1.8	17.0	4.61	4.61	0.0094	30	39	400	500
	4	4	Stranded		0.9	0.8	1.8	18.0	4.61	4.61	0.0085	30	39	430	500
	6	6	Stranded		0.9	0.8	1.8	19.0	3.08	3.08	0.0073	37	50	550	500
	10	10	Stranded		1.1	0.8	1.8	22.5	1.83	1.83	0.0069	52	68	800	500
	16	16	Stranded		1.1	1.2	2.0	26.5	1.15	1.15	0.0057	70	87	1200	500
	25	16	Stranded		1.3	1.2	2.0	30.5	0.727	1.15	0.0054	88	128	1600	500
	35	16	Stranded		1.3	1.2	2.0	33.0	0.524	1.15	0.0047	110	154	1900	500
	50	25	Stranded		1.5	1.5	2.2	38.5	0.387	0.727	0.0046	133	181	2600	500
	70	35	Stranded		1.5	1.5	2.2	42.5	0.268	0.524	0.0039	171	223	3500	500
	95	50	Stranded		1.7	1.5	2.4	48.5	0.193	0.387	0.0038	207	267	4700	500
	120	70	Stranded		1.7	1.8	2.6	53.5	0.153	0.268	0.0034	240	304	6000	500
	150	95	Stranded		1.9	1.8	2.8	59.0	0.124	0.193	0.0034	278	342	7500	500
	185	95	Stranded		2.1	2.0	3.0	64.5	0.0991	0.193	0.0034	317	386	9000	500
	240	120	Stranded		2.3	2.0	3.2	72.0	0.0754	0.153	0.0033	374	448	11500	300
	300	150	Stranded		2.5	2.2	3.4	79.5	0.0601	0.124	0.0032	432	507	14000	300

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY-G

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATHED WITH GROUND

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Solid and staranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey + Green/Yellow

Inner sheath : Black polyvinyl chloride (PVC)

Outer Sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 5

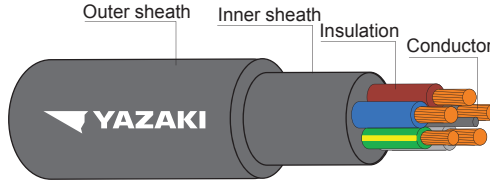
APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of coress	Nominal cross section area		A.C. Resistance	Inductance	Reactance	Impedance
	Phase (mm^2)	Ground (mm^2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
3+G	1	1	21.7000	0.3771	0.1185	21.7000
	1	1	21.7000	0.3651	0.1147	21.7000
	1.5	1.5	14.5000	0.3505	0.1101	14.5000
	1.5	1.5	14.5000	0.3402	0.1069	14.5000
	2.5	2.5	8.8700	0.3238	0.1017	8.8710
	2.5	2.5	8.8700	0.3160	0.0993	8.8710
	4	4	5.5200	0.3135	0.0985	5.5210
	4	4	5.5200	0.3022	0.0950	5.5210
	6	6	3.6900	0.2869	0.0901	3.6910
	10	10	2.1900	0.2801	0.0880	2.1920
	16	16	1.3800	0.2791	0.0877	1.3828
	25	16	0.8700	0.2631	0.0827	0.8739
	35	16	0.6273	0.2593	0.0814	0.6326
	50	25	0.4635	0.2604	0.0818	0.4707
	70	35	0.3213	0.2506	0.0787	0.3308
	95	50	0.2319	0.2480	0.0779	0.2446
	120	70	0.1843	0.2409	0.0757	0.1992
	150	95	0.1499	0.2402	0.0755	0.1678
	185	95	0.1205	0.2401	0.0754	0.1422
	240	120	0.0928	0.2361	0.0742	0.1188
	300	150	0.0751	0.2343	0.0736	0.1052

NYY-G

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND



TIS 11 Part 101-2559

CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown, Black, Grey + Green/Yellow

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl choride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 5

APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

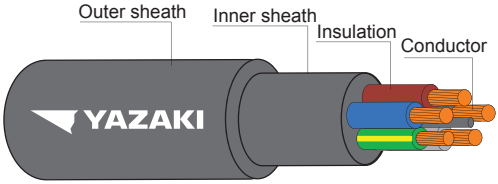
B

Number of coress	Conductor				Insulation thickness nominal	Inner sheath thickness approx.	Outer Sheath thick-ness nominal	Overall diameter maxi-mum	Conductor resistance at 20°C maximum		Insulation resis-tance at 70°C minimum	Continuous currunt rating maxium		Cable weight approx.	Standard length per drum
	Nominal cross section area		Type of Conductor						Phase	Ground		on cable Ladder at 40°C	direct burial at 30°C		
	Phase (mm^2)	Ground (mm^2)	Phase	Ground	(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)		(A)	(A)	(kg/km)	(m)
	1	1	Solid		0.8	0.8	1.8	14.5	18.1	18.1	0.0141	13	18	250	500
	1	1	Stranded		0.8	0.8	1.8	15.0	18.1	18.1	0.0135	13	18	260	500
	1.5	1.5	Solid		0.8	0.8	1.8	15.0	12.1	12.1	0.0123	16	22	280	500
	1.5	1.5	Stranded		0.8	0.8	1.8	16.0	12.1	12.1	0.0116	16	22	300	500
	2.5	2.5	Solid		0.8	0.8	1.8	16.5	7.41	7.41	0.0102	22	30	360	500
	2.5	2.5	Stranded		0.8	0.8	1.8	17.0	7.41	7.41	0.0093	22	30	390	500
	4	4	Solid		0.9	0.8	1.8	18.0	4.61	4.61	0.0094	30	39	480	500
	4	4	Stranded		0.9	0.8	1.8	19.0	4.61	4.61	0.0085	30	39	500	500
	6	6	Stranded		0.9	0.8	1.8	20.5	3.08	3.08	0.0073	37	50	650	500
	10	10	Stranded		1.1	0.8	2.0	25.0	1.83	1.83	0.0069	52	68	1000	500
4+G	16	16	Stranded		1.1	1.2	2.0	28.5	1.15	1.15	0.0057	70	87	1400	500
	25	16	Stranded		1.3	1.2	2.0	34.0	0.727	1.15	0.0054	88	128	1900	500
	35	16	Stranded		1.3	1.5	2.2	39.0	0.524	1.15	0.0047	110	154	2500	500
	50	25	Stranded		1.5	1.5	2.2	43.5	0.387	0.727	0.0046	133	181	3300	500
	70	35	Stranded		1.5	1.5	2.4	49.0	0.268	0.524	0.0039	171	223	4500	500
	95	50	Stranded		1.7	1.8	2.6	56.5	0.193	0.387	0.0038	207	267	6000	500
	120	70	Stranded		1.7	1.8	2.8	61.5	0.153	0.268	0.0034	240	304	7500	500
	150	95	Stranded		1.9	2.0	3.0	68.0	0.124	0.193	0.0034	278	342	9500	300
	185	95	Stranded		2.1	2.0	3.2	75.0	0.0991	0.193	0.0034	317	386	11500	300
	240	120	Stranded		2.3	2.2	3.4	84.5	0.0754	0.153	0.0033	374	448	14500	300
	300	150	Stranded		2.5	2.2	3.8	93.5	0.0601	0.124	0.0032	432	507	18000	200

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY-G

450/750 V 70°C SOLID AND STRANDED CONDUCTOR PVC INSULATED AND DOUBLE SHEATH WITH GROUND



TIS 11 Part 101-2559

CABLE STRUCTURE

Conductor : Solid and staranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown, Black, Grey + Green/Yellow

Inner sheath : Black polyvinyl chloride (PVC)

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 5

APPLICATION

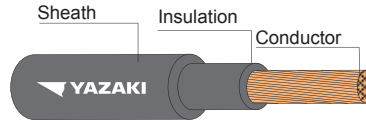
For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

Cable name	Nominal cross section area (No.x mm2)	Conductor Type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
	1	1	21.7000	0.3771	0.1185	21.7000
	1	1	21.7000	0.3651	0.1147	21.7000
	1.5	1.5	14.5000	0.3505	0.1101	14.5000
	1.5	1.5	14.5000	0.3402	0.1069	14.5000
	2.5	2.5	8.8700	0.3238	0.1017	8.8710
	2.5	2.5	8.8700	0.3160	0.0993	8.8710
	4	4	5.5200	0.3135	0.0985	5.5210
	4	4	5.5200	0.3022	0.0950	5.5210
	6	6	3.6900	0.2869	0.0901	3.6910
	10	10	2.1900	0.2801	0.0880	2.1920
4+G	16	16	1.3800	0.2791	0.0877	1.3828
	25	16	0.8700	0.2631	0.0827	0.8739
	35	16	0.6273	0.2593	0.0814	0.6326
	50	25	0.4635	0.2604	0.0818	0.4707
	70	35	0.3213	0.2506	0.0787	0.3308
	95	50	0.2319	0.2480	0.0779	0.2446
	120	70	0.1843	0.2409	0.0757	0.1992
	150	95	0.1499	0.2402	0.0755	0.1678
	185	95	0.1205	0.2401	0.0754	0.1422
	240	120	0.0928	0.2361	0.0742	0.1188
	300	150	0.0751	0.2343	0.0736	0.1052

VCT

450/750 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Insulation color : Black

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 7

APPLICATION

For moble-electrical equipment used in mines, factories, farm or household appliances. This calble is suitable for use in places where cable come in contact with oils.

B

Number of cores	Nominal cross sectional area (mm²)	Conductor Type	Insulation Inner sheath thickness nominal (mm)	Outer Sheath thickness nominal (mm)	Overall diameter (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
	1	Flexible	0.8	1.2	6.2	19.5	0.0127	14	40	100/C
	1.5	Flexible	0.8	1.2	6.6	13.3	0.0111	16	50	100/C
	2.5	Flexible	0.8	1.2	7.4	7.98	0.0092	25	65	100/C
	4	Flexible	0.9	1.4	8.6	4.95	0.0084	30	90	100/C
1	6	Flexible	0.9	1.4	9.4	3.30	0.0071	39	120	100/C
	10	Flexible	1.1	1.8	12.0	1.91	0.0068	51	210	100/C
	16	Flexible	1.1	1.8	13.5	1.21	0.0050	73	270	100/C
	25	Flexible	1.3	2.2	16.0	0.780	0.0048	97	410	100/C
	35	Flexible	1.3	2.2	17.5	0.554	0.0041	140	550	500/D

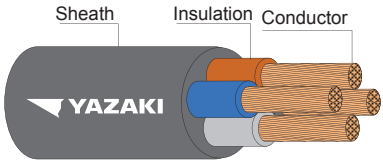
C = Packing in Coil
D = Packing in drum

Number of cores	Nominal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
	1	23.3000	0.6620	0.2079	23.3000
	1.5	15.9000	0.6310	0.1983	15.9000
	2.5	9.5500	0.5930	0.1864	9.5520
	4	5.9227	0.5946	0.1868	5.9256
1	6	3.9485	0.5605	0.1761	3.9524
	10	2.2854	0.5529	0.1737	2.2919
	16	1.4478	0.5306	0.1667	1.4574
	25	0.9334	0.5275	0.1657	0.9480
	35	0.6630	0.5086	0.1598	0.6820

VCT

450/750 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color :

2 Cores	Blue, Brown
3 Cores	Brown, Black, Grey
4 Cores	Blue, Brown, Black, Grey

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 7

APPLICATION

For moble-electrical equipment used in mines, factories, farm or household appliances. This calble is suitable for use in places where cable come in contact with oils.

Number of cores	Nominal cross sectional area (mm²)	Conductor Type	Insulation Inner sheath thickness nominal (mm)	Outer Sheath thickness nominal (mm)	Overall diameter minimum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
	1	Flexible	0.8	1.2	9.6	19.5	0.0127	14	100	100/C
	1.5	Flexible	0.8	1.4	11.0	13.3	0.011	16	130	100/C
	2.5	Flexible	0.8	1.4	12.5	7.98	0.0092	25	170	100/C
	4	Flexible	0.9	1.6	14.5	4.95	0.0084	30	230	100/C
2	6	Flexible	0.9	1.6	16.0	3.30	0.0071	39	320	100/C
	10	Flexible	1.1	1.8	20.0	1.91	0.0068	51	500	500/D
	16	Flexible	1.1	2.2	23.0	1.21	0.0050	73	700	500/D
	25	Flexible	1.3	2.4	27.5	0.780	0.0048	97	1000	500/D
	35	Flexible	1.3	2.6	31.0	0.554	0.0041	140	1400	500/D
	1	Flexible	0.8	1.4	10.5	19.5	0.0127	12	100	100/C
	1.5	Flexible	0.8	1.4	11.5	13.3	0.0111	15	130	100/C
	2.5	Flexible	0.8	1.4	13.0	7.98	0.0092	20	170	100/C
	4	Flexible	0.9	1.6	15.5	4.95	0.0084	26	230	100/C
3	6	Flexible	0.9	1.8	17.5	3.30	0.0071	34	320	100/C
	10	Flexible	1.1	2.0	21.5	1.91	0.0068	47	500	500/D
	16	Flexible	1.1	2.4	25.0	1.21	0.0050	63	700	500/D
	25	Flexible	1.3	2.6	30.0	0.780	0.0048	83	1000	500/D
	35	Flexible	1.3	2.8	33.5	0.554	0.0041	102	1400	500/D
	1	Flexible	0.8	1.6	10.5	19.5	0.0127	12	100	100/C
	1.5	Flexible	0.8	1.6	11.5	13.3	0.0111	15	130	100/C
	2.5	Flexible	0.8	1.6	13.0	7.98	0.0092	20	170	100/C
	4	Flexible	0.9	1.8	15.5	4.95	0.0084	26	230	100/C
4	6	Flexible	0.9	2.0	17.5	3.30	0.0071	34	320	500/D
	10	Flexible	1.1	2.2	21.5	1.91	0.0068	47	500	500/D
	16	Flexible	1.1	2.6	25.0	1.21	0.0050	63	700	500/D
	25	Flexible	1.3	2.8	30.0	0.780	0.0048	83	1000	500/D
	35	Flexible	1.3	3.1	33.5	0.554	0.0041	102	1400	500/D

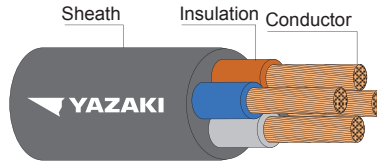
C = Packing in Coil
D = Packing in drum

B

VCT

450/750 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH, ROUND TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Insulation color :

2 Cores	Blue, Brown
3 Cores	Brown, Black, Grey
4 Cores	Blue, Brown, Black, Grey

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 7

APPLICATION

For moble-electrical equipment used in mines, factories, farm or household appliances. This calble is suitable for use in places where cable come in contact with oils.

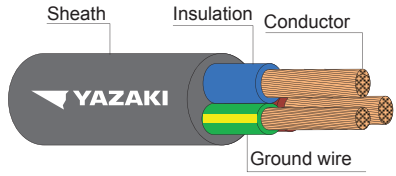
B

Number of cores	Nominal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	1	23.3000	0.3560	0.1118	23.3000
	1.5	15.9000	0.3330	0.1048	15.9000
	2.5	9.5500	0.3070	0.0965	9.5500
	4	5.9227	0.3084	0.0969	5.9235
	6	3.9485	0.8662	0.0899	3.9495
	10	2.2854	0.2768	0.0870	2.2870
	16	1.4479	0.2638	0.0829	1.4502
	25	0.9334	0.2602	0.0817	0.9370
	35	0.6631	0.2500	0.0785	0.6677
3	1	23.3000	0.3560	0.1118	23.3000
	1.5	15.9000	0.3330	0.1048	15.9000
	2.5	9.5500	0.3070	0.0965	9.5500
	4	5.9227	0.3084	0.0969	5.9235
	6	3.9485	0.2862	0.0899	3.9495
	10	2.2854	0.2768	0.0870	2.2870
	16	1.4479	0.2638	0.0829	1.4503
	25	0.9335	0.2602	0.0817	0.9371
	35	0.6632	0.2500	0.0785	0.6678
4	1	23.3000	0.3560	0.1118	23.3000
	1.5	15.9000	0.3330	0.1048	15.9000
	2.5	9.5500	0.3070	0.0965	9.5520
	4	5.9227	0.3084	0.0969	5.9235
	6	3.9485	0.2862	0.0899	3.9495
	10	2.2854	0.2768	0.0870	2.2870
	16	1.4479	0.2638	0.0829	1.4503
	25	0.9335	0.2602	0.0817	0.9371
	35	0.6632	0.2500	0.0785	0.6678

VCT-G

450/750 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH GROUND, ROUND TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/D)

Insulation color : Blue, Brown + Green/Yellow

Sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 8

APPLICATION

For moble-electrical equipment used in mines, factories, farm or household appliances. This calble is suitable for use in places where cable come in contact with oils.

B

Number of coress	Conductor				Insulation thickness nominal	Sheath thickness approx.	Overall diameter maximum	Conductor resistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
	Nominal cross section area		Type of Conductor					Phase	Ground				
	Phase	Ground	Phase	Ground									
	(mm^2)	(mm^2)			(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)		(kg/km)	(m)
2+G	1	1	Flexible		0.8	1.2	10.0	19.5	19.5	0.0127	14	120	100/C
	1.5	1.5	Flexible		0.8	1.4	12.0	13.3	13.3	0.0111	16	150	100/C
	2.5	2.5	Flexible		0.8	1.4	13.0	7.98	7.98	0.0092	25	200	100/C
	4	4	Flexible		0.9	1.6	15.5	4.95	4.95	0.00084	30	280	100/C
	6	6	Flexible		0.9	1.8	17.5	3.30	3.30	0.0071	39	400	100/C
	10	10	Flexible		1.1	2.0	21.5	1.91	1.91	0.0068	51	650	500/D
	16	16	Flexible		1.1	2.4	25.0	1.21	1.21	0.0050	73	900	500/D
	25	16	Flexible		1.3	2.6	28.5	0.780	1.21	0.0048	97	1200	500/D
	35	16	Flexible		1.3	2.8	31.5	0.554	1.21	0.0041	140	1500	500/D

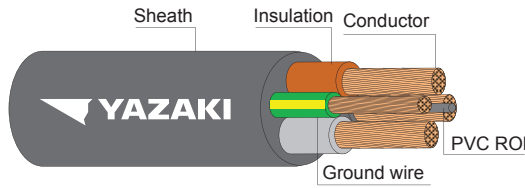
C = Packing in Coil
D = Packing in drum

Number of cores	Nominal cross sectional area		A.C. Resistance	Inductance	Reactance	Impedance
	Phase (mm^2)	Ground (mm^2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
2+G	1	1	23.3000	0.3560	0.1118	23.3000
	1.5	1.5	15.9000	0.3330	0.1048	15.9000
	2.5	2.5	9.5500	0.3070	0.0965	9.5520
	4	4	5.9227	0.3084	0.0969	5.9235
	6	6	3.9485	0.2862	0.0899	3.9495
	10	10	2.2854	0.2768	0.0870	2.2870
	16	16	1.4479	0.2638	0.0829	1.4502
	25	16	0.9334	0.2602	0.0817	0.9370
	35	16	0.6631	0.2500	0.0785	0.6677

VCT-G

450/750 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH GROUND, ROUND TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey + Green/Yellow

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 8

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

B

Number of cores	Conductor				Insulation thickness nominal	Sheath thickness approx.	Overall diameter maximum	Conductor resistance at 20°C maximum		Insulation resistance at 70°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
	Nominal cross section area		Type of Conductor					Phase	Ground				
	Phase (mm^2)	Ground (mm^2)	Phase	Ground	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)	(MΩ-km)		(kg/km)	(m)
3+G	1	1	Flexible		0.8	1.4	11.5	19.5	19.5	0.0127	12	150	100/C
	1.5	1.5	Flexible		0.8	1.4	12.5	13.3	13.3	0.0111	15	180	100/C
	2.5	2.5	Flexible		0.8	1.4	14.0	7.98	7.98	0.0092	20	240	100/C
	4	4	Flexible		0.9	1.8	17.0	4.95	4.95	0.0084	26	360	100/C
	6	6	Flexible		0.9	2.0	19.5	3.30	3.30	0.0071	34	500	500/D
	10	10	Flexible		1.1	2.2	24.0	1.91	1.91	0.0068	47	850	500/D
	16	16	Flexible		1.1	2.6	28.0	1.21	1.21	0.0050	63	1200	500/D
	25	16	Flexible		1.3	2.8	33.0	0.780	1.21	0.0048	83	1600	500/D
	35	16	Flexible		1.3	3.1	37.0	0.554	1.21	0.0041	102	2100	500/D

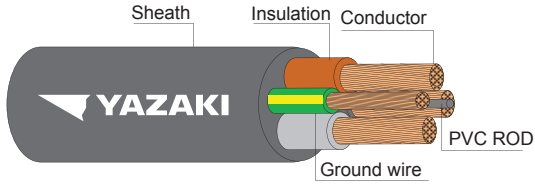
C = Packing in Coil
D = Packing in drum

Number of cores	Nominal cross sectional area		A.C. Resistance	Inductance	Reactance	Impedance
	Phase (mm2)	Ground (mm2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
3+G	1	1	23.3000	0.3560	0.1118	23.3000
	1.5	1.5	15.9000	0.3330	0.1048	15.9000
	2.5	2.5	9.5500	0.3070	0.0965	9.5500
	4	4	5.9227	0.3084	0.0969	5.9235
	6	6	3.9485	0.2862	0.0899	3.9495
	10	10	2.2854	0.2768	0.0870	2.2870
	16	16	1.4479	0.2638	0.0829	1.4503
	25	16	0.9335	0.2602	0.0817	0.9371
	35	16	0.6632	0.2500	0.0785	0.6678

VCT-G

450/750 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH GROUND, ROUND TYPE

TIS 11 Part 101-2559



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown, Black, Grey + Green/Yellow

Sheath : Black polyvinyl chloride (PVC/ST5)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 8

APPLICATION

For household appliances, electrical eauipment and electrcal illumination.

Number of cores	Conductor				Insulation Inner sheath thickness nominal	Outer Sheath thickness nominal	Overall diameter		Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating in free air 40°C maximum	Cable weight approx.	Standard Length
	Nominal cross sectional area		Type of Conductor										
	Phase (mm^2)	Ground (mm^2)	Phase	Ground	(mm)	(mm)	minimum (mm)	maximum (mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
4+G	1	1	Flexible		0.8	1.6	13.0	19.5	19.5	0.0127	12	190	100/C
	1.5	1.5	Flexible		0.8	1.6	14.0	13.3	13.3	0.0111	15	220	100/C
	2.5	2.5	Flexible		0.8	1.6	15.5	7.98	7.98	0.0092	20	310	100/C
	4	4	Flexible		0.9	1.8	18.5	4.95	4.95	0.0084	26	440	100/C
	6	6	Flexible		0.9	2.0	21.5	3.30	3.30	0.0071	34	600	500/D
	10	10	Flexible		1.1	2.2	26.5	1.91	1.91	0.0068	47	1000	500/D
	16	16	Flexible		1.1	2.6	30.5	1.21	1.21	0.0050	63	1400	500/D
	25	16	Flexible		1.3	2.8	36.5	0.780	1.21	0.0048	83	2000	500/D
	35	16	Flexible		1.3	3.1	41.5	0.554	1.21	0.0041	102	2600	500/D

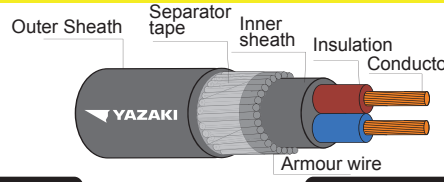
C = Packing in Coil
D = Packing in drum

Number of cores	Nominal cross sectional area		A.C. Resistance	Inductance	Reactance	Impedance
	Phase (mm^2)	Ground (mm^2)	R (Ω/km)	L (mH/km)	XL (Ω/km)	Z (Ω/km)
4+G	1	1	23.3000	0.3560	0.1118	23.3000
	1.5	1.5	15.9000	0.3330	0.1048	15.9000
	2.5	2.5	9.5500	0.3070	0.0965	9.5520
	4	4	5.9227	0.3084	0.0969	5.9235
	6	6	3.9485	0.2862	0.0899	3.9495
	10	10	2.2854	0.2768	0.0870	2.2870
	16	16	1.4479	0.2638	0.0829	1.4503
	25	16	0.9335	0.2602	0.0817	0.9371
	35	16	0.6632	0.2500	0.0785	0.6678

B

NYY-SWA

450/750 V 70°C PVC INSULATED AND DOUBLE SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED POWER CABLE



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown

Inner sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized Steel Wires

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

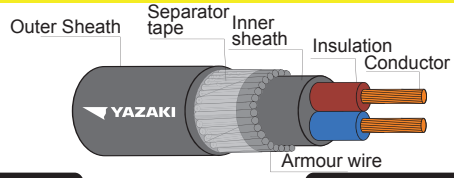
B

Number of cores	Nominal cross sectional area (mm^2)	Conductor Type	Insulation Inner sheath thickness nominal (mm)	Inner sheath thickness approx. (mm)	Diameter of steel wire amor nominal	Outer Sheath thickness nominal (mm)	Overall diameter maximum (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating In ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length per drum (m)
	1	Solid	0.8	0.8	0.8	1.8	13.5	18.1	0.0141	22	300	500
	1	Stranded	0.8	0.8	0.8	1.8	14.0	18.1	0.0135	22	310	500
	1.5	Solid	0.8	0.8	0.8	1.8	14.0	12.1	0.0123	27	320	500
	1.5	Stranded	0.8	0.8	0.8	1.8	14.5	12.1	0.0116	27	340	500
	2.5	Solid	0.8	0.8	0.8	1.8	15.0	7.4	0.0102	36	370	500
	2.5	Stranded	0.8	0.8	0.8	1.8	15.5	7.4	0.0093	36	400	500
	4	Solid	0.9	0.8	0.8	1.8	16.5	4.6	0.0094	47	460	500
	4	Stranded	0.9	0.8	1.3	1.8	18.0	4.61	0.0085	47	600	500
	6	Stranded	0.9	0.8	1.3	1.8	19.0	3.08	0.0073	61	700	500
	10	Stranded	1.1	0.8	1.3	1.8	22.0	1.83	0.0069	82	950	500
2	16	Stranded	1.1	0.8	1.6	1.8	24.0	1.15	0.0057	107	1300	500
	25	Stranded	1.3	1.2	2.0	1.9	30.0	0.727	0.0054	138	2000	500
	35	Stranded	1.3	1.2	2.0	2.0	33.0	0.524	0.0047	168	2400	500
	50	Stranded	1.5	1.2	2.0	2.1	36.0	0.387	0.0046	199	3000	500
	70	Stranded	1.5	1.5	2.0	2.2	41.0	0.268	0.0039	243	3800	500
	95	Stranded	1.7	1.5	2.5	2.4	47.0	0.193	0.0038	294	5000	500
	120	Stranded	1.7	1.5	2.5	2.6	51.0	0.153	0.0034	336	6000	500
	150	Stranded	1.9	1.8	2.5	2.7	56.0	0.124	0.0034	375	7000	500
	185	Stranded	2.1	1.8	2.5	2.9	61.0	0.0991	0.0034	424	8500	300
	240	Stranded	2.3	2.0	2.5	3.1	68.0	0.0754	0.0033	489	10500	300
	300	Stranded	2.5	2.0	3.2	3.4	76.0	0.0601	0.0032	553	13500	200

Remark: Thermal relativity of soll 1.2 Km/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY-SWA

450/750 V 70°C PVC INSULATED AND DOUBLE SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED POWER CABLE



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown

Inner sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized Steel Wires

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 4

APPLICATION

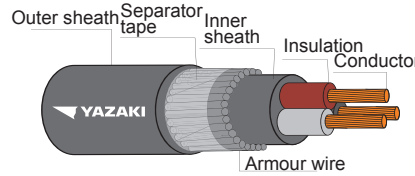
For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm²)	Conductor Type	A.C. Realstance R (Ω/km)	Inductance L (Ω/km)	Reactance XL (Ω/km)	Impedence Z (Ω/km)
2	1	Solid	21.7000	0.3771	0.1185	21.7000
	1	Stranded	21.7000	0.3651	0.1147	21.7000
	1.5	Solid	14.5000	0.3505	0.1101	14.5000
	1.5	Stranded	14.5000	0.3402	0.1069	14.5000
	2.5	Solid	8.8700	0.3238	0.1017	8.8710
	2.5	Stranded	8.8700	0.3160	0.0993	8.8710
	4	Solid	5.5200	0.3135	0.0085	5.5210
	4	Stranded	5.5200	0.3022	0.0950	5.5210
	6	Stranded	3.6900	0.2869	0.0901	3.6910
	10	Stranded	2.1900	0.2801	0.0880	2.1920
	16	Stranded	1.3800	0.2631	0.0827	1.3820
	25	Stranded	0.8700	0.2607	0.0819	0.8738
	35	Stranded	0.6272	0.2593	0.0814	0.6325
	50	Stranded	0.4634	0.2604	0.0818	0.4706
	70	Stranded	0.3212	0.2506	0.0787	0.3307
	95	Stranded	0.2317	0.2480	0.0779	0.2444
	120	Stranded	0.1840	0.2409	0.0757	0.1990
	150	Stranded	0.1495	0.2402	0.0755	0.1675
	185	Stranded	0.1201	0.2401	0.0754	0.1418
	240	Stranded	0.0922	0.2361	0.0742	0.1183
	300	Stranded	0.0744	0.2343	0.0736	0.1047

B

NYY-SWA

450/750 V 70°C PVC INSULATED AND DOUBLE SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED POWER CABLE



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized Steel Wires

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 4

B

APPLICATION

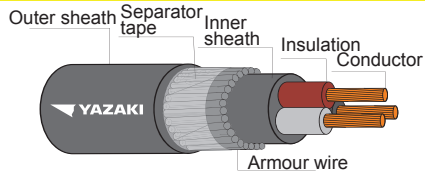
For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area	Conductor Type	Insulation Inner sheath thickness nominal	Inner sheath thickness approx.	Diameter of steel wire amor nominal	Outer Sheath thickness nominal	Overall diameter maximum	Conductor resistance at 20°C maximum	Insulation resistance at 70°C minimum	Continuous current rating In ground at 30°C maximum	Cable weight approx.	Standard Length per drum
	($mm^{2)}$		(mm)	(mm)		(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(kg/km)	(m)
	1	Solid	0.8	0.8	0.8	1.8	14.0	18.1	0.0141	18	330	500
	1	Stranded	0.8	0.8	0.8	1.8	14.5	18.1	0.0135	18	340	500
	1.5	Solid	0.8	0.8	0.8	1.8	14.5	12.1	0.0123	23	350	500
	1.5	Stranded	0.8	0.8	0.8	1.8	15.0	12.1	0.0116	23	380	500
	2.5	Solid	0.8	0.8	0.8	1.8	15.5	7.41	0.0102	30	420	500
	2.5	Stranded	0.8	0.8	0.8	1.8	16.5	7.41	0.0093	30	450	500
	4	Solid	0.9	0.8	1.3	1.8	18.0	4.61	0.0094	40	650	500
	4	Stranded	0.9	0.8	1.3	1.8	18.5	4.61	0.0085	40	700	500
	6	Stranded	0.9	0.8	1.3	1.8	20.0	3.08	0.0073	51	800	500
	10	Stranded	1.1	0.8	1.6	1.8	23.0	1.83	0.0069	69	1200	500
3	16	Stranded	1.1	1.2	1.6	1.8	26.0	1.15	0.0057	88	1600	500
	25	Stranded	1.3	1.2	2.0	1.9	31.0	0.727	0.0054	115	2300	500
	35	Stranded	1.3	1.2	2.0	2.0	34.0	0.524	0.0047	140	2800	500
	50	Stranded	1.5	1.5	2.0	2.2	39.0	0.387	0.0046	168	3600	500
	70	Stranded	1.5	1.5	2.0	2.3	43.0	0.268	0.0039	209	4500	500
	95	Stranded	1.7	1.5	2.5	2.5	50.0	0.193	0.0038	248	6500	500
	120	Stranded	1.7	1.8	2.5	2.7	55.0	0.153	0.0034	283	7500	300
	150	Stranded	1.9	1.8	2.5	2.8	59.0	0.124	0.0034	310	9000	300
	185	Stranded	2.1	2.0	2.5	3.0	65.0	0.0991	0.0034	357	15000	300
	240	Stranded	2.3	2.0	2.5	3.3	73.0	0.0754	0.0033	427	13000	200
	300	Stranded	2.5	2.2	3.2	3.5	81.0	0.0601	0.0032	453	17000	200

Remark: Thermal relativity of soll 1.2 Km/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY-SWA

450/750 V 70°C PVC INSULATED AND DOUBLE SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED POWER CABLE



CABLE STRUCTURE

Conductor : Solid and stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized Steel Wires

Outer sheath : Black polyvinyl Chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 volts

Reference standard : TIS 11 Part 101-2559 Table 4

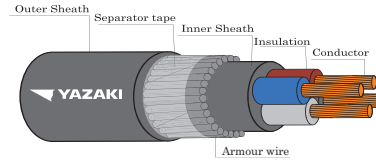
APPLICATION

For Installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Conductor Type	A.C. Realstance R (Ω/km)	Inductance L (Ω/km)	Reactance XL (Ω/km)	Impedence Z (Ω/km)
3	1	Solid	21.7000	0.3771	0.1185	21.7000
	1	Stranded	21.7000	0.3651	0.1147	21.7000
	1.5	Solid	14.5000	0.3605	0.1101	14.5000
	1.5	Stranded	14.5000	0.3402	0.1069	14.5000
	2.5	Solid	8.8700	0.3238	0.1017	8.8710
	2.5	Stranded	8.8700	0.3160	0.0993	8.8710
	4	Solid	5.5200	0.3135	0.0085	5.5210
	4	Stranded	5.5200	0.3022	0.0950	5.5210
	6	Stranded	3.6900	0.2869	0.0901	3.6910
	10	Stranded	2.1900	0.2801	0.0880	2.1920
	16	Stranded	1.3800	0.2831	0.0827	1.3820
	25	Stranded	0.8700	0.2607	0.0819	0.8738
	35	Stranded	0.6273	0.2593	0.0814	0.6326
	50	Stranded	0.4635	0.2604	0.0818	0.4707
	70	Stranded	0.3213	0.2506	0.0787	0.3308
	95	Stranded	0.2319	0.2480	0.0779	0.2446
	120	Stranded	0.1843	0.2409	0.0757	0.1992
	150	Stranded	0.1499	0.2402	0.0755	0.1678
	185	Stranded	0.1205	0.2401	0.0754	0.1422
	240	Stranded	0.0928	0.2361	0.0742	0.1188
	300	Stranded	0.0751	0.2343	0.0736	0.1052

NYY-SWA

450/750 V 70°C PVC INSULATED AND DOUBLE SHEATHED, WITH GALVANIZED STEEL WIRE AMORED POWER CABLE



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Amor : Galvanized Steel Wires

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

B

APPLICATION

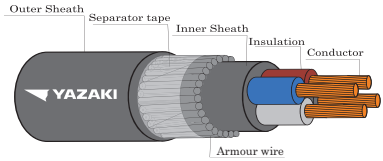
For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional (mm^2)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Diameter of steel norminal	Outer Sheath thickness nominal (mm)	Overall diameter (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length per drum (m)
	1	Solid	0.8	0.8	0.8	1.8	15.0	18.1	0.0141	18	360	500
	1	Stranded	0.8	0.8	0.8	1.8	15.0	18.1	0.0135	18	380	500
	1.5	Solid	0.8	0.8	0.8	1.8	15.5	12.1	0.0123	23	400	500
	1.5	Stranded	0.8	0.8	0.8	1.8	16.0	12.1	0.0116	23	420	500
	2.5	Solid	0.8	0.8	0.8	1.8	16.5	7.41	0.0102	30	480	500
	2.5	Stranded	0.8	0.8	1.3	1.8	18.0	7.41	0.0093	30	650	500
	4	Solid	0.9	0.8	1.3	1.8	19.0	4.61	0.0094	40	750	500
	4	Stranded	0.9	0.8	1.3	1.8	20.0	4.61	0.0085	40	800	500
	6	Stranded	0.9	0.8	1.3	1.8	21.0	3.08	0.0073	51	950	500
	10	Stranded	1.1	0.8	1.6	1.8	25.0	1.83	0.0069	69	1400	500
4	16	Stranded	1.1	1.2	1.6	1.8	28.0	1.15	0.0057	88	1800	500
	25	Stranded	1.3	1.2	2.0	2.0	34.0	0.727	0.0054	115	2800	500
	35	Stranded	1.3	1.5	2.0	2.1	38.0	0.524	0.0047	140	3500	500
	50	Stranded	1.5	1.5	2.0	2.3	43.0	0.387	0.0046	168	4300	500
	70	Stranded	1.5	1.5	2.5	2.5	49.0	0.268	0.0039	209	6000	500
	95	Stranded	1.7	1.8	2.5	2.7	55.0	0.193	0.0038	248	8000	300
	120	Stranded	1.7	1.8	2.5	2.9	60.0	0.153	0.0034	283	9000	300
	150	Stranded	1.9	2.0	2.5	3.0	65.0	0.124	0.0034	310	11000	300
	185	Stranded	2.1	2.0	2.5	3.2	72.0	0.0991	0.0034	357	13000	200
	240	Stranded	2.3	2.2	3.2	3.5	81.0	0.0754	0.0033	427	17500	100
	300	Stranded	2.5	2.2	3.2	3.8	89.0	0.0601	0.0032	453	21000	100

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYY-SWA

450/750 V 70°C PVC INSULATED AND DOUBLE SHEATHED, WITH GALVANIZED STEEL WIRE AMORED POWER CABLE



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Blue, Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Amor : Galvanized Steel Wires

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

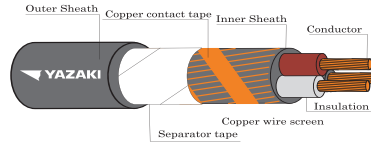
APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
	1	Solid	21.7000	0.3771	0.1185	21.7000
	1	Stranded	21.7000	0.3651	0.1147	21.7000
	1.5	Solid	14.5000	0.3505	0.1101	14.5000
	1.5	Stranded	14.5000	0.3402	0.1069	14.5000
	2.5	Solid	8.8700	0.3238	0.1017	8.8710
	2.5	Stranded	8.8700	0.3160	0.0993	8.8710
	4	Solid	5.5200	0.3135	0.0985	5.5210
	4	Stranded	5.5200	0.3022	0.0950	5.5210
	6	Stranded	3.6900	0.2869	0.0901	3.6910
	10	Stranded	2.1900	0.2801	0.0880	2.1920
4	16	Stranded	1.3800	0.2631	0.0827	1.3820
	25	Stranded	0.8700	0.2607	0.0819	0.8738
	35	Stranded	0.6273	0.2593	0.0814	0.6326
	50	Stranded	0.4635	0.2604	0.0818	0.4707
	70	Stranded	0.3213	0.2506	0.0787	0.3308
	95	Stranded	0.2319	0.2480	0.0779	0.2446
	120	Stranded	0.1843	0.2409	0.0757	0.1992
	150	Stranded	0.1499	0.2402	0.0755	0.1678
	185	Stranded	0.1205	0.2401	0.0754	0.1422
	240	Stranded	0.0928	0.2361	0.0742	0.1188
	300	Stranded	0.0751	0.2343	0.0736	0.1052

NYCY

450/750 V 70°C PVC INSULATED AND DOUBLE SHEATHED, WITH CONCENTRIC CONDUCTORS POWER CABLE



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Concentric shield : Annealed copper wires with helix of copper tape fully covers

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

B

APPLICATION

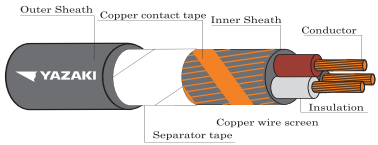
or in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)		Conductor type	Diameter of Concentric shield	Insulation thickness nominal	Inner Sheath thickness approx.	Outer Sheath thickness nominal	Overall diameter maximum	Conductor resistance at 20°C	Insulation resistance at 70°C	Continuous current rating in free air at 40°c	Continuous current rating in ground at 30°C	Cable weight approx	Standard length per drum
	Phase	Concentric Shield		(mm)	(mm)	(mm)	(mm)	(mm)	(01km)	(MD-km)	(A)	(A)	(kg/km)	(m)
3	1.5	1.5	Solid	1.5	0.8	0.8	1.8	14.5	12.1	0.0123	16	22	240	500
	1.5	1.5	Stranded	1.5	0.8	0.8	1.8	15.0	12.1	0.0116	16	22	260	500
	2.5	2.5	Solid	2.5	0.8	0.8	1.8	15.5	7.41	0.0102	22	30	300	500
	2.5	2.5	Stranded	2.5	0.8	0.8	1.8	16.5	7.41	0.0093	22	30	320	500
	4	4	Solid	4	0.9	0.8	1.8	17.5	4.61	0.0094	30	39	400	500
	4	4	Stranded	4	0.9	0.8	1.8	18.0	4.61	0.0085	30	39	420	500
	6	6	Stranded	6	0.9	0.8	1.8	19.5	3.08	0.0073	37	50	550	500
	10	10	Stranded	10	1.1	0.8	1.8	22.0	1.83	0.0069	52	68	750	500
	16	16	Stranded	16	1.1	0.8	2.0	26.0	1.15	0.0057	66	87	1100	500
	25	16	Stranded	16	1.3	1.2	2.0	30.0	0.727	0.0054	88	107	1600	500
	25	25	Stranded	25	1.3	1.2	2.0	30.0	0.727	0.0054	88	107	1600	500
	35	16	Stranded	16	1.3	1.2	2.0	33.0	0.524	0.0047	107	122	1900	500
	35	25	Stranded	25	1.3	1.2	2.0	33.0	0.524	0.0047	107	122	2000	500
	50	25	Stranded	25	1.5	1.5	2.2	38.0	0.387	0.0046	130	142	2600	500
	50	35	Stranded	35	1.5	1.5	2.2	39.0	0.387	0.0046	130	142	2700	500
	70	35	Stranded	35	1.5	1.5	2.2	43.0	0.268	0.0039	162	178	3500	500
	70	50	Stranded	50	1.5	1.5	2.2	43.0	0.268	0.0039	162	178	3600	500
	95	50	Stranded	50	1.7	1.5	2.4	48.0	0.193	0.0038	200	219	4700	500
	95	70	Stranded	70	1.7	1.5	2.4	49.0	0.193	0.0038	200	219	4900	500
	120	70	Stranded	70	1.7	1.8	2.6	53.0	0.153	0.0034	233	254	6000	500
	120	95	Stranded	95	1.7	1.8	2.6	54.0	0.153	0.0034	233	254	6000	500
	150	70	Stranded	70	1.9	1.8	2.8	58.0	0.124	0.0034	266	290	7000	500
	150	95	Stranded	95	1.9	1.8	2.8	58.0	0.124	0.0034	266	290	7500	500
	150	120	Stranded	120	1.9	1.8	2.8	59.0	0.124	0.0034	266	290	7500	500
	185	95	Stranded	95	2.1	2.0	3.0	64.0	0.0991	0.0034	306	332	9000	300
	185	120	Stranded	120	2.1	2.0	3.0	65.0	0.0991	0.0034	306	332	9000	300
	240	120	Stranded	120	2.3	2.0	3.2	72.0	0.0754	0.0033	364	389	11500	300
	300	150	Stranded	150	2.5	2.2	3.4	79.0	0.0601	0.0032	417	445	14000	300

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

NYCY

450/750 V 70°C PVC INSULATED AND DOUBLE SHEATHED, WITH CONCENTRIC CONDUCTORS POWER CABLE



CABLE STRUCTURE

Conductor : Solid and Stranded annealed copper wire

Insulation : Polyvinyl chloride (PVC/C)

Insulation color : Brown, Black, Grey

Inner sheath : Black polyvinyl chloride (PVC)

Concentric shield : Annealed copper wires with helix of copper tape fully covers

Outer sheath : Black polyvinyl chloride (PVC/ST4)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 450/750 Volts

Rated voltage : 450 Volts between Line to Earth
: 750 Volts between Line to Line

AC Testing voltage : 2,500 Volts

Reference standard : TIS 11 Part 101-2559 Table 4

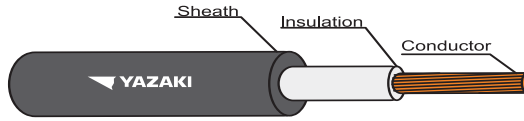
APPLICATION

For in raceway, wet or dry location, or direct burial in ground

Number of cores	Nominal cross sectional area (mm^2)	Conductor type	A.C. Resistance R (0/km)	Inductance L (mH/km)	Reactance XL (0/km)	Impedance Z (0/km)
3	1.5	Solid	14.5000	0.3505	0.1101	14.5000
	1.5	Stranded	14.5000	0.3402	0.1069	14.5000
	2.5	Solid	8.8700	0.3238	0.1017	8.8710
	2.5	Stranded	8.8700	0.3160	0.0993	8.8710
	4	Solid	5.5200	0.3135	0.0985	5.5210
	4	Stranded	5.5200	0.3022	0.0950	5.5210
	6	Stranded	3.6900	0.2869	0.0901	3.6910
	10	Stranded	2.1900	0.2801	0.0880	2.1920
	16	Stranded	1.3800	0.2631	0.0827	1.3820
	25	Stranded	0.8700	0.2607	0.0819	0.8738
	35	Stranded	0.6273	0.2593	0.0814	0.6326
	50	Stranded	0.4635	0.2604	0.0818	0.4707
	70	Stranded	0.3213	0.2506	0.0787	0.3308
	95	Stranded	0.2319	0.2480	0.0779	0.2446
	120	Stranded	0.1843	0.2409	0.0757	0.1992
	150	Stranded	0.1499	0.2402	0.0755	0.1678
	185	Stranded	0.1205	0.2401	0.0754	0.1422
	240	Stranded	0.0928	0.2361	0.0742	0.1188
	300	Stranded	0.0751	0.2343	0.0736	0.1052

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

Category C

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Natural (Translucent)

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24; Category C, TIS 2143-2546

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Cable name	Number x Size of conductor (No.x mm²)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductorl resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)			Continuous current rating in ground at 30°C maximum (A)	Cable weight approx (kg/km)	Standard length per drum (m)
								Spaced	Touching	Trefoil			
FD-0.6/1KV-CV	1x1.5	Non-compacted	0.7	1.4	6.5	12.1	2,500	31	24	23	33	50	500
YK FD-0.6/1KV-CV	1x2.5	Non-compacted	0.7	1.4	7.0	7.41	2,100	42	32	31	43	65	1000
	1x4	Non-compacted	0.7	1.4	7.5	4.61	1,700	54	42	41	55	80	1000
	1x6	Non-compacted	0.7	1.4	8.0	3.08	1,450	68	53	52	70	100	1000
	1x10	Non-compacted	0.7	1.4	9.0	1.83	1,250	90	73	71	92	150	1000
	1x16	Compacted	0.7	1.4	9.5	1.15	1,000	124	95	93	119	200	1000
	1x25	Compacted	0.9	1.4	11.0	0.727	1,050	166	128	123	152	300	1000
	1x35	Compacted	0.9	1.4	12.5	0.524	900	206	160	154	184	390	1000
	1x50	Compacted	1.0	1.4	13.5	0.387	850	250	197	188	217	500	1000
	1x70	Compacted	1.1	1.4	15.5	0.268	800	321	254	244	266	700	1000
	1x95	Compacted	1.1	1.5	17.5	0.193	650	391	311	298	318	950	1000
	1x120	Compacted	1.2	1.5	19.0	0.153	650	455	364	349	362	1200	1000
	1x150	Compacted	1.4	1.6	21.0	0.124	700	525	422	404	406	1500	1000
	1x185	Compacted	1.6	1.6	23.0	0.0991	700	602	485	464	459	1800	1000
	1x240	Compacted	1.7	1.7	26.0	0.0754	650	711	577	552	533	2400	1000
FD-0.6/1KV-CV	1x300	Compacted	1.8	1.8	29.0	0.0601	600	821	670	640	601	3100	500
	1x400	Compacted	2.0	1.9	32.0	0.0470	600	987	790	749	684	3900	500
	1x500	Compacted	2.2	2.0	36.0	0.0366	600	1140	908	861	777	5000	500
	1x630	Compacted	2.4	2.2	40.0	0.0283	550	1298	1064	1014	1229	6500	500
	1x800	Compacted	2.6	2.3	45.0	0.0221	550	1494	1220	1156	1380	8000	500
	1x1000	Compacted	2.8	2.4	51.0	0.0176	500	1712	1391	1307	1532	10500	500

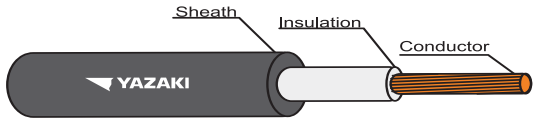
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED FLAME RETARDANT POWER CABLE

IEC 60502-1

TIS 2143-2546



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Natural (Translucent)

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24; Category C, TIS 2143-2546

APPLICATION

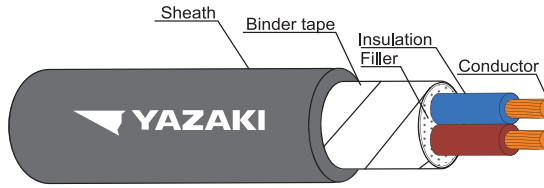
For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Cable name	Number x Size of conductor (No.x mm²)	Conductor type	A.C. Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Inductance Z Impedance		
			Spaced	Touching	Trefoil	Spaced	Touching	Trefoil	Spaced	Touching	Trefoil	Spaced	Touching	Trefoil
FD-0.6/1KV-CV	1x1.5	Non-compacted	15.4287	15.4287	15.4287	0.6630	0.5244	0.4782	0.2083	0.1647	0.1502	15.4301	15.4296	15.4294
YK FD-0.6/1KV-CV	1x2.5	Non-compacted	9.4485	9.4485	9.4485	0.6314	0.4928	0.4466	0.1984	0.1548	0.1403	9.4506	9.4498	9.4495
	1x4	Non-compacted	5.8782	5.8782	5.8782	0.5988	0.4602	0.4140	0.1881	0.1446	0.1301	5.8812	5.8800	5.8796
	1x6	Non-compacted	3.9273	3.9273	3.9273	0.5754	0.4368	0.3906	0.1808	0.1372	0.1227	3.9315	3.9297	3.9292
	1x10	Non-compacted	2.3335	2.3335	2.3335	0.5459	0.4072	0.3610	0.1715	0.1279	0.1134	2.3398	2.3370	2.3363
	1x16	Compacted	1.4664	1.4664	1.4665	0.5284	0.3898	0.3436	0.1660	0.1225	0.1079	1.4758	1.4715	1.4705
	1x25	Compacted	0.9271	0.9271	0.9272	0.5159	0.3772	0.3310	0.1621	0.1185	0.1040	0.9412	0.9346	0.9330
	1x35	Compacted	0.6683	0.6683	0.6684	0.5017	0.3630	0.3168	0.1576	0.1140	0.0995	0.6866	0.6780	0.6758
	1x50	Compacted	0.4937	0.4937	0.4938	0.4913	0.3527	0.3065	0.1543	0.1108	0.0963	0.5173	0.5060	0.5031
	1x70	Compacted	0.3420	0.3421	0.3422	0.4716	0.3330	0.2867	0.1482	0.1046	0.0901	0.3727	0.3577	0.3539
	1x95	Compacted	0.2465	0.2467	0.2468	0.4651	0.3265	0.2803	0.1461	0.1026	0.0881	0.2866	0.2672	0.2620
	1x120	Compacted	0.1956	0.1959	0.1961	0.4587	0.3201	0.2738	0.1441	0.1006	0.0860	0.2430	0.2202	0.2141
	1x150	Compacted	0.1587	0.1591	0.1593	0.4555	0.3169	0.2706	0.1431	0.0996	0.0850	0.2137	0.1877	0.1806
	1x185	Compacted	0.1271	0.1275	0.1279	0.4536	0.3149	0.2687	0.1425	0.0989	0.0844	0.1909	0.1614	0.1532
	1x240	Compacted	0.0972	0.0977	0.0982	0.4484	0.3098	0.2635	0.1409	0.0973	0.0828	0.1711	0.1379	0.1284
FD-0.6/1KV-CV	1x300	Compacted	0.0779	0.0787	0.0792	0.4413	0.3027	0.2565	0.1386	0.0951	0.0806	0.1590	0.1234	0.1130
	1x400	Compacted	0.0616	0.0625	0.0632	0.4393	0.3007	0.2545	0.1380	0.0945	0.0800	0.1511	0.1133	0.1019
	1x500	Compacted	0.0488	0.0499	0.0509	0.4365	0.2979	0.2517	0.1371	0.0936	0.0791	0.1456	0.1061	0.0940
	1x630	Compacted	0.0387	0.0402	0.0414	0.4341	0.2954	0.2492	0.1364	0.0928	0.0783	0.1418	0.1011	0.0886
	1x800	Compacted	0.0314	0.0332	0.0346	0.4309	0.2923	0.2461	0.1354	0.0918	0.0773	0.1390	0.0976	0.0847
	1x1000	Compacted	0.0263	0.0284	0.0301	0.4265	0.2879	0.2416	0.1340	0.0904	0.0759	0.1365	0.0948	0.0817

B

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Blue, Brown

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24; Category C, TIS 2143-2546

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

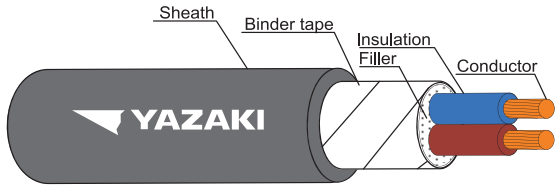
B

Cable name	Number x Size of conductor (No.x mm²)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductorl resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx (kg/km)	Standard length per drum (m)
FD-0.6/1KV-CV	2x1.5	Non-compacted	0.7	1.8	11.0	12.1	2,500	27	33	130	500
YK FD-0.6/1KV-CV	2x2.5	Non-compacted	0.7	1.8	11.5	7.41	2,100	36	44	150	1000
	2x4	Non-compacted	0.7	1.8	12.5	4.61	1,700	47	58	190	1000
	2x6	Non-compacted	0.7	1.8	13.5	3.08	1,450	60	73	240	1000
	2x10	Non-compacted	0.7	1.8	16.0	1.83	1,250	81	97	340	1000
	2x16	Compacted	0.7	1.8	17.5	1.15	1,000	107	125	500	1000
	2x25	Compacted	0.9	1.8	21.0	0.727	1,050	143	165	700	1000
	2x35	Compacted	0.9	1.8	23.0	0.524	900	175	195	900	1000
	2x50	Compacted	1.0	1.8	26.0	0.387	850	214	235	1200	1000
	2x70	Compacted	1.1	1.8	30.0	0.268	800	270	290	1700	1000
FD-0.6/1KV-CV	2x95	Compacted	1.1	2.0	33.0	0.193	650	329	350	2200	500
	2x120	Compacted	1.2	2.1	37.0	0.153	650	381	400	2800	500
	2x150	Compacted	1.4	2.2	41.0	0.124	700	436	450	3400	500
	2x185	Compacted	1.6	2.3	45.0	0.0991	700	503	505	4200	500
	2x240	Compacted	1.7	2.5	51.0	0.0754	650	593	585	5500	500
	2x300	Compacted	1.8	2.7	56.0	0.0601	600	676	665	7000	500
	2x400	Compacted	2.0	2.9	63.0	0.0470	600	777	750	8500	500

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Blue, Brown

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90ºC
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24; Category C, TIS 2143-2546

APPLICATION

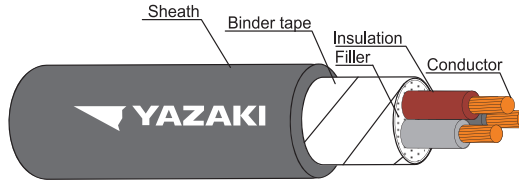
For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

B

Cable name	Number x Size of conductor (No.x mm²)	Conductor type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
FD-0.6/1KV-CV	2x1.5	Non-compacted	15.4287	0.3427	0.1077	15.4291
YK FD-0.6/1KV-CV	2x2.5	Non-compacted	9.4485	0.3210	0.1009	9.4490
	2x4	Non-compacted	5.8782	0.3010	0.0946	5.8790
	2x6	Non-compacted	3.9273	0.2871	0.0902	3.9284
	2x10	Non-compacted	2.3335	0.2710	0.0851	2.3351
	2x16	Compacted	1.4665	0.2624	0.0824	1.4688
	2x25	Compacted	0.9272	0.2645	0.0831	0.9309
	2x35	Compacted	0.6684	0.2569	0.0807	0.6733
	2x50	Compacted	0.4938	0.2536	0.0797	0.5002
	2x70	Compacted	0.3422	0.2421	0.0761	0.3506
FD-0.6/1KV-CV	2x95	Compacted	0.2468	0.2331	0.0732	0.2575
	2x120	Compacted	0.1960	0.2315	0.0727	0.2091
	2x150	Compacted	0.1593	0.2302	0.0723	0.1749
	2x185	Compacted	0.1278	0.2338	0.0734	0.1474
	2x240	Compacted	0.0981	0.2295	0.0721	0.1217
	2x300	Compacted	0.0791	0.2260	0.0710	0.1063
	2x400	Compacted	0.0630	0.2259	0.0710	0.0949

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Brown, Black, Grey

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24; Category C, TIS 2143-2546

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

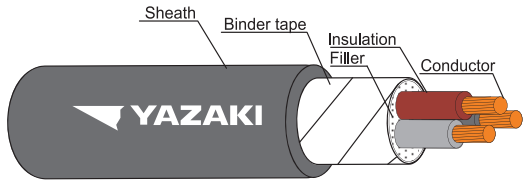
B

Cable name	Number x Size of conductor (No.x mm²)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductorl resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx (kg/km)	Standard length per drum (m)
FD-0.6/1KV-CV	3x1.5	Non-compacted	0.7	1.8	11.5	12.1	2,500	22	28	150	500
YK FD-0.6/1KV-CV	3x2.5	Non-compacted	0.7	1.8	12.5	7.41	2,100	29	43	190	1000
	3x4	Non-compacted	0.7	1.8	13.5	4.61	1,700	38	55	250	1000
	3x6	Non-compacted	0.7	1.8	14.5	3.08	1,450	49	70	320	1000
	3x10	Non-compacted	0.7	1.8	16.5	1.83	1,250	68	92	460	1000
	3x16	Compacted	0.7	1.8	18.5	1.15	1,000	91	119	650	1000
	3x25	Compacted	0.9	1.8	22.0	0.727	1,050	116	152	950	1000
	3x35	Compacted	0.9	1.8	25.0	0.524	900	144	184	1200	1000
	3x50	Compacted	1.0	1.8	28.0	0.387	850	175	217	1600	1000
	3x70	Compacted	1.1	1.9	32.0	0.268	800	224	266	2300	1000
FD-0.6/1KV-CV	3x95	Compacted	1.1	2.0	36.0	0.193	650	272	295	3100	500
	3x120	Compacted	1.2	2.1	39.0	0.153	650	320	335	3900	500
	3x150	Compacted	1.4	2.3	44.0	0.124	700	366	380	4800	500
	3x185	Compacted	1.6	2.4	49.0	0.0991	700	422	425	6000	500
	3x240	Compacted	1.7	2.6	55.0	0.0754	650	498	495	8000	500
	3x300	Compacted	1.8	2.8	61.0	0.0601	600	567	560	9500	500
	3x400	Compacted	2.0	3.1	68.0	0.0470	600	652	630	12500	500

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Brown, Black, Grey

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24; Category C, TIS 2143-2546

APPLICATION

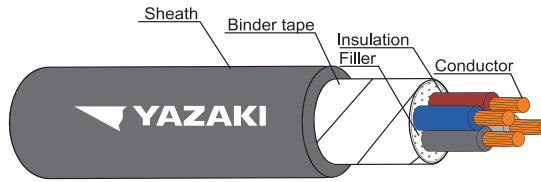
For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Cable name	Number x Size of conductor (No.x mm^2)	Conductor type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
FD-0.6/1KV-CV	3x1.5	Non-compacted	15.4287	0.3427	0.1077	15.4291
YK FD-0.6/1KV-CV	3x2.5	Non-compacted	9.4485	0.3210	0.1009	9.4490
	3x4	Non-compacted	5.8782	0.3010	0.0946	5.8790
	3x6	Non-compacted	3.9274	0.2871	0.0902	3.9284
	3x10	Non-compacted	2.3335	0.2710	0.0851	2.3351
	3x16	Compacted	1.4665	0.2624	0.0824	1.4688
	3x25	Compacted	0.9272	0.2645	0.0831	0.9309
	3x35	Compacted	0.6685	0.2569	0.0807	0.6733
	3x50	Compacted	0.4939	0.2536	0.0797	0.5003
	3x70	Compacted	0.3424	0.2421	0.0761	0.3507
FD-0.6/1KV-CV	3x95	Compacted	0.2471	0.2331	0.0732	0.2577
	3x120	Compacted	0.1964	0.2315	0.0727	0.2094
	3x150	Compacted	0.1597	0.2302	0.0723	0.1753
	3x185	Compacted	0.1282	0.2338	0.0734	0.1478
	3x240	Compacted	0.0987	0.2295	0.0721	0.1222
	3x300	Compacted	0.0798	0.2260	0.0710	0.1068
	3x400	Compacted	0.0639	0.2259	0.0710	0.0955

B

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Blue, Brown, Black, Grey

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24; Category C, TIS 2143-2546

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

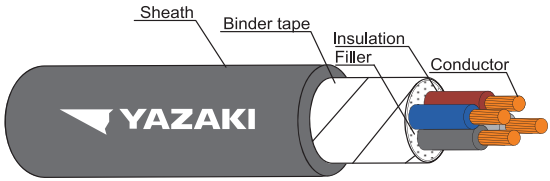
B

Cable name	Number x Size of conductor (No.x mm²)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductorl resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx (kg/km)	Standard length per drum (m)
FD-0.6/1KV-CV	4x1.5	Non-compacted	0.7	1.8	12.0	12.1	2,500	22	28	180	500
YK FD-0.6/1KV-CV	4x2.5	Non-compacted	0.7	1.8	13.0	7.41	2,100	29	43	230	1000
	4x4	Non-compacted	0.7	1.8	14.5	4.61	1,700	38	55	300	1000
	4x6	Non-compacted	0.7	1.8	16.0	3.08	1,450	49	70	390	1000
	4x10	Non-compacted	0.7	1.8	18.0	1.83	1,250	68	92	550	1000
	4x16	Compacted	0.7	1.8	20.0	1.15	1,000	91	119	800	1000
	4x25	Compacted	0.9	1.8	24.0	0.727	1,050	116	152	1200	1000
	4x35	Compacted	0.9	1.8	27.0	0.524	900	144	184	1600	1000
	4x50	Compacted	1.0	1.9	30.0	0.387	850	175	217	2100	1000
	4x70	Compacted	1.1	2.0	35.0	0.268	800	224	266	3000	1000
FD-0.6/1KV-CV	4x95	Compacted	1.1	2.0	39.0	0.193	650	272	295	4000	500
	4x120	Compacted	1.2	2.1	44.0	0.153	650	320	335	5000	500
	4x150	Compacted	1.4	2.3	49.0	0.124	700	366	380	6500	500
	4x185	Compacted	1.6	2.4	54.0	0.0991	700	422	425	8000	500
	4x240	Compacted	1.7	2.6	61.0	0.0754	650	498	495	10000	500
	4x300	Compacted	1.8	2.8	68.0	0.0601	600	567	560	12500	500
	4x400	Compacted	2.0	3.1	76.0	0.0470	600	652	630	16000	500

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

FD-0.6/1KV-CV or YK FD-0.6/1KV-CV

0.6/1kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Blue, Brown, Black, Grey

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24; Category C, TIS 2143-2546

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

B

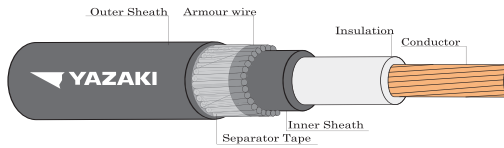
Cable name	Number x Size of conductor (No.x mm²)	Conductor type	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
FD-0.6/1KV-CV	4x1.5	Non-compacted	15.4287	0.3427	0.1077	15.4291
	4x2.5	Non-compacted	9.4485	0.3210	0.1009	9.4490
	4x4	Non-compacted	5.8782	0.3010	0.0946	5.8790
	4x6	Non-compacted	3.9274	0.2871	0.0902	3.9284
	4x10	Non-compacted	2.3335	0.2710	0.0851	2.3351
YK FD-0.6/1KV-CV	4x16	Compacted	1.4665	0.2624	0.0824	1.4688
	4x25	Compacted	0.9272	0.2645	0.0831	0.9309
	4x35	Compacted	0.6685	0.2569	0.0807	0.6733
	4x50	Compacted	0.4939	0.2536	0.0797	0.5002
	4x70	Compacted	0.3424	0.2421	0.0761	0.3506
	4x95	Compacted	0.2471	0.2331	0.0732	0.2577
	4x120	Compacted	0.1964	0.2315	0.0727	0.2094
	4x150	Compacted	0.1597	0.2302	0.0723	0.1753
FD-0.6/1KV-CV	4x185	Compacted	0.1282	0.2338	0.0734	0.1478
	4x240	Compacted	0.0987	0.2295	0.0721	0.1222
	4x300	Compacted	0.0798	0.2260	0.0710	0.1068
	4x400	Compacted	0.0639	0.2259	0.0710	0.0955

FD-0.6/1KV-CV-AWA

0.6/1 KV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH ALUMINIUM WIRE ARMORED FLAME RETARDANT POWER CABLE

IEC 60502-1

TIS 2143-2546



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Natural (Translucent)

Inner sheath : Black polyvinyl chloride (PVC)

Amor : Aluminium wires

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24 (Cat. C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

B

Number of core	Nominal cross sectional area	Conductor type	Insulation thickness nominal	Inner Sheath thickness approx.	Dia. Of inner sheath approx.	Diameter of steel wire armor norminal	Outer Sheath thickness norminal	Overall diameter approx.	Conductor resistance at 20°C maximum	Insulation resistance at 20°C minimum	Continuous current rating in free air at 40°C maximum (A)			Continuous current rating in ground at 30°C maximum	Cable weight approx.	Standard Length
											Spaced	Touching	Trefoil			
	(mm²)		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(Ω/km)	(Ω/km)				(A)	(kg/km)	(m)
	1.5	Non-compacted	0.7	1.2	5.9	1.25	1.4	12.5	12.1	2.500	36	30	29	32	180	500/D
	2.5	Non-compacted	0.7	1.2	6.4	1.25	1.4	13.0	7.41	2,100	48	39	38	41	190	500/D
	4	Non-compacted	0.7	1.2	6.9	1.25	1.4	13.5	4.61	1,700	62	51	50	53	220	500/D
	6	Non-compacted	0.7	1.2	7.5	1.25	1.4	14.0	3.08	1,450	78	64	63	65	250	500/D
	10	Compacted	0.7	1.2	8.0	1.25	1.4	14.5	1.83	1,250	104	85	83	86	300	500/D
	16	Compacted	0.7	1.2	9.0	1.25	1.4	16	1.15	1.000	136	112	109	110	370	500/D
	25	Compacted	0.9	1.2	10.5	1.25	1.5	17	0.727	1,050	179	147	143	141	510	500/D
	35	Compacted	0.9	1.2	11.5	1.25	1.5	19	0.524	900	217	179	174	169	620	500/D
	50	Compacted	1.0	1.2	13.0	1.25	1.5	20	0.387	850	261	216	210	199	770	500/D
	70	Compacted	1.1	1.2	15.0	1.25	1.6	22	0.268	800	327	270	262	243	1,010	500/D
1	95	Compacted	1.1	1.2	16.5	1.60	1.7	24	0.193	650	404	334	325	292	1,350	500/D
	120	Compacted	1.2	1.2	18.5	1.60	1.7	26	0.153	650	467	387	376	331	1,630	500/D
	150	Compacted	1.4	1.2	20	1.60	1.8	28	0.124	700	532	422	429	371	2,000	500/D
	185	Compacted	1.6	1.2	22	2.00	1.8	31	0.0991	700	617	515	499	421	2,500	500/D
	240	Compacted	1.7	1.2	25	2.00	1.9	33	0.0754	650	733	613	594	487	3,100	500/D
	300	Compacted	1.8	1.2	28	200	2.0	36	0.0601	600	844	707	684	549	3,700	500/D
	400	Compacted	2.0	1.2	31	2.00	2.2	40	0.0470	600	979	822	794	622	4,700	500/D
	500	Compacted	2.2	1.2	34	2.00	2.3	43	0.0366	600	1139	957	921	703	6,000	500/D
	630	Compacted	2.4	1.3	38	2.50	2.4	49	0.0283	550	1333	1120	1075	795	7,500	500/D
	800	Compacted	2.6	1.3	43	2.50	2.6	53	0.0221	550	1527	1280	1222	881	9,000	300/D
	1000	Compacted	2.8	1.4	49	2.50	27	60	0.0176	500	1739	1453	1377	965	12,000	300/D

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

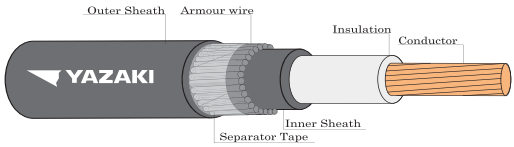
D : Packing in drum

FD-0.6/1KV-CV-AWA

0.6/1 KV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH ALUMINIUM WIRE ARMORED FLAME RETARDANT POWER CABLE

IEC 60502-1

TIS 2143-2546



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Natural (Translucent)

Inner sheath : Black polyvinyl chloride (PVC)

Amor : Aluminium wires

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24 (Cat. C)

APPLICATION

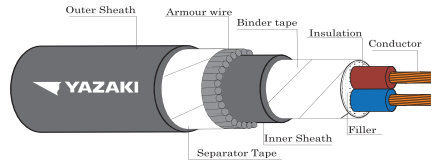
For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

B

Number of core	Nominal cross sectional area (mm^2)	A.C. Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
1	1.5	15.4287	15.4287	15.4287	0.8017	0.6630	0.6168	0.2519	0.2083	0.1938	15.4308	15.4301	15.4299
	2.5	9.4485	9.4485	9.4485	0.7626	0.6239	0.5777	0.2396	0.1960	0.1815	9.4515	9.4505	9.4502
	4	5.8782	5.8782	5.8782	0.7225	0.5838	0.5376	0.2270	0.1834	0.1689	5.8826	5.8811	5.8807
	6	3.9273	3.9273	3.9273	0.6908	0.5521	0.5059	0.2170	0.1735	0.1589	3.9333	3.9312	3.9305
	10	2.3335	2.3335	2.3335	0.6636	0.5250	0.4787	0.2085	0.1649	0.1504	2.3428	2.3393	2.3383
	16	1.4664	1.4664	1.4664	0.6289	0.4903	0.4440	0.1976	0.1540	0.1395	1.4797	1.4745	1.4731
	25	0.9271	0.9271	0.9271	0.6040	0.4654	0.4191	0.1897	0.1462	0.1317	0.9463	0.9386	0.9364
	35	0.6683	0.6683	0.6683	0.5835	0.4449	0.3986	0.1833	0.1398	0.1252	0.6930	0.6828	0.6800
	50	0.4936	0.4937	0.4937	0.5562	0.4176	0.3713	0.1747	0.1312	0.1167	0.5237	0.5108	0.5073
	70	0.3420	0.3421	0.3421	0.5379	03992	0.3530	0.1690	0.1254	0.1109	0.3815	0.3643	0.3596
	95	0.2465	0.2466	0.2466	0.5260	0.3873	0.3411	0.1652	0.1217	0.1072	0.2967	0.2750	0.2689
	120	0.1956	0.1957	0.1958	0.5126	0.3740	0.3278	0.1610	0.1175	0.1030	0.2533	0.2283	0.2212
	150	0.1587	0.1589	0.1590	0.5057	0.3671	0.3209	0.1589	0.1153	0.1008	0.2246	0.1963	0.1883
	185	0.1271	0.1273	0.1275	0.5054	0.3668	0.3206	0.1588	0.1152	0.1007	0.2034	0.1717	0.1625
	240	0.0971	0.0974	0.0977	0.4937	0.3551	0.3089	0.1551	0.1116	0.0970	0.1830	0.1481	0.1377
	300	0.0778	0.0783	0.0787	0.3487	0.3487	0.3025	0.1531	0.1096	0.0950	0.1718	0.1347	0.1234
	400	0.0615	0.0621	0.0625	0.4821	0.3435	0.2973	0.1515	0.1079	0.0934	0.1635	0.1245	0.1124
	500	0.0486	0.0494	0.0501	0.4746	0.3360	0.2898	0.1491	0.1056	0.0910	0.1568	0.1166	0.1039
	630	0.0386	0.0396	0.0403	0.4729	0.3343	0.2880	0.1486	0.1050	0.0905	0.1535	0.1122	0.0991
	800	0.0313	0.0325	0.0335	0.4670	0.3284	0.2822	0.1467	0.1032	0.0887	0.1500	0.1082	0.0948
	1000	0.0262	0.0276	0.0288	0.4593	0.3207	0.2745	0.1443	0.1008	0.0862	0.1467	0.1045	0.0909

FD-0.6/1KV-CV-SWA

0.6/1 KV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor	:	Non-compacted and compacted stranded annealed copper
Insulation	:	Cross-Linked polyethylene (XLPE)
Insulation color	:	Blue, Brown
Filler	:	Non-hygroscopic material
Binder tape	:	Non-hygroscopic tape
Inner sheath	:	Black polyvinyl chloride (PVC)
Amor	:	Galvanized Steel Wires
Outer sheath	:	Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification	:	Maximum conductor temperature 90°C
	:	Circuit voltage not exceeding 1,200 Volts
Rated voltage	:	600 Volts between Line to Earth
	:	1,000 Volts between Line to Line
AC Testing voltage	:	3,500 Volts
Reference standard	:	IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24 (Cat. C)

APPLICATION

B

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Diameter of steel wire armor norminal (mm)	Sheath thickness norminal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (Ω/km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
2	1.5	Non-compacted	0.7	1.2	9.7	0.8	1.8	15.0	12.1	2,500	28	33	380	500/D
	2.5	Non-Compacted	0.7	1.2	10.5	0.8	1.8	16.5	7.41	2,100	37	43	420	500/D
	4	Non-Compacted	0.7	1.2	11.5	1.25	1.8	18.0	4.61	1,700	50	57	600	500/D
	6	Non-compacted	0.7	1.2	12.5	1.25	1.8	19.5	3.08	1,450	63	71	700	500/D
	10	Compacted	0.7	1.2	14.0	1.25	1.8	20	1.83	1,250	83	93	800	500/D
	16	Compacted	0.7	1.2	16.0	1.25	1.8	23	1.150	1,000	111	121	1,200	500/D
	25	Compacted	0.9	1.2	19.0	1.6	1.8	26	0.727	1,050	147	156	1,500	500/D
	35	Compacted	0.9	1.2	22	2.0	1.8	30	0.524	900	182	188	2,000	500/D
	50	Compacted	1.0	1.2	24	2.0	1.9	33	0.387	850	219	222	2,400	500/D
	70	Compacted	1.1	1.2	28	2.0	2.0	36	0.268	800	275	271	3,100	500/D
	95	Compacted	1.1	1.2	32	2.0	2.1	40	0.193	650	337	325	3,800	500/D
	120	Compacted	1.2	1.2	35	2.0	2.3	44	0.153	650	389	368	4,600	500/D
	150	Compacted	1.4	1.3	39	2.0	2.4	48	0.124	700	444	412	6,000	500/D
	185	Compacted	1.6	1.3	43	2.5	2.6	54	0.0991	700	509	463	7,000	500/D
	240	Compacted	1.7	1.4	49	2.5	2.7	60	0.0754	650	600	534	8,500	500/D
	300	Compacted	1.8	1.5	54	2.5	2.9	66	0.0601	600	684	597	10,000	300/D
	400	Compacted	2.0	1.7	61	2.5	3.2	73	0.0470	600	783	670	12,500	300/D

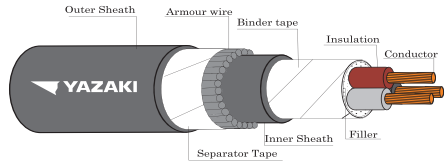
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

Number of core	Norminal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	1.5	15.4287	0.3427	0.1077	15.4291
	2.5	9.4485	0.3249	0.1021	9.4491
	4	5.8782	0.3026	0.0951	5.8790
	6	3.9273	0.2890	0.0908	3.9284
	10	2.3335	0.2747	0.0863	2.3351
	16	1.4665	0.2614	0.0821	1.4688
	25	0.9272	0.2637	0.0829	0.9309
	35	0.6684	0.2567	0.0807	0.6733
	50	0.4938	0.2435	0.0765	0.4997
	70	0.3423	0.2395	0.0752	0.3504
	95	0.2468	0.2331	0.0732	0.2575
	120	0.1960	0.2289	0.0719	0.2088
	150	0.1593	0.2302	0.0723	0.1749
	185	0.1278	0.2326	0.0731	0.1472
	240	0.0981	0.2281	0.0717	0.1215
	300	0.0791	0.2260	0.0710	0.1063
	400	0.0630	0.2259	0.0710	0.0949

FD-0.6/1KV-CV-SWA

0.6/1 KV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Brown, Black, Grey

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Amor : Galvanized Steel Wires

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24 (Cat. C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Norminal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Diameter of steel wire armor norminal (mm)	Sheath thickness norminal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (Ω/km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
	1.5	Non-Compacted	0.7	1.2	10.0	0.8	1.8	16.0	12.1	2,500	24	26	400	500/D
	2.5	Non-Compacted	0.7	1.2	11.0	1.25	1.8	18.0	7.41	2,100	32	34	550	500/D
	4	Non-Compacted	0.7	1.2	12.0	1.25	1.8	19.0	4.61	1,700	42	44	650	500/D
	6	Non-Compacted	0.7	1.2	13.5	1.25	1.8	20	3.08	1,450	53	55	800	500/D
	10	Compacted	0.7	1.2	14.5	1.6	1.8	21	1.83	1,250	71	72	950	500/D
	16	Compacted	0.7	1.2	17.0	1.6	1.8	24	1.150	1,000	94	93	1,300	500/D
	25	Compacted	0.9	1.2	21	2.0	1.8	28	0.727	1,050	125	120	1,800	500/D
3	35	Compacted	0.9	1.2	23	2.0	1.8	31	0.524	900	154	145	2,400	500/D
	50	Compacted	1.0	1.2	26	2.0	2.0	34	0.387	850	186	171	3,000	500/D
	70	Compacted	1.1	1.2	30	2.0	2.1	39	0.268	800	233	208	3,800	500/D
	95	Compacted	1.1	1.2	34	2.0	2.2	43	0.193	650	286	249	4,800	500/D
	120	Compacted	1.2	1.2	38	2.0	2.3	47	0.153	650	332	283	6,000	500/D
	150	Compacted	1.4	1.3	42	2.5	2.5	52	0.124	700	376	315	7,500	500/D
	185	Compacted	1.6	1.4	47	2.5	2.7	58	0.0991	700	430	354	9,000	500/D
	240	Compacted	1.7	1.5	53	2.5	2.9	64	0.0754	650	505	406	11,000	300/D
	300	Compacted	1.8	1.6	58	2.5	3.0	70	0.0601	600	574	453	13,500	300/D
	400	Compacted	2.0	1.8	65	3.15	3.4	80	0.0470	600	652	501	17,500	300/D

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

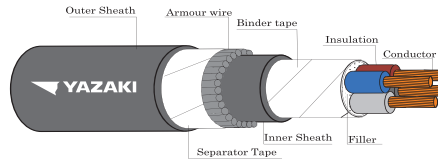
D : Packing in drum

Number of core	Norminal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
	1.5	15.4287	0.3427	0.1077	15.4291
	2.5	9.4485	0.3249	0.1021	9.4491
	4	5.8782	0.3026	0.0951	5.8790
	6	3.9274	0.2890	0.0908	3.9284
	10	2.3335	0.2747	0.0863	2.3351
	16	1.4665	0.2614	0.0821	1.4688
	25	0.9272	0.2637	0.0829	0.9309
3	35	0.6685	0.2567	0.0807	0.6733
	50	0.4939	0.2435	0.0765	0.4998
	70	0.3424	0.2395	0.0752	0.3506
	95	0.2471	0.2331	0.0732	0.2577
	120	0.1964	0.2289	0.0719	0.2091
	150	0.1597	0.2302	0.0723	0.1753
	185	0.1283	0.2326	0.0731	0.1476
	240	0.0987	0.2281	0.0717	0.1219
	300	0.0798	0.2260	0.0710	0.1068
	400	0.0639	0.2259	0.0710	0.0955

B

FD-0.6/1KV-CV-SWA

0.6/1 KV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE



IEC 60502-1

TIS 2143-2546

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Blue, Brown, Black, Grey

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Amor : Galvanized Steel Wires

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24 (Cat. C)

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Norminal crose sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Diameter of steel wire armor norminal (mm)	Sheath thickness norminal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (Ω/km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
4	1.5	Non-Compacted	0.7	1.2	11.0	1.25	1.8	17.5	12.1	2,500	24	26	550	500/D
	2.5	Non-Compacted	0.7	1.2	12.0	1.25	1.8	19.0	7.41	2,100	32	34	650	500/D
	4	Non-Compacted	0.7	1.2	13.5	1.25	1.8	20.0	4.61	1,700	42	44	750	500/D
	6	Non-Compacted	0.7	1.2	15.0	1.25	1.8	21	3.08	1,450	53	55	900	500/D
	10	Compacted	0.7	1.2	16.0	1.25	1.8	23	1.83	1,250	71	72	1,100	500/D
	16	Compacted	0.7	1.2	18.5	1.6	1.8	26	1.150	1,000	94	93	1,600	500/D
	25	Compacted	0.9	1.2	23	2.0	1.8	31	0.727	1,050	125	120	2,300	500/D
	35	Compacted	0.9	1.2	25	2.0	1.9	34	0.524	900	154	145	2,900	500/D
	50	Compacted	1.0	1.2	29	2.0	2.1	38	0.387	850	186	171	3,600	500/D
	70	Compacted	1.1	1.2	33	2.0	2.2	42	0.268	800	233	208	4,700	500/D
	95	Compacted	1.1	1.2	38	2.0	2.3	48	0.193	650	286	249	6,000	500/D
	120	Compacted	1.2	1.3	42	2.5	2.5	53	0.153	650	332	283	7,500	500/D
	150	Compacted	1.4	1.4	46	2.5	2.7	58	0.124	700	376	315	9,000	500/D
	185	Compacted	1.6	1.5	52	2.5	2.8	64	0.0991	700	430	354	11,000	500/D
	240	Compacted	1.7	1.6	59	2.5	3.1	71	0.0754	650	505	406	14,000	300/D
	300	Compacted	1.8	1.7	65	3.15	3.3	79	0.0601	600	574	453	17,000	300/D
	400	Compacted	2.0	1.9	73	3.15	3.6	87	0.0470	600	652	501	22,000	300/D

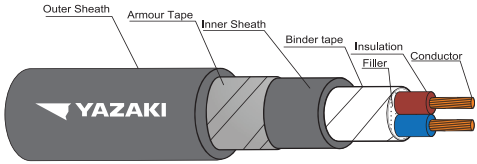
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

Number of core	Norminal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
4	1.5	15.4287	0.3427	0.1077	15.4291
	2.5	9.4485	0.3249	0.1021	9.4491
	4	5.8782	0.3026	0.0951	5.8790
	6	3.9274	0.2890	0.0908	3.9284
	10	2.3335	0.2747	0.0863	2.3351
	16	1.4665	0.2614	0.0821	1.4688
	25	0.9272	0.2637	0.0829	0.9309
	35	0.6685	0.2567	0.0807	0.6733
	50	0.4939	0.2435	0.0765	0.4998
	70	0.3424	0.2395	0.0752	0.3506
	95	0.2471	0.2331	0.0732	0.2577
	120	0.1964	0.2289	0.0719	0.2091
	150	0.1597	0.2302	0.0723	0.1753
	185	0.1283	0.2326	0.0731	0.1476
	240	0.0987	0.2281	0.0717	0.1219
	300	0.0798	0.2260	0.0710	0.1068
	400	0.0639	0.2259	0.0710	0.0955

FD-0.6/1KV-CV-STA

0.6/1 KV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED STEEL TAPE ARMOUR FLAME RETARDANT POWER CABLE



IEC 60502-1

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor	:	Non-compacted and compacted stranded annealed copper
Insulation	:	Cross-Linked polyethylene (XLPE)
Insulation color	:	Blue, Brown
Filler	:	Non-hygroscopic material
Binder tape	:	Non-hygroscopic tape
Inner sheath	:	Black polyvinyl chloride (PVC)
Amor	:	Two galvanized flat steel tape
Outer sheath	:	Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification	:	Maximum conductor temperature 90°C
	:	Circuit voltage not exceeding 1,200 Volts
Rated voltage	:	600 Volts between Line to Earth
	:	1,000 Volts between Line to Line
AC Testing voltage	:	3,500 Volts
Reference standard	:	IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24 (Cat. C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

B

Number of core	Norminal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Armor thickness nominal (mm)	Sheath thickness norminal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (Ω/km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
2	1.5	Non-Compacted	0.7	1.2	9.70	0.2	1.8	15.0	12.1	2,500	28	33	330	500/D
	2.5	Non-Compacted	0.7	1.2	10.5	0.2	1.8	16.0	7.41	2,100	37	43	380	500/D
	4	Non-Compacted	0.7	1.2	11.5	0.2	1.8	17.0	4.61	1,700	48	56	440	500/D
	6	Non-Compacted	0.7	1.2	12.5	0.2	1.8	18.0	3.08	1,450	61	70	500	500/D
	10	Compacted	0.7	1.2	13.5	0.2	1.8	19.0	1.83	1,250	82	92	600	500/D
	16	Compacted	0.7	1.2	16.0	0.2	1.8	21	1.150	1,000	108	120	800	500/D
	25	Compacted	0.9	1.2	19.0	0.2	1.8	24	0.727	1,050	144	154	1100	500/D
	35	Compacted	0.9	1.2	21	0.2	1.8	26	0.524	900	176	185	1300	500/D
	50	Compacted	1.0	1.2	24	0.2	1.9	30	0.387	850	213	219	1700	500/D
	70	Compacted	1.1	1.2	28	0.2	2.0	33	0.268	800	267	268	2200	500/D
	95	Compacted	1.1	1.2	31	0.5	2.2	38	0.193	650	331	322	3100	500/D
	120	Compacted	1.2	1.2	35	0.5	2.3	42	0.153	650	383	366	3800	500/D
	150	Compacted	1.4	1.3	39	0.5	2.4	46	0.124	700	435	409	4500	500/D
	185	Compacted	1.6	1.3	43	0.5	2.6	51	0.0991	700	500	461	5400	500/D
	240	Compacted	1.7	1.4	49	0.5	2.8	57	0.0754	650	590	531	6900	500/D
	300	Compacted	1.8	1.5	54	0.5	2.9	62	0.0601	600	676	596	8300	500/D
	400	Compacted	2.0	1.7	61	0.5	3.2	70	0.0470	600	765	664	10500	500/D

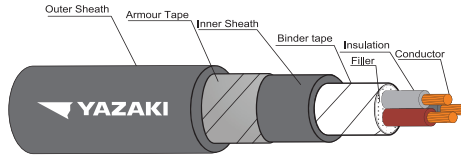
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

Number of core	Norminal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	1.5	15.4287	0.3427	0.1077	15.4291
	2.5	9.4485	0.3249	0.1021	9.4491
	4	5.8782	0.3026	0.0951	5.8790
	6	3.9273	0.2890	0.0908	3.9284
	10	2.3335	0.2747	0.0863	2.3351
	16	1.4664	0.2614	0.0821	1.4688
	25	0.9271	0.2637	0.0829	0.9309
	35	0.6683	0.2567	0.0807	0.6733
	50	0.4936	0.2435	0.0765	0.4998
	70	0.3420	0.2395	0.0752	0.3506
	95	0.2465	0.2331	0.0732	0.2577
	120	0.1956	0.2289	0.0719	0.2091
	150	0.1587	0.2302	0.0723	0.1753
	185	0.1271	0.2326	0.0731	0.1476
	240	0.0971	0.2281	0.0717	0.1219
	300	0.0778	0.2260	0.0710	0.1068
	400	0.0615	0.2259	0.0710	0.0955

FD-0.6/1KV-CV-STA

0.6/1 KV 90°C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED STEEL TAPE ARMOUR FLAME RETARDANT POWER CABLE



IEC 60502-1

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Brown, Black, Grey

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Amor : Two galvanized flat steel tape

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24 (Cat. C)

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Armor thickness nominal (mm)	Sheath thickness norminal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (Ω/km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
	1.5	Non-Compacted	0.7	1.2	10.0	125	1.$	17.5	12.1	2,500	24	26	550	500/D
	2.5	Non-Compacted	0.7	1.2	11.0	1.25	1.8	19.0	7.41	2,100	32	34	650	500/D
	4	Non-Compacted	0.7	1.2	12.0	1.25	1.8	20.0	4.61	1,700	42	44	750	500/D
	6	Non-Compacted	0.7	1.2	13.5	1.25	1.8	21	3.08	1.450	53	55	000	500/D
	10	Compacted	0.7	1.2	14.5	1.25	1.8	23	1.83	1,250	71	72	1100	500/D
	16	Compacted	0.7	1.2	17.0	1.6	1.8	26	1.150	1.000	94	93	1.600	500/D
	25	Compacted	0.9	1.2	20	2.0	1.8	31	0.727	1.050	125	120	2,300	500/D
	35	Compacted	0.9	1.2	23	2.0	1.9	34	0.524	900	154	145	2.900	500/D
3	50	Compacted	1.0	1.2	26	2.0	2.1	38	0.387	850	186	171	3.600	500/D
	70	Compacted	1.1	12	30	2.0	2.2	42	0.268	800	233	208	4,700	500/D
	95	Compacted	1.1	1.2	34	2.0	2.3	48	0.193	650	286	249	6.000	500/D
	120	Compacted	1.2	1.2	37	2.5	2.5	53	0.153	650	332	283	7.500	500/D
	150	Compacted	1.4	1.3	41	2.5	2.7	58	0.124	700	376	315	9.000	500/D
	185	Compacted	1.6	1.4	47	2.5	2.8	64	0.0991	700	430	354	11,000	500/D
	240	Compacted	1.7	1.5	53	2.5	3.1	71	0.0754	650	505	406	14,000	300/D
	300	Compacted	1.8	1.6	58	3.15	3.3	79	0.0601	600	574	453	17,000	300/D
	400	Compacted	2.0	1.8	65	3.15	3.6	87	0.0470	600	652	501	22,000	300/D

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

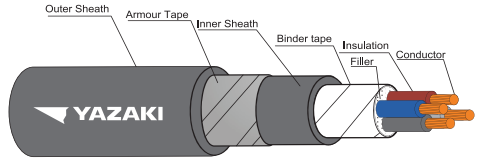
D : Packing in drum

Number of core	Nominal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
	1.5	15.4287	0.3427	0.1077	15.4291
	2.5	9.4485	0.3249	0.1021	9.4491
	4	5.8782	0.3026	0.0951	5.8790
	6	3.9273	0.2890	0.0908	3.9284
	10	2.3335	0.2747	0.0863	2.3351
	16	1.4664	0.2614	0.0821	1.4688
	25	0.9271	0.2637	0.0829	0.9309
	35	0.6683	0.2567	0.0807	0.6733
3	50	0.4936	0.2435	0.0765	0.4998
	70	0.3420	0.2395	0.0752	0.3506
	95	0.2465	0.2331	0.0732	0.2577
	120	0.1956	0.2289	0.0719	0.2091
	150	0.1587	0.2302	0.0723	0.1753
	185	0.1271	0.2326	0.0731	0.1476
	240	0.0971	0.2281	0.0717	0.1219
	300	0.0778	0.2260	0.0710	0.1068
	400	0.0615	0.2259	0.0710	0.0955

FD-0.6/1KV-CV-STA

0.6/1kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED FLAME RETARDANT POWER CABLE

IEC 60502-1



FLAME RETARDANT

CABLE STRUCTURE

Conductor : Non-compacted and compacted stranded annealed copper

Insulation : Cross-Linked polyethylene (XLPE)

Insulation color : Blue, Brown, Black, Grey

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Amor : Two galvanized flat steel tape

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1, IEC 60332-3-24 (Cat. C)

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm²)	Conductor type	Insulation thickness nominal (mm)	Inner Sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Armor thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (Ω/km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
	1.5	Non-Compacted	0.7	1.2	11.0	0.2	1.8	16.0	12.1	2,500	24	28	410	500/D
	2.5	Non-Compacted	0.7	1.2	12.0	0.2	1.8	17.5	7.41	2,100	31	37	480	500/D
	4	Non-Compacted	0.7	1.2	13.5	0.2	1.8	18.5	4.61	1,700	41	48	550	500/D
	6	Non-Compacted	0.7	1.2	15.0	0.2	1.8	20	3.08	1,450	52	59	700	500/D
	10	Compacted	0.7	1.2	16.0	0.2	1.8	22	1.83	1,250	69	78	850	500/D
	16	Compacted	0.7	1.2	18.5	0.2	1.8	23	1.150	1.000	91	101	1200	500/D
	25	Compacted	0.9	1.2	22	0.2	1.8	28	0.727	1,050	122	130	1700	500/D
	35	Compacted	0.9	1.2	25	0.2	1.9	30	0.524	900	149	156	2100	500/D
4	50	Compacted	1.0	1.2	28	0.2	2.1	34	0.387	850	181	185	2700	500/D
	70	Compacted	1.1	1.2	33	0.5	2.2	40	0.268	800	227	226	3900	500/D
	95	Compacted	1.1	1.2	37	0.5	2.4	45	0.193	650	281	272	5000	500/D
	120	Compacted	1.2	1.3	42	0.5	2.5	49	0.153	650	325	309	6500	500/D
	150	Compacted	1.4	1.4	46	0.5	2.7	54	0.124	700	370	345	7500	500/D
	185	Compacted	1.6	1.5	52	0.5	2.9	61	0.0991	700	426	389	9500	500/D
	240	Compacted	1.7	1.6	59	0.5	3.1	68	0.0754	650	504	449	12000	500/D
	300	Compacted	1.8	1.7	65	0.5	3.4	74	0.0601	600	576	504	14500	500/D
	400	Compacted	2.0	1.9	73	0.5	3.6	83	0.0470	600	662	567	18500	500/D

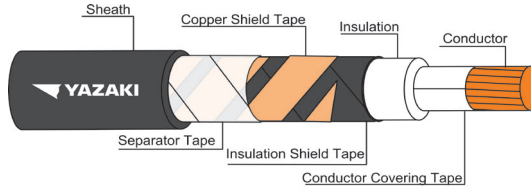
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

Number of core	Nominal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
	1.5	15.4287	0.3427	0.1077	15.4291
	2.5	9.4485	0.3249	0.1021	9.4491
	4	5.8782	0.3026	0.0951	5.8790
	6	3.9274	0.2890	0.0908	3.9284
	10	2.3335	0.2747	0.0863	2.3351
	16	1.4665	0.2614	0.0821	1.4688
	25	0.9272	0.2637	0.0829	0.9309
	35	0.6685	0.2567	0.0807	0.6733
4	50	0.4939	0.2435	0.0765	0.4998
	70	0.3424	0.2395	0.0752	0.3506
	95	0.2471	0.2331	0.0732	0.2577
	120	0.1964	0.2289	0.0719	0.2091
	150	0.1597	0.2302	0.0723	0.1753
	185	0.1283	0.2326	0.0731	0.1476
	240	0.0987	0.2281	0.0717	0.1219
	300	0.0798	0.2260	0.0710	0.1068
	400	0.0639	0.2259	0.0710	0.0955

1.8/3KV-CV

1.8/3(3.6)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE



IEC 60502-1

CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive tape

Insulation color : Natural (Translucent)

Shield : Copper tape

Separator tape : Non-hygroscopic material

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 3,600 Volts

Rated voltage : 1,800 Volts between Line to Earth
: 3,000 Volts between Line to Line

AC Testing voltage : 6,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1

APPLICATION

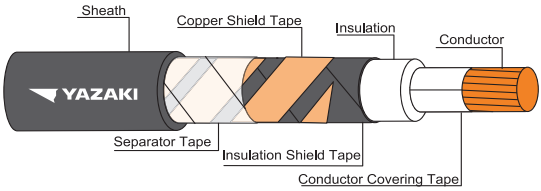
For installation exposed, or in raceway, wet or dry location, or direct burial in ground

Number of core	Nominal cross sectional area (mm^2)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard length per drum (m)
1	10	6	2.0	1.4	12.5	1.83	2,900	220	500
	16	6	2.0	1.4	13.5	1.15	2,450	280	500
	25	6	2.0	1.4	15.0	0.727	2,050	380	500
	35	6	2.0	1.4	16.0	0.524	1,800	480	500
	50	6	2.0	1.4	17.0	0.387	1,550	600	500
	70	12	2.0	1.5	19.0	0.268	1,350	850	500
	95	15	2.0	1.5	21.0	0.193	1,150	1100	500
	120	18	2.0	1.6	22.5	0.153	1,050	1400	500
	150	18	2.0	1.6	24.0	0.124	950	1600	500
	185	30	2.0	1.7	26.0	0.0991	850	2000	500
	240	34	2.0	1.8	28.5	0.0754	750	2600	500
	300	34	2.0	1.8	31.0	0.0601	700	3200	500
	400	53	2.0	2.0	34.0	0.0470	600	4000	500

1.8/3KV-CV

1.8/3(3.6)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-1



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive tape

Insulation color : Natural (Translucent)

Shield : Copper tape

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 3,600 Volts

Rated voltage : 1,800 Volts between Line to Earth
: 3,000 Volts between Line to Line

AC Testing voltage : 6,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1,

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

B

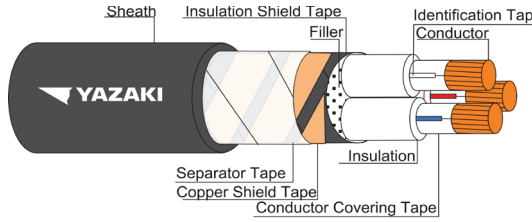
Number of core	Nominal cross sectional area (mm2)	Current rating in free air at 40°C (A)			Current rating Direct burial at 30°C (A)		Current rating Underground duct at 30°C (A)	
		Spaced	Touching	Trefoil	Spaced	Trefoil	Spaced	Trefoil
	10	100	81	79	88	82	79	76
	16	132	106	104	113	106	101	98
	25	173	140	136	145	136	129	125
	35	211	171	166	173	163	157	148
	50	255	207	201	205	192	185	175
	70	321	261	253	251	235	225	217
1	95	395	321	311	301	281	275	264
	120	457	373	362	342	319	312	299
	150	522	426	413	384	358	349	334
	185	601	492	476	434	403	393	376
	240	716	587	567	504	466	465	443
	300	827	678	654	571	525	524	498
	400	963	791	762	650	592	595	563

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Norminal cross sectional area (mm^2)	A.C. Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Spaced	Touching	Trefoil	Spaced	Touching	Trefoil	Spaced	Touching	Trefoil	Spaced	Touching	Trefoil
	10	2.3335	2.3335	2.3335	0.6258	0.4872	0.4410	0.1966	0.1531	0.1385	2.3418	2.3385	2.3376
	16	1.4664	1.4664	1.4664	0.5945	0.4559	0.4096	0.1868	0.1432	0.1287	1.4782	1.4734	1.4720
	25	0.9271	0.9271	0.9271	0.5669	0.4283	0.3820	0.1781	0.1346	0.1200	0.9441	0.9368	0.9348
	35	0.6683	0.6683	0.6683	0.5492	0.4106	0.3644	0.1725	0.1290	0.1145	0.6902	0.6806	0.6780
	50	0.4936	0.4937	0.4937	0.5223	0.3836	0.3374	0.1641	0.1205	0.1060	0.5202	0.5082	0.5050
	70	0.3420	0.3421	0.3422	0.5093	0.3706	0.3244	0.1600	0.1164	0.1019	0.3776	0.3614	0.3571
1	95	0.2465	0.2466	0.2467	0.4940	0.3553	0.3091	0.1552	0.1116	0.0971	0.2913	0.2707	0.2651
	120	0.1956	0.1958	0.1959	0.4829	0.3443	0.2981	0.1517	0.1082	0.0937	0.2475	0.2237	0.2171
	150	0.1587	0.1590	0.1592	0.4749	0.3362	0.2900	0.1492	0.1056	0.0911	0.2178	0.1909	0.1834
	185	0.1271	0.1275	0.1277	0.4681	0.3295	0.2833	0.1471	0.1035	0.0890	0.1944	0.1642	0.1557
	240	0.0972	0.0976	0.0980	0.4595	0.3209	0.2747	0.1444	0.1008	0.0863	0.1740	0.1403	0.1306
	300	0.0779	0.0786	0.0791	0.4521	0.3135	0.2672	0.1420	0.0985	0.0839	0.1620	0.1260	0.1153
	400	0.0616	0.0624	0.0631	0.4478	0.3092	0.2630	0.1407	0.0971	0.0826	0.1536	0.1155	0.1040

1.8/3KV-CV

1.8/3(3.6)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE



IEC 60502-1

CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Insulation : Cross-Linked polyethylene (XLPE)

Filler : Non-hygroscopic material

Insulation shield : Semi-conductive tape

Core identification : White, Red, Blue

Shield : Copper tape

Separator tape : Non-hygroscopic material

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 3,600 Volts

Rated voltage : 1,800 Volts between Line to Earth
: 3,000 Volts between Line to Line

AC Testing voltage : 6,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

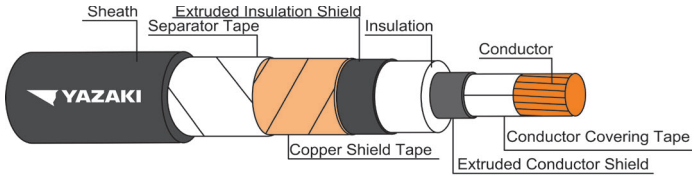
Number of cores	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Maximum Current Rating			Cable weight approx. (kg/km)	Standard length per drum (m)
								In air at 40°C (A)	Direct burial at 30°C (A)	Underground duct at 30°C (A)		
3	10	6	2.0	1.8	24.5	1.83	2,900	73	80	63	650	500
	16	6	2.0	1.8	27.0	1.15	2,450	96	103	81	850	500
	25	6	2.0	1.8	29.5	0.727	2,050	126	133	105	1200	500
	35	6	2.0	1.9	32.0	0.524	1,800	154	159	126	1500	500
	50	6	2.0	2.0	35.0	0.387	1,550	186	188	151	1900	500
	70	12	2.0	2.1	38.5	0.268	1,350	233	230	185	2600	500
	95	15	2.0	2.2	43.0	0.193	1,150	286	275	224	3400	500
	120	18	2.0	2.3	46.5	0.153	1,050	331	313	255	4200	500
	150	18	2.0	2.4	49.5	0.124	950	377	350	287	5000	500
	185	30	2.0	2.5	53.5	0.0991	850	434	395	327	6000	500
	240	34	2.0	2.7	59.0	0.0754	750	514	457	379	8000	500
	300	34	2.0	2.9	64.5	0.0601	700	589	513	432	10000	300
	400	53	2.0	3.1	70.5	0.0470	600	679	578	487	12500	300

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Nominal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	10	2.3335	0.3685	0.1158	2.3364
	16	1.4665	0.3435	0.1079	1.4705
	25	0.9272	0.3222	0.1012	0.9327
	35	0.6684	0.3090	0.0971	0.6754
	50	0.4938	0.2868	0.0901	0.5020
	70	0.3423	0.2744	0.0862	0.3530
	95	0.2469	0.2640	0.0829	0.2605
	120	0.1962	0.2546	0.0800	0.2119
	150	0.1595	0.2493	0.0783	0.1777
	185	0.1281	0.2440	0.0767	0.1493
	240	0.0985	0.2359	0.0741	0.1233
	300	0.0797	0.2331	0.0732	0.1082
	400	0.0638	0.2288	0.0719	0.0961

3.6/6KV-CV

3.6/6(7.2)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE



IEC 60502-2

TIS 2143-2546

CABLE STRUCTURE

Conductor	:	Compacted stranded annealed copper wire
Conductor shield	:	Semi-conductive Cross-linked polyethylene compound
Insulation	:	Cross-Linked polyethylene (XLPE)
Insulation shield	:	Semi-conductive Cross-linked polyethylene compound
Insulation color	:	Natural (Translucent)
Shield	:	Copper tape
Separator tape	:	Non-hygroscopic tape
Sheath	:	Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification	:	Maximum conductor temperature 90°C
	:	Circuit voltage not exceeding 7,200 Volts
Rated voltage	:	3,600 Volts between Line to Earth
	:	6,000 Volts between Line to Line
AC Testing voltage	:	12,500 Volts
Reference standard	:	IEC 60502-2, IEC 60228, IEC 60332-1 TIS 2143-2546
Remark	:	*Insulation shield shall be applied semi-conductive tape (for size < 25 mm²)

B

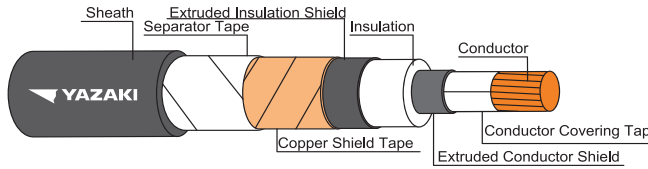
APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Norminal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length per drum (m)
	10	6	2.5	1.4	15.0	1.83	2,850	260	500
	16	6	2.5	1.5	16.0	1.15	2,500	340	500
	25	6	2.5	1.5	18.0	0.727	2,150	470	500
	35	6	2.5	1.5	19.5	0.524	1,900	600	500
	50	6	2.5	1.6	20.5	0.387	1,700	700	500
	70	12	2.5	1.6	22.5	0.268	1,500	950	500
	95	15	2.5	1.7	24.5	0.193	1,300	1200	500
	120	18	2.5	1.7	26.0	0.153	1,200	1500	500
1	150	18	2.5	1.8	27.5	0.124	1,100	1800	500
	185	30	2.5	1.8	29.5	0.0991	1,000	2200	500
	240	34	2.6	1.9	32.0	0.0754	900	2800	500
	300	34	2.8	2.0	35.0	0.0601	900	3400	500
	400	53	3.0	2.1	38.5	0.0470	850	4300	500
	500	53	3.2	2.2	42.5	0.0366	800	5500	500
	630	53	3.2	2.4	46.5	0.0283	700	7000	500
	800	53	3.2	2.5	50.5	0.0221	600	8500	500
	1000	53	3.2	2.6	56.0	0.0176	550	11000	300

3.6/6KV-CV

3.6/6(7.2)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE



IEC 60502-2

TIS 2143-2546

CABLE STRUCTURE

Conductor	:	Compacted stranded annealed copper wire
Conductor shield	:	Semi-conductive Cross-linked polyethylene compound
Insulation	:	Cross-linked polyethylene (XLPE)
Insulation shield	:	Semi-conductive Cross-linked polyethylene compound
Insulation color	:	Natural (Translucent)
Shield	:	Copper tape
Separatior tape	:	Non-hygroscopic material
Sheath	:	Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification	:	Maximum conductor temperature 90°C
	:	Circuit voltage not exceeding 7,200 Volts
Rated voltage	:	3,600 Volts between Line to Earth
	:	6,000 Volts between Line to Line
AC Testing voltage	:	12,500 Volts
Reference standard	:	IEC 60502-2, IEC 60228, IEC 60332-1 TIS 2143-2546
Remark	:	*Insulation shield shall be applied semi-conductive tape (for size < 25 mm²)

APPLICATION

B

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm²)	Continuous current rating in free air at 40°C maximum (A)			Current rating Direct burial at 30°C (A)		Current rating Underground duct at 30°C (A)	
		Spaced	Touching	Trefoil	Spaced	Trefoil	Spaced	Trefoil
1	10	100	83	81	88	83	79	76
	16	132	109	107	114	107	103	100
	25	175	145	142	145	137	132	127
	35	213	177	172	174	164	157	152
	50	256	213	208	206	193	185	178
	70	321	267	259	252	236	230	221
	95	393	327	318	302	282	275	264
	120	455	379	368	343	320	311	299
	150	518	432	419	385	359	356	340
	185	597	498	484	435	405	401	383
	240	710	594	575	505	469	464	443
	300	822	688	666	572	527	536	509
	400	960	804	777	652	597	610	577
	500	1126	943	908	744	675	707	666
	630	1308	1094	1048	847	756	802	750
	800	1504	1251	1191	952	835	921	856
	1000	1720	1422	1343	1058	909	1020	936

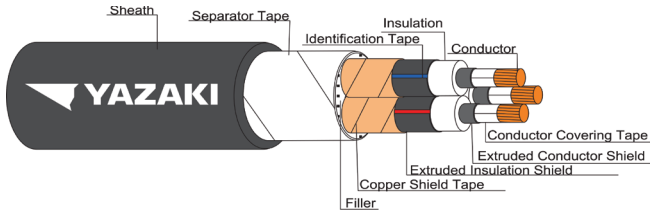
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Nominal cross sectional area (mm²)	A.C. Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
1	10	2.3335	2.3335	2.3335	0.6541	0.5155	0.4693	0.2055	0.1619	0.1474	2.3425	2.3391	2.3382
	16	1.4664	1.4664	1.4664	0.6260	0.4873	0.4411	0.1967	0.1531	0.1386	1.4795	1.4744	1.4729
	25	0.9271	0.9271	0.9271	0.6052	0.4665	0.4203	0.1901	0.1466	0.1320	0.9464	0.9386	0.9365
	35	0.6683	0.6683	0.6683	0.5863	0.4477	0.4015	0.1842	0.1406	0.1261	0.6932	0.6829	0.6801
	50	0.4936	0.4937	0.4937	0.5578	0.4191	0.3729	0.1752	0.1317	0.1171	0.5238	0.5110	0.5074
	70	0.3420	0.3421	0.3422	0.5377	0.3990	0.3528	0.1689	0.1253	0.1108	0.3814	0.3643	0.3597
	95	0.2465	0.2466	0.2467	0.5217	0.3831	0.3369	0.1639	0.1204	0.1058	0.2960	0.2744	0.2684
	120	0.1956	0.1958	0.1959	0.5072	0.3686	0.3223	0.1593	0.1158	0.1013	0.2523	0.2275	0.2205
	150	0.1587	0.1590	0.1592	0.4992	0.3606	0.3144	0.1568	0.1133	0.0988	0.2231	0.1952	0.1874
	185	0.1271	0.1275	0.1277	0.4915	0.3529	0.3067	0.1544	0.1109	0.0964	0.2000	0.1690	0.1600
	240	0.0972	0.0976	0.0978	0.4821	0.3435	0.2973	0.1515	0.1079	0.0934	0.1800	0.1455	0.1352
	300	0.0779	0.0784	0.0788	0.4772	0.3386	0.2924	0.1499	0.1064	0.0919	0.1689	0.1321	0.1210
	400	0.0616	0.0622	0.0627	0.4719	0.3332	0.2870	0.1483	0.1047	0.0902	0.1605	0.1218	0.1098
	500	0.0487	0.0495	0.0502	0.4672	0.3286	0.2823	0.1468	0.1032	0.0887	0.1546	0.1145	0.1019
	630	0.0386	0.0397	0.0406	0.4599	0.3213	0.2751	0.1445	0.1009	0.0864	0.1495	0.1085	0.0955
	800	0.0313	0.0327	0.0339	0.4528	0.3142	0.2680	0.1423	0.0987	0.0842	0.1457	0.1040	0.0908
	1000	0.0262	0.0279	0.0293	0.4445	0.3059	0.2596	0.1396	0.0961	0.0816	0.1421	0.1001	0.0867

3.6/6KV-CV

3.6/6(7.2)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification : White, Red, Blue

Shield : Copper tape

Filler : Non-hygroscopic material

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 7,200 Volts

Rated voltage : 3,600 Volts between Line to Earth
: 6,000 Volts between Line to Line

AC Testing voltage : 12,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1

Remark : *Insulation shield shall be applied semi-conductive tape (for size < 25 mm²)

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Norminal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Maximum Current Rating			Cable weight approx. (kg/km)	Standard Length (m)
								In air at 40°C (A)	Direct burial at 30°C (A)	Underground duct at 30°C (A)		
3	10	6	2.5	2.0	29.5	1.83	2,850	81	85	65	850	500
	16	6	2.5	2.0	31.5	1.15	2,500	106	108	83	1100	500
	25	6	2.5	2.1	36.0	0.727	2,150	139	139	109	1500	500
	35	6	2.5	2.2	38.5	0.524	1,900	170	174	130	1900	500
	50	6	2.5	2.3	41.5	0.387	1,700	203	195	153	2300	500
	70	12	2.5	2.4	45.0	0.268	1,500	252	238	189	3000	500
	95	15	2.5	2.5	49.5	0.193	1,300	308	284	227	3900	500
	120	18	2.5	2.6	53.0	0.153	1,200	355	322	260	4700	500
	150	18	2.5	2.8	56.0	0.124	1,100	402	360	292	5500	500
	185	30	2.5	2.9	61.0	0.0991	1,000	461	406	329	7000	500
	240	34	2.6	3.1	67.0	0.0754	900	545	470	386	9000	300
	300	34	2.8	3.3	73.0	0.0601	900	625	529	434	11000	300
	400	53	3.0	3.5	80.5	0.0470	850	724	598	496	13500	300

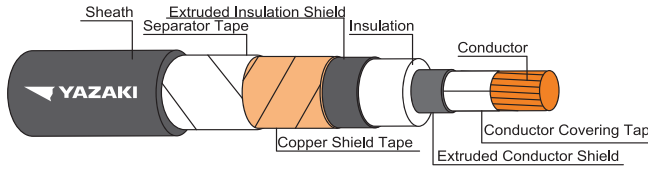
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Norminal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	10	2.3335	0.4117	0.1293	2.3371
	16	1.4665	0.3827	0.1202	1.4714
	25	0.9272	0.3694	0.1161	0.9344
	35	0.6684	0.3529	0.1109	0.6775
	50	0.4938	0.3265	0.1026	0.5043
	70	0.3423	0.3102	0.0975	0.3559
	95	0.2469	0.2962	0.0931	0.2639
	120	0.1960	0.2843	0.0893	0.2154
	150	0.1593	0.2770	0.0870	0.1815
	185	0.1278	0.2721	0.0855	0.1538
	240	0.0981	0.2646	0.0831	0.1286
	300	0.0792	0.2606	0.0819	0.1139
	400	0.0632	0.2570	0.0807	0.1025

6/10KV-CV

6/10(12)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Insulation color : Natural (Translucent)

Shield : Copper tape

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 12,000 Volts

Rated voltage : 6,000 Volts between Line to Earth
: 10,000 Volts between Line to Line

AC Testing voltage : 21,000 volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

B

APPLICATION

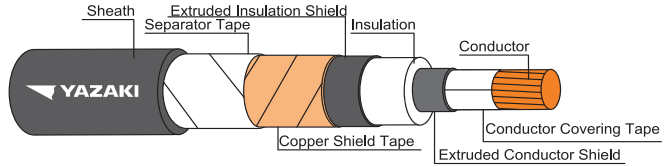
For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm^2)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length per drum (m)
1	16	6	3.4	1.5	19.0	1.15	3,100	440	500
	25	6	3.4	1.6	20.5	0.727	2,700	550	500
	35	6	3.4	1.6	21.5	0.524	2,450	650	500
	50	6	3.4	1.7	23.0	0.387	2,200	800	500
	70	12	3.4	1.7	24.5	0.268	1,900	1000	500
	95	15	3.4	1.8	26.5	0.193	1,700	1300	500
	120	18	3.4	1.8	28.0	0.153	1,550	1600	500
	150	18	3.4	1.9	29.5	0.124	1,450	1900	500
	185	30	3.4	1.9	31.5	0.0991	1,300	2300	500
	240	34	3.4	2.0	34.0	0.0754	1,150	2900	500
	300	34	3.4	2.1	36.5	0.0601	1,050	3500	500
	400	53	3.4	2.2	39.5	0.0470	950	4400	500
	500	53	3.4	2.3	43.0	0.0366	850	5500	500
	630	53	3.4	2.4	47.0	0.0283	750	7000	500
	800	53	3.4	2.5	51.0	0.0221	650	8500	500
	1000	53	3.4	2.6	56.5	0.0176	600	11000	300

6/10KV-CV

6/10(12)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Insulation color : Natural (Translucent)

Shield : Copper tape

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 12,000 Volts

Rated voltage : 6,000 Volts between Line to Earth
: 10,000 Volts between Line to Line

AC Testing voltage : 21,000 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

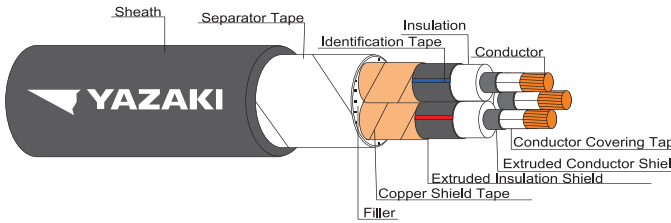
Number of core	Nominal cross sectional area (mm²)	Current rating in free air at 40°C (A)			Current rating Direct burial at 30°C (A)		Current rating Underground duct at 30°C (A)	
		Spaced	Touching	Trefoil	Spaced	Trefoil	Spaced	Trefoil
1	16	135	114	112	114	107	103	100
	25	177	150	146	146	137	132	127
	35	216	182	177	174	164	160	154
	50	260	219	213	206	193	189	181
	70	324	273	265	252	236	230	221
	95	397	334	325	302	282	274	263
	120	459	386	375	343	321	317	304
	150	521	439	426	385	359	355	340
	185	601	506	492	435	405	401	383
	240	713	601	583	506	469	464	442
	300	820	692	670	572	528	536	509
	400	954	804	777	652	597	609	576
	500	1116	939	905	744	675	706	665
	630	1299	1090	1045	847	756	802	750
	800	1494	1247	1188	952	835	920	855
	1000	1708	1417	1340	1058	909	1019	935

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Nominal cross sectional area	A.C. Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
	(mm²)	Spaced	Touching	Trefoil	Spaced	Touching	Trefoil	Spaced	Touching	Trefoil	Spaced	Touching	Trefoil
1	16	1.4664	1.4664	1.4664	0.6597	0.5210	0.4748	0.2073	0.1637	0.1492	1.4810	1.4755	1.4740
	25	0.9271	0.9271	0.9271	0.6295	0.4908	0.4446	0.1978	0.1542	0.1397	0.9480	0.9398	0.9376
	35	0.6683	0.6683	0.6683	0.6093	0.4707	0.4244	0.1914	0.1479	0.1333	0.6952	0.6845	0.6815
	50	0.4936	0.4937	0.4937	0.5792	0.4406	0.3944	0.1820	0.1384	0.1239	0.5261	0.5127	0.5090
	70	0.3420	0.3421	0.3422	0.5576	0.4190	0.3728	0.1752	0.1316	0.1171	0.3843	0.3666	0.3617
	95	0.2465	0.2466	0.2467	0.5401	0.4015	0.3553	0.1697	0.1261	0.1116	0.2993	0.2770	0.2708
	120	0.1956	0.1958	0.1959	0.5245	0.3859	0.3397	0.1648	0.1212	0.1067	0.2558	0.2303	0.2231
	150	0.1587	0.1590	0.1590	0.5156	0.3770	0.3307	0.1620	0.1184	0.1039	0.2268	0.1983	0.1899
	185	0.1271	0.1273	0.1275	0.5068	0.3681	0.3219	0.1592	0.1156	0.1011	0.2037	0.1720	0.1627
	240	0.0972	0.0974	0.0978	0.4955	0.3569	0.3107	0.1557	0.1121	0.0976	0.1835	0.1485	0.1382
	300	0.0779	0.0784	0.0788	0.4868	0.3482	0.3020	0.1529	0.1094	0.0949	0.1716	0.1346	0.1233
	400	0.0616	0.0622	0.0627	0.4781	0.3394	0.2932	0.1502	0.1066	0.0921	0.1623	0.1234	0.1114
	500	0.0487	0.0495	0.0502	0.4709	0.3323	0.2861	0.1479	0.1044	0.0899	0.1557	0.1155	0.1029
	630	0.0386	0.0397	0.0406	0.4625	0.3239	0.2776	0.1453	0.1018	0.0872	0.1503	0.1092	0.0962
	800	0.0313	0.0327	0.0339	0.4552	0.3166	0.2703	0.1430	0.0995	0.0849	0.1464	0.1047	0.0914
	1000	0.0262	0.0279	0.0293	0.4466	0.3080	0.2618	0.1403	0.0968	0.0822	0.1427	0.1007	0.0873

6/10KV-CV

6/10(12)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE



IEC 60502-2

CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification : White, Red, Blue

Shield : Copper tape

Filler : Non-hygroscopic material

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 12,000 Volts

Rated voltage : 6,000 Volts between Line to Earth
: 10,000 Volts between Line to Line

AC Testing voltage : 21,000 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Norminal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Maximum Current Rating			Cable weight approx. (kg/km)	Standard length per drum (m)
								In air at 40°C (A)	Direct burial at 30°C (A)	Underground duct at 30°C (A)		
3	16	6	3.4	2.2	38.0	1.15	3,100	109	108	86	1400	500
	25	6	3.4	2.2	40.5	0.727	2,700	142	139	110	1800	500
	35	6	3.4	2.3	43.0	0.524	2,450	173	166	132	2200	500
	50	6	3.4	2.4	46.0	0.387	2,200	207	196	156	2600	500
	70	12	3.4	2.6	49.5	0.268	1,900	257	239	191	3300	500
	95	15	3.4	2.7	54.0	0.193	1,700	313	285	231	4300	500
	120	18	3.4	2.8	57.5	0.153	1,550	360	323	262	5000	500
	150	18	3.4	2.9	60.5	0.124	1,450	407	361	293	6000	500
	185	30	3.4	3.0	65.5	0.0991	1,300	467	408	335	7500	300
	240	34	3.4	3.2	71.0	0.0754	1,150	549	471	388	9000	300
	300	34	3.4	3.3	76.0	0.0601	1,050	628	529	441	11000	300
	400	53	3.4	3.6	82.0	0.0470	950	721	597	497	14000	300

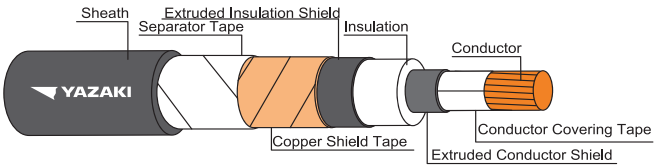
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Norminal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	16	1.4665	0.4267	0.1341	1.4726
	25	0.9272	0.3977	0.1249	0.9356
	35	0.6684	0.3803	0.1195	0.6790
	50	0.4938	0.3511	0.1103	0.5060
	70	0.3421	0.3327	0.1045	0.3577
	95	0.2467	0.3167	0.0995	0.2660
	120	0.1960	0.3034	0.0953	0.2179
	150	0.1593	0.2950	0.0927	0.1843
	185	0.1278	0.2886	0.0907	0.1567
	240	0.0981	0.2782	0.0874	0.1314
	300	0.0790	0.2705	0.0850	0.1160
	400	0.0632	0.2630	0.0826	0.1040

8.7/15KV-CV

8.7/15(17.5)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Insulation color : Natural (Translucent)

Shield : Copper tape

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 17,500 Volts

Rated voltage : 8,700 Volts between Line to Earth
: 15,000 Volts between Line to Line

AC Testing voltage : 30,500 volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground

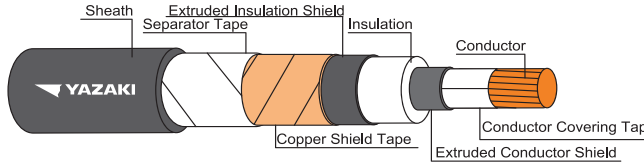
Number of core	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard length per drum (m)
1	25	6	4.5	1.6	22.5	0.727	3,300	650	500
	35	6	4.5	1.7	24.0	0.524	3,000	750	500
	50	6	4.5	1.7	25.0	0.387	2,700	900	500
	70	12	4.5	1.8	27.0	0.268	2,400	1100	500
	95	15	4.5	1.8	28.5	0.193	2,100	1400	500
	120	18	4.5	1.9	30.5	0.153	1,950	1700	500
	150	18	4.5	1.9	32.0	0.124	1,800	2000	500
	185	30	4.5	2.0	34.0	0.0991	1,650	2400	500
	240	34	4.5	2.1	36.5	0.0754	1,500	3000	500
	300	34	4.5	2.1	39.0	0.0601	1,350	3700	500
	400	53	4.5	2.2	41.5	0.0470	1,200	4500	500
	500	53	4.5	2.3	45.5	0.0366	1,100	5500	500
	630	53	4.5	2.4	49.5	0.0283	950	7000	500
	800	53	4.5	2.6	53.5	0.0221	850	8500	500
	1000	53	4.5	2.7	59.0	0.0176	750	11500	300

B

8.7/15KV-CV

8.7/15(17.5)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Insulation color : Natural (Translucent)

Shield : Copper tape

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 17,500 Volts

Rated voltage : 8,700 Volts between Line to Earth
: 15,000 Volts between Line to Line

AC Testing voltage : 30,500 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm²)	Continuous current rating in free air at 40°C maximum (A)			Current rating Direct burial at 30°C (A)		Current rating Underground duct at 30°C (A)	
		Spaced	Touching	Trefoil	Spaced	Trefoil	Spaced	Trefoil
	25	177	151	148	146	137	134	129
	35	215	184	179	174	164	160	154
	50	258	220	215	206	194	188	181
	70	322	275	268	252	236	234	224
	95	394	336	327	301	283	279	268
	120	454	388	377	343	321	317	303
	150	517	441	429	385	360	354	339
1	185	595	508	494	435	406	400	382
	240	705	602	584	506	470	474	451
	300	805	688	667	572	529	534	508
	400	935	798	773	652	599	608	575
	500	1093	932	900	744	677	705	664
	630	1272	1081	1039	847	760	800	748
	800	1460	1235	1181	953	840	918	853
	1000	1669	1403	1331	1059	916	1016	932

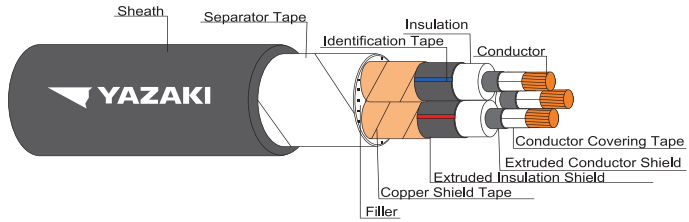
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Nominal cross sectional area (mm²)	A.C. Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
	25	0.9271	0.9271	0.9271	0.6511	0.5125	0.4663	0.2045	0.1610	0.1465	0.9494	0.9410	0.9386
	35	0.6683	0.6683	0.6683	0.6316	0.4930	0.4467	0.1984	0.1549	0.1403	0.6971	0.6860	0.6829
	50	0.4936	0.4937	0.4937	0.5986	0.4600	0.4138	0.1881	0.1445	0.1300	0.5282	0.5144	0.5105
	70	0.3420	0.3421	0.3422	0.5773	0.4387	0.3925	0.1814	0.1378	0.1233	0.3871	0.3688	0.3637
	95	0.2465	0.2466	0.2467	0.5569	0.4183	0.3721	0.1750	0.1314	0.1169	0.3023	0.2794	0.2730
	120	0.1956	0.1958	0.1957	0.5418	0.4032	0.3570	0.1702	0.1267	0.1122	0.2593	0.2332	0.2256
	150	0.1587	0.1588	0.1590	0.5307	0.3921	0.3459	0.1667	0.1232	0.1087	0.2302	0.2010	0.1926
1	185	0.1271	0.1273	0.1275	0.5227	0.3841	0.3379	0.1642	0.1207	0.1062	0.2077	0.1754	0.1659
	240	0.0972	0.0974	0.0976	0.5097	0.3711	0.3249	0.1601	0.1166	0.1021	0.1873	0.1519	0.1412
	300	0.0779	0.0782	0.0785	0.4991	0.3604	0.3142	0.1568	0.1132	0.0987	0.1751	0.1376	0.1261
	400	0.0616	0.0620	0.0624	0.4895	0.3508	0.3046	0.1538	0.1102	0.0957	0.1657	0.1264	0.1142
	500	0.0487	0.0494	0.0500	0.4814	0.3427	0.2965	0.1512	0.1077	0.0931	0.1589	0.1185	0.1057
	630	0.0386	0.0396	0.0404	0.4721	0.3335	0.2872	0.1483	0.1048	0.0902	0.1533	0.1120	0.0989
	800	0.0313	0.0325	0.0335	0.4648	0.3262	0.2799	0.1460	0.1025	0.0879	0.1493	0.1075	0.0941
	1000	0.0262	0.0277	0.0289	0.4553	0.3167	0.2704	0.1430	0.0995	0.0849	0.1454	0.1033	0.0897

8.7/15KV-CV

8.7/15(17.5)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification : White, Red, Blue

Shield : Copper tape

Filler : Non-hygroscopic material

Separator tape : Non-hygroscopic tape

sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 17,500 Volts

Rated voltage : 8,700 Volts between Line to Earth
: 15,000 Volts between Line to Line

AC Testing voltage : 30,500 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

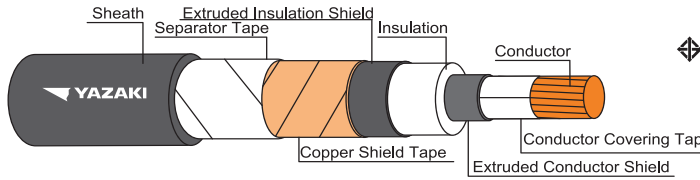
Number of core	Norminal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Maximum Current Rating			Cable weight approx. (kg/km)	Standard Length per drum (m)
								In air at 40°C (A)	Direct burial at 30°C (A)	Underground duct at 30°C (A)		
	25	6	4.5	2.4	46.0	0.727	3,300	142	137	112	2100	500
	35	6	4.5	2.5	48.5	0.524	3,000	173	165	134	2500	500
	50	6	4.5	2.6	51.0	0.387	2,700	208	195	159	3000	500
	70	12	4.5	2.7	55.0	0.268	2,400	258	238	194	3700	500
	95	15	4.5	2.8	59.0	0.193	2,100	314	284	232	4700	500
3	120	18	4.5	2.9	62.5	0.153	1,950	362	323	267	5500	500
	150	18	4.5	3.1	66.0	0.124	1,800	409	361	299	6500	500
	185	30	4.5	3.2	70.5	0.0991	1,650	468	407	337	8000	300
	240	34	4.5	3.4	76.5	0.0754	1,500	551	470	393	9500	300
	300	34	4.5	3.5	81.5	0.0601	1,350	629	529	443	11500	300
	400	53	4.5	3.7	87.5	0.0470	1,200	722	598	505	14500	300

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Norminal cross sectional area (mm²)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
	25	0.9272	0.4248	0.1335	0.9368
	35	0.6684	0.4057	0.1275	0.6804
	50	0.4938	0.3749	0.1178	0.5077
	70	0.3421	0.3546	0.1114	0.3598
	95	0.2467	0.3369	0.1058	0.2684
3	120	0.1958	0.3223	0.1013	0.2204
	150	0.1591	0.3129	0.0983	0.1870
	185	0.1276	0.3053	0.0959	0.1596
	240	0.0978	0.2935	0.0922	0.1344
	300	0.0788	0.2848	0.0895	0.1192
	400	0.0628	0.2762	0.0868	0.1071

12/20KV-CV

12/20(24)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE



IEC 60502-2

TIS 2143-2546

CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Insulation color : Natural (Translucent)

Shield : Copper tape

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 24,000 Volts

Rated voltage : 12,000 Volts between Line to Earth
: 20,000 Volts between Line to Line

AC Testing voltage : 42,000 volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1 TIS 2143-2546

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

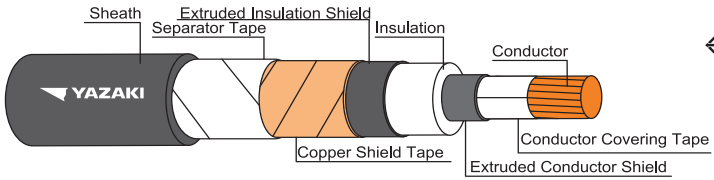
Number of core	Norminal cross sectional area (mm^2)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length per drum (m)
1	35	6	5.5	1.8	26.0	0.524	3,460	850	500
	50	6	5.5	1.8	27.5	0.387	3,130	1000	500
	70	12	5.5	1.8	29.0	0.268	2,790	1200	500
	95	15	5.5	1.9	31.0	0.193	2,500	1500	500
	120	18	5.5	2.0	32.5	0.153	2,290	1800	500
	150	18	5.5	2.0	34.0	0.124	2,130	2100	500
	185	30	5.5	2.1	36.5	0.0991	1,970	2500	500
	240	34	5.5	2.1	38.5	0.0754	1,770	3200	500
	300	34	5.5	2.2	41.0	0.0601	1,620	3800	500
	400	53	5.5	2.3	44.0	0.0470	1,480	4700	500
	500	53	5.5	2.4	47.5	0.0366	1,320	6000	500
	630	53	5.5	2.5	51.5	0.0283	1,190	7500	500
	800	53	5.5	2.6	55.5	0.0221	1,070	9000	500
	1000	53	5.5	2.8	61.5	0.0176	940	11500	300

12/20KV-CV

12/20(24)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2

TIS 2143-2546



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Insulation color : Natural (Translucent)

Shield : Copper tape

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 24,000 Volts

Rated voltage : 12,000 Volts between Line to Earth
: 20,000 Volts between Line to Line

AC Testing voltage : 42,000 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1
TIS 2143-2546

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm²)	Continuous current rating in free air at 40°C maximum (A)			Current rating Direct burial at 30°C (A)		Current rating Underground duct at 30°C (A)	
		Spaced	Touching	Trefoil	Spaced	Trefoil	Spaced	Trefoil
1	35	210	183	179	174	164	160	154
	50	253	219	214	206	194	192	184
	70	315	273	266	252	237	233	224
	95	385	333	325	302	283	279	267
	120	445	385	375	343	321	316	303
	150	506	438	426	385	360	354	338
	185	581	503	490	435	406	408	389
	240	689	595	579	506	470	473	450
	300	792	684	665	572	529	533	507
	400	920	794	770	653	600	618	585
	500	1066	920	890	744	678	703	662
	630	1241	1067	1028	848	762	816	764
	800	1423	1221	1169	954	844	916	851
	1000	1628	1385	1318	1060	920	1043	963

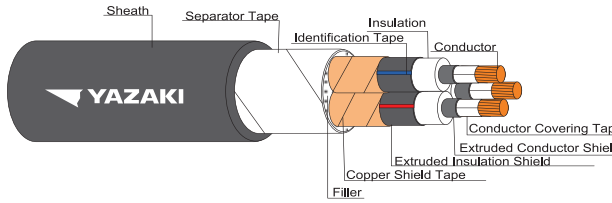
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Nominal cross sectional area (mm²)	A.C. Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
1	35	0.6683	0.6683	0.6683	0.6493	0.5107	0.4645	0.2040	0.1604	0.1459	0.6987	0.6873	0.6840
	50	0.4936	0.4937	0.4937	0.6155	0.4769	0.4307	0.1934	0.1498	0.1353	0.5301	0.5159	0.5119
	70	0.3420	0.3421	0.3420	0.5918	0.4531	0.4069	0.1859	0.1423	0.1278	0.3893	0.3705	0.3651
	95	0.2465	0.2466	0.2467	0.5718	0.4332	0.3870	0.1796	0.1361	0.1216	0.3050	0.2817	0.2750
	120	0.1956	0.1956	0.1957	0.5565	0.4179	0.3716	0.1748	0.1313	0.1167	0.2623	0.2356	0.2279
	150	0.1587	0.1588	0.1590	0.5448	0.4061	0.3599	0.1712	0.1276	0.1131	0.2334	0.2037	0.1951
	185	0.1271	0.1273	0.1275	0.5353	0.3967	0.3505	0.1682	0.1246	0.1101	0.2108	0.1781	0.1685
	240	0.0972	0.0974	0.0976	0.5204	0.3818	0.3355	0.1635	0.1199	0.1054	0.1902	0.1545	0.1436
	300	0.0779	0.0782	0.0785	0.5101	0.3715	0.3253	0.1603	0.1167	0.1022	0.1782	0.1405	0.1289
	400	0.0614	0.0620	0.0624	0.4998	0.3612	0.3150	0.1570	0.1135	0.0990	0.1686	0.1293	0.1170
	500	0.0487	0.0494	0.0498	0.4908	0.3522	0.3060	0.1542	0.1106	0.0961	0.1617	0.1212	0.1083
	630	0.0386	0.0396	0.0402	0.4909	0.3422	0.2960	0.1542	0.1075	0.0930	0.1590	0.1146	0.1013
	800	0.0313	0.0325	0.0333	0.4722	0.3335	0.2873	0.1483	0.1048	0.0903	0.1516	0.1097	0.0962
	1000	0.0262	0.0277	0.0287	0.4626	0.3240	0.2778	0.1453	0.1018	0.0873	0.1477	0.1055	0.0919

12/20KV-CV

12/20(24)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification : White, Red, Blue

Shield : Copper tape

Filler : Non-hygroscopic material

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 24,000 Volts

Rated voltage : 12,000 Volts between Line to Earth
: 20,000 Volts between Line to Line

AC Testing voltage : 42,000 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area	Number of wires minimum	Insulation thickness nominal	Sheath thickness nominal	Overall diameter approx.	Conductor resistance at 20°C maximum	Insulation resistance at 20°C minimum	Maximum Current Rating			Cable weight approx.	Standard Length per drum
								In air at 40°C	Direct burial at 30°C	Underground duct at 30°C		
	(mm^2)	(No.)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(A)	(A)	(kg/km)	(m)
3	35	6	5.5	2.7	53.0	0.524	3,460	169	161	136	2800	500
	50	6	5.5	2.8	56.0	0.387	3,130	204	191	160	3300	500
	70	12	5.5	2.9	59.5	0.268	2,790	254	234	195	4100	500
	95	15	5.5	3.0	64.0	0.193	2,500	311	281	236	5000	500
	120	18	5.5	3.1	67.5	0.153	2,290	358	319	268	6000	500
	150	18	5.5	3.2	70.5	0.124	2,130	405	358	300	7000	300
	185	30	5.5	3.3	75.5	0.0991	1,970	463	404	342	8000	300
	240	34	5.5	3.5	81.0	0.0754	1,770	546	468	395	10000	300
	300	34	5.5	3.7	86.0	0.0601	1,620	622	526	448	12000	300
	400	53	5.5	3.9	92.0	0.0470	1,480	715	595	506	15000	200

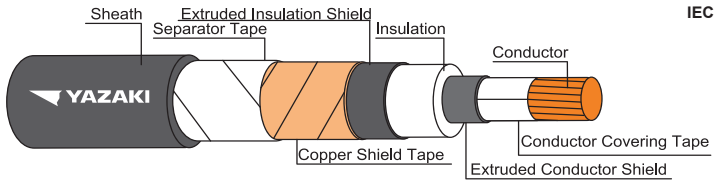
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Nominal cross sectional area	A.C. Resistance	Inductance	Reactance	Impedance
		R	L	XL	Z
	(mm^2)	(Ω/km)	(mH/km)	(Ω/km)	(Ω/km)
3	35	0.6684	0.4254	0.1336	0.6816
	50	0.4938	0.3935	0.1236	0.5090
	70	0.3421	0.3720	0.1169	0.3615
	95	0.2467	0.3530	0.1109	0.2705
	120	0.1958	0.3375	0.1060	0.2227
	150	0.1591	0.3273	0.1028	0.1894
	185	0.1276	0.3187	0.1001	0.1622
	240	0.0978	0.3059	0.0961	0.1371
	300	0.0788	0.2964	0.0931	0.1220
	400	0.0628	0.2870	0.0902	0.1099

18/30KV-CV

18/30(36)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Insulation color : Natural (Translucent)

Shield : Copper tape

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 36,000 Volts

Rated voltage : 18,000 Volts between Line to Earth
: 30,000 Volts between Line to Line

AC Testing voltage : 63,000 volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

B

APPLICATION

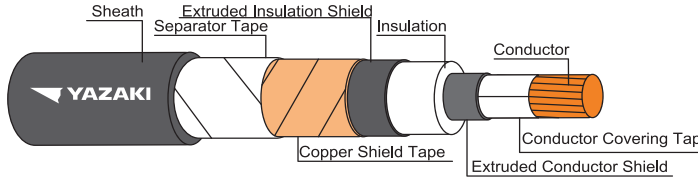
For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard length per drum (m)
	50	6	8.0	2.0	33.0	0.387	4,010	1300	500
	70	12	8.0	2.0	34.5	0.268	3,620	1500	500
	95	15	8.0	2.1	36.5	0.193	3,260	1800	500
	120	18	8.0	2.1	38.0	0.153	3,020	2100	500
	150	18	8.0	2.2	39.5	0.124	2,820	2500	500
	185	30	8.0	2.2	41.5	0.0991	2,620	2900	500
1	240	34	8.0	2.3	44.0	0.0754	2,370	3500	500
	300	34	8.0	2.4	46.5	0.0601	2,190	4200	500
	400	53	8.0	2.5	49.5	0.0470	2,000	5000	500
	500	53	8.0	2.6	53.0	0.0366	1,800	6000	500
	630	53	8.0	2.7	57.0	0.0283	1,630	7500	500
	800	53	8.0	2.8	61.0	0.0221	1,480	9500	300
	1000	53	8.0	3.0	67.0	0.0176	1,300	12000	300

18/30KV-CV

18/30(36)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Shield : Copper tape

Separator tape : Non-hygroscopic tape

Sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 36,000 Volts

Rated voltage : 18,000 Volts between Line to Earth
: 30,000 Volts between Line to Line

AC Testing voltage : 63,000 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Norminal cross sectional area (mm²)	Continuous current rating in free air at 40°C maximum (A)			Current rating Direct burial at 30°C (A)		Current rating Underground duct at 30°C (A)	
		Spaced	Touching	Trefoil	Spaced	Trefoil	Spaced	Trefoil
1	50	256	226	221	206	194	191	183
	70	319	281	275	252	237	237	228
	95	390	343	335	302	283	284	271
	120	450	395	385	343	322	322	308
	150	510	448	437	385	360	360	344
	185	586	514	501	390	364	364	347
	240	693	607	591	506	471	479	456
	300	796	696	678	572	530	541	513
	400	923	807	784	652	602	615	582
	500	1076	939	910	745	681	714	672
	630	1251	1088	1051	849	767	811	759
	800	1437	1243	1195	955	851	935	871
	1000	1640	1411	1348	1062	930	1036	956

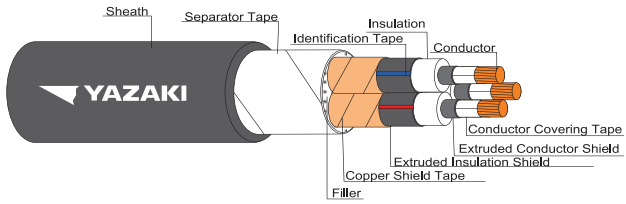
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Norminal cross sectional area (mm²)	A.C. Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
1	50	0.4936	0.4937	0.4937	0.6525	0.5139	0.4676	0.2050	0.1614	0.1469	0.5345	0.5194	0.5151
	70	0.3420	0.3421	0.3420	0.6268	0.4882	0.4420	0.1969	0.1534	0.1389	0.3946	0.3749	0.3691
	95	0.2465	0.2466	0.2465	0.6048	0.4661	0.4199	0.1900	0.1464	0.1319	0.3112	0.2868	0.2796
	120	0.1956	0.1956	0.1957	0.5862	0.4475	0.4013	0.1842	0.1406	0.1261	0.2687	0.2409	0.2328
	150	0.1587	0.1588	0.1588	0.5743	0.4357	0.3895	0.1804	0.1369	0.1224	0.2403	0.2097	0.2005
	185	0.1271	0.1273	0.1273	0.5622	0.4236	0.3774	0.1766	0.1331	0.1186	0.2176	0.1842	0.1740
	240	0.0972	0.0974	0.0974	0.5466	0.4080	0.3618	0.1717	0.1282	0.1137	0.1973	0.1610	0.1497
	300	0.0779	0.0782	0.0783	0.5349	0.3963	0.3501	0.1680	0.1245	0.1100	0.1852	0.1470	0.1350
	400	0.0614	0.0618	0.0621	0.5231	0.3845	0.3383	0.1643	0.1208	0.1063	0.1754	0.1357	0.1231
	500	0.0487	0.0491	0.0491	0.5124	0.3738	0.3275	0.1610	0.1174	0.1029	0.1682	0.1273	0.1140
	630	0.0386	0.0392	0.0398	0.5009	0.3622	0.3160	0.1574	0.1138	0.0993	0.1620	0.1204	0.1070
	800	0.0313	0.0321	0.0329	0.4908	0.3522	0.3059	0.1542	0.1106	0.0961	0.1573	0.1152	0.1016
	1000	0.0262	0.0272	0.0282	0.4802	0.3415	0.2953	0.1509	0.1073	0.0928	0.1531	0.1107	0.0970

18/30KV-CV

18/30(36)kV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

Conductor : Compacted stranded annealed copper wire

Conductor shield : Semi-conductive Cross-linked polyethylene compound

Insulation : Cross-Linked polyethylene (XLPE)

Insulation shield : Semi-conductive Cross-linked polyethylene compound

Core identification : White, Red, Blue

Shield : Copper tape

Filler : Non-hygroscopic material

Separator tape : Non-hygroscopic tape

sheath : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 36,000 Volts

Rated voltage : 18,000 Volts between Line to Earth
: 30,000 Volts between Line to Line

AC Testing voltage : 63,000 Volts

Reference standard : IEC 60502-2, IEC 60228, IEC 60332-1

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Norminal cross sectional area	Number of wires minimum	Insulation thickness nominal	Sheath thickness nominal	Overall diameter approx.	Conductor resistance at 20°C maximum	Insulation resistance at 20°C minimum	Maximum Current Rating			Cable weight approx.	Standard Length per drum
								In air at 40°C	Direct burial at 30°C	Under-ground duct at 30°C		
	(mm^2)	(No.)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)	(A)	(A)	(A)	(kg/km)	(m)
3	50	6	8.0	3.2	68.0	0.387	4,010	205	190	164	4300	500
	70	12	8.0	3.3	71.5	0.268	3,620	262	236	199	5000	300
	95	15	8.0	3.4	75.5	0.193	3,260	320	284	240	6000	300
	120	18	8.0	3.5	79.0	0.153	3,020	368	323	273	7000	300
	150	18	8.0	3.6	82.5	0.124	2,820	417	362	305	8000	300
	185	30	8.0	3.7	87.0	0.0991	2,620	477	409	347	9500	300
	240	34	8.0	3.9	92.5	0.0754	2,370	561	473	401	11500	300
	300	34	8.0	4.0	98.0	0.0601	2,190	640	533	455	13500	200
	400	53	8.0	4.3	104.0	0.0470	2,000	734	603	515	16500	200

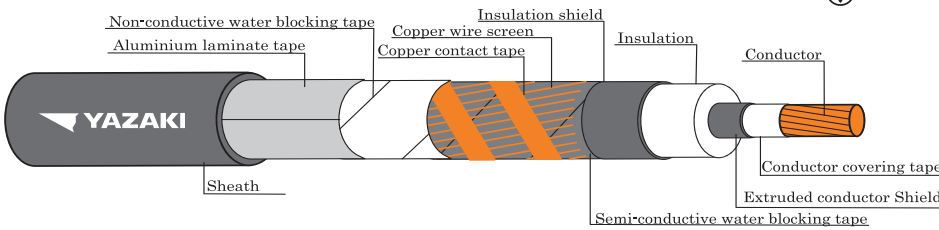
Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

Number of core	Norminal cross sectional area	A.C. Resistance	Inductance	Reactance	Impedance
		R	L	XL	Z
	(mm^2)	(Ω/km)	(mH/km)	(Ω/km)	(Ω/km)
3	50	0.4938	0.4336	0.1362	0.5122
	70	0.3421	0.4097	0.1287	0.3655
	95	0.2467	0.3883	0.1220	0.2752
	120	0.1958	0.3710	0.1166	0.2279
	150	0.1589	0.3593	0.1129	0.1949
	185	0.1274	0.3488	0.1096	0.1680
	240	0.0976	0.3340	0.1049	0.1433
	300	0.0785	0.3228	0.1014	0.1282
	400	0.0624	0.3117	0.0979	0.1161

69KV-CE

69kV 90°C CROSS-LINKED POLYETHYLENE INSULATED WITH COPPER WIRE SCREEN AND POLYETHYLENE SHEATHED POWER CABLE

TIS 2202-2547



CABLE STRUCTURE

Conductor	:	Compacted stranded annealed copper wire
Tape on Conductor	:	Semi-Conductive tape
Conductor shield	:	Semi-conductive Cross-linked polyethylene compound
Insulation	:	Cross-Linked polyethylene (XLPE)
Insulation shield	:	Semi-conductive Cross-linked polyethylene compound
Insulation color	:	Natural (Translucent)
Water blocking tape	:	Non-conductive water blocking tape
Metallic screen	:	Copper wire screen with copper contact tape
Synthetic water blocking and cushioning tape	:	Non-conductive water blocking tape
Radial water barrier	:	Aluminium laminate tape
Sheath	:	Black polyethylene (PE/ST7)

TECHNICAL DATA

Classification	:	Maximum conductor temperature 90°C
AC Testing voltage	:	90,000 Volts
Reference standard	:	TIS 2202-2547, TIS 2427-2552 IEC 60228

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Conductor diameter approx. (mm)	Conductor shield thickness nominal (mm)	Insulation thickness nominal (mm)	Insulation shield thickness nominal (mm)	Copper wire area nominal (mm²)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Cable weight approx. (kg/km)	Standard Length per drum (m)
1	400/95	53	23.5	1.5	11.0	1.5	95	3.5	67.5	0.0470	7000	500
	500/95	53	26.7	1.5	11.0	1.5	95	3.5	71.0	0.0366	8200	500
	630/95	53	30.3	1.5	11.0	1.5	95	3.5	74.5	0.0283	10000	500
	800/95	53	34.1	1.5	11.0	1.5	95	3.5	78.5	0.0221	11500	500
	800/120	53	34.1	1.5	11.0	1.5	120	3.5	78.5	0.0221	11500	500

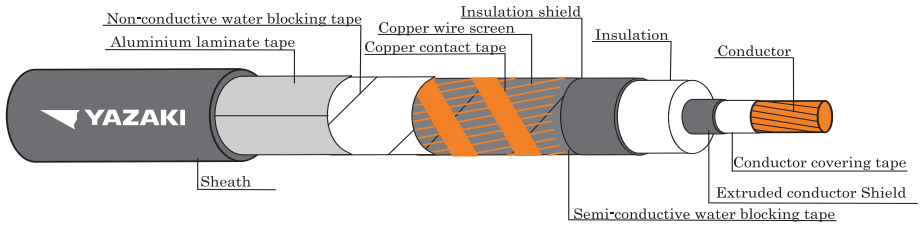
Number of core	Nominal cross sectional area	Current rating Direct burial at 30°C (A)		Current rating Underground duct at 30°C (A)		A.C. Resistance R (Ω/km)		Inductance L (mH/km)		Reactance XL (Ω/km)		Impedance Z (Ω/km)	
	(mm²)	Space	Trefoil	Space	Trefoil	Space	Trefoil	Space	Trefoil	Space	Trefoil	Space	Trefoil
1	400/95	873	611	644	607	0.0613	0.0617	0.5835	0.3987	0.1833	0.1253	0.1933	0.1396
	500/95	1001	695	732	688	0.0485	0.0490	0.5679	0.3831	0.1784	0.1204	0.1849	0.1299
	630/95	1145	788	832	778	0.0384	0.0392	0.5543	0.3694	0.1741	0.1161	0.1783	0.1225
	800/95	1295	881	951	885	0.0311	0.0321	0.5411	0.3563	0.1700	0.1119	0.1728	0.1164
	800/120	1295	881	951	885	0.0311	0.0321	0.5411	0.3563	0.1700	0.1119	0.1728	0.1164

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

115KV-CE

115kV 90°C CROSS-LINKED POLYETHYLENE INSULATED WITH COPPER WIRE SCREEN AND POLYETHYLENE SHEATHED POWER CABLE

TIS 2202-2547



CABLE STRUCTURE

Conductor	:	Compacted stranded annealed copper wire
Tape on Conductor	:	Semi-Conductive tape
Conductor shield	:	Semi-conductive Cross-linked polyethylene compound
Insulation	:	Cross-Linked polyethylene (XLPE)
Insulation shield	:	Semi-conductive tape Cross-linked polyethylene compound
Insulation color	:	Natural (Translucent)
Water blocking tape	:	Semi-conductive water blocking tape
Metallic screen	:	Copper wire screen with copper contact tape
Synthetic water blocking and cushioning tape	:	Non-conductive water blocking tape
Radial water barrier	:	Aluminium laminate tape
Sheath	:	Black polyethylene (PE/ST7)

TECHNICAL DATA

Classification	:	Maximum conductor temperature 90°C
AC Testing voltage	:	160,000 Volts
Reference standard	:	TIS 2202-2547, TIS 2427-2552 IEC 60228

B

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

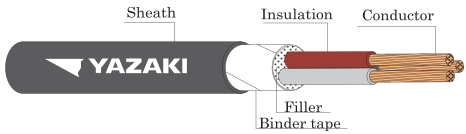
Number of core	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Conductor diameter approx. (mm)	Conductor shield thickness nominal (mm)	Insulation thickness nominal (mm)	Insulation shield thickness nominal (mm)	Copper wire area nominal (mm²)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Cable weight approx. (kg/km)	Standard Length per drum (m)
1	400/95	53	23.5	1.5	16.0	1.5	95	3.5	77.0	0.0470	8000	500
	500/95	53	26.7	1.5	16.0	1.5	95	3.6	80.5	0.0366	9000	500
	630/95	53	30.3	1.5	16.0	1.5	95	3.6	84.0	0.0283	11000	500
	800/95	53	34.1	1.5	16.0	1.5	95	3.7	87.5	0.0221	12500	500
	800/120	53	34.1	1.5	16.0	1.5	120	3.7	87.5	0.0221	12600	500

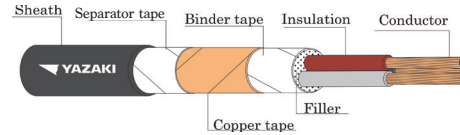
Number of core	Nominal cross sectional area (mm²)	Current rating Direct burial at 30°C (A)		Current rating Underground duct at 30°C (A)		A.C. Resistance R (Ω/km)		Inductance L (mH/km)		Reactance XL (Ω/km)		Impedance Z (Ω/km)	
		Space	Trefoil	Space	Trefoil	Space	Trefoil	Space	Trefoil	Space	Trefoil	Space	Trefoil
1	400/95	850	607	646	608	0.0613	0.0617	0.6128	0.4279	0.1925	0.1344	0.2020	0.1479
	500/95	975	691	735	690	0.0485	0.0490	0.5958	0.4110	0.1872	0.1291	0.1934	0.1381
	630/95	1117	785	848	793	0.0384	0.0390	0.5805	0.3956	0.1824	0.1243	0.1864	0.1303
	800/95	1264	879	954	887	0.0311	0.0318	0.5665	0.3817	0.1780	0.1199	0.1807	0.1241
	800/120	1264	879	954	887	0.0311	0.0318	0.5665	0.3817	0.1780	0.1199	0.1807	0.1241

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE





CABLE STRUCTURE

Conductor : Flexible annealed copper

Insulation : Polyvinyl chloride (PVC)

Insulation color
2 Cores : Blue and Brown
3 Cores : Brown, Black, Grey
4 Cores : Blue, Brown, Black, Grey
More than 4 Cores :
Black with marking numbers, colored white, printed continuously throungout the whole length of insulated wires for the porpose of core identification.

Filler : Non-hygroscopic material

Binder tape and Separator tape : Non-hygroscopic tape

Shield (for CVV-S cable) : Copper tape

Sheath : Black polyvinyl chloride (PVC)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage no exceeding 600 Volts

AC Testing voltage : 2,000 Volts

Reference standard : THAI YAZAKI STANDARD

B

APPLICATION

For supervisory electrical equipment, station control circuits, outdoor, suitable installation in the dry or wet cable trenches.

Number of core	Nominal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length (m)
2	0.5	Flexible	0.6	0.9	7.5	39.0	0.0130	49	300/D
	0.75	Flexible	0.6	1.2	8.5	26.0	0.0114	65	300/D
	1	Flexible	0.6	1.2	8.7	19.5	0.0104	75	300/D
	1.5	Flexible	0.6	1.2	9.3	13.3	0.0089	90	300/D
	2.5	Flexible	0.7	1.2	10.5	7.98	0.0081	130	300/D
	4	Flexible	0.8	1.2	12.0	4.95	0.0076	170	300/D
	6	Flexible	0.8	1.4	14.0	3.30	0.0061	250	300/D
3	0.5	Flexible	0.6	1.2	8.5	39.0	0.0130	65	300/D
	0.75	Flexible	0.6	1.2	8.9	26.0	0.0114	80	300/D
	1	Flexible	0.6	1.2	9.1	19.5	0.0104	90	300/D
	1.5	Flexible	0.6	1.2	9.8	13.3	0.0089	110	300/D
	2.5	Flexible	0.7	1.2	11.0	7.98	0.0081	160	300/D
	4	Flexible	0.8	1.2	13.0	4.95	0.0076	230	300/D
	6	Flexible	0.8	1.4	15.0	3.30	0.0061	330	300/D
4	0.5	Flexible	0.6	1.2	9.1	39.0	0.0130	80	300/D
	0.75	Flexible	0.6	1.2	9.6	26.0	0.0114	95	300/D
	1	Flexible	0.6	1.2	9.8	19.5	0.0104	110	300/D
	1.5	Flexible	0.6	1.2	10.5	13.3	0.0089	140	300/D
	2.5	Flexible	0.7	1.2	12.0	7.98	0.0081	200	300/D
	4	Flexible	0.8	1.4	14.5	4.95	0.0076	300	300/D
	6	Flexible	0.8	1.4	16.5	3.30	0.0061	410	300/D
5	0.5	Flexible	0.6	1.2	9.8	39.0	0.0130	90	300/D
	0.75	Flexible	0.6	1.2	10.0	26.0	0.0114	110	300/D
	1	Flexible	0.6	1.2	10.5	19.5	0.0104	130	300/D
	1.5	Flexible	0.6	1.2	11.5	13.3	0.0089	160	300/D
	2.5	Flexible	0.7	1.4	13.5	7.98	0.0081	250	300/D
	4	Flexible	0.8	1.4	15.5	4.95	0.0076	350	300/D
	6	Flexible	0.8	1.4	18.0	3.30	0.0061	500	300/D

D = Packing in drum

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

Number of core	Norminal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length (m)
6	0.5	Flexible	0.6	1.2	10.5	39.0	0.0130	110	300/D
	0.75	Flexible	0.6	1.2	11.0	26.0	0.0114	130	300/D
	1	Flexible	0.6	1.2	11.5	19.5	0.0104	150	300/D
	1.5	Flexible	0.6	1.2	12.0	13.3	0.0089	190	300/D
	2.5	Flexible	0.7	1.4	14.5	7.98	0.0081	290	300/D
	4	Flexible	0.8	1.4	17.0	4.95	0.0076	420	300/D
	6	Flexible	0.8	1.4	19.5	3.30	0.0061	600	300/D
7	0.5	Flexible	0.6	1.2	10.5	39.0	0.0130	110	300/D
	0.75	Flexible	0.6	1.2	11.0	26.0	0.0114	140	300/D
	1	Flexible	0.6	1.2	11.5	19.5	0.0104	160	300/D
	1.5	Flexible	0.6	1.2	12.0	13.3	0.0089	210	300/D
	2.5	Flexible	0.7	1.4	14.5	7.98	0.0081	320	300/D
	4	Flexible	0.8	1.4	17.0	4.95	0.0076	460	300/D
	6	Flexible	0.8	1.4	19.5	3.30	0.0061	650	300/D
8	0.5	Flexible	0.6	1.2	11.0	39.0	0.0130	130	300/D
	0.75	Flexible	0.6	1.2	11.5	26.0	0.0114	160	300/D
	1	Flexible	0.6	1.2	12.0	19.5	0.0104	180	300/D
	1.5	Flexible	0.6	1.4	13.5	13.3	0.0089	240	300/D
	2.5	Flexible	0.7	1.4	16.0	7.98	0.0081	360	300/D
	4	Flexible	0.8	1.4	18.5	4.95	0.0076	550	300/D
	6	Flexible	0.8	1.4	21.0	3.30	0.0061	750	300/D
9	0.5	Flexible	0.6	1.2	12.0	39.0	0.0130	150	300/D
	0.75	Flexible	0.6	1.2	12.5	26.0	0.0114	180	300/D
	1	Flexible	0.6	1.2	13.5	19.5	0.0104	220	300/D
	1.5	Flexible	0.6	1.2	14.5	13.3	0.0089	270	300/D
	2.5	Flexible	0.7	1.4	17.0	7.98	0.0081	410	300/D
	4	Flexible	0.8	1.4	20.0	4.95	0.0076	600	300/D
	6	Flexible	0.8	1.4	23.0	3.30	0.0061	850	300/D
10	0.5	Flexible	0.6	1.2	12.5	39.0	0.0130	150	300/D
	0.75	Flexible	0.6	1.4	14.0	26.0	0.0114	210	300/D
	1	Flexible	0.6	1.4	14.5	19.5	0.0104	240	300/D
	1.5	Flexible	0.6	1.4	15.5	13.3	0.0089	310	300/D
	2.5	Flexible	0.7	1.4	18.0	7.98	0.0081	460	300/D
	4	Flexible	0.8	1.4	21.0	4.95	0.0076	650	300/D
	6	Flexible	0.8	1.8	25.0	3.30	0.0061	1,000	300/D
11	0.5	Flexible	0.6	1.2	12.5	39.0	0.0130	170	300/D
	0.75	Flexible	0.6	1.4	14.0	26.0	0.0114	210	300/D
	1	Flexible	0.6	1.4	14.5	19.5	0.0104	250	300/D
	1.5	Flexible	0.6	1.4	15.5	13.3	0.0089	320	300/D
	2.5	Flexible	0.7	1.4	18.0	7.98	0.0081	480	300/D
	4	Flexible	0.8	1.4	21.0	4.95	0.0076	700	300/D
	6	Flexible	0.8	1.8	25.0	3.30	0.0061	1,100	300/D
12	0.5	Flexible	0.6	1.2	13.0	39.0	0.0130	180	300/D
	0.75	Flexible	0.6	1.4	14.5	26.0	0.0114	220	300/D
	1	Flexible	0.6	1.4	15.0	19.5	0.0104	280	300/D
	1.5	Flexible	0.6	1.4	16.0	13.3	0.0089	350	300/D
	2.5	Flexible	0.7	1.4	19.0	7.98	0.0081	550	300/D
	4	Flexible	0.8	1.4	22.0	4.95	0.0076	750	300/D
	6	Flexible	0.8	1.8	26.0	3.30	0.0061	1,200	300/D
13	0.5	Flexible	0.6	1.4	14.0	39.0	0.0130	200	300/D
	0.75	Flexible	0.6	1.4	15.0	26.0	0.0114	250	300/D
	1	Flexible	0.6	1.4	15.5	19.5	0.0104	290	300/D
	1.5	Flexible	0.6	1.4	17.0	13.3	0.0089	370	300/D
	2.5	Flexible	0.7	1.4	20.0	7.98	0.0081	550	300/D
	4	Flexible	0.8	1.4	23.0	4.95	0.0076	850	300/D
	6	Flexible	0.8	1.8	28.0	3.30	0.0061	1,200	300/D
14	0.5	Flexible	0.6	1.4	14.0	39.0	0.0130	210	300/D
	0.75	Flexible	0.6	1.4	15.0	26.0	0.0114	250	300/D
	1	Flexible	0.6	1.4	15.5	19.5	0.0104	300	300/D
	1.5	Flexible	0.6	1.4	17.0	13.3	0.0089	390	300/D
	2.5	Flexible	0.7	1.4	20.0	7.98	0.0081	600	300/D
	4	Flexible	0.8	1.4	23.0	4.95	0.0076	850	300/D
	6	Flexible	0.8	1.8	28.0	3.30	0.0061	1,300	300/D

Remark : Thermal resistivity of soil 1.2 K.m./W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m
Shield bonded at single point

B

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

Number of core	Norminal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length (m)
	0.5	Flexible	0.6	1.4	14.5	39.0	0.0130	220	300/D
	0.75	Flexible	0.6	1.4	15.5	26.0	0.0114	270	300/D
	1	Flexible	0.6	1.4	16.0	19.5	0.0104	320	300/D
15	1.5	Flexible	0.6	1.4	17.5	13.3	0.0089	420	300/D
	2.5	Flexible	0.7	1.4	21.0	7.98	0.0081	650	300/D
	4	Flexible	0.8	1.8	25.0	4.95	0.0076	950	300/D
	6	Flexible	0.8	1.8	29.0	3.30	0.0061	1,400	300/D
	0.5	Flexible	0.6	1.4	15.0	39.0	0.0130	230	300/D
	0.75	Flexible	0.6	1.4	15.5	26.0	0.0114	280	300/D
	1	Flexible	0.6	1.4	16.0	19.5	0.0104	340	300/D
16	1.5	Flexible	0.6	1.4	17.5	13.3	0.0089	430	300/D
	2.5	Flexible	0.7	1.4	21.0	7.98	0.0081	650	300/D
	4	Flexible	0.8	1.8	25.0	4.95	0.0076	1,000	300/D
	6	Flexible	0.8	1.8	29.0	3.30	0.0061	1,400	300/D
	0.5	Flexible	0.6	1.4	15.5	39.0	0.0130	240	300/D
	0.75	Flexible	0.6	1.4	16.5	26.0	0.0114	310	300/D
	1	Flexible	0.6	1.4	17.0	19.5	0.0104	370	300/D
17	1.5	Flexible	0.6	1.4	18.5	13.3	0.0089	470	300/D
	2.5	Flexible	0.7	1.4	22.0	7.98	0.0081	700	300/D
	4	Flexible	0.8	1.8	27.0	4.95	0.0076	1,100	300/D
	6	Flexible	0.8	1.8	31.0	3.30	0.0061	1,600	300/D
	0.5	Flexible	0.6	1.4	15.5	39.0	0.0130	250	300/D
	0.75	Flexible	0.6	1.4	16.5	26.0	0.0114	310	300/D
	1	Flexible	0.6	1.4	17.0	19.5	0.0104	370	300/D
18	1.5	Flexible	0.6	1.4	18.5	13.3	0.0089	470	300/D
	2.5	Flexible	0.7	1.4	22.0	7.98	0.0081	700	300/D
	4	Flexible	0.8	1.8	27.0	4.95	0.0076	1,100	300/D
	6	Flexible	0.8	1.8	31.0	3.30	0.0061	1,600	300/D
	0.5	Flexible	0.6	1.4	15.5	39.0	0.0130	260	300/D
	0.75	Flexible	0.6	1.4	16.5	26.0	0.0114	320	300/D
	1	Flexible	0.6	1.4	17.0	19.5	0.0104	380	300/D
19	1.5	Flexible	0.6	1.4	18.5	13.3	0.0089	490	300/D
	2.5	Flexible	0.7	1.4	22.0	7.98	0.0081	750	300/D
	4	Flexible	0.8	1.8	27.0	4.95	0.0076	1,100	300/D
	6	Flexible	0.8	1.8	31.0	3.30	0.0061	1,600	300/D
	0.5	Flexible	0.6	1.4	16.0	39.0	0.0130	270	300/D
	0.75	Flexible	0.6	1.4	17.0	26.0	0.0114	330	300/D
	1	Flexible	0.6	1.4	17.5	19.5	0.0104	400	300/D
20	1.5	Flexible	0.6	1.4	19.0	13.3	0.0089	500	300/D
	2.5	Flexible	0.7	1.4	23.0	7.98	0.0081	800	300/D
	4	Flexible	0.8	1.8	28.0	4.95	0.0076	1,200	300/D
	6	Flexible	0.8	1.8	32.0	3.30	0.0061	1,700	300/D
	0.5	Flexible	0.6	1.4	16.5	39.0	0.0130	280	300/D
	0.75	Flexible	0.6	1.4	17.5	26.0	0.0114	350	300/D
	1	Flexible	0.6	1.4	18.0	19.5	0.0104	420	300/D
21	1.5	Flexible	0.6	1.4	19.5	13.3	0.0089	550	300/D
	2.5	Flexible	0.7	1.4	23.0	7.98	0.0081	800	300/D
	4	Flexible	0.8	1.8	28.0	4.95	0.0076	1,300	300/D
	6	Flexible	0.8	1.8	32.0	3.30	0.0061	1,800	300/D
	0.5	Flexible	0.6	1.4	17.0	39.0	0.0130	300	300/D
	0.75	Flexible	0.6	1.4	18.0	26.0	0.0114	370	300/D
	1	Flexible	0.6	1.4	18.5	19.5	0.0104	450	300/D
22	1.5	Flexible	0.6	1.4	20.0	13.3	0.0089	550	300/D
	2.5	Flexible	0.7	1.8	25.0	7.98	0.0081	900	300/D
	4	Flexible	0.8	1.8	30.0	4.95	0.0076	1,300	300/D
	6	Flexible	0.8	1.8	34.0	3.30	0.0061	1,900	300/D
	0.5	Flexible	0.6	1.4	17.0	39.0	0.0130	310	300/D
	0.75	Flexible	0.6	1.4	18.0	26.0	0.0114	380	300/D
	1	Flexible	0.6	1.4	18.5	19.5	0.0104	460	300/D
23	1.5	Flexible	0.6	1.4	20.0	13.3	0.0089	600	300/D
	2.5	Flexible	0.7	1.8	25.0	7.98	0.0081	950	300/D
	4	Flexible	0.8	1.8	30.0	4.95	0.0076	1,400	300/D
	6	Flexible	0.8	1.8	34.0	3.30	0.0061	2,000	300/D

D = Packing in drum

B

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

Number of core	Norminal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length (m)
	0.5	Flexible	0.6	1.4	18.0	39.0	0.0130	320	300/D
	0.75	Flexible	0.6	1.4	19.0	26.0	0.0114	400	300/D
	1	Flexible	0.6	1.4	19.5	19.5	0.0104	500	300/D
24	1.5	Flexible	0.6	1.4	21.0	13.3	0.0089	600	300/D
	2.5	Flexible	0.7	1.8	26.0	7.98	0.0081	1,000	300/D
	4	Flexible	0.8	1.8	31.0	4.95	0.0076	1,400	300/D
	6	Flexible	0.8	2.2	37.0	3.30	0.0061	2,100	300/D
	0.5	Flexible	0.6	1.4	18.0	39.0	0.0130	330	300/D
	0.75	Flexible	0.6	1.4	19.0	26.0	0.0114	410	300/D
	1	Flexible	0.6	1.4	19.5	19.5	0.0104	490	300/D
25	1.5	Flexible	0.6	1.4	21.0	13.3	0.0089	650	300/D
	2.5	Flexible	0.7	1.8	26.0	7.98	0.0081	1,000	300/D
	4	Flexible	0.8	1.8	31.0	4.95	0.0076	1,500	300/D
	6	Flexible	0.8	2.2	37.0	3.30	0.0061	2,200	300/D
	0.5	Flexible	0.6	1.4	18.0	39.0	0.0130	340	300/D
	0.75	Flexible	0.6	1.4	19.0	26.0	0.0114	420	300/D
	1	Flexible	0.6	1.4	19.5	19.5	0.0104	500	300/D
26	1.5	Flexible	0.6	1.4	21.0	13.3	0.0089	650	300/D
	2.5	Flexible	0.7	1.8	26.0	7.98	0.0081	1,000	300/D
	4	Flexible	0.8	1.8	31.0	4.95	0.0076	1,500	300/D
	6	Flexible	0.8	2.2	37.0	3.30	0.0061	2,300	300/D
	0.5	Flexible	0.6	1.4	18.5	39.0	0.0130	340	300/D
	0.75	Flexible	0.6	1.4	19.5	26.0	0.0114	430	300/D
	1	Flexible	0.6	1.4	20.0	19.5	0.0104	500	300/D
27	1.5	Flexible	0.6	1.4	22.0	13.3	0.0089	650	300/D
	2.5	Flexible	0.7	1.8	27.0	7.98	0.0081	1,100	300/D
	4	Flexible	0.8	1.8	32.0	4.95	0.0076	1,600	300/D
	6	Flexible	0.8	2.2	38.0	3.30	0.0061	2,400	300/D
	0.5	Flexible	0.6	1.4	19.0	39.0	0.0130	370	300/D
	0.75	Flexible	0.6	1.4	20.0	26.0	0.0114	460	300/D
	1	Flexible	0.6	1.4	21.0	19.5	0.0104	550	300/D
28	1.5	Flexible	0.6	1.4	23.0	13.3	0.0089	700	300/D
	2.5	Flexible	0.7	1.8	28.0	7.98	0.0081	1,100	300/D
	4	Flexible	0.8	1.8	33.0	4.95	0.0076	1,700	300/D
	6	Flexible	0.8	2.2	39.0	3.30	0.0061	2,500	300/D
	0.5	Flexible	0.6	1.4	19.0	39.0	0.0130	370	300/D
	0.75	Flexible	0.6	1.4	20.0	26.0	0.0114	460	300/D
	1	Flexible	0.6	1.4	21.0	19.5	0.0104	550	300/D
29	1.5	Flexible	0.6	1.4	23.0	13.3	0.0089	700	300/D
	2.5	Flexible	0.7	1.8	28.0	7.98	0.0081	1,100	300/D
	4	Flexible	0.8	1.8	33.0	4.95	0.0076	1,700	300/D
	6	Flexible	0.8	2.2	39.0	3.30	0.0061	2,500	300/D
	0.5	Flexible	0.6	1.4	19.0	39.0	0.0130	370	300/D
	0.75	Flexible	0.6	1.4	20.0	26.0	0.0114	470	300/D
	1	Flexible	0.6	1.4	21.0	19.5	0.0104	550	300/D
30	1.5	Flexible	0.6	1.4	23.0	13.3	0.0089	750	300/D
	2.5	Flexible	0.7	1.8	28.0	7.98	0.0081	1,200	300/D
	4	Flexible	0.8	1.8	33.0	4.95	0.0076	1,700	300/D
	6	Flexible	0.8	2.2	39.0	3.30	0.0061	2,600	300/D
	0.5	Flexible	0.6	1.4	19.5	39.0	0.0130	400	300/D
	0.75	Flexible	0.6	1.4	21.0	26.0	0.0114	500	300/D
	1	Flexible	0.6	1.4	22.0	19.5	0.0104	600	300/D
31	1.5	Flexible	0.6	1.8	24.0	13.3	0.0089	850	300/D
	2.5	Flexible	0.7	1.8	29.0	7.98	0.0081	1,300	300/D
	4	Flexible	0.8	1.8	34.0	4.95	0.0076	1,800	300/D
	6	Flexible	0.8	2.2	41.0	3.30	0.0061	2,700	300/D
	0.5	Flexible	0.6	1.4	19.5	39.0	0.0130	400	300/D
	0.75	Flexible	0.6	1.4	21.0	26.0	0.0114	500	300/D
	1	Flexible	0.6	1.4	22.0	19.5	0.0104	600	300/D
32	1.5	Flexible	0.6	1.8	24.0	13.3	0.0089	850	300/D
	2.5	Flexible	0.7	1.8	29.0	7.98	0.0081	1,300	300/D
	4	Flexible	0.8	1.8	34.0	4.95	0.0076	1,900	300/D
	6	Flexible	0.8	2.2	41.0	3.30	0.0061	2,800	300/D

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

Number of cores	Norminal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length (m)
33	0.5	Flexible	0.6	1.4	19.5	39.0	0.0130	400	300/D
	0.75	Flexible	0.6	1.4	21.0	26.0	0.0114	500	300/D
	1	Flexible	0.6	1.4	22.0	19.5	0.0104	600	300/D
	1.5	Flexible	0.6	1.8	24.0	13.3	0.0089	850	300/D
	2.5	Flexible	0.7	1.8	29.0	7.98	0.0081	1,300	300/D
	4	Flexible	0.8	1.8	34.0	4.95	0.0076	1,900	300/D
	6	Flexible	0.8	2.2	41.0	3.30	0.0061	2,800	300/D
34	0.5	Flexible	0.6	1.4	20.0	39.0	0.0130	430	300/D
	0.75	Flexible	0.6	1.4	21.0	26.0	0.0114	550	300/D
	1	Flexible	0.6	1.4	22.0	19.5	0.0104	650	300/D
	1.5	Flexible	0.6	1.8	25.0	13.3	0.0089	900	300/D
	2.5	Flexible	0.7	1.8	30.0	7.98	0.0081	1,400	300/D
	4	Flexible	0.8	2.2	37.0	4.95	0.0076	2,100	300/D
	6	Flexible	0.8	2.2	42.0	3.30	0.0061	3,000	300/D
35	0.5	Flexible	0.6	1.4	20.0	39.0	0.0130	430	300/D
	0.75	Flexible	0.6	1.4	21.0	26.0	0.0114	550	300/D
	1	Flexible	0.6	1.4	22.0	19.5	0.0104	650	300/D
	1.5	Flexible	0.6	1.8	25.0	13.3	0.0089	900	300/D
	2.5	Flexible	0.7	1.8	30.0	7.98	0.0081	1,400	300/D
	4	Flexible	0.8	2.2	37.0	4.95	0.0076	2,100	300/D
	6	Flexible	0.8	2.2	42.0	3.30	0.0061	3,000	300/D
36	0.5	Flexible	0.6	1.4	20.0	39.0	0.0130	440	300/D
	0.75	Flexible	0.6	1.4	21.0	26.0	0.0114	550	300/D
	1	Flexible	0.6	1.4	22.0	19.5	0.0104	650	300/D
	1.5	Flexible	0.6	1.8	25.0	13.3	0.0089	900	300/D
	2.5	Flexible	0.7	1.8	30.0	7.98	0.0081	1,400	300/D
	4	Flexible	0.8	2.2	37.0	4.95	0.0076	2,100	300/D
	6	Flexible	0.8	2.2	42.0	3.30	0.0061	3,100	300/D
37	0.5	Flexible	0.6	1.4	20.0	39.0	0.0130	450	300/D
	0.75	Flexible	0.6	1.4	21.0	26.0	0.0114	550	300/D
	1	Flexible	0.6	1.4	22.0	19.5	0.0104	700	300/D
	1.5	Flexible	0.6	1.8	25.0	13.3	0.0089	950	300/D
	2.5	Flexible	0.7	1.8	30.0	7.98	0.0081	1,400	300/D
	4	Flexible	0.8	2.2	37.0	4.95	0.0076	2,200	300/D
	6	Flexible	0.8	2.2	42.0	3.30	0.0061	3,100	300/D
38	0.5	Flexible	0.6	1.4	21.0	39.0	0.0130	460	300/D
	0.75	Flexible	0.6	1.4	22.0	26.0	0.0114	600	300/D
	1	Flexible	0.6	1.4	23.0	19.5	0.0104	700	300/D
	1.5	Flexible	0.6	1.8	26.0	13.3	0.0089	950	300/D
	2.5	Flexible	0.7	1.8	31.0	7.98	0.0081	1,500	300/D
	4	Flexible	0.8	2.2	38.0	4.95	0.0076	2,200	300/D
	6	Flexible	0.8	2.2	44.0	3.30	0.0061	3,300	300/D
39	0.5	Flexible	0.6	1.4	21.0	39.0	0.0130	470	300/D
	0.75	Flexible	0.6	1.4	22.0	26.0	0.0114	600	300/D
	1	Flexible	0.6	1.4	23.0	19.5	0.0104	700	300/D
	1.5	Flexible	0.6	1.8	26.0	13.3	0.0089	1,000	300/D
	2.5	Flexible	0.7	1.8	31.0	7.98	0.0081	1,500	300/D
	4	Flexible	0.8	2.2	38.0	4.95	0.0076	2,300	300/D
	6	Flexible	0.8	2.2	44.0	3.30	0.0061	3,300	300/D
40	0.5	Flexible	0.6	1.4	21.0	39.0	0.0130	480	300/D
	0.75	Flexible	0.6	1.4	22.0	26.0	0.0114	600	300/D
	1	Flexible	0.6	1.4	23.0	19.5	0.0104	750	300/D
	1.5	Flexible	0.6	1.8	26.0	13.3	0.0089	1,000	300/D
	2.5	Flexible	0.7	1.8	31.0	7.98	0.0081	1,500	300/D
	4	Flexible	0.8	2.2	38.0	4.95	0.0076	2,300	300/D
	6	Flexible	0.8	2.2	44.0	3.30	0.0061	3,400	300/D
41	0.5	Flexible	0.6	1.4	22.0	39.0	0.0130	500	300/D
	0.75	Flexible	0.6	1.4	23.0	26.0	0.0114	650	300/D
	1	Flexible	0.6	1.8	25.0	19.5	0.0104	800	300/D
	1.5	Flexible	0.6	1.8	27.0	13.3	0.0089	1,000	300/D
	2.5	Flexible	0.7	1.8	33.0	7.98	0.0081	1,600	300/D
	4	Flexible	0.8	2.2	40.0	4.95	0.0076	2,400	300/D
	6	Flexible	0.8	2.2	46.0	3.30	0.0061	3,500	300/D

B

D = Packing in drum

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

Number of cores	Norminal cross sectional area (mm^2)	Conductor type	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Cable weight approx. (kg/km)	Standard Length (m)
	0.5	Flexible	0.6	1.4	22.0	39.0	0.0130	500	300/D
	0.75	Flexible	0.6	1.4	23.0	26.0	0.0114	650	300/D
	1	Flexible	0.6	1.8	25.0	19.5	0.0104	800	300/D
42	1.5	Flexible	0.6	1.8	27.0	13.3	0.0089	1,100	300/D
	2.5	Flexible	0.7	1.8	33.0	7.98	0.0081	1,600	300/D
	4	Flexible	0.8	2.2	40.0	4.95	0.0076	2,500	300/D
	6	Flexible	0.8	2.2	46.0	3.30	0.0061	3,600	300/D
	0.5	Flexible	0.6	1.4	22.0	39.0	0.0130	500	300/D
	0.75	Flexible	0.6	1.4	23.0	26.0	0.0114	650	300/D
	1	Flexible	0.6	1.8	25.0	19.5	0.0104	850	300/D
43	1.5	Flexible	0.6	1.8	27.0	13.3	0.0089	1,100	300/D
	2.5	Flexible	0.7	1.8	33.0	7.98	0.0081	1,600	300/D
	4	Flexible	0.8	2.2	40.0	4.95	0.0076	2,500	300/D
	6	Flexible	0.8	2.2	46.0	3.30	0.0061	3,600	300/D
	0.5	Flexible	0.6	1.4	22.0	39.0	0.0130	550	300/D
	0.75	Flexible	0.6	1.4	24.0	26.0	0.0114	650	300/D
	1	Flexible	0.6	1.8	26.0	19.5	0.0104	850	300/D
44	1.5	Flexible	0.6	1.8	28.0	13.3	0.0089	1,100	300/D
	2.5	Flexible	0.7	1.8	34.0	7.98	0.0081	1,700	300/D
	4	Flexible	0.8	2.2	41.0	4.95	0.0076	2,600	300/D
	6	Flexible	0.8	2.6	48.0	3.30	0.0061	3,800	300/D
	0.5	Flexible	0.6	1.4	22.0	39.0	0.0130	550	300/D
	0.75	Flexible	0.6	1.4	24.0	26.0	0.0114	700	300/D
	1	Flexible	0.6	1.8	26.0	19.5	0.0104	850	300/D
45	1.5	Flexible	0.6	1.8	28.0	13.3	0.0089	1,100	300/D
	2.5	Flexible	0.7	1.8	34.0	7.98	0.0081	1,700	300/D
	4	Flexible	0.8	2.2	41.0	4.95	0.0076	2,600	300/D
	6	Flexible	0.8	2.6	48.0	3.30	0.0061	3,900	300/D
	0.5	Flexible	0.6	1.4	22.0	39.0	0.0130	550	300/D
	0.75	Flexible	0.6	1.4	24.0	26.0	0.0114	700	300/D
	1	Flexible	0.6	1.8	26.0	19.5	0.0104	900	300/D
46	1.5	Flexible	0.6	1.8	28.0	13.3	0.0089	1,100	300/D
	2.5	Flexible	0.7	1.8	34.0	7.98	0.0081	1,800	300/D
	4	Flexible	0.8	2.2	41.0	4.95	0.0076	2,700	300/D
	6	Flexible	0.8	2.6	48.0	3.30	0.0061	4,000	300/D
	0.5	Flexible	0.6	1.4	22.0	39.0	0.0130	550	300/D
	0.75	Flexible	0.6	1.4	24.0	26.0	0.0114	700	300/D
	1	Flexible	0.6	1.8	26.0	19.5	0.0104	900	300/D
47	1.5	Flexible	0.6	1.8	28.0	13.3	0.0089	1,200	300/D
	2.5	Flexible	0.7	1.8	34.0	7.98	0.0081	1,800	300/D
	4	Flexible	0.8	2.2	41.0	4.95	0.0076	2,700	300/D
	6	Flexible	0.8	2.6	48.0	3.30	0.0061	4,000	300/D
	0.5	Flexible	0.6	1.4	23.0	39.0	0.0130	550	300/D
	0.75	Flexible	0.6	1.8	25.0	26.0	0.0114	750	300/D
	1	Flexible	0.6	1.8	26.0	19.5	0.0104	900	300/D
48	1.5	Flexible	0.6	1.8	29.0	13.3	0.0089	1,200	300/D
	2.5	Flexible	0.7	1.8	34.0	7.98	0.0081	1,800	300/D
	4	Flexible	0.8	2.2	42.0	4.95	0.0076	2,800	300/D
	6	Flexible	0.8	2.6	49.0	3.30	0.0061	4,100	300/D

D = Packing in drum

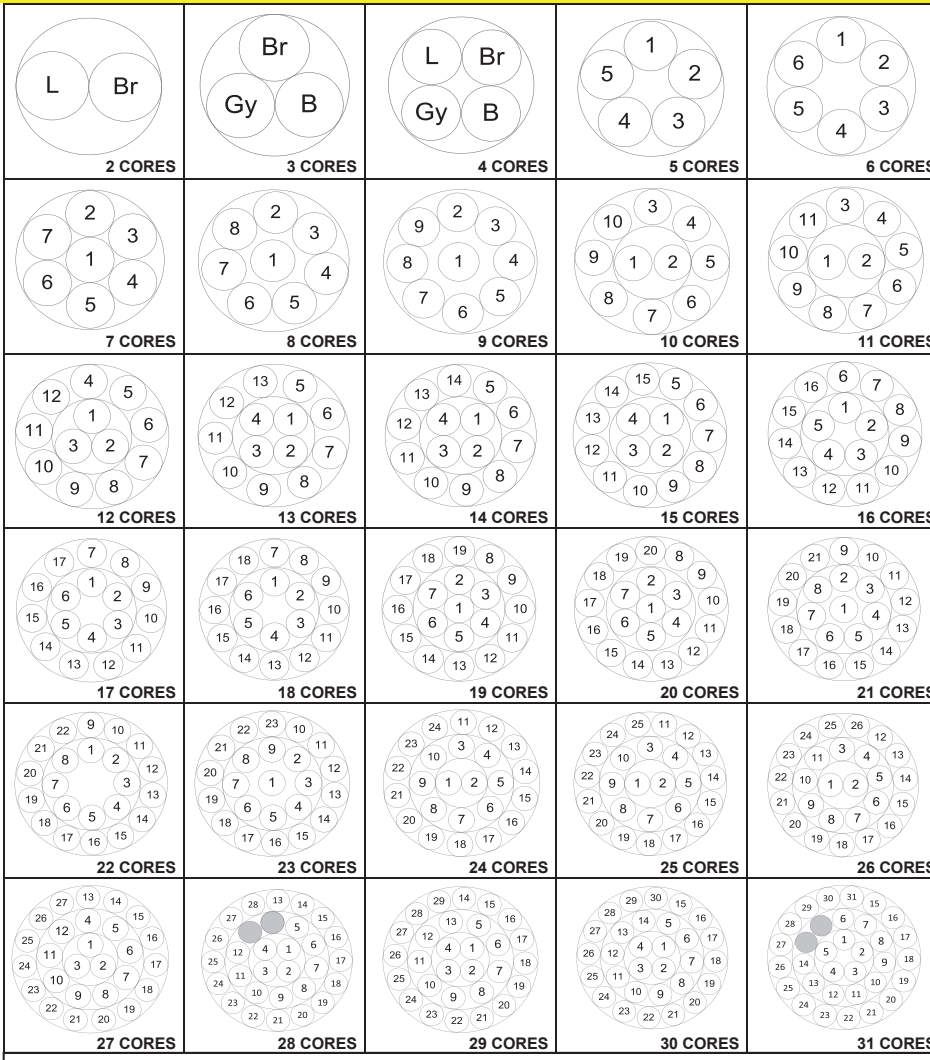
This table show only flexible stranded condutor. If you want to have solid or concentric conductor type, please contact with our sales department for CW-S: The overall diameter of cable and cable weight shall be change a little bit more.
"Remark : Special protection can be produce.

B

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

ARRANGEMENT OF CORES FOR CW or CW-S



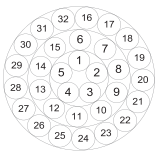
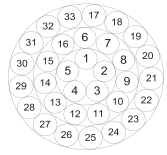
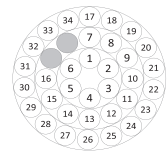
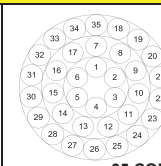
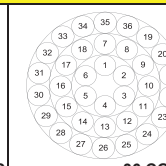
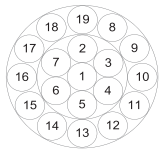
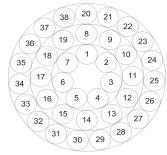
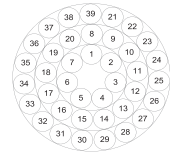
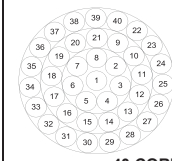
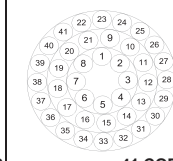
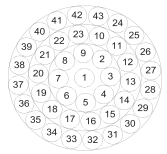
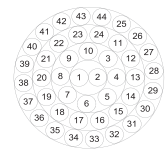
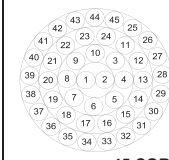
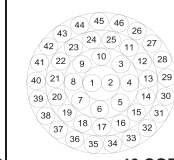
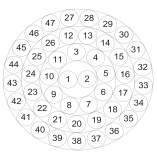
NOTE : Fillers are necessary to fill the cable a substantially circular cross section.
(If the stranded cores be circle enough, fillers shall not be necessary)

B

CVV or CVV-S

600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH CONTROL CABLE
600 V 70°C FLEXIBLE CONDUCTOR PVC INSULATED AND SHEATH WITH SHIELD CONTROL CABLE

ARRANGEMENT OF CORES FOR CW or CW-S

 32 CORES	 33 CORES	 34 CORES	 35 CORES	 36 CORES
 37 CORES	 38 CORES	 39 CORES	 40 CORES	 41 CORES
 42 CORES	 43 CORES	 44 CORES	 45 CORES	 46 CORES
 47 CORES	 48 CORES			

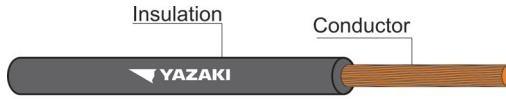
NOTE : Fillers are necessary to fill the cable a substantially circular cross section.
(If the stranded cores be circle enough, fillers shall not be necessary)

B

T-AV

60°C LOW VOLTAGE FLEXIBLE CONDUCTOR PVC INSULATED FOR AUTOMOBILE

TIS 118-2522



CABLE STRUCTURE

Conductor : Flexible annealed copper wire

Insulation : Polyvinyl chloride (PVC)

Insulation color : Black

TECHNICAL DATA

Classification : Maximum conductor temperature 60°C

AC Testing voltage : 1,000 Volts

Reference standard : TIS 118-2522

Remark :
Nowadays the wires are produced according to two kinds of Standard. But such the Ministerial Regulations shall come into force upon their publication in Government Gazette, the production must be in the way of THAI INDUSTRIAL STANDARD.

APPLICATION

For Automobile

B

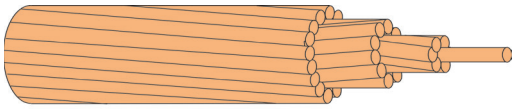
Nominal cross sectional area (mm^2)	Number and diameter of wires (No./mm)	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Continuous current rating in free airat 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
0.5	16/0.20	0.95	0.6	2.2	37.1	11	9	100/C
0.5	7/0.30	0.95	0.6	2.2	37.1	11	9	100/C
0.75	24/0.20	1.15	0.6	2.4	24.7	14	11	100/C
0.85	12/0.30	1.20	0.6	2.4	22.0	15	12	100/C
1	32/0.20	1.30	0.6	2.6	18.5	16	14	100/C
1.25	40/0.20	1.50	0.6	2.7	14.8	19	17	100/C
1.25	18/0.30	1.50	0.6	2.7	14.7	19	17	100/C
1.5	30/0.25	1.60	0.6	2.8	12.7	20	19	100/C
2	28/0.30	1.90	0.6	3.1	9.42	25	24	100/C
2.5	50/0.25	2.10	0.7	3.5	7.60	28	30	100/C
3	44/0.30	2.30	0.7	3.7	6.00	32	37	100/C
4	56/0.30	2.60	0.8	4.2	4.71	38	47	100/C
5	70/0.30	3.0	0.8	4.6	3.77	44	57	100/C
6	84/0.30	3.2	0.9	5.0	3.14	49	69	100/C
8	63/0.40	3.7	0.9	5.5	2.31	59	88	100/C
10	84/0.40	4.2	1.1	6.4	1.82	69	114	100/C
16	126/0.40	5.8	1.1	8.0	1.16	95	173	100/C
25	196/0.60	7.0	1.4	9.8	0.770	123	261	100/C
35	280/0.40	8.5	1.4	11.3	0.524	158	366	100/C
50	399/0.40	10.9	1.6	14.1	0.357	207	537	500/D
70	361/0.50	12.6	2.0	16.6	0.268	250	727	500/D
95	475/0.50	14.1	2.0	18.1	0.193	305	971	500/D

C : Packing in Coil
D : Packing in Drum

FHC

HARD DRAWN COPPER STRANDED CONDUCTOR

TIS 64-2517



CABLE STRUCTURE

Conductor : Hard drawn copper wires, concentric stranded conductor

TECHNICAL DATA

Reference standard : TIS 64-2517

APPLICATION

For grounding wire

Nominal cross sectional area (mm²)	Number and diameter of wires (No./mm)	Conductor diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Breaking strength (kgf)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
10	7/1.35	4.05	1.80548	438	90	90	100/C
16	7/1.70	5.10	1.13857	694	125	140	100/C
25	7/2.14	6.42	0.71851	1,076	160	230	100/C
35	7/2.52	7.56	0.51815	1,459	200	320	100/C
50	7/3.02	9.06	0.35896	2,095	250	450	100/C
50	19/1.78	8.90	0.38252	2,021	250	430	100/C
70	19/2.14	10.70	0.26466	2,921	310	600	500/D
95	19/2.52	12.60	0.19183	3,961	380	850	500/D
120	19/2.85	14.25	0.14922	5,067	440	1100	500/D
150	37/2.25	15.75	0.12384	6,289	510	1300	500/D
185	37/2.52	17.64	0.09813	7,713	585	1700	500/D
240	61/2.25	20.25	0.07528	10,369	700	2200	500/D
300	61/2.52	22.68	0.06002	12,717	800	2800	500/D
400	61/2.85	25.65	0.04692	16,266	900	3600	500/D
500	61/3.20	28.80	0.03703	20,506	1110	4500	500/D

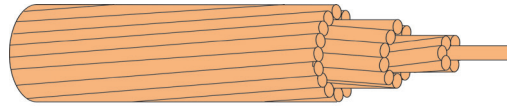
C: Packing in Coil
D: Packing in Drum

B

FAC

ANNEALED COPPER STRANDED CONDUCTOR

IEC 60228



CABLE STRUCTURE

Conductor : Annealed copper wires, concentric stranded conductor

TECHNICAL DATA

Reference standard : IEC 60228 (Same as TIS 2427-2552)

B

APPLICATION

Conductor for insulated cables and wires, grounded electrical system.

Nominal cross sectional area (mm^2)	Number and diameter of wires (No./mm)	Conductor diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Cable weight approx. (kg/km)	Standard Length (m)
1	7/0.43	1.29	18.1	9	2000/D
1.5	7/0.53	1.59	12.1	14	2000/D
2.5	7/0.67	2.01	7.41	22	2000/D
4	7/0.85	2.55	4.61	36	2000/D
6	7/1.04	3.12	3.08	55	2000/D
10	7/1.33	4.05	1.83	90	2000/D
16	7/1.70	5.10	1.15	140	2000/D
25	7/2.14	6.42	0.727	230	2000/D
35	19/1.53	7.65	0.524	320	2000/D
50	19/1.75	8.90	0.387	430	2000/D
70	19/2.14	10.70	0.268	600	2000/D
95	19/2.52	12.60	0.193	850	2000/D
120	37/2.03	14.21	0.153	1100	1000/D
150	37/2.25	15.75	0.124	1300	1000/D
185	37/2.52	17.64	0.0991	1700	1000/D
240	61/2.25	20.25	0.0754	2200	500/D
300	61/2.52	22.68	0.0601	2800	500/D
400	61/2.85	25.65	0.0470	3500	500/D
500	61/3.20	28.80	0.0366	4500	500/D
630	127/2.52	32.76	0.0283	6000	500/D
800	127/2.85	37.05	0.0221	7500	500/D
1000	127/3.20	41.6	0.0176	9500	300/D

D : Packing in Drum

Aluminium Conductor Cables

Building Wires and Cables

THWA	750 V 70°C ALUMINIUM CONDUCTOR PVC INSULATED, SINGLE CORE (TIS 293-2541)	C1
THWA-C	750 V 70°C COMPACTED ALUMINIUM CONDUCTOR PVC INSULATED, SINGLE CORE (TIS 293-2541)	C2

Low Voltage Power Cables

FD-0.6/1KV-AL-CV	0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE	C3
FD-0.6/1KV-AL-CV-AWA	0.6/1 kV 90°C ALUMINIUM CODUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH ALUMINIUM WIRE ARMORED FLAME RETARDANT POWER CABLE	C8
FD-0.6/1KV-AL-CV-SWA	0.6/1 kV 90°C ALUMINIUM CODUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE	C9
FD-0.6/1KV-AL-CV-STA	0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED STEEL TAPE ARMOUR FLAME RETARDANT POWER CABLE	C12

High Voltage Power Cables

Bare Conductor

THWA

750V 70°C ALUMINIUM CONDUCTOR PVC INSULATED, SINGLE CORE

TIS 293-2541

CABLE STRUCTURE

Conductor : Solid and Stranded hard drawn aluminium wires

Insulation : Black polyvinyl chloride (PVC)

TECHNICAL DATA

Classification : Maximum conductor temperature 70 °C
: Circuit voltage not exceeding 750 Volts

AC Testing voltage : 2,500 Volts
Reference standard : TIS 293-2541, Table 1

APPLICATION

For low voltage overhead distribution line

Nominal cross sectional area (mm²)	Number and diameter of wires (No.\mm)	Insulation thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
10	1/3.49	1.1	6.0	3.08	0.0078	1,562	52	50	100/C
10	7/1.32	1.1	6.5	3.08	0.0070	1,769	52	55	100/C
16	1/4.43	1.1	7.0	1.91	0.0064	2,445	70	70	100/C
16	7/1.68	1.1	7.6	1.91	0.0058	2,781	70	80	100/C
25	7/2.12	1.3	9.3	1.20	0.0055	4,241	95	120	100/C
35	7/2.49	1.3	10.5	0.868	0.0048	5,703	117	160	100/C
50	7/2.90	1.5	12.0	0.641	0.0047	7,423	143	210	100/C
50	19/1.76	1.5	12.5	0.641	0.0047	8,114	143	210	100/C
70	19/2.12	1.5	14.0	0.443	0.0040	11,487	185	280	100/C
95	19/2.49	1.7	16.5	0.320	0.0038	15,470	226	390	100/C
120	19/2.80	1.7	18.0	0.253	0.0035	18,810	264	470	500/D
120	37/2.01	1.7	18.0	0.253	0.0034	20,114	264	470	500/D
150	37/2.23	1.9	20.0	0.206	0.0035	24,704	302	600	500/D
185	37/2.50	2.1	22.0	0.164	0.0034	30,187	352	700	500/D
240	61/2.23	2.3	25.0	0.125	0.0033	38,568	421	900	500/D
300	61/2.49	2.5	28.0	0.100	0.0032	46,901	487	1,100	500/D
400	61/2.82	2.7	32.0	0.0778	0.0031	57,948	574	1,400	500/D
500	61/3.20	3.1	36.0	0.0605	0.0031	73,194	675	1,900	500/D

C : Packing in coil
D : Packing in drum

Nominal cross sectional area (mm²)	Number and diameter of wires (No.\mm)	A.C. Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
10	1/3.49	3.7006	0.4819	0.1514	3.7037
10	7/1.32	3.7006	0.4868	0.1529	3.7038
16	1/4.43	2.2949	0.4650	0.1461	2.2996
16	7/1.68	2.2949	0.4698	0.1476	2.2996
25	7/2.12	1.4419	0.4637	0.1457	1.4492
35	7/2.49	1.0430	0.4539	0.1426	1.0527
50	7/2.90	0.7703	0.4553	0.1430	0.7835
50	19/1.76	0.7703	0.4459	0.1401	0.7829
70	19/2.12	0.5325	0.4359	0.1370	0.5498
95	19/2.49	0.3847	0.4340	0.1363	0.4082
120	19/2.80	0.3043	0.4280	0.1345	0.3327
120	37/2.01	0.3043	0.4255	0.1337	0.3324
150	37/2.23	0.2479	0.4258	0.1338	0.2817
185	37/2.50	0.1976	0.4248	0.1334	0.2384
240	61/2.23	0.1509	0.4150	0.1304	0.1994
300	61/2.49	0.1210	0.4201	0.1320	0.1791
400	61/2.82	0.0946	0.4175	0.1311	0.1617
500	61/3.20	0.0741	0.4184	0.1314	0.1509

C

THWA-C

750V 70°C COMPACTED ALUMINIUM CONDUCTOR PVC INSULATED, SINGLE CORE

TIS 293-2541

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium wires

Insulation : Black Polyvinyl chloride (PVC)

TECHNICAL DATA

Classification : Maximum conductor temperature 70°C
: Circuit voltage not exceeding 750 Volts

AC Testing voltage : 2,500 Volts

Reference standard : TIS 293-2541, Table 2

APPLICATION

For low voltage overhead distribution line

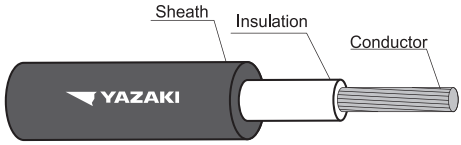
Nominal cross sectional area (mm²)	Actual cross sectional area (mm²)	Minimum number of wires (No.)	Conductor diameter approx. (mm)	Insulation thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 70°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
10	9.64	6	3.72	1.1	6.3	3.08	0.0084	1,768	52	50	100/C
16	15.55	6	4.69	1.1	7.2	1.91	0.0068	2,734	69	75	100/C
25	24.75	6	5.90	1.3	8.8	1.20	0.0064	4,120	93	110	100/C
35	34.21	6	6.95	1.3	9.9	0.868	0.0056	5,591	115	150	100/C
50	46.32	6	8.01	1.5	11.5	0.641	0.0059	7,313	141	200	100/C
70	67.03	12	9.73	1.5	13.5	0.443	0.0050	10,420	178	270	100/C
95	92.79	15	11.40	1.7	15.5	0.320	0.0047	14,098	220	370	100/C
120	117.37	15	12.95	1.7	17.0	0.253	0.0042	18,518	258	450	100/C
150	144.15	15	14.27	1.9	18.5	0.206	0.0042	22,457	294	550	500/D
185	181.06	30	15.98	2.1	21.0	0.164	0.0042	28,974	342	700	500/D
240	237.55	30	18.47	2.3	24.0	0.125	0.0040	37,506	410	900	500/D
300	296.94	30	20.68	2.5	26.0	0.100	0.0038	45,642	475	1,100	500/D
400	381.67	53	23.39	2.7	30.0	0.0778	0.0036	56,992	560	1,400	500/D
500	490.81	53	26.67	3.1	34.0	0.0605	0.0037	72,195	659	1,800	500/D

C : Packing in coil
D : Packing in drum

Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
10	3.7006	0.4930	0.1549	3.7039
16	2.2949	0.4734	0.1487	2.2997
25	1.4419	0.4676	0.1469	1.4493
35	1.0430	0.4584	0.1440	1.0529
50	0.7703	0.4617	0.1451	0.7838
70	0.5325	0.4414	0.1387	0.5502
95	0.3847	0.4377	0.1375	0.4086
120	0.3043	0.4321	0.1358	0.3332
150	0.2479	0.4319	0.1357	0.2826
185	0.1976	0.4290	0.1348	0.2392
240	0.1509	0.4261	0.1339	0.2017
300	0.1210	0.4244	0.1333	0.1801
400	0.0946	0.4206	0.1321	0.1625
500	0.0741	0.4217	0.1325	0.1518

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Natural (Translucent)

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area	Number of wires minimum	Insulation thickness nominal	Sheath thickness nominal	Overall diameter approx.	Conductor resistance at 20°C maximum	Insulation resistance at 20°C minimum	Continuous current rating in free air at 40°C maximum (A)			Continuous current rating in ground at 30°C maximum	Cable weight approx.	Standard length
								Spaced	Touching	Trefoil			
	(mm²)	(No.)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)				(A)	(kg/km)	(m)
1	10	6	0.7	1.4	8.5	308	1,250	72	55	54	64	96	500/D
	16	6	0.7	1.4	9.4	1.91	1,000	95	74	72	82	126	500/D
	25	6	0.9	1.4	11.0	1.20	1,050	128	100	97	107	163	500/D
	35	6	0.9	1.4	12.0	0.868	900	156	122	119	128	196	500/D
	50	6	1.0	1.4	13.5	0.641	850	189	149	145	151	232	500/D
	70	12	1.1	1.4	15.5	0.443	800	240	190	184	185	285	500/D
	95	15	1.1	1.5	17.0	0.320	650	295	236	228	221	342	500/D
	120	15	1.2	1.5	19.0	0.253	650	345	277	268	252	390	500/D
	150	15	1.4	1.6	21	0.206	700	393	317	308	282	436	500/D
	185	30	1.6	1.6	23	0.164	700	458	371	360	321	495	500/D
	240	30	1.7	1.7	26	0.125	650	548	446	432	373	575	500/D
	300	30	1.8	1.8	29	0.100	600	633	518	501	420	649	500/D
	400	53	2.0	1.9	32	0.0778	600	745	612	591	481	743	500/D
	500	53	2.2	2.0	36	0.0605	600	878	724	698	550	850	500/D

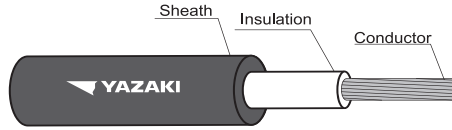
Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

C

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Natural (Translucent)

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

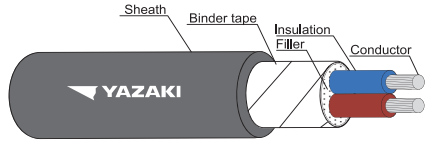
APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area (mm^2)	A.C.Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
1	10	3.9489	3.9489	3.9489	0.5529	0.4143	0.3681	0.1737	0.1302	0.1156	3.9527	3.9510	3.9506
	16	2.4488	2.4489	2.4489	0.5267	0.3881	0.3419	0.1655	0.1219	0.1074	2.4544	2.4519	2.4512
	25	1.5386	1.5386	1.5386	0.5141	0.3755	0.3292	0.1615	0.1180	0.1034	1.5470	1.5431	1.5421
	35	1.1129	1.1130	1.1130	0.5002	0.3616	0.3154	0.1571	0.1136	0.0991	1.1240	1.1188	1.1174
	50	0.8219	0.8220	0.8220	0.4921	0.3535	0.3072	0.1546	0.1110	0.0965	0.8364	0.8295	0.8277
	70	0.5681	0.5682	0.5683	0.4707	0.3321	0.2859	0.1479	0.1043	0.0898	0.5871	0.5777	0.5753
	95	0.4105	0.4106	0.4107	0.4635	0.3248	0.2786	0.1456	0.1020	0.0875	0.4356	0.4231	0.4199
	120	0.3247	0.3248	0.3250	0.4576	0.3190	0.2728	0.1438	0.1002	0.0857	0.3551	0.3399	0.3361
	150	0.2645	0.2647	0.2648	0.4571	0.3185	0.2723	0.1436	0.1001	0.0855	0.3010	0.2830	0.2783
	185	0.2107	0.2110	0.2112	0.4526	0.3139	0.2677	0.1422	0.0986	0.0841	0.2542	0.2329	0.2273
	240	0.1609	0.1612	0.1615	0.4470	0.3083	0.2621	0.1404	0.0969	0.0823	0.2135	0.1881	0.1813
	300	0.1290	0.1294	0.1298	0.4432	0.3046	0.2584	0.1392	0.0957	0.0812	0.1898	0.1610	0.1531
	400	0.1008	0.1013	0.1018	0.4394	0.3008	0.2546	0.1381	0.0945	0.0800	0.1709	0.1386	0.1295
	500	0.0789	0.0796	0.0802	0.4365	0.2979	0.2517	0.1371	0.0936	0.0791	0.1582	0.1229	0.1126

C

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE



IEC 60502-1

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Blue, Brown

Filler : Non-hygroscopic material
Binder tape : Non-hygroscopic tape

Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
2	10	6	0.7	1.8	15.5	3.08	1,250	61	77	220	500/D
	16	6	0.7	1.8	17.0	1.91	1,000	82	100	290	500/D
	25	6	0.9	1.8	21	1.20	1,050	110	130	400	500/D
	35	6	0.9	1.8	23	0.868	900	134	154	500	500/D
	50	6	1.0	1.8	25	0.641	850	164	180	600	500/D
	70	12	1.1	1.8	29	0.443	800	208	220	800	500/D
	95	15	1.1	2.0	33	0.320	650	254	365	1,100	500/D
	120	15	1.2	2.1	37	0.253	650	296	300	1,300	500/D
	150	15	1.4	2.2	40	0.206	700	338	335	1,600	500/D
	185	30	1.6	2.3	45	0.164	700	392	380	1,900	500/D
	240	30	1.7	2.5	51	0.125	650	464	440	2,500	500/D
	300	30	1.8	2.7	56	0.100	600	531	496	3,000	500/D
	400	53	2.0	2.9	63	0.0778	600	619	565	3,800	500/D

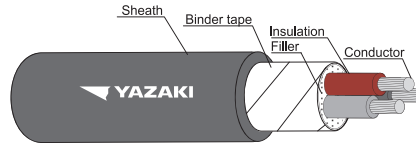
Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5386	0.2637	0.0829	1.5409
	35	1.1130	0.2567	0.0807	1.1159
	50	0.8220	0.2551	0.0801	0.8259
	70	0.5683	0.2409	0.0757	0.5733
	95	0.4107	0.2337	0.0734	0.4172
	120	0.3249	0.2325	0.0731	0.3331
	150	0.2648	0.2337	0.0734	0.2748
	185	0.2111	0.2333	0.0733	0.2235
	240	0.1614	0.2300	0.0723	0.1769
	300	0.1297	0.2278	0.0716	0.1481
	400	0.1016	0.2260	0.0710	0.1240

Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

C

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE



IEC 60502-1

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Brown, Black, Grey

Filler : Non-hygroscopic material
Binder tape : Non-hygroscopic tape
Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
	10	6	0.7	1.8	16.0	3.08	1,250	51	65	260	500/D
	16	6	0.7	1.8	18.0	1.91	1,000	68	84	350	500/D
	25	6	0.9	1.8	22	1.20	1,050	91	110	490	500/D
	35	6	0.9	1.8	24	0.868	900	113	130	650	500/D
	50	6	1.0	1.8	27	0.641	850	136	154	750	500/D
	70	12	1.1	1.9	31	0.443	800	172	188	1100	500/D
3	95	15	1.1	2.0	35	0.320	650	210	225	1400	500/D
	120	15	1.2	2.1	39	0.253	650	248	255	1700	500/D
	150	15	1.4	2.3	43	0.206	700	283	285	2100	500/D
	185	30	1.6	2.4	48	0.164	700	329	325	2600	500/D
	240	30	1.7	2.6	55	0.125	650	389	375	3300	500/D
	300	30	1.8	2.8	60	0.100	600	446	420	4000	500/D
	400	53	2.0	3.1	68	0.078	600	519	480	5000	500/D

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5386	0.2637	0.0829	1.5409
	35	1.1130	0.2567	0.0807	1.1159
	50	0.8220	0.2551	0.0801	0.8259
	70	0.5683	0.2409	0.0757	0.5733
3	95	0.4107	0.2337	0.0734	0.4172
	120	0.3249	0.2325	0.0731	0.3331
	150	0.2648	0.2337	0.0734	0.2748
	185	0.2111	0.2333	0.0733	0.2235
	240	0.1614	0.2300	0.0723	0.1769
	300	0.1297	0.2278	0.0716	0.1481
	400	0.1016	0.2260	0.0710	0.1240

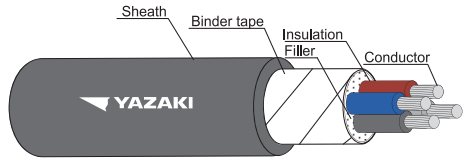
Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

C

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Blue, Brown, Black, Grey

Filler : Non-hygroscopic material

Binder tape : Non-hygroscopic tape
Sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
4	10	6	0.7	1.8	17.5	3.08	1,250	51	65	310	500/D
	16	6	0.7	1.8	20	1.91	1,000	68	84	420	500/D
	25	6	0.9	1.8	24	1.20	1,050	91	110	600	500/D
	35	6	0.9	1.8	27	0.868	900	113	130	750	500/D
	50	6	1.0	1.9	30	0.641	850	136	154	1000	500/D
	70	12	1.1	2.0	35	0.443	800	172	188	1400	500/D
	95	15	1.1	2.1	39	0.320	650	210	225	1700	500/D
	120	15	1.2	2.3	44	0.253	650	248	255	2200	500/D
	150	15	1.4	2.4	48	0.206	700	283	285	2600	500/D
	185	30	1.6	2.6	54	0.164	700	329	325	3300	500/D
	240	30	1.7	2.8	61	0.125	650	389	375	4200	500/D
	300	30	1.8	3.0	67	0.100	600	446	420	5000	500/D
	400	53	2.0	3.3	76	0.0778	600	519	480	6500	300/D

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
4	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5386	0.2637	0.0829	1.5409
	35	1.1130	0.2567	0.0807	1.1159
	50	0.8220	0.2551	0.0801	0.8259
	70	0.5683	0.2409	0.0757	0.5733
	95	0.4107	0.2337	0.0734	0.4172
	120	0.3249	0.2325	0.0731	0.3331
	150	0.2648	0.2337	0.0734	0.2748
	185	0.2111	0.2333	0.0733	0.2235
	240	0.1614	0.2300	0.0723	0.1769
	300	0.1297	0.2278	0.0716	0.1481
	400	0.1016	0.2260	0.0710	0.1240

Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

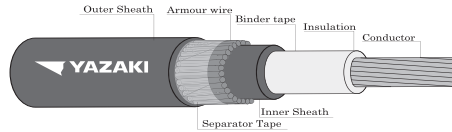
D : Packing in drum

C

YAZAKI

0.6/1 kV 90°C ALUMINIUM CODUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH ALUMINIUM WIRE ARMORED FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Natural (Translucent)

Inner sheath : Black polyvinyl chloride (PVC)

Armor : Aluminium wires

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of core	Nominal cross sectional area	Number of wires minimum	Insulation thickness nominal	Inner sheath thickness approx.	Dia. Of inner sheath approx.	Diameter of steel wire armor nominal	Outer sheath thickness nominal	Overall diameter approx.	Conductor resistance at 20°C maximum	Insulation resistance at 20°C minimum	Continuous current rating in free air at 40°C maximum (A)			Continuous current rating in ground at 30°C maximum	Cable weight approx.	Standard length
											Spaced	Touching	Trefoil			
	(mm²)	(No.)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(Ω/km)	(MΩ-km)				(A)	(kg/km)	(m)
1	10	6	0.7	1.2	8.1	1.25	1.4	14.5	3.08	1,250	80	66	64	96	270	500/D
	16	6	0.7	1.2	9.0	1.25	1.4	15.5	1.91	1,000	105	86	84	125	310	500/D
	25	6	0.9	1.2	10.5	1.25	1.5	17.0	1.20	1,050	139	114	111	161	380	500/D
	35	6	0.9	1.2	11.5	1.25	1.5	18.5	0.868	900	169	139	135	194	440	500/D
	50	6	1.0	1.2	13.0	1.25	1.5	19.5	0.641	850	202	167	162	229	500	500/D
	70	12	1.1	1.2	15.0	1.25	1.6	22	0.443	800	253	209	203	281	600	500/D
	95	15	1.1	1.2	16.5	1.60	1.7	24	0.320	650	312	258	251	339	800	500/D
	120	15	1.2	1.2	18.5	1.60	1.7	26	0.253	650	362	300	291	387	900	500/D
	150	15	1.4	1.2	20	1.60	1.8	27	0.206	700	410	341	331	432	1,000	500/D
	185	30	1.6	1.2	22	2.00	1.9	31	0.164	700	479	400	388	492	1,300	500/D
	240	30	1.7	1.2	25	2.00	1.9	33	0.125	650	569	476	461	573	1,600	500/D
	300	30	1.8	1.2	28	2.00	2.0	36	0.100	600	655	550	532	648	1,900	500/D
	400	53	2.0	1.2	31	2.00	2.2	40	0.0778	600	766	644	624	741	2,300	500/D
	500	53	2.2	1.2	34	2.00	2.3	43	0.0605	600	897	756	731	848	2,800	500/D

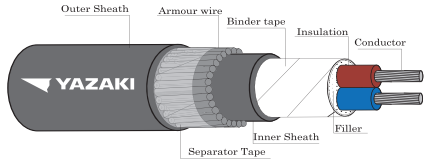
C

Number of core	Nominal cross sectional area	A.C.Resistance R (Ω/km)			Inductance L (mH/km)			Reactance XL (Ω/km)			Impedance Z (Ω/km)		
		Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil	Space	Touching	Trefoil
	(mm²)												
1	10	3.9489	3.9489	3.9489	0.6639	0.5252	0.4790	0.2086	0.1650	0.1505	3.9544	3.9523	3.9518
	16	2.4488	2.4488	2.4489	0.6293	0.4907	0.4445	0.1977	0.1542	0.1396	2.4568	2.4537	2.4528
	25	1.5386	1.5386	1.5386	0.6040	0.4654	0.4191	0.1897	0.1462	0.1317	1.5502	1.5455	1.5442
	35	1.1129	1.1130	1.1130	0.5835	0.4449	0.3986	0.1833	0.1398	0.1252	1.1279	1.1217	1.1200
	50	0.8219	0.8220	0.8220	0.5687	0.4301	0.3838	0.1787	0.1351	0.1206	0.8411	0.8330	0.8308
	70	0.5681	0.5682	0.5682	0.5393	0.4007	0.3544	0.1694	0.1259	0.1114	0.5929	0.5819	0.5790
	95	0.4105	0.4106	0.4106	0.5278	0.3891	0.3429	0.1658	0.1223	0.1077	0.4427	0.4284	0.4245
	120	0.3247	0.3247	0.3248	0.5167	0.3781	0.3319	0.1623	0.1188	0.1043	0.3630	0.3458	0.3411
	150	0.2645	0.2646	0.2647	0.5101	0.3715	0.3252	0.1602	0.1167	0.1022	0.3092	0.2892	0.2837
	185	0.2107	0.2108	0.2110	0.5082	0.3695	0.3233	0.1596	0.1161	0.1016	0.2644	0.2407	0.2341
	240	0.1608	0.1610	0.1612	0.4960	0.3573	0.3111	0.1558	0.1123	0.0977	0.2239	0.1963	0.1885
	300	0.1289	0.1292	0.1294	0.4894	0.3507	0.3045	0.1537	0.1102	0.0957	0.2007	0.1698	0.1609
	400	0.1007	0.1011	0.1014	0.4836	0.3450	0.2987	0.1519	0.1084	0.0939	0.1823	0.1482	0.1381
	500	0.0788	0.0793	0.0797	0.4760	0.3373	0.2911	0.1495	0.1060	0.0915	0.1690	0.1324	0.1213

Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

0.6/1 kV 90°C ALUMINIUM CODUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE



IEC 60502-1

Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Blue, Brown

Filler : Non-hygroscopic material
Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized steel wires

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Dia. Of inner sheath approx. (mm)	Diameter of steel wire armor nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
2	10	6	0.7	1.2	14.0	1.25	1.8	20	3.08	1,250	64	72	700	500/D
	16	6	0.7	1.2	16.0	1.60	1.8	23	1.91	1,000	86	94	950	500/D
	25	6	0.9	1.2	19.0	1.60	1.8	26	1.20	1,050	114	121	1200	500/D
	35	6	0.9	1.2	22	2.00	1.8	29	0.868	900	141	146	1600	500/D
	50	6	1.0	1.2	24	2.00	1.9	32	0.641	850	169	172	1800	500/D
	70	12	1.1	1.2	28	2.00	2.0	37	0.443	800	213	211	2,200	500/D
	95	15	1.1	1.2	31	2.00	2.1	40	0.320	650	260	252	2,600	500/D
	120	15	1.2	1.2	35	2.00	2.3	44	0.253	650	302	286	3,100	500/D
	150	15	1.4	1.3	38	2.50	2.4	49	0.206	700	344	320	3,900	500/D
	185	30	1.6	1.3	43	2.50	2.6	54	0.164	700	396	362	4,600	500/D
	240	30	1.7	1.4	49	2.50	2.7	60	0.125	650	469	419	5,500	500/D
	300	30	1.8	1.5	54	2.50	2.9	65	0.100	600	537	472	6,500	500/D
	400	53	2.0	1.7	61	2.50	3.2	73	0.0778	600	622	536	7,500	300/D

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5386	0.2637	0.0829	1.5409
	35	1.1130	0.2567	0.0807	1.1159
	50	0.8220	0.2551	0.0801	0.8259
	70	0.5683	0.2409	0.0757	0.5733
	95	0.4107	0.2337	0.0734	0.4172
	120	0.3249	0.2325	0.0731	0.3331
	150	0.2648	0.2337	0.0734	0.2748
	185	0.2111	0.2333	0.0733	0.2235
	240	0.1614	0.2300	0.0723	0.1769
	300	0.1297	0.2278	0.0716	0.1481
	400	0.1016	0.2274	0.0714	0.1242

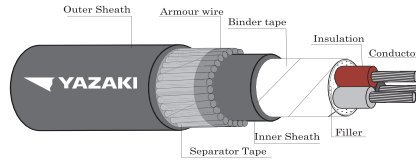
Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

C

0.6/1 kV 90 °C ALUMINIUM CODUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Brown, Black, Grey

Filler : Non-hygroscopic material
Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized steel wires

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Dia. of inner sheath approx. (mm)	Diameter of steel wire armor nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
3	10	6	0.7	1.2	15.0	1.25	1.8	21	3.08	1,250	55	61	750	500/D
	16	6	0.7	1.2	17.0	1.60	1.8	24	1.91	1,000	73	79	1,050	500/D
	25	6	0.9	1.2	21	1.60	1.8	28	1.20	1,050	97	102	1,350	500/D
	35	6	0.9	1.2	23	2.00	1.8	31	0.868	900	120	123	1,750	500/D
	50	6	1.0	1.2	26	2.00	2.0	34	0.641	850	144	145	2,100	500/D
	70	12	1.1	1.2	30	2.00	2.1	39	0.443	800	181	177	2,600	500/D
	95	15	1.1	1.2	33	2.00	2.2	42	0.320	650	221	212	3,000	500/D
	120	15	1.2	1.2	37	2.50	2.3	48	0.253	650	258	242	4,000	500/D
	150	15	1.4	1.3	41	2.50	2.5	52	0.206	700	292	269	4,600	500/D
	185	30	1.6	1.4	46	2.50	2.7	58	0.164	700	336	304	5,500	500/D
	240	30	1.7	1.5	52	2.50	2.9	64	0.125	650	397	351	6,500	500/D
	300	30	1.8	1.6	58	2.50	3.0	70	0.100	600	454	394	7,500	300/D
	400	53	2.0	1.8	65	3.15	3.4	80	0.0778	600	524	444	10,000	300/D

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5387	0.2637	0.0829	1.5409
	35	1.1131	0.2567	0.0807	1.1160
	50	0.8221	0.2551	0.0801	0.8260
	70	0.5684	0.2409	0.0757	0.5734
	95	0.4109	0.2337	0.0734	0.4174
	120	0.3251	0.2325	0.0731	0.3332
	150	0.2650	0.2337	0.0734	0.2750
	185	0.2114	0.2333	0.0733	0.2237
	240	0.1618	0.2300	0.0723	0.1772
	300	0.1301	0.2278	0.0716	0.1485
	400	0.1022	0.2274	0.0714	0.1247

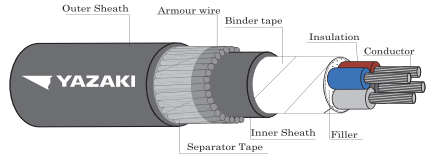
Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

YAZAKI

0.6/1 kV 90 °C ALUMINIUM CODUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED, WITH GALVANIZED STEEL WIRE ARMORED FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Blue, Brown, Black, Grey

Filler : Non-hygroscopic material
Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Armor : Galvanized steel wires

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Dia. of inner sheath approx. (mm)	Diameter of steel wire armor nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
4	10	6	0.7	1.2	16.0	1.60	1.8	23	3.08	1,250	55	61	1,000	500/D
	16	6	0.7	1.2	18.5	1.60	1.8	26	1.91	1,000	73	79	1,200	500/D
	25	6	0.9	1.2	22	2.00	1.8	31	1.20	1,050	97	102	1,700	500/D
	35	6	0.9	1.2	25	2.00	1.9	34	0.868	900	120	123	2,000	500/D
	50	6	1.0	1.2	28	2.00	2.1	37	0.641	850	144	145	2,400	500/D
	70	12	1.1	1.2	33	2.00	2.2	42	0.443	800	181	177	3,000	500/D
	95	15	1.1	1.2	37	2.50	2.3	47	0.320	650	221	212	4,000	500/D
	120	15	1.2	1.3	42	2.50	2.5	52	0.253	650	258	242	4,700	500/D
	150	15	1.4	1.4	46	2.50	2.7	57	0.206	700	292	269	5,500	500/D
	185	30	1.6	1.5	52	2.50	2.8	63	0.164	700	336	304	6,500	500/D
	240	30	1.7	1.6	58	2.50	3.1	71	0.125	650	397	351	8,000	300/D
	300	30	1.8	1.7	65	3.15	3.3	79	0.100	600	454	394	10,000	300/D
	400	53	2.0	1.9	73	3.15	3.4	87	0.0778	600	524	444	12,000	200/D

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5387	0.2637	0.0829	1.5409
	35	1.1131	0.2567	0.0807	1.1160
	50	0.8221	0.2551	0.0801	0.8260
	70	0.5684	0.2409	0.0757	0.5734
	95	0.4109	0.2337	0.0734	0.4174
	120	0.3251	0.2325	0.0731	0.3332
	150	0.2650	0.2337	0.0734	0.2750
	185	0.2114	0.2333	0.0733	0.2237
	240	0.1618	0.2300	0.0723	0.1772
	300	0.1301	0.2278	0.0716	0.1485
	400	0.1022	0.2274	0.0714	0.1247

Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

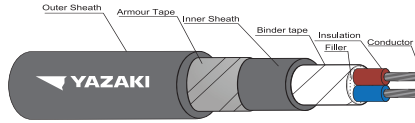
D : Packing in drum

C

YAZAKI

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED STEEL TAPE ARMOUR FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Blue, Brown

Filler : Non-hygroscopic material
Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Armor : 2 Layers galvanized steel tape

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts

Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Dia. of inner sheath approx. (mm)	Armor thickness nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
2	10	6	0.7	1.2	14.0	0.2	1.8	19.0	3.08	1,250	63	71	500	500/D
	16	6	0.7	1.2	16.0	0.2	1.8	21	1.91	1,000	84	93	600	500/D
	25	6	0.9	1.2	19.0	0.2	1.8	24	1.20	1,050	111	120	750	500/D
	35	6	0.9	1.2	21	0.2	1.8	27	0.868	900	136	144	900	500/D
	50	6	1.0	1.2	24	0.2	1.9	29	0.641	850	164	170	1,100	500/D
	70	12	1.1	1.2	28	0.2	2.0	33	0.443	800	207	208	1,400	500/D
	95	15	1.1	1.2	31	0.5	2.1	38	0.320	650	256	250	1,900	500/D
	120	15	1.2	1.2	35	0.5	2.3	42	0.253	650	297	285	2,300	500/D
	150	15	1.4	1.3	39	0.5	2.4	46	0.206	700	337	318	2,700	500/D
	185	30	1.6	1.3	43	0.5	2.6	51	0.164	700	388	359	3,200	500/D
	240	30	1.7	1.4	49	0.5	2.8	57	0.125	650	461	417	3,900	500/D
	300	30	1.8	1.5	54	0.5	2.9	62	0.100	600	530	470	4,600	500/D
	400	53	2.0	1.7	61	0.5	3.2	70	0.0778	600	615	535	5,500	300/D

C

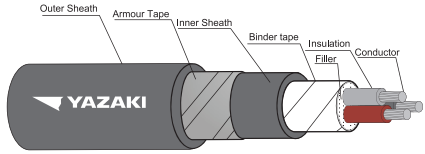
Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
2	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5386	0.2637	0.0829	1.5409
	35	1.1130	0.2567	0.0807	1.1159
	50	0.8220	0.2551	0.0801	0.8259
	70	0.5683	0.2409	0.0757	0.5733
	95	0.4107	0.2337	0.0734	0.4172
	120	0.3249	0.2325	0.0731	0.3331
	150	0.2648	0.2337	0.0734	0.2748
	185	0.2111	0.2333	0.0733	0.2235
	240	0.1614	0.2300	0.0723	0.1769
	300	0.1297	0.2278	0.0716	0.1481
	400	0.1016	0.2274	0.0714	0.1242

Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

YAZAKI

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED STEEL TAPE ARMOUR FLAME RETARDANT POWER CABLE



IEC 60502-1

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Brown, Black, Grey

Filler : Non-hygroscopic material
Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Armor : 2 Layers galvanized steel tape

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Dia. of inner sheath approx. (mm)	Armor thickness nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
3	10	6	0.7	1.2	15.0	0.2	1.8	20	3.08	1,250	53	60	550	500/D
	16	6	0.7	1.2	17.0	0.2	1.8	22	1.91	1.000	71	78	700	500/D
	25	6	0.9	1.2	21	0.2	1.8	26	1.20	1,050	95	101	800	500/D
	35	6	0.9	1.2	23	0.2	1.8	28	0.868	900	116	121	1,100	500/D
	50	6	1.0	1.2	26	0.2	1.9	31	0.641	850	140	143	1,300	500/D
	70	12	1.1	1.2	30	0.2	2.1	36	0.443	800	176	176	1,700	500/D
	95	15	1.1	1.2	33	0.5	2.2	40	0.320	650	217	211	2,300	500/D
	120	15	1.2	1.2	37	0.5	2.4	44	0.253	650	252	240	2,700	500/D
	150	15	1.4	1.3	41	0.5	2.5	49	0.206	700	287	268	3,200	500/D
	185	30	1.6	1.4	46	0.5	2.7	54	0.164	700	331	304	3,900	500/D
	240	30	1.7	1.5	52	0.5	2.9	61	0.125	650	393	352	4,900	500/D
	300	30	1.8	1.6	58	0.5	3.1	67	0.100	600	451	397	6,000	500/D
	400	53	2.0	1.8	65	0.5	3.3	75	0.0778	600	525	453	7,000	300/D

Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
3	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5387	0.2637	0.0829	1.5409
	35	1.1131	0.2567	0.0807	1.1160
	50	0.8221	0.2551	0.0801	0.8260
	70	0.5684	0.2409	0.0757	0.5734
	95	0.4109	0.2337	0.0734	0.4174
	120	0.3251	0.2325	0.0731	0.3332
	150	0.2650	0.2337	0.0734	0.2750
	185	0.2114	0.2333	0.0733	0.2237
	240	0.1618	0.2300	0.0723	0.1772
	300	0.1301	0.2278	0.0716	0.1485
	400	0.1022	0.2274	0.0714	0.1247

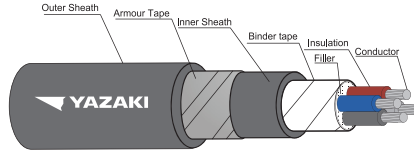
Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

C

0.6/1 kV 90°C ALUMINIUM CONDUCTOR CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED STEEL TAPE ARMOUR FLAME RETARDANT POWER CABLE

IEC 60502-1



Category C
FLAME RETARDANT

CABLE STRUCTURE

Conductor : Compacted stranded hard drawn aluminium

Insulation : Cross-Linked polyethylene (XLPE)
Insulation color : Blue, Brown, Black, Grey

Filler : Non-hygroscopic material
Binder tape : Non-hygroscopic tape

Inner sheath : Black polyvinyl chloride (PVC)

Armor : 2 Layers galvanized steel tape

Outer sheath : Black flame retardant polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 1,200 Volts

Rated voltage : 600 Volts between Line to Earth
: 1,000 Volts between Line to Line

AC Testing voltage : 3,500 Volts
Reference standard : IEC 60502-1, IEC 60228, IEC 60332-1
IEC 60332-3-24 (Cat.C)

APPLICATION

For installation exposed, or in raceway, wet or dry location, or direct burial in ground.

Number of cores	Nominal cross sectional area (mm²)	Number of wires minimum (No.)	Insulation thickness nominal (mm)	Inner sheath thickness approx. (mm)	Dia. of inner sheath approx. (mm)	Armor thickness nominal (mm)	Outer sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 20°C minimum (MΩ-km)	Continuous current rating in free air at 40°C maximum (A)	Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
4	10	6	0.7	1.2	16.0	0.2	1.8	21	3.08	1,250	53	60	650	500/D
	16	6	0.7	1.2	18.5	0.2	1.8	24	1.91	1,000	71	78	800	500/D
	25	6	0.9	1.2	23	0.2	1.8	28	1.20	1,050	95	101	1,050	500/D
	35	6	0.9	1.2	25	0.2	1.9	31	0.868	900	116	121	1,250	500/D
	50	6	1.0	1.2	28	0.2	2.0	34.0	0.641	850	140	143	1,600	500/D
	70	12	1.1	1.2	33	0.5	2.2	40	0.443	800	176	176	2,300	500/D
	95	15	1.1	1.2	37	0.5	2.3	44	0.320	650	217	211	2,800	500/D
	120	15	1.2	1.3	42	0.5	2.5	49	0.253	650	252	240	3,300	500/D
	150	15	1.4	1.4	46	0.5	2.7	54	0.206	700	287	268	3,400	500/D
	185	30	1.6	1.5	52	0.5	2.9	60	0.164	700	331	304	4,800	500/D
	240	30	1.7	1.6	58	0.5	3.1	67	0.125	650	393	352	6,000	500/D
	300	30	1.8	1.7	65	0.5	3.3	74	0.100	600	451	397	7,000	300/D
	400	53	2.0	1.9	73	0.5	3.6	83	0.0778	600	525	453	9,000	300/D

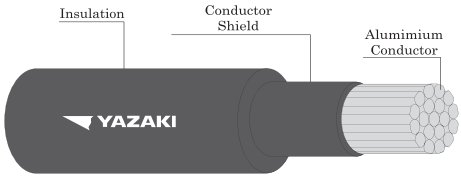
Number of cores	Nominal cross sectional area (mm²)	A.C.Resistance R (Ω/km)	Inductance L (mH/km)	Reactance XL (Ω/km)	Impedance Z (Ω/km)
4	10	3.9489	0.2774	0.0871	3.9499
	16	2.4489	0.2619	0.0823	2.4503
	25	1.5387	0.2637	0.0829	1.5409
	35	1.1131	0.2567	0.0807	1.1160
	50	0.8221	0.2551	0.0801	0.8260
	70	0.5684	0.2409	0.0757	0.5734
	95	0.4109	0.2337	0.0734	0.4174
	120	0.3251	0.2325	0.0731	0.3332
	150	0.2650	0.2337	0.0734	0.2750
	185	0.2114	0.2333	0.0733	0.2237
	240	0.1618	0.2300	0.0723	0.1772
	300	0.1301	0.2278	0.0716	0.1485
	400	0.1022	0.2274	0.0714	0.1247

Remark: Thermal resistivity of soil 1.2 K.m/W or °C.m/W
Deep of laying (For cable laid direct in ground) 0.8 m

D : Packing in drum

24KV 90°C PARTIAL INSULATED CABLE

ICEA S-66-524
ICEA S-93-639



CABLE STRUCTURE

Conductor : Compact round stranded hard drawn aluminium wires

Conductor screen : Semi-Conductive Cross-linked polyethylene (XLPE) compundoss-linked

Insulation : Black Cross-linked polyethylene (XLPE)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 24,000 Volts

AC Testing voltage : 11,000 Volts

Reference standard : ICEA S-66-524, ICEA S-93-639

APPLICATION

For aerial power transmission and distribution line.

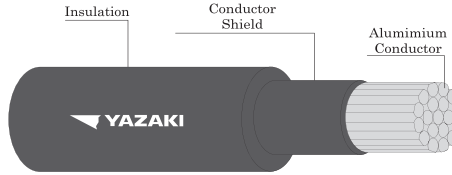
Nominal cross sectional area (mm²)	Number of wire minimum (No.)	Diameter of conductor Approx. (mm)	Insulation thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 15.6°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
35	6	7.05	1.8	12.0	0.868	900	5,591	140	170	1000/D
50	6	8.11	2.2	14.0	0.641	880	7,313	170	220	1000/D
70	12	9.73	2.1	15.0	0.443	800	10,420	215	290	1000/D
95	15	11.43	2.5	18.0	0.320	750	14,098	270	400	1000/D
120	15	13.05	2.6	19.5	0.253	700	18,518	310	490	1000/D
150	15	14.37	2.6	21.0	0.206	650	22,457	355	550	1000/D
185	30	16.08	2.55	23.0	0.164	600	28,974	410	700	1000/D

D : Packing in drum

C

33KV 90°C PARTIAL INSULATED CABLE

ICEA S-66-524
ICEA S-93-639



CABLE STRUCTURE

Conductor : Compact round stranded hard drawn aluminium wires

Conductor screen : Semi-Conductive Cross-linked polyethylene (XLPE) compound

Insulation : Black Cross-linked polyethylene (XLPE)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 33,000 Volts

AC Testing voltage : 17,000 Volts

Reference standard : ICEA S-66-524, ICEA S-93-639

APPLICATION

For aerial power transmission and distribution line.

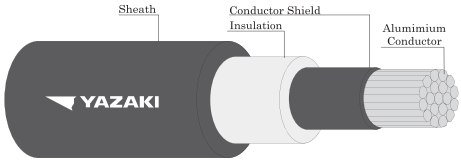
Nominal cross sectional area (mm²)	Number of wire minimum (No.)	Diameter of conductor Approx. (mm)	Insulation thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 15.6°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
35	6	7.05	3.0	14.5	0.868	1,350	5,591	145	220	1000/D
50	6	8.11	3.2	16.5	0.641	1,300	7,313	175	280	1000/D
70	12	9.73	3.2	18.0	0.443	1,200	10,420	220	350	1000/D
95	15	11.43	3.5	20.0	0.320	1,100	14,098	270	460	1000/D
120	15	13.05	3.6	22.0	0.253	1,000	18,518	315	550	1000/D
150	15	14.37	3.6	23.0	0.206	950	22,457	360	650	1000/D
185	30	16.08	3.9	26.0	0.164	900	28,974	415	800	1000/D

D : Packing in drum

C

15KV 90°C SPACED AERIAL CABLE

ICEA S-93-639



CABLE STRUCTURE

Conductor : Compact round stranded hard drawn aluminium wires

Conductor screen : Semi-Conductive Cross-linked polyethylene (XLPE) compound

Insulation : Cross-linked polyethylene (XLPE)

Sheath : Black Cross-linked polyethylene (XLPE)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 15,000 Volts

AC Testing voltage : 27,000 Volts

Reference standard : ICEA S-93-639

APPLICATION

For aerial power transmission and distribution line.

Nominal cross sectional area (mm²)	Number of wire minimum (No.)	Diameter of conductor Approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 15.6°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
35	6	7.05	1.91	1.91	16.5	0.868	1,750	5,591	164	260	500/D
50	6	8.11	1.91	1.91	18.0	0.641	1,550	7,313	198	320	500/D
70	12	9.73	1.91	1.91	19.5	0.443	1,400	10,420	250	390	500/D
95	15	11.43	1.91	1.91	21.0	0.320	1,250	14,098	306	490	500/D
120	15	13.05	1.91	1.91	23.0	0.253	1,150	18,518	355	600	500/D
150	15	14.37	1.91	1.91	24.0	0.206	1,050	22,457	405	650	500/D
185	30	16.08	1.91	1.91	26.0	0.164	980	28,974	468	800	500/D
240	30	18.57	1.91	1.91	28.0	0.125	850	37,506	560	1000	500/D

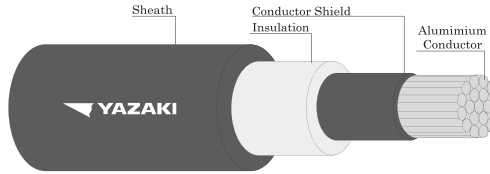
D : Packing in drum

C

25KV-CC (T1)

25KV 90°C SPACED AERIAL CABLE

ICEA S-93-639
TIS 2341-2564



CABLE STRUCTURE

Conductor : Compact round stranded hard drawn aluminium wires

Conductor screen : Semi-Conductive Cross-linked polyethylene (XLPE) compound

Insulation : Cross-linked polyethylene (XLPE)

Sheath : Black Cross-linked polyethylene (XLPE)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 25,000 Volts

AC Testing voltage : 38,000 Volts

Reference standard : ICEA S-93-639, TIS 2341-2564

APPLICATION

For aerial power transmission and distribution line.

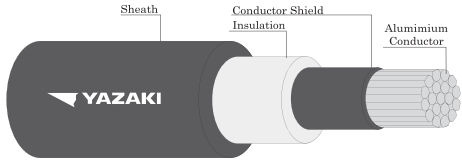
Nominal cross sectional area (mm^2)	Number of wire minimum (No.)	Diameter of conductor Approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 15.6°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
35	6	7.05	3.175	3.175	22	0.868	2,500	5,591	165	400	500/D
50	6	8.11	3.175	3.175	23	0.641	2,250	7,313	199	460	500/D
70	12	9.73	3.175	3.175	25	0.443	2,050	10,420	250	550	500/D
95	15	11.43	3.175	3.175	26	0.320	1,850	14,098	305	650	500/D
120	15	13.05	3.175	3.175	28	0.253	1,700	18,518	353	750	500/D
150	15	14.37	3.175	3.175	29	0.206	1,600	22,457	402	850	500/D
185	30	16.08	3.175	3.175	31	0.164	1,450	28,974	464	1,000	500/D
240	30	18.57	3.175	3.175	33	0.125	1,300	37,506	553	1,200	500/D

D : Packing in drum

C

35KV 90°C SPACED AERIAL CABLE

ICEA S-93-639
TIS 2341-2564



CABLE STRUCTURE

Conductor : Compact round stranded hard drawn aluminium wires

Conductor screen : Semi-Conductive Cross-linked polyethylene (XLPE) compound

Insulation : Cross-linked polyethylene (XLPE)

Sheath : Black Cross-linked polyethylene (XLPE)

TECHNICAL DATA

Classification : Maximum conductor temperature 90°C
: Circuit voltage not exceeding 35,000 Volts

AC Testing voltage : 49,000 Volts

Reference standard : ICEA S-93-639, TIS 2341-2564

APPLICATION

For aerial power transmission and distribution line.

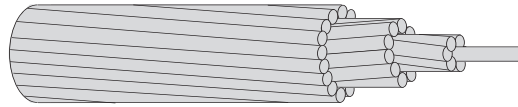
Nominal cross sectional area (mm²)	Number of wire minimum (No.)	Diameter of conductor Approx. (mm)	Insulation thickness nominal (mm)	Sheath thickness nominal (mm)	Overall diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Insulation resistance at 15.6°C minimum (MΩ-km)	Breaking strength of conductor minimum (N)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
50	6	8.11	4.445	3.175	26	0.641	2,500	7,313	200	550	500/D
70	12	9.73	4.445	3.175	27	0.443	2,300	10,420	251	650	500/D
95	15	11.43	4.445	3.175	29	0.320	2,100	14,098	306	750	500/D
120	15	13.05	4.445	3.175	31	0.253	1,950	18,518	355	900	500/D
150	15	14.37	4.445	3.175	32	0.206	1,800	22,457	403	1,000	500/D
185	30	16.08	4.445	3.175	34	0.164	1,690	28,974	464	1,100	500/D
240	30	18.57	4.445	3.175	36	0.125	1,500	37,506	552	1,400	500/D

D : Packing in drum

C

ALL ALUMINIUM STRANDED CONDUCTOR

TIS 85-2548



CABLE STRUCTURE

Conductor : Concentric stranded hard drawn aluminium wires

TECHNICAL DATA

Reference standard : TIS 85-2548

APPLICATION

For overhead transmission and distrubution line.

Nominal cross sectional area (mm^2)	Number and diameter of wires (No./mm)	Conductor diameter approx. (mm)	Conductor resistance at 20°C maximum (Ω/km)	Breaking strength (kgf)	Continuous current rating in free air at 40°C maximum (A)	Cable weight approx. (kg/km)	Standard length (m)
16	7/1.70	5.10	1.802	290	110	44	3000/D
25	7/2.14	6.42	1.138	440	145	70	3000/D
35	7/2.52	7.56	0.820	585	180	95	3000/D
50	7/3.02	9.06	0.571	805	225	140	2500/D
50	19/1.83	9.15	0.5758	890	225	140	2500/D
70	19/2.15	10.75	0.4171	1,205	270	190	2500/D
95	19/2.52	12.60	0.3036	1,585	340	260	2500/D
120	19/2.85	14.25	0.2374	1,980	390	330	2000/D
150	37/2.25	15.75	0.1960	2,570	455	400	2000/D
185	37/2.52	17.64	0.1563	3,085	550	500	2000/D
240	61/2.25	20.25	0.1192	4,015	625	650	1500/D
300	91/2.52	22.68	0.0950	4,820	710	850	1500/D
400	61/2.85	25.65	0.0743	6,025	855	1100	1000/D
500	61/3.25	29.25	0.0571	7,695	990	1400	1000/D
625	91/2.96	32.6	0.0463	9,694	1140	1700	500/D
800	91/3.35	36.85	0.0361	12,055	1340	2200	500/D
1000	91/3.74	41.14	0.0290	14,845	1540	2800	500/D

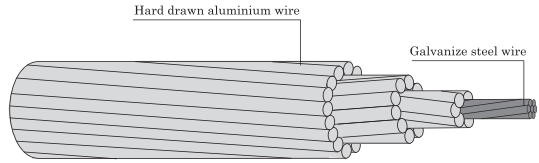
D : Packing in drum

C

ACSR

ALL ALUMINIUM CONDUCTOR STEEL REINFORCED

TIS 85-2548



CABLE STRUCTURE

Conductor : Hard drawn aluminium wire

Steel Core : Galvanized steel (Zinc coated), solid and concentric stranded

TECHNICAL DATA

Reference standard : TIS 85-2548

APPLICATION

For overhead transmission and distrubution line.

Nominal cross sectional area	Alumimium		Steel wire		Overall conductor diameter approx.	Conductor resistance at 20°C maximum	Breaking strength	Continuous current rating in free air at 40°C maximum	Cable weight approx.	Standard length
	Number and approx. diameter of wires	Cross sectional area	Number and approx. diameter of wires	Cross sectional area						
(mm^2)	(No./mm)	(mm^2)	(No./mm)	(mm^2)	(mm)	(Ω/km)	(kgf)	(A)	(kg/km)	(m)
16/2.5	6/1.80	15.3	1/1.80	2.54	5.40	1.880	592	90	60	4000/D
25/4	6/2.25	23.9	1/2.25	3.98	6.75	1.203	916	125	95	4000/D
35/6	6/2.70	34.4	1/2.70	5.73	8.10	0.8353	1,265	145	140	3000/D
50/8	6/3.20	48.3	1/3.20	8.04	9.60	0.5947	1,716	170	200	3000/D
50/30	12/2.33	51.2	7/2.33	29.85	11.50	0.5644	4,380	170	380	3000/D
70/12	26/1.85	69.9	7/1.44	11.40	11.50	0.4131	2,676	290	280	3000/D
95/15	26/2.15	94.4	7/1.67	15.33	13.50	0.3058	3,565	350	380	3000/D
95/55	12/3.20	96.5	7/3.20	56.30	16.00	0.2993	7,965	350	700	3000/D
120/20	26/2.44	121.6	7/1.90	19.85	15.50	0.2375	4,555	410	490	2000/D
120/70	12/3.60	122.1	7/3.60	71.25	18.00	0.2365	10,034	410	900	2000/D
125/30	30/2.33	127.9	7/2.33	29.85	16.00	0.2259	5,759	425	600	2000/D
150/25	26/2.70	148.9	7/2.10	24.25	17.00	0.1939	5,513	470	600	2000/D
170/40	30/2.70	171.8	7/2.70	40.08	18.50	0.1683	7,675	520	800	2000/D
185/30	26/3.00	183.8	7/2.33	29.85	18.50	0.1571	6,618	535	750	2000/D
210/35	26/3.20	209.1	7/2.49	34.09	20.00	0.1381	7,489	590	850	1500/D
210/50	30/3.00	212.1	7/3.00	49.48	21.00	0.1363	9,390	610	1,000	1500/D
230/10	24/3.50	230.9	7/2.33	29.85	21.00	0.1250	7,313	630	900	1500/D
240/40	26/3.45	243.1	7/2.68	39.49	21.00	0.1188	8,640	645	1,000	1500/D
265/35	24/3.74	263.7	7/2.49	34.10	22.00	0.1095	8,307	680	1,000	1000/D
300/50	26/3.86	304.3	7/3.00	49.50	24.00	0.0949	10,702	740	1,200	1000/D
305/40	54/2.68	304.6	7/2.68	39.50	24.00	0.0949	9,942	740	1,200	1000/D
380/50	54/3.00	381.7	7/3.00	49.50	27.00	0.0758	12,312	840	1,500	1000/D
435/55	54/3.20	434.3	7/3.20	56.30	28.00	0.0666	13,673	900	1,700	1000/D
490/65	54/3.40	490.3	7/3.40	63.60	30.00	0.0590	15,343	960	1,900	1000/D
550/70	54/3.60	549.7	7/3.60	71.30	32.00	0.0526	17,096	1,020	2,100	500/D
680/85	54/4.00	678.6	19/2.40	86.00	36.00	0.0426	12,040	1,150	2,600	500/D

D : Packing in drum

C

Electrical Insulation Tape

D

VTA

TIS 386-2531

RoHS PVC PLASTIC ELECTRICAL INSULATION TAPE

SCOPE :

This specification covers RoHS PVC plastic electrical insulation tape to be used in electrical service at temperature 0 ~ 80°C.

The tape shall be used for insulation of jointed splices of cables and wires. The tape must have good insulation properties, heat, weather, flame retardant and RoHS materials for environment, suitable for tropical country.

STANDARD :

The RoHS PVC plastic electrical insulation tape shall be manufactured and tested in accordance with TIS 386-2531.

Dimension

1) Thickness	(mm)	0.125 ± 0.025, 0.18 ± 0.025
2) Width	(mm)	19 ± 1.0
3) Length	(m)	10 + 1.0 - 0

PROPERTY AND REQUIREMENTS		PACKING	
1) Electrolytic corrosion after 24h		The RoHS PVC plastic electrical insulation tape	
at 27 ± 2°C and 93 ± 2% relative humidity	(Ω) ≥ 10^{11}	shall be packing in paper core Cellophane and	
2) Penetration at elevated temperature	(°C) ≥ 50	shrinkage wrapped.	
3) Flammability	non-ignitable or		
	self-extinguishing	1) Dimension of each roll	
4) Thermal endurance	no-crack	: Diameter (cm)	5.8
5) Tensile strength	(N/10 mm width/mm thick.) ≥ 150	Width (cm)	1.9
6) Adhesion to steel	(N/10 mm width/mm thick.) ≥ 1.8	2) Weight of each roll (approx.)	
7) Adhesion to backing	(N/10 mm width/mm thick.) ≥ 1.8	: Net (kg)	0.036
8) Shear adhesion after immersion in water	(N) ≥ 18.0	Gross (kg)	0.037
9) Electric strength		3) Number of roll in each package (Rolls)	10
- after 24 hour at 27 ± 2°C		4) Number of package in one case (Package)	10
and 65 ± 5% relative humidity	(kV/mm) ≥ 40	5) Dimension of each case : WxLxH (cm)	12.5x30x19.5
- after 24 hour at 27 ± 2°C		6) Gross weight of each case (approx.) (kg)	4
and 93 ± 2% relative humidity	(kV/mm) ≥ 35		

D

Memo

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Website

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