

WellConnect™

1" Subsea Vertical Electrical Connector - V1

The Vertical Instrument Wet Mateable Electrical Connector is designed to provide continuous electrical connection between the THRT Top, JRC & DPR Adaptor. The purpose of the Vertical Single Contact Mated Connector is to provide a long term reliable electrical connection for DHPT Applications.

Operational Requirements

Design Life:	25 years
Location within Completion:	Subsea Vertical X-Tree
Rated Pressure:	10,000 Psi
Test Pressure:	15,000 Psi
Working Temperature Range:	-20°C to 155°C
Storage Temperature Range:	-18°C Min
Number of Mating Cycles:	100

Mechanical Requirements

Envelope Diameter:	As per Customer Specifications
Stack up Tolerance:	± 3.5mm
Mechanical Shock:	Half sine period at 6g
Angular Misalignment:	± 0.5°
Radial Misalignment:	± 1mm

Electrical Specification

Number of Contacts:	1
Contact Method:	Multi-contact
Working Voltage:	500 Vdc
Test Voltage (to Earth):	1000Vdc
Ampacity:	5A

Material Specification

Housing:	Inconel 625/Superduplex to ISO 15156-3
Contact:	Gold Plated Beryllium Copper
Insulation:	PEEK HT

Design Philosophy

Main Dielectric Body:	Pressure Balanced
Seal Philosophy:	Dual Electrical and Mechanical Barriers
Electrical Insulation:	Primary Thermoplastic or Elastomer Secondary Dielectric Fluid

Cable

Plug Termination	1/8" Metal Tube with Alpha Cable
Receptacle Termination	1/4" Metal Clad Monocable

Qualification Testing

Proof Voltage	Unique Oil Flow Design to Flush the Electrical Connection during Mating
Insulation Resistance	Protective Contact on Male/Female Halves
Contact Resistance	HPHT Application Materials
Pressure Test	Energised Seals
Long Term & Life Test	Metal to Metal Sealing
Temperature Limit	Gold-plated Contacts
Vibration Test	Crimp Technology
Shock (Drop) Test	
Gas Seal (Helium) Test	
Misalignment Test	
API 6A PSL4 Pressure & Temperature Cycling	
API 17D Pressure & Temperature Cycling (Mechanical Barriers) - Gas	

Key Performance Features

Unique Oil Flow Design to Flush the Electrical Connection during Mating
Protective Contact on Male/Female Halves
HPHT Application Materials
Energised Seals
Metal to Metal Sealing
Gold-plated Contacts
Crimp Technology

