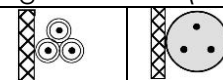
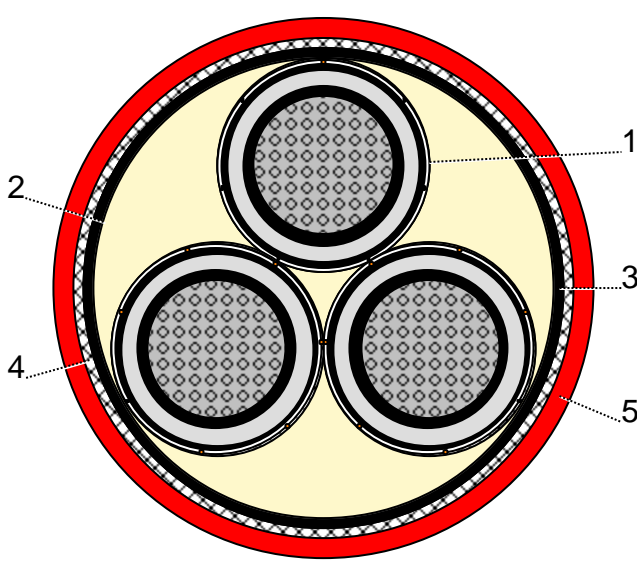


## TECHNICAL DATA SHEET MEDIUM VOLTAGE POWER CABLES

Cable Description:

Al / XLPE / STA / PVC 3X500/35 mm<sup>2</sup> 15kV CWS 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 500
Conductor Material & shape		Al, Compacted Round Class 2
Approx. Diameter of Conductor	mm	26.4
Insulation Material		XLPE
Nominal Thickness of Insulation	mm	4.5
Approx. Cross Section Area of Copper Wire Screen	mm <sup>2</sup>	35
Approx. No. , Thickness & Width of Helically O.H. Copper Tape	mm	1 x 0.1 x 15
Core Identification tape color		(Red, Yellow, Blue)
Armour Material Type		Double Galvanized Steel Tape
Outer Sheath Material		PVC - ST2
Approx. Overall Diameter of the Cable	mm	103.0
Colour of Outer Sheath		RED
Approx. Weight of Conductor	kg/km	3940
Approx. net weight of the cable	kg/km	12527
Electrical Data:		
System Frequency	Hz	60
Max. Conductor DC Resistance at 20°C	Ohms/km	0.0605
Conductor AC Resistance at 90°C	Ohms/km	0.0817
Inductance	mH/km	0.2814
Inductive Reactance	Ohms/km	0.106
Conductor Impedance at 90°C	Ohms/km	0.134
Capacitance	µF/km	0.4923
Charging Current	Amps/km	1.615
Short Circuit Rating of Cable based on Maximum Conductor Operating Temperature		
- Conductor for 1 second	KA	46.85
- Screen for 1 second	KA	4.39
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	554
- 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	481

<b>Additional Data:</b>		
Maximum pulling Tension	kN	45.0
Maximum side wall press	kN/m	29.1
Minimum Bending Radius	m	1.546
The Cable shall meet all Test requirements of IEC-60502-2		Yes
<b>Packing Data:</b>		
Drum Type		Non-Returnable
Length of Cable per drum (± 5%)	m	500
Drum Dimensions "Height x Width" (Approx.)	m	3 x 1.66
Gross Weight (Approx.)	kg	7,138
<b>Cable Sheath Marking:</b>		
BAHRA CABLES CO. KSA ELECTRIC CABLE 3x500/35 mm <sup>2</sup> AL/XLPE/STA/PVC 8.7/15 (17.5) KV IEC 60502-2 'Manufacturing Year' 'Meter marked' " - PROPERTY OF SAUDI ELECTRICITY COMPANY - 'Arabic Marking is required" Arabic شركة كابلات بحرة كابل ألمنيوم 35 / 500×3 مم خاص بالشركة السعودية للكهرباء (السنة الهجرية)		
<b>Cable Drawing:</b>		
		
<b>Description</b>	<b>Al / XLPE / STA / PVC 3X500/35 mm<sup>2</sup> 15kV CWS</b>	<b>Approx. Diameter</b>
1	Core	
	- Aluminum Conductor	26.35
	- Extruder Inner Semi-Conductor	27.61
	- Extruded XLPE insulation	36.61
	- Extruder Outer Semi-Conductor (Strippable)	38.81
	- Copper Wire Metallic Screen	40.48
	Cores will be assembled with non-hygroscopic filler	
2	Polymeric Tape	87.74
3	LLDPE Inner Covering	91.94
4	Double Galvanized Steel Tape Armour (STA)	95.14
5	PVC Outer Sheath	103.04