



CABLE STRUCTURE

Conductors	Flexible electrolytic copper wire acc. to DIN VDE 0295 - Class 5
Insulation	
Main Cores	3GI3 type EPR compound
Pilot Control Cores	3GI3 type EPR compound
Protective Conductor	Made of plain copper wires or copper wire braiding laid-up concentrically around each main core
Electrical Field Control	Extruded inner and outer rubber semiconductive layer For 3,6/6 kV cables outer semiconductive layer only
Core Identification	
Main Cores	Natural coloring, design acc. to DIN VDE 0250 Part1
Pilot Cores	Black colored and number coded
Lay Up	Three main conductors laid-up with three pilot control cores in the outer interstice Protective cores are concentrically wrapped over insulation of power cores
Inner Sheath	Special Halogen free and flame retardant HFFR compound
Monitoring Conductor	Semiconductive tape + overall concentric lay of copper wires and syntetic tape over wires
Inner Sheath Armour	Special Halogen free and flame retardant HFFR compound Galvanized steel wire braiding, coverage minimum 75 %
Outer Sheath	Special Halogen free and flame retardant HFFR compound , Red or Black

PRODUCTION AND TEST STANDARDS

Construction	DIN VDE 0250-605 & IEC 60502-2
General Requirements	DIN VDE 0250-1
Guide to Use	DIN VDE 0298-3
Electrical Tests	DIN VDE 0472-501, 503, 508
Non-Electrical Tests	DIN VDE 0472-401, 402, 602, 303, 615
Under Fire Conditions Test	DIN VDE 0472-803, 804
Flame Retardant	VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1

Ozone
ResistantCold
ResistantTear
ResistantUV
ResistantWeather
ResistantMoisture
Resistant

Ex-Proof

OPERATING CHARACTERISTICS

Rated Voltage	3,6/6 kV	6/10 kV	8,7/15 kV	2/20 kV	18/30 kV
AC Test Voltage	11 kV	17 kV	24 kV	29 kV	43 kV
Max. Permissible					
Operating Voltage AC	4,2/7,2 kV	6,9/12 kV	10,4/18 kV	13,9/24 kV	20,8/36 kV
Max. Permissible					
Operating Voltage DC	5,4/10,8 kV	9/18 kV	13,5/27 kV	18/36 kV	27/54 kV
Min. Bending Radius					
Current Carrying Capacity	Acc. to DIN VDE 0298 part 3				
Working Temperature	According to DIN VDE 0298, Part 4				
Fixed	-40°C ... +80°C				
Mobile	+5°C ... +80°C				
Max. Tensile Load of cable	15 N/mm ²				
Max. Torsion	25°/m				
Travel Speed	max 30m/min				
Minimum distance for change of direction	20 X D				

Application

These cables are used for the connection of mobile operating equipments, in mines and underground excavations with hazardous environments, in stationary operation, e.g. high-voltage transformers in mining and tunnelling.

3,6/6 kV

Cross Section (mm ²)	Overall Diameter Min - Max (mm)	Conductor Resistance At 20 °C (Ω/km)	Approximate weight (kg / km)
3x25 + 3x16/3E + 3x2,5st + ŪL	47.0 - 51.0	0.780	3600
3x35 + 3x16/3E + 3x2,5st + ŪL	49.0 - 54.0	0.554	4170
3x50 + 3x25/3E + 3x2,5st + ŪL	52.0 - 57.8	0.386	4850
3x70 + 3x35/3E + 3x2,5st + ŪL	56.1 - 61.2	0.272	5900
3x95 + 3x50/3E + 3x2,5st + ŪL	60.3 - 66.2	0.206	5900
3x120 + 3x70/3E + 3x2,5st + ŪL	63.8 - 70.2	0.161	8620
3x150 + 3x70/3E + 3x2,5st + ŪL	66.0 - 72.0	0.129	9860
3x185 + 3x95/3E + 3x2,5st + ŪL	70.0 - 74.0	0.106	11300

6/10 kV

Cross Section (mm ²)	Overall Diameter Min - Max (mm)	Conductor Resistance At 20 °C (Ω/km)	Approximate weight (kg / km)
3x25 + 3x16/3E + 3x2,5st + ŪL	54.0 - 57.0	0.780	4200
3x35 + 3x16/3E + 3x2,5st + ŪL	57.1 - 60.2	0.554	4650
3x50 + 3x25/3E + 3x2,5st + ŪL	60.4 - 63.6	0.386	5380
3x70 + 3x35/3E + 3x2,5st + ŪL	65.2 - 68.8	0.272	6450
3x95 + 3x50/3E + 3x2,5st + ŪL	68.0 - 71.9	0.206	7700
3x120 + 3x70/3E + 3x2,5st + ŪL	70.1 - 76.1	0.161	9260
3x150 + 3x70/3E + 3x2,5st + ŪL	73.0 - 78.0	0.129	10840
3x185 + 3x95/3E + 3x2,5st + ŪL	74.0 - 79.2	0.106	12400

8,7/15 kV

Cross Section (mm ²)	Overall Diameter Min - Max (mm)	Conductor Resistance At 20 °C (Ω/km)	Approximate weight (kg / km)
3x25 + 3x16/3E + 3x2,5st + ŪL	54.2 - 58.0	0.780	4530
3x35 + 3x16/3E + 3x2,5st + ŪL	55.0 - 60.0	0.554	5100
3x50 + 3x25/3E + 3x2,5st + ŪL	58.0 - 61.0	0.386	5840
3x70 + 3x35/3E + 3x2,5st + ŪL	65.2 - 67.0	0.272	7840
3x95 + 3x50/3E + 3x2,5st + ŪL	66.0 - 69.0	0.206	9120

12/20 kV

Cross Section (mm ²)	Overall Diameter Min - Max (mm)	Conductor Resistance At 20 °C (Ω/km)	Approximate weight (kg / km)
3x25 + 3x16/3E + 3x2,5st + ŪL	54.4 - 58.2	0.780	4920
3x35 + 3x16/3E + 3x2,5st + ŪL	55.4 - 60.0	0.554	5400
3x50 + 3x25/3E + 3x2,5st + ŪL	58.0 - 61.0	0.386	6200
3x70 + 3x35/3E + 3x2,5st + ŪL	65.2 - 67.0	0.272	7320
3x95 + 3x50/3E + 3x2,5st + ŪL	66.0 - 69.0	0.206	8630
3x120 + 3x70/3E + 3x2,5st + ŪL	68.7 - 74.0	0.161	9260
3x150 + 3x70/3E + 3x2,5st + ŪL	74.0 - 78.0	0.129	10460
3x185 + 3x95/3E + 3x2,5st + ŪL	78.0 - 82.0	0.106	11870

