

Power & Control Cable

IEC 60502-1

(2-, 3-, 4- and 5-cores)

U₀/U 0.6 / 1 kV

**XLPE-Insulation, PVC-Sheath
2XY-fl**

Application

For electricity supply and control in public networks and industrial plants; suitable for use in zone 1 and zone 2 group II classified areas (IEC 60079-14).

Recommended for direct burial. For indoor and outdoor installation in dry and wet locations, on racks, in conduits. (Local and / or legal requirements to be noted)

Construction

Conductor plain annealed copper, class 1 or class 2 resp., acc. to IEC 60228,
 ≤ 35 mm²: circular solid (RE) or circular stranded (RM),
 > 35 mm²: sector-shaped stranded (SM)¹⁾

Insulation cross-linked polyethylene XLPE

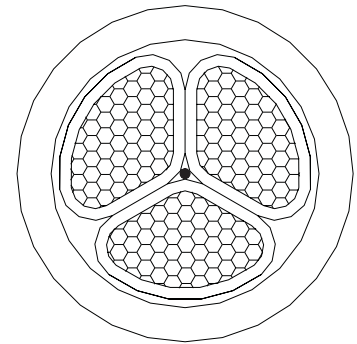
Colour code ^{1) 2)} Two-core: blue, brown
 Three-core: brown, black, grey
 Four-core: blue, brown, black, grey
 Five-core: blue, brown, black, grey, black

Laying up cores twisted in layers

Inner Covering extruded filler of regenerated rubber

Outer Sheath extruded polyvinyl chloride PVC, black

Cable marking ELECTRIC CABLE 0.6/1 kV IEC 60502-1
 KERPEN, YEAR, LENGTH MARKING



Technical Data

Flame retardancy : IEC 60332-1
Flame propagation : IEC 60332-3 cat. A
Outer Sheath :
Amount of halogen acid gas : max. 17 %
 (IEC 60754-1)
Limiting Oxygen Index (LOI): min. 30 %
 (IEC 60332-3 ann. B)
Temperature Index (TI) : min. 300 °C

Temperature range:
 - 30 °C up to + 90 °C
 (during operation)
 - 5 °C up to + 50 °C
 (during installation)
 max. + 250 °C
 (under short circuit)
Min. bending radius:
 8 x cable-Ø

Abbreviations

2X insulation of XLPE
Y outer sheath of PVC
-fl reduced flame propagation

Electrical Data at 20 °C

	Character	Unit	Values
Conductor resistance :	max.	Ω/km	acc. to IEC 60228
Test voltage U _{rms} core:core :		V	3500
Nominal voltage U ₀ /U :		V	600/1000
Highest system voltage U _m :	max.	V	1200 (for three phase systems)

¹⁾ 5 core cables only with circular conductors ²⁾ other colours on request

For further details see appendix

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(2-, 3-, 4- and 5-cores)						U ₀ /U 0.6 / 1 kV
XLPE-Insulation, PVC-Sheath						
2XY-fl						
Geometrical Data						
No. of cores and cross-section (nom.) n / mm ²	Radial thickness of insulation (nom.) mm	Radial thickness of outer sheath (nom.) mm	Overall diameter (approx.) mm	Weight of cable (approx.) kg / km	Part number	
2 x 1.5 RE	0.7	1.8	9.7	140	20810021	
2 x 1.5 RM	0.7	1.8	10.2	150	20810022	
2 x 2.5 RE	0.7	1.8	10.5	170	20810023	
2 x 2.5 RM	0.7	1.8	11.0	180	20810024	
2 x 4 RE	0.7	1.8	11.5	210	20810025	
2 x 4 RM	0.7	1.8	12.2	230	20810026	
2 x 6 RE	0.7	1.8	12.5	270	20810027	
2 x 6 RM	0.7	1.8	13.2	290	20810028	
2 x 10 RE	0.7	1.8	14.0	370	20810029	
2 x 10 RM	0.7	1.8	15.0	410	20810030	
2 x 16 RE	0.7	1.8	15.9	530	20810031	
2 x 16 RM	0.7	1.8	17.3	580	20810032	
2 x 25 RM	0.9	1.8	20.2	740	-	
2 x 35 RM	0.9	1.8	22.8	1100	-	
2 x 50 SM	1.0	1.8	21.5	1200	20810035	
2 x 70 SM	1.1	1.8	24.9	1620	20810036	
2 x 95 SM	1.1	2.0	28.0	2200	20810037	
2 x 120 SM	1.2	2.1	30.1	2640	20810038	
2 x 150 SM	1.4	2.2	33.5	3250	20810039	
2 x 185 SM	1.6	2.3	37.7	4050	20810040	
2 x 240 SM	1.7	2.5	42.4	5260	20810041	
2 x 300 SM	1.8	2.7	49.3	6760	20810091	
3 x 1.5 RE	0.7	1.8	10.2	150	20810042	
3 x 1.5 RM	0.7	1.8	10.7	170	20810043	
3 x 2.5 RE	0.7	1.8	11.0	190	20810044	
3 x 2.5 RM	0.7	1.8	11.6	210	20810045	
3 x 4 RE	0.7	1.8	12.0	250	20810046	
3 x 4 RM	0.7	1.8	12.8	280	20810047	
3 x 6 RE	0.7	1.8	13.1	330	20810048	
3 x 6 RM	0.7	1.8	13.9	350	20810049	
3 x 10 RE	0.7	1.8	14.8	470	20810050	
3 x 10 RM	0.7	1.8	15.9	500	20810051	
3 x 16 RE	0.7	1.8	16.9	670	20810052	
3 x 16 RM	0.7	1.8	18.3	730	20810053	
3 x 25 RM	0.9	1.8	21.5	1060	-	

RE: circular solid • RM: circular stranded • SM: sector shaped stranded

Power & Control Cable

IEC 60502-1

(2-, 3-, 4- and 5-cores)

U₀/U 0.6 / 1 kV

**XLPE-Insulation, PVC-Sheath
2XY-fl**

Geometrical Data

No. of cores and cross-section (nom.) n / mm ²	Radial thickness of insulation (nom.) mm	Radial thickness of outer sheath (nom.) mm	Overall Diameter (approx.) mm	Weight of cable (approx.) kg / km	Part number
3 x 35 RM	0.9	1.8	24.3	1450	-
3 x 50 SM	1.0	1.8	25.0	1710	20810056
3 x 70 SM	1.1	1.9	28.6	2320	20810057
3 x 95 SM	1.1	2.0	31.3	3150	20810058
3 x120 SM	1.2	2.1	34.3	3820	20810059
3 x150 SM	1.4	2.3	38.6	4730	20810060
3 x185 SM	1.6	2.4	43.8	5920	20810061
3 x240 SM	1.7	2.6	49.2	7670	20810062
3 x300 SM	1.8	2.8	56.7	9870	20810063
3 x400 SM	2.0	3.1	63.9	12560	20810064
4 x 1.5 RE	0.7	1.8	10.9	180	20810065
4 x 1.5 RM	0.7	1.8	11.4	190	20810066
4 x 2.5 RE	0.7	1.8	11.8	230	20810067
4 x 2.5 RM	0.7	1.8	12.4	240	20810068
4 x 4 RE	0.7	1.8	12.9	300	20810069
4 x 4 RM	0.7	1.8	13.8	330	20810070
4 x 6 RE	0.7	1.8	14.2	400	20810071
4 x 6 RM	0.7	1.8	15.0	420	20810072
4 x 10 RE	0.7	1.8	16.1	580	20810073
4 x 10 RM	0.7	1.8	17.3	620	20810074
4 x 16 RE	0.7	1.8	18.3	840	20810075
4 x 16 RM	0.7	1.8	19.9	910	20810076
4 x 25 RM	0.9	1.8	23.5	1400	-
4 x 35 RM	0.9	1.8	26.5	1700	-
4 x 50 SM	1.0	1.9	28.8	2240	20810079
4 x 70 SM	1.1	2.0	32.5	3050	20810080
4 x 95 SM	1.1	2.1	35.7	4130	20810081
4 x120 SM	1.2	2.3	39.6	5070	20810082
4 x150 SM	1.4	2.4	43.8	6220	20810083
4 x185 SM	1.6	2.6	49.7	7790	20810084
4 x240 SM	1.7	2.8	56.3	10150	20810085
4 x300 SM	1.8	3.0	62.9	12990	20810086
4 x400 SM	2.0	3.3	73.8	16580	20810087
5 x 4 RE	0.7	1.8	14.0	360	20810331
5 x 4 RM	0.7	1.8	14.9	370	20810332

RE: circular solid • RM: circular stranded • SM: sector shaped stranded

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(2-, 3-, 4- and 5-cores)	U₀/U 0.6 / 1 kV
XLPE-Insulation, PVC-Sheath	
2XY-fl	

Geometrical Data							
No. of cores and cross-section	Radial thickness of insulation	Radial thickness of outer sheath	Overall Diameter	Weight of cable	Part number		
(nom.) n / mm ²	(nom.) mm	(nom.) mm	(approx.) mm	(approx.) kg / km			
5 x 6 RE	0.7	1.8	15.4	470	20810333		
5 x 6 RM	0.7	1.8	16.3	500	20810334		
5 x 10 RE	0.7	1.8	17.5	690	20810335		
5 x 10 RM	0.7	1.8	18.8	730	20810336		
5 x 16 RE	0.7	1.8	20.0	1010	20810337		
5 x 16 RM	0.7	1.8	21.8	1080	20810338		
5 x 25 RM	0.9	1.8	25.8	1650	20810339		
5 x 35 RM	0.9	1.8	28.8	2120	20810340		
5 x 50 RM	1.0	1.8	32.9	2840	20810341		
5 x 70 RM	1.1	2.1	38.5	3990	20810342		

RE: circular solid • RM: circular stranded • SM: sector shaped stranded

Power & Control Cable

IEC 60502-1

(Multicores)

U₀/U 0.6 / 1 kV

**XLPE-Insulation, PVC-Sheath
2XY-fl**

Application

For electricity supply and control in public networks and industrial plants; suitable for use in zone 1 and zone 2 group II classified areas (IEC 60079-14).

Recommended for direct burial. For indoor and outdoor installation in dry and wet locations, on racks, in conduits. (Local and / or legal requirements to be noted)

Construction

Conductor plain annealed copper, class 1 or class 2 resp., acc. to IEC 60228,
class 1: circular solid (RE)
class 2: circular stranded (RM)

Insulation cross-linked polyethylene XLPE

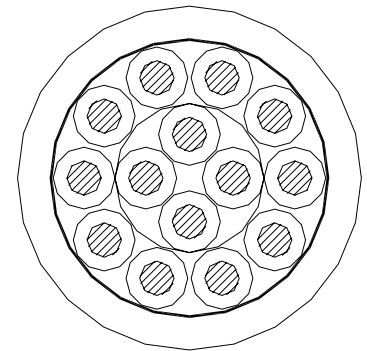
Colour code black, continuously numbered

Laying up cores twisted in layers (if necessary with filling element/s)

Wrapping at least 1 layer of plastic tape

Outer Sheath extruded polyvinyl chloride PVC, black

Cable marking ELECTRIC CABLE 0.6/1 kV IEC 60502-1
KERPEN, YEAR, LENGTH MARKING



Technical Data

Flame retardancy: IEC 60332-1

Flame propagation: IEC 60332-3 cat. A

Outer sheath:

Amount of halogen acid gas: max. 17 %
(IEC 60754-1)

Limiting Oxygen Index (LOI): min. 30 %
(IEC 60332-3 ann. B)

Temperature Index (TI): min. 300 °C
(ASTM-D-2863)

Temperature range:
- 30 °C up to + 90 °C
(during operation)
- 5 °C up to + 50 °C
(during installation)
max. + 250 °C
(under short circuit)

Min. bending radius:
8 x cable-Ø

Abbreviations

2X insulation of XLPE

Y outer sheath of PVC

-fl reduced flame propagation

Electrical Data at 20 °C

	Character	Unit	Values
Conductor resistance :	max.	Ω/km	acc. to IEC 60228
Test voltage U _{rms} core:core :		V	3500
Nominal voltage U ₀ /U :		V	600/1000
Highest system voltage U _m :	max.	V	1200 (for three phase systems)

For further electrical details see appendix

Power & Control Cable					IEC 60502-1	
(Multicores)					U ₀ /U 0.6 / 1 kV	
XLPE-Insulation, PVC-Sheath						
2XY-fl						
Geometrical Data						
No. of cores and cross-section (nom.) n / mm ²	Radial thickness of insulation (nom.) mm	Radial thickness of outer sheath (nom.) mm	Overall Diameter (approx.) mm	Weight of cable (approx.) kg / km	Part number	
5 x 1.5 RE	0.7	1.8	11.3	180	20810131	
7 x 1.5 RE	0.7	1.8	12.2	220	20810132	
10 x 1.5 RE	0.7	1.8	14.9	310	20810133	
12 x 1.5 RE	0.7	1.8	15.3	340	20810134	
19 x 1.5 RE	0.7	1.8	17.7	480	20810137	
27 x 1.5 RE	0.7	1.8	21.0	660	20810140	
37 x 1.5 RE	0.7	1.8	23.4	860	20810144	
48 x 1.5 RE	0.7	1.8	26.5	1080	20810148	
5 x 1.5 RM	0.7	1.8	11.9	190	20810150	
7 x 1.5 RM	0.7	1.8	12.8	230	20810151	
10 x 1.5 RM	0.7	1.8	15.8	320	20810152	
12 x 1.5 RM	0.7	1.8	16.2	360	20810153	
19 x 1.5 RM	0.7	1.8	18.8	510	20810156	
27 x 1.5 RM	0.7	1.8	22.3	700	20810108	
37 x 1.5 RM	0.7	1.8	24.8	910	20810112	
48 x 1.5 RM	0.7	1.8	28.3	1150	20810164	
5 x 2.5 RE	0.7	1.8	12.4	240	20810351	
7 x 2.5 RE	0.7	1.8	13.4	300	20810167	
10 x 2.5 RE	0.7	1.8	16.4	400	20810168	
12 x 2.5 RE	0.7	1.8	16.9	460	20810169	
19 x 2.5 RE	0.7	1.8	19.8	670	20810172	
27 x 2.5 RE	0.7	1.8	23.4	920	20810175	
37 x 2.5 RE	0.7	1.8	26.1	1210	20810179	
48 x 2.5 RE	0.7	1.9	29.9	1550	20810183	
5 x 2.5 RM	0.7	1.8	13.0	250	20810115	
7 x 2.5 RM	0.7	1.8	14.0	310	20810207	
10 x 2.5 RM	0.7	1.8	17.4	420	20810116	
12 x 2.5 RM	0.7	1.8	18.0	490	20810186	
19 x 2.5 RM	0.7	1.8	21.0	710	20810189	
27 x 2.5 RM	0.7	1.8	24.9	980	20810192	
37 x 2.5 RM	0.7	1.8	27.8	1290	20810196	
48 x 2.5 RM	0.7	1.9	31.9	1650	20810200	

RE: circular solid • RM: circular stranded • SM: sector shaped stranded