TECHNICAL SPECIFICATION
for Three Core Cables
type AXLJ-F LT 3 x 50RM/16 mm^2 Uo/U(Um) = 6/10(12)kV
acc. to HD 620 Part 10 section M

CONSTRUCTION

- Round, stranded and compacted aluminium conductor - Class 2 – longitudinally sealed
- Extruded semi-conducting conductor screen
- Insulation XLPE
- Extruded semi-conducting insulation screen – FULL BONDED
- Laid-up three-cores
- Semi-conducting tape(s)
- Metallic screen - copper wires and copper equalizing tape(s)
- Polyester tape(s)
- Outer sheath – colour BLACK

APPLICATION

- Laying in ground (wet or dry locations)
- Laying in air
- Laying in ducts

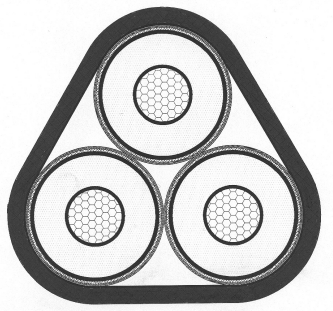
TEMPERATURE

Conductor

- Continuous operation 90 °C
- Short circuit 250 °C (duration max 5 s)

Metallic screen and armour

- Short circuit 350 °C (duration max 5 s)



The picture is informative only – not in scale

DESCRIPTION	UNIT	DETAILS /1
CONSTRUCTION DATA		
Conductor		
❑ Material	-	Aluminium
❑ Nominal cross sectional area	mm^2	50
❑ Number of wires	No	min 6
❑ Conductor diameter	mm	$8.15^{\pm 0.1}$
❑ Longitudinally sealed	-	YES
Conductor screen /2		
❑ Material	-	Semi-cond. polyethylene
❑ Minimum at point radial thickness	mm	0.3
Insulation /2		
❑ Material	-	XLPE
❑ Minimum average / minimum at point radial thickness	mm	3.4 / 2.96
❑ Diameter over insulation	mm	15.9
Insulation screen /2		
❑ Type	-	FULL BONDED
❑ Material	-	Semi-cond. polyethylene
❑ Minimum at point radial thickness	mm	0.3
Laid-up three-cores		
❑ Diameter over the laid-up cores	mm	≈ 36.5
Wrapping over laid-up three cores		
❑ Material	-	Semi - cond. tape(s)
Metallic screen		
❑ Material	-	Copper (wire's and equalizing tape)
❑ Diameter over metallic screen	mm	38.9
❑ Cross sectional area	mm^2	16
❑ Wrapping over Metallic Screen –material	-	Polyester tape(s)

/1 - *Diameters are calculated values and subject to manufacturing tolerances*
/2 - *Triple extrusion processes, Dry curing and cooling.*

D E S C R I P T I O N	UNIT	DETAILS [/1]
Outer sheath		
❑ Material	-	PE – colour BLACK
❑ Nominal /minimum at point radial thickness	mm	2.4 / 1.7
❑ Diameter over sheath - completed cable (De)	mm	43.5
Weight of complete cable (approx.)	kg / km	1 370
ELECTRICAL DATA at 50Hz		
Conductor resistance AC at 90°C	Ω/km	0.825
Impedance	mH/km	0.832
SHORT CIRCUIT CURRENTS		
Max Short Circuit Capacity: (IEC 60949)		
❑ conductor : **90 → 250 °C**	kA / 1 sec	4.7
❑ metallic screen: **→ 350 °C**	kA / 1 sec	3.7
AMPACITY (In) [/3]		
in earth	A	165
in air	A	165
MECHANICAL DATA		
Recommended min. bending radius for laying	m	16 * **De** * 10^{-3}
Maximum Cable Pulling Force: [/4]	kN	30* (No*cross sectional) conductor area *10^{-3}
Lowest recommended temperature during laying:	^{O}C	≥ minus 20
DELIVERY DATA		
Maximum length per drum / Diameter (Type) of wooden drum	m / m	820 / 2.2 (K22)

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[/3] *- Current rating guideline (Calculated according to IEC Pub. 60287 and the following conditions)*

In ground :

- ❑ *Ground temperature* *20 ^{O}C*
- ❑ *Laying depth* *0.7 m*
- ❑ *Ground thermal resistivity* *1.0 K·m/W – in damp area / 2.5 K·m/W – in dry area*
- ❑ *Loading* *0.7*

In air :

- ❑ *Air temperature* *30 ^{O}C*
- ❑ *Loading* *1.0*

[/4] *- Cable pulling forces by its conductor or sheath with the use of cable grip*

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