

## 3 Core, Aluminium, XLPE insulated, FRPVC / LHFRPVC (Type B) Unarmoured

SIZE CODE: XLAUA 3x(conductor size) FR / LH 33kV

### Application

For use in power circuits of 19/33kV earthed systems. Installed in cable trays and ducts.

**Specification:** SANS 1339

**Voltage Rating:** 19/33kV

### Construction

3 Core, Circular Stranded Aluminium Conductor, XLPE insulated, individually copper tape screened, flame retardant / low halogen flame retardant PVC sheathed.

## Physical properties and dimensions

## Electrical Properties

Conductor size	Conductor diameter	Insulation diameter	Cable diameter	Cable mass	Gross mass (300m)	Bending radius	Maximum pulling force on combined conductors	Current rating			Resistance $\Omega/\text{km max}$		Reactance $\Omega/\text{km}$	Impedance $\Omega/\text{km}$	Capacitance $\mu\text{F}/\text{km}$	Short circuit ratings	
								Amps			dc @ 20 °C	ac @ 90 °C				Symmetrical	Max Earth fault
								air	ground	ducts							
mm <sup>2</sup> Nom.	mm Nom.	mm Nom.	mm Nom.	kg/m Nom.	kg Nom.	mm min.	kN										
50	8.2	27.8	69.7	4.2	1,660	1045	353	166	149	130	0.641	0.822	0.145	0.835	0.113	4.1	1.0
70	10.0	29.5	73.6	4.8	1,929	1103	494	204	181	158	0.443	0.568	0.136	0.584	0.128	5.9	1.0
95	11.8	31.4	77.8	5.3	2,081	1166	670	247	214	191	0.320	0.410	0.126	0.429	0.142	8.2	1.0
120	13.1	32.7	81.0	5.9	2,376	1215	847	285	242	219	0.253	0.324	0.122	0.347	0.152	10.3	1.0
150	14.4	34.4	84.8	6.4	2,727	1273	1,058	318	270	246	0.206	0.264	0.119	0.290	0.160	12.7	1.0
185	16.4	35.9	88.4	7.1	2,936	1326	1,305	371	307	279	0.164	0.210	0.113	0.239	0.177	15.9	1.0
240	18.9	38.5	94.3	8.1	3,231	1415	1,693	437	353	321	0.125	0.160	0.109	0.194	0.196	20.9	1.0
300	21.2	40.8	99.5	9.0	3,493	1492	2,117	494	395	358	0.100	0.128	0.105	0.166	0.213	26.2	1.0

### Cable Identification:

FRPVC (red stripe), LHFRPVC (blue stripe), HFFR (white stripe), PE (no stripe).

Note: Under ground installations will only be allowed if the cables are adequately protected against mechanical damage.

### Installation conditions:

- Conductor temperature maximum 90 °C
- Depth of laying 800 mm
- Ambient temperature 30 °C in free air (shaded)
- Soil thermal resistivity 1.2 K.m/W. • Ground temperature 25 °C.

Revision: R00 22/02/2016



Item	Description
1	Aluminium Conductor
2	Semi-conductive conductor screen
3	TR XLPE insulation
4	Semi-conductive core screen
5	Semi-conductive bedding tape
6	Individual Copper tape screen
7	PP Filler
8	Binding tape
9	Sheath

