



Exploration & Production

ESP Cables

Flat Cables

DW 205 F / DEVILENE F 205 °F

Flat cable, which is specified when there is a tight fit between casing and tubing. 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 TAPE

A fluoropolymer tape is helically applied with an overlap over the jacket to provide added protection against oil and chemicals and core decompression.

5 BRAID

A synthetic braid, applied with full coverage over the fluoropolymer tape, provides additional mechanical reinforcement and hoop strength.

6 ARMOUR

A 50% lapped, fully galvanized (4-sides) steel tape armour provides excellent mechanical protection with a high degree of flexibility and is available in thickness of 0.020" or 0.025". Stainless steel or Monel 400 armour is available for use in highly corrosive well environments.



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ESP Cables

Round Cables

PERFORMANCES / RATINGS

CHEMICAL RESISTANCE



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

MAXIMUM AXIAL LOAD



50 N/mm²

MIN. INSTALLATION TEMPERATURE



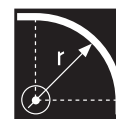
+23 °F
(-5 °C)

MAX. RATED TEMPERATURE



+205 °F
(+96 °C)

MIN. BENDING RADIUS FOR INSTALLED CABLES



7 times
major axis dimension

TECHNICAL DATA

DW 205 F - 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 ²)	(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	0,69x1,89	17,6x48,2	0,73x1,93	18,6x49,2	1554	2313	0,178	0,041
2	33,6	7	0,27	6,78	0,074	1,90	0,42	10,6	0,70x1,79	17,8x45,7	0,70x1,83	17,8x46,7	1356	2018	0,224	0,042
4	21,2	1	0,21	5,20	0,074	1,90	0,35	9,0	0,59x1,61	15,2x41,0	0,63x1,65	16,2x42,0	1055	1570	0,346	0,045
6	13,3	1	0,16	4,10	0,074	1,90	0,31	7,9	0,55x1,48	14,1x37,7	0,59x1,52	15,1x38,7	853	1269	0,550	0,048

DW 205 F - 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 ²)	(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	0,70x1,94	18,0x49,4	0,74x1,98	19,0x50,4	1583	2356	0,178	0,042
2	33,6	7	0,27	6,78	0,082	2,10	0,43	11,0	0,67x1,84	17,2x46,9	0,71x1,88	18,2x47,9	1385	2061	0,224	0,043
4	21,2	1	0,21	5,20	0,082	2,10	0,37	9,4	0,61x1,66	15,6x42,2	0,65x1,70	16,6x43,2	1087	1618	0,346	0,046
6	13,3	1	0,16	4,10	0,082	2,10	0,33	8,3	0,57x1,53	14,5x38,9	0,61x1,57	15,5x39,9	881	1311	0,550	0,049

DW 205 F - 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 ²)	(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	0,72x1,99	18,4x50,6	0,76x2,03	19,4x51,6	1611	2397	0,178	0,042
2	33,6	7	0,27	6,78	0,092	2,33	0,45	11,4	0,69x1,89	17,6x48,1	0,73x1,93	18,6x49,1	1410	2099	0,224	0,044
4	21,2	1	0,21	5,20	0,092	2,33	0,40	9,9	0,63x1,71	16,0x43,4	0,66x1,74	17,0x44,4	1111	1653	0,346	0,047
6	13,3	1	0,16	4,10	0,092	2,33	0,35	8,8	0,59x1,58	14,9x40,1	0,62x1,61	15,9x41,1	909	1353	0,550	0,050

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

Note: overall dimensions and weights are based on 0.020" 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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