

SINGLE CORE 22KV FLEX

Flexible high voltage cable for high mechanical stresses



APPLICATION

- Power supply cubicle interconnections
- Transformer dropper cable
- Mobile substations
- Pumps and motors
- Overhead line connections
- High voltage switchboards
- Suitable for 6.6kV, 11kV and 22kV applications

DESIGN

Finely stranded tinned copper conductors laid up with a short length of lay to provide a flexible and robust conductor assembly. The PROTOLON R-EP-90 insulation provides high electrical characteristics and is manufactured using a triple extrusion process together with the semi-conductive EPR conductor and insulation screen. The semi-conductive screening combined with the overall braided copper wire screen controls the electric field and prevents partial discharge. The overall copper wire braid screen is in accordance with AS 2802. The flame retardant heavy duty XHD-90-PCP sheath has a high resistance to abrasion, tearing, lubricants, chemicals and weathering. The PROTOLON sheath is coloured red for high voltage designation.

OPERATING TEMPERATURE

- Minimum permissible ambient temperature fixed -25°C
- Minimum permissible ambient temperature flexing -40°C
- Maximum permissible conductor temperature -90°C
- Maximum permissible short circuit temperature -250°C

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CURRENT CARRYING CAPACITY

Current ratings are based on continuous operation at an ambient temperature of 40°C. At other temperatures these values must be converted using the following table.

°C	15	20	25	30	35	40	45	50	55	60	65	70	75	80
Factor	1.26	1.20	1.15	1.10	1.05	1.00	0.94	0.88	0.81	0.73	0.65	0.57	0.47	0.34

VOLTAGE RATINGS


Rated voltage	6/10kV	$U_0/U = 6.9/12$ kV
AC test voltage		17 kV
Rated voltage	12/20kV	$U_0/U = 13.9/24$ kV
AC test voltage		29 kV

MINIMUM BENDING RADII


The following minimum bending radii should be observed to ensure operating reliability where d = cable O.D.

- For fixed installation 6 x cable O.D
- When freely flexing 10 x cable O.D

Selection and Ordering Data - 6/10kV Flex

Number of Cores and Conductor Cross-section	Part No.	Diameter of bare conductor	Min outer diameter	Max outer diameter	Net weight	Maximum	Unenclosed touching
mm ²		mm	mm	mm	kg/km	N	
1 x 25	5DK4 113	6.9	22.2	24.2	791	375	117
1 x 35	5DK4 114	8.1	23.4	25.4	1050	525	144
1 x 50	5DK4 115	9.7	25.4	28.4	1153	750	180
1 x 70	5DK4 116	11.2	27.3	30.3	1399	1050	222
1 x 95	5DK4 117	13.2	29.3	32.3	1910	1425	268

Selection and Ordering Data - 12/20kV Flex

Number of Cores and Conductor Cross-section	Part No.	Diameter of bare conductor	Min outer diameter	Max outer diameter	Net weight	Maximum	Unenclosed touching
mm ²		mm	mm	mm	kg/km	N	
1 x 25	5DK5 562	6.9	27.2	30.2	1090	375	124
1 x 35	5DK5 564	8.1	28.4	31.4	1236	525	153
1 x 50	5DK5 566	9.7	31.0	34.0	1680	750	192
1 x 70	5DK5 568	11.2	32.5	35.5	1776	1050	226
1 x 95	5DK4 571	13.2	34.5	37.5	2170	1425	284