

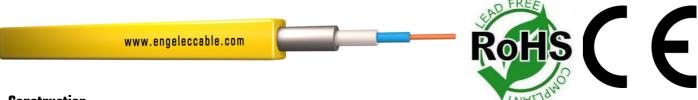
# Tube Encapsulated Downhole Cables For Electronic Sensor

## **Technical Datasheet**

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.

## ENGELEC CABLES

Intelligent manufacturing, Industry 5.0 email:info@engelec.cn www.engeleccable.com