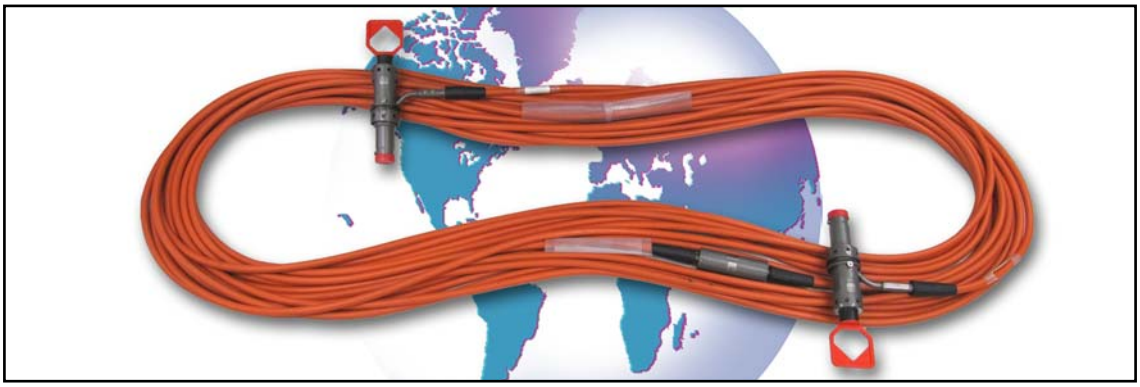
PRODUCT DATASHEET

# SUBSEA JUMPER ASSEMBLIES AND DISTRIBUTION HARNESS



## DESCRIPTION

Subsea jumper assemblies and distribution harnesses are provided by SEA CON® for use with SEA CON® subsea connectors. Many subsea electrical and optical cable and connection systems utilize Pressure Balanced Oil Filled (PBOF) cabling solutions. These cables utilize an elastomeric tube as a conduit for electric wires and fiber optic lines. The elastomeric conduit is filled with a compensating fluid, allowing the sea pressure to freely communicate with the interior oil volume, equalizing the pressure in the assembly. This option for cabling provides for a reliable and configurable cable system suitable for many subsea applications. This technology has been widely utilized in ocean science observatories, towed arrays, drilling systems, production control systems and Remotely Operated Vehicle (ROV) systems to name a few. They have become a critical component in many subsea systems today and Seacon is pleased to offer this solution with its Subsea fiber optic and electrical connectors.

## KEY FEATURES

- Integral fiber management system within hose to mitigate excessive movement or forces applied directly to the internal fibers
- Good cable flexibility (typical 5" bend radius)
- Enhanced visibility, typically Orange and Yellow in color (other colors available)
- Deployment techniques similar to jacketed cable
- Good ROV maneuverability during connector mating
- Easy interface to connector
- Early leak detection; some hoses are designed for over-pressure and may be used to offer visible leak paths
- Ease of repair
- Double Barrier against water ingress
- Temperature and pressure Compensated
- Size 13mm & 20mm ID (Other sizes available upon request)
- Multi-mode and single-mode available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## DESIGN RATINGS

- Up to 3.3kV, 30 amp ratings
- 25 year life
- Working Depth: 4,500 meters
- Bending Radius: 150mm
- Working Temperature: -4ºC to +25ºC
- Storage Temperature: -40ºC to +70ºC

## MATERIALS

- Inner Liner - SBR
- Outer Jacket - NBR/PVC
- Armour - Polyester
- Strain Element - Aramid (Kevlar)

## PRINCIPLE OF OPERATION

Attaching electrical and fiber optic subsea connectors to PBOF cables have become a very common method for subsea jumpers and distribution assemblies. The hose is attached to the subsea connector by a robust mechanically swaged/machined fitting that adapts to the hose. These engineered fittings include filling ports and are easily mounted to the subsea connector with an adapter housing utilizing o-ring seals. These subsea connector jumpers are typically 30 meters in length on average, but can be constructed in a variety of lengths (up to 500m) to suit the needs of a particular application. The PBOF approach utilizes a main elastomeric tube (hose) as a mechanically protective conduit for electrical wires and/or fiber optic cores. The elastomeric conduit is filled with a pressure-compensating fluid (typically a dielectric) allowing the seawater pressure to be freely communicated across the flexible hose walls, to the interior oil volume. Equalizing the pressure and temperature in the assembly allows for the variable effects of ambient pressure and temperature during typical storage and operational regimes. PBOF hoses have been field proven for many years throughout the marine and submarine industries, this option for cabling provides for a reliable, configurable cable system suitable for many subsea applications.

## QUALITY

- SEACON Advanced Products, LLC operate a Quality Management System certified to ISO 9001:2008.

ISO 9001 REGISTERED
UKAS MANAGEMENT SYSTEMS
Certificate No. 6936




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