



## Exploration & Production

# ESP Cables

## Round Cables

### DW 205 R / DEVILENE R 205 °F

Round cable providing a high degree of flexibility and crush resistance. For easier installation and maintenance, Prysmian ESP cables are shipped on reels of a continuous, splice-free length. Maximum permissible temperature is 205 °F (96 °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 1019.

#### 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 or stranded plain (or tinned) copper conductors. A special sealing compound completely fills the interstitial spaces between the strands to prevent gas migration.

##### 2 INSULATION

A high dielectric quality Polypropylene (PP) provides the ideal balance of physical and electrical properties.

##### 3 JACKET

A proprietary Nitrile rubber (NBR) formulation, specially compounded to provide excellent heat, oil resistance and low swell, is extruded over the cabled insulated conductors.

##### 4 ARMOUR

An interlocking, fully galvanized (4-sides) steel tape armour provides excellent mechanical protection with a high degree of flexibility and enhanced crush resistance, available in 0.025" and 0.034" thicknesses. Stainless steel or Monel 400 armour is available for use in highly corrosive well environments. A selection of various armour profiles is available to suit various downhole applications.



#### CONTACT INFO:

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### PERFORMANCES / RATINGS

**CHEMICAL RESISTANCE**



galvanised steel tape: good  
stainless steel tape: very good  
monel tape: excellent

**MAXIMUM AXIAL LOAD**



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

**MIN. INSTALLATION TEMPERATURE**



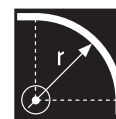
+23 °F  
(-5 °C)

**MAX. RATED TEMPERATURE**



+205 °F  
(+96 °C)

**MIN. BENDING RADIUS FOR INSTALLED CABLES**



7 times  
overall diameter

### TECHNICAL DATA

#### DW 205 R3 - 3 Conductors PP/NBR/GSTA 3 kV

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
1	42,4	7	0,30	7,65	0,074	1,90	0,45	11,5	1,13	28,7	1,27	32,2	1612	2398	0,178	0,033
2	33,6	7	0,27	6,78	0,074	1,90	0,42	10,6	1,06	26,9	1,20	30,4	1394	2074	0,224	0,034
4	21,2	1	0,21	5,20	0,074	1,90	0,35	9,0	0,93	23,6	1,06	27,0	1067	1588	0,346	0,037
6	13,3	1	0,16	4,10	0,074	1,90	0,31	7,9	0,83	21,1	0,97	24,6	839	1248	0,550	0,039

#### DW 205 R4 - 3 Conductors PP/NBR/GSTA 4 kV

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
1	42,4	7	0,30	7,65	0,082	2,10	0,47	11,9	1,17	29,6	1,30	33,1	1653	2460	0,178	0,034
2	33,6	7	0,27	6,78	0,082	2,10	0,43	11,0	1,09	27,8	1,23	31,3	1433	2132	0,224	0,035
4	21,2	1	0,21	5,20	0,082	2,10	0,37	9,4	0,96	24,4	1,10	27,9	1103	1641	0,346	0,038
6	13,3	1	0,16	4,10	0,082	2,10	0,33	8,3	0,87	22,0	1,00	25,5	873	1299	0,550	0,040

#### DW 205 R5 - 3 Conductors PP/NBR/GSTA 5 kV

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
1	42,4	7	0,30	7,65	0,092	2,33	0,48	12,3	1,19	30,2	1,34	33,9	1684	2506	0,178	0,034
2	33,6	7	0,27	6,78	0,092	2,33	0,45	11,4	1,12	28,5	1,26	32,1	1465	2180	0,224	0,036
4	21,2	1	0,21	5,20	0,092	2,33	0,40	9,9	0,99	25,2	1,13	28,7	1138	1693	0,346	0,039
6	13,3	1	0,16	4,10	0,092	2,33	0,35	8,8	0,90	22,9	1,04	26,4	909	1353	0,550	0,042

r = conductor electrical resistance at 205 °F | x = inductive reactance at 60 Hz

Note: overall dimensions and weights are based on 0.025" armour tape thickness

This product information sheet is provided for reference only.  
For Voltage Drop/Ampacity data, please contact your Prysmian representative.

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