


Part No: TEC11S
Description: The ENGELEC downhole cable for sensor application is designed to perform in the well and withstand elevated temperatures, high pressure and corrosive environments. It is used in conjunction and connecting with a big range of permanently installed electronic downhole pressure sensor, temperature sensor or other electronic equipment. The downhole cable is targeted to < 150°C offshore and land-based wells where ruggedness is essential.



Construction

Conductor	Annealed bare copper or tinned copper, sizes: 16 AWG and 18AWG, Solid or multi-stranded (Class 2) to BS 6360
Insulation	ETFE (ethylene-tetra-fluoro-ethylene) , wall thickness 0.03 inch (0.76 mm) with blue color or upon customizing
Filler	Expanded polypropylene, with nature color or upon customizing
Tubing	Seamless stainless SS 316L or Alloy 825, Diameter 0.25 inch (6.35mm) Wall thickness 0.028" (0.71mm), 0.035" (0.89mm), 0.049"(1.24mm) are optional.
Outer encapsulation	Material Nylon, Polypropylene, ETFE are optional, Square shape : 11x11mm
Encapsulation Color	

Mechanical and Electrical Properties

Tube Wall Thickness, inch (mm)	0.28"(0.76)		0.035" (0.89)		0.049"(1.24)
Tube Material	SS 316L	Alloy 825	SS 316L	Alloy 825	Alloy 825
Continuous maximum operating pressure, psi (bar)	11500(793)	13500(931)	17500(1206)	18000(1241)	26000(1793)
Collapse pressure, psi (bar)	17500(1206)	20000(1379)	26000(1793)	27000(1861)	39000(2689)
Armor DC resistance, 68°F (20°C), Ohms/kft. (Ohms/km)	17.9 (58.8)	27.3 (89.6)	15 (49.22)	22.5 (73.82)	17.2 (56.43)
Capacitance, conductor to tube, pf/ft. (pf/m)	23.3 (76.45)	23 (75.46)	25 (82.03)	30 (98.43)	36 (118.12)
Conductor DC resistance, 68°F(20°C), Ohms/kft.(Ohms/km)	16 AWG: 4.45 (14.6); 18AWG: 7.07 (23.2)				
Insulation resistance conductor to tube at 68°F (20°C) MOhms/kft.(MOhms/km)	884 (2900)				
Rated voltage	1000VDC				
Max operating temperature	Nylon : 275°F (135°C) ; Polypropylene : 302°F (150°C) ; ETFE : 302°F (150°C)				

Standards

RoHS Compliance :	Yes	Abrasion Resistance :	Good, ISO/DIS 23794-2014
CE Compliant :	Yes (2014/35/EU)	Brine Resistance :	Good
Manufactured in accordance to :	BS 5308, BS 6360, IEC 60331-1	Hydrocarbon Resistance :	Good, ISO 14419-2010

*Information and images on this datasheet are intended for guidance only and products may vary due to manufacturing changes, technical improvements and commercial factors. We reserve the right to amend the product information without notice or liability.

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