NAVY / Shipboard

Submersible, Articulating Backshell

Designed for use in rugged shipboard applications as well as military ground systems such as armored vehicles, the Glenair BacNav OFS delivers outstanding mechanical, electrical, and environmental performance. The innovative design incorporates an environmentally-sealed, EMI shielded core with a locking pivot that facilitates cable routing and eliminates the need to stock discrete straight, 45° and 90° variants of standard wire sealing, strain relief, and EMI shield termination backshells. Built to withstand the handling abuse that topside and below-deck electrical and fiber optic interconnect systems are routinely subjected to by ham-fisted sailors and marines, the BacNav OFS is purpose-designed to deliver life-of-ship and life-of-system performance and durability. Available for the broad range of power, signal, and fiber optic connector systems—including MIL-PRF-28876 and MIL-PRF-64266 (fiber optics) to MIL-DTL-28840, AS50151, and more—BacNav OFS meets every current requirement for backshell-equipped connectorized cabling.

Designed for above and below deck shipboard use and other harsh environmental applications, BacNav OFS delivers submersible environmental protection for electrical and fiber optic interconnect systems.

- **Easy repositioning from straight, 45° and 90° cable-exit orientations**
- **Submersible performance without the need for shrink boots**
- **Durable, flexible EMI/RFI and environmentally-sealed core with locking-pivot Swing-Arm™ frame**
- **Accommodates power, signal and fiber optic jacketed cables**
- **Reposition terminated cables with no impact on signal integrity or system performance**
- **Easy repeatable assembly process using standard tools**

Mission-Driven Design

SERIES 390

BacNav OFS repositionable harsh-environment backshell

Outstanding, flexible performance

BacNav OFS is the only fully-sealed EMI/RFI backshell and strain relief device that delivers fast and easy cable angle configuration in the field—using a common 7/64" hex wrench, and without decoupling from the connector and/or cable. The sealed, flexible connector backshell adjusts to straight, 45° and 90° cable angles with zero impact on signal integrity or system performance.

PERFORMANCE DATA

DESCRIPTION	REQUIREMENT	STANDARD
Magnetic permeability	Less than 2.0µ	EIA-364-54
Shell conductivity	< 2.5 milliohms(2)	EIA 364-83
Salt spray (corrosion)	No exposure of basis material as defined in AIR4789 for 500 hours(2)	EIA 364-26
Vibration	CIT <0.5dB No discontinuities(1) No damage	MIL-STD-167-1A (SHIPS), paragraph 5.1.2.4.6 (endurance test)
Shock	CIT <0.5dB No discontinuities(1) No damage	MIL-S-901D, grade A, Class 1
Water pressure	10 meters for 48 hours (IP68)	QTP-384
Cable pullout	No slippage exceeding 1/8" CIT <0.5dB(1)	EIA 364-38 TIA-455-6
Coupling thread strength	No damage at 3X magnification	AS85049 (Heavy Duty)
External bending moment	300-750 in-lbs (size dependant)	AS85049 (Heavy Duty) QTP-384
Fluid immersion	No changes detrimental to performance(2)	EIA 364-10
Insertion loss	MIL-STD-1678-2 Appendix C, Table 2101 C-I	TIA-455-34 Method A
Cable seal flexing	100 cycles/axis	TIA-455-1
Twist	50 cycles • No damage/leaks	TIA-455-36
Impact	8 drops • No damage detrimental to performance	TIA-455-2 Method B
Crush	7 cycles 1,250 N (281 lbs)	TIA-455-26
Thermal Shock	5 cycles -40°C to +85°C (-40°F to +185°F)	TIA-455-71
Temp/humidity cycling	No damage detrimental to performance	TIA-455-5 Method B
Temperature cycling	No damage detrimental to performance	TIA-455-3
Life Aging	10 cycles	QTP-384-F
Freezing water immersion	No damage detrimental to performance	TIA-455-98
Sand and dust	No damage detrimental to performance	TIA-455-35
Modified SO2/salt spray	240 hours • No damage detrimental to performance(2)	ASTM G85 + Annex A4

(1) Tested with MIL-PRF-28876 Multi-mode Fiber-Optic connectors (2) Tested with Cadmium/Olive-Drab finish option (code NF)

ADDITIONAL ENVIRONMENTAL NAVSEA-QUALIFIED BACKSHELL DESIGNS

M28840/6 Straight EMI/RFI Environmental Backshell

M28840/9 45° EMI/RFI Environmental Backshell

M28840/8 90° EMI/RFI Environmental Backshell

M28840/25 90° EMI/RFI Conduit Adapter