

OceanPower™

V1 HV Electrical Wet-Mate Connector

The HV Power 3-phase Wet-Mate system is a single mandrel connector, utilising technology proven in the marine environment ensuring long term reliability. The connectors bring many benefits to tidal stream and wave energy devices, providing innovation to some of the industry's major challenges.

Operational Requirements

Location within Completion:	Subsea
Design Life:	25 years
Rated Depth:	3,000+ Metres
Rated Pressure:	10,000 Psi
Working Temperature Range:	-20°C to 121°C (-4°F to 250°F)
Storage Temperature Range:	-30°C to 40°C (-22°F to 104°F)

Mechanical Requirements

Fully Compliant Mounting System	
Misalignment Limits:	Radial +/- 3mm, Angular +/- 1°
Envelope Diameter:	As per Customer Specification

Electrical Specification

Number of Phases:	3 + 1 earth
Contact Method:	Multi-contact
Working Voltage:	3.6/6(7.2) kV
Test Voltage:	14.4 kVdc
Ampacity:	168 A
Frequency Range:	47 - 52 HZ

Material Specification

Housing:	Stainless Steel (Superduplex or 316)
Insulation:	PEEK

Design Philosophy

Protected Male & Female Electrical Contacts
 Oil Filled Pressure Balanced Design
 Test Port Facilities
 Cathodic Protection System Compatible
 IEC: 60502-2, 60502-4, 60228

Cable and Hose

35mm² Cable
 Goodyear Gorilla Hose via Hose Fittings Connection
 Oil-filled & Pressure Balanced
 Other Cables & Hoses are available

Testing

Shell Continuity
 Proof Voltage
 Insulation Resistance
 Contact Resistance
 Partial Discharge (PD)
 Pressure Test
 Thermal Short Circuit
 Temperature Cycles
 Pull Test

Key Performance Features

Modular inter-changeable Male and Female Connectors
 Plug Connectors can be Energised Unmated
 Dual Sealing Barriers
 Metal to Metal Sealing
 Elastomeric Back-up Sealing
 Gold-plated Contacts
 Compliant Mount maintains axial pre-load on Mated Connectors

