

**Power & Control Cable**

**IEC 60502-1**

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

**U<sub>0</sub>/U 0.6 / 1 kV**

**XLPE-Insulation, LSZH-Sheath**

**2XH**

**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 (partly). 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 mm<sup>2</sup>: circular solid (RE) or circular stranded (RM), > 35 mm<sup>2</sup>: sector-shaped stranded (SM)<sup>1)</sup>

**Insulation** cross-linked polyethylene XLPE

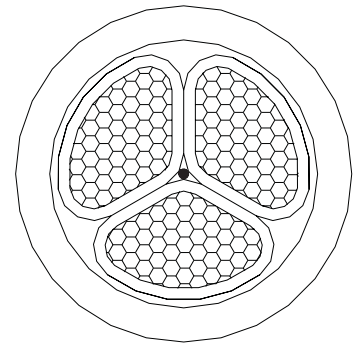
**Colour code<sup>1) 2)</sup>** Two-core: blue, brown  
 Three-core: brown, black, grey  
 Four-core: blue, brown, black, grey  
 Five-core: blue, brown, black, grey, black

**Laying up** cores twisted in layers

**Inner Covering** extruded filler of regenerated rubber

**Outer Sheath** extruded zero halogen flame retardant compound LSZH, 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  
**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 %  
**Temperature Index (TI):** (IEC 60332-3 ann. B) 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** outer sheath of LSZH

**Electrical Data at 20 °C**

	Character	Unit	Values
<b>Conductor resistance :</b>	max.	Ω/km	acc. to IEC 60228
<b>Test voltage U<sub>rms</sub> core:core :</b>		V	3500
<b>Nominal voltage U<sub>0</sub> /U</b>		V	600/1000
<b>Highest system voltage U<sub>m</sub> :</b>	max.	V	1200 (for three phase systems)

<sup>1)</sup> 5core cables only with circular conductors <sup>2)</sup> other colours on request

For further details see appendix

Power & Control Cable						IEC 60502-1
(2-, 3-, 4,- and 5-cores)						U <sub>0</sub> /U 0.6 / 1 kV
XLPE-Insulation, LSZH-Sheath						
2XH						
Geometrical Data						
No. of cores and cross-section  (nom.) n / mm <sup>2</sup>	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	22220000	
2 x 1.5 RM	0.7	1.8	10.2	150	22220001	
2 x 2.5 RE	0.7	1.8	10.5	170	22220002	
2 x 2.5 RM	0.7	1.8	11.0	180	22220003	
2 x 4 RE	0.7	1.8	11.5	210	22220004	
2 x 4 RM	0.7	1.8	12.2	230	22220005	
2 x 6 RE	0.7	1.8	12.5	270	22220006	
2 x 6 RM	0.7	1.8	13.2	290	22220007	
2 x 10 RE	0.7	1.8	14.0	370	22220008	
2 x 10 RM	0.7	1.8	15.0	410	22220009	
2 x 16 RE	0.7	1.8	15.9	530	22220010	
2 x 16 RM	0.7	1.8	17.3	580	22220011	
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	22220014	
2 x 70 SM	1.1	1.8	24.9	1620	22220015	
2 x 95 SM	1.1	2.0	28.0	2200	22220016	
2 x 120 SM	1.2	2.1	30.1	2640	22220017	
3 x 1.5 RE	0.7	1.8	10.2	150	22220018	
3 x 1.5 RM	0.7	1.8	10.7	170	22220019	
3 x 2.5 RE	0.7	1.8	11.0	190	22220020	
3 x 2.5 RM	0.7	1.8	11.6	210	22220021	
3 x 4 RE	0.7	1.8	12.0	250	22220022	
3 x 4 RM	0.7	1.8	12.8	280	22220023	
3 x 6 RE	0.7	1.8	13.1	330	22220024	
3 x 6 RM	0.7	1.8	13.9	350	22220025	
3 x 10 RE	0.7	1.8	14.8	470	22220026	
3 x 10 RM	0.7	1.8	15.9	500	22220027	
3 x 16 RE	0.7	1.8	16.9	670	22220028	
3 x 16 RM	0.7	1.8	18.3	730	22220029	
3 x 25 RM	0.9	1.8	21.5	1060	-	
3 x 35 RM	0.9	1.8	24.3	1450	-	
3 x 50 SM	1.0	1.8	25.0	1710	22220032	
3 x 70 SM	1.1	1.9	28.6	2320	22220033	
3 x 95 SM	1.1	2.0	31.3	3150	22220034	

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

**Power & Control Cable**

**IEC 60502-1**

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

**U<sub>0</sub>/U 0.6 / 1 kV**

**XLPE-Insulation, LSZH-Sheath**

**2XH**

**Geometrical Data**

No. of cores and cross-section  (nom.) n / mm <sup>2</sup>	Radial thickness of insulation  (nom.) mm	Radial thickness of outer sheath  (nom.) mm	Overall Diameter  (approx.) mm	Weigth of cable  (approx.) kg / km	Part number
4 x 1.5 RE	0.7	1.8	10.9	180	22220035
4 x 1.5 RM	0.7	1.8	11.4	190	22220036
4 x 2.5 RE	0.7	1.8	11.8	230	22220037
4 x 2.5 RM	0.7	1.8	12.4	240	22220038
4 x 4 RE	0.7	1.8	12.9	300	22220039
4 x 4 RM	0.7	1.8	13.8	330	22220040
4 x 6 RE	0.7	1.8	14.2	400	22220041
4 x 6 RM	0.7	1.8	15.0	420	22220042
4 x 10 RE	0.7	1.8	16.1	580	22220043
4 x 10 RM	0.7	1.8	17.3	620	22220044
4 x 16 RE	0.7	1.8	18.3	840	22220045
4 x 16 RM	0.7	1.8	19.9	910	22220046
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	22220049
4 x 70 SM	1.1	2.0	32.5	3050	22220050
5 x 4 RE	0.7	1.8	14.0	360	22220055
5 x 4 RM	0.7	1.8	14.9	370	22220056
5 x 6 RE	0.7	1.8	15.4	470	22220057
5 x 6 RM	0.7	1.8	16.3	500	22220058
5 x 10 RE	0.7	1.8	17.5	690	22220059
5 x 10 RM	0.7	1.8	18.8	730	22220060
5 x 16 RE	0.7	1.8	20.0	1010	22220061
5 x 16 RM	0.7	1.8	21.8	1080	22220062
5 x 25 RM	0.9	1.8	25.8	1650	22220063
5 x 35 RM	0.9	1.8	28.8	2120	22220064
5 x 50 RM	1.0	1.8	32.9	2840	22220065

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

## KERPEN's Focus:

Competence - Flexibility - Quality - Service

## Quality

- new designs to customer required standards
- one of the first with ISO 9001 certificate (1990)  
ISO 9001:2000 (2002)
- first cable manufacturer with ISO 14001 environment certificate (1998)
- test certificates for every drum length
- special certificates for fire resistant cables
- UL approvals, GOST certificates
- acceptance through inspection companies

**Power & Control Cable**

**IEC 60502-1**

**(Multicores)**

**U<sub>0</sub>/U 0.6 / 1 kV**

**XLPE-Insulation, LSZH-Sheath**

**2XH**

**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 (partly). 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

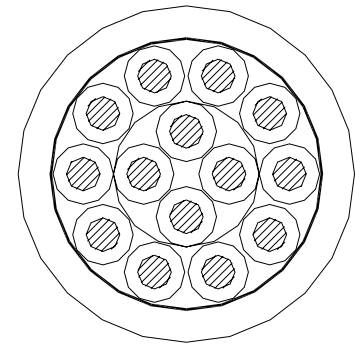
**Colour code** black, continuously numbered

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

**Wrapping** at least 1 layer of plastic tape

**Outer Sheath** extruded zero halogen flame retardant compound LSZH, 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

**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** outer sheath of LSZH

**Electrical Data at 20 °C**

	<b>Character</b>	<b>Unit</b>	<b>Values</b>
<b>Conductor resistance</b>	max.	Ω/km	acc. to IEC 60228
<b>Test voltage U<sub>rms</sub> core:core</b>		V	3500
<b>Nominal voltage U<sub>0</sub> /U</b>		V	600/1000
<b>Highest system voltage U<sub>m</sub></b>	max.	V	1200 (for three phase systems)

For further electrical details see appendix

Power & Control Cable					IEC 60502-1
(Multicores)					U <sub>0</sub> /U 0.6 / 1 kV
XLPE-Insulation, LSZH-Sheath					
2XH					
Geometrical Data					
No. of cores and cross-section  (nom.) n / mm <sup>2</sup>	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	22220066
7 x 1.5 RE	0.7	1.8	12.2	220	22220067
10 x 1.5 RE	0.7	1.8	14.9	310	22220068
12 x 1.5 RE	0.7	1.8	15.3	340	22220069
19 x 1.5 RE	0.7	1.8	17.7	480	22220070
27 x 1.5 RE	0.7	1.8	21.0	660	22220071
37 x 1.5 RE	0.7	1.8	23.4	860	22220072
48 x 1.5 RE	0.7	1.8	26.5	1080	22220073
5 x 1.5 RM	0.7	1.8	11.9	190	22220074
7 x 1.5 RM	0.7	1.8	12.8	230	22220075
10 x 1.5 RM	0.7	1.8	15.8	320	22220076
12 x 1.5 RM	0.7	1.8	16.2	360	22220077
19 x 1.5 RM	0.7	1.8	18.8	510	22220078
27 x 1.5 RM	0.7	1.8	22.3	700	22220079
37 x 1.5 RM	0.7	1.8	24.8	910	22220080
48 x 1.5 RM	0.7	1.8	28.3	1150	22220081
5 x 2.5 RE	0.7	1.8	12.4	240	22220082
7 x 2.5 RE	0.7	1.8	13.4	300	22220083
10 x 2.5 RE	0.7	1.8	16.4	400	22220084
12 x 2.5 RE	0.7	1.8	16.9	460	22220085
19 x 2.5 RE	0.7	1.8	19.8	670	22220086
27 x 2.5 RE	0.7	1.8	23.4	920	22220087
37 x 2.5 RE	0.7	1.8	26.1	1210	22220088
48 x 2.5 RE	0.7	1.9	29.9	1550	22220089
5 x 2.5 RM	0.7	1.8	13.0	250	22220090
7 x 2.5 RM	0.7	1.8	14.0	310	22220091
10 x 2.5 RM	0.7	1.8	17.4	420	22220092
12 x 2.5 RM	0.7	1.8	18.0	490	22220093
19 x 2.5 RM	0.7	1.8	21.0	710	22220094
27 x 2.5 RM	0.7	1.8	24.9	980	22220095
37 x 2.5 RM	0.7	1.8	27.8	1290	22220096
48 x 2.5 RM	0.7	1.9	31.9	1650	22220097

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