SEA CON
WET-CON / Micro WET-CON / Micro WET-CON SPLIT
UNDERWATER ELECTRICAL WET-MATE CONNECTORS
SEACON

WET-CON SERIES

UNDERWATER ELECTRICAL WET-MATE CONNECTORS
SECTION

HOT-CON SERIES

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PRODUCT NEWS

WET-CON SERIES CONNECTOR ENHANCEMENTS

INTRODUCTION
As part of our continuous improvement process the SEACON Group consistently reviews its product ranges through both customer feedback and internal improvements. It is via these processes that SEACON identified a design enhancement to the WET-CON connector ranges.

DESIGN FEATURES
The design change is associated with the Male Pin connectors only and has been introduced to improve and extend the life of the connectors by decreasing the stresses that are applied to the sealing interface between the male contact pin and the sealing rubber around the pin during the connectors mate and de-mate cycles.

The newly designed male contact has a "Lead in" as part of the contact pin itself which replaces the current rubber lead in. The introduction of the new pin removes any potential wear to the sealing interface between the male contact pin and the sealing rubber around the pin which may occur with many repeated make and breaks of the connector pairs. The new pin will maintain the full connector sealing properties and will provide a greater life expectancy of the connectors.

The incorporation of this design change to the Male Pin connectors will not affect the existing Female Socket connectors currently being used by SEACON’s customers and therefore full intermateability will be maintained. In addition, SEACON would also like to confirm that pricing will also not be affected.

TESTING
This new pin design concept has been fully tested and has been utilized in both the U-HATE and SEA-MATE connector ranges for a number of years.

IP68 AND IPX8 CERTIFICATION
AWARDED TO SEACON (europe) LTD

SEACON (europe) Ltd is pleased to advise that its WET-CON connector series is now approved to IP Codes (Ingress Protection) 68 and X8. These two international standards classify the level of protection provided against the intrusion of dust and water in electrical enclosures.

In order to meet the requirements of the IP68 and IPX8 standards, sample connectors were sent to an independent testing house and subjected to various tests as per the agreed program including pressure testing to 101 bar for a 24 hour period. All test samples successfully passed and therefore conform to the following conditions:

· Dust tight - No ingress of dust, complete protection against contact with dust.

· Immersion beyond 1 meter - Suitable for continuous immersion in water, under conditions specified by SEACON (europe) Ltd.
INTRODUCTION
SEACON's WET-CON connector series was developed to provide inexpensive yet reliable rubber molded connectors that allow the user to make and break connections both on the surface and underwater.

Manufactured using only high quality materials, the WET-CON bulkhead connector's metal shell is produced using DGS 1043 (UK spec) or CA680 per QQ-C-465 as standard, although other materials are available upon request including PEEK (Polyetheretherketone) which offers superior chemical resistance, excellent electrical properties, wear and abrasion resistance and is lightweight. Contacts are gold plated to ASTM B488 providing superior corrosion resistance and stainless steel guide pins ensure "no miss" mating.

AVAILABILITY
This connector range is available in a number of configurations ranging from 1 to 16 contacts rated up to 19 amps maximum current (dependent on cable) and a mated pressure rating of up to 20,000 psi.

The WET-CON series is also available with a metal shell body, individual single tail, extended metal shoulder. For further information please contact SEACON.

APPLICATIONS
The WET-CON series is suitable for a variety of applications including underwater television and lights, diver communications, ROV systems, recreational submersibles, towed-array cable systems, current meters, animal migration and research and food processing equipment.

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.

NOTES:
SEACON 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.

PART NUMBER DESCRIPTION SYSTEM - EXAMPLE

<table>
<thead>
<tr>
<th>WET-CON BULKHEAD CONNECTORS</th>
<th>WET-CON IN-LINE CONNECTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>B - 4 - MP</td>
<td>IL - 4 - FS</td>
</tr>
<tr>
<td>Number of Contacts</td>
<td>Number of Contacts</td>
</tr>
<tr>
<td>MP - Male Plug</td>
<td>FS - Female Socket</td>
</tr>
<tr>
<td>FS - Female Socket</td>
<td>MP - Male Plug</td>
</tr>
<tr>
<td>WET-CON Bulkhead Connector</td>
<td>WET-CON In-Line Connector</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WET-CON LOCKING SLEEVES</th>
<th>WET-CON DUMMY CONNECTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DLSA - M</td>
<td>DC - 4 - FS</td>
</tr>
<tr>
<td>Number of Contacts</td>
<td>Number of Contacts</td>
</tr>
<tr>
<td>M - Male</td>
<td>FS - Female Socket</td>
</tr>
<tr>
<td>F - Female</td>
<td>MP - Male Plug</td>
</tr>
<tr>
<td>WET-CON Polyacetal Locking Sleeve</td>
<td>WET-CON Dummy Connector</td>
</tr>
</tbody>
</table>

NOTES:
- 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.
GENERAL INFORMATION

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>BULKHEAD BODY:</td>
<td>DGS 1043 or CA690 per QQ-C-465</td>
</tr>
<tr>
<td>STAND:</td>
<td>316 Stainless Steel (no cost option), 6061-T6 Aluminum,</td>
</tr>
<tr>
<td>OPTIONAL:</td>
<td>Hard Anodized</td>
</tr>
<tr>
<td>CONNECTOR BODY:</td>
<td>Neoprene per B/A X5727</td>
</tr>
<tr>
<td>STAND:</td>
<td>Hypalon per B/A X6830 or PEEK (Polyetheretherketone)</td>
</tr>
<tr>
<td>OPTIONAL:</td>
<td></td>
</tr>
<tr>
<td>CONTACTS</td>
<td>Copper Alloy Gold Plated per ASTM B488</td>
</tr>
<tr>
<td>GUIDE PINS</td>
<td>304 Stainless Steel</td>
</tr>
<tr>
<td>O-RINGS</td>
<td>Nitrile (formerly known as Buna N)</td>
</tr>
<tr>
<td>IN-LINE CABLE</td>
<td>#18 AWG SO Cable as standard</td>
</tr>
<tr>
<td></td>
<td>#14 or #16 AWG SO Cable available dependent on</td>
</tr>
<tr>
<td></td>
<td>connector size</td>
</tr>
<tr>
<td>BULKHEAD PIGTAILS</td>
<td>TFE insulated wire, type E hook-up wire, 18 inches</td>
</tr>
</tbody>
</table>

NOTES:
- 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.

AMPACITY CHART FOR STANDARD PARTS (18 AWG SO CABLE)

<table>
<thead>
<tr>
<th>PART DESCRIPTION</th>
<th>NUMBER OF CONTACTS</th>
<th>AMPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>IL-BH-2</td>
<td></td>
<td>10 amps</td>
</tr>
<tr>
<td>IL-BH-3</td>
<td></td>
<td>7 amps</td>
</tr>
<tr>
<td>IL-BH-4</td>
<td></td>
<td>5.6 amps</td>
</tr>
<tr>
<td>IL-BH-5</td>
<td></td>
<td>5.6 amps</td>
</tr>
<tr>
<td>IL-BH-6</td>
<td></td>
<td>5.6 amps</td>
</tr>
</tbody>
</table>

NOTE:
- Higher capacities are available.

STANDARD IN-LINE WIRING COLOR CODE (SO CABLE)

<table>
<thead>
<tr>
<th>CONTACT #</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BLACK</td>
</tr>
<tr>
<td>2</td>
<td>WHITE</td>
</tr>
<tr>
<td>3</td>
<td>RED*</td>
</tr>
<tr>
<td>4</td>
<td>GREEN</td>
</tr>
<tr>
<td>5</td>
<td>ORANGE</td>
</tr>
<tr>
<td>6</td>
<td>BLUE</td>
</tr>
<tr>
<td>7</td>
<td>WHITE/BLACK</td>
</tr>
<tr>
<td>8</td>
<td>RED/BLACK</td>
</tr>
<tr>
<td>9</td>
<td>GREEN/BLACK</td>
</tr>
<tr>
<td>10</td>
<td>ORANGE/BLACK</td>
</tr>
<tr>
<td>11</td>
<td>BLUE/BLACK</td>
</tr>
<tr>
<td>12</td>
<td>BLACK/WHITE</td>
</tr>
<tr>
<td>13</td>
<td>RED/WHITE</td>
</tr>
<tr>
<td>14</td>
<td>GREEN/WHITE</td>
</tr>
<tr>
<td>15</td>
<td>BLUE/WHITE</td>
</tr>
<tr>
<td>16</td>
<td>BLACK/RED</td>
</tr>
</tbody>
</table>

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

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.
### WET-CON SERIES

#### BH-MP

(2 - 10 contacts)

**WET-CON Bulkhead Connector Male Plug**
- Mates with IL-FS
- Dummy Connector: DC-FS

<table>
<thead>
<tr>
<th>CONNECTOR</th>
<th>A - THREAD</th>
<th>1 - O-RING</th>
<th>B - Ø (INCHES)</th>
<th>C - HEX FLATS (INCHES)</th>
<th>2 - HOOK-UP WIRE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BH-2-MP</td>
<td>7/16-20 UNF-2A</td>
<td>2-014</td>
<td>1.00</td>
<td>0.75</td>
<td>18 AWG</td>
</tr>
<tr>
<td>BH-3-MP</td>
<td>7/16-20 UNF-2A</td>
<td>2-014</td>
<td>1.00</td>
<td>0.75</td>
<td>18 AWG</td>
</tr>
<tr>
<td>BH-4-MP</td>
<td>7/16-20 UNF-2A</td>
<td>2-014</td>
<td>1.00</td>
<td>0.75</td>
<td>18 AWG</td>
</tr>
<tr>
<td>BH-5-MP</td>
<td>7/16-20 UNF-2A</td>
<td>2-014</td>
<td>1.00</td>
<td>0.75</td>
<td>18 AWG</td>
</tr>
<tr>
<td>BH-6-MP</td>
<td>5/8-18 UNF-2A</td>
<td>2-017</td>
<td>1.25</td>
<td>1.00</td>
<td>18 AWG</td>
</tr>
<tr>
<td>BH-8-MP/MPX*</td>
<td>5/8-18 UNF-2A</td>
<td>2-017</td>
<td>1.25</td>
<td>1.00</td>
<td>18 AWG</td>
</tr>
<tr>
<td>BH-10-MP</td>
<td>5/8-18 UNF-2A</td>
<td>2-017</td>
<td>1.25</td>
<td>1.00</td>
<td>18 AWG</td>
</tr>
</tbody>
</table>

### WET-CON SERIES

#### BH-FS

(2 - 10 contacts)

**WET-CON Bulkhead Connector Female Socket**
- Mates with IL-MP
- Dummy Connector: DC-MP

<table>
<thead>
<tr>
<th>CONNECTOR</th>
<th>D - THREAD</th>
<th>3 - O-RING</th>
<th>E - Ø (INCHES)</th>
<th>F - HEX FLATS (INCHES)</th>
<th>4 - HOOK-UP WIRE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BH-2-FS</td>
<td>7/16-20 UNF-2A</td>
<td>2-014</td>
<td>1.00</td>
<td>0.75</td>
<td>18 AWG</td>
</tr>
<tr>
<td>BH-3-FS</td>
<td>7/16-20 UNF-2A</td>
<td>2-014</td>
<td>1.00</td>
<td>0.75</td>
<td>18 AWG</td>
</tr>
<tr>
<td>BH-4-FS</td>
<td>7/16-20 UNF-2A</td>
<td>2-014</td>
<td>1.00</td>
<td>0.75</td>
<td>18 AWG</td>
</tr>
<tr>
<td>BH-5-FS</td>
<td>7/16-20 UNF-2A</td>
<td>2-014</td>
<td>1.00</td>
<td>0.75</td>
<td>18 AWG</td>
</tr>
<tr>
<td>BH-6-FS</td>
<td>5/8-18 UNF-2A</td>
<td>2-017</td>
<td>1.25</td>
<td>1.00</td>
<td>18 AWG</td>
</tr>
<tr>
<td>BH-8-FS/FSX*</td>
<td>5/8-18 UNF-2A</td>
<td>2-017</td>
<td>1.25</td>
<td>1.00</td>
<td>18 AWG</td>
</tr>
<tr>
<td>BH-10-FS</td>
<td>5/8-18 UNF-2A</td>
<td>2-017</td>
<td>1.25</td>
<td>1.00</td>
<td>18 AWG</td>
</tr>
</tbody>
</table>

**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 SEACON for recommendations.
- Connectors are designed for installation on one atmosphere vessels. Contact SEACON for recommendations if using compensated vessels.
- For contact configurations please refer to page 14.
- * No guide pin. MPX/FSX connectors are recommended for new applications.
**WET-CON SERIES**

## IL-MP

*(2 - 10 contacts)*

**WET-CON** In-Line Connector Male Plug

Mates with BH-FS and IL-FS

Dummy Connector: DC-FS

<table>
<thead>
<tr>
<th>CONNECTOR</th>
<th>A - Ø (INCHES)</th>
<th>1 - CABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>IL-2-MP</td>
<td>1.00</td>
<td>18/2 SO</td>
</tr>
<tr>
<td>IL-3-MP</td>
<td>1.00</td>
<td>18/3 SO</td>
</tr>
<tr>
<td>IL-4-MP</td>
<td>1.00</td>
<td>18/4 SO</td>
</tr>
<tr>
<td>IL-5-MP</td>
<td>1.00</td>
<td>18/5 SO</td>
</tr>
<tr>
<td>IL-6-MP</td>
<td>1.25</td>
<td>18/6 SO</td>
</tr>
<tr>
<td>IL-8-MP/MPX*</td>
<td>1.25</td>
<td>18/8 SO</td>
</tr>
<tr>
<td>IL-10-MP</td>
<td>1.25</td>
<td>18/10 SO</td>
</tr>
</tbody>
</table>

## IL-FS

*(2 - 10 contacts)*

**WET-CON** In-Line Connector Female Socket

Mates with BH-MP and IL-MP

Dummy Connector: DC-MP

<table>
<thead>
<tr>
<th>CONNECTOR</th>
<th>B - Ø (INCHES)</th>
<th>2 - CABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>IL-2-FS</td>
<td>1.00</td>
<td>18/2 SO</td>
</tr>
<tr>
<td>IL-3-FS</td>
<td>1.00</td>
<td>18/3 SO</td>
</tr>
<tr>
<td>IL-4-FS</td>
<td>1.00</td>
<td>18/4 SO</td>
</tr>
<tr>
<td>IL-5-FS</td>
<td>1.00</td>
<td>18/5 SO</td>
</tr>
<tr>
<td>IL-6-FS</td>
<td>1.25</td>
<td>18/6 SO</td>
</tr>
<tr>
<td>IL-8-FS/FSX*</td>
<td>1.25</td>
<td>18/8 SO</td>
</tr>
<tr>
<td>IL-10-FS</td>
<td>1.25</td>
<td>18/10 SO</td>
</tr>
</tbody>
</table>

**NOTES:**
- Locking Sleeve: Optional (see page 10).
- 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.
**WET-CON SERIES**

**BH-MP**

*(12 - 16 contacts)*

WET-CON Bulkhead Connector Male Plug
Mates with IL-FS
Dummy Connector: DC-FS

![Diagram of BH-MP](image)

<table>
<thead>
<tr>
<th>CONNECTOR</th>
<th>A - THREAD</th>
<th>B - O-RING</th>
<th>C - HEX FLATS (INCHES)</th>
<th>D - HOOK-UP WIRE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BH-12-MP</td>
<td>5/8-18 UNF-2A</td>
<td>2.017</td>
<td>1.00</td>
<td>18 AWG</td>
</tr>
<tr>
<td>BH-16-MP</td>
<td>3/4-16 UNF-2A</td>
<td>2.118</td>
<td>1.25</td>
<td>18 AWG</td>
</tr>
</tbody>
</table>

**WET-CON SERIES**

**BH-FS**

*(12 - 16 contacts)*

WET-CON Bulkhead Connector Female Socket
Mates with IL-MP
Dummy Connector: DC-MP

![Diagram of BH-FS](image)

<table>
<thead>
<tr>
<th>CONNECTOR</th>
<th>E - THREAD</th>
<th>F - O-RING</th>
<th>G - HEX FLATS (INCHES)</th>
<th>H - HOOK-UP WIRE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BH-12-FS</td>
<td>5/8-18 UNF-2A</td>
<td>2.017</td>
<td>1.00</td>
<td>18 AWG</td>
</tr>
<tr>
<td>BH-16-FS</td>
<td>3/4-16 UNF-2A</td>
<td>2.118</td>
<td>1.25</td>
<td>18 AWG</td>
</tr>
</tbody>
</table>

**NOTES:**
- Bulkhead Mounting Torque: 5/8 Thread = 85 inch pounds. 3/4 Thread = 85 inch pounds.
- Locking Sleeve: Optional (see page 10).
- 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 SEACON for recommendations.
- Connectors are designed for installation on one atmosphere vessels. Contact SEACON for recommendations if using compensated vessels.
- For contact configurations please refer to page 14.
**WET-CON SERIES**

**IL-MP**
(12 - 16 contacts)

*WET-CON In-Line Connector Male Plug*
*Mates with BH-FS and IL-FS*
*Dummy Connector: DC-FS*

<table>
<thead>
<tr>
<th>CONNECTOR</th>
<th>A - Ø (INCHES)</th>
<th>B - CABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>IL-12-MP</td>
<td>1.60</td>
<td>18/12 SO</td>
</tr>
<tr>
<td>IL-16-MP</td>
<td>1.60</td>
<td>18/16 SO</td>
</tr>
</tbody>
</table>

**IL-FS**
(12 - 16 contacts)

*WET-CON In-Line Connector Female Socket*
*Mates with BH-MP and IL-MP*
*Dummy Connector: DC-MP*

<table>
<thead>
<tr>
<th>CONNECTOR</th>
<th>C - Ø (INCHES)</th>
<th>D - CABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>IL-12-FS</td>
<td>1.60</td>
<td>18/12 SO</td>
</tr>
<tr>
<td>IL-16-FS</td>
<td>1.60</td>
<td>18/16 SO</td>
</tr>
</tbody>
</table>

**NOTES:**
- IL-16-MP WOC is not available, substitute with BH-16-MP.
- Locking Sleeve: Optional (see page 10).
- 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.
## WET-CON SERIES}

### LOCKING SLEEVE

<table>
<thead>
<tr>
<th>LOCKING SLEEVE</th>
<th>A - Ø (INCHES)</th>
<th>B - (INCHES)</th>
<th>C - (INCHES)</th>
<th>D - MATED LENGTH (INCHES)</th>
<th>E - SPIROLOX*</th>
</tr>
</thead>
<tbody>
<tr>
<td>DLSA-M</td>
<td>1.40</td>
<td>0.90</td>
<td>-</td>
<td>2.19</td>
<td>RR 103</td>
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<tr>
<td>DLSA-F</td>
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<td>-</td>
<td>1.29</td>
<td>2.19</td>
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<tr>
<td>DLSB-M</td>
<td>1.62</td>
<td>0.94</td>
<td>-</td>
<td>2.26</td>
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<tr>
<td>DLSB-F</td>
<td>1.62</td>
<td>-</td>
<td>1.32</td>
<td>2.28</td>
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<td>DLSC-M</td>
<td>2.37</td>
<td>0.78</td>
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<td>2.38</td>
<td>-</td>
<td>1.17</td>
<td>1.85</td>
<td>RR 187</td>
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</tbody>
</table>

### NOTES:

- *SPIROLOX RINGS: Stainless Steel.*
WET-CON SERIES
LPBH-MP

WET-CON Low Profile Bulkhead Connector Male Plug
Mates with LPBH-FS & LPIL-FS

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.

WET-CON SERIES
LPBH-FS

WET-CON Low Profile Bulkhead Connector Female Socket
Mates with LPBH-MP & LPIL-MP

NOTES:
8 - LPBH-BC SHELL: CA 630 and Copper Sockets, 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.
**WET-CON SERIES**

**LPIL-MP**

WET-CON Low Profile In-Line Connector Male Plug
Mates with LPBH-FS & LPIL-FS

**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.

**WIRE COLOR CODE**

<table>
<thead>
<tr>
<th>CONTACT NUMBER</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BLACK</td>
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<tr>
<td>2</td>
<td>WHITE</td>
</tr>
<tr>
<td>3</td>
<td>RED</td>
</tr>
<tr>
<td>4</td>
<td>GREEN</td>
</tr>
</tbody>
</table>

**WET-CON SERIES**

**LPIL-FS**

WET-CON Low Profile In-Line Connector Female Socket
Mates with LPBH-MP & LPIL-MP

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

- PRESSURE RATING: 20,000 psi mated.
WET-CON SERIES
BH-MP/FS
THROUGH BORE OPTION
WET-CON Bulkhead Connector Male Plug/Female Socket

*SERIES* INTERFACE DETAILS

WET-CON SERIES
BH-MP/FS
THREADED MOUNTING OPTION
WET-CON Bulkhead Connector Male Plug/Female Socket

<table>
<thead>
<tr>
<th>CONNECTOR</th>
<th>THREAD</th>
<th>BORE Ø (INCHES)</th>
<th>MOUNTING TORQUE (INCH POUNDS)</th>
<th>SPOT FACE Ø (INCHES)</th>
<th>A - MAX (INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BH-MP/FS (2/3/4/5)</td>
<td>7/16-20 UNF-2B</td>
<td>0.437 +0.015 -0.000</td>
<td>50</td>
<td>1.00</td>
<td>0.44</td>
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<tr>
<td>BH-MP/FS (6/8/10/12)</td>
<td>5/8-18 UNF-2B</td>
<td>0.625 +0.015 -0.000</td>
<td>85</td>
<td>1.25</td>
<td>0.44</td>
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<tr>
<td>BH-MP/FS (16)</td>
<td>3/4-16 UNF-2B</td>
<td>0.750 +0.015 -0.000</td>
<td>85</td>
<td>1.50</td>
<td>0.44</td>
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<tr>
<td>SIZE</td>
<td>WET-CON SERIES BULKHEAD/IN-LINE CONTACT CONFIGURATIONS (MALE FACE VIEW ONLY - NOT TO SCALE)*</td>
<td></td>
<td></td>
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<td>------</td>
<td>------------------------------------------------------------------------------------------</td>
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<tr>
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</tr>
</tbody>
</table>

NOTES:
- * For female face view contact configurations please contact SEACON.

KEY
- GUIDE PIN
Micro WET-CON SERIES

UNDERWATER ELECTRICAL WET-MATE CONNECTORS
SECTION

Micro WET-CON

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MC-BH-F-DO (10 to 16 Contacts) ................................................................................................................................ MWC 9
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PRODUCT NEWS

Micro WET-CON and Micro WET-CON SPLIT SERIES

CONNECTOR ENHANCEMENTS

INTRODUCTION
As part of our continuous improvement process the SEACON Group consistently reviews its product ranges through both customer feedback and internal improvements. It is via these processes that SEACON identified a design enhancement to the Micro WET-CON connector ranges. This new design improvement has now been implemented not only across this connector range, but also the new Micro WET-CON Split Series.

DESIGN FEATURES
The design change is associated with the Male Pin connectors only and has been introduced to improve and extend the life of the connectors by decreasing the stresses that are applied to the sealing interface between the male contact pin and the sealing rubber around the pin during the connectors mate and de-mate cycles.

The newly designed male contact has a "Lead in" as part of the contact pin itself which replaces the current rubber lead in. The introduction of the new pin removes any potential wear to the sealing interface between the male contact pin and the sealing rubber around the pin which may occur with many repeated make and breaks of the connector pairs. The new pin will maintain the full connector sealing properties and will provide a greater life expectancy of the connectors.

The incorporation of this design change to the Male Pin connectors will not affect the existing Female Socket connectors currently being used by SEACON's customers and therefore full intermateability will be maintained. In addition, SEACON would also like to confirm that pricing will also not be affected.

TESTING
This new pin design concept has been fully tested and has been utilized in both the U-HATE and SEA-MATE connector ranges for a number of years.

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

This new 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 SEACON.
INTRODUCTION
The Micro WET-CON connector series was developed to provide all the features of SEACON’s ALL-WET connector series, but in a miniature, industry standard configuration. The small size offers the same flexibility and reliability as our rubber molded connectors, in a lightweight and user friendly model.

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 ROV or other vessel. This connector range is wet-mateable and therefore enables connections to be made underwater, on-deck or in any weather condition.

APPLICATIONS
Possible 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 range has undergone complete Qualification testing including low pressure soak tests, full mate/de-mate 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

<table>
<thead>
<tr>
<th>M</th>
<th>C</th>
<th>I</th>
<th>L</th>
<th>4</th>
<th>M</th>
<th>S/S</th>
</tr>
</thead>
</table>

- Stainless Steel - Bulkheads Only (Standard is Brass)
- M - Male Plug
- F - Female Socket
- Number of Contacts
- IL - In-Line
- BH - Bulkhead
- DC - Dummy Connector
- Micro WET-CON Series

NOTES:
- For Locking Sleeves see page MWC 14.
UNDERWATER ELECTRICAL WET-MATE CONNECTORS

GENERAL INFORMATION

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>MATERIAL</th>
<th>CATEGORY</th>
<th>VALUE</th>
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<tbody>
<tr>
<td>MOLDED BODY</td>
<td>Neoprene</td>
<td>OPEN FACE PRESSURE</td>
<td>10,000 psi (700 bar) optional and needs to be specified</td>
</tr>
<tr>
<td>BULKHEAD BODY</td>
<td>Brass (CA #360)</td>
<td>MATED PRESSURE</td>
<td>10,000 psi (700 bar)</td>
</tr>
<tr>
<td>CONTACTS</td>
<td>Brass-gold platted (CA #360)</td>
<td>VOLTAGE RATING</td>
<td>2, 3 &amp; 4 pin 600 VDC</td>
</tr>
<tr>
<td>GUIDE PINS</td>
<td>Stainless Steel (303 SS or 304 SS)</td>
<td></td>
<td>5, 6, 8, 10, 12 &amp; 16 pin 300 VDC</td>
</tr>
<tr>
<td>BULKHEAD N &amp; W</td>
<td>Brass (CA #360)</td>
<td>CURRENT RATING</td>
<td>Up to 19 amps per contact</td>
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<tr>
<td>O-RING</td>
<td>Nitrile (formerly known as Buna N)</td>
<td>INSULATION RESISTANCE</td>
<td>&gt;200 megohms @ 300 VDC</td>
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<tr>
<td>LOCKING SLEEVE</td>
<td>Polycetal</td>
<td>CONTACT RESISTANCE</td>
<td>&lt;0.01 ohms</td>
</tr>
<tr>
<td>IN-LINE CABLE</td>
<td>Neoprene</td>
<td>AIR MATE</td>
<td>&gt;1,000 cycles</td>
</tr>
<tr>
<td></td>
<td>#18 AWG (SO Cable)</td>
<td>UNDERWATER MATE</td>
<td>&gt;500</td>
</tr>
<tr>
<td></td>
<td>#20 AWG</td>
<td>OPERATING TEMPERATURE</td>
<td>25° to 140°F (-4° to 60°C)</td>
</tr>
<tr>
<td></td>
<td>1m, 2m, 5m</td>
<td>MOUNTING TORQUE</td>
<td>85 in-lb*</td>
</tr>
<tr>
<td></td>
<td>TFE insulated wire</td>
<td>APPROVALS</td>
<td>Lead-free and Restriction of Hazardous Substances Directive (RoHS) compliant</td>
</tr>
<tr>
<td></td>
<td>#20 AWG</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.5m</td>
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</table>

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

AMPACITY CHART FOR STANDARD PARTS (18 & 20 AWG SO CABLE)

<table>
<thead>
<tr>
<th>PART DESCRIPTION NUMBER OF CONTACTS</th>
<th>AMPACITY</th>
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<tbody>
<tr>
<td>MCBHIL-2</td>
<td>10 amps</td>
</tr>
<tr>
<td>MCBHIL-3</td>
<td>6 amps</td>
</tr>
<tr>
<td>MCBHIL-4</td>
<td>3 amps</td>
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<tr>
<td>MCBHIL-5</td>
<td>3 amps</td>
</tr>
<tr>
<td>MCBHIL-6</td>
<td>3 amps</td>
</tr>
<tr>
<td>MCBHIL-8</td>
<td>3 amps</td>
</tr>
<tr>
<td>MCBHIL-10</td>
<td>2.5 amps</td>
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<tr>
<td>MCBHIL-12</td>
<td>2.5 amps</td>
</tr>
<tr>
<td>MCBHIL-16</td>
<td>2 amps</td>
</tr>
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STANDARD IN-LINE WIRING COLOR CODE (SO CABLE)

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<th>CONTACT #</th>
<th>COLOR</th>
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<tr>
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</tr>
<tr>
<td>2</td>
<td>WHITE</td>
</tr>
<tr>
<td>3</td>
<td>RED **</td>
</tr>
<tr>
<td>4</td>
<td>GREEN</td>
</tr>
<tr>
<td>5</td>
<td>ORANGE</td>
</tr>
<tr>
<td>6</td>
<td>BLUE</td>
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<tr>
<td>7</td>
<td>WHITE/BLACK</td>
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<td>8</td>
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<td>9</td>
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<td>10</td>
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<tr>
<td>15</td>
<td>BLUE/WHITE</td>
</tr>
<tr>
<td>16</td>
<td>BLACK/RED</td>
</tr>
</tbody>
</table>

NOTE:
- ** For 3 contact configurations wiring color code is GREEN.
Micro WET-CON SERIES
MC-BH-M
(2 - 8 contacts)
Micro WET-CON Bulkhead Connector Male Plug
Mates with MC-IL-F
Dummy Connector: MC-DC-F

Micro WET-CON SERIES
MC-BH-F
(2 - 8 contacts)
Micro WET-CON Bulkhead Connector Female Socket
Mates with MC-IL-M
Dummy Connector: MC-DC-M

Micro WET-CON SERIES
HEX NUT AND WASHER
(2 - 8 contacts)
Micro WET-CON Bulkhead Connector

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 SEACON for recommendations.
- Connectors are designed for installation on one atmosphere vessels. Contact SEACON for recommendations if using compensated vessels.

STD - BRASS
(SStainless Steel and others upon request)
Micro WET-CON SERIES
MC-BH-M
(10 - 16 contacts)
Micro WET-CON Bulkhead Connector Male Plug
Mates with MC-IL-F
Dummy Connector: MC-DC-F

Micro WET-CON SERIES
MC-BH-F
(10 - 16 contacts)
Micro WET-CON Bulkhead Connector Female Socket
Mates with MC-IL-M
Dummy Connector: MC-DC-M

Micro WET-CON SERIES
HEX NUT AND WASHER
(10 - 16 contacts)
Micro WET-CON 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 SEACON for recommendations.
- Connectors are designed for installation on one atmosphere vessels. Contact SEACON for recommendations if using compensated vessels.
**Micro WET-CON SERIES**  
**MC-BH-M-DO (DOUBLE O-RING)**  
*(2 - 8 contacts)*  
Micro WET-CON Bulkhead Connector Male Plug with Double O-Ring  
Mates with MC-IL-F  
Dummy Connector: MC-DC-F  

**Micro WET-CON SERIES**  
**MC-BH-F-DO (DOUBLE O-RING)**  
*(2 - 8 contacts)*  
Micro WET-CON Bulkhead Connector Female Socket with Double O-Ring  
Mates with MC-IL-M  
Dummy Connector: MC-DC-M  

### PART NUMBER  |  PART DESCRIPTION  
---|---  
A | MC-BH DOUBLE O-RING SHELL  
B | NEOPRENE MOLDING  
C | O-RING 2-012  
D | O-RING 06-10325-1  
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 SEACON for recommendations.  
- Connectors are designed for installation on one atmosphere vessels. Contact SEACON for recommendations if using compensated vessels.
**Micro WET-CON SERIES**

**MC-BH-M-DO (DOUBLE O-RING)**

*(10 - 16 contacts)*

Micro WET-CON Bulkhead Connector Male Plug with Double O-Ring
Mates with MC-IL-F
Dummy Connector: MC-DC-F

---

**Micro WET-CON SERIES**

**MC-BH-F-DO (DOUBLE O-RING)**

*(10 - 16 contacts)*

Micro WET-CON Bulkhead Connector Female Socket with Double O-Ring
Mates with MC-IL-M
Dummy Connector: MC-DC-M

---

### PART NUMBER & DESCRIPTION

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>PART DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>MC-BH DOUBLE O-RING SHELL</td>
</tr>
<tr>
<td>B</td>
<td>NEOPRENE MOLDING</td>
</tr>
<tr>
<td>C</td>
<td>O-RING 06-10583-1</td>
</tr>
<tr>
<td>D</td>
<td>O-RING 06-10437-1</td>
</tr>
<tr>
<td>E</td>
<td>WASHER</td>
</tr>
<tr>
<td>F</td>
<td>HEX NUT 1/2-20</td>
</tr>
<tr>
<td>G</td>
<td>BULKHEAD LEADS</td>
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</tbody>
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---

**NOTES:**

- Bulkhead Locking Sleeve: Optional.
- 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 SEACON for recommendations.
- Connectors are designed for installation on one atmosphere vessels. Contact SEACON for recommendations if using compensated vessels.
Micro WET-CON SERIES
MC-IL-M
(2 - 8 contacts)
Micro WET-CON In-Line Connector Male Plug
Mates with MC-IL-F & MC-BH-F
Dummy Connector: MC-DC-F

NOTES:
· Locking Sleeve: Optional (see page MWC 14).
· 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.
**Micro WET-CON SERIES**  
**MC-IL-M**  
*(10 - 16 contacts)*  
Micro WET-CON In-Line Connector Male Plug  
Mates with MC-IL-F & MC-BH-F  
Dummy Connector: MC-DC-F

**Micro WET-CON SERIES**  
**MC-IL-F**  
*(10 - 16 contacts)*  
Micro WET-CON In-Line Connector Female Socket  
Mates with MC-IL-M & MC-BH-M  
Dummy Connector: MC-DC-M

**NOTES:**  
- Locking Sleeve: Optional (see page MWC 14).  
- 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.
**Micro WET-CON SERIES**

**MC-DC-M**

(2 - 8 contacts)

-Micro WET-CON Dummy Connector Male Plug
-Mates with MC-IL-F & MC-BH-F

**Micro WET-CON SERIES**

**MC-DC-F**

(2 - 8 contacts)

-Micro WET-CON Dummy Connector Female Socket
-Mates with MC-IL-M & MC-BH-M

**NOTES:**
- Locking Sleeve: Optional (see page MWC 14).
- 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.
**Micro WET-CON SERIES**

**MC-DC-M**

(10 - 16 contacts)

Micro WET-CON Dummy Connector Male Plug
Mates with MC-IL-F & MC-BH-F

**Micro WET-CON SERIES**

**MC-DC-F**

(10 - 16 contacts)

Micro WET-CON Dummy Connector Female Socket
Mates with MC-IL-M & MC-BH-M

**NOTES:**
- Locking Sleeve: Optional (see page MWC 14).
- 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.
**Micro WET-CON SERIES**

**MC-DLS-F**
(2 - 8 contacts)
Micro WET-CON Locking Sleeve Female

**MC-DLS-M**
(2 - 8 contacts)
Micro WET-CON Locking Sleeve Male

**DLSA-F**
(10 - 16 contacts)
Micro WET-CON Locking Sleeve Female

**DLSA-M**
(10 - 16 contacts)
Micro WET-CON Locking Sleeve Male

**NOTES:**
- * Not required for 2 to 8 way Bulkhead connectors. For In-Lines only.
- Locking Sleeves: Polyacetal.
<table>
<thead>
<tr>
<th>CONNECTOR</th>
<th>BORE Ø (INCHES)</th>
<th>THREAD</th>
<th>SPOT FACE Ø (INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC-BH (2-8)</td>
<td>0.437 ±0.015</td>
<td>7/16-20 UNF-2B</td>
<td>0.88</td>
</tr>
<tr>
<td>MC-BH (10-16)</td>
<td>0.500 ±0.015</td>
<td>1/2-20 UNF-2B</td>
<td>0.94</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONNECTOR</th>
<th>A - LENGTH (INCHES)</th>
<th>B - Ø (INCHES)</th>
<th>C - Ø (INCHES)</th>
<th>D - THREAD</th>
<th>E - Ø (INCHES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC-BH-DO (2-8)</td>
<td>0.425</td>
<td>0.475</td>
<td>0.88</td>
<td>7/16-20 UNF-2B</td>
<td>0.750 MIN</td>
</tr>
<tr>
<td>MC-BH-DO (10-16)</td>
<td>0.500</td>
<td>0.553</td>
<td>0.94</td>
<td>1/2-20 UNF-2B</td>
<td>1.000 MIN</td>
</tr>
</tbody>
</table>
## CONTACT CONFIGURATIONS

<table>
<thead>
<tr>
<th>SIZE</th>
<th>Micro WET-CON SERIES BULKHEAD/IN-LINE CONTACT CONFIGURATIONS (MALE FACE VIEW ONLY - NOT TO SCALE)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-8</td>
<td><img src="image" alt="Diagram of 2-8 configurations" /></td>
</tr>
<tr>
<td></td>
<td>MC-BH / MC-IL-2</td>
</tr>
<tr>
<td>10-16</td>
<td><img src="image" alt="Diagram of 10-16 configurations" /></td>
</tr>
<tr>
<td></td>
<td>MC-BH / MC-IL-10</td>
</tr>
</tbody>
</table>

**KEY**
- **GUIDE PIN**

**NOTES:**
- * For female face view contact configurations available please contact SEACON.
- ** Ethernet version available.
Micro WET-CON SPLIT SERIES

UNDERWATER ELECTRICAL WET-MATE CONNECTORS
## WET-CON SPLIT SERIES

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<td>MWC 19</td>
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<tr>
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<td>Special Assemblies</td>
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<td>Part Number Description System</td>
<td>MWC 19</td>
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<tr>
<td>General Information</td>
<td>MWC 19</td>
</tr>
<tr>
<td>In-Line Cable</td>
<td>MWC 19</td>
</tr>
</tbody>
</table>

### Dimension Details:

- MC-BH-F (6 Contacts) ................................................................. MWC 20
- MC-IL-M (6 Contacts) ................................................................. MWC 20
- MC-DLS-F (6 Contacts) ................................................................. MWC 20
- MC-BH-F (12 to 16 Contacts) ..................................................... MWC 21
- MC-IL-M (12 to 16 Contacts) ..................................................... MWC 21
- MC-DLSA-F/M (12 to 16 Contacts) ................................................ MWC 21

### Interface Details ................................................................. MWC 22

### Contact Configurations ....................................................... MWC 23
Micro WET-CON SPLIT SERIES UNDERWATER ELECTRICAL WET-MATE CONNECTORS

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 up to 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

<table>
<thead>
<tr>
<th>MC</th>
<th>IL</th>
<th>3/6</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>Male Plug</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Female Socket</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Number of Contacts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Contacts Per Sector</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IL</td>
<td>In-Line</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BH</td>
<td>Bulkhead</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DC</td>
<td>Dummy Connector</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Micro WET-CON Split Series

GENERAL INFORMATION

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOLDED BODY</td>
<td>Neoprene</td>
</tr>
<tr>
<td>BULKHEAD BODY</td>
<td>Brass (CA #360)</td>
</tr>
<tr>
<td>CONTACTS</td>
<td>Brass-gold plated</td>
</tr>
<tr>
<td>BULKHEAD N &amp; W</td>
<td>Brass (CA #360)</td>
</tr>
<tr>
<td>O-RING</td>
<td>Nitrile (formerly known as Buna N)</td>
</tr>
<tr>
<td>LOCKING SLEEVE</td>
<td>Polyacetal</td>
</tr>
<tr>
<td>HOOK-UP WIRE</td>
<td>TFE insulated wire, #20 AWG</td>
</tr>
</tbody>
</table>

IN-LINE CABLE

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC-5/15</td>
<td>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.</td>
</tr>
<tr>
<td>MC-2/6 &amp; MC-2/12</td>
<td>22/2 Neoprene jacket, TFE insulated wire 1.5 amp (600V). All contacts white and individually identified by color or flagged ends.</td>
</tr>
<tr>
<td>MC-8/16</td>
<td>22/8 Neoprene jacket, TFE insulated wire 1.0 amp (600V). All contacts white and individually identified by color or flagged ends.</td>
</tr>
<tr>
<td>MC-3/6 &amp; MC-3/15</td>
<td>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.</td>
</tr>
</tbody>
</table>

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.

GENERAL INFORMATION

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN FACE PRESSURE</td>
<td>Up to 10,000 psi (700 bar) optional and needs to be specified</td>
</tr>
<tr>
<td>MATED PRESSURE</td>
<td>Up to 10,000 psi (700 bar)</td>
</tr>
<tr>
<td>VOLTAGE RATING</td>
<td>Up to 600 VDC (dependent on cable)</td>
</tr>
<tr>
<td>CURRENT RATING</td>
<td>Up to 19 amps per contact*</td>
</tr>
<tr>
<td>INSULATION RESISTANCE</td>
<td>&gt;200 megohms @ 300 VDC</td>
</tr>
<tr>
<td>CONTACT RESISTANCE</td>
<td>&lt;0.01 ohms</td>
</tr>
<tr>
<td>AIR MATE</td>
<td>&gt;1,000 cycles</td>
</tr>
<tr>
<td>UNDERWATER MATE</td>
<td>&gt;500</td>
</tr>
<tr>
<td>OPERATING TEMPERATURE</td>
<td>25° to 140°F (-4° to 60°C)</td>
</tr>
<tr>
<td>MOUNTING TORQUE</td>
<td>85 in-lb** In dry stainless 1/2&quot; long Female threads</td>
</tr>
</tbody>
</table>

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

**MC-IL-M**  
*(6 contacts)*  
Micro WET-CON Split In-Line Connector Male Plug

**MC-DLS-F**  
*(6 contacts)*  
Micro WET-CON Split Dummy Locking Sleeve Female Socket

**HEX NUT AND WASHER**  
*(6 contacts)*  
Micro WET-CON Split Bulkhead Connector

**NOTES:**  
- O-RING SIZE: 2-014

**OPTIONAL PARTS**

**MC-DC-M**

**NOTES:**  
- For interface details please contact SEACON.

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

NOTES:
- For interface details please contact SEACON.

STD - BRASS
(Stainless Steel and others available upon request)
**Micro WET-CON SPLIT SERIES**

**MC-BH ***
(6 contacts)
THROUGH BORE OPTION

Micro WET-CON Bulkhead Connector

**MC-BH **
(12 - 16 contacts)
THROUGH BORE OPTION

Micro WET-CON Bulkhead Connector

**MC-BH **
(12 - 16 contacts)
THREADED MOUNTING OPTION

Micro WET-CON Bulkhead Connector

**MC-BH **
(6 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.
<table>
<thead>
<tr>
<th>SIZE</th>
<th>Micro WET-CON SPLIT CONTACT CONFIGURATIONS (FEMALE FACE VIEW ONLY - NOT TO SCALE)*</th>
</tr>
</thead>
</table>
| 6    | ![Diagram](image1.png)  
MC-BH-2/6-FS SPLIT
MC-BH-3/6-FS SPLIT |
| 12-16| ![Diagram](image2.png)  
MC-BH-2/12-FS SPLIT
MC-BH-3/15-FS SPLIT
MC-BH-5/15-FS SPLIT
MC-BH-8/16-FS SPLIT |

NOTES:

* For male face view contact configurations available please contact SEACON.
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 it’s housing then replace sealing areas of male connector and across the face of the female connector. 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 “burr” 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.
5. Make 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.

HANDLING PROCEDURES AND SPECIAL CAPABILITIES

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 “burr” 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.

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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