



SEACON HydraElectric Wet-Mate Connector

HydraElectric Electrical Wet-Mate Connectors Provide Rugged, Reliable, Cost-Effective Subsea Connectivity Solutions for Oil and Gas Applications

ADVANCED TECHNOLOGY

- Modular construction with 4, 7 or 12 electrical circuits
- ROV, manual and stab plate configurations with industry standard panel interfaces
- Socket and pin flying leads
- Termination and boot seals up to size AWG#12 wire

MEETS INDUSTRY STANDARDS

- Designed in accordance with ISO 13628-6 and API 17F - SEAFOM TSD-02, Statoil and Total requirements
- SEACON MKII Pressure Balanced Oil Filled (PBOF) hose interface as standard
- Elastomers compatible with industry standard requirements

DEEPWATER CAPABILITY

- Qualified for use at 4,000m water depth
- Dual barriers oil-filled, pressure compensated design
- Corrosion resistant without cathodic protection

TE Connectivity (TE)'s HydraElectric wet-mate connector has been designed, developed, tested and qualified in accordance with the latest industry standards and customer specifications. The design features a modular construction that enables many configurations to be assembled from a minimum number of components. Industry standard panel, bulkhead and stab plate interfaces have been met enabling the opportunity for the HydraElectric wet-mate connector to replace incumbent product with no impact to customer hardware.

TE Components . . . TE Technology . . . TE Know-how . . .
AMP | AGASTAT | CII | HARTMAN | KILOVAC | MICRODOT | NANONICS | POLAMCO | Raychem | Rochester | DEUTSCH
SEACON Phoenix | LL ROWE | Phoenix Optix | AFP | SEACON

Empower Engineers to Solve Problems, Moving the World Forward.

SEACON HydraElectric Wet-Mate Connector

OPERATION

- Modular and compliant ROV D-handle as standard
- Unique locking mechanism with visible mating verification
- **Max. ROV Mate Force:** 750N
- **Max. ROV De-Mate Force:** 750N
- **Max. Handling Load:** 2,500N
- **Max. ROV Load Without Damage:**
Axial 5,000N, Transverse 2,500N
- **Max. Rotational Misalignment:** $\pm 15^\circ$
- **Max. Angular Misalignment:** $\pm 20^\circ$
- **Max. Radial Misalignment:** $\pm 20\text{mm}$

STANDARDS AND SPECIFICATIONS

- **Designed to Meet the Following Standards and Specifications:**
 - ISO 13628-6
 - API 17F - SEAFOM TSD-02
 - Statoil TR2390 Ver2
 - Total GS EP SPS 021 Rev. 07

CONFIGURATIONS

- ROV
- Manual
- Stab Plate
- Flying Lead
- Panel
- Bulkhead
- Dummy
- Parking
- Dust Cap
- **Circuit count colour codes:**
 - RED indicates 4 way
 - GREEN indicates 7 way
 - WHITE indicates 12 way

MATERIALS

- **Shell:** Super Duplex Stainless Steel
- **Inserts/Pin/Socket Insulation:** PEEK
- **Contacts:** Gold plated copper
- **Bladders:** Silicone Rubber
- **O-rings:** Nitrile Butadiene Rubber (NBR)

DESIGN RATINGS

- **Design Life:** Up to 30 years
- **Min. Number of Mate/Demate Cycles:** 1,000 (250 in turbid seawater)
- **Depth Rating:** Qualified for use at 4,000 m (412 bar)
- **Rated Voltage Conductor-to-Conductor (U):**
 - 1,000 VAC RMS
 - 1,500 VDC
- **Rated Voltage Between Conductor and Earth (Uo):**
 - 600 VAC RMS
 - 1,500 VDC
- **Max. Voltage Between Circuits with Two Adjacent Pairs 180° Out of Phase (Um):**
 - 1,200 VAC RMS
- **Partial discharge free @ 2.5kV (<10pC) & 4.5kV (<50pC)**
- **Long term (3 months) DC testing @ 4.1kVDC**
- **Operating Current:**

Maximum Operating Current		
No. of Circuits	Dry, 40°C	Wet, 40°C
4 Circuits	30A	40A
7 Circuits	20A	30A
12 Circuits	15A	25A

Maximum temperature rise is 30°C

- **Insulation Resistance:** >20 G Ω
- **Contact Resistance:** <5 m Ω
- **Operating Temperature:**
 - Dry: -18°C to 40°C
 - Wet: -5°C to 40°C
- **Storage Temperature:** -40°C to +50°C
- Maintenance-free over design life (within number of mate/demate cycles)

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Consult TE for the latest dimensions and design specifications.

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