

Power & Control Cable

IEC 60502-1

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

U₀/U 0.6 / 1 kV

XLPE-Insulation, Armour
2XYRY-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.

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)

Insulation cross-linked polyethylene XLPE

Colour code Two-core: blue, brown
Three-core: brown, black, grey
Four-core: blue, brown, black, grey

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

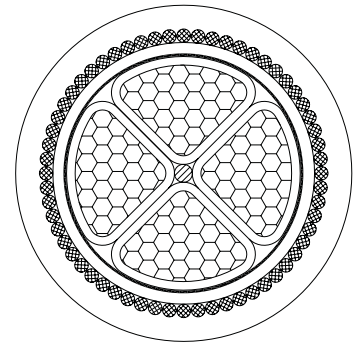
Wrapping at least 1 layer of plastic tape

Bedding extruded polyvinyl chloride PVC, black

Armour galvanized round steel wires

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-∅

Abbreviations

2X insulation of XLPE

Y bedding & outer sheath of PVC

R round steel wire armour

-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
Test voltage U_{rms} core:armour		V	3500
Nominal voltage U₀ /U		V	600/1000
Highest system voltage U_m	max.	V	1200 (for three phase systems)

¹⁾ other colours on request

For further details see appendix

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**XLPE-Insulation, Armour
2XYRY-fl**

Geometrical Data

No. of cores and cross-section (nom.) n / mm ²	Radial thickness of insulation (nom.) mm	Diameter over bedding (approx.) mm	Armour wire diameter (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	7.3	0.8	1.8	12.7	310	20050038
2 x 1.5 RM	0.7	7.8	0.8	1.8	13.2	330	20050154
2 x 2.5 RE	0.7	8.1	0.8	1.8	13.5	350	20050039
2 x 2.5 RM	0.7	8.6	0.8	1.8	14.0	370	20050155
2 x 4 RE	0.7	9.1	0.8	1.8	14.5	410	20050040
2 x 4 RM	0.7	9.8	0.8	1.8	15.2	440	20050156
2 x 6 RE	0.7	10.1	0.8	1.8	15.5	480	20050041
2 x 6 RM	0.7	10.8	0.8	1.8	16.2	510	20050042
2 x 10 RE	0.7	11.6	0.8	1.8	17.0	600	20050043
2 x 10 RM	0.7	12.8	1.25	1.8	18.9	770	20050044
2 x 16 RE	0.7	13.5	1.25	1.8	19.6	890	20050045
2 x 16 RM	0.7	14.9	1.25	1.8	21.0	960	20050046
2 x 25 RM	0.9	18.3	1.6	1.8	25.1	1350	-
2 x 35 RM	0.9	20.5	1.6	1.8	27.3	1620	-
2 x 50 SM	1.0	19.2	1.6	1.9	26.0	1845	20050157
2 x 70 SM	1.1	20.4	1.6	2.0	27.6	2310	20050049
2 x 95 SM	1.1	23.5	2.0	2.1	31.7	3145	20050050
2 x 120 SM	1.2	27.8	2.0	2.2	36.2	3865	20050051
2 x 150 SM	1.4	31.0	2.0	2.3	39.6	4640	20050052
2 x 185 SM	1.6	35.4	2.5	2.5	45.4	6090	20050053
2 x 240 SM	1.7	39.5	2.5	2.7	49.9	7520	20050054
2 x 300 SM	1.8	46.2	2.5	2.8	56.8	9360	20050221
3 x 1.5 RE	0.7	7.8	0.8	1.8	13.2	340	20050057
3 x 1.5 RM	0.7	8.3	0.8	1.8	13.7	360	20050158
3 x 2.5 RE	0.7	8.6	0.8	1.8	14.0	390	20050058
3 x 2.5 RM	0.7	9.2	0.8	1.8	14.6	410	20050159
3 x 4 RE	0.7	9.6	0.8	1.8	15.0	460	20050059
3 x 4 RM	0.7	10.4	0.8	1.8	15.8	510	20050160
3 x 6 RE	0.7	10.7	0.8	1.8	16.1	550	20050060
3 x 6 RM	0.7	11.5	0.8	1.8	16.9	600	20050161
3 x 10 RE	0.7	12.4	1.25	1.8	18.5	830	20050061
3 x 10 RM	0.7	13.5	1.25	1.8	19.6	890	20050162
3 x 16 RE	0.7	14.5	1.25	1.8	20.6	1080	20050062
3 x 16 RM	0.7	15.8	1.25	1.8	21.9	1150	20050163
3 x 25 RM	0.9	19.6	1.6	1.8	26.4	1660	-

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

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Geometrical Data

No. of cores and cross-section (nom.) n / mm ²	Radial thickness of insulation (nom.) mm	Diameter over bedding (approx.) mm	Armour wire diameter (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	22.0	1.6	1.8	28.8	2050	-
3 x 50 SM	1.0	22.7	1.6	1.9	29.7	2500	20050166
3 x 70 SM	1.1	26.5	2.0	2.0	34.5	3540	20050167
3 x 95 SM	1.1	29.0	2.0	2.2	37.4	4440	20050168
3 x120 SM	1.2	32.0	2.0	2.3	40.6	5280	20050169
3 x150 SM	1.4	36.3	2.5	2.5	46.3	6810	20050170
3 x185 SM	1.6	41.1	2.5	2.6	51.3	8200	20050063
3 x240 SM	1.7	46.1	2.5	2.8	56.7	10310	20050171
3 x300 SM	1.8	53.4	2.5	3.0	64.4	12900	20050064
3 x400 SM	2.0	59.8	2.5	3.2	71.2	15860	20050065
4 x 1.5 RE	0.7	8.5	0.8	1.8	13.9	370	20050066
4 x 1.5 RM	0.7	9.0	0.8	1.8	14.4	400	20050067
4 x 2.5 RE	0.7	9.4	0.8	1.8	14.8	440	20050068
4 x 2.5 RM	0.7	10.0	0.8	1.8	15.4	460	20050172
4 x 4 RE	0.7	10.5	0.8	1.8	15.9	530	20050069
4 x 4 RM	0.7	11.4	0.8	1.8	16.8	580	20050173
4 x 6 RE	0.7	11.8	0.8	1.8	17.2	650	20050070
4 x 6 RM	0.7	12.7	1.25	1.8	18.8	800	20050071
4 x 10 RE	0.7	13.7	1.25	1.8	19.8	970	20050072
4 x 10 RM	0.7	14.9	1.25	1.8	21.0	1040	20050073
4 x 16 RE	0.7	15.9	1.6	1.8	22.7	1390	20050074
4 x 16 RM	0.7	17.5	1.6	1.8	24.3	1500	20050174
4 x 25 RM	0.9	21.6	1.6	1.8	28.4	1980	-
4 x 35 RM	0.9	24.0	1.6	1.9	31.0	2530	-
4 x 50 SM	1.0	26.3	1.6	2.0	33.5	3150	20050077
4 x 70 SM	1.1	29.7	2.0	2.0	37.7	4370	20050078
4 x 95 SM	1.1	33.2	2.0	2.3	41.8	5590	20050079
4 x120 SM	1.2	37.1	2.5	2.5	47.1	7170	20050080
4 x150 SM	1.4	41.1	2.5	2.6	51.3	8550	20050081
4 x185 SM	1.6	46.6	2.5	2.8	57.2	10460	20050082
4 x240 SM	1.7	53.0	2.5	3.0	64.0	13190	20050083
4 x300 SM	1.8	59.0	2.5	3.2	70.4	16360	20050084
4 x400 SM	2.0	69.7	3.15	3.5	83.0	21470	20050085

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

KERPEN's Focus:

Competence - Flexibility - Quality - Service

Flexibility

- new designs to customer required standards
- short delivery times to meet your project plan
- equipped for „short length“ production
- fast response to customer needs
- general purpose production equipment to manufacture large variety of products

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Recommended for direct burial. For indoor and outdoor installation in dry and wet locations, on racks, in conduits

Construction

Conductor plain annealed copper, class 1 or class 2 resp., acc. to IEC60228
 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))

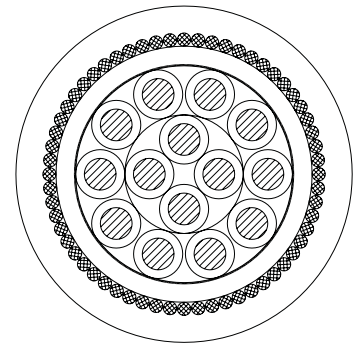
Wrapping at least 1 layer of plastic tape

Bedding extruded polyvinyl chloride PVC, black

Armour galvanized round steel wires

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 bedding & outer sheath of PVC

R round steel wire armour

-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
Test voltage U_{rms} core:armour		V	3500
Nominal voltage U₀ /U :		V	600/1000
Highest system voltage U_m:	max.	V	1200 (for three phase systems)

For further details see appendix

Power & Control Cable

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(Multicores)

U₀/U 0.6 / 1 kV

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5 x 1.5 RE	0.7	9.3	0.8	1.8	14.7	420	20050093
7 x 1.5 RE	0.7	10.1	0.8	1.8	15.5	480	20050094
10 x 1.5 RE	0.7	12.9	1.25	1.8	19.0	730	20050095
12 x 1.5 RE	0.7	13.3	1.25	1.8	19.4	780	20050096
19 x 1.5 RE	0.7	15.7	1.25	1.8	21.8	1000	20050099
27 x 1.5 RE	0.7	19.3	1.6	1.8	26.1	1450	20050102
37 x 1.5 RE	0.7	21.7	1.6	1.8	28.5	1730	20050105
48 x 1.5 RE	0.7	24.9	1.6	1.9	31.9	2100	20050109
5 x 1.5 RM	0.7	9.9	0.8	1.8	15.3	450	20050034
7 x 1.5 RM	0.7	10.8	0.8	1.8	16.2	510	20050035
10 x 1.5 RM	0.7	13.8	1.25	1.8	19.9	770	20050036
12 x 1.5 RM	0.7	14.2	1.25	1.8	20.3	830	20050110
19 x 1.5 RM	0.7	16.8	1.25	1.8	22.9	1070	20050113
27 x 1.5 RM	0.7	20.7	1.6	1.8	27.5	1560	20050116
37 x 1.5 RM	0.7	23.2	1.6	1.8	30.0	1830	20050119
48 x 1.5 RM	0.7	26.7	1.6	1.9	33.7	2270	20050123
5 x 2.5 RE	0.7	10.3	0.8	1.8	15.7	500	20050124
7 x 2.5 RE	0.7	11.3	1.25	1.8	17.4	660	20050125
10 x 2.5 RE	0.7	14.4	1.25	1.8	20.5	880	20050126
12 x 2.5 RE	0.7	14.9	1.25	1.8	21.0	950	20050127
19 x 2.5 RE	0.7	18.1	1.6	1.8	24.9	1430	20050130
27 x 2.5 RE	0.7	21.7	1.6	1.8	28.5	1800	20050133
37 x 2.5 RE	0.7	24.4	1.6	1.9	31.4	2230	20050136
48 x 2.5 RE	0.7	28.5	2.0	2.1	36.7	3010	20050140
5 x 2.5 RM	0.7	11.0	0.8	1.8	16.4	530	20050029
7 x 2.5 RM	0.7	12.0	1.25	1.8	18.1	690	20050030
10 x 2.5 RM	0.7	15.4	1.25	1.8	21.5	930	20050031
12 x 2.5 RM	0.7	16.0	1.25	1.8	22.1	1020	20050032
19 x 2.5 RM	0.7	19.4	1.6	1.8	26.2	1510	20050143
27 x 2.5 RM	0.7	23.3	1.6	1.8	30.1	1930	20050146
37 x 2.5 RM	0.7	26.2	1.6	1.9	33.2	2360	20050149
48 x 2.5 RM	0.7	30.5	2.0	2.1	38.7	3240	20050141

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