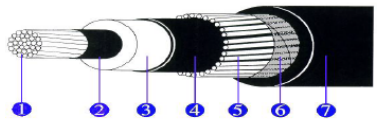


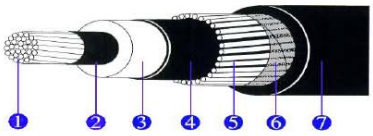
1 Stranded Aluminium conductor (optional water blocking)
2 Semi-conducting screen
3 XLPE insulation
4 Semi-conducting screen
5 35mm² Copper wire screen (optional equalisation tape)
6 Tape binder
7 MDPE sheath (optional graphite coating)

PRYSMIAN CABLES & SYSTEMS

Electricity Supply Industry
19000/33000V
Extruded insulation
Stranded aluminium conductor
35mm² Copper wire screened
BS7870-4.10

Constructional Data														
Conductor - nominal cross-sectional area	mm²	50	70	95	120	150	185	240	300	400	500	630	800	1000
Conductor - diameter	mm	8.3	9.9	11.6	13.0	14.5	16.1	18.7	20.5	23.9	27.4	31.0	35.4	39.7
Insulation - minimum average thickness	mm	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Copper wire screen - nominal area	mm	35	35	35	35	35	35	35	35	35	35	35	35	35
Oversheath - minimum average thickness	mm	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.4	2.5	2.6	2.7	2.8	3.0
Overall diameter	mm	34.0	35.5	37.5	39.0	40.5	42.5	45.0	47.0	51.0	55.0	59.0	63.5	68.0
Triplexed diameter (if applicable)	mm	73.5	77.0	81.0	84.0	87.5	91.0	97.0	101.5	-	-	-	-	-
Installation Data														
Cable mass	kg	1.2	1.3	1.4	1.6	1.7	1.9	2.1	2.4	2.7	3.2	3.7	4.4	5.2
Minimum bending radius	mm	700	750	750	800	850	850	900	950	1100	1100	1200	1300	1400
Maximum pulling tension (on conductor)	kg	150	210	285	360	450	555	720	900	1200	1500	1890	2000	2000
Nominal diameter of twin wall PE duct (1 cable)	mm	100	100	100	100	100	100	100	100	100	100	100	100	125
Nominal external diameter of twin wall PE duct	mm	120	120	120	120	120	120	120	120	120	120	120	120	150
Nominal diameter of twin wall PE duct (Triplex cable)	mm	150	150	150	150	225	225	225	225	-	-	-	-	-
Nominal external diameter of twin wall PE duct	mm	180	180	180	180	270	270	270	270	-	-	-	-	-
Electrical Data														
Conductor - maximum DC resistance @ 20°C	Ω/km	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.078	0.061	0.047	0.037	0.029
Conductor - maximum AC resistance @ 90°C	Ω/km	0.822	0.568	0.411	0.325	0.265	0.211	0.161	0.129	0.101	0.080	0.063	0.051	0.042
Copper wire screen - maximum DC resistance @ 20°C	Ω/km	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542
Capacitance* - maximum	µF/km	0.144	0.159	0.175	0.188	0.201	0.216	0.239	0.255	0.285	0.321	0.352	0.390	0.429
Charging current - maximum at normal voltage and frequency*	A/km	0.859	0.948	1.044	1.120	1.199	1.287	1.424	1.522	1.702	1.913	2.102	2.330	2.558
Reactance @ 50Hz	Ω/km	0.149	0.141	0.134	0.129	0.125	0.121	0.115	0.112	0.107	0.103	0.100	0.096	0.094
Impedance @ 50Hz	Ω/km	0.835	0.585	0.432	0.350	0.293	0.243	0.198	0.171	0.147	0.131	0.118	0.109	0.103
Zero Sequence Resistance	Ω/km	1.183	0.985	0.862	0.795	0.748	0.706	0.667	0.642	0.620	0.603	0.590	0.580	0.573
Zero Sequence Reactance	Ω/km	0.094	0.087	0.080	0.076	0.071	0.067	0.062	0.059	0.054	0.051	0.048	0.045	0.042
Current Ratings														
Laid in air	Amps	195	240	295	340	385	440	520	595	695	810	940	1080	1220
Laid direct in ground	Amps	170	205	250	280	315	355	415	465	535	610	695	780	865
Drawn into trefoil ducts	Amps	165	200	235	265	295	335	385	430	485	550	620	695	765
Drawn into 1 duct	Amps	145	175	210	240	275	310	360	405	-	-	-	-	-
Short circuit ratings (1s, adiabatic)														
Conductor (90 to 250°C)	kA	4.7	6.6	9.0	11.3	14.2	17.5	22.7	28.3	37.8	47.2	59.5	75.6	94.5
Copper wire screen (80 to 250°C)	kA	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Current rating conditions														
Air temperature	°C	25												
Ground temperature	°C	15												
Depth of burial (to centre of cable group)	mm	800												
Thermal resistance of soil	°C m/W	1.2												
Single core cables in trefoil, bonded and earthed at both ends.														

All data are nominal and subject to manufacturing tolerances
* For EPR, multiply capacitance and charging current values by 1.2
Ref: IEC60287-2-1 (A2:2006)



1 Stranded Copper conductor (optional water blocking)
2 Semi-conducting screen
3 XLPE insulation
4 Semi-conducting screen (optional water blocking tape)
5 50mm² copper wire screen (optional equalisation)
6 Water blocking tape
7 MDPE sheath (optional graphite coating)

PRYSMIAN CABLES & SYSTEMS

Electricity Supply Industry
19000/33000V
Extruded insulation
Stranded copper conductor
50mm² Copper wire screened
BS7870-4.10
Water Blocked

Constructional Data														
Conductor - nominal cross-sectional area	mm²	50	70	95	120	150	185	240	300	400	500	630	800	1000
Conductor - diameter	mm	8.2	9.9	11.5	13.0	14.4	16.1	18.2	20.5	23.7	27.1	31.0	35.4	39.7
Insulation - minimum average thickness	mm	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Copper wire screen - nominal area	mm	50	50	50	50	50	50	50	50	50	50	50	50	50
Oversheath - minimum average thickness	mm	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.4	2.5	2.6	2.7	2.8	3.0
Overall diameter	mm	35.5	37.5	39.0	40.5	42.0	44.0	46.0	49.0	52.0	56.5	60.5	65.0	69.5
Triplexed diameter (if applicable)	mm	76.5	80.0	84.5	87.5	91.0	94.5	99.5	105.0	-	-	-	-	-
Installation Data														
Cable mass	kg	1.6	1.8	2.1	2.4	2.7	3.1	3.7	4.3	5.2	6.3	7.8	9.7	11.8
Minimum bending radius	mm	750	750	800	850	850	900	950	1000	1100	1200	1300	1300	1400
Maximum pulling tension (on conductor)	kg	250	350	475	600	750	925	1200	1500	2000	2000	2000	2000	2000
Nominal diameter of twin wall PE duct (1 cable)	mm	100	100	100	100	100	100	100	100	100	100	100	100	125
Nominal external diameter of twin wall PE duct	mm	120	120	120	120	120	120	120	120	120	120	120	120	150
Nominal diameter of twin wall PE duct (Triplex cable)	mm	150	150	150	225	225	225	225	225	-	-	-	-	-
Nominal external diameter of twin wall PE duct	mm	180	180	180	270	270	270	270	270	-	-	-	-	-
Electrical Data														
Conductor - maximum DC resistance @ 20°C	Ω/km	0.387	0.268	0.193	0.153	0.124	0.099	0.075	0.060	0.047	0.037	0.028	0.022	0.018
Conductor - maximum AC resistance @ 90°C	Ω/km	0.494	0.342	0.247	0.196	0.159	0.127	0.098	0.078	0.062	0.050	0.040	0.034	0.029
Copper wire screen - maximum DC resistance @ 20°C	Ω/km	0.379	0.379	0.379	0.379	0.379	0.379	0.379	0.379	0.379	0.379	0.379	0.379	0.379
Capacitance* - maximum	µF/km	0.143	0.159	0.174	0.188	0.200	0.216	0.234	0.255	0.283	0.318	0.352	0.390	0.429
Charging current - maximum at normal voltage and frequency*	A/km	0.854	0.948	1.039	1.120	1.196	1.287	1.397	1.522	1.692	1.897	2.102	2.330	2.558
Reactance @ 50Hz	Ω/km	0.153	0.144	0.137	0.132	0.128	0.123	0.118	0.114	0.109	0.106	0.102	0.098	0.095
Impedance @ 50Hz	Ω/km	0.517	0.371	0.282	0.236	0.204	0.177	0.153	0.138	0.126	0.117	0.109	0.103	0.099
Zero Sequence Resistance	Ω/km	0.766	0.647	0.573	0.533	0.504	0.479	0.455	0.440	0.427	0.417	0.409	0.404	0.399
Zero Sequence Reactance	Ω/km	0.095	0.087	0.080	0.076	0.072	0.067	0.063	0.059	0.055	0.052	0.048	0.045	0.042
Current Ratings														
Laid in air	Amps	250	310	375	430	490	560	655	745	860	990	1135	1280	1415
Laid direct in ground	Amps	215	265	315	360	400	455	520	585	660	745	835	920	1000
Drawn into trefoil ducts	Amps	205	250	295	330	370	410	465	515	575	640	715	785	830
Drawn into 1 duct	Amps	185	225	270	315	350	395	455	510	-	-	-	-	-
Short circuit ratings (1s, adiabatic)														
Conductor (90 to 250°C)	kA	7.2	10.0	13.6	17.2	21.5	26.5	34.3	42.9	57.2	71.5	90.1	114.5	143.1
Copper wire screen (80 to 250°C)	kA	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Current rating conditions														
Air temperature	°C	25												
Ground temperature	°C	15												
Depth of burial (to centre of cable group)	mm	800												
Thermal resistance of soil	°C m/W	1.2												
Single core cables in trefoil, bonded and earthed at both ends.														

All data are nominal and subject to manufacturing tolerances
* For EPR, multiply capacitance and charging current values by 1.2
Ref: IEC60287-2-1 (A2:2006)