


## TECHNICAL DATA SHEET MEDIUM VOLTAGE POWER CABLES

Cable Description:

Cu / XLPE / SWA / PVC 3X185 mm<sup>2</sup> 15kV CTS IEC 60502-2 FR-IEC 60332-1

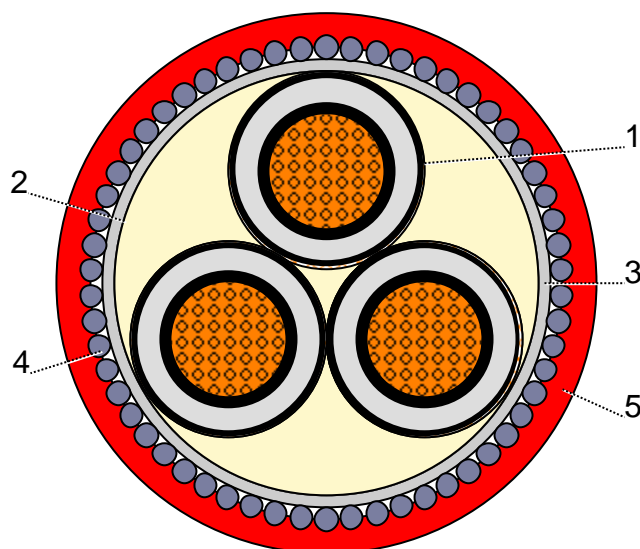
Design and Construction Data:		
Reference Manufacturing Standard		IEC 60502-2, IEC 60228
Max. Permissible Continuous Conductor Temp	°C	90
Maximum Conductor Short Circuit Temperature for 5 Seconds	°C	250
Rated Voltage 'U <sub>0</sub> / U (U <sub>m</sub> )'	kV	8.7 / 15 (17.5)
Number of Cores x Conductor Cross-Section	mm <sup>2</sup>	3 x 185
Conductor Material & shape		Cu, Compacted Round Class 2
Approx. Diameter of Conductor	mm	15.9
Insulation Material		XLPE
Nominal Thickness of Insulation	mm	4.5
Approx. Thickness of Helically O.L. Copper Tape Screen	mm	0.075
Core Identification tape color		(Red, Yellow, Blue)
Armour Material Type		Round Galvanized Steel Wire
Outer Sheath Material		PVC - ST2
Approx. Overall Diameter of the Cable	mm	73.7
Colour of Outer Sheath		RED
Approx. Weight of Conductor	kg/km	4753
Approx. net weight of the cable	kg/km	11608
Electrical Data:		
System Frequency	Hz	60
Max. Conductor DC Resistance at 20°C	Ohms/km	0.0991
Conductor AC Resistance at 90°C	Ohms/km	0.1287
Inductance	mH/km	0.3008
Inductive Reactance	Ohms/km	0.113
Conductor Impedance at 90°C	Ohms/km	0.171
Capacitance	µF/km	0.3432
Charging Current	Amps/km	1.126
Short Circuit Rating of Cable based on Maximum Conductor Operating Temperature		
- Conductor for 1 second	KA	26.47
- Screen for 1 second	KA	1.92
Screen Temperature before Short Circuit	°C	85
Screen Temperature at the end of Short Circuit	°C	200
Permissible load under Service Conditions given below (for both end bond installation)		
- In Air @ 40°C Ambient Temperature touched to vertical surface	 Amp	389
- Direct in Ground with the following conditions: Ambient Ground Temperature: 35 °C Depth of laying in ground: 0.8 m Soil Thermal Resistivity: 1.2 °K.m/W	Amp	355

Additional Data:		
Maximum pulling Tension	kN	27.8
Maximum side wall press	kN/m	25.1
Minimum Bending Radius	m	1.106
The Cable shall meet all Test requirements of IEC-60502-2		Yes

Packing Data:		
Drum Type		Non-Returnable
Length of Cable per drum (± 5%)	m	500
Drum Dimensions "Height x Width" (Approx.)	m	2.6 x 1.56
Gross Weight (Approx.)	kg	6314

Cable Sheath Marking:		
BAHRA CABLES CO. KSA ELECTRIC CABLE 3x185 mm <sup>2</sup> Cu/XLPE/SWA/PVC 8.7/15 (17.5) KV IEC 60502-2 FR-IEC 60332-1 'Manufacturing Year' 'Meter marked'		

**Cable Drawing:**



Description	Cu / XLPE / SWA / PVC 3X185 mm <sup>2</sup> 15kV CTS	Approx. Diameter
1	Core	
	- Copper Conductor	15.90
	- Extruder Inner Semi-Conductor	16.84
	- Extruded XLPE insulation	25.24
	- Extruder Outer Semi-Conductor (Strippable)	26.38
	- Copper Tape Metallic Screen	26.68
	Cores will be assembled with non-hygroscopic filler	
2	Polymeric Tape	58.13
3	PVC Inner Covering	61.39
4	Round Galvanized Steel Wire Armour (SWA)	67.43
5	PVC Outer Sheath	73.7