



## Exploration & Production

# ESP Cables

## Flat Cables

### DW 450 MLE - Motor Lead Flat Cable 450 °F

Motor lead flat cable. For easier installation and maintenance, Prysmian ESP cables are shipped on reels of a continuous, splice-free length. Maximum permissible temperature is 450 °F (232 °C).

#### APPLICATION

Downhole extraction systems are critical for crude oil extraction. The reliability of the electrical power supply to an Electrical Submersible Pump (ESP) system depends on the performance and reliability of the power feed through to the wellhead, power cable, motor lead cable, pig tail connectors and related equipment such as the pump and motor. Prysmian ESP cables offer an efficient, rugged and easy to handle solution that delivers reliable performance in a package that is straightforward to install and maintain.

#### STANDARDS & APPROVALS

IEEE 1018 as far as applicable.

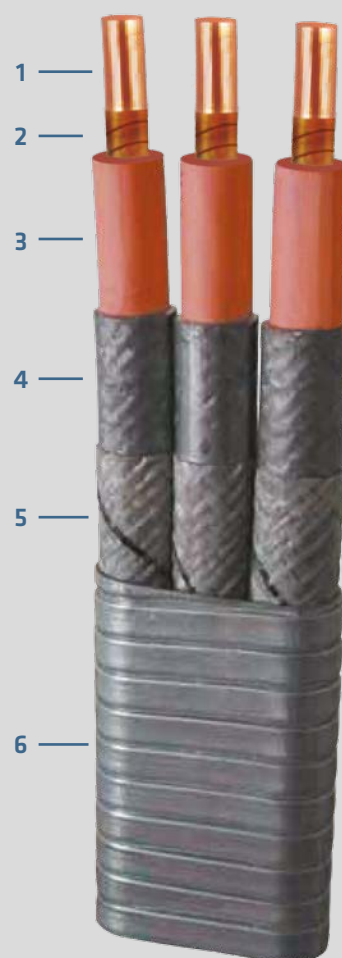
#### QUALITY & TESTING

Prysmian has a built-in multi-step quality assurance program, covering the production process from cable design and raw material purchases to final inspection and testing documentation.

The ISO 9001 quality system of Prysmian Group (together with ISO 14001 and OHSAS 18001) has been assessed, approved and is currently audited by SGS.

#### DESIGN & CONSTRUCTION

- 1 CONDUCTOR**  
Solid plain copper conductors.
- 2 TAPE**  
Two layers of Kapton tape are applied on the conductors to allow high thermal and electrical performances.
- 3 INSULATION**  
A proprietary high quality EPDM compound is chemically bonded to the conductor. It is specially formulated to provide high dielectric and low swell characteristics in presence of oil.
- 4 LEAD SHEATH**  
A continuous, impervious, fatigue and corrosion resistant lead sheath is extruded over the insulation to provide excellent protection against oil, chemicals and gases and insulation decompression.
- 5 BRAID**  
A synthetic braid, applied with full coverage over the lead sheath, provides additional mechanical reinforcement, hoop strength and armour bedding. A suitable overlapped tape can be used as an alternative.
- 6 ARMOUR**  
A 50% lapped, Monel 400 tape armour provides excellent mechanical protection with a high degree of flexibility and is available in thickness of 0.015". Stainless steel or fully galvanized (4 sides) steel tape armour (thickness 0.020") is available for use in less corrosive well environments.





## Oil & Gas - Cable Solutions

# Exploration & Production

# ESP Cables

## Flat Cables

### PERFORMANCES/RATINGS

#### CHEMICAL RESISTANCE



monel tape: excellent

#### MAXIMUM AXIAL LOAD



50 N/mm<sup>2</sup>

#### MIN. INSTALLATION TEMPERATURE



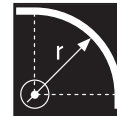
-40 °F  
(-40°C)

#### MAX. RATED TEMPERATURE



+450 °F  
(+232°C)

#### MIN. BENDING RADIUS FOR INSTALLED CABLES



7 times  
major axis dimension

### TECHNICAL DATA

#### DW 450 MLE - 3 Conductors KAPTON/EPDM/LEAD/MONEL 4 kV - MOTOR LEAD EXTENSION

SIZE		CONDUCTOR STRANDS	CONDUCTOR DIAMETER		INSULATION THICKNESS		INSULATION DIAMETER		DIMENSIONS UNDER ARMOUR		OVERALL DIMENSIONS		WEIGHT		ELECTRICAL PARAMETERS	
(awg)	(mm <sup>2</sup> )	(nr)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb/kft)	(kg/km)	r	x
4	23,76	1	0,22	5,50	0,050	1,27	0,32	8,1	0.40x1.20	10.2x30.6	0.47x1.26	11.7x32.1	1478	2200	0,459	0,042
6	15,34	1	0,18	4,42	0,050	1,27	0,28	7,0	0.36x1.07	9.1x27.3	0.45x1.17	11.5x29.7	1155	1719	0,730	0,045

r = conductor electrical resistance at 450 °F | x= inductive reactance at 60 Hz

Note: overall dimensions and weights are based on 0.015" armour tape thickness

This product information sheet is provided for reference only.

For Voltage Drop/Ampacity data, please contact your Pysmian representative.

#### CONTACT INFO:

prysmianoilandgas@prysmiangroup.com

www.prysmiangroup.com/contact-us