

# SEACON<sup>®</sup>

UNDERWATER ELECTRICAL AND FIBER OPTIC CONNECTORS



## GLOBE-CON

UNDERWATER ELECTRICAL DRY-MATE CONNECTORS

SEACON  
global  
PRODUCTION

## UNDERWATER ELECTRICAL DRY-MATE CONNECTORS

### INTRODUCTION

SEA CON® is pleased to announce the release of a new connector range. Originally developed for a major offshore development project, the GLOBE-CON series is a small diameter, dry-mate connector. The Bulkhead Connector Receptacle (BCR) has a GRE (Glass Reinforced Epoxy) insert with a metal shell and utilizes gold plated contacts and Viton o-rings. The Cable Connector Plug (CCP) is also manufactured from GRE and is molded in Neoprene to standard or custom cable lengths upon request, although other component materials are available for high temperature and high pressure applications. This innovative connector design also incorporates a spring ring device to improve reliability in high vibration environments.

### AVAILABILITY

The GLOBE-CON series is currently available in 2 shell sizes with up to 12 contacts, however more configurations are due to be added to the range at a later date. Sturdy and robust, this connector range has the ability to withstand temperatures of upto 140 degrees Fahrenheit (although higher temperature versions are available by special order) with a mated pressure rating of 10,000 psi (22,500ft/7,000m).

### APPLICATIONS

This new connector range is suitable for many applications including ROV's, Underwater Cameras, Telecommunications/Broadcasting Systems, Sensors, Digital Data Transmission and Acquisition.

### TESTING

The GLOBE-CON series has undergone complete Qualification testing including:-

- Insulation resistance testing at >200 megohms @ 300 VDC.
- Pressure testing to 10,000 psi.
- Durability testing with 250 mate and de-mate cycles with no change in conductor or insulation resistance readings.

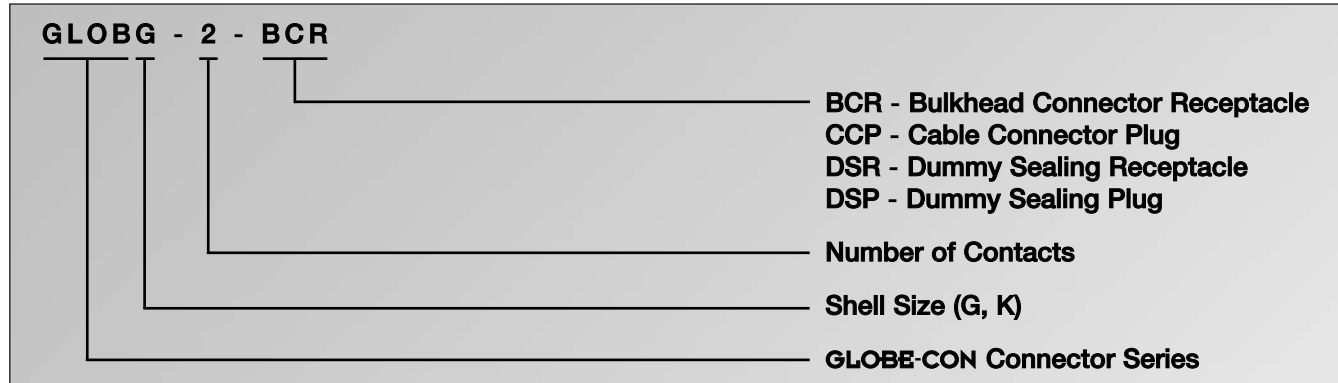
#### NOTE:

New wet-mate GLOBE-CON now available. For further information please contact SEA CON®.

# GLOBE-CON SERIES

## PART NUMBER SYSTEM

EXAMPLE:



## GENERAL INFORMATION

COMPONENT	MATERIAL
<b>BULKHEAD BODY</b> CCP	GRE/316 Stainless Steel Shell GRE/Neoprene Overmold. Other materials are available upon request for high pressure applications.
DSR DSP	316 Stainless Steel GRE
CONTACTS	Brass-gold plated
O-RING	Viton (85 Durometer)
ENGAGING NUT*	Copper Alloy 630
<b>N-LINE CABLE**</b> G7 K5 K12	Neoprene #28 Gage Amperage 0.20*** Neoprene #22 Gage Amperage 1.1*** Neoprene #28 Gage Amperage 0.16*** Maximum rating is for a 'fully loaded' connector. Cable rating must not be exceeded. Please contact SEA CON® for higher ratings.
STANDARD LENGTH	18 inches
HOOK-UP WIRE	Teflon® or Tefzel® #22/#28 (Registered trademark for DuPont)
SPRING RING	17-7PH
WASHER	Nylon 101
RETAINING RING	316SST (Stainless Steel)

CATEGORY	VALUE
<b>OPEN FACE PRESSURE</b>	Upto 10,000 psi by special order
<b>MATED PRESSURE</b>	10,000 psi (700 bar)
<b>VOLTAGE RATING</b>	300 VDC
<b>INSULATION RESISTANCE</b>	>200 megohms @ 300 VDC
<b>OPERATING TEMPERATURE</b>	25° to 140°F (-4° to 60°C) - Higher temperature versions are available by special order. Please contact SEA CON® for further details.
<b>BULKHEAD MOUNTING TORQUE</b>	GLOBG 12 inch lbs GLOBK 30 inch lbs (see note below)
<b>MATING CYCLES WITH NO CHANGES IN RESISTANCE OR IR READING</b>	250
<b>TORQUE VALUES REFERS TO INSTALLATION INTO DRY METAL THREADS</b>	

### NOTES:

\* Contact SEA CON® for special order materials.

\*\* Incorporation of special order cables will be determined on a case by case basis.

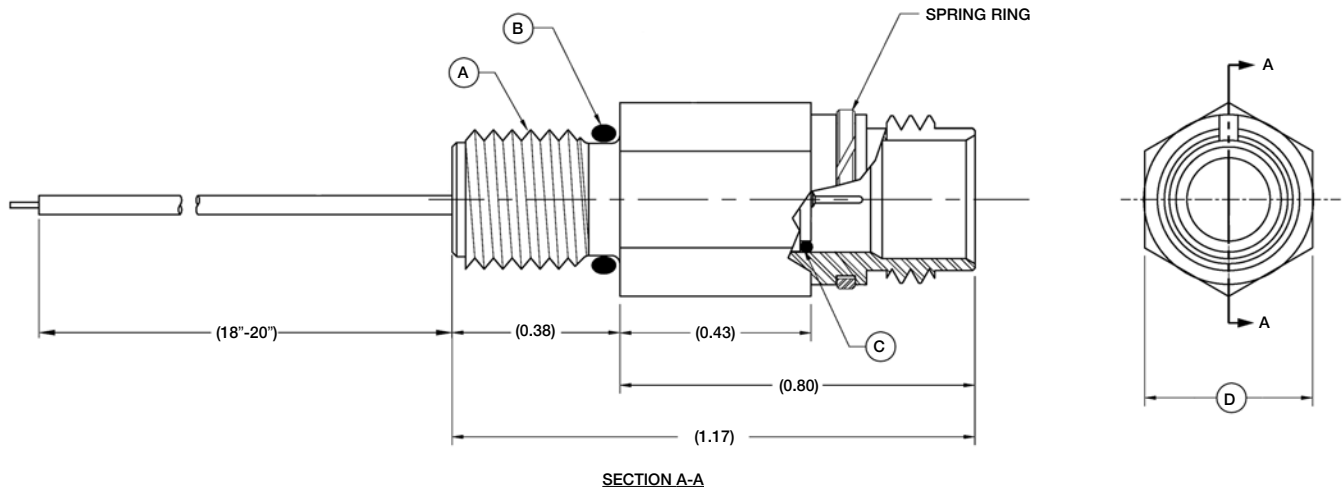
\*\*\* Cables are supplied with overall shield and are not connected.

Connectors are designed for installation onto one atmosphere vessels. Please contact SEA CON® for recommendations if using compensated vessels.

# DIMENSION DETAILS

## GLOBE-CON SERIES GLOB-BCR

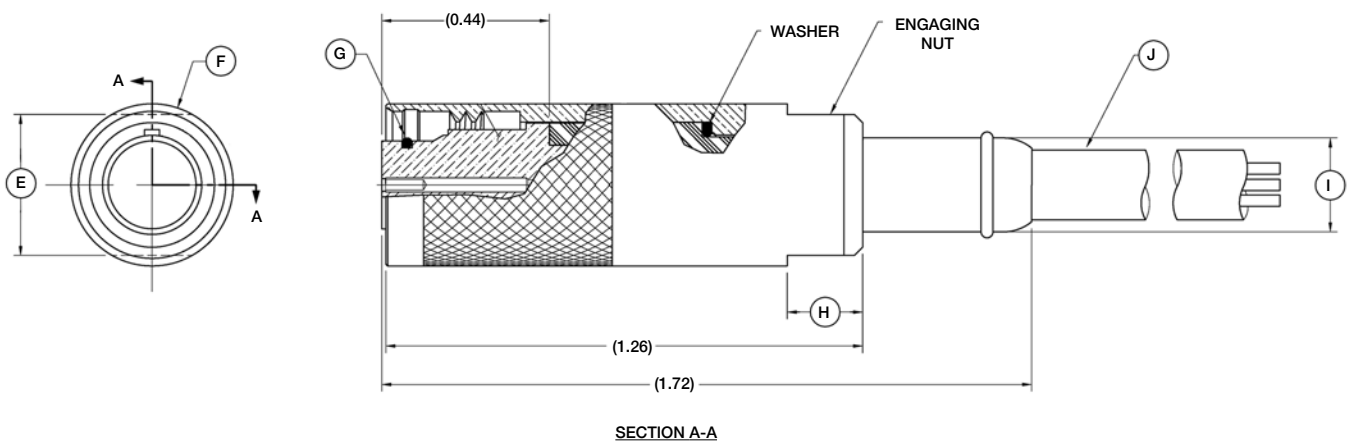
GLOBE-CON Bulkhead Connector Receptacle  
Mates with GLOB-CCP  
Dummy Connector: GLOB-DSP



CONNECTOR	A - SAE THREAD	B - O-RING	C - O-RING	D - HEX FLATS (INCHES)
GLOBG-BCR	5/16-24 UNF-2A	06-10239-2	06-10193-2	0.37
GLOBK-BCR	3/8-24 UNF-2A	06-10301-2	06-10315-2	0.50

## GLOBE-CON SERIES GLOB-CCP

GLOBE-CON Cable Connector Plug  
Mates with GLOB-BCR  
Dummy Connector: GLOB-DSR



CONNECTOR	E - Ø (INCHES)	F - Ø (INCHES)	G - O-RING	H - LENGTH (INCHES)	I - Ø (INCHES)	J - STD/MAX CABLE Ø
GLOBG-CCP	0.37	0.43	06-10193-2	0.200	0.26	#28 AWG 0.182 STD/0.190MAX*
GLOBK-CCP	0.50	0.56	06-10315-2	0.250	0.37	#22 AWG 0.200 STD/0.250 MAX* #28 AWG 0.215 STD/0.250 MAX*

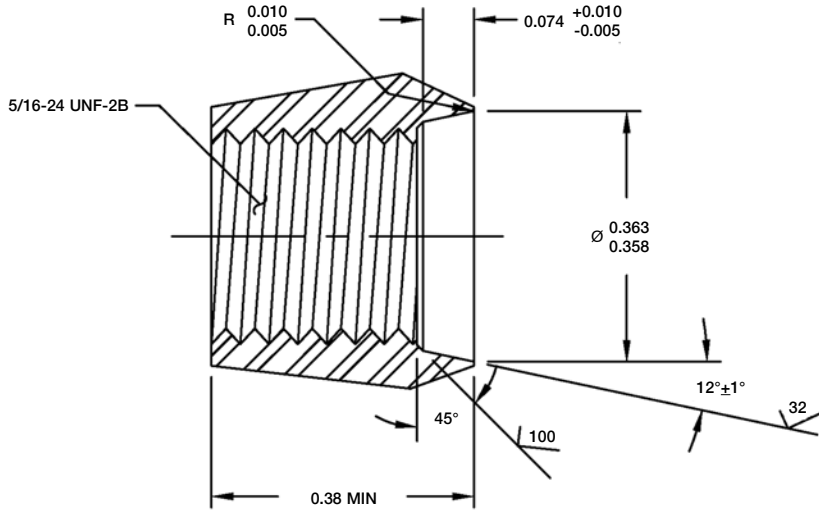
\* Incorporation of special cables will be determined on a case by case basis.



# INTERFACE DETAILS

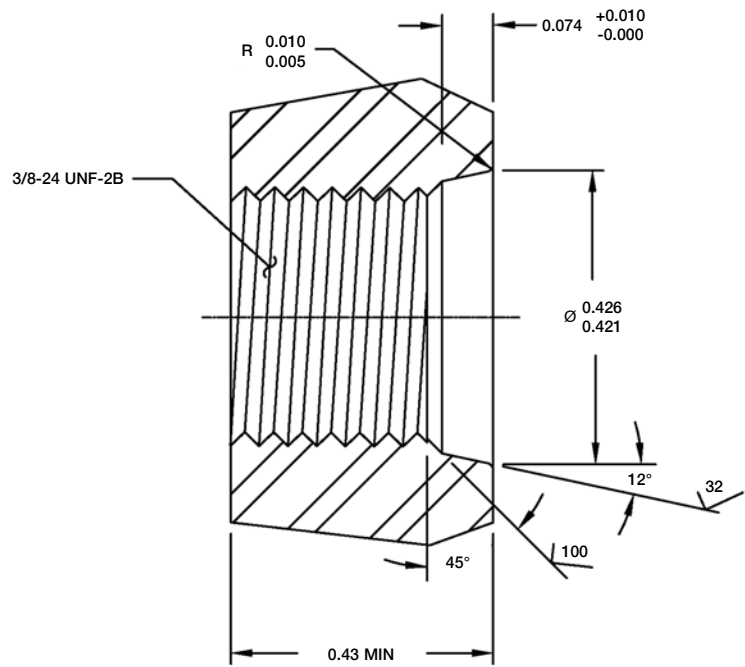
## GLOBE-CON SERIES GLOBG-BCR

GLOBE-CON Bulkhead Connector Receptacle  
THREADING REQUIREMENT



## GLOBE-CON SERIES GLOBK-BCR

GLOBE-CON Bulkhead Connector Receptacle  
THREADING REQUIREMENT

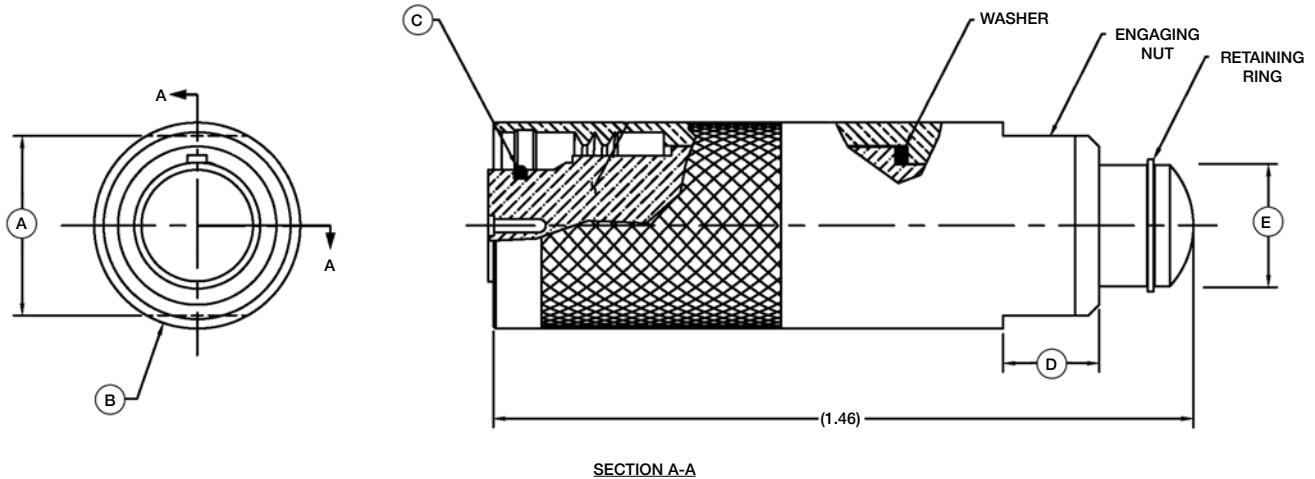


For Boss dimensions, please reference SAE J1926 and MS16142 of the Parker O-Ring Handbook.

# DIMENSION DETAILS

## GLOBE-CON SERIES GLOB-DSP

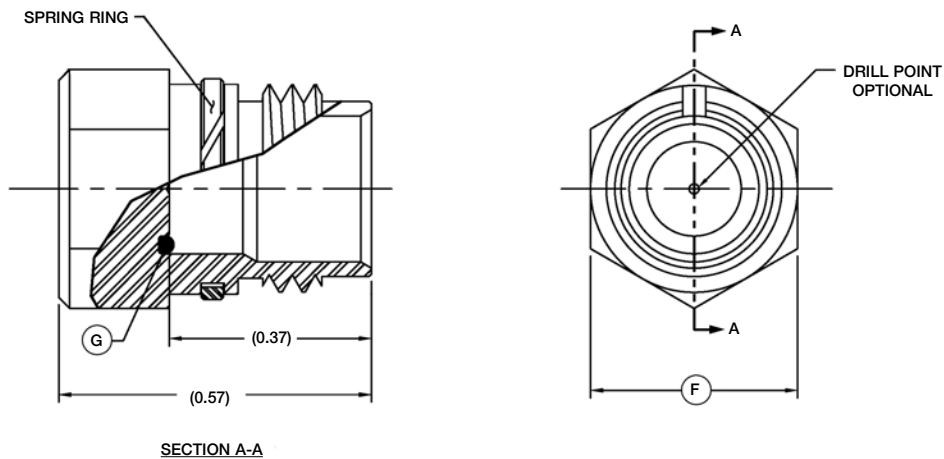
GLOBE-CON Dummy Sealing Plug  
Mates with GLOB-BCR



CONNECTOR	A - Ø (INCHES)	B - Ø (INCHES)	C - O-RING	D - LENGTH (INCHES)	E - Ø (INCHES)
GLOBG-DSP	0.37	0.43	06-10193-2	0.200	0.26
GLOBK-DSP	0.50	0.56	06-10315-2	0.250	0.37

## GLOBE-CON SERIES GLOB-DSR

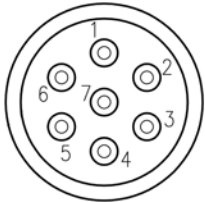
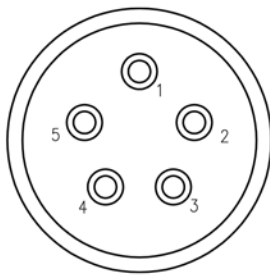
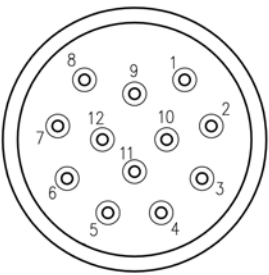
GLOBE-CON Dummy Sealing Receptacle  
Mates with GLOB-CCP



CONNECTOR	F - HEX FLATS (INCHES)	G - O-RING
GLOBG-DSR	0.37	06-10193-2
GLOBK-DSR	0.50	06-10315-2

**NOTE:**  
Contact pattern must be specified when ordering dummy connectors.

# CONTACT CONFIGURATIONS

SIZE	GLOBE-CON SERIES CONTACT CONFIGURATIONS AVAILABLE (MALE FACE VIEW ONLY)*
G	 <p data-bbox="308 430 414 451">GLOBG-7#28</p>
K	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div data-bbox="243 535 511 808">  <p data-bbox="324 819 430 840">GLOBK-5#22</p> </div> <div data-bbox="609 535 876 808">  <p data-bbox="690 819 795 840">GLOBK-12#28</p> </div> </div>

\* For female face view contact configurations available please contact SEA CON®.

## HANDLING PROCEDURES AND SPECIAL CAPABILITIES



### SEA CON GLOBAL PRODUCTION

Callejon Terrazos #8, Local 2-C,  
Las Brisas 1ra. Seccion,  
Tijuana, B.C., Mexico C.P. 22610.  
TEL: +52 (664) 626-2726  
FAX: +52 (664) 686-8922  
E-Mail: sales@seaconglobal.com  
Website: www.seaconglobal.com  
Dial from U.S.A. TEL: +1 (619) 308-7901  
TOLL FREE: (888) 562-7072  
FAX: +1 (619) 308-7900



### SEA CON®

1700 Gillespie Way,  
El Cajon, California 92020, USA.  
TEL: +1 (619) 562-7071  
FAX: +1 (619) 562-9706  
E-Mail: seacon@seaconworldwide.com  
Website: www.seaconworldwide.com



### SEA CON US GULF AREA SALES OFFICE

14511 Old Katy Road, Suite 300,  
Houston, Texas 77079, USA.  
TEL: +1 (281) 599-3509  
FAX: +1 (281) 599-3517  
E-Mail: gulfcoastsales@seaconworldwide.com  
Website: www.seaconworldwide.com



### SEA CON US EAST COAST SALES OFFICE

50 Airport Road,  
Westerly, RI 02891, USA.  
TEL: +1 (401) 348-0155  
FAX: +1 (401) 348-0227  
E-Mail: eastcoastsales@seaconworldwide.com  
Website: www.seaconworldwide.com



### SEA CON FLORIDA SALES OFFICE

Building B, Suite 22,  
3959 South Nova Road,  
Port Orange, Florida 32127, USA.  
TEL: +1 (281) 802-5504  
E-Mail: steven.thumbbeck@seacon-ap.com  
Website: www.seaconworldwide.com



### SEA CON ADVANCED PRODUCTS, LLC

1321 Nelius Road, P.O. Box 767,  
Bellville, Texas 77418, USA.  
TEL: +1 (979) 865-8846  
FAX: +1 (979) 865-8859  
E-Mail: sales@seacon-ap.com  
Website: www.seacon-ap.com



### SEA CON BRAZIL

Rua Conde de Bonfim 120 sala 212,  
Tijuca, Rio de Janeiro,  
Brazil, CEP: 20520-053.  
TEL #1: +55 (21) 3592-0920  
TEL #2: +55 (21) 3594-0920  
CELL: +55 (21) 8849-3336  
E-Mail: renata@seacon-ap.com  
Website: www.seaconworldwide.com



### SEA CON (europe) LTD

Seacon House, Hewett Road,  
Gapton Hall Industrial Estate,  
Great Yarmouth, Norfolk, NR31 0RB, UK.  
TEL: +44 (0) 1493-652733  
FAX: +44 (0) 1493-652840  
E-Mail: sales@seaconeurope.com  
Website: www.seaconeurope.com



### SEA CON PHOENIX, LLC

15 Gray Lane, Suite 108,  
Hopkinton Industrial Park,  
Ashaway, RI 02804, USA.  
TEL: +1 (401) 637-4952  
FAX: +1 (401) 637-4953  
E-Mail: sales@seaconphoenixllc.com  
Website: www.seaconphoenixllc.com

Even though these procedures appear simple, only qualified technicians should perform the installation and maintenance.

Connectors are designed for installation on one atmosphere vessels. Contact SEA CON® for recommendations if using compensated vessels.

## INSTALLATION PROCEDURES

Torque values referenced in this literature assume installation into dry metal threads. For other applications, please contact SEA CON® for recommendations.

All connectors should be clean and free from moisture prior to mating.

**Bulkhead Connector Receptacle (BCR):** The BCR is mounted using a standard SAE port per SAE J1926 or MS16142. Lubricate the BCR o-ring with an appropriate silicone grease before installing. This lubrication should be applied to form an adequate film. Excessive lubrication is detrimental to the operation of the connector.

**Cable Connector Plug (CCP):** Lubricate the sealing areas using an appropriate silicone grease.

## CARE AND MAINTENANCE

After mating, the GLOBE-CON connector requires no maintenance.

It is recommended that upon disconnecting or retrieving a system that utilizes the GLOBE-CON series, the GLOBE-CON connectors should be dried, cleaned, regreased and remated prior to deploying or storage. It is recommended that when not mated, the BCR or CCP should be protected with a Dummy Sealing Receptacle (DSR) or Dummy Sealing Plug (DSP).

## CABLE AND CONTINUITY PRESERVATION

Avoid sharp bends in cables. Cables subjected to vibration and exposed to seawater drag should be adequately clamped to prevent fatigue and possible failure.

## SPECIAL ASSEMBLIES

SEA CON® maintains all facilities necessary to furnish complete underwater and environmental electrical connector/cable systems, including Research and Development, Engineering, Manufacturing, Quality Control and Pressure Testing. As well as supplying our standard 'off-the-shelf' items, we have the capability to design and manufacture SPECIAL CUSTOMIZED CONNECTORS AND CABLE ASSEMBLIES to suit your individual needs.

SEA CON® prides itself with the ability to perform stringent quality conformance testing procedures which are in accordance with MIL-SPEC programs.

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REV II