





SEACON WET-CON Electrical Wet-Pluggable Connectors

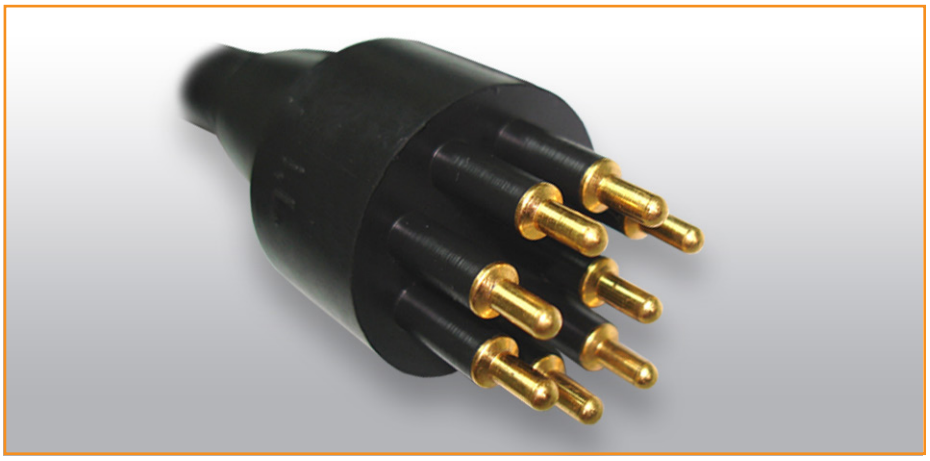
WET-CON Electrical Wet-Pluggable Connectors Provide Reliable and Durable Connectivity Solutions for Subsea Environments

SEACON
WET-CON Electrical Wet-Pluggable Connectors

Reliable and Durable Connectivity Solutions for Subsea Environments

KEY FEATURES

- Wet-pluggable connector
- 1 to 16 contacts, 3 connector body sizes
- Up to 20,000 psig (approx. 45,000ft/13,700m) mated
- 600 VDC with standard cable
- 19 amps max current (cable dependant)
- Typical uses: Remotely Operated Vehicles (ROV) equipment (lights, cameras, thrusters), oceanographic instruments, diver equipment, defense



TE Connectivity (TE)'s SEACON WET-CON connector series was developed to provide low cost yet reliable rubber molded connectors that allow the user to make and break connections both on the surface and underwater.

Bulkhead connectors are available in a brass or stainless steel material.

APPLICATION

- **Diver Communications**
- **Cameras & Lights**
- **ROV's**
- **Recreational Submersibles**
- **Towed-Array Cable Systems**
- **Current Meters**
- **Food Processing Equipment**

TE Components . . . TE Technology . . . TE Know-how . . .

AMP | AGASTAT | CII | HARTMAN | KILOVAC | MICRODOT | NANONICS | POLAMCO | Raychem

SEACON | Rochester | DEUTSCH

Empower Engineers to Solve Problems, Moving the World Forward.

SPECIFICATIONS

- **Open Face Pressure - Bulkheads:** Up to 1,000 psi (2,300 ft).
- **Mated Pressure - Bulkheads:** Up to 10,000 psi (23,000 ft).
- **Mated Pressure - In-Lines:** Up to 20,000 psi (46,000 ft).
- **Voltage Rating:** 600 VDC (with standard cable).
- **Current Rating:** Up to 19 amps per contact.
- **Contact Resistance:** <0.01 ohms.
- **Insulation Resistance:** >500 megohms after wet mating.
- **Mating Cycles:** >500 wet matings.
- **Operating Temperature:** 25° to 140°F (-4° to 60°C).

MATERIALS

- **Bulkhead Body:**
  - **Standard:** DGS 1043 or CA630 per QQ-C-465.
  - **Optional:** 316 Stainless Steel (no cost option), 6061-T6 Aluminum, Hard Anodized available on request.
- **Connector Body:**
  - **Standard:** Neoprene per B/A X5727.
  - **Optional:** Hypalon per B/A X6830 or PEEK (Polyetheretherketone).
- **Contacts:** Copper Alloy Gold Plated per ASTM B488.
- **Guide Pins:** 304 Stainless Steel.
- **O-Ring:** Nitrile (formerly known as Buna N).
- **In-Line Cable:** #18 AWG SO as standard.
  #14 or #16 AWG SO Cable available dependent on connector size.
- **Bulkhead Pigtails:** TFE insulated wire type E hook-up wire, 18 inches.

SPECIAL ASSEMBLIES

TE provides complete under-water 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.

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

NOTES:
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.

- Locking sleeves are not standard and must be ordered separately. Available in Polyacetal.
- Bulkhead nut/washer is not standard and must be ordered separately. Available in Brass or 316 Stainless Steel.
- In-line cable and hook up wire is 18 inch standard length. Longer length to be specified when ordering.
- In-line cable is available in #14 or #16 AWG SO. Cable other than SO will be terminated and over-molded to a bulkhead connector.

WET-CON Bulkhead Connectors

Ordering Information

BH - X - XX

Family Designator
WET-CON Bulkhead Connector

Number of Contacts Total

Connector Type
MP Male Plug
FS Female Socket

WET-CON In-Line Connectors

Ordering Information

IL - X - XX

Family Designator
WET-CON In-Line Connector

Number of Contacts Total

Connector Type
MP Male Plug
FS Female Socket

WET-CON Locking Sleeves

Ordering Information

BH - X - X

Family Designator
WET-CON Polyacetal Locking Sleeve

Size
A, B, C

Connector Type
M Male
F Female

NOTES:
- Locking Sleeves are available for WET-CON connectors as an option.
- Size A fits 2, 3, 4 and 5 contact patterns.
- Size B fits 6, 8 and 10 contact patterns.
- Size C fits 12 and 16 contact patterns.

WET-CON Dummy Connectors

Ordering Information

DC - X - XX

Family Designator
WET-CON Dummy Connector

Number of Contacts Total

Connector Type
MP Male Plug
FS Female Socket

NOTES:
- Dummy connectors are available parts in the WET-CON Series.

Ampacity Chart for Standard Parts (18 AWG SO cable)

Part Description Number of Contacts	Ampacity
IL-BH-2	10 amps
IL-BH-3	7 amps
IL-BH-4	5.6 amps
IL-BH-5	5.6 amps
IL-BH-6	5.6 amps
IL-BH-8	4.9 amps
IL-BH-10	3.5 amps
IL-BH-12	3.5 amps
IL-BH-16	3.5 amps

NOTES:

- Higher ampacities are available.

Standard In-Line Wiring Color Code (SO Cable)

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

NOTES:

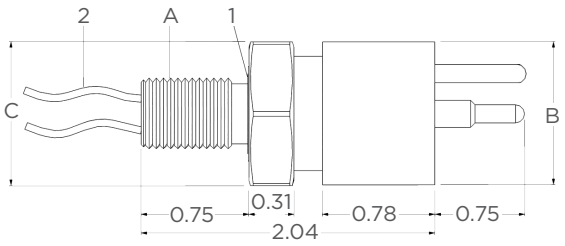
- * For 3 contact configurations wiring color code is GREEN.

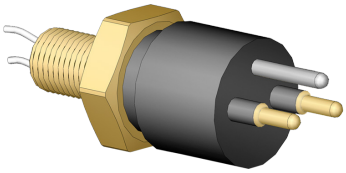
CAUTION:

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BH-MP (2 - 10 Contacts)

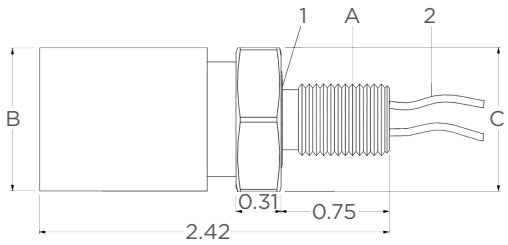
Bulkhead Connector Male Plug

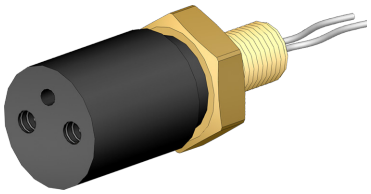




BH-FS (2 - 10 Contacts)

Bulkhead Connector Female Socket





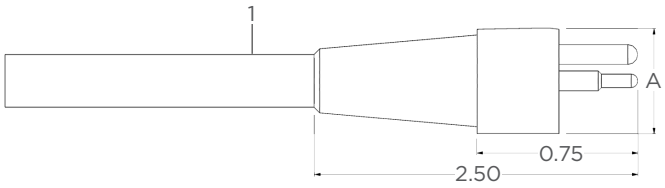
Contact Size	A Thread	1 O-Ring	B Ø (In)	C Hex Flats (In)	2 Hook-Up Wire	Part Number
2	7/16-20 UNF-2A	2-014	1.00	0.75	18 AWG	BH-2-MP/FS
3	7/16-20 UNF-2A	2-014	1.00	0.75	18 AWG	BH-3-MP/FS
4	7/16-20 UNF-2A	2-014	1.00	0.75	18 AWG	BH-4-MP/FS
5	7/16-20 UNF-2A	2-014	1.00	0.75	18 AWG	BH-5-MP/FS
6	5/8-18 UNF-2A	2-017	1.25	1.00	18 AWG	BH-6-MP/FS
8	5/8-18 UNF-2A	2-017	1.25	1.00	18 AWG	BH-8-MP/MPX*/FS/FSX*
10	5/8-18 UNF-2A	2-017	1.25	1.00	18 AWG	BH-10-MP/FS

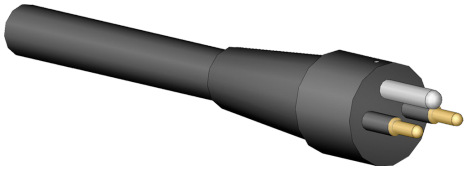
Notes:

- 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: Nitrile (formerly known as Buna N).
- Bulkhead leads are tagged with pin number.
- Connectors must be lubricated prior to mating.
- Torque values referenced in this literature assume installation into dry metal threads. For other applications, please contact TE for recommendations.
- Connectors are designed for installation on one atmosphere vessels. Contact TE for recommendations if using compensated vessels.
- For contact configurations please refer to page 13.
- * No guide pin. MPX/FSX connectors are recommended for new applications.

IL-MP (2 - 10 Contacts)

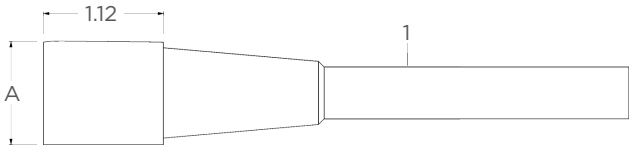
In-Line Connector Male Plug





IL-FS (2 - 10 Contacts)

In-Line Connector Female Socket



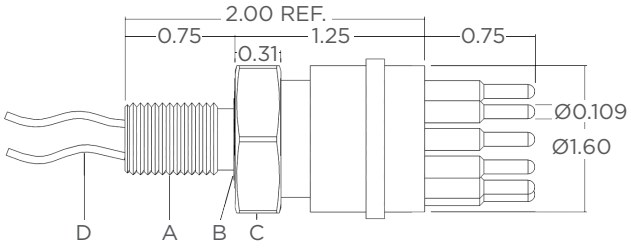


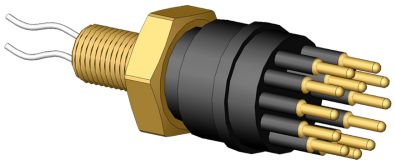
Contact Size	A Ø (In)	1 Cable	Part Number
2	1.00	18/2 SO	IL-2-MP/FS
3	1.00	18/3 SO	IL-3-MP/FS
4	1.00	18/4 SO	IL-4-MP/FS
5	1.00	18/5 SO	IL-5-MP/FS
6	1.25	18/6 SO	IL-6-MP/FS
8	1.25	18/8 SO	IL-8-MP/MPX*/FS/FSX*
10	1.25	18/10 SO	IL-10-MP/FS

Notes:
- Locking Sleeve: Optional (see page 12).
- Dummy Connector: Optional.
- Dummy Shorting Plug: Optional.
- Connectors must be lubricated prior to mating.
- * No guide pin. MPX/FSX connectors are recommended for new applications.

BH-MP (12 - 16 Contacts)

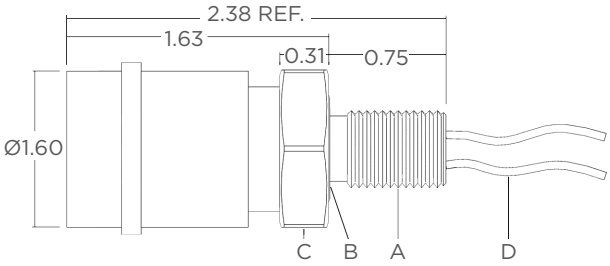
Bulkhead Connector Male Plug

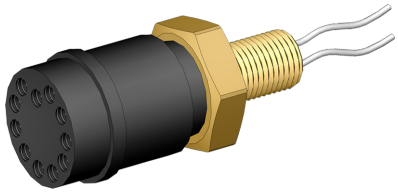




BH-FS (12 - 16 Contacts)

Bulkhead Connector Female Socket





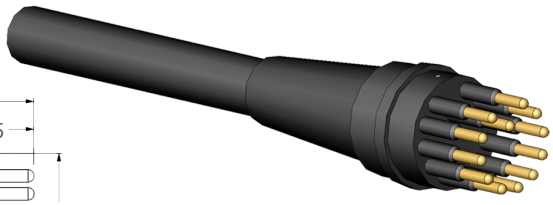
Contact Size	A Thread	B O-Ring	C Hex Flats (In)	D Hook-Up Wire	Part Number
12	5/8-18 UNF-2A	2-017	1.00	18 AWG	BH-12-MP/FS
16	3/4-16 UNF-2A	2-118	1.25	18 AWG	BH-16-MP/FS

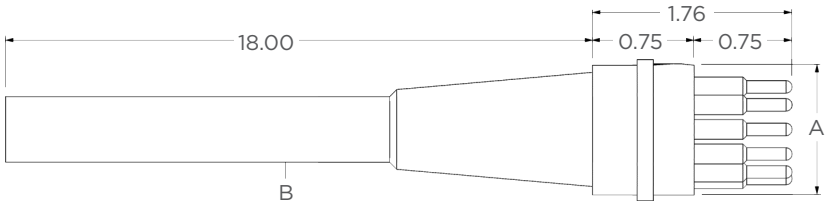
Notes:

- Bulkhead Mounting Torque: 5/8 Thread = 85 inch pounds. 3/4 Thread = 85 inch pounds.
- Locking Sleeve: Optional (see page 12).
- Nut and Washer: Optional.
- Dummy Connector: Optional.
- Dummy Shorting Plug: Optional.
- O-Ring: Nitrile (formerly known as Buna N).
- Bulkhead leads are tagged with pin number.
- Connectors must be lubricated before mating.
- Torque values referenced in this literature assume installation into dry metal threads. For other applications, please contact TE for recommendations.
- Connectors are designed for installation on one atmosphere vessels. Contact TE for recommendations if using compensated vessels.
- For contact configurations please refer to page 13.

IL-MP (12 - 16 Contacts)

In-Line Connector Male Plug

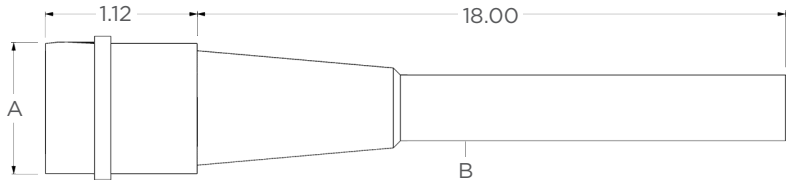




IL-FS (12 - 16 Contacts)

In-Line Connector Female Socket





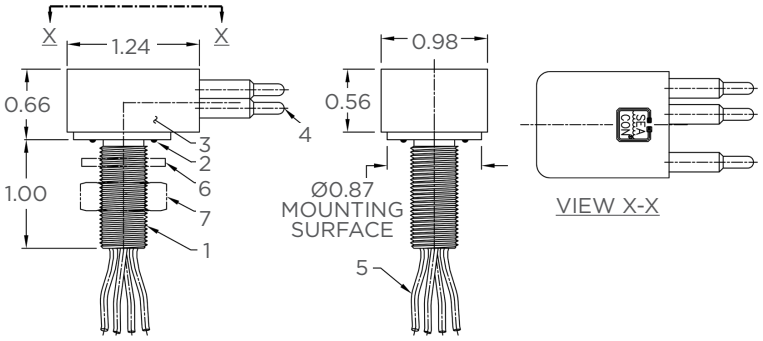
Contact Size	A Ø (In)	B Cable	Part Number
12	1.60	18/12 SO	IL-12-MP/FS
16	1.60	18/16 SO	IL-16-MP/FS

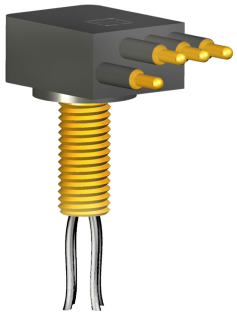
Notes:

- IL-16-MP WOC is not available, substitute with BH-16-MP.
- Locking Sleeve: Optional (see page 12).
- Dummy Connector: Optional.
- Connectors must be lubricated prior to mating.
- Shorting plugs are available should you require the ability of looping together 'like' circuits for testing purposes within the dummy. Pin to pin shorting details need to be supplied at time of order placement.

LPBH-MP

Low Profile Bulkhead Connector Male Plug





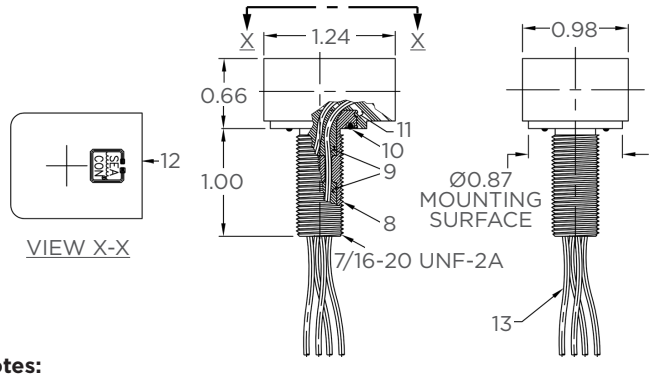
Notes:

1 **LPBH-BC SHELL:** CA 630 and Copper Contacts, Gold Plated.
2 **O-RING:** 2-014 Nitrile (formerly known as Buna N).
3 **LPBH-3/4-MP:** Neoprene Molding per B/A X-5727.
4 **PIN:** Copper Alloy and Gold Plated per MIL-G-45204.
5 #18 AWG TFE insulated wire. **WIRE:** 12 inches long.
6 **WASHER (OPTIONAL):** Brass.
7 **HEX NUT (OPTIONAL):** Brass.

- **MOUNTING TORQUE:** 40 inch lbs.
- **PRESSURE RATING:** 20,000 psi mated.

LPBH-FS

Low Profile Bulkhead Connector Female Socket





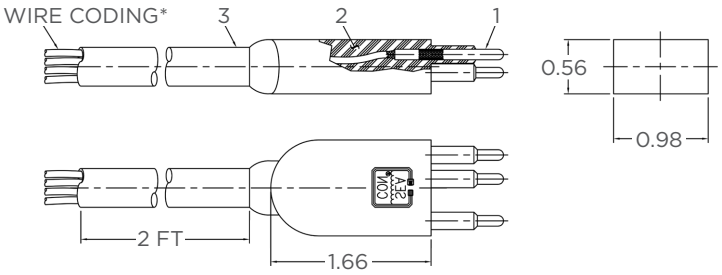
Notes:

8 **LPBH-BC SHELL:** CA 630 and Copper Contacts, Gold Plated.
9 **POTTING:** White Epoxy per B/A 6373.
10 **O-RING:** 2-014 Nitrile (formerly known as Buna N).
11 **MOLDED BODY:** Neoprene Molding per B/A X-5727.
12 **SOCKET:** Copper Alloy 360 per QQ-B-626 or 61A; Gold Plated per MIL-G-45204, Type II, Grade C, Class I, with Flash Nickel Undercoat.
13 #18 AWG TFE insulated wire. **WIRE:** 12 inches long.

- **MOUNTING TORQUE:** 40 inch lbs.
- **PRESSURE RATING:** 20,000 psi mated.

LPIL-MP

Low Profile In-Line Connector Male Plug





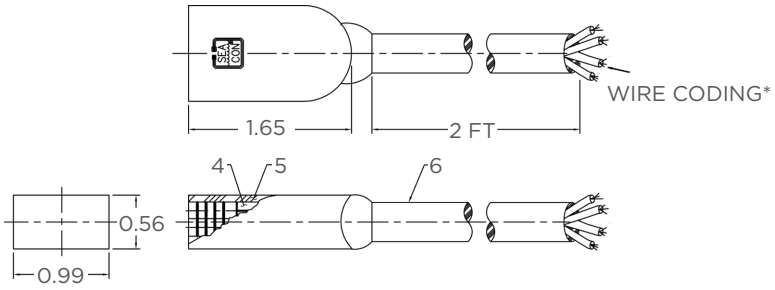
Notes:

1 **PIN:** CA 630 & Gold Plated per ASTM-B488-95.
2 **RUBBER MOLD:** Neoprene Mold per B/A X-5727.
3 **CABLE:** 16/3 SOW or 16/4 SOW.

• **PRESSURE RATING:** 20,000 psi mated.

LPIL-FS

Low Profile In-Line Connector Female Socket





Notes:

4 **SOCKET:** CA 630 per MSBA-019.
5 **RUBBER MOLD:** Neoprene per MSNBA-027.
6 **CABLE:** 16/3 SOW or 16/4 SOW.

• **PRESSURE RATING:** 20,000 psi mated.

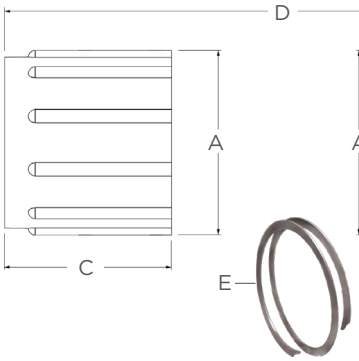
Wire Color Code

Contact Number	Colour
1	Black
2	White
3	Red
4	Green

DLS-F

Locking Sleeve Female

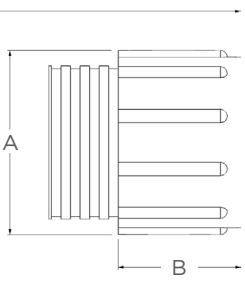




DLS-M

Male Locking Sleeve





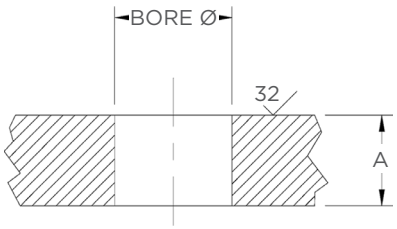
Locking Sleeve	A Ø (In)	B Length (In)	C Length (In)	D Mated Length (In)	E Spirolox*
DLSA-M	1.40	0.90	-	2.19	RR 103
DLSA-F	1.40	-	1.29	2.19	RR 103
DLSB-M	1.62	0.94	-	2.26	RR 125
DLSB-F	1.62	-	1.32	2.26	RR 125
DLSC-M	2.37	0.78	-	1.95	RR 187
DLSC-F	2.38	-	1.17	1.95	RR 187

Notes:

- * SPIROLOX RINGS: Stainless Steel.
- Size A fits 2, 3, 4 and 5 contact patterns.
- Size B fits 6, 8 and 10 contact patterns.
- Size C fits 12 and 16 contact patterns.

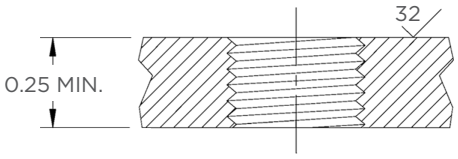
BH-MP/FS

Through Bore Option



BH-MP/FS

Threaded Mounting Option

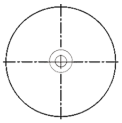


Connector	Thread	Bore Ø (In)		Mounting Torque (In/lbs)	Spot Face Ø (In)	A Max. (In)
BH-MP/FS (2/3/4/5)	7/16-20 UNF-2B	0.437	+0.0.15 -0.000	50	1.00	0.44
BH-MP/FS (6/8/10/12)	5/8-18 UNF-2B	0.625	+0.0.15 -0.000	85	1.25	0.44
BH-MP/FS (16)	3/4-16 UNF-2B	0.750	+0.0.15 -0.000	85	1.50	0.44

WET-CON Series Bulkhead/In-Line Contact Configurations

Male Face View Only - Not to Scale*

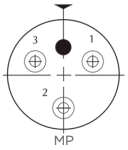
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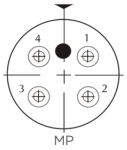
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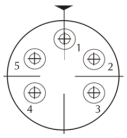
3



4



5

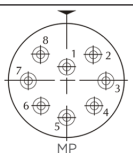




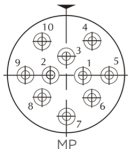
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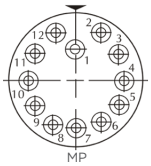
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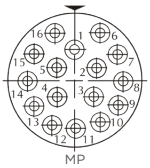
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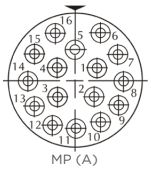


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Notes:

- * For female face view contact configurations please contact TE.

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