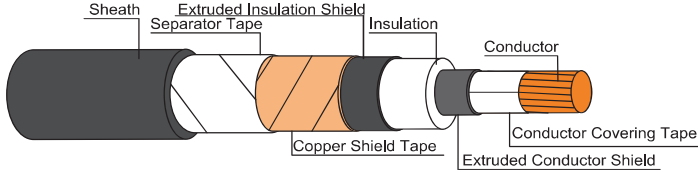


12/20(24)kV 90 °C CROSS-LINKED POLYETHYLENE INSULATED PVC SHEATHED POWER CABLE

IEC 60502-2



CABLE STRUCTURE

- Conductor** : Compacted round annealed copper  
Single-core : Sizes 35 mm<sup>2</sup> up to 1000 mm<sup>2</sup>
- Insulation** : Cross-Linked polyethylene (XLPE)
- Core identification**  
Single-core : Natural (Translucent)
- Shield** : Copper 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
- Testing voltage** : 42,000 Volts
- Reference standard** : IEC 60502-2, IEC 60228, IEC 60332-1
- Remark** : Special protection can be produced

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 <sup>2</sup> )	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			Continuous current rating in ground at 30°C maximum (A)	Cable weight approx. (kg/km)	Standard Length (m)
								Spaced (A)	Touching (A)	Trefoil (A)			
1	35	6	5.5	1.8	26	0.524	3.460	210	183	179	165	850	500/D
	50	6	5.5	1.8	27	0.387	3.130	253	219	214	195	1,000	500/D
	70	12	5.5	1.8	28	0.268	2.790	315	273	266	238	1,300	500/D
	95	15	5.5	1.9	30	0.193	2.500	385	333	325	285	1,600	500/D
	120	18	5.5	2.0	32	0.153	2.290	445	385	375	324	1,900	500/D
	150	18	5.5	2.0	34	0.124	2.130	506	438	426	364	2,200	500/D
	185	30	5.5	2.1	35	0.0991	1.970	581	503	490	411	2,600	500/D
	240	34	5.5	2.1	38	0.0754	1.770	689	595	579	477	3,200	500/D
	300	34	5.5	2.2	40	0.0601	1.620	792	694	665	538	3,800	500/D
	400	53	5.5	2.3	43	0.0470	1.480	920	794	770	610	4,700	500/D
	500	53	5.5	2.4	47	0.0366	1.320	1066	920	890	689	6,000	500/D
	630	53	5.5	2.5	51	0.0283	1.190	1241	1067	1028	777	7,500	500/D
	800	53	5.5	2.6	55	0.0221	1.070	1426	1221	1169	863	9,000	500/D
	1000	53	5.5	2.8	60	0.0176	940	1628	1385	1318	945	11,500	300/D

Remark : Thermal resistivity of soil 1.2 K.m/W or °C.m/W

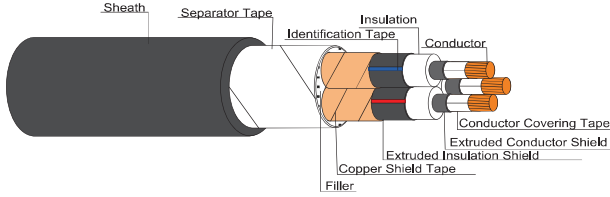
D : Packing in drum

Deep of laying (For cable laid direct in ground) 0.8 m

Number of core	Nominal cross sectional area (mm <sup>2</sup> )	A.C. Resistance			Inductance			Reactance			Impedance		
		R (Ω/km)			L (mH/km)			XL (Ω/km)			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	0.5302	0.5159	0.5119
	70	0.3420	0.3420	0.3420	0.5918	0.4531	0.4069	0.1859	0.1424	0.1278	0.3892	0.3705	0.3652
	95	0.2464	0.2465	0.2466	0.5718	0.4332	0.3870	0.1796	0.1361	0.1216	0.3050	0.2816	0.2749
	120	0.1955	0.1956	0.1957	0.5565	0.4179	0.3716	0.1748	0.1313	0.1168	0.2623	0.2356	0.2279
	150	0.1587	0.1588	0.1589	0.5448	0.4061	0.3599	0.1711	0.1276	0.1131	0.2334	0.2037	0.1950
	185	0.1271	0.1272	0.1274	0.5353	0.3967	0.3505	0.1682	0.1246	0.1101	0.2108	0.1781	0.1684
	240	0.0971	0.0973	0.0975	0.5204	0.3818	0.3355	0.1635	0.1299	0.1054	0.1901	0.1545	0.1436
	300	0.0778	0.0782	0.0785	0.5101	0.3715	0.3253	0.1603	0.1167	0.1022	0.1781	0.1405	0.1288
	400	0.0614	0.0619	0.0623	0.4998	0.3612	0.3150	0.1570	0.1135	0.0989	0.1686	0.1293	0.1169
	500	0.0486	0.0493	0.0498	0.4908	0.3522	0.3069	0.1542	0.1107	0.0961	0.1617	0.1211	0.1083
	630	0.0386	0.0395	0.0402	0.4809	0.3422	0.2960	0.1511	0.1075	0.0930	0.1559	0.1145	0.1013
	800	0.0313	0.0324	0.0333	0.4722	0.3335	0.2873	0.1483	0.1048	0.0903	0.1516	0.1097	0.0962
	1000	0.0261	0.0276	0.0287	0.4626	0.3240	0.2778	0.1453	0.1018	0.0873	0.1477	0.1055	0.0919

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- Core identification**  
3 Cores : White, Red, Blue
- Shield** : Copper tape
- Sheath** : Black polyvinyl chloride (PVC/ST2)

TECHNICAL DATA

- Classification** : Maximum conductor temperature 90°C  
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- Reference standard** : IEC 60502-2, IEC 60228, IEC 60332-1
- Remark** : Special protection can be produced

APPLICATION

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

Number of cores	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	Continuous current rating in ground at 30°C maximum	Cable weight approx.	Standard Length
3	35	6	5.5	2.7	53	0.524	3,460	169	161	3,000	500/D
	50	6	5.5	2.8	55	0.387	3,130	204	191	3,500	500/D
	70	12	5.5	2.9	59	0.268	2,790	254	234	4,300	500/D
	95	15	5.5	3.0	63	0.193	2,500	311	281	5,000	500/D
	120	18	5.5	3.1	67	0.153	2,290	358	319	6,000	500/D
	150	18	5.5	3.2	70	0.124	2,130	405	358	7,000	300/D
	185	30	5.5	3.3	74	0.0991	1,970	463	404	8,500	300/D
	240	34	5.5	3.5	80	0.0754	1,770	546	468	10,500	300/D
	300	34	5.5	3.7	85	0.0601	1,620	622	526	12,500	300/D
	400	53	5.5	3.9	91	0.0470	1,480	715	595	15,000	200/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 cores	Nominal cross sectional area	A.C. Resistance	Inductance	Reactance	Impedance
		R	L	XL	Z
	(mm <sup>2</sup> )	(Ω/km)	(mH/km)	(Ω/km)	(Ω/km)
3	35	0.6683	0.4254	0.1336	0.6815
	50	0.4937	0.3935	0.1236	0.5089
	70	0.3421	0.3720	0.1169	0.3615
	95	0.2466	0.3530	0.1109	0.2704
	120	0.1958	0.3375	0.1060	0.2227
	150	0.1590	0.3273	0.1028	0.1894
	185	0.1275	0.3187	0.1001	0.1621
	240	0.0977	0.3059	0.0961	0.1371
	300	0.0787	0.2964	0.0931	0.1219
400	0.0627	0.2870	0.0902	0.1098	

B