WET-CON Series

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WET-CON Series
specifications

Current Carrying Capacity	19 amps per contact (subject to cable) *
Operating Voltage	600 VDC
Contact Resistance	< 0.01 OHM
Insulation Resistance	> 500 MΩ after wet mating
Pressure Ratings	
Mated Condition	In-line: 20,000 psi (46,000 ft)
	Bulkhead 10,000 psi (23,000 ft)
Open Face Pressure	Bulkhead 1,000 psi (2,300 ft)
Mating Cycles	> 500 wet matings **

* Maximum current carrying capacity for contacts may be affected by cable selection.
**Provided proper handling procedures are adhered to.

Ampacity chart for standard parts (18 AWG SO cable)

Part description number of contacts	Ampacity	Part description number of contacts	Ampacity
IL-BH-2	7 Amps	IL-BH-8	4.9 Amps
IL-BH-3	7 Amps	IL-BH-10	3.5 Amps
IL-BH-4	5.6 Amps	IL-BH-12	3.5 Amps
IL-BH-6	5.6 Amps	IL-BH-16	3.5 Amps

Higher ampacities are available

materials

	Standard	Optional
Connector Body	Neoprene per B/A X5727	Hypalon per B/A X6830
Bulkhead Shell	DGS 1043 or	316 Stainless Steel (no cost option)
	CA630 per QQ-C-465	6061-T6 Aluminum, Hard Anodized
Contacts	Copper Alloy	
	Gold Plated per MIL-G-45204	
Guide Pins	304 Stainless Steel	
O-Rings	Buna N, 70 Durometer	
In-Line Cable	#18 AWG SO *	#14 OR #16 AWG SO
Bulkhead Pigtails	Teflon Type E hook-up wire*	
Locking Sleeves **		Delrin
Bulkhead Nut / Washer		Brass or Stainless Steel

* 18 in. standard length
** Locking Sleeves on page 15-7.

standard wiring color code

Standard In-Line Color Code (SO cable)

CONTACT #	COLOR	CONTACT #	COLOR
1	Black	9	Green / Black
2	White	10	Orange / Black
3	Red	11	Blue / Black
4	Green	12	Black / White
5	Orange	13	Red / White
6	Blue	14	Green / White
7	White / Black	15	Blue / White
8	Red / Black	16	Black / Red

CAUTION:

WET-CON connectors are intended to mate with WET-CON connectors only. Although the WET-CON and ALL-WET connectors look similar, the numbering pattern and color codes are not the same.

We recommend, as general practice, to verify color code and pin location before installation.

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WET-CON Series
part numbering system

When ordering, specify as follows:

BH: Bulkhead Connector

example: BH - 4 - MP

- BH: WET-CON Bulkhead
- 4: number of contacts
- MP: male plug (FS: female socket)

IL: In-Line Connector

example: IL - 4 - FS

- IL: WET-CON in-line
- 4: number of contacts
- FS: female socket (MP: male plug)

Locking Sleeves

Locking Sleeves are available for WET-CON connectors as an option.

example: DLSA - M

- DLSA: Delrin Locking Sleeve
- A: size (B & C)
- M: male, F: female

notes

- Size A fits 2, 3 and 4 contact patterns.
- Size B fits 6, 8 and 10 contact patterns.
- Size C fits 12 and 16 contact patterns.

Dummy Connectors

Dummy connectors are available parts in the WET-CON series.

example: DC - 4 - FS

- DC: WET-CON Dummy Connector
- 4: number of contacts
- FS: female (MP: male)

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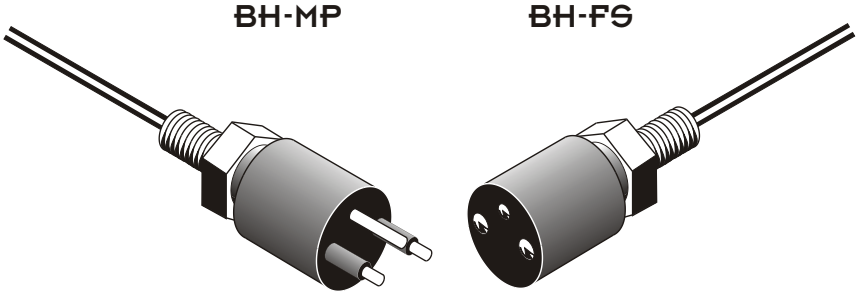
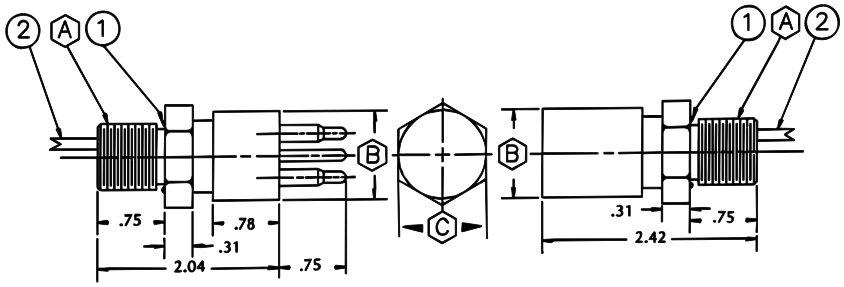
WET-CON Series
bulkhead connectors (2-10 contacts)

BH-MP BH-FS





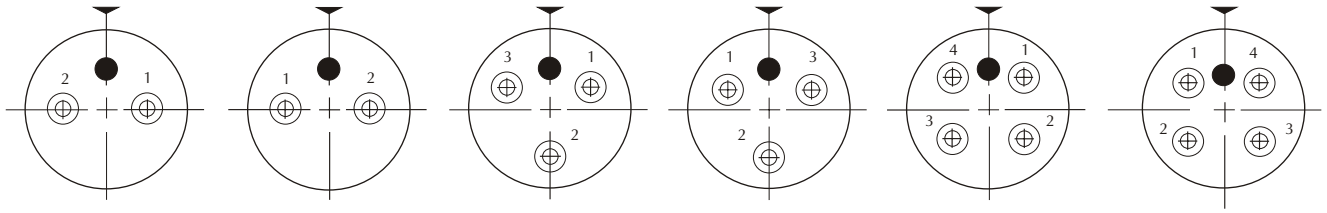
Part No.	A Thread	1 O-Ring	C Hex Flats Inches	B Inches	2 Hook-Up Wire
BH-2-MP/FS	7/16-20 UNF-2A	2-014	.75	1.00	18 AWG
BH-3-MP/FS	7/16-20 UNF-2A	2-014	.75	1.00	18 AWG
BH-4-MP/FS	7/16-20 UNF-2A	2-014	.75	1.00	18 AWG
BH-6-MP/FS	5/8-18 UNF-2A	2-017	1.00	1.25	18 AWG
BH-8-MPX/FSX	5/8-18 UNF-2A	2-017	1.00	1.25	18 AWG
BH-10-MP/FS	5/8-18 UNF-2A	2-017	1.00	1.25	18 AWG

notes

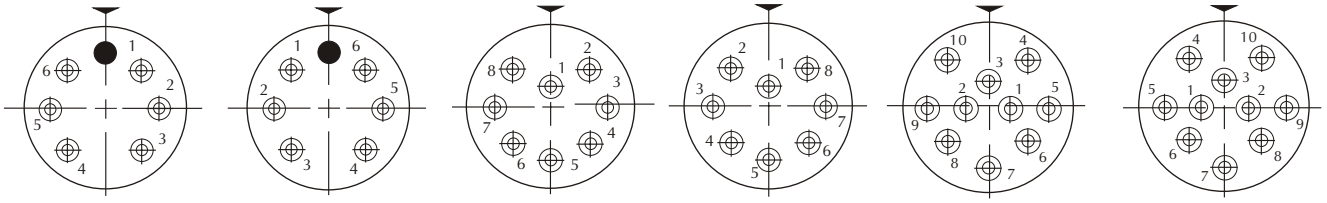
- BH-MP mates with IL-FS.
- BH-FS mates with IL-MP.
- Bulkhead mounting torque: 7/16 thread = 50 inch pounds. 5/8 thread = 85 inch pounds.
- Nut and washer: Optional.
- Dummy Connector: Optional.
- Dummy Shorting Plug: Optional
- O' Ring: Buna-N 70 Duro
- BH Shell DGS 1043 CA 630 Stainless Steel: No cost optional
- Bulkhead leads are tagged with pin number. (Optional)
- Do not dry mate connectors.
- Torque values referenced in this literature assume installation into dry metal threads. For other applications, please contact the factory for recommendations.

contact configurations - face view

BH-2-MP BH-2-FS BH-3-MP BH-3-FS BH-4-MP BH-4-FS



BH-6-MP BH-6-FS *BH-8-MPX *BH-8-FSX BH-10-MP BH-10-FSX



* BH-8-MPX and BH-8-FSX patterns are recommended for new applications.

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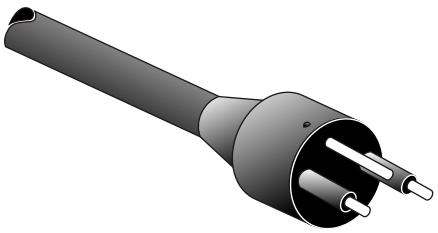
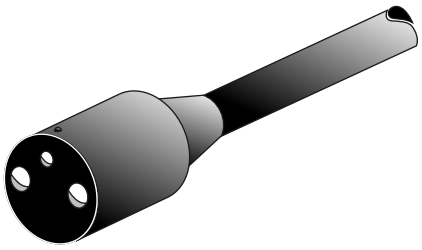
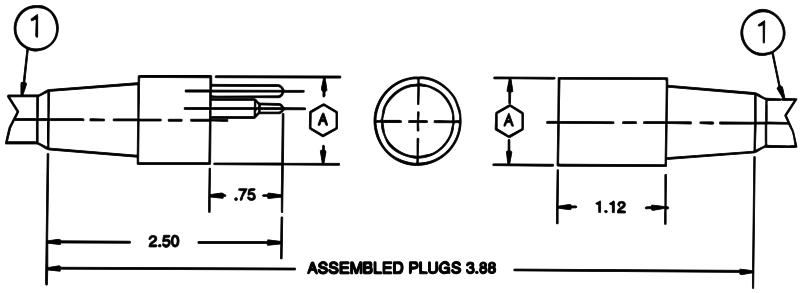
WET-CON Series
in-line connectors (2-10 contacts)

IL-MP



IL-FS





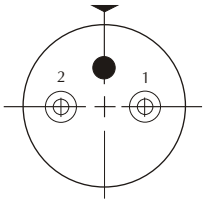
Part No.	A Inches	1 Cable	Approx Cable Ø
IL-2-MP/FS	1.00	18/2 SO	9.0 mm (.354")
IL-3-MP/FS	1.00	18/3 SO	9.4 mm (.372")
IL-4 MP/FS	1.00	18/4 SO	10.2 mm (.402")
IL-6-MP/FS	1.25	18/6 SO	13.3 mm (.525")
IL-8MPX/FSX	1.25	18/8 SO	15.2 mm (.600")
IL-10-MP/FS	1.25	18/10 SO	16.3 mm (.640")

notes

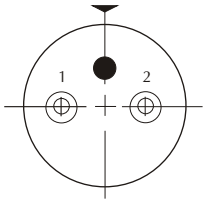
- IL-MP mates with BH-FS and IL-FS.
- IL-FS mates with BH-MP and IL-MP.
- Locking Sleeve: Optional (see page 15-7).
- Dummy Connector: Optional.
- Dummy Shorting Plug: Optional
- Do not dry mate connectors.

contact configurations - face view

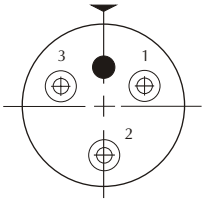
IL-2-MP



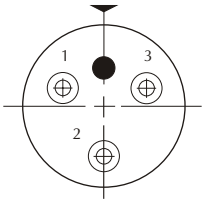
IL-2-FS



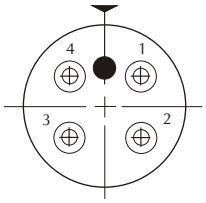
IL-3-MP



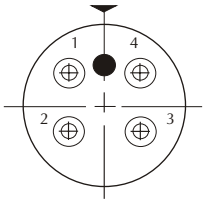
IL-3-FS



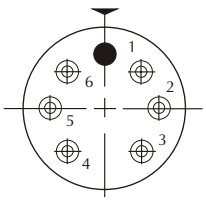
IL-4-MP



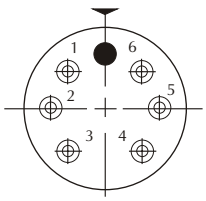
IL-4-FS



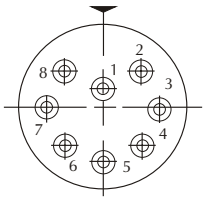
IL-6-MP



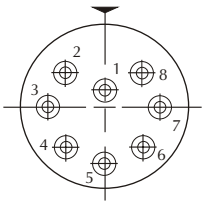
IL-6-FS



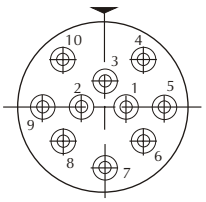
*IL-8-MPX



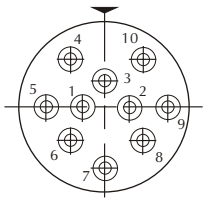
*IL-8-FSX



IL-10-MPX



IL-10-FSX



* IL-8-MPX and IL-8-FSX patterns are recommended for new applications.

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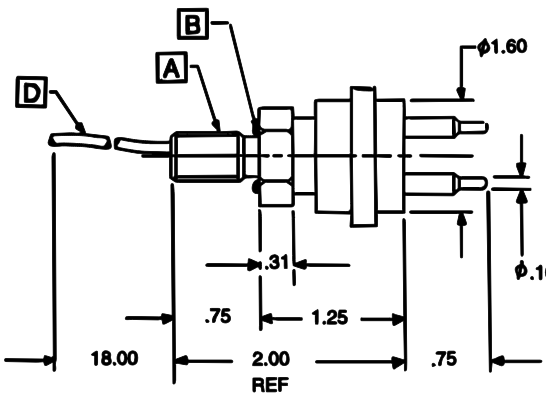
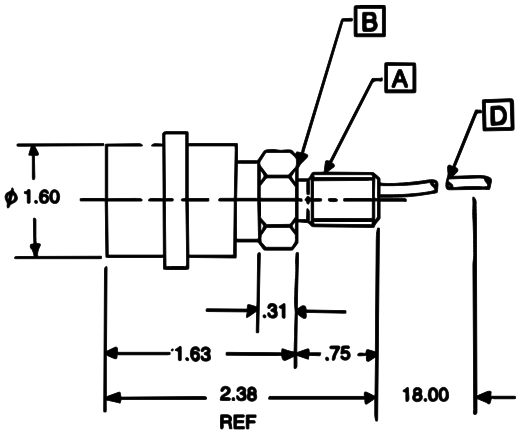
WET-CON Series
bulkhead connectors (12-16 contacts)

BH-MP



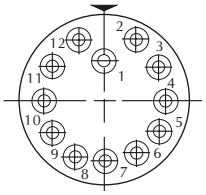
BH-FS



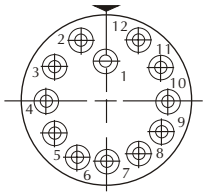
Part No.	A Thread	B O-Ring	C Hex Flats Inches	Connector O/D	D Hook-Up Wire
BH-12-MP/FS	5/8-18 UNF-2A	2-017	1.00	1.60	18 AWG
BH-16-MP/FS	3/4-16 UNF-2A	2-118	1.25	1.60	18 AWG

contact configurations - face view

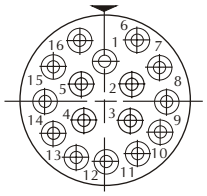
BH-12-MP



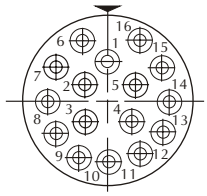
BH-12-FS



BH-16-MP



BH-16-FS



notes

- BH-MP mates with IL-FS.
- BH-FS mates with IL-MP.
- Locking Sleeve: Optional.
  (see page 15-7).
- Nut and washer: Optional.
- Dummy connector: Optional.
- O-Ring: Buna-N 70 Duro.
- BH Shell DGS 1043 CA 630.
  Stainless Steel: No cost optional.
- Bulkhead leads are tagged with pin number (Optional).
- Do not dry mate connectors.
- Bulkhead Mounting Torque:
  5/8 Thread = 85 inch pounds
  3/4 Thread = 85 inch pounds
- Torque values referenced in this literature assume installation into dry metal threads. For other applications, please contact the factory for recommendations.

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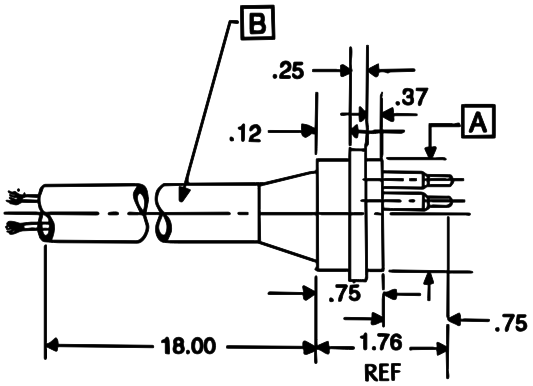
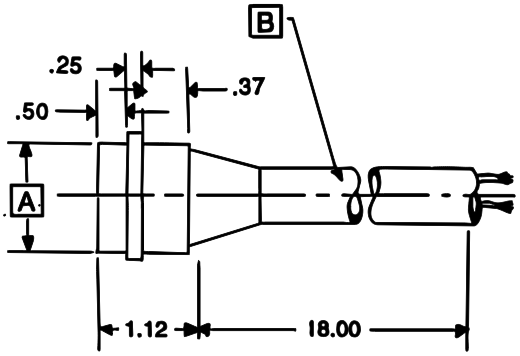
WET-CON Series
in-line connectors (12-16 contacts)

IL-MP



IL-FS



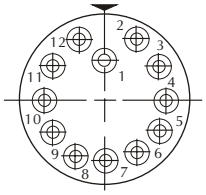
Part No.	A Inches	B Cable	Approx Cable Ø
IL-12-MP/FS	1.60	18/12 SO	16.8 mm (.660")
IL-16-MP/FS	1.60	18/16 SO	19.3 mm (.760")

notes

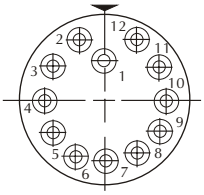
- IL-MP mates with BH-FS and IL-FS.
- IL-FS mates with BH-MP and IL-MP.
- IL-16-MP WOC is not available, substitute with BH-16-M.
- Locking Sleeve: Optional (see page 15-7).
- Dummy Connector: Optional.
- Do not dry mate connectors.

contact configurations - face view

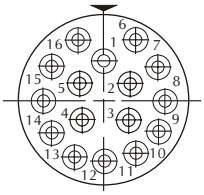
IL-12-MP



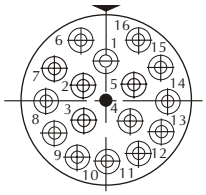
IL-12-FS



IL-16-MP



IL-16-FS



standard wiring color code

Standard In-Line Color Code (SO cable)

CONTACT #	COLOR
1	Black
2	White
3	Red
4	Green
5	Orange
6	Blue
7	White / Black
8	Red / Black

CONTACT #	COLOR
9	Green / Black
10	Orange / Black
11	Blue / Black
12	Black / White
13	Red / White
14	Green / White
15	Blue / White
16	Black / Red

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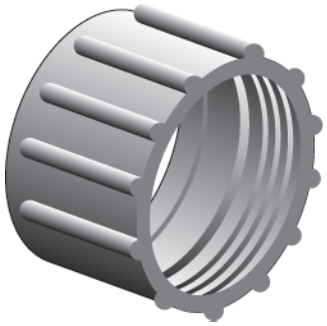
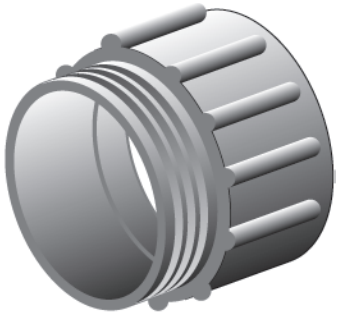
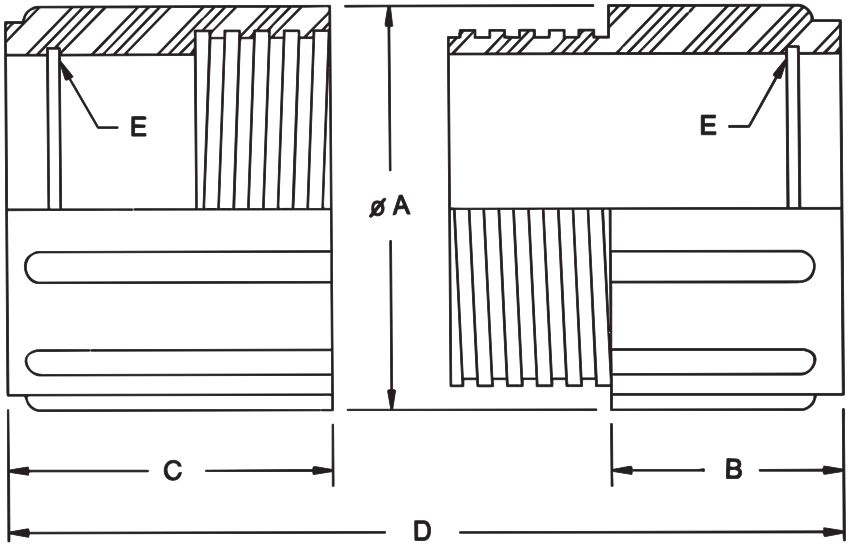
WET-CON Series
locking sleeves

DLS - F



DLS - M





Mated Length

notes

- Spirolox Rings: Stainless

WET-CON Locking Sleeves	A	B	C	D	E*
DLSA-M	1.40	.90	———	2.19	RR 103
DLSA-F	1.40	———	1.29		RR 103
DLSB-M	1.62	.94	———	2.26	RR 125
DLSB-F	1.62	———	1.32		RR 125
DLSC-M	2.37	.78	———	1.95	RR 187
DLSC-F	2.38	———	1.17		RR 187

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Handling Procedures and Special Capabilities

installation procedure

Torque values referenced in this literature assume installation into dry metal trheads. For other applications, please contact the factory for recommendations.

Bulkhead Connector (BC): The BC may be installed using one of two methods. The preferred method is to spotface the bulkhead surface and thread the hole, then screw the connector by means of a nut and washer. The bored hole (or threaded hole) should be free of any "burrs" and all O-ring sealing surfaces polished to a number 32 finish. Lubricate the BC O-ring with an appropriate silicone spray or grease before installing. This lubrication should be applied to form an adequate film. Excessive lubrication is detrimental to the operation of the connector. Bulkhead nut, if used, should not be overtorqued.

IN LINE CONNECTOR: Lubricate the sealing areas around the male pins, using an appropriate silicone spray, or grease lightly.

care and maintenance

The ALL-WET and WET CON connectors require very little maintenance. They are designed to be used in harsh environments and thus limited amounts of dirt and grit do not affect their performance.

It is recommended that, upon disconnecting or retrieving the system, the connectors be cleaned, to storage (if possible, remate with dummy plugs).

Prior to deployment the following maintenance procedure is recommended:

1. Demate the connector set.
2. Flush connector interface with fresh water (deionized water if available), remove all dirt, grit and grease.
3. Inspect for damage in sealing areas, excessive corrosion, debonding of the cable and connector interface and cuts in the cable jacket.
4. Apply thin film of dilectric compound (DC) grease, silicon based, to sealing areas of male connector and across the face of the female connector*. If the BC is removed from it's housing then replace facial O'ring and make sure that O-rings are lubricated and in good condition.
5. Mate the connector halves, wipe away any excess grease off the interface line of the mated set.

CAUTION: The use of some oil-based propellants in spray cans can cause conductivity problems in neoprene.

cable and continuity preservation

Avoid sharp bends in cables. Cables subjected to vibration or exposed to seawater drag should be adequately clamped to prevent conductor fatique and ultimate 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 you individual needs.

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