Cu or Al - XLPE - LSHF

Unarmoured - Fire Retardant - Halogen Free - IEC 60502-1

APPLICATION

Power supply in places requiring extra fire safety precautions. Fire retardant, high security cable for rated voltages up to 0.6/1kV. Suitable for fixed installations, in public areas such as hospitals, hotels, shopping malls, computer, communication centers and in all general places where it is required a high degree of protection of persons and assets or/and with a large number of people and electrical and electronic equipment.

CABLE DESIGNATION

Cu/XLPE/LSHF
Al/XLPE/LSHF

CONSTRUCTION CHARACTERISTICS

Conductor

Copper (plain annealed): solid class 1, or stranded class 2, or flexible class 5, circular or sector shape.
Aluminium: solid class 1, stranded class 2, circular or sector shape.

Insulation

XLPE – (Cross-linked polyethylene)

Oversheath

LSHF – Low Smoke Halogen Free thermoplastic compound. Fire retardant.

GENERAL CHARACTERISTICS

Construction and test standards	IEC 60228 · IEC 60502-1
Rated voltage U_0/U	0.6 / 1 kV
Test voltage	3.5 kV a.c. 5 minutes
Conductor maximum operating temperature	90°C
Maximum short-circuit temperature	250°C (t ≤ 5s)
Minimum bending radius (mm) **(permanent. after installation)** **(during installation)**	 4xd if d<25 · 6xd if d≥25 · 8xd if sector shape cond. 6xd if d<25 · 9xd if d≥25 · 12xd if sector shape cond.
Maximum pulling force over conductor (N)	Copper – 50 x S Aluminium – 30 x S
Flame retardant	IEC 60332-1-2 · EN 60332-1-2 (cable vertically mounted, length of charred cable ≤ 540 mm)
Fire retardant (frt)	IEC 60332-3-24 · EN 60332-3-24 (bunch of cables vertically mounted on a ladder, length of charred cable ≤ 2.5 m)
Halogen free (zh)	
Low smoke	IEC 61034-2 · EN 61034-2 (cable light transmittance ≥ 60%)
Low toxicity	IEC 60754-1 · EN 50267-2-1 (halogen acid gas content ≤ 0.5%)
Low corrosivity	IEC 60754-2 · EN 50267-2-3 (pH ≥4.3 · conductivity ≤ 10µS/mm)

S – conductor cross-section (mm^2)
d – cable outer diameter (mm)

ELECTRICAL AND DIMENSIONAL CHARACTERISTICS

Cable composition n.° cond. x cross-section (mm^2)	Approximate outer diameter (mm)	Approximate weight (kg/km)	Current carrying capacity In open air [2] T = 30°C (A)	
			2 charged conductors	3 charged conductors
Cu / XLPE / LSHF				
1x1.5	5.8	50	23	20
1x2.5	6.2	63	31	28
1x4.0	6.8	80	42	37
1x6.0	7.3	103	54	48
1x10	8.2	147	75	66
1x16	9.3	207	100	88
1x25	10.9	302	161	135
1x35	11.9	395	200	169
1x50	13.2	519	242	207
1x70	15.0	724	310	268
1x95	16.9	971	377	328
1x120	18.6	1205	437	383
1x150	20.7	1473	504	444
1x185	23.0	1839	575	510
1x240	25.8	2381	679	607
1x300	28.6	2989	783	703
1x400	32.2	3834	940	823
1x500	35.7	4734	1083	946
1x630	41.4	6099	1254	1088
2x1.5	9.6	113	26	
2x2.5	10.4	140	36	
2x4.0	11.5	177	49	
2x6.0	12.6	224	63	
2x10	14.4	319	86	
2x16	16.6	441	115	
2x25	19.8	642	149	
2x35	21.8	840	185	
2x50	24.4	1079	225	
2x70	28.2	1517	289	
2x95	31.8	2042	352	
2x120	35.4	2537	410	
3x1.5	10.1	137		23
3x2.5	11.0	175		32
3x4.0	12.1	228		42
3x6.0	13.4	298		54
3x10	15.3	417		75
3x16	17.6	600		100
3x25	18.0	846		127

Cu or Al - XLPE - LSHF

Unarmoured - Fire Retardant - Halogen Free - IEC 60502-1

ELECTRICAL AND DIMENSIONAL CHARACTERISTICS

Cable composition n.° cond. x cross-section (mm^2)	Approximate outer diameter (mm)	Approximate weight (kg/km)	Current carrying capacity In open air [2] T = 30°C (A)	
			2 charged conductors	3 charged conductors
3x35	20.0	1125		158
3x50	22.8	1495		192
3x70	26.0	2087		246
3x95	29.1	2834		298
3x120	32.3	3552		346
3x150	36.1	4361		399
3x185	40.0	5434		456
3x240	44.8	7059		538
3x300	49.5	8877		621
3x400	56.4	11145		741
3x16+1x10	19.3	714		100
3x25+1x16	21.6	1037		127
3x35+1x16	24.1	1322		158
3x50+1x25	27.7	1781		192
3x70+1x35	32.2	2496		246
3x95+1x50	36.1	3372		298
3x120+1x70	40.3	4314		346
3x150+1x70	45.0	5149		399
3x185+1x95	50.1	6512		456
3x240+1x120	56.1	8395		538
3x300+1x150	62.0	10512		621
3x400+1x185	70.7	13178		741
4x1.5	10.8	165		23
4x2.5	11.9	210		32
4x4.0	13.2	279		42
4x6.0	14.5	368		54
4x10	16.7	537		75
4x16	19.3	772		100
4x25	21.6	1122		127
4x35	24.1	1492		158
4x50	27.7	1986		192
4x70	32.2	2803		246
4x95	36.1	3804		298
4x120	40.3	4587		346
4x150	45.0	5876		399
4x185	50.1	7350		456
4x240	56.1	9521		538
4x300	62.0	11962		621
4x400	70.7	15004		741

ELECTRICAL AND DIMENSIONAL CHARACTERISTICS

Cable composition n.° cond. x cross-section (mm^2)	Approximate outer diameter (mm)	Approximate weight (kg/km)	Current carrying capacity In open air [2] T = 30°C (A)	
			2 charged conductors	3 charged conductors
Al / XLPE / LSHF				
1x16	9.3	116		
1x25	10.9	161		
1x35	11.9	196		
1x50	13.2	246	184	154
1x70	15.0	325	237	206
1x95	16.9	417	289	253
1x120	18.6	504	337	296
1x150	20.7	620	389	343
1x185	23.0	764	447	395
1x240	25.8	967	530	471
1x300	28.6	1188	613	544
1x400	32.2	1485	679	638
1x500	35.7	1845	786	743
1x630	41.4	2321	903	849
3x16	17.6	387		77
3x25	18.0	485		97
3x35	20.0	592		120
3x50	22.8	742		146
3x70	26.0	969		187
3x95	29.1	1253		227
3x120	32.3	1559		263
3x150	36.1	1882		304
3x185	40.0	2309		347
3x240	44.8	2926		409
3x300	49.5	3557		471
3x25+1x16	21.6	580		97
3x35+1x16	24.1	693		120
3x50+1x25	27.7	892		146
3x70+1x35	32.2	1172		187
3x95+1x50	36.1	1521		227
3x120+1x70	40.3	1872		263
3x150+1x70	45.0	2250		304
3x185+1x95	50.1	2759		347
3x240+1x120	56.1	3488		409
3x300+1x150	62.0	4272		471

ELECTRICAL AND DIMENSIONAL CHARACTERISTICS

Cable composition n.° cond. x cross-section (mm^2)	Approximate outer diameter (mm)	Approximate weight (kg/km)	Current carrying capacity In open air (2) T = 30°C (A)	
			2 charged conductors	3 charged conductors
4x16	19.3	466		77
4x25	21.6	613		97
4x35	24.1	753		120
4x50	27.7	965		146
4x70	32.2	1281		187
4x95	36.1	1661		227
4x120	40.3	2016		263
4x150	45.0	2487		304
4x185	50.1	3050		347
4x240	56.1	3861		409
4x300	62.0	4748		471

Other compositions are available, contact info@fast-cables.com for information.

(1) Phase conductors sector shape.
(2) Installation in free air or on perforated cable tray, horizontal or vertical.

Single core cables – Flat touching installation.
Cables with 2 and 3 conductors: 2 charged conductors.
Cables with 4 and 5 conductors: 3 charged conductors.
For compositions of 4 conductors, the same characteristics apply if the fourth conductor is the earth conductor or neutral conductor.