

Single Pin Horizontal EFS

For Downhole Sensor Communications

Teledyne DGO offers an advanced, high-reliability subsea wellhead single channel electrical feedthrough system for use in intelligent completions with permanent downhole instrumentation. The connection system is designed for long-term reliability in the demanding subsea and downhole environments with sour well (H2S) conditions, as well as aggressive production and packer fluids.

Extensive system, component and material qualifications have been successfully completed with reliability and aging testing continuing based on FMEA. Our goal is to not simply qualify a design, but to determine the limits and engineer continuous improvements to meet ever increasing demands.

One of the key technologies that distinguishes Teledyne DGO from our competition is glass-to-metal sealing. Our integral glass-ceramic seal barriers withstand continuous, extreme HPHT exposure in excess of 22,500psig (155MPa) and 400°F (204°C). These glass seal barriers provide burst pressures exceeding 40,000psig (276MPa). The inorganic materials used provide an inherently stable structure that exhibits no degradation attributed to continuous HPHT exposure in aggressive media.

Simple, quick, testable DHG connector rig terminations

Dual-barrier philosophy throughout:

- Primary metal seals
- Secondary elastomer seals
- Rig-testable interface seals

API 6A, 16D & 17D Compliant:

- HH Material class (sour service)
- Exceeds U Temperature class
- Product Specification Level 3 – PSL 3 / 3G below the TH
- Performance Requirement Level 2 – PR2



PRIMARY FEATURES AND BENEFITS

- Glass-to-metal sealed pressure barriers
- Underwater, wet mateable connections
- Interchangeable with hydraulic couplers
- Modular design to suit varying installation envelopes



TELEDYNE MARINE
Everywhere you look™

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TECHNICAL SPECIFICATIONS*

ENVIRONMENTAL	
Operational Pressure	15,000psig/103MPa
Operational Test Pressure	17,500psig/121 MPa
Operational Temperature	0°F to 302°F (-18°C to 150°C)
Storage Temperature	0°F to 120°F (-18°C to 49°C)
Deployment depth	10,000ft/3000m
Mating Durability	100 cycles min.
Service Life	25 years
MECHANICAL SPECIFICATIONS	
Axial Misalignment	±.062" (±1.57mm)
Angular Misalignment	±0.5°
Radial Misalignment	±.03" (.76mm)
Actuation Speed	5in/sec (12 5mm/sec)
ELECTRICAL SPECIFICATIONS	
Number of circuits	one
Voltage Rating, working	600 VDC
Test Voltage	2400 VDC
Current Rating, working	2.0 A
Insulation Resistance	> 1 GΩ @ 1 kVDC (20°C)
Contact Resistance	< 30mΩ
Shell resistance	< 10mΩ
MATERIALS	
Load Bearing	Inconel 718 (UNS N07718) *alternate materials are readily accommodated
Metal Seals	Inconel 718, Ag-plated
Die Lectric Insulators	PEEK
Elastomers	FKM and HNBR
Electrical Contacts	Au-plated BeCu



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