

Medium Voltage Power Cable to IEC 60502-2



XLPE Insulated with Longitudinal Water Barrier, PE Sheathed Single Core Cable for Fixed Installations:
6/10(12) kV, 12/20(24) kV & 18/30(36) kV to IEC 60502-2.

Application



For internal or external installation in open air, in tray, in tough conduit or for direct burial. Generally, for utility power applications, commercial buildings and industrial plant.

Construction

Conductor	Copper or Aluminium compacted conductor
Conductor screen	Triple Single Head extruded
Insulation	XLPE (cross -linked polyethylene) Dry nitrogen cured
Bonded insulation	XLPE (cross -linked polyethylene) Dry nitrogen cured
Water block	S/C swellable tape
Screen	Solid bare copper wires /counter Helix copper tape
Sheath	PE Black UV resistant or Red

Also available:

Tree-retardant XLPE insulation
EPR insulation
Easy-strip insulation screen
Aluminium wire armour

Cross Section Conductor & Screen No.x mm ² /mm ²	Min. No. wires	Nominal Insulation mm	Nominal Sheath mm	Nominal O/D mm	min Bending Radius mm	Approx Weight kg/km	Max resistance Conductor DC at 20°C Ω/km	Short circuit Rating Conductor (1sec) kA	Current Ratings(2)				Reactance 50Hz(5) Ω/km	Capacitance μF/km
														
									In Air 3 A	Ground 4 A	In Air 3 A	Ground 4 A		
N2XS(F)2Y 6/10(12) kV Copper														
1x35/16	6	3.4	1.8	21	315	750	0.524	5.0	197	187	235	212	0.133	0.23
1x50/16	6	3.4	1.8	24	360	900	0.387	7.2	236	220	282	249	0.127	0.25
1x70/16	12	3.4	1.8	25.5	383	1100	0.268	10.0	294	268	350	302	0.119	0.28
1x95/16	15	3.4	1.8	27	405	1450	0.193	13.6	358	320	426	359	0.114	0.32
1x120/16	18	3.4	1.8	28.5	428	1700	0.153	17.2	413	363	491	405	0.109	0.35
1x150/25	18	3.4	1.9	30.5	458	2000	0.124	21.5	468	405	549	442	0.106	0.37
1x185/25	30	3.4	1.9	33	495	2400	0.0991	26.5	535	457	625	493	0.102	0.41
1x240/25	34	3.4	2	35	525	2950	0.0754	34.3	631	526	731	563	0.098	0.46
1x300/25	34	3.4	2	37.5	563	3530	0.0601	42.9	722	591	831	626	0.095	0.5
1x400/35	53	3.4	2.1	41	615	4500	0.047	57.2	827	662	920	675	0.091	0.56
1x500/35	53	3.4	2.2	44	660	5500	0.0366	71.5	949	744	1043	748	0.069	0.61
1x630/35	53	3.4	2.3	48	720	7050	0.0283	90.1	1066	832	1162	835	0.087	0.67
NA2XS(F)2Y 6/10(12) kV Aluminium														
1x35/16	6	3.4	1.8	21	315	500	0.868	3.29	153	145	182	165	0.133	0.23
1x50/16	6	3.4	1.8	24	360	580	0.641	4.7	183	171	219	194	0.127	0.25
1x70/16	12	3.4	1.8	25.5	383	680	0.443	6.6	228	208	273	236	0.119	0.28
1x95/16	15	3.4	1.8	27	405	810	0.32	8.9	278	248	333	281	0.114	0.32
1x120/16	18	3.4	1.8	28.5	428	950	0.253	11.3	321	283	384	318	0.109	0.35
1x150/25	18	3.4	1.9	30.5	458	1100	0.206	14.1	364	315	432	350	0.106	0.37
1x185/25	30	3.4	1.9	33	495	1210	0.164	17.4	418	357	496	394	0.102	0.41
1x240/25	34	3.4	2	35	525	1420	0.125	22.6	494	413	583	452	0.098	0.46
1x300/25	34	3.4	2	37.5	563	1730	0.100	28.2	568	466	666	506	0.095	0.5
1x400/35	53	3.4	2.1	41	615	2100	0.0778	37.6	660	529	755	558	0.091	0.56
1x500/35	53	3.4	2.2	44	660	2520	0.0605	47	767	602	868	627	0.069	0.61
1x630/35	53	3.4	2.3	48	720	3000	0.0469	59.2	882	694	881	712	0.087	0.67
N2XS(F)2Y 12/20 (24) kV Copper														
1x35/16	6	5.5	1.8	26	390	900	0.524	5.0	200	187	235	213	0.144	0.16
1x50/16	6	5.5	1.8	27.5	413	1050	0.387	7.2	239	222	282	250	0.137	0.17
1x70/16	12	5.5	1.9	29	435	1300	0.268	10.0	297	271	351	303	0.129	0.19
1x95/16	15	5.5	1.9	31	465	1600	0.193	13.6	361	232	426	360	0.123	0.21
1x120/16	18	5.5	2.0	33	495	1900	0.153	17.2	416	367	491	407	0.118	0.23
1x150/25	18	5.5	2.0	34.5	518	2200	0.124	21.5	470	409	549	445	0.114	0.25
1x185/25	30	5.5	2.1	36	540	2550	0.0991	26.5	538	461	625	498	0.11	0.27
1x240/25	34	5.5	2.1	38.5	578	3200	0.0754	34.3	634	532	731	568	0.105	0.3
1x300/25	34	5.5	2.2	41	615	3800	0.0601	42.9	724	599	830	633	0.102	0.32
1x400/35	53	5.5	2.3	45	675	4750	0.047	57.2	829	671	923	685	0.098	0.36
1x500/35	53	5.5	2.4	48	720	5700	0.0366	71.5	953	754	1045	760	0.094	0.4
1x630/35	53	5.5	2.5	53	795	7250	0.0283	90.1	1070	843	1160	848	0.092	0.44
NA2XS(F)2Y 12/20 (24) kV Aluminium														
1x35/16	6	5.5	1.8	26	390	700	0.868	3.29	154	145	0.144	0.16	0.144	0.16
1x50/16	6	5.5	1.8	27.5	413	800	0.641	4.7	185	172	0.137	0.17	0.137	0.17
1x70/16	12	5.5	1.9	29	435	900	0.443	6.6	231	210	0.129	0.19	0.129	0.19
1x95/16	15	5.5	1.9	31	465	1050	0.32	8.9	280	251	0.123	0.21	0.123	0.21
1x120/16	18	5.5	2.0	33	495	1200	0.253	11.3	323	285	0.118	0.23	0.118	0.23
1x150/25	18	5.5	2.0	34.5	518	1300	0.206	14.1	366	319	0.114	0.25	0.114	0.25
1x185/25	30	5.5	2.1	36	540	1500	0.164	17.4	420	361	0.11	0.27	0.11	0.27
1x240/25	34	5.5	2.1	38.5	578	1650	0.125	22.6	496	417	0.105	0.3	0.105	0.3
1x300/25	34	5.5	2.2	41	615	1950	0.100	28.2	569	471	0.102	0.32	0.102	0.32
1x400/35	53	5.5	2.3	45	675	2300	0.0778	37.6	660	535	0.098	0.36	0.098	0.36
1x500/35	53	5.5	2.4	48	720	2800	0.0605	47	766	609	0.094	0.4	0.094	0.4
1x630/35	53	5.5	2.5	53	795	3300	0.0469	59.2	882	701	0.092	0.44	0.092	0.44



Cross Section Conductor & Screen No.x mm ² /mm ²	Min. No. wires	Nominal Insulation mm	Nominal Sheath mm	Nominal O/D mm	min Bending Radius mm	Approx Weight kg/km	Max resistance Conductor DC at 20°C Ω/km	Short circuit Rating Conductor (1sec) kA	Current Ratings(2)				Reactance 50Hz(5) Ω/km	Capacitance μF/km
									In Air 3 A	Ground 4 A	In Air 3 A	Ground 4 A		
N2XS(F)2Y 18/30 (36) kV Copper														
1x50/16	6	8	2.0	33	495	1400	0.387	7.2	241	225	282	251	0.146	0.13
1x70/16	12	8	2.0	35	525	1650	0.268	10.0	299	274	350	304	0.137	0.15
1x95/16	15	8	2.1	37	555	2000	0.193	13.6	363	327	425	362	0.131	0.16
1x120/16	18	8	2.1	38	570	2250	0.153	17.2	418	371	488	409	0.125	0.18
1x150/25	18	8	2.2	40	600	2700	0.124	21.5	472	414	548	449	0.121	0.19
1x185/25	30	8	2.2	42	630	3100	0.0991	26.5	539	466	624	502	0.17	0.2
1x240/25	34	8	2.3	44	660	3750	0.0754	34.3	635	539	728	574	0.112	0.22
1x300/25	34	8	2.4	47	705	4300	0.0601	42.9	725	606	828	640	0.108	0.24
1x400/35	53	8	2.5	52	780	5200	0.0470	57.2	831	680	922	695	0.103	0.27
1x500/35	53	8	2.6	54	810	6450	0.0366	71.5	953	765	1045	773	0.100	0.29
1x630/35	53	8	2.7	60	900	7900	0.0283	90.1	1070	855	1160	861	0.098	0.32
NA2XS(F)2Y 18/30 (36) kV Aluminium														
1x50/16	6	8	2.0	33	495	1000	0.641	4.7	187	174	219	195	0.146	0.13
1x70/16	12	8	2.0	35	525	1200	0.443	6.6	232	213	273	238	0.137	0.15
1x95/16	15	8	2.1	37	555	1400	0.32	8.9	282	254	331	263	0.131	0.16
1x120/16	15	8	2.1	38	570	1500	0.253	11.3	325	289	382	321	0.125	0.18
1x150/25	15	8	2.2	40	600	1850	0.206	14.1	367	322	429	354	0.121	0.19
1x185/25	30	8	2.2	42	630	1900	0.164	17.4	421	364	492	399	0.117	0.2
1x240/25	30	8	2.3	44	660	2200	0.125	22.6	496	422	578	458	0.112	0.22
1x300/25	30	8	2.4	47	705	2500	0.100	28.2	568	476	659	514	0.108	0.24
1x400/35	53	8	2.5	52	780	2850	0.0778	37.6	659	541	750	570	0.103	0.27
1x500/35	53	8	2.6	54	810	3300	0.0605	47.0	764	616	861	642	0.100	0.29
1x630/35	53	8	2.7	60	900	3800	0.0469	59.2	680	709	880	736	0.098	0.32

(1) Conductor short circuit based on an initial conductor temperature of 90°C and a final temperature of 250°C

(2) Current rating based on operation at 90°C conductor, three phase AC, trefoil touching or flat formation with one cable diameter clearance. Bonded screens and earthed both ends. according to VDE 0276-620

(3) Cable laid in circulating air at 30°C

(4) Buried at 0.7m deep in soil at 20°C with 1 K.m/W thermal resistivity, load factor 0.7

(5) Calculated inductive resistance per core in trefoil, the screens are bonded and earthed at both ends.

Temperature Rating Factors

Ambient temp.	20	25	30	35	40	45	50	55	60	65
Correction Factor Air.	1.08	1.04	1.00	0.96	0.91	0.87	0.82	0.76	0.71	0.65
Correction factor ground.	1.00	0.96	0.93	0.89	0.85	0.80	0.76			

The information contained within this data sheet is for guidance only.

Cable and gland sizes are nominal and may vary according to different manufacturer's tolerances.

Every possible effort is made to ensure that the information contained in this data sheet is correct.

However, we reserve the right to change the information or specification at any time in the light of technical developments or revisions.

References to or extracts from British Standards, current IEE regulations or other regulatory bodies should be verified with these organisations.

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