TRIPLEX MEDIUM VOLTAGE CABLE

NF2XSE(AB)Y

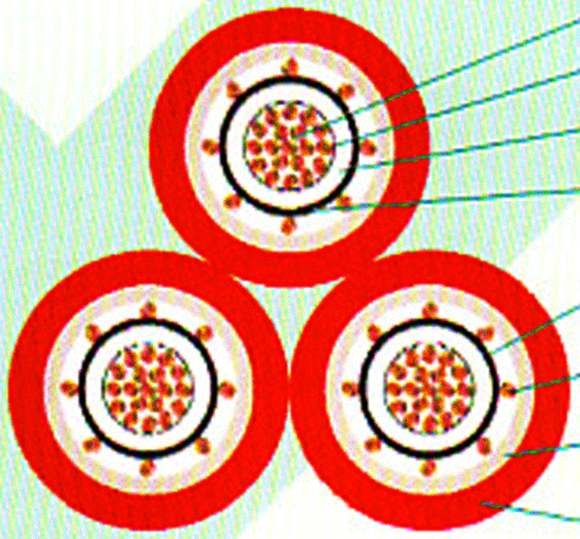
3.6/6 (7.2) ~ 18/30 (36) kV
NON METALLIC ARMOR TO IEC 60502.2
Standard

CABLE CONSTRUCTIONS

- **CONDUCTOR**
  Compacted circular stranded copper /aluminum with cross sectional area range 50 ~ 400 mm2, complying with IEC 60228 Class 2.
  Water blocked stranded conductor is available upon request; maximum continuous operating temperature : 90 C.
- **CONDUCTOR SCREEN**
  Extruded Semi-conducting compound bonded to insulation and applied in the same operation as the insulation
- **INSULATION**
  Extruded cross-linked polyethylene (XLPE)/ Hard ethylene propylene rubber (HEPR), triple layers extrusion with bonded semi conductive conductor screen and insulation screen, dry curing process, and suitable for operating at a conductor temperature of 90°C .
- **INSULATION SCREEN**
  Extruded Semi-conducting compound in the same operation as the insulation, fully bonded screens or easy strippable
- **METALLIC SCREEN**
  Copper wires screen is applied to provide an earth fault current path; water blocking screen is available upon request.
- **NON METALLIC ARMOR**
  Polymeric shock absorber "Airbag®" compound instead of metallic armor to provide shock absorber
- **SHEATH**
  Extruded red polyvinyl chloride (PVC) compound is supplied as standard. Alternative materials may be provided where specified e.g. reduced flame propagation PVC (PVC-FR), Low Smoke Zero Halogen compound (LSOH) or Medium/High Density Polyethylene (MD/HD PE). Other colors are available on request.

NOTE

- Also available product in accordance to SPLN, ICEA/NEMA, AS std or other customer requirement.
- Detailed cable data are shown in the tables.

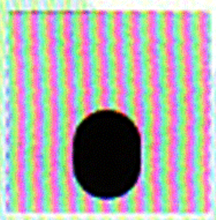


1. Copper conductor
2. Extruded conductor screen
3. XLPE insulation
4. Extruded insulation screen
5. Identification colors tape
6. Copper wires screen
7. Non metallic airbag armor
8. PVC outer sheath

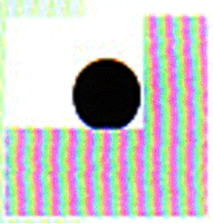
CABLE CHARACTERISTICS

Ambient temperature	Resistance to water	Chemical resistance	Flexibility	Behaviour in flame and fire	Minimum bending radius	Mechanical impact resistance	Resistance to solar radiation and weather
+90°C −25°C	Splashes	Very Good	Flexible	C 3		4	Very Good

INSTALLATION CONDITIONS


In ground

In duct


In free air

Minimum bending Radius during Installation

PRYSMIAN CABLES & SYSTEMS

TRIPLEX COPPER INSULATED NON METALLIC ARMOR MEDIUM VOLTAGE CABLE

3.6/6 (7.2) kV to IEC 60502.2 Standard

COPPER CONDUCTOR, XLPE INSULATION, COPPER WIRES SCREEN, AIRBAG™, PVC SHEATH

Cross section area	mm2	3X1X50	3X1X70	3X1X95	3X1X120	3X1X150	3X1X185	3X1X240	3X1X300	3X1X400
Nominal insulation thickness	mm	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.8	3.0
Nominal diameter over insulation	mm	15.29	16.89	18.49	19.99	21.29	23.09	25.49	28.04	31.55
Nominal area of copper wires screen	mm2	16	16	16	16	25	25	25	25	35
Nominal outer sheath thickness	mm	1.6	1.7	1.7	1.8	1.8	1.9	1.9	2	2.2
Nominal overall diameter of triplex cable	mm	59	63	67	70	73	77	83	89	97
Approximate cable weight	kg/m	2803	3460	4240	5039	6080	7198	8879	10750	13289
Nominal drum length	m	1000	1000	1000	500	500	500	500	500	400
Minimum bending radius during installation	mm	1180	1260	1340	1400	1460	1540	1660	1780	1940
Minimum bending radius of installed cables	mm	885	945	1005	1050	1095	1155	1245	1335	1455
Nominal internal diameter of ducts	mm	89	95	101	105	110	116	125	134	146
Maximum DC resistance @ 20 ^{0}C per phase	ohm/km	0.3860	0.2680	0.1930	0.1530	0.1240	0.0991	0.0754	0.0601	0.0470
Maximum AC resistance @ 90 ^{0}C per phase	ohm/km	0.5496	0.3458	0.2502	0.1994	0.1643	0.1327	0.1027	0.0835	0.0693
Reactance @ 50 Hz per phase	ohm/km	0.142	0.135	0.128	0.13	0.121	0.116	0.112	0.107	0.104
Impedance @ 50 Hz per phase	ohm/km	0.568	0.371	0.281	0.238	0.204	0.176	0.152	0.136	0.125
Nominal capacitance per phase	pF/m	315	360	404	445	481	530	570	587	623
Maximum charging current per phase	mA/m	0.59	0.68	0.76	0.84	0.91	1	1.07	1.11	1.17
Continuous Current rating in ground	A	190	231	277	309	349	393	452	510	570
Continuous Current rating in ducts	A	200	240	285	320	360	396	463	507	561
Continuous Current rating in air	A	236	291	354	393	456	523	613	703	803
Maximum operating conductor temperature	^{0}C	90	90	90	90	90	90	90	90	90
Short circuit of conductor for 1 sec/core (non adiabatic)	kA	7	10	13	17	21	27	34	43	57
Short circuit of metallic screen for 1 sec/core (non adiabatic)	kA	3	3	3	3	4.6	4.6	4.6	4.6	6.4
Final conductor and screen temperature after short circuit	^{0}C	250	250	250	250	250	250	250	250	250

Standard current rating conditions

Ground temperature	^{0}C	30
Ambient temperature (air)	^{0}C	30
Depth of burial	m	0.8
Thermal resistivity of soil	^{0}C m/W	1.2

Single core cables in trefoil, bonded and earthed at both ends

Average variation in soil thermal resistivity for cables

		Soil thermal resistivity			
	^{0}C m/W	0.8	1	2	2.5
in ground	1 core	1.17	1.08	0.79	0.72
	3 core	1.13	1.07	0.84	0.77
in ducts	1 core	1.15	1.07	0.83	0.76
	3 core	1.16	1.07	0.80	0.73

Multiple circuits

		Number of circuits		
	Spacing	2	3	4
3 core cable	0.30m	0.88	0.79	0.76
	0.45m	0.90	0.83	0.79
	0.60m	0.92	0.86	0.83
1 core cables	0.30m	0.85	0.76	0.72
(Trefoil formation)	0.45m	0.88	0.80	0.76
	0.60m	0.90	0.83	0.80

Variation in temperature

	Temperature ^{0}C						
	15	20	25	30	35	40	50
Multiple in air rating			1.05	1.00	0.96	0.90	0.77
Multiple of laid direct and duct rating	1.12	0.09	1.04	1.00	0.97	0.92	0.82

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PRYSMIAN CABLES & SYSTEMS

TRIPLEX COPPER INSULATED NON METALLIC ARMOR MEDIUM VOLTAGE CABLE

6/10 (12) kV to IEC 60502.2 Standard

COPPER CONDUCTOR, XLPE INSULATION, COPPER WIRES SCREEN, AIRBAG™, PVC SHEATH

Cross section area	mm2	3X1X50	3X1X70	3X1X95	3X1X120	3X1X150	3X1X185	3X1X240	3X1X300	3X1X400
Nominal insulation thickness	mm	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Nominal diameter over insulation	mm	17.12	18.72	20.32	21.82	23.12	24.92	27.12	29.26	32.36
Nominal area of copper wires screen	mm2	16	16	16	16	25	25	25	25	35
Nominal outer sheath thickness	mm	1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.1	2.2
Nominal overall diameter of triplex cable	mm	64	67	71	74	78	81	87	92	99
Approximate cable weight	kg/m	3003	3650	4470	5254	6335	7438	9139	10975	13414
Nominal drum length	m	1000	1000	1000	500	500	500	500	400	400
Minimum bending radius during installation	mm	1280	1340	1420	1480	1560	1620	1740	1840	1980
Minimum bending radius of installed cables	mm	960	1005	1065	1110	1170	1215	1305	1380	1485
Nominal internal diameter of ducts	mm	96	101	107	111	117	122	131	138	149
Maximum DC resistance @ 20 ^{0}C per phase	ohm/km	0.3860	0.2680	0.1930	0.1530	0.1240	0.0991	0.0754	0.0601	0.0470
Maximum AC resistance @ 90 ^{0}C per phase	ohm/km	0.5496	0.3458	0.2502	0.1994	0.1643	0.1327	0.1027	0.0835	0.0693
Reactance @ 50 Hz per phase	ohm/km	0.142	0.135	0.128	0.13	0.121	0.116	0.112	0.107	0.104
Impedance @ 50 Hz per phase	ohm/km	0.568	0.371	0.281	0.238	0.204	0.176	0.152	0.136	0.125
Nominal capacitance per phase	pF/m	248	280	313	344	370	407	451	494	557
Maximum charging current per phase	mA/m	0.78	0.88	0.98	1.08	1.16	1.28	1.42	1.55	1.75
Continuous Current rating in ground	A	190	231	277	309	349	393	452	510	570
Continuous Current rating in ducts	A	200	240	285	320	360	396	463	507	561
Continuous Current rating in air	A	236	291	354	393	456	523	613	703	803
Maximum operating conductor temperature	^{0}C	90	90	90	90	90	90	90	90	90
Short circuit of conductor for 1 sec/core (non adiabatic)	kA	7	10	13	17	21	27	34	43	57
Short circuit of metallic screen for 1 sec/core (non adiabatic)	kA	3	3	3	3	4.6	4.6	4.6	4.6	6.4
Final conductor and screen temperature after short circuit	^{0}C	250	250	250	250	250	250	250	250	250

Standard current rating conditions

Ground temperature	^{0}C	30
Ambient temperature (air)	^{0}C	30
Depth of burial	m	0.8
Thermal resistivity of soil	^{0}C m/W	1.2

Single core cables in trefoil, bonded and earthed at both ends

Average variation in soil thermal resistivity for cables

		Soil thermal resistivity			
	^{0}C m/W	0.8	1	2	2.5
in ground	1 core	1.17	1.08	0.79	0.72
	3 core	1.13	1.07	0.84	0.77
in ducts	1 core	1.15	1.07	0.83	0.76
	3 core	1.16	1.07	0.80	0.73

Multiple circuits

		Number of circuits		
	Spacing	2	3	4
3 core cable	0.30m	0.88	0.79	0.76
	0.45m	0.90	0.83	0.79
	0.60m	0.92	0.86	0.83
1 core cables	0.30m	0.85	0.76	0.72
(Trefoil formation)	0.45m	0.88	0.80	0.76
	0.60m	0.90	0.83	0.80

Variation in temperature

	Temperature ^{0}C						
	15	20	25	30	35	40	50
Multiple in air rating			1.05	1.00	0.96	0.90	0.77
Multiple of laid direct and duct rating	1.12	0.09	1.04	1.00	0.97	0.92	0.82

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PRYSMIAN CABLES & SYSTEMS

TRIPLEX COPPER INSULATED NON METALLIC ARMOR MEDIUM VOLTAGE CABLE

8.7/15 (17.5) kV to IEC 60502.2 Standard

COPPER CONDUCTOR, XLPE INSULATION, COPPER WIRES SCREEN, AIRBAG™, PVC SHEATH

Cross section area	mm2	**3X1X50**	**3X1X70**	**3X1X95**	**3X1X120**	**3X1X150**	**3X1X185**	**3X1X240**	**3X1X300**	**3X1X400**
Nominal insulation thickness	mm	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Nominal diameter over insulation	mm	19.36	20.96	22.56	24.06	25.36	27.16	29.36	31.50	34.60
Nominal area of copper wires screen	mm2	16	16	16	16	25	25	25	25	35
Nominal outer sheath thickness	mm	1.7	1.8	1.8	1.9	1.9	2.0	2.1	2.2	2.3
Nominal overall diameter of triplex cable	mm	69	72	76	80	82	87	92	97	104
Approximate cable weight	kg/m	3253	3945	4755	5584	6645	7808	9529	11395	13869
Nominal drum length	m	1000	1000	1000	500	500	500	500	500	400
Minimum bending radius during installation	mm	1380	1440	1520	1600	1640	1740	1840	1940	2080
Minimum bending radius of installed cables	mm	1035	1080	1140	1200	1230	1305	1380	1455	1560
Nominal internal diameter of ducts	mm	104	108	114	120	123	131	138	146	156
Maximum DC resistance @ 20 ^{0}C per phase	ohm/km	0.3860	0.2680	0.1930	0.1530	0.1240	0.0991	0.0754	0.0601	0.0470
Maximum AC resistance @ 90 ^{0}C per phase	ohm/km	0.5496	0.3458	0.2502	0.1994	0.1643	0.1327	0.1027	0.0835	0.0693
Reactance @ 50 Hz per phase	ohm/km	0.142	0.135	0.128	0.13	0.121	0.116	0.112	0.107	0.104
Impedance @ 50 Hz per phase	ohm/km	0.568	0.371	0.281	0.238	0.204	0.176	0.152	0.136	0.125
Nominal capacitance per phase	pF/m	201	226	251	274	294	322	356	389	436
Maximum charging current per phase	mA/m	0.95	1.06	1.18	1.29	1.39	1.52	1.68	1.83	2.05
Continuous Current rating in ground	A	190	231	277	309	349	393	452	510	570
Continuous Current rating in ducts	A	200	240	285	320	360	396	463	507	561
Continuous Current rating in air	A	236	291	354	393	456	523	613	703	803
Maximum operating conductor temperature	^{0}C	90	90	90	90	90	90	90	90	90
Short circuit of conductor for 1 sec/core (non adiabatic)	kA	7	10	13	17	21	27	34	43	57
Short circuit of metallic screen for 1 sec/core (non adiabatic)	kA	3	3	3	3	4.6	4.6	4.6	4.6	6.4
Final conductor and screen temperature after short circuit	^{0}C	250	250	250	250	250	250	250	250	250

Standard current rating conditions

Ground temperature	^{0}C	30
Ambient temperature (air)	^{0}C	30
Depth of burial	m	0.8
Thermal resistivity of soil	^{0}C m/W	1.2

Single core cables in trefoil, bonded and earthed at both ends

Average variation in soil thermal resistivity for cables

		Soil thermal resistivity			
	^{0}C m/W	0.8	1	2	2.5
in ground	1 core	1.17	1.08	0.79	0.72
	3 core	1.13	1.07	0.84	0.77
in ducts	1 core	1.15	1.07	0.83	0.76
	3 core	1.16	1.07	0.80	0.73

Multiple circuits

		Number of circuits		
	Spacing	2	3	4
3 core cable	0.30m	0.88	0.79	0.76
	0.45m	0.90	0.83	0.79
	0.60m	0.92	0.86	0.83
1 core cables	0.30m	0.85	0.76	0.72
(Trefoil formation)	0.45m	0.88	0.80	0.76
	0.60m	0.90	0.83	0.80

Variation in temperature

	Temperature ^{0}C						
	15	20	25	30	35	40	50
Multiple in air rating			1.05	1.00	0.96	0.90	0.77
Multiple of laid direct and duct rating	1.12	0.09	1.04	1.00	0.97	0.92	0.82

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PRYSMIAN CABLES & SYSTEMS

TRIPLEX COPPER NON METALLIC ARMOR MEDIUM VOLTAGE CABLE

12/20 (24) kV to IEC 60502.2 Standard

COPPER CONDUCTOR, XLPE INSULATION, COPPER WIRES SCREEN, AIRBAG™, PVC SHEATH

Cross section area	mm2	3X1X50	3X1X70	3X1X95	3X1X120	3X1X150	3X1X185	3X1X240	3X1X300	3X1X400
Nominal insulation thickness	mm	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Nominal diameter over insulation	mm	21.40	23.00	24.60	26.10	27.40	29.20	31.40	33.54	36.64
Nominal area of copper wires screen	mm2	16	16	16	16	25	25	25	25	35
Nominal outer sheath thickness	mm	1.8	1.9	1.9	2.0	2.0	2.1	2.2	2.2	2.3
Nominal overall diameter of triplex cable	mm	73	77	81	84	87	92	97	101	108
Approximate cable weight	kg/m	3533	4240	5065	5914	6985	8163	9914	11765	14549
Nominal drum length	m	1000	1000	500	500	500	500	500	400	300
Minimum bending radius during installation	mm	1460	1540	1620	1680	1740	1840	1940	2020	2160
Minimum bending radius of installed cables	mm	1095	1155	1215	1260	1305	1380	1455	1515	1620
Nominal internal diameter of ducts	mm	110	116	122	126	131	138	146	152	162
Maximum DC resistance @ 20 ^{0}C per phase	ohm/km	0.3860	0.2680	0.1930	0.1530	0.1240	0.0991	0.0754	0.0601	0.0470
Maximum AC resistance @ 90 ^{0}C per phase	ohm/km	0.5496	0.3458	0.2502	0.1994	0.1643	0.1327	0.1027	0.0835	0.0693
Reactance @ 50 Hz per phase	ohm/km	0.142	0.135	0.128	0.13	0.121	0.116	0.112	0.107	0.104
Impedance @ 50 Hz per phase	ohm/km	0.568	0.371	0.281	0.238	0.204	0.176	0.152	0.136	0.125
Nominal capacitance per phase	pF/m	174	195	216	235	252	274	302	329	368
Maximum charging current per phase	mA/m	0.66	0.74	0.81	0.89	0.95	1.03	1.14	1.24	1.39
Continuous Current rating in ground	A	190	231	277	309	349	393	452	510	570
Continuous Current rating in ducts	A	200	240	285	320	360	396	463	507	561
Continuous Current rating in air	A	236	291	354	393	456	523	613	703	803
Maximum operating conductor temperature	^{0}C	90	90	90	90	90	90	90	90	90
Short circuit of conductor for 1 sec/core (non adiabatic)	kA	7	10	13	17	21	27	34	43	57
Short circuit of metallic screen for 1 sec/core (non adiabatic)	kA	3	3	3	3	4.6	4.6	4.6	4.6	6.4
Final conductor and screen temperature after short circuit	^{0}C	250	250	250	250	250	250	250	250	250

Standard current rating conditions

Ground temperature	^{0}C	30
Ambient temperature (air)	^{0}C	30
Depth of burial	m	0.8
Thermal resistivity of soil	^{0}C m/W	1.2

Single core cables in trefoil, bonded and earthed at both ends

Average variation in soil thermal resistivity for cables

		Soil thermal resistivity			
	^{0}C m/W	0.8	1	2	2.5
in ground	1 core	1.17	1.08	0.79	0.72
	3 core	1.13	1.07	0.84	0.77
in ducts	1 core	1.15	1.07	0.83	0.76
	3 core	1.16	1.07	0.80	0.73

Multiple circuits

		Number of circuits		
	Spacing	2	3	4
3 core cable	0.30m	0.88	0.79	0.76
	0.45m	0.90	0.83	0.79
	0.60m	0.92	0.86	0.83
1 core cables	0.30m	0.85	0.76	0.72
(Trefoil formation)	0.45m	0.88	0.80	0.76
	0.60m	0.90	0.83	0.80

Variation in temperature

	Temperature ^{0}C						
	15	20	25	30	35	40	50
Multiple in air rating			1.05	1.00	0.96	0.90	0.77
Multiple of laid direct and duct rating	1.12	0.09	1.04	1.00	0.97	0.92	0.82

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PRYSMIAN CABLES & SYSTEMS

TRIPLEX COPPER INSULATED NON METALLIC ARMOR MEDIUM VOLTAGE CABLE

18/30 (36)kV to IEC 60502.2 Standard

COPPER CONDUCTOR, XLPE INSULATION, COPPER WIRES SCREEN, AIRBAG™, PVC SHEATH

Cross section area	mm2	3X1X50	3X1X70	3X1X95	3X1X120	3X1X150	3X1X185	3X1X240	3X1X300	3X1X400
Nominal insulation thickness	mm	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Nominal diameter over insulation	mm	26.49	28.09	29.69	31.19	32.49	34.29	36.49	38.63	41.73
Nominal area of copper wires screen	mm2	16	16	16	16	25	25	25	25	35
Nominal outer sheath thickness	mm	2	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.5
Nominal overall diameter of triplex cable	mm	85	89	93	96	99	103	108	113	120
Approximate cable weight	kg/m	4298	5070	5915	6804	7660	8893	10654	12615	15179
Nominal drum length	m	500	500	500	500	500	500	400	400	300
Minimum bending radius during installation	mm	1700	1780	1860	1920	1980	2060	2160	2260	2400
Minimum bending radius of installed cables	mm	1275	1335	1395	1440	1485	1545	1620	1695	1800
Nominal internal diameter of ducts	mm	128	134	140	144	149	155	162	170	180
Maximum DC resistance @ 20 ^{0}C per phase	ohm/km	0.3860	0.2680	0.1930	0.1530	0.1240	0.0991	0.0754	0.0601	0.0470
Maximum AC resistance @ 90 ^{0}C per phase	ohm/km	0.5496	0.3458	0.2502	0.1994	0.1643	0.1327	0.1027	0.0835	0.0693
Reactance @ 50 Hz per phase	ohm/km	0.142	0.135	0.128	0.13	0.121	0.116	0.112	0.107	0.104
Impedance @ 50 Hz per phase	ohm/km	0.568	0.371	0.281	0.238	0.204	0.176	0.152	0.136	0.125
Nominal capacitance per phase	pF/m	151	166	179	191	207	226	245	272	272
Maximum charging current per phase	mA/m	0.85	0.94	1.01	1.08	1.17	1.28	1.39	1.54	1.54
Continuous Current rating in ground	A	190	231	277	309	349	393	452	510	570
Continuous Current rating in ducts	A	200	240	285	320	360	396	463	507	561
Continuous Current rating in air	A	236	291	354	393	456	523	613	703	803
Maximum operating conductor temperature	^{0}C	90	90	90	90	90	90	90	90	90
Short circuit of conductor for 1 sec/core (non adiabatic)	kA	7	10	13	17	21	27	34	43	57
Short circuit of metallic screen for 1 sec/core (non adiabatic)	kA	3	3	3	3	4.6	4.6	4.6	4.6	6.4
Final conductor and screen temperature after short circuit	^{0}C	250	250	250	250	250	250	250	250	250

Standard current rating conditions

Ground temperature	^{0}C	30
Ambient temperature (air)	^{0}C	30
Depth of burial	m	0.8
Thermal resistivity of soil	^{0}C m/W	1.2

Single core cables in trefoil, bonded and earthed at both ends

Average variation in soil thermal resistivity for cables

		Soil thermal resistivity			
	^{0}C m/W	0.8	1	2	2.5
in ground	1 core	1.17	1.08	0.79	0.72
	3 core	1.13	1.07	0.84	0.77
in ducts	1 core	1.15	1.07	0.83	0.76
	3 core	1.16	1.07	0.80	0.73

Multiple circuits

		Number of circuits		
	Spacing	2	3	4
3 core cable	0.30m	0.88	0.79	0.76
	0.45m	0.90	0.83	0.79
	0.60m	0.92	0.86	0.83
1 core cables	0.30m	0.85	0.76	0.72
(Trefoil formation)	0.45m	0.88	0.80	0.76
	0.60m	0.90	0.83	0.80

Variation in temperature

	Temperature ^{0}C						
	15	20	25	30	35	40	50
Multiple in air rating			1.05	1.00	0.96	0.90	0.77
Multiple of laid direct and duct rating	1.12	0.09	1.04	1.00	0.97	0.92	0.82

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PRYSMIAN CABLES & SYSTEMS

TRIPLEX ALUMINUM INSULATED NON METALLIC MEDIUM VOLTAGE CABLE

3.6/6 (7.2) kV to IEC 60502.2 Standard

ALUMINIUM CONDUCTOR, XLPE INSULATION, COPPER WIRES SCREEN, AIRBAG™, PVC SHEATH

Cross section area	mm2	3X1X50	3X1X70	3X1X95	3X1X120	3X1X150	3X1X185	3X1X240	3X1X300	3X1X400
Nominal insulation thickness	mm	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.8	3.0
Nominal diameter over insulation	mm	15.29	16.89	18.49	19.99	21.29	23.09	25.49	28.04	31.55
Nominal area of copper wires screen	mm2	16	16	16	16	25	25	25	25	35
Nominal outer sheath thickness	mm	1.6	1.7	1.7	1.8	1.8	1.9	1.9	2	2.2
Nominal overall diameter of triplex cable	mm	59	63	67	70	73	77	83	89	97
Approximate cable weight	kg/m	1945	2235	2545	2880	3410	3865	4475	5295	6350
Nominal drum length	m	1000	1000	1000	1000	1000	1000	1000	500	500
Minimum bending radius during installation	mm	1180	1260	1340	1400	1460	1540	1660	1780	1940
Minimum bending radius of installed cables	mm	885	945	1005	1050	1095	1155	1245	1335	1455
Nominal internal diameter of ducts	mm	89	95	101	105	110	116	125	134	146
Maximum DC resistance @ 20 ^{0}C per phase	ohm/km	0.6410	0.4430	0.3200	0.2530	0.2060	0.1640	0.1250	0.1000	0.0778
Maximum AC resistance @ 90 ^{0}C per phase	ohm/km	0.8258	0.5719	0.4142	0.3284	0.2700	0.2161	0.1663	0.1343	0.1081
Reactance @ 50 Hz per phase	ohm/km	0.142	0.135	0.128	0.13	0.121	0.116	0.112	0.107	0.104
Impedance @ 50 Hz per phase	ohm/km	0.838	0.588	0.434	0.353	0.296	0.245	0.200	0.172	0.150
Nominal capacitance per phase	pF/m	360	404	445	481	530	570	587	623	623
Maximum charging current per phase	mA/m	0.68	0.76	0.84	0.91	1	1.07	1.11	1.17	1.17
Continuous Current rating in ground	A	147	179	214	240	271	308	356	403	457
Continuous Current rating in ducts	A	156	187	223	249	285	312	369	409	463
Continuous Current rating in air	A	183	227	275	307	356	410	482	554	642
Maximum operating conductor temperature	^{0}C	90	90	90	90	90	90	90	90	90
Short circuit of conductor for 1 sec/core (non adiabatic)	kA	5	6.0	9.0	11.0	14.0	17.0	23.0	28.0	38.0
Short circuit of metallic screen for 1 sec/core (non adiabatic)	kA	3	3	3	3	4.6	4.6	4.6	4.6	6.4
Final conductor and screen temperature after short circuit	^{0}C	250	250	250	250	250	250	250	250	250

Standard current rating conditions

Ground temperature	^{0}C	30
Ambient temperature (air)	^{0}C	30
Depth of burial	m	0.8
Thermal resistivity of soil	^{0}C m/W	1.2

Single core cables in trefoil, bonded and earthed at both ends

Average variation in soil thermal resistivity for cables

		Soil thermal resistivity			
	^{0}C m/W	0.8	1	2	2.5
in ground	1 core	1.17	1.08	0.79	0.72
	3 core	1.13	1.07	0.84	0.77
in ducts	1 core	1.15	1.07	0.83	0.76
	3 core	1.16	1.07	0.80	0.73

Multiple circuits

		Number of circuits		
	Spacing	2	3	4
3 core cable	0.30m	0.88	0.79	0.76
	0.45m	0.90	0.83	0.79
	0.60m	0.92	0.86	0.83
1 core cables	0.30m	0.85	0.76	0.72
(Trefoil formation)	0.45m	0.88	0.80	0.76
	0.60m	0.90	0.83	0.80

Variation in temperature

	Temperature ^{0}C						
	15	20	25	30	35	40	50
Multiple in air rating			1.05	1.00	0.96	0.90	0.77
Multiple of laid direct and duct rating	1.12	0.09	1.04	1.00	0.97	0.92	0.82

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PRYSMIAN CABLES & SYSTEMS

TRIPLEX ALUMINUM INSULATED NON METALLIC MEDIUM VOLTAGE CABLE

6/10 (12) kV to IEC 60502.2 Standard

ALUMINIUM CONDUCTOR, XLPE INSULATION, COPPER WIRES SCREEN, AIRBAG™, PVC SHEATH

Cross section area	mm2	3X1X50	3X1X70	3X1X95	3X1X120	3X1X150	3X1X185	3X1X240	3X1X300	3X1X400
Nominal insulation thickness	mm	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Nominal diameter over insulation	mm	17.12	18.72	20.32	21.82	23.12	24.92	27.12	29.26	32.36
Nominal area of copper wires screen	mm2	16	16	16	16	25	25	25	25	35
Nominal outer sheath thickness	mm	1.7	1.7	1.8	1.8	1.9	1.9	2.0	2.1	2.2
Nominal overall diameter of triplex cable	mm	64	67	71	74	78	81	87	92	99
Approximate cable weight	kg/m	2145	2425	2775	3095	3665	4105	4735	5520	6475
Nominal drum length	m	1000	1000	1000	1000	1000	1000	1000	500	500
Minimum bending radius during installation	mm	1280	1340	1420	1480	1560	1620	1740	1840	1980
Minimum bending radius of installed cables	mm	960	1005	1065	1110	1170	1215	1305	1380	1485
Nominal internal diameter of ducts	mm	96	101	107	111	117	122	131	138	149
Maximum DC resistance @ 20 ^{0}C per phase	ohm/km	0.6410	0.4430	0.3200	0.2530	0.2060	0.1640	0.1250	0.1000	0.0778
Maximum AC resistance @ 90 ^{0}C per phase	ohm/km	0.8258	0.5719	0.4142	0.3284	0.2700	0.2161	0.1663	0.1343	0.1081
Reactance @ 50 Hz per phase	ohm/km	0.142	0.135	0.128	0.13	0.121	0.116	0.112	0.107	0.104
Impedance @ 50 Hz per phase	ohm/km	0.838	0.588	0.434	0.353	0.296	0.245	0.200	0.172	0.150
Nominal capacitance per phase	pF/m	280	313	344	370	407	451	494	557	557
Maximum charging current per phase	mA/m	0.88	0.98	1.08	1.16	1.28	1.42	1.55	1.75	1.75
Continuous Current rating in ground	A	147	179	214	240	271	308	356	403	457
Continuous Current rating in ducts	A	156	187	223	249	285	312	369	409	463
Continuous Current rating in air	A	183	227	275	307	356	410	482	554	642
Maximum operating conductor temperature	^{0}C	90	90	90	90	90	90	90	90	90
Short circuit of conductor for 1 sec/core (non adiabatic)	kA	5	6.0	9.0	11.0	14.0	17.0	23.0	28.0	38.0
Short circuit of metallic screen for 1 sec/core (non adiabatic)	kA	3	3	3	3	4.6	4.6	4.6	4.6	6.4
Final conductor and screen temperature after short circuit	^{0}C	250	250	250	250	250	250	250	250	250

Standard current rating conditions

Ground temperature	^{0}C	30
Ambient temperature (air)	^{0}C	30
Depth of burial	m	0.8
Thermal resistivity of soil	^{0}C m/W	1.2

Single core cables in trefoil, bonded and earthed at both ends

Average variation in soil thermal resistivity for cables

		Soil thermal resistivity			
	^{0}C m/W	0.8	1	2	2.5
in ground	1 core	1.17	1.08	0.79	0.72
	3 core	1.13	1.07	0.84	0.77
in ducts	1 core	1.15	1.07	0.83	0.76
	3 core	1.16	1.07	0.80	0.73

Multiple circuits

		Number of circuits		
	Spacing	2	3	4
3 core cable	0.30m	0.88	0.79	0.76
	0.45m	0.90	0.83	0.79
	0.60m	0.92	0.86	0.83
1 core cables	0.30m	0.85	0.76	0.72
(Trefoil formation)	0.45m	0.88	0.80	0.76
	0.60m	0.90	0.83	0.80

Variation in temperature

	Temperature ^{0}C						
	15	20	25	30	35	40	50
Multiple in air rating			1.05	1.00	0.96	0.90	0.77
Multiple of laid direct and duct rating	1.12	0.09	1.04	1.00	0.97	0.92	0.82

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PRYSMIAN CABLES & SYSTEMS

TRIPLEX ALUMINUM INSULATED NON METALLIC MEDIUM VOLTAGE CABLE

8.7/15 (17.5) kV to IEC 60502.2 Standard

ALUMINIUM CONDUCTOR, XLPE INSULATION, COPPER WIRES SCREEN, AIRBAG™, PVC SHEATH

Cross section area	mm2	3X1X50	3X1X70	3X1X95	3X1X120	3X1X150	3X1X185	3X1X240	3X1X300	3X1X400
Nominal insulation thickness	mm	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Nominal diameter over insulation	mm	19.36	20.96	22.56	24.06	25.36	27.16	29.36	31.50	34.60
Nominal area of copper wires screen	mm2	16	16	16	16	25	25	25	25	35
Nominal outer sheath thickness	mm	1.7	1.8	1.8	1.9	1.9	2.0	2.1	2.2	2.3
Nominal overall diameter of triplex cable	mm	69	72	76	80	82	87	92	97	104
Approximate cable weight	kg/m	2395	2720	3060	3425	3975	4475	5125	5940	6930
Nominal drum length	m	1000	1000	1000	1000	1000	1000	500	500	500
Minimum bending radius during installation	mm	1380	1440	1520	1600	1640	1740	1840	1940	2080
Minimum bending radius of installed cables	mm	1035	1080	1140	1200	1230	1305	1380	1455	1560
Nominal internal diameter of ducts	mm	104	108	114	120	123	131	138	146	156
Maximum DC resistance @ 20 ^{0}C per phase	ohm/km	0.6410	0.4430	0.3200	0.2530	0.2060	0.1640	0.1250	0.1000	0.0778
Maximum AC resistance @ 90 ^{0}C per phase	ohm/km	0.8258	0.5719	0.4142	0.3284	0.2700	0.2161	0.1663	0.1343	0.1081
Reactance @ 50 Hz per phase	ohm/km	0.142	0.135	0.128	0.13	0.121	0.116	0.112	0.107	0.104
Impedance @ 50 Hz per phase	ohm/km	0.838	0.588	0.434	0.353	0.296	0.245	0.200	0.172	0.150
Nominal capacitance per phase	pF/m	226	251	274	294	322	356	389	436	436
Maximum charging current per phase	mA/m	1.06	1.18	1.29	1.39	1.52	1.68	1.83	2.05	2.05
Continuous Current rating in ground	A	147	179	214	240	271	308	356	403	457
Continuous Current rating in ducts	A	156	187	223	249	285	312	369	409	463
Continuous Current rating in air	A	183	227	275	307	356	410	482	554	642
Maximum operating conductor temperature	^{0}C	90	90	90	90	90	90	90	90	90
Short circuit of conductor for 1 sec/core (non adiabatic)	kA	5	6.0	9.0	11.0	14.0	17.0	23.0	28.0	38.0
Short circuit of metallic screen for 1 sec/core (non adiabatic)	kA	3	3	3	3	4.6	4.6	4.6	4.6	6.4
Final conductor and screen temperature after short circuit	^{0}C	250	250	250	250	250	250	250	250	250

Standard current rating conditions

Ground temperature	^{0}C	30
Ambient temperature (air)	^{0}C	30
Depth of burial	m	0.8
Thermal resistivity of soil	^{0}C m/W	1.2

Single core cables in trefoil, bonded and earthed at both ends

Average variation in soil thermal resistivity for cables

		Soil thermal resistivity			
	^{0}C m/W	0.8	1	2	2.5
in ground	1 core	1.17	1.08	0.79	0.72
	3 core	1.13	1.07	0.84	0.77
in ducts	1 core	1.15	1.07	0.83	0.76
	3 core	1.16	1.07	0.80	0.73

Multiple circuits

		Number of circuits		
	Spacing	2	3	4
3 core cable	0.30m	0.88	0.79	0.76
	0.45m	0.90	0.83	0.79
	0.60m	0.92	0.86	0.83
1 core cables	0.30m	0.85	0.76	0.72
(Trefoil formation)	0.45m	0.88	0.80	0.76
	0.60m	0.90	0.83	0.80

Variation in temperature

	Temperature ^{0}C						
	15	20	25	30	35	40	50
Multiple in air rating			1.05	1.00	0.96	0.90	0.77
Multiple of laid direct and duct rating	1.12	0.09	1.04	1.00	0.97	0.92	0.82

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PRYSMIAN CABLES & SYSTEMS

TRIPLEXED ALUMINUM INSULATED MEDIUM VOLTAGE CABLE

18/30 (36) kV to IEC 60502-2 Standard

ALUMINIUM CONDUCTOR, XLPE INSULATION, COPPER WIRES SCREEN, AIRBAG™, PVC SHEATH

Cross section area	mm2	3X1X50	3X1X70	3X1X95	3X1X120	3X1X150	3X1X185	3X1X240	3X1X300	3X1X400
Nominal insulation thickness	mm	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Nominal diameter over insulation	mm	26.49	28.09	29.69	31.19	32.49	34.29	36.49	38.63	41.73
Nominal area of copper wires screen	mm2	16	16	16	16	25	25	25	25	35
Nominal outer sheath thickness	mm	2	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.5
Nominal overall diameter of triplex cable	mm	85	89	93	96	99	103	108	113	120
Approximate cable weight	kg/m	3440	3845	4220	4645	4990	5560	6250	7160	8240
Nominal drum length	m	1000	1000	1000	1000	1000	500	500	500	500
Minimum bending radius during installation	mm	1700	1780	1860	1920	1980	2060	2160	2260	2400
Minimum bending radius of installed cables	mm	1275	1335	1395	1440	1485	1545	1620	1695	1800
Nominal internal diameter of ducts	mm	128	134	140	144	149	155	162	170	180
Maximum DC resistance @ 20 ^{0}C per phase	ohm/km	0.6410	0.4430	0.3200	0.2530	0.2060	0.1640	0.1250	0.1000	0.0778
Maximum AC resistance @ 90 ^{0}C per phase	ohm/km	0.8258	0.5719	0.4142	0.3284	0.2700	0.2161	0.1663	0.1343	0.1081
Reactance @ 50 Hz per phase	ohm/km	0.142	0.135	0.128	0.13	0.121	0.116	0.112	0.107	0.104
Impedance @ 50 Hz per phase	ohm/km	0.838	0.588	0.434	0.353	0.296	0.245	0.200	0.172	0.150
Nominal capacitance per phase	pF/m	163	179	193	206	223	244	264	294	294
Maximum charging current per phase	mA/m	0.92	1.01	1.09	1.16	1.26	1.38	1.49	1.66	1.66
Continuous Current rating in ground	A	147	179	214	240	271	308	356	403	457
Continuous Current rating in ducts	A	156	187	223	249	285	312	369	409	463
Continuous Current rating in air	A	183	227	275	307	356	410	482	554	642
Maximum operating conductor temperature	^{0}C	90	90	90	90	90	90	90	90	90
Short circuit of conductor for 1 sec/core (non adiabatic)	kA	5	6.0	9.0	11.0	14.0	17.0	23.0	28.0	38.0
Short circuit of metallic screen for 1 sec/core (non adiabatic)	kA	3	3	3	3	4.6	4.6	4.6	4.6	6.4
Final conductor and screen temperature after short circuit	^{0}C	250	250	250	250	250	250	250	250	250

Standard current rating conditions

Ground temperature	^{0}C	30
Ambient temperature (air)	^{0}C	30
Depth of burial	m	0.8
Thermal resistivity of soil	^{0}C m/W	1.2

Single core cables in trefoil, bonded and earthed at both ends

Average variation in soil thermal resistivity for cables

		Soil thermal resistivity			
	^{0}C m/W	0.8	1	2	2.5
in ground	1 core	1.17	1.08	0.79	0.72
	3 core	1.13	1.07	0.84	0.77
in ducts	1 core	1.15	1.07	0.83	0.76
	3 core	1.16	1.07	0.80	0.73

Multiple circuits

		Number of circuits		
	Spacing	2	3	4
3 core cable	0.30m	0.88	0.79	0.76
	0.45m	0.90	0.83	0.79
	0.60m	0.92	0.86	0.83
1 core cables	0.30m	0.85	0.76	0.72
(Trefoil formation)	0.45m	0.88	0.80	0.76
	0.60m	0.90	0.83	0.80

Variation in temperature

	Temperature ^{0}C						
	15	20	25	30	35	40	50
Multiple in air rating			1.05	1.00	0.96	0.90	0.77
Multiple of laid direct and duct rating	1.12	0.09	1.04	1.00	0.97	0.92	0.82

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PRYSMIAN CABLES & SYSTEMS

TRIPLEX ALUMINUM INSULATED NON METALLIC MEDIUM VOLTAGE CABLE

12/20 (24) kV to IEC 60502.2 Standard

ALUMINIUM CONDUCTOR, XLPE INSULATION, COPPER WIRES SCREEN, AIRBAG™, PVC SHEATH

Cross section area	mm2	3X1X50	3X1X70	3X1X95	3X1X120	3X1X150	3X1X185	3X1X240	3X1X300	3X1X400
Nominal insulation thickness	mm	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Nominal diameter over insulation	mm	21.40	23.00	24.60	26.10	27.40	29.20	31.40	33.54	36.64
Nominal area of copper wires screen	mm2	16	16	16	16	25	25	25	25	35
Nominal outer sheath thickness	mm	1.8	1.9	1.9	2.0	2.0	2.1	2.2	2.2	2.3
Nominal overall diameter of triplex cable	mm	73	77	81	84	87	92	97	101	108
Approximate cable weight	kg/m	2675	3015	3370	3755.000	4315	4830	5510	6310	7610
Nominal drum length	m	1000	1000	1000	1000	1000	1000	500	500	500
Minimum bending radius during installation	mm	1460	1540	1620	1680	1740	1840	1940	2020	2160
Minimum bending radius of installed cables	mm	1095	1155	1215	1260	1305	1380	1455	1515	1620
Nominal internal diameter of ducts	mm	110	116	122	126	131	138	146	152	162
Maximum DC resistance @ 20 ^{0}C per phase	ohm/km	0.6410	0.4430	0.3200	0.2530	0.2060	0.1640	0.1250	0.1000	0.0778
Maximum AC resistance @ 90 ^{0}C per phase	ohm/km	0.8258	0.5719	0.4142	0.3284	0.2700	0.2161	0.1663	0.1343	0.1081
Reactance @ 50 Hz per phase	ohm/km	0.142	0.135	0.128	0.13	0.121	0.116	0.112	0.107	0.104
Impedance @ 50 Hz per phase	ohm/km	0.838	0.588	0.434	0.353	0.296	0.245	0.200	0.172	0.150
Nominal capacitance per phase	pF/m	195	216	235	252	274	302	329	368	368
Maximum charging current per phase	mA/m	0.74	0.81	0.89	0.95	1.03	1.14	1.24	1.39	1.39
Continuous Current rating in ground	A	147	179	214	240	271	308	356	403	457
Continuous Current rating in ducts	A	156	187	223	249	285	312	369	409	463
Continuous Current rating in air	A	183	227	275	307	356	410	482	554	642
Maximum operating conductor temperature	^{0}C	90	90	90	90	90	90	90	90	90
Short circuit of conductor for 1 sec/core (non adiabatic)	kA	5	6.0	9.0	11.0	14.0	17.0	23.0	28.0	38.0
Short circuit of metallic screen for 1 sec/core (non adiabatic)	kA	3	3	3	3	4.6	4.6	4.6	4.6	6.4
Final conductor and screen temperature after short circuit	^{0}C	250	250	250	250	250	250	250	250	250

Standard current rating conditions

Ground temperature	^{0}C	30
Ambient temperature (air)	^{0}C	30
Depth of burial	m	0.8
Thermal resistivity of soil	^{0}C m/W	1.2

Single core cables in trefoil, bonded and earthed at both ends

Average variation in soil thermal resistivity for cables

		Soil thermal resistivity			
	^{0}C m/W	0.8	1	2	2.5
in ground	1 core	1.17	1.08	0.79	0.72
	3 core	1.13	1.07	0.84	0.77
in ducts	1 core	1.15	1.07	0.83	0.76
	3 core	1.16	1.07	0.80	0.73

Multiple circuits

		Number of circuits		
	Spacing	2	3	4
3 core cable	0.30m	0.88	0.79	0.76
	0.45m	0.90	0.83	0.79
	0.60m	0.92	0.86	0.83
1 core cables	0.30m	0.85	0.76	0.72
(Trefoil formation)	0.45m	0.88	0.80	0.76
	0.60m	0.90	0.83	0.80

Variation in temperature

	Temperature ^{0}C						
	15	20	25	30	35	40	50
Multiple in air rating			1.05	1.00	0.96	0.90	0.77
Multiple of laid direct and duct rating	1.12	0.09	1.04	1.00	0.97	0.92	0.82

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