OceanPower™ 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 Turbine and Hub
- Design Life: 25 years
- Rated Depth: 1,000+ Metres
- Rated Pressure: 1,500 Psi
- Working Temperature Range: -20ºC to 45ºC
- Storage Temperature Range: -20ºC to 60ºC

**Mechanical Requirements**
- Fully Compliant Mounting System
- Misalignment Limits: Radial +/- 3mm, Angular +/- 1º
- 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

**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

**Material Specification**
- Housing: SAF / High Strength CuproNickel
- Insulation: PEEK

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

**Design Philosophy and Standards**
- 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