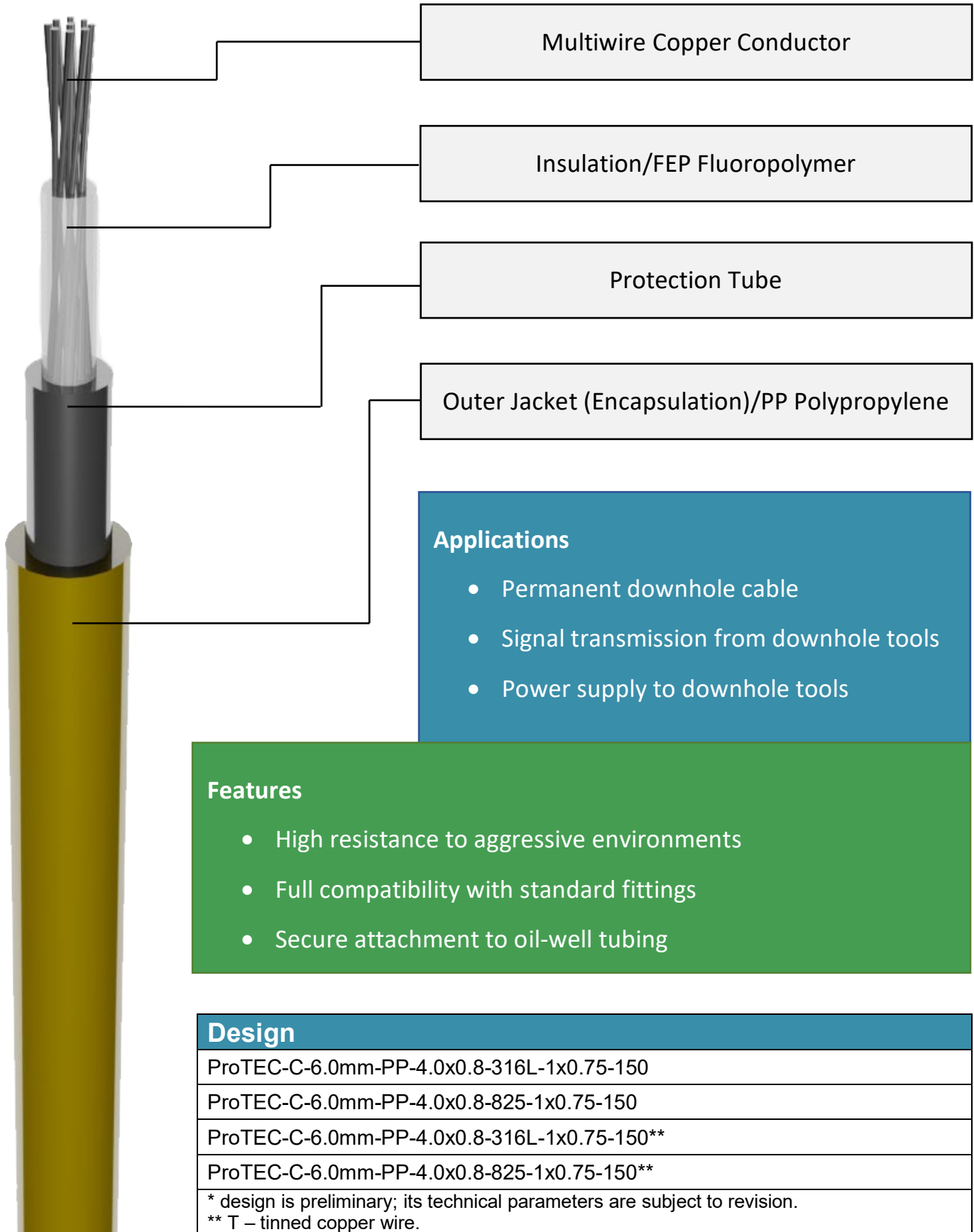


PRODUCT DATASHEET

ProTEC-6.0mm-PP-4.0x0.8mm...-1x0.75-150



Multiwire Copper Conductor

Insulation/FEP Fluoropolymer

Protection Tube

Outer Jacket (Encapsulation)/PP Polypropylene

Applications

- Permanent downhole cable
- Signal transmission from downhole tools
- Power supply to downhole tools

Features

- High resistance to aggressive environments
- Full compatibility with standard fittings
- Secure attachment to oil-well tubing

Design

ProTEC-C-6.0mm-PP-4.0x0.8-316L-1x0.75-150

ProTEC-C-6.0mm-PP-4.0x0.8-825-1x0.75-150

ProTEC-C-6.0mm-PP-4.0x0.8-316L-1x0.75-150**

ProTEC-C-6.0mm-PP-4.0x0.8-825-1x0.75-150**

* design is preliminary; its technical parameters are subject to revision.
** T – tinned copper wire.

PRODUCT DATASHEET

ProTEC-6.0mm-PP-4.0x0.8mm...-1x0.75-150



Operating parameters					
Operating temperature range			-76°F...+300°F	-60°C...+150°C	
Minimum installation temperature			-40°F	-40°C	
Rated breaking strength			1 540 LBF	7 kN*	
Maximum operation tension			660 LBF	3 kN*	
Rated collapse pressure for protection tube			39 000 psi	270 MPA	
Minimum bending radius without tensile load			5"	120 mm	
Minimum sheave diameter for maximum operation tension			14"	350 mm	
Electrical parameters					
Rated voltage			1000 VDC		
Maximum conductor electrical resistance (@20C/68F)			7.9 (8.1**) Ohm / 1000 ft	26 (26.5**) Ohm/km	
Insulation resistance (central conductor to tube) (@20C/68F)			>9500 MOhm*kft	>2900 MOhm*km	
Capacitance			31 pF/ft	100 pF/m*	
Protection tube electrical resistance			16.8 Ohm/1000 ft	55 Ohm/km	
** value in brackets for option with tinned copper wire					
Design details					
Conductor equivalent AWG number / Cross section			AWG19	0.75 mm ²	
Copper conductor type (number of wires x diameter)			(7x0.015")	(7x0.38 mm)	
Insulation diameter			0.094"	2.4 mm	
Protection tube total wall thickness			0.031"	0.8 mm	
Protection tube outer diameter			0.16" (±0.004")	4.0 mm (± 0.10 mm)	
Encapsulation diameter			0.24" (± 0.008")	6.0 mm (± 0.20 mm)	
Cable weight			70 lb / 1000 ft	104 kg/km	
Encapsulation characteristic (for reference)					
Material type	Maximum temperature range		Abrasion resistance	Resistance to brines	Resistance to hydrocarbons
			Relative resistance (1-bad...5-very good)		
Polypropylene	+300°F	+150°C	3	5	3
Fluoropolymer ETFE	+300°F	+150°C	5	5	5
Polyamid	+275°F	+135°C	5	5	5