



SEACON Micro WET-CON Electrical Wet-Pluggable Connectors

Micro WET-CON Electrical Wet-Pluggable
Connectors Offer Low Cost and Space Saving
Solutions for Underwater Applications

SEACON

Micro WET-CON Electrical Wet-Mate Connectors

Low Cost and Space Saving Solutions for Underwater Applications

KEY FEATURES

- Wet-pluggable
- New pin design removing any potential wear to the sealing interface
- Low cost
- 2 to 16 contacts
- Up to 10,000 psig (approx. 22,500ft/7,000m) mated
- 2, 3 & 4 pin 600 VDC
- Special versions available (right-angle, double o-ring, Micro WET-CON Attachable (MCAT) filed installable, ethernet, power ethernet, low profile, split)
- 5, 6, 8, 10, 12 & 16 pin 300 VDC
- Up to 19 amps max current
- Brass and stainless steel bulkhead in a miniature configuration, aluminum, titanium and peek optional
- Typical uses: ROV equipments (lights, cameras, thrusters), diver equipment, oceanographic instruments, defense



The popular Micro WET-CON connector series was developed to provide all the features of TE Connectivity (TE)'s SEACON ALL-WET connector series, but in a miniature configuration. The small, lightweight design offers the same flexibility and reliability as our rubber molded connectors.

The Micro WET-CON series allows for smaller through ports in a pressure vessel and a greater density of conductors in a compact area. The smaller cables decrease the overall weight and drag of an Remotely Operated Vehicle (ROV) or other vessel. This connector range is wet-pluggable and therefore enables connections to be made underwater, on-deck or in many weather conditions. Bulkhead connectors are available in a variety of different materials.

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

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Empower Engineers to Solve Problems, Moving the World Forward.



APPLICATION

- Diver Communications
- UWTV & Lights
- ROV's
- Submersibles
- Towed-Array Cable Systems
- Current Meters

SPECIFICATIONS

- **Open Face Pressure:** 10,000 psi (700 bar) optional and needs to be specified. Dummy cap recommended above 100 psi.
- **Mated Pressure:** 10,000 psi (700 bar).
- **Voltage Rating:** 2, 3 & 4 pin 600 VDC.
5, 6, 8, 10, 12 & 16 pin 300 VDC.
- **Current Rating:** Up to 19 amps per contact.
- **Contact Resistance:** <0.01 ohms.
- **Insulation Resistance:** >200 megohms @ 300 VDC.
- **Air Mate:** >1,000 cycles.
- **Underwater Mate:** >500.
- **Operating Temperature:** 25° to 140°F (-4° to 60°C).
- **Mounting Torque:** 85 in-lb*
In dry stainless 1/2" long Female threads.
- **Approvals:** Lead-free and Restriction of Hazardous Substances Directive (RoHS) compliant.

MATERIALS

- **Molded Body:** Neoprene.
- **Bulkhead Body:** Brass (CA #360).
- **Contacts:** Brass-gold plated (CA #360).
- **Guide Pins:** Stainless Steel (303 SS or 304 SS).
- **Bulkhead N & W:** Brass (CA #360).
- **O-Ring:** Nitrile (formerly known as Buna N).
- **Locking Sleeve:** Polyacetal.
- **In-Line Cable:** Neoprene.
 - **2, 3 & 4 Pin:** #18 AWG (SO Cable).
 - **5, 6, 8, 10, 12 & 16 Pin:** #20 AWG.
 - **Standard Length:** 1m, 2m, 5m.
- **Hook-Up Wire (BH):** TFE insulated wire.
 - **2, 3 & 4 Pin:** #20 AWG.
 - **5, 6, & 8 Pin:** #22 AWG.
 - **10, 12, & 16 Pin:** #20 AWG.
 - **Standard Length:** 0.5m.

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.

NOTES:

- Contact TE for special order materials.
- Incorporation of special order cables will be determined on a case by case basis.
- Connectors are designed for installation on 1 atmosphere vessels. Contact TE for recommendations if using compensated vessels.
- * For metal shells only, for other materials contact TE for recommendations.

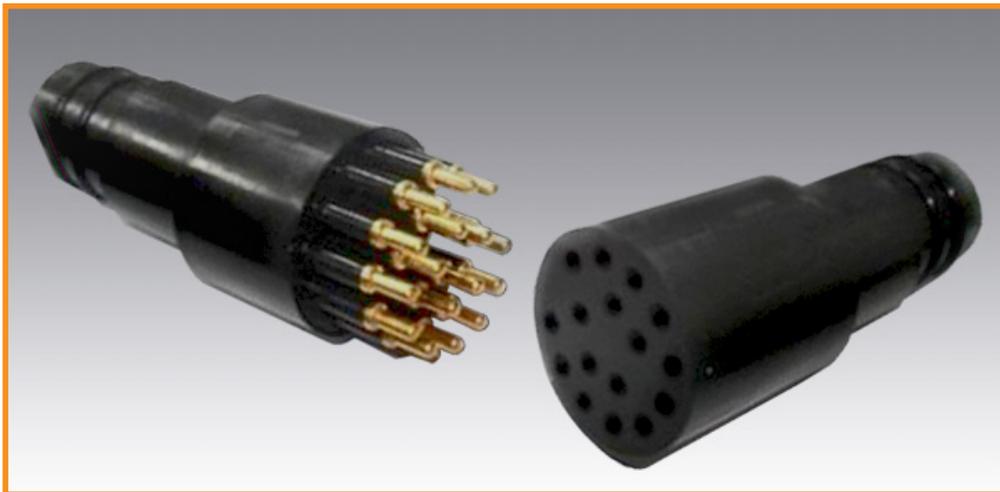


MCAT Attachable Micro WET-CON

Due to global demand to terminate standard rubber molded connectors onto specialized or customer furnished cable, TE introduced an MCAT version of the successful Micro WET-CON connector series.

This connector can be terminated virtually anywhere eliminating the need for shipping bulky long lengths of cable. In addition the end user is able to produce a reduced length termination without the need for additional cable splices and have one continuous cable diameter for the total length of the cable.

The MCAT connector is fully inter-mateable with like configured Micro WET-CON inline and bulkhead connectors. For further information and for cable jacket materials that can be accommodated please contact TE.





Micro WET-CON Connectors

Ordering Information

Family Designator

Micro WET-CON

Connector Type

IL In-Line

BH Bulkhead

DC Dummy Connector

Number of Contacts Total

Plug/Socket

M Male Plug

F Female Socket

Material

S/S Stainless Steel - Bulkheads Only (Standard is Brass)

MC - XX - X - X - XX

NOTES:

- For Locking Sleeves see page 13.

Ampacity Chart for Standard Parts (18 AWG SO cable)

Part Description Number of Contacts	Ampacity
MCBH/IL-2	10 amps
MCBH/IL-3	6 amps
MCBH/IL-4	6 amps
MCBH/IL-5	3 amps
MCBH/IL-6	3 amps
MCBH/IL-8	3 amps
MCBH/IL-10	2.5 amps
MCBH/IL-12	2.5 amps
MCBH/IL-16	2 amps

Standard In-Line Wiring Colour 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

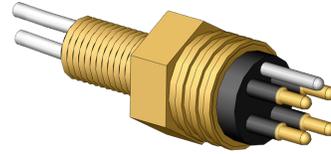
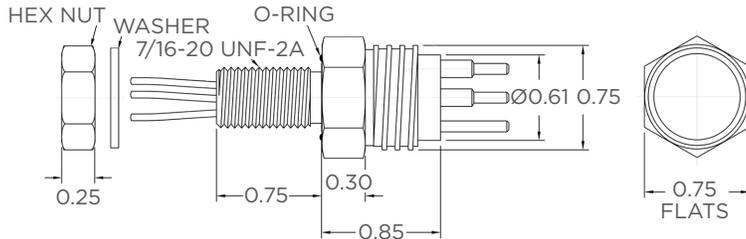
NOTES:

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



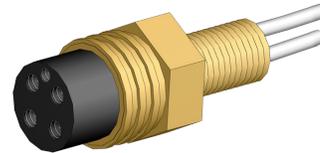
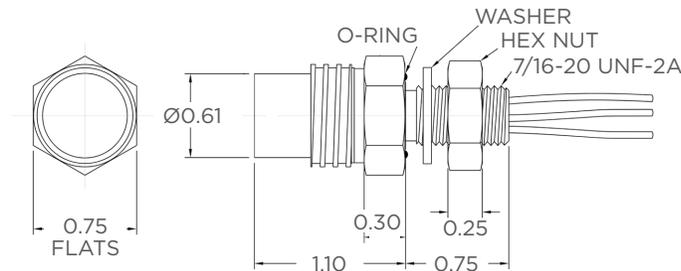
MC-BH-M (2 - 8 Contacts)

Bulkhead Connector Male Plug



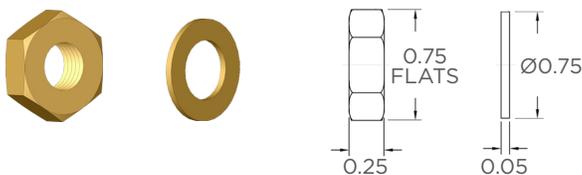
MC-BH-F (2 - 8 Contacts)

Bulkhead Connector Female Socket



Hex Nut & Washer (2 - 8 Contacts)

Bulkhead Connector



STD - BRASS

(Stainless Steel and others upon request)

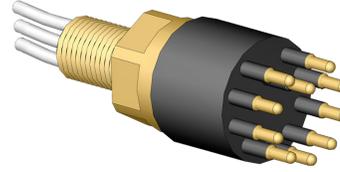
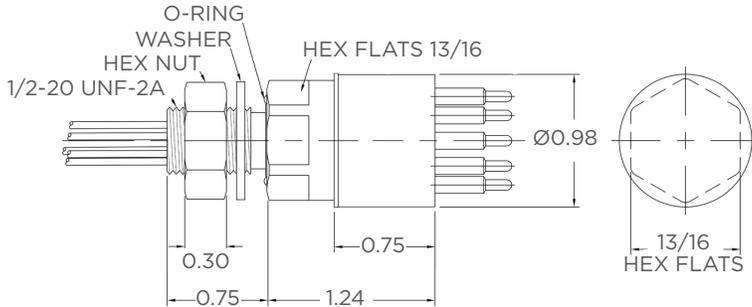
Notes:

- Hex Nut and Washer: Optional.
- O-Ring: 2-014.
- Dummy Connector: Optional.
- Dummy Shorting Plug Connector: Optional.
- 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 1 atmosphere vessels. Contact TE for recommendations if using compensated vessels.



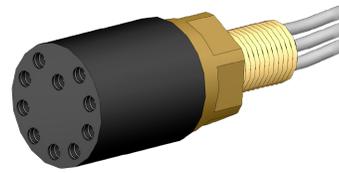
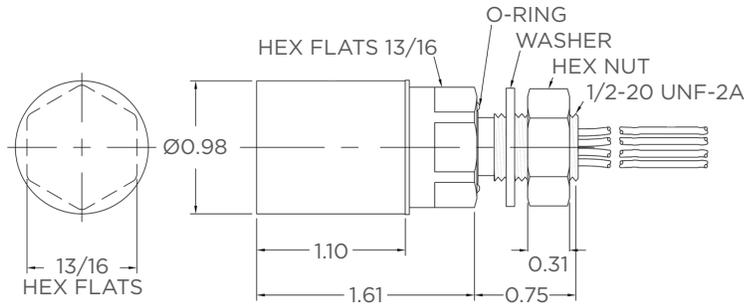
MC-BH-M (10 - 16 Contacts)

Bulkhead Connector Male Plug



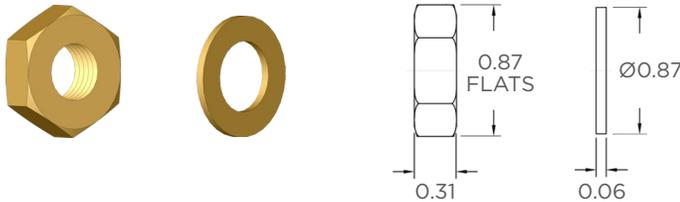
MC-BH-F (10 - 16 Contacts)

Bulkhead Connector Female Socket



Hex Nut & Washer (10 - 16 Contacts)

Bulkhead Connector



STD - BRASS

(Stainless Steel and others upon request)

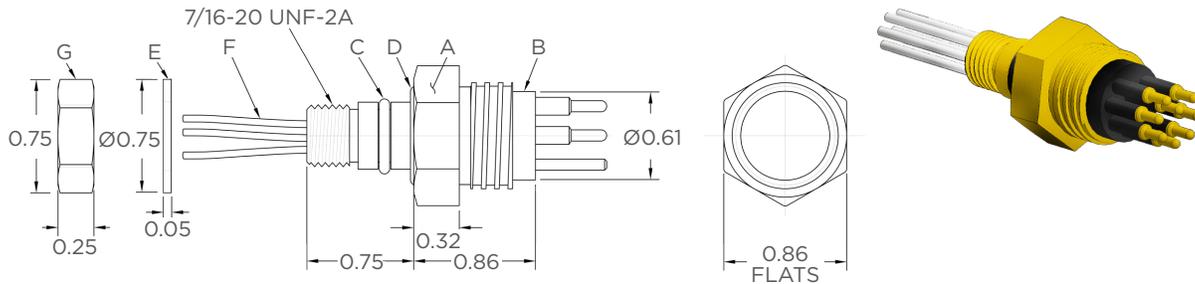
Notes:

- Hex Nut and Washer: Optional.
- O-Ring: 2-015.
- Dummy Connector: Optional.
- Dummy Shorting Plug Connector: Optional.
- 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.
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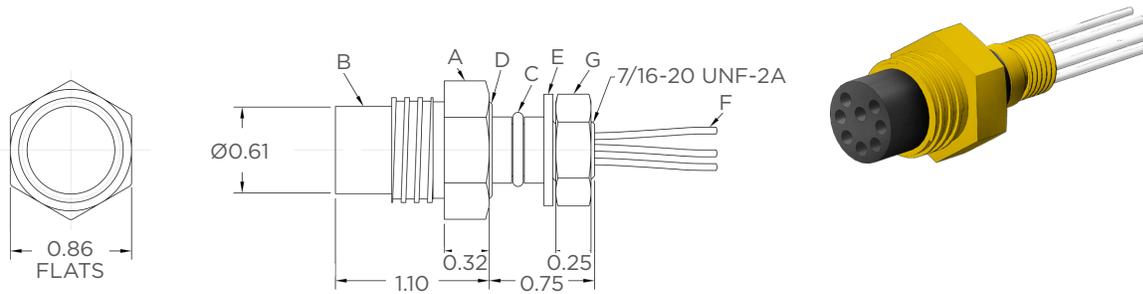
MC-BH-M-DO (Double O-Ring 2 - 8 Contacts)

Bulkhead Connector Male Plug with Double O-Ring



MC-BH-F-DO (Double O-Ring 2 - 8 Contacts)

Bulkhead Connector Female Socket with Double O-Ring



Part Number	Description
A	MC-BH Double O-Ring Shell
B	Neoprene Molding
C	O-Ring 2-012
D	O-Ring 06-10525-1
E	Washer
F	Bulkhead Leads
G	Hex Nut 7/16-20

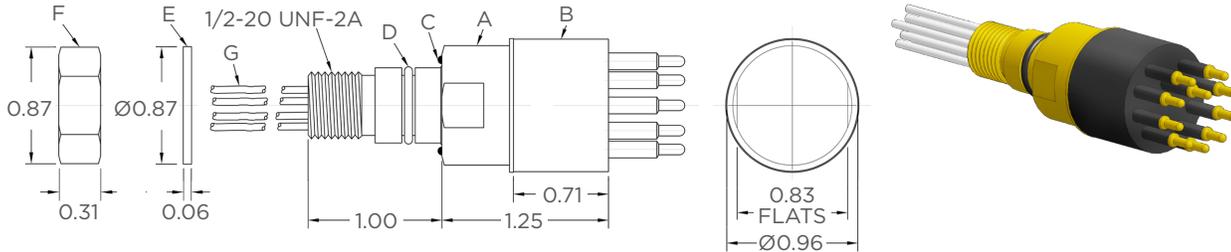
Notes:

- Hex Nut and Washer: Optional.
- Dummy Connector: Optional.
- Dummy Shorting Plug Connector: Optional. (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).
- 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 1 atmosphere vessels. Contact TE for recommendations if using compensated vessels.



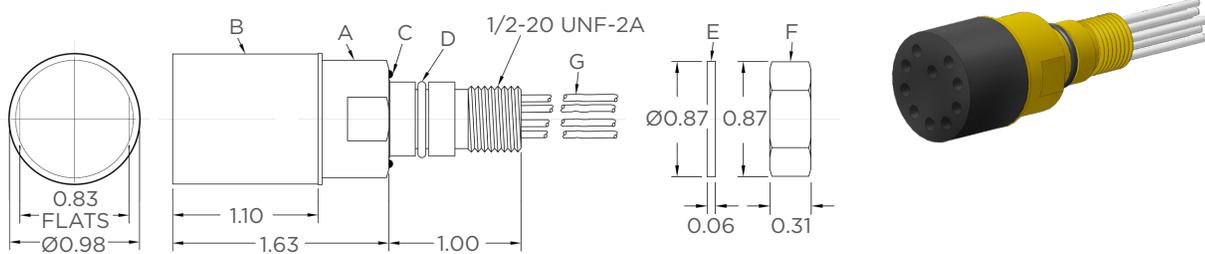
MC-BH-M-DO (Double O-Ring 10 - 16 Contacts)

Bulkhead Connector Male Plug with Double O-Ring



MC-BH-F-DO (Double O-Ring 10 - 16 Contacts)

Bulkhead Connector Female Socket with Double O-Ring



Part Number	Description
A	MC-BH Double O-Ring Shell
B	Neoprene Molding
C	O-Ring 06-10583-1
D	O-Ring 06-10437-1
E	Washer
F	Hex Nut 1/2-20
G	Bulkhead Leads

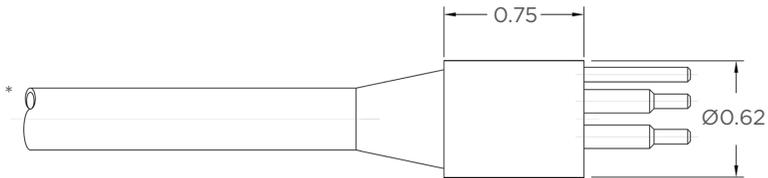
Notes:

- Hex Nut and Washer: Optional.
- Dummy Connector: Optional.
- Dummy Shorting Plug Connector: Optional. (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).
- 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.
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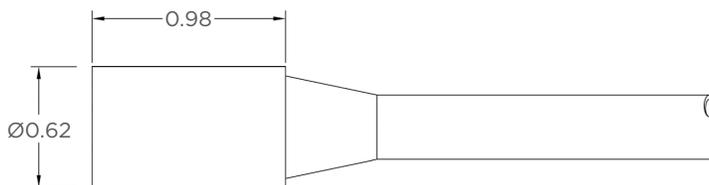
MC-IL-M (2 - 8 Contacts)

In-Line Connector Male Plug



MC-IL-F (2 - 8 Contacts)

In-Line Connector Female Socket



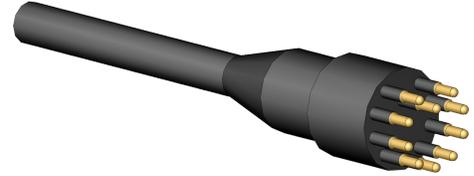
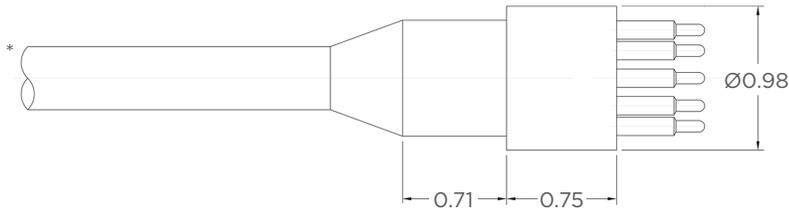
Notes:

- Locking Sleeve: Optional (see page 13).
- Dummy Connector: Optional.
- Dummy Shorting Plug Connector: Optional. (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).
- Connectors must be lubricated prior to mating.
- * Incorporation of special order cables will be determined on a case-by-case basis.



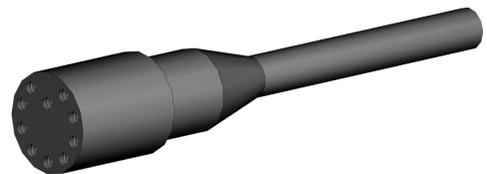
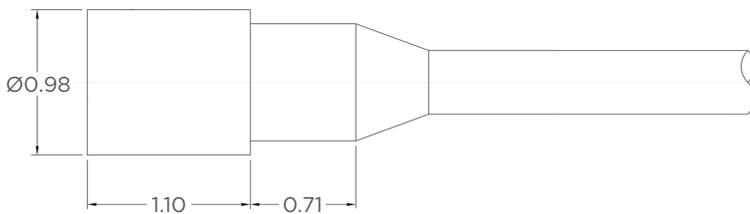
MC-IL-M (10 - 16 Contacts)

In-Line Connector Male Plug



MC-IL-F (10 - 16 Contacts)

In-Line Connector Female Socket



Notes:

- Locking Sleeve: Optional (see page 13).
- Dummy Connector: Optional.
- Dummy Shorting Plug Connector: Optional. (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).
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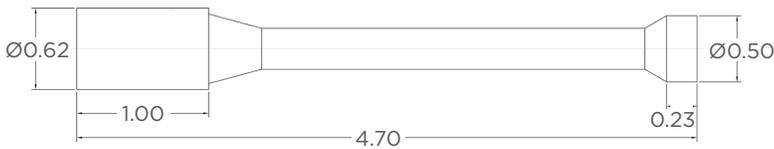
MC-DC-M (2 - 8 Contacts)

Dummy Connector Male Plug



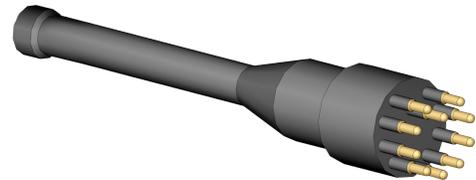
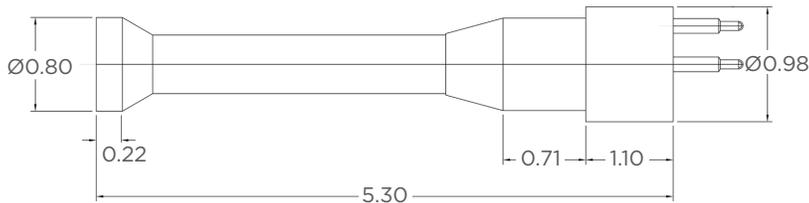
MC-DC-F (2 - 8 Contacts)

Dummy Connector Female Socket



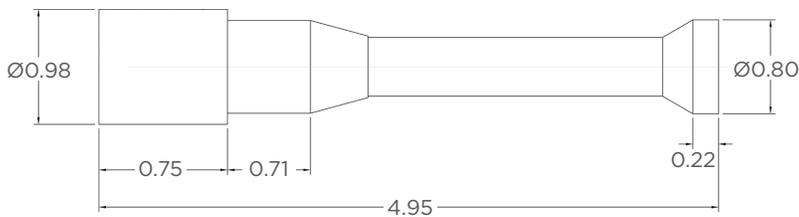
MC-DC-M (10 - 16 Contacts)

Dummy Connector Male Plug



MC-DC-F (10 - 16 Contacts)

Dummy Connector Female Socket



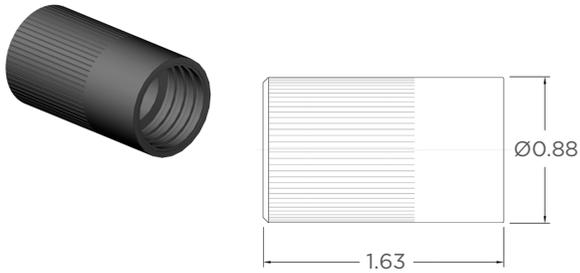
Notes:

- Locking Sleeve: Optional (see page 13).
- Dummy Shorting Plug Connector: Optional. (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).
- Connectors must be lubricated prior to mating.



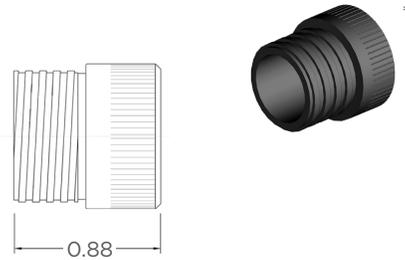
MC-DLS-F (2 - 8 Contacts)

Locking Sleeve Female



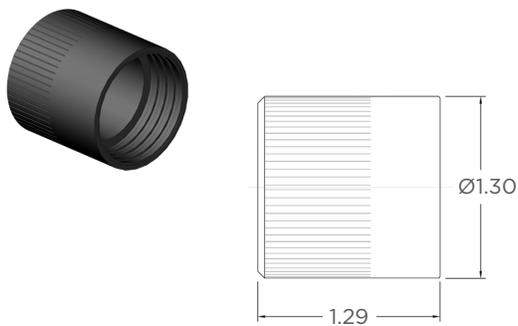
MC-DLS-M (2 - 8 Contacts)

Locking Sleeve Male



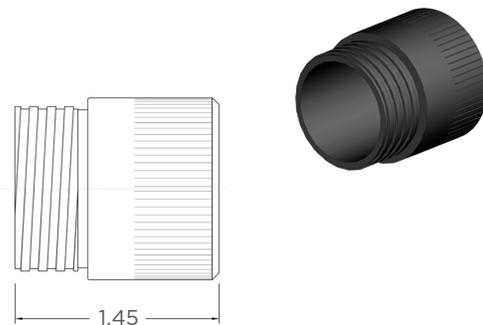
DLSA-F (10 - 16 Contacts)

Locking Sleeve Female



DLSA-M (10 - 16 Contacts)

Locking Sleeve Male



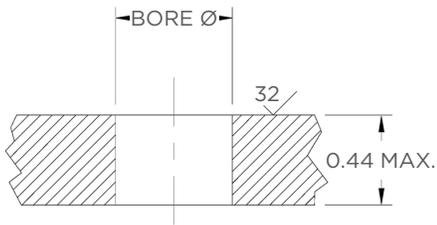
Notes:

- * Not required for 2 to 8 way Bulkhead connectors. For In-Lines only.
- Locking Sleeves: Polyacetal.



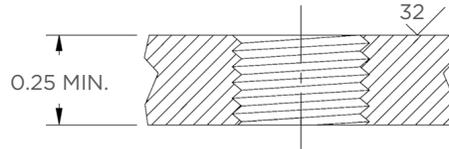
MC-BH-M/F

Through Bore Option



MC-BH-M/F

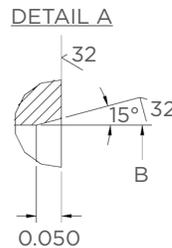
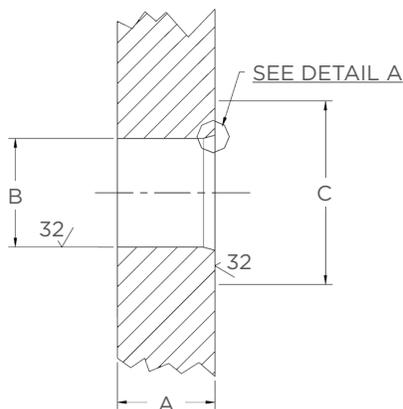
Threaded Mounting Option



Connector	Bore Ø (In)		Thread	Spot Face Ø (In)
MC-BH (2-8)	0.437	+0.015 -0.000	7/16-20 UNF-2B	0.88
MC-BH (10-16)	0.500	+0.015 -0.000	1/2-20 UNF-2B	0.94

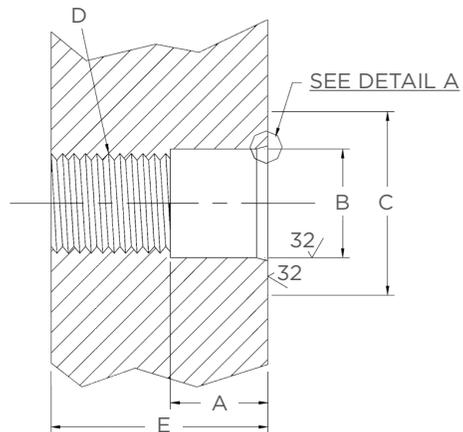
MC-BH-M/F-DO (Double O-Ring)

Through Bore Option



MC-BH-M/F-DO (Double O-Ring)

Threaded Mounting Option



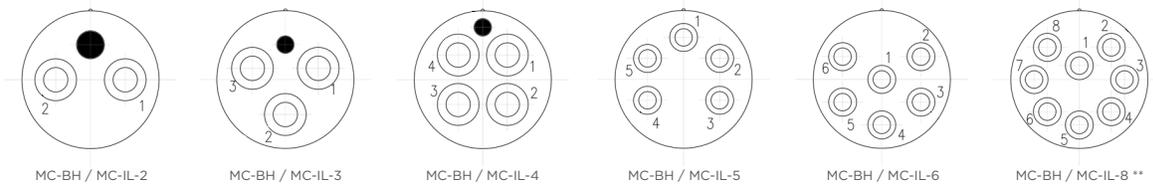
Connector	A Length (In)	B Ø (In)	C Ø (In)	D Thread	E Ø (In)
MC-BH-DO (2-8)	0.425	0.475 0.473	0.88	7/16-20 UNF-2B	0.750 MIN.
MC-BH-DO (10-16)	0.500	0.553 0.552	0.94	1/2-20 UNF-2B	1.000 MIN.



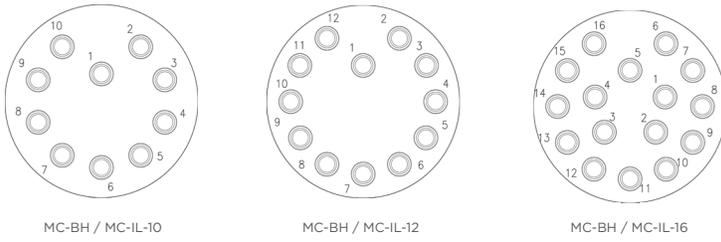
Micro WET-CON Series Bulkhead/In-Line Contact Configurations

Male Face View Only - Not to Scale*

2-8



10-16



Notes:

- * For female face view contact configurations available please contact TE.
- ** Ethernet version available.

LET'S CONNECT

We make it easy to connect with our experts and are ready to provide all the support you need. Just call your local support number or visit www.te.com/industrial to chat with a Product Information Specialist.

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Consult TE for the latest dimensions and design specifications.

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