

Power & Control Cable

IEC 60502-1

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

U₀/U 0.6 / 1 kV

XLPE-Insulation, Armour, LSZH-Sheath, Fire Resistant

2XHRH

Application

For electricity supply and control in public networks and industrial plants or public buildings, where people are potentially endangered in case of fire and where, for a defined period of time, the continuity of control and energy supply is of vital necessity; suitable for use in zone 1 and zone 2 group II classified areas (IEC 60079-14).

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, over the MICA-tape wrapped conductor

Colour code ¹⁾ 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))

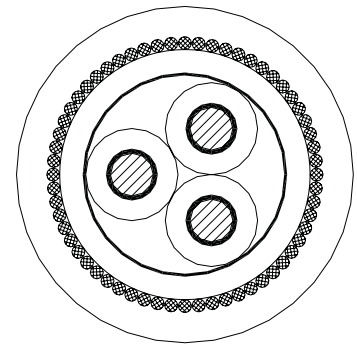
Wrapping at least 1 layer of plastic tape

Bedding extruded zero halogen flame retardant compound LSZH, black

Armour galvanized round steel wires

Outer Sheath extruded zero halogen flame retardant compound LSZH, black

Cable marking ELECTRIC CABLE 0.6/1 kV IEC 60502-1
KERPEN, YEAR, LENGTH MARKING, IEC 60331



Technical Data

Flame retardancy: IEC 60332-1

Flame propagation: IEC 60332-3 cat. A

Fire resistance: IEC 60331-21 (90 min/750 °C)

Smoke density: IEC 61034-1 and 2

Amount of halogen acid gas: IEC 60754-1; 0 %

Degree of acidity of gases: IEC 60754-2

Outer sheath:

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

Temperature Index (TI): min. 250 °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

H bedding & outer sheath of LSZH

R round steel wire armour

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 U ₀ /U		V	600/1000
Highest system voltage U _m	max.	V	1200 (for three phase systems)

¹⁾ other colours on request

For further detail see appendix

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(Multicores)

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Construction

Conductor plain annealed copper, class 1 or class 2 resp., acc. to IEC 0228,
class 1: circular solid (RE)
class 2: circular stranded (RM)

Insulation cross-linked polyethylene XLPE, over the MICA-tape wrapped conductor

Colour code black, continuously numbered

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

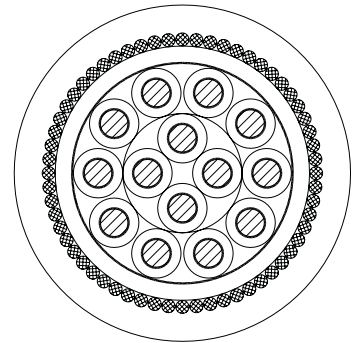
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Geometrical Data

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
5 x 1.5 RE	0.7	12.1	0.8	1.8	17.4	500	21190013
7 x 1.5 RE	0.7	13.1	0.8	1.8	18.3	570	21190014
10 x 1.5 RE	0.7	16.9	1.25	1.8	23.0	780	21190015
12 x 1.5 RE	0.7	17.5	1.25	1.8	23.6	820	21190016
19 x 1.5 RE	0.7	20.9	1.25	1.8	27.0	1200	21190031
27 x 1.5 RE	0.7	25.5	1.6	1.8	32.3	1860	21190032
37 x 1.5 RE	0.7	28.8	1.6	1.8	35.6	2150	21190040
48 x 1.5 RE	0.7	33.1	1.6	1.9	40.1	2630	21190041
5 x 1.5 RM	0.7	12.6	0.8	1.8	17.8	520	21190003
7 x 1.5 RM	0.7	13.8	0.8	1.8	19.2	630	21190004
10 x 1.5 RM	0.7	17.8	1.25	1.8	23.9	810	21190005
12 x 1.5 RM	0.7	18.5	1.25	1.8	24.6	1040	21190006
19 x 1.5 RM	0.7	21.9	1.25	1.8	28.0	1340	21190034
27 x 1.5 RM	0.7	26.8	1.6	1.8	33.6	1950	21190035
37 x 1.5 RM	0.7	30.2	1.6	1.8	37.0	2340	21190042
48 x 1.5 RM	0.7	34.9	1.6	1.9	41.9	2810	21190043
5 x 2.5 RE	0.7	13.1	0.8	1.8	18.3	580	21190047
7 x 2.5 RE	0.7	14.4	1.25	1.8	20.5	770	21190048
10 x 2.5 RE	0.7	18.5	1.25	1.8	24.6	1050	21190049
12 x 2.5 RE	0.7	19.2	1.25	1.8	25.3	1140	21190050
19 x 2.5 RE	0.7	23.2	1.6	1.8	30.0	1720	21190051
27 x 2.5 RE	0.7	27.9	1.6	1.8	34.7	2190	21190052
37 x 2.5 RE	0.7	31.5	1.6	1.9	38.5	2730	21190053
48 x 2.5 RE	0.7	36.6	2.0	2.1	44.8	3670	21190054
5 x 2.5 RM	0.7	13.8	0.8	1.8	18.9	610	21190023
7 x 2.5 RM	0.7	15.2	1.25	1.8	21.3	810	21190024
10 x 2.5 RM	0.7	19.5	1.25	1.8	25.6	1100	21190025
12 x 2.5 RM	0.7	20.2	1.25	1.8	26.3	1210	21190026
19 x 2.5 RM	0.7	24.5	1.6	1.8	31.2	1800	21190037
27 x 2.5 RM	0.7	29.5	1.6	1.8	36.2	2320	21190038
37 x 2.5 RM	0.7	33.3	1.6	1.9	40.3	2860	21190055
48 x 2.5 RM	0.7	38.7	2.0	2.1	46.9	3920	21190056

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