

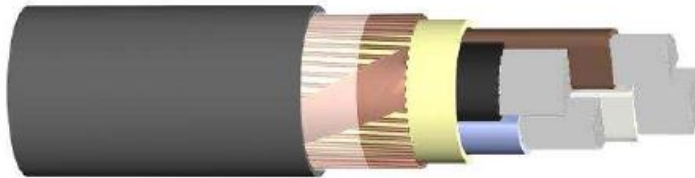
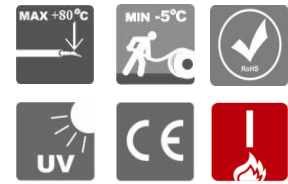
# AL/XLPE/CWW/PVC

## 600/1000V

BS 7870-3.40:2011

# TfKable

**XLPE insulated, copper wire waveform concentric cables with solid aluminium conductors and PVC sheath**



### CONSTRUCTION

<b>Conductors:</b>	aluminium solid circular (RE) class 1, sector shaped (SE) solid conductor class 1
<b>Insulation:</b>	cross-linked polyethylene XLPE type GP8 acc. to BS 7655-1.3
<b>Filling</b>	non-vulcanised rubber compound
<b>Concentric conductor</b>	plain annealed copper wires applied concentrically with a waveform lay
<b>Outer sheath</b>	PVC compound type DMV 23 acc. to BS 7870-1 Annex B
<b>Colour of outer sheath:</b>	black
<b>Core identification:</b>	3-core: brown, black, grey 4-core: blue, brown, black, grey

### CHARACTERISTIC

<b>Maximum conductor operating temperature:</b>	+80°C
<b>Lowest ambient temperature for fixed installation:</b>	-30°C
<b>Lowest installation temperature:</b>	-5°C
<b>Maximum short-circuit conductor temperature:</b>	+250°C
<b>Minimum bending radius during installation:</b>	8D; D – overall diameter
<b>Maximum permissible pulling force with cable grip for Al-conductor:</b>	30 N/mm <sup>2</sup> - maximum value 20kN
<b>Voltage test on complete cable:</b>	3,5 kV AC/ 5 mins
<b>Spark test of the oversheath:</b>	a.c. 6 kV/mm x thickness of oversheath and up to max voltage 25kV

### APPLICATIONS

XLPE insulated and sheathed power and auxiliary control cables for the supply of electrical energy. Special for installations in the open air, in underground and water, indoors, in cable ducts. The concentric conductor is allowed to use as neutral, protective or earthed conductor. Simultaneously, this also is permitted to apply as a screen for example earth-connected protection against contact.

<b>Standard length cable packing</b>	500 or 1000m on drums. Other forms of packing and delivery are available on request
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AL-XLPE-CWW-PVC MK-25-05-2016

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### MARKING

Example:

Embossing convex in two parallel lines and symmetrically in two sides:

**ELECTRIC CABLE 600/1000V BS 7870-3.40 TF KABLE 3 3x300 AL 2016 CE H** + meter markings  
meter markings and unique marking number – ink jet printed or embossing

Number and cross-sectional area of conductor	Thickness of insulation		Minimum core lay length	Typical number and diameter of concentric earth conductor wires	Typical waveform lay length	Thickness of outer sheath	
	Minimum at any point	Minimum Average				Minimum at any point	Minimum Average
n x mm <sup>2</sup>	mm		mm	n x m	mm	mm	mm
3x35RE	0,71	0,9	600	26 x 1,04	220	1,43	1,8
3x70SE	0,89	1,1	700	16 x 1,85	220	1,51	1,9
3x95SE	0,89	1,1	800	22 x 1,85	250	1,68	2,1
3x120SE	0,98	1,2	1000	28 x 1,85	270	1,77	2,2
3x185SE	1,34	1,6	1200	41 x 1,85	300	2,02	2,5
3x240SE	1,43	1,7	1400	41 x 1,85	375	2,19	2,7
3x300SE	1,52	1,8	1600	41 x 1,85	440	2,28	2,8
4x95SE	0,89	1,1	800	22 x 1,85	250	1,77	2,2
4x185SE	1,34	1,6	1200	41 x 1,85	300	2,11	2,6
4x240SE	1,43	1,7	1400	41 x 1,85	375	2,28	2,8
4x300SE	1,52	1,8	1600	41 x 1,85	440	2,53	3,1

Number and cross-sectional area of conductor	Approximate overall diameter	Approximate weight of cables	Maximum dc conductor resistance at 20°C	Maximum dc concentric earth conductor resistance at 20°C	Minimum bending radius 8D acc BS7870-1 Annex A Clause A.4.6	Pulling force 30N/mm <sup>2</sup> acc BS7870-1 Annex A Clause A.4.12
n x mm <sup>2</sup>	mm	kg/km	Ω/km	Ω/km	mm	kN
3x35RE	25,8	1055	0,868	0,868	206	3,15
3x70SE	31,5	1662	0,443	0,443	252	6,3
3x95SE	34,4	2139	0,320	0,320	275	8,55
3x120SE	37,3	2611	0,253	0,253	298	10,8
3x185SE	44,8	3893	0,164	0,164	358	16,65
3x240SE	49,5	4615	0,125	0,164	396	20
3x300SE	55,1	5410	0,100	0,164	441	20
4x95SE	38,7	2556	0,320	0,320	310	11,4
4x185SE	50,6	4663	0,164	0,164	405	20
4x240SE	55,8	5579	0,125	0,164	446	20
4x300SE	62,7	6668	0,100	0,164	502	20

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