

S E A C O N



Micro WET-CON SPLIT SERIES

UNDERWATER ELECTRICAL WET-MATE CONNECTORS

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INTRODUCTION

SEACON has added a range of split connectors to its popular Micro WET-CON wet-mate series. This series of connectors was originally developed to provide all the features of the ALL-WET connector range, but in a miniature industry standard configuration. The split connector range prevents costly 'Y' assemblies and allows ease of replacement of break-outs by the customer. This smaller connector series offers the same flexibility and reliability as SEACON's standard rubber molded connectors, in a lightweight and user-friendly model.

AVAILABILITY

The Micro WET-CON Split series is currently available in six different configurations ranging from 6 to 16 contacts rated upto 600 VDC (dependent on cable) with a mated pressure rating of 10,000 psi.

APPLICATIONS

Applications include underwater television and lights, diver communications, ROV systems, submersibles, towed-array cable systems, current meters, animal migration research and food processing equipment.

TESTING

The Micro WET-CON Split range has undergone complete Qualification testing including low pressure soak tests, full mate/demate and high pressure cycling to 10,000 psi.

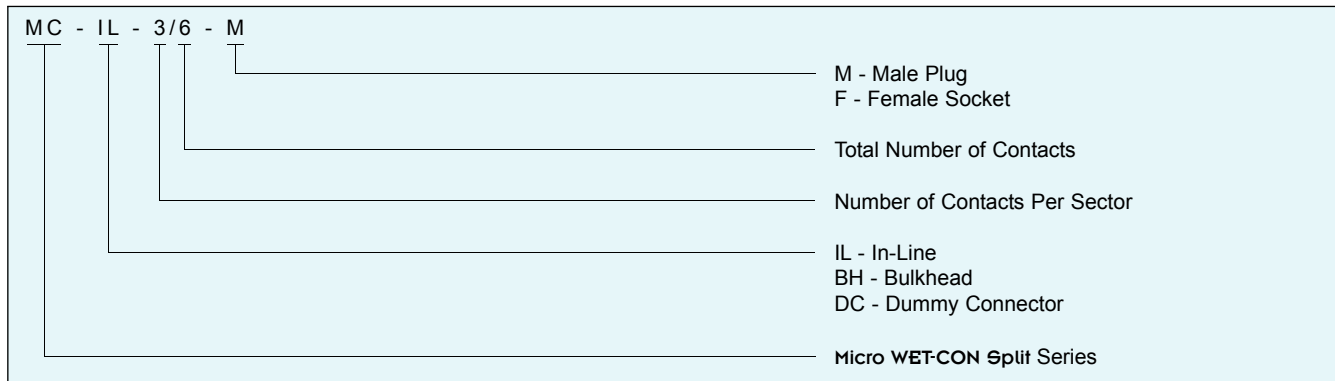
SPECIAL ASSEMBLIES

SEACON 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.

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

PART NUMBER DESCRIPTION SYSTEM - EXAMPLE



GENERAL INFORMATION

COMPONENT	MATERIAL
MOLDED BODY	Neoprene
BULKHEAD BODY	Brass (CA #360)
CONTACTS	Brass-gold plated
BULKHEAD N & W	Brass (CA #360)
O-RING	Nitrile (formerly known as Buna N)
LOCKING SLEEVE	Polyacetal
HOOK-UP WIRE	TFE insulated wire, #20 AWG

CATEGORY	VALUE
OPEN FACE PRESSURE	Up to 10,000 psi (700 bar) optional and needs to be specified
MATED PRESSURE	Up to 10,000 psi (700 bar)
VOLTAGE RATING	Up to 600 VDC (dependent on cable)
CURRENT RATING	Up to 19 amps per contact*
INSULATION RESISTANCE	>200 megohms @ 300 VDC
CONTACT RESISTANCE	<0.01 ohms
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

IN-LINE CABLE

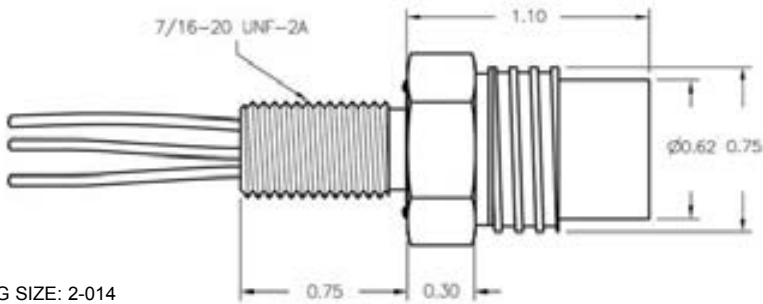
- MC-5/15 20/5 Neoprene jacket, rubber insulated 2.8 amp (300V).
Color code: Contact 1 Black, Contact 2 White, Contact 3 Red, Contact 4 Green, Contact 5 Orange.
- MC-2/6 & MC-2/12 22/2 Neoprene jacket, TFE insulated wire 1.5 amp (600V).
All contacts white and individually identified by color or flagged ends.
- MC-8/16 22/8 Neoprene jacket, TFE insulated wire 1.0 amp (600V).
All contacts white and individually identified by color or flagged ends.
- MC-3/6 & MC-3/15 22/TSP Neoprene jacket, TSP (Twisted Shielded Pair), TFE insulated wire 1.5 amp (600V).
Color code: Contact 1 Black, Contact 2 White, Contact 3 Shield.

NOTES:

- * Maximum carrying capacity for contacts may be affected by cable selection.
- ** For metal shells only, for other materials contact SEACON for recommendations.
- Connectors are designed for installation on one atmosphere vessels. Contact SEACON for recommendations if using compensated vessels.

**Micro WET-CON SPLIT SERIES
MC-BH-F
(6 contacts)**

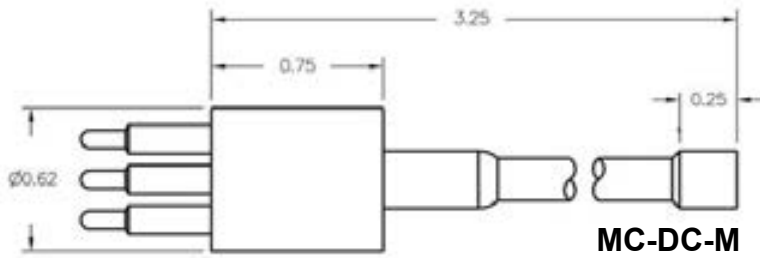
Micro WET-CON Split Bulkhead Connector Female Socket



NOTE:
· O-RING SIZE: 2-014

**Micro WET-CON SPLIT SERIES
MC-IL-M
(6 contacts)**

Micro WET-CON Split In-Line Connector Male Plug



OPTIONAL PARTS

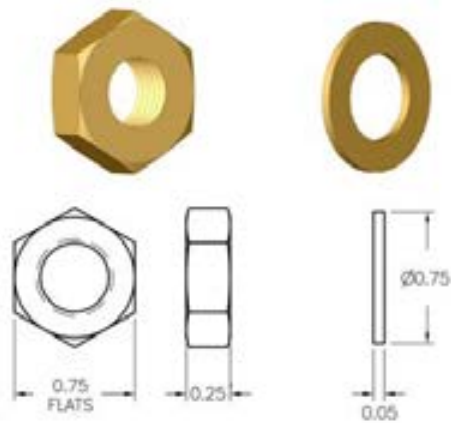
**Micro WET-CON SPLIT SERIES
MC-DLS-F
(6 contacts)**

Micro WET-CON Split Dummy Locking Sleeve Female Socket



**Micro WET-CON SPLIT SERIES
HEX NUT AND WASHER
(6 contacts)**

Micro WET-CON Split Bulkhead Connector

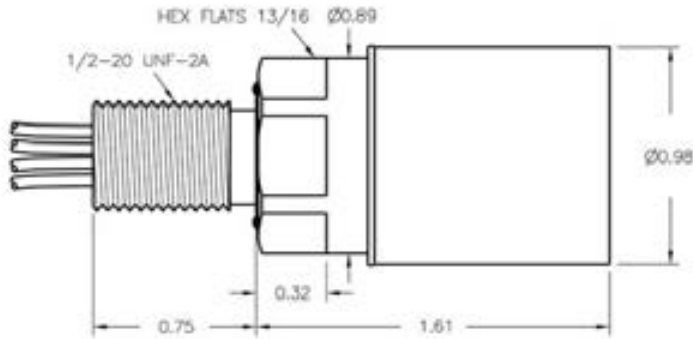


STD - BRASS
(Stainless Steel and others available upon request)

NOTES:
· For interface details please contact SEACON.

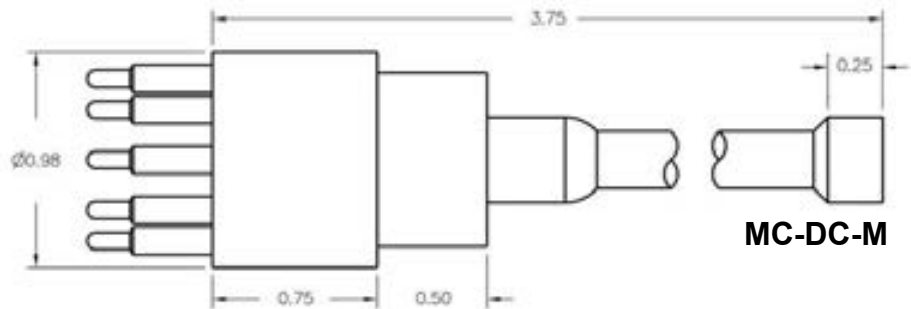
**Micro WET-CON SPLIT SERIES
MC-BH-F
(12 - 16 contacts)**

Micro WET-CON Split Bulkhead Connector Female Socket



**Micro WET-CON SPLIT SERIES
MC-IL-M
(12 - 16 contacts)**

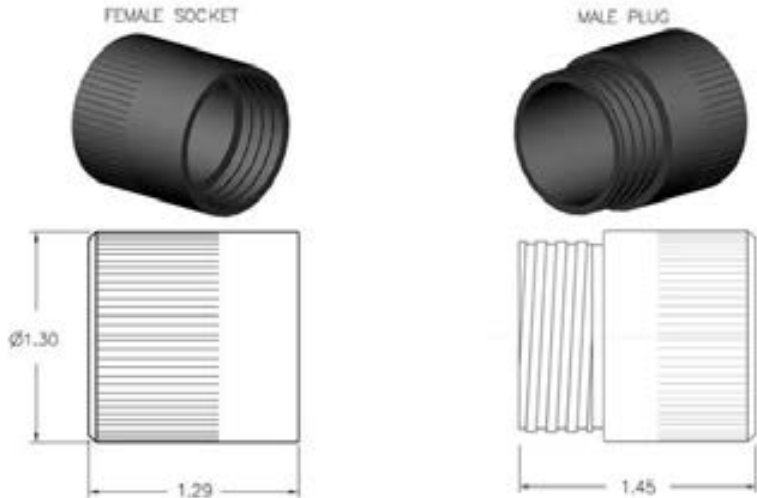
Micro WET-CON Split In-Line Connector Male Plug



OPTIONAL PARTS

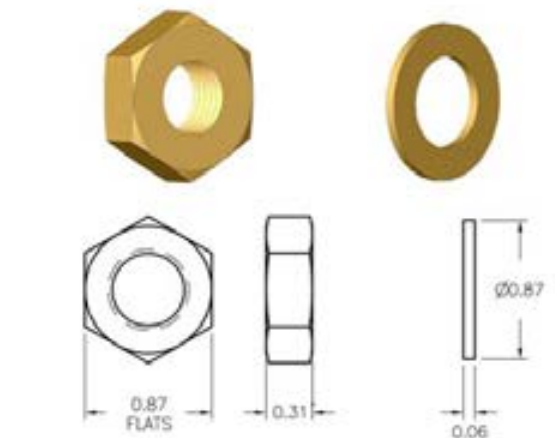
**Micro WET-CON SPLIT SERIES
MC-DLSA-F/M
(12 - 16 contacts)**

Micro WET-CON Split Dummy Locking Sleeve Female Socket/Male Plug



**Micro WET-CON SPLIT SERIES
HEX NUT AND WASHER
(12 - 16 contacts)**

Micro WET-CON Split Bulkhead Connector

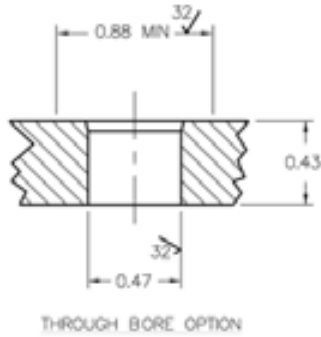


STD - BRASS
(Stainless Steel and others available upon request)

NOTES:
· For interface details please contact SEACON.

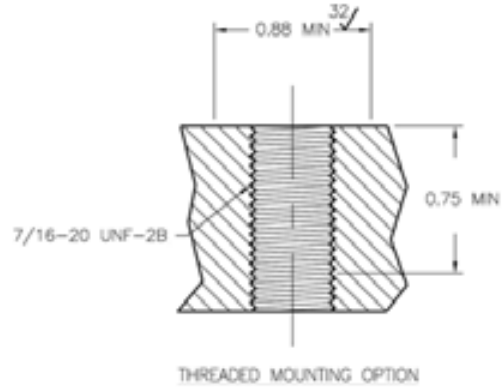
**Micro WET-CON SPLIT SERIES
MC-BH *
(6 contacts)
THROUGH BORE OPTION**

Micro WET-CON Bulkhead Connector



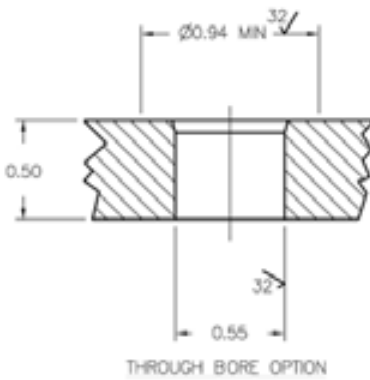
**Micro WET-CON SPLIT SERIES
MC-BH
(6 contacts)
THREADED MOUNTING OPTION**

Micro WET-CON Bulkhead Connector



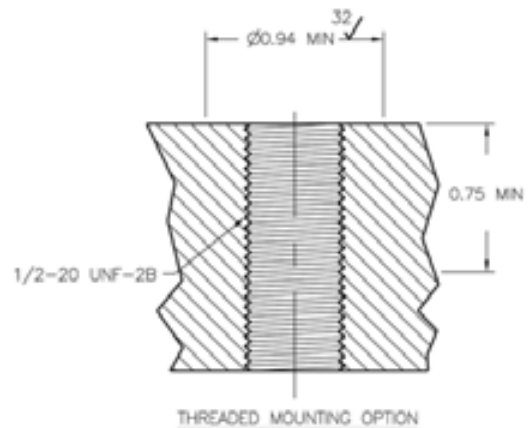
**Micro WET-CON SPLIT SERIES
MC-BH **
(12 - 16 contacts)
THROUGH BORE OPTION**

Micro WET-CON Bulkhead Connector







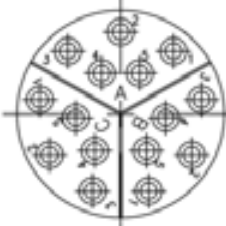
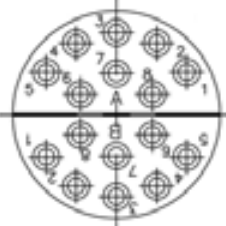
**Micro WET-CON SPLIT SERIES
MC-BH
(12 - 16 contacts)
THREADED MOUNTING OPTION**

Micro WET-CON Bulkhead Connector



NOTES:

- * This option requires the 7/16 Hex Nut, Washer and MIN Ø0.88 clearance on low pressure side of wall.
- ** This option requires the 7/16 Hex Nut, Washer and MIN Ø0.94 clearance on low pressure side of wall.

SIZE	Micro WET-CON SPLIT CONTACT CONFIGURATIONS (FEMALE FACE VIEW ONLY - NOT TO SCALE)*			
6	 <p data-bbox="245 386 406 407">MC-BH-2/6-FS SPLIT</p>	 <p data-bbox="570 386 730 407">MC-BH-3/6-FS SPLIT</p>		
12-16	 <p data-bbox="258 701 430 722">MC-BH-2/12-FS SPLIT</p>	 <p data-bbox="583 701 755 722">MC-BH-3/15-FS SPLIT</p>	 <p data-bbox="899 701 1071 722">MC-BH-5/15-FS SPLIT</p>	 <p data-bbox="1213 701 1385 722">MC-BH-8/16-FS SPLIT</p>

NOTES:

· * For male face view contact configurations available please contact SEACON.

HANDLING PROCEDURES AND SPECIAL CAPABILITIES

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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 SEACON 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 SEACON 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 silicon 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 over-torqued.

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

CARE AND MAINTENANCE

The WET-CON and Micro 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 dielectric 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 its 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 fatigue and ultimate failure.

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