

WellConnect™

Horizontal Instrument Wet Mate Electrical Connector

The Horizontal Instrument Wet Mateable Electrical Connector is designed to provide continuous electrical connection between the Tubing Hanger and the X-Tree. The purpose of the Horizontal Single Contact or Multi Pin Mated Connector is to provide a long term reliable electrical connection for DHPT Applications.

Operational Requirements

Design Life:	25 years
Location within Completion:	Subsea Horizontal X-Tree
Rated Pressure:	10,000 Psi
Test Pressure:	15,000 Psi
Working Temperature Range:	-20°C to 150°C
Water Depth:	3000 Mtrs
Number of Mating Cycles:	100 +

Mechanical Requirements

Vertical Misalignment:	± 2mm
Radial Misalignment:	± 1.68°
No. Turns (Mate/Demate):	17
Envelope Diameter:	As per Customer Specifications

Electrical Specification

Number of Contacts:	1, 2 or 3
Contact Method:	Multi-contact
Working Voltage:	500 Vdc
Test Voltage (to Earth):	1000Vdc
Amps:	5A

Material Specification

Housing:	HS Cupro Nickel Alloy
Contact:	Gold Plated Beryllium Copper
Insulation:	PEEK HT

Cable

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

Qualification Testing

Proof Voltage
 Insulation Resistance
 Contact Resistance
 Pressure Test
 Pressure and Temperature Cycling (API 6A)
 100 Mating cycles at pressure
 Dry Mate Test
 Gas Test
 Turbid Test
 Sealing Systems
 Spheri-Seal Pressure Test
 Mating Forces
 Internal Seal
 Misalignment Test
 ROV Actuation

Key Performance Features

Unique Oil Flow Design to Flush the Electrical Connection during Mating
 HPHT Application Materials
 Energised Seals
 Metal to Metal Sealing
 Gold-plated Contacts
 Pressure testable

