
6.35/11kV XLPE Insulated, MDPE Sheathed, Armoured MV Power Cables (Single Core)

N2XSYB2Y (CU/XLPE/CS/PVC/ATA/PE 6.35/11KV Class 2)

N2XSYR2Y (CU/XLPE/CS/PVC/AWA/PE 6.35/11KV Class 2)

Caledonian No.: FGD300 12RVMAX-R (CU/XLPE/CS/PVC/ATA or AWA/PE 6.35/11KV Class 2)

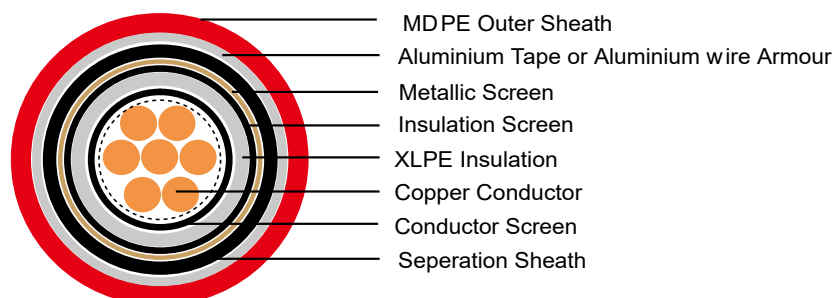
APPLICATIONS:

They are suitable for installation mostly in power supply stations, indoors and in cable ducts, outdoors, underground and in water as well as for installation on cable trays for industries, switchboards and power stations.

STANDARD:

Basic design adapted to IEC 60502-2

CONSTRUCTION:



Conductor: Plain annealed copper wire, stranded according to IEC/BS EN 60228 class 2..

Conductor Screen: Extruded layer of semi-conducting cross-linkable compound is applied over the conductor and shall cover the surface completely.

Insulation: Extruded cross-linked compound type (XLPE)

Insulation Screen: Extruded layer of semi-conducting cross-linkable compound is applied over the insulation.

Metallic Screen: The metallic layer shall be applied as a collective screen. The metallic screen shall consist of either copper tapes or a concentric layer of copper wires or a combination of tapes and wires.

Separation Sheath: Thermoplastic PVC compound.

Armour : Aluminium tape or Aluminium wire.

Outer Sheath: Thermoplastic MDPE compound Type ST7 according to IEC 60502-2.

The overall cable design will be more suitable for wet locations.

Outer Sheath Option: UV resistance, hydrocarbon resistance, oil resistance and anti-rodent can be offered as option.

COLOUR CODE

Insulation Colour: Natural colouring.

Sheath Colour: Red;

PHYSICAL PROPERTIES:

Operating Temperature: up to 90°C



Temperature Range: -5°C

Short Circuit Temperature(5 seconds maximum duration): 250°C

Bending Radius:20 x OD

Nominal /Operating /Testing Voltages

Rated Voltage Uo/U	Operating Voltage (Um)	Testing Voltage (rms)
6.35/11KV	12KV	25.5KV

DIMENSIONAL DATA

N2XSXB2Y (CU/XLPE/CS/PVC/ATA/PE 6.35/11KV Class 2)

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Wire Screen Area	Copper Tape Screen Area	Nom. Bedding Thickness	Nom. Armour Tape Thickness	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight
mm ²	mm	mm ²	mm ²	mm	mm	mm	mm	kg/km
70	3.4	16	8.2	1.2	0.5	1.9	30.8	1700
95	3.4	16	8.9	1.2	0.5	1.9	32.4	2020
120	3.4	16	9.8	1.2	0.5	2.0	34.0	2214
150	3.4	25	10.4	1.2	0.5	2.1	36.7	2650
185	3.4	25	11.2	1.2	0.5	2.1	37.4	3010
240	3.4	25	12.4	1.2	0.5	2.2	40.1	3260
300	3.4	25	13.4	1.2	0.5	2.2	42.1	4160
400	3.4	35	14.6	1.2	0.5	2.4	46.2	5150
500	3.4	35	16.2	1.3	0.5	2.5	49.0	6240
630	3.4	35	18.9	1.4	0.5	2.6	54.4	7590

N2XSXR2Y (CU/XLPE/CS/PVC/AWA/PE 6.35/11KV Class 2)

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Wire Screen Area	Copper Tape Screen Area	Nom. Bedding Thickness	Nom. Armour Wire Diameter	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight
mm ²	mm	mm ²	mm ²	mm	mm	mm	mm	kg/km
70	3.4	16	8.2	1.2	1.6	1.9	32.0	1840
95	3.4	16	8.9	1.2	1.6	1.9	33.6	2130
120	3.4	16	9.8	1.2	1.6	2.0	35.2	2430
150	3.4	25	10.4	1.2	1.6	2.1	37.9	2870
185	3.4	25	11.2	1.2	2.0	2.1	39.4	3240
240	3.4	25	12.4	1.2	2.0	2.2	42.1	3490
300	3.4	25	13.4	1.2	2.0	2.2	44.1	4490
400	3.4	35	14.6	1.2	2.0	2.4	48.2	5589
500	3.4	35	16.2	1.3	2.5	2.5	52.0	6780
630	3.4	35	18.9	1.4	2.5	2.6	57.4	8230

ELECTRICAL DATA

mm ²	— P	— P	N\$	S	P	P\$	P	N\$	— P	— P	Q+	P	Q+	P	— P
70	268	343	9.8	288	0.58	1.96	1.19	122	188	390	600	364	386		
95	193	248	13.3	323	0.65	1.96	1.31	122	182	390	580	272	300		
120	153	196	17.2	353	0.71	1.96	1.43	116	172	370	550	225	257		
150	124	159	21.2	380	0.76	3.06	1.52	110	166	350	530	193	229		
185	99	128	26.6	416	0.83	3.06	1.63	107	166	340	530	165	206		
240	75	98	34.9	460	0.92	3.06	1.81	104	163	330	520	140	185		
300	60	80	43.8	506	1.01	3.06	1.95	100	157	320	500	126	174		
400	47	64	57.3	561	1.12	4.29	2.13	94	154	300	490	113	164		
500	37	51	72.3	619	1.24	4.29	2.37	91	151	290	480	105	158		
630	28	42	91.2	698	1.37	4.29	2.75	91	148	290	470	97	151		

CURRENT RATING FOR SINGLE CORE 3.6/6KV(UM=7.2KV) TO 18/30KV(UM=36KV) XLPE INSULATION

Nom. Cross-Section Area mm ²	Buried direct in Ground		Laid in Single Way Duct		Laid in Air		
	Trefoil	Flat spaced	Trefoil	Flat Touching	Trefoil	Flat Touching	Flat spaced
mm ²	A	A	A	A	A	A	A
70	239	246	227	229	296	303	356
95	285	293	271	274	361	369	434
120	323	332	308	311	417	426	500
150	361	366	343	347	473	481	559
185	406	410	387	391	543	550	637
240	469	470	447	453	641	647	745
300	526	524	504	510	735	739	846
400	590	572	564	571	845	837	938
500	650	672	604	661	935	938	1118
630	700	882	654	771	1045	1048	1318

CURRENT RATING CONDITIONS

Ground Temperature: 20°C

Ambient Temperature (air): 30°C

Depth of Soil: 0.8m

Thermal Resistance of Soil: 1.5K·m/W



Rated Voltage



Standard



6.35/11KV XLPE Insulated, MDPE Sheathed, Armoured MV Power Cables (Three Cores)

N2XSEYR2Y (CU/XLPE/CS/PVC/SWA/PE 6.35/11 KV Class 2)

N2XSEYB2Y (CU/XLPE/CS/PVC/STA/PE 6.35/11 KV Class 2)

Caledonian No.: FGD400 12RVMX-R (CU/XLPE/CS/PVC/SWA or STA/PE 6.35/11 KV Class 2)

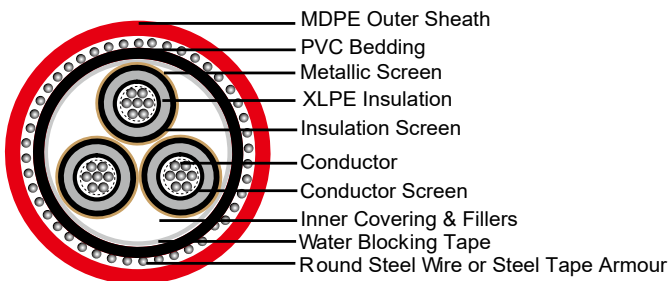
APPLICATIONS:

They are suitable for installation mostly in power supply stations, indoors and in cable ducts, outdoors, underground and in water as well as for installation on cable trays for industries, switchboards and power stations.

STANDARD:

Basic design adapted to IEC 60502-2

CONSTRUCTION:



Conductor: Plain annealed bare copper wire, stranded according to IEC 60228 class 2.

Conductor Screen: Extruded layer of semi-conducting cross-linkable compound is applied over the conductor and shall cover the surface completely.

Insulation: Extruded cross-linked polyethylene (XLPE) according to IEC 60502-2&IEC 60811.

Insulation Screen: Extruded layer of semi-conducting cross-linkable compound is applied over the insulation.

Inner Covering & Fillers: Cables shall have an inner covering over the laid-up cores. The inner covering and fillers are made of non hygroscopic material like polypropylene, except if the cable is to be made longitudinally watertight. The inner covering is extruded in general but may be lapped if the interstices between the cores are filled.

Metallic Screen: The metallic layer shall be applied over each core or applied as a collective screen. The metallic screen shall consist of either copper tapes or a concentric layer of copper wires or a combination of tapes and wires.

Waterproof: Water blocking tape

Bedding: Thermoplastic PVC compound.

Armour : Round Steel Wire or Steel Tape Armour

Outer Sheath: Thermoplastic MDPE compound Type ST7 according to IEC 60502-2.

COLOUR CODE

Insulation Colour: Natural colouring with coloured stripe (brown, black, grey)

Sheath Colour: Red, other colours can be offered upon request.

Expansion of Velana International Airport Republic of Maldives

PHYSICAL PROPERTIES:

Operating Temperature: up to 90°C

Temperature Range: -5°C

Short Circuit Temperature(5 seconds maximum duration): 250°C

Bending Radius: 15 x OD

Table 4. Nominal /Operating /Testing Voltages

Rated Voltage U ₀ /U	Operating Voltage (U _m)	Testing Voltage (rms)
6.35/11KV	12KV	25.5KV

DIMENSIONAL DATA

N2XSEYR2Y (CU/XLPE/CS/PVC/SWA/PE 6.35/11 KV Class 2)

Nom. Cross-Section Area	Nom. Insulation Thickness	Metallic Screen Area	Nom. Bedding Thickness	Armour wire Diameter	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight
mm ²	mm	mm ²	mm	mm	mm	mm	kg/km
16	3.4	16	1.2	2.0	2.4	42.4	3000
25	3.4	16	1.3	2.5	2.5	46.7	3900
35	3.4	16	1.3	2.5	2.6	49.3	4430
50	3.4	16	1.4	2.5	2.7	52.6	5080
70	3.4	16	1.5	2.5	2.8	56.9	6050
95	3.4	16	1.5	2.5	2.9	61.2	7180
120	3.4	16	1.6	2.5	3.0	65.9	8230
150	3.4	25	1.7	2.5	3.1	69.6	9380
185	3.4	25	1.7	3.15	3.3	75.4	11610
240	3.4	25	1.8	3.15	3.5	82.5	14110
300	3.4	25	1.9	3.15	3.7	88.3	16420
400	3.4	35	2.0	3.5	3.9	96.0	20620

N2XSEYB2Y (CU/XLPE/CS/PVC/STA/PE 6.35/11 KV Class 2)

Nom. Cross-Section Area	Nom. Insulation Thickness	Metallic Screen Area	Nom. Bedding Thickness	Armour tape Thickness	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight
mm ²	mm	mm ²	mm	mm	mm	mm	kg/km
16	3.4	16	1.2		2.3	40.5	2680
25	3.4	16	1.3		2.4	43.7	3195
35	3.4	16	1.3		2.5	46.2	3720
50	3.4	16	1.4		2.6	48.8	4200
70	3.4	16	1.5		2.7	52.8	5185
95	3.4	16	1.5		2.8	56.9	6280
120	3.4	16	1.6		2.9	60.5	7360
150	3.4	25	1.7		3.0	63.9	8420
185	3.4	25	1.7		3.1	68.2	9910
240	3.4	25	1.8		3.3	73.8	12200
300	3.4	25	1.9		3.4	79.1	14530
400	3.4	35	2.0		3.7	87.7	18600



ELECTRICAL DATA

Nom. Cross-Section Area	D C Resistance CU	A C Resistance CU	Short Circuit Rating of Conductor CU 1 sec	Capacitance	Charging Current	Short Circuit Rating of Metallic Screen Per Core 1 sec	Reactance	Inductance
mm ²	μΩm	μΩ/m	kA	pF/m	mA/m	kA	μΩm	nH/m
16	1150	1470	2.2	186	0.40	2.6	131	410
25	727	927	3.6	216	0.43	2.6	123	390
35	524	668	5.0	237	0.47	2.6	115	370
50	387	494	6.8	266	0.52	2.6	109	350
70	268	343	9.8	298	0.60	2.6	103	330
95	193	248	13.3	334	0.67	4.3	99	320
120	153	196	17.2	365	0.73	4.3	96	310
150	124	159	21.2	392	0.78	4.3	93	300
185	99	128	26.6	430	0.86	4.3	90	290
240	75	98	34.9	476	0.95	4.3	87	280
300	60	80	43.8	524	1.05	4.3	85	270
400	47	64	57.3	580	1.16	5.8	81	260

CURRENT RATING

Nom. Cross-Section Area	Buried direct in Ground	Laid in Single Way Duct	Laid in Air
mm ²	A	A	A
16	101	88	110
25	129	112	143
35	153	134	172
50	181	158	205
70	220	194	253
95	263	232	307
120	298	264	352
150	332	296	397
185	374	335	453
240	431	387	529
300	482	435	599
400	541	492	683

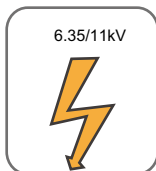
CURRENT RATING CONDITIONS

Ground Temperature: 20°C

Ambient Temperature (air): 30°C

Depth of Soil: 0.8m

Thermal Resistance of Soil: 1.5K•m/W



Rated Voltage



Standard