

APPLICATION

Power supply cable for rated voltage up to 0,6/1kV. Suitable for indoor and outdoor fixed installations protected or not, in industrial areas, buildings and similar applications.

CABLE DESIGNATION

Al / LSHF / LSHF

CONSTRUCTION CHARACTERISTICS

Conductor

Aluminum: solid class 1 or stranded class 2 circular or sector shaped

Insulation

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

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	70°C
Maximum short-circuit temperature	160°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)	Aluminum – 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 (mm²)

d – cable outer diameter (mm)



ELECTRICAL AND DIMENSIONAL CHARACTERISTICS

Cable composition n.º 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 / LSHF / LSHF				
1x16	9.9	142		
1x25	11.5	190		
1x35	12.5	226		
1x50	14.0	293	149	128
1x70	15.6	378	192	166
1x95	17.9	494	235	203
1x120	19.6	570	273	237
1x150	21.5	713	316	274
1x185	23.8	874	363	316
1x240	26.8	1111	430	375
1x300	29.8	1340	497	434
1x400	33.4	1700	543	
1x500	39.4	2052	629	
1x630	43.4	2534	722	
3x16	18.9	461	73	61
3x25	19.3	587	89	78
3x35	21.3	706	111	96
3x50	24.6	904	135	117
3x70	27.3	1151	173	150
3x95	31.5	1536	210	183
3x120	34.2	1835		212
3x150	38.0	2163		245
3x185	41.9	2719		280
3x240	47.2	3422		330
3x300	52.1	4117		381
3x25+1x16	23.1	710		78
3x35+1x16	25.6	835		96
3x50+1x25	29.9	1093		117
3x70+1x35	33.6	1382		150
3x95+1x50	38.8	1884		183
3x120+1x70	42.3	2213		212
3x150+1x70	47.2	2626		245
3x185+1x95	52.0	3240		280
3x240+1x120	58.8	4085		330
3x300+1x150	65.1	5012		381

ELECTRICAL AND DIMENSIONAL CHARACTERISTICS

Cable composition n.º 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	20.8	535		61
4x25	23.1	725		78
4x35	25.6	905		96
4x50	29.9	1150		117
4x70	33.6	1464		150
4x95	38.8	2020		183
4x120	42.3	2325		212
4x150	47.2	2868		245
4x185	52.0	3577		280
4x240	58.8	4436		330
4x300	65.1	5488		381

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.