

Heavy duty / extra heavy duty flexible cables



APPLICATION

- Flexible pump cable
- Heavy duty construction site leads
- Oil rigs
- Generator supply cables
- Suitable for submersible application
- Suitable for hazardous locations

For flexible use and fixed installation in underground mining applications, tunnel building applications, open-cast mining applications, in quarries, on construction sites and similar applications, with heavy mechanical stresses. The cables can be used indoors as well as outdoors, in explosion-hazard areas, in industry and in agriculture.

They can be used permanently in waste water up to 40 °C. Owing to the various (and frequently changing) substances of which the contaminated water is made up, the cables may be used only in easily accessible areas that can be inspected (installation depth of approximately 10 m, as customarily encountered in sewage water tanks).

The cables can also be used in industrial water, cooling water, surface water, rainwater and mixed water – and in groundwater and seawater to a more limited extent. The requirements for accessibility and inspection are less stringent in such cases at depths greater than 10 m up to 500 m.

If the water concerned is aggressive or composed of special substances, the cable's resistance properties should be examined.

DESIGN

PROTOMONT heavy duty elastomer flexible cables are designed for aggressive environments in open cut mining and quarries, industry and construction sites as well as agricultural use where heavy mechanical stresses occur.

PROTOMONT cables consist of finely stranded tinned copper conductors laid up to provide a flexible design. Between the elastomer inner and outer sheaths there is an overall tinned copper screen.

R-EP-90 elastomer insulation enables improved current carrying capacities and a specially compounded CPE outer sheath resists hard and abrasive surfaces. Designed in accordance with the Australian Standard, AS/NZS 5000-1, AS 3191.

OPERATING TEMPERATURE

- Maximum permissible operating temperature at conductor 90 °C
- Maximum permissible short circuit temperature at conductor 250 °C (max. 5 s)
- Minimum permissible temperatures
 - when in motion -25 °C
 - when stationary -40 °C
- Maximum permissible water temperature 40 °C

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

The values are valid for permanent operation with DC or AC with 50 up to 60 Hz. Touching a surface, two or three cores loaded, multi-core cables all cores loaded.

VOLTAGE RATING

- Rated voltage: U_o/U = 0.6/1kV
- Maximum operating voltages in:
 - 3 phase AC operation U_o/U = 0.7/1.15kV
 - DC operation U_o/U = 0.9/1.73kV
- AC test voltage = 3kV

* The cable is designed in accordance with VDE/IEC and meets or exceeds the Australian Standard AS 5000.1 for the voltage rating of 0.6/1kV.

MINIMUM BENDING RADII

The following minimum bending radii should be observed to ensure operating reliability.

- For fixed installation 4 x cable diameter
- When freely flexing 5 x cable diameter

Note: For force guided and reeling applications please refer to Siemens CORDAFLEX (K) information.

TENSILE STRENGTH

The maximum allowable tensile stress is 15N/mm². This ensures no conductor damage will occur in operation.


CORE COLOUR IDENTIFICATION

- 4 core blue, brown, black, **green/yellow**
- 5 core red, white, blue, black, **green/yellow**

Selection and ordering data

5 CORE OVERALL PROTOMONT SCREENED (F)

Current ratings are based on AS/NZS 3008.1.1:2017.

	Number of cores x conductor size	Part No.	Nominal strands and strand diameter	Nominal of diameter conductor	Nominal cable diameter	Approx net cable weight	Unenclosed Spaced 
	mm ²		mm	mm	mm	kg/km	A
PROTOMONT Screened	5 x 2.5/2.5	5DL2 710	50 x 0.25	2.1	15.8	540	27
	5 x 4/4	5DL2 811	56 x 0.30	2.6	18.8	680	36
	5 x 6/6	5DL2 712	84 x 0.30	3.2	20.4	910	46
	5 x 10/10	5DL2 713	80 x 0.40	4.2	24.6	1320	66
	5 x 16/16	5DL2 714	126 x 0.40	5.3	30.0	1955	87