

PRODUCT NEWS

Micro WET-CON and Micro WET-CON SPLIT SERIES CONNECTOR ENHANCEMENTS

INTRODUCTION

As part of our continuous improvement process the SEA CON® Group consistently reviews it's product ranges through both customer feedback and internal improvements. It is via these processes that SEA CON® 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 SEA CON®'s customers and therefore full intermateability will be maintained. In addition, SEA CON® 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-MATE and SEA-MATE connector ranges for a number of years.

M I C R O W E T - C O N S E R I E S

U N D E R W A T E R E L E C T R I C A L W E T - M A T E C O N N E C T O R S

I N T R O D U C T I O N

The Micro WET-CON connector series was developed to provide all the features of SEA CON®'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 light-weight 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.

A V A I L A B I L I T Y

The Micro WET-CON series is a stocked item, which ensures quick delivery (in reasonable quantities) of standard configurations. Custom cable lengths are available upon request. 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.

M A T E R I A L S

The Micro WET-CON is made from a proprietary grade Neoprene. The standard locking sleeves are Delrin® (DuPont trademark for Acetal Resin), which is lightweight, durable and user-friendly in the working environment (Brass and Stainless Steel are also available upon request).

A P P L I C A T I O N S

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.

T E S T I N G

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.

S P E C I A L A S S E M B L I E S

SEA CON® maintains all facilities necessary to furnish complete underwater and environmental electrical connector/cable systems, including Research and Development, Engineering, Manufacturing, Quality Control and Pressure Testing.

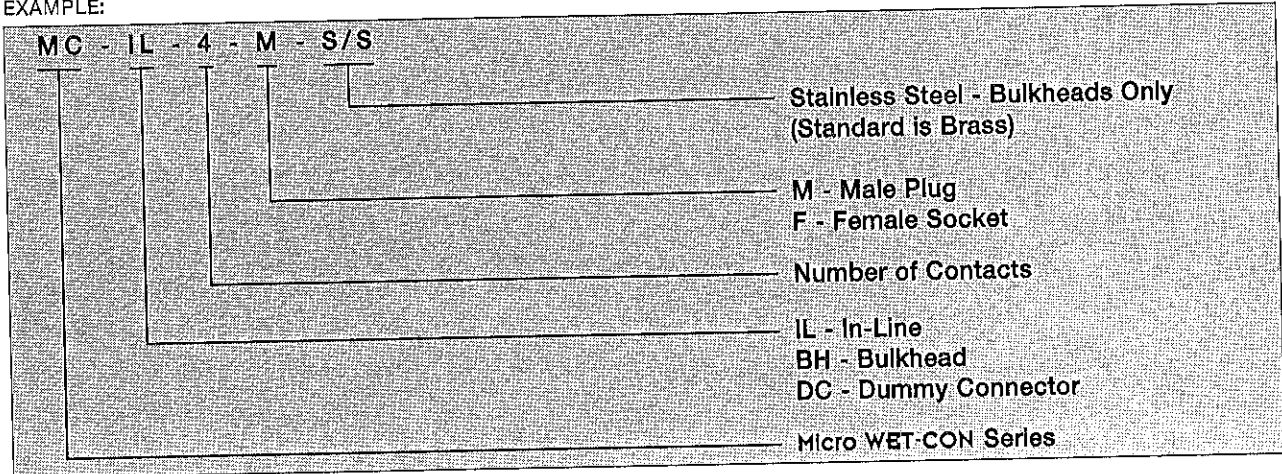
As well as supplying our standard 'off-the-shelf' items, we have the capability to design and manufacture **SPECIAL CUSTOMIZED CONNECTORS AND CABLE ASSEMBLIES** to suit your individual needs.

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

MICRO WET-CON SERIES

PART NUMBER SYSTEM

EXAMPLE:



GENERAL INFORMATION

COMPONENT	MATERIAL
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	Delrin® (DuPont trademark for Acetal Resin)
IN-LINE CABLE (2, 3 and 4 pin) (5, 6, 8, 10, 12 and 16 pin) Standard Length	Neoprene, #18 AWG (SO Cable) Neoprene, #20 AWG 24 inches (60cm)
HOO-K-UP WIRE (BC)	Tellon®, #20 AWG (Registered trademark for DuPont) Standard length 13 inches (33cm)

CATEGORY	VALUE
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	Upto 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	50 in-lb In dry stainless 1/2" long Female threads

- * Contact SEA CON® 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 SEA CON® for recommendations if using compensated vessels.

AMPACITY CHART FOR STANDARD PARTS

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

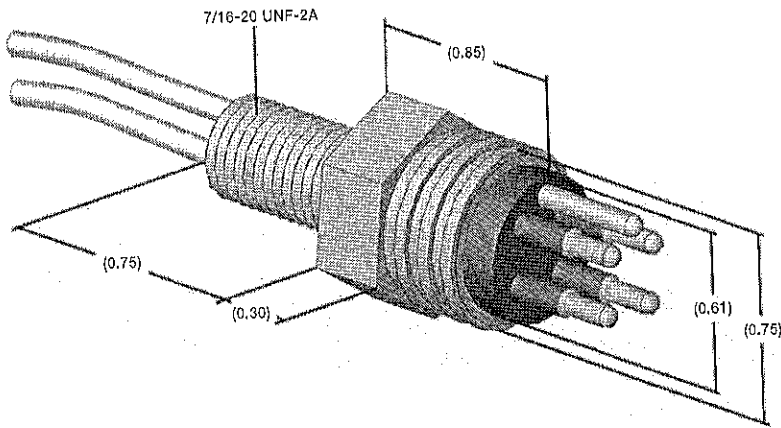
PART DESCRIPTION NUMBER OF CONTACTS	AMPACITY
MCBH/IL-8	3 amps
MCBH/IL-10	2.5 amps
MCBH/IL-12	2.5 amps
MCBH/IL-16	2 amps

IN-LINE COLOR CODE

CONTACT #	COLOR
1	BLACK
2	WHITE
3	RED
4	GREEN
5	ORANGE
6	BLUE
7	WHITE/BLACK
8	RED/BLACK

CONTACT #	COLOR
9	GREEN/BLACK
10	ORANGE/BLACK
11	BLUE/BLACK
12	BLACK/WHITE
13	RED/WHITE
14	GREEN/WHITE
15	BLUE/WHITE
16	BLACK/RED

DIMENSION DETAILS

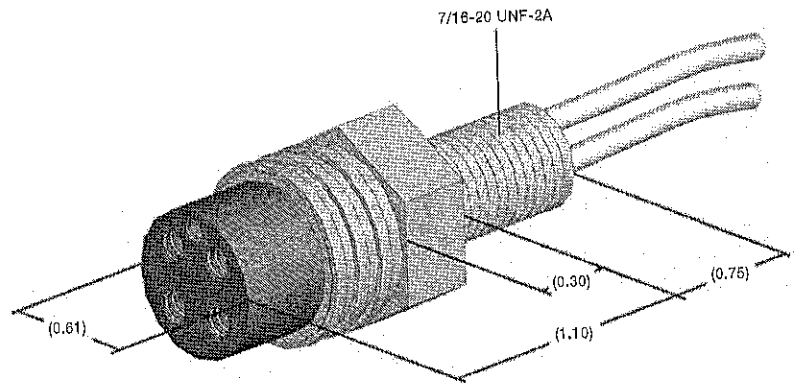


**Micro WET-CON SERIES
MCBH-M**
Micro WET-CON Bulkhead Connector
(2 to 8 contacts)
Mates with MCIL-F
Dummy Connector: MCDC-F

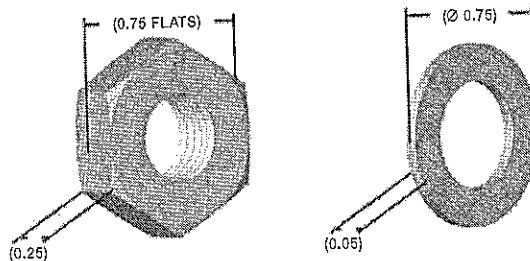
NOTES:

- Bulkhead Locking Sleeve: Optional.
- 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 SEA CON® for recommendations.
- Connectors are designed for installation on one atmosphere vessels. Contact SEA CON® for recommendations if using compensated vessels.

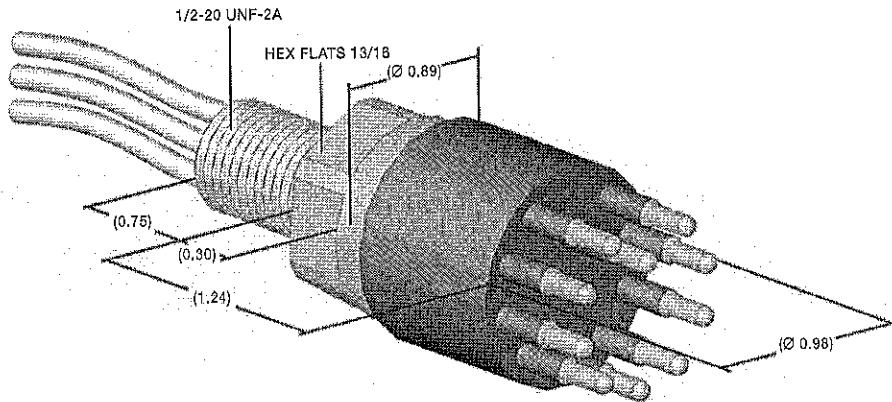
**Micro WET-CON SERIES
MCBH-F**
Micro WET-CON Bulkhead Connector
(2 to 8 contacts)
Mates with MCIL-M
Dummy Connector: MCDC-M



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



DIMENSION DETAILS

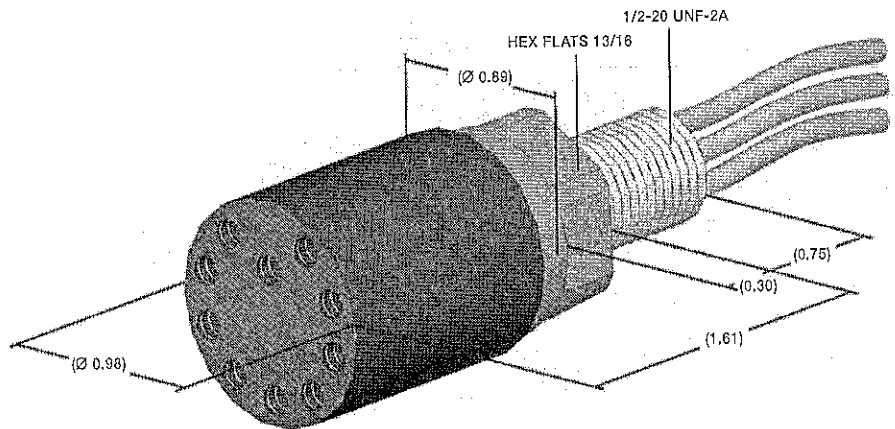


**Micro WET-CON SERIES
MCBH-M**
Micro WET-CON Bulkhead Connector
(10 to 16 contacts)
Mates with MCIL-F
Dummy Connector: MCDC-F

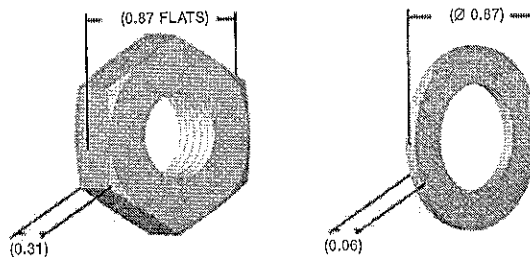
NOTES:

- Bulkhead Locking Sleeve: Optional.
- 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 SEA CON® for recommendations.
- Connectors are designed for installation on one atmosphere vessels. Contact SEA CON® for recommendations if using compensated vessels.

**Micro WET-CON SERIES
MCBH-F**
Micro WET-CON Bulkhead Connector
(10 to 16 contacts)
Mates with MCIL-M
Dummy Connector: MCDC-M



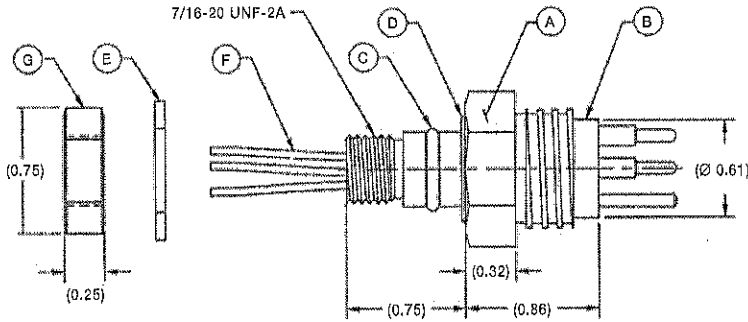
**Micro WET-CON SERIES
HEX NUT AND WASHER**
Micro WET-CON Bulkhead Connector
(10 to 16 contacts)



DIMENSION DETAILS

Micro WET-CON SERIES MCBH-M-DO (DOUBLE O-RING)

Micro WET-CON Bulkhead Series with Double O-Ring
(2 to 8 contacts)



PART NUMBER	PART DESCRIPTION
A	MCBH 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

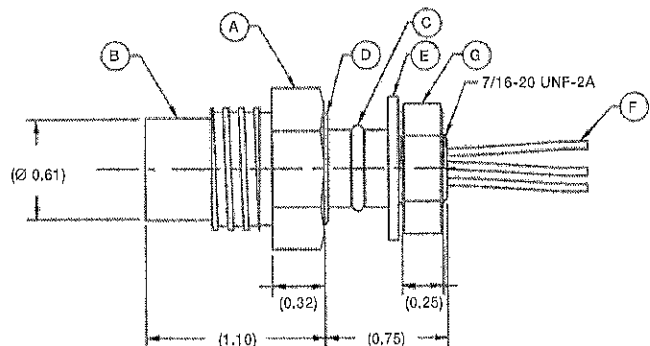
* For dimensions, please refer to page MWC 4 of this brochure.

NOTES:

- Bulkhead Locking Sleeve: Optional.
- 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 SEA CON® for recommendations.
- Connectors are designed for installation on one atmosphere vessels. Contact SEA CON® for recommendations if using compensated vessels.

Micro WET-CON SERIES MCBH-F-DO (DOUBLE O-RING)

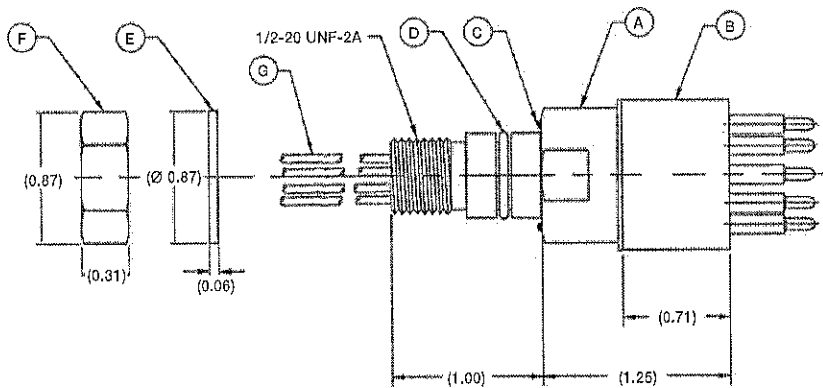
Micro WET-CON Bulkhead Series with Double O-Ring
(2 to 8 contacts)



DIMENSION DETAILS

Micro WET-CON SERIES MCBH-M-DO (DOUBLE O-RING)

Micro WET-CON Bulkhead Series with Double O-Ring
(10 to 16 contacts)



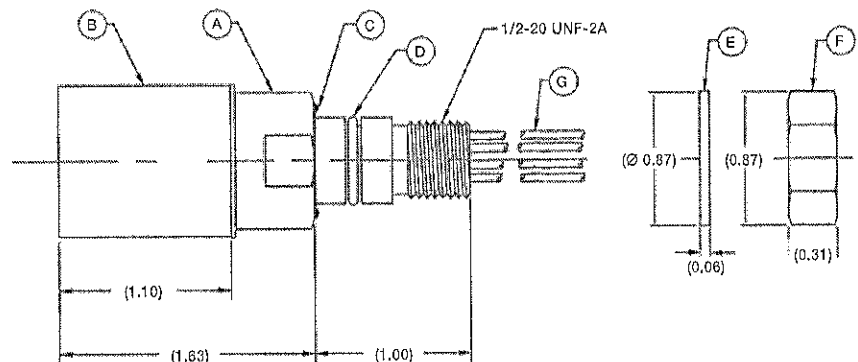
PART NUMBER	PART DESCRIPTION
A	MCBH DOUBLE O-RING SHELL
B	NEOPRENE MOLDING
C	O-RING 06-10583-1
D	O-RING 06-10437-1
E	WASHER
F	HEX NUT 1/2-20
G	BULKHEAD LEADS

NOTES:

- Bulkhead Locking Sleeve: Optional.
- Nut and washer: Optional.
- 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 SEA CON® for recommendations.
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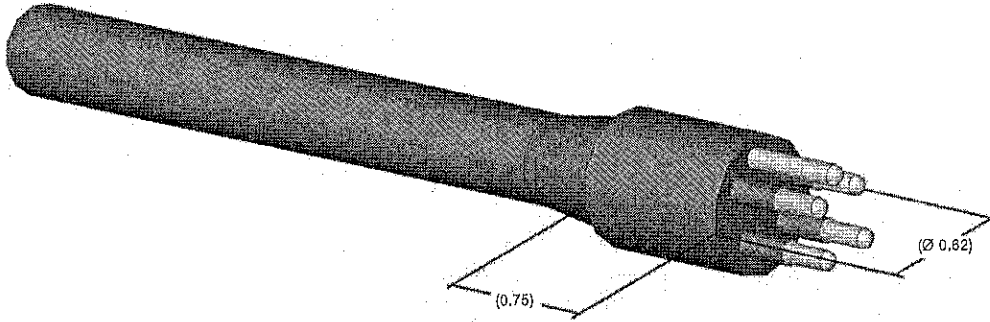
Micro WET-CON SERIES MCBH-F-DO (DOUBLE O-RING)

Micro WET-CON Bulkhead Series with Double O-Ring
(10 to 16 contacts)



DIMENSION DETAILS

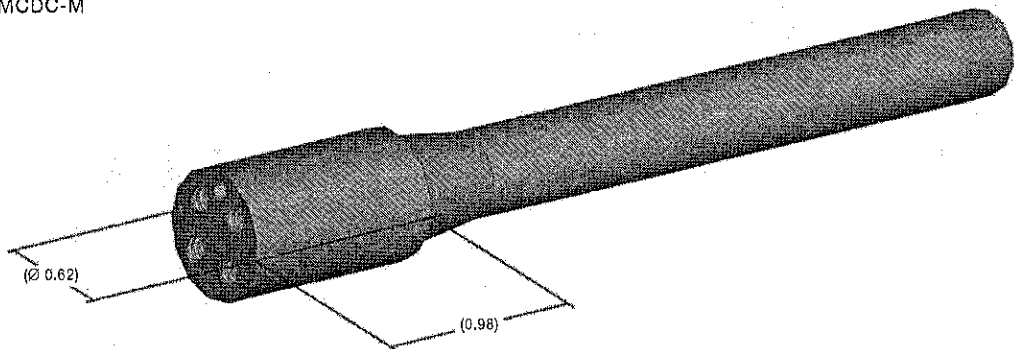
**Micro WET-CON SERIES
MCIL-M**
Micro WET-CON In-Line Connector
(2 to 8 contacts)
Mates with MCIL-F & MCBH-F
Dummy Connector: MCDC-F



NOTES:

- Locking Sleeve: Optional (see page MWC 12).
- 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.

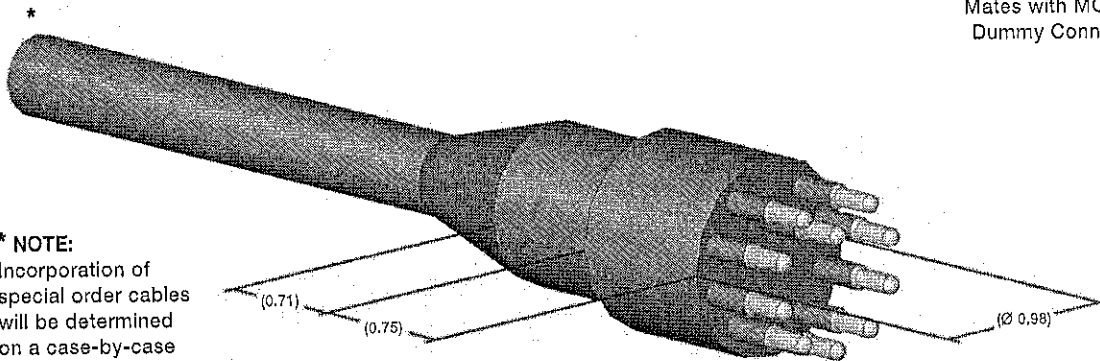
**Micro WET-CON SERIES
MCIL-F**
Micro WET-CON In-Line Connector
(2 to 8 contacts)
Mates with MCIL-M & MCBH-M
Dummy Connector: MCDC-M



DIMENSION DETAILS

Micro WET-CON SERIES MCIL-M

Micro WET-CON In-Line Connector
(10 to 16 contacts)
Mates with MCIL-F & MCBH-F
Dummy Connector: MCDC-F



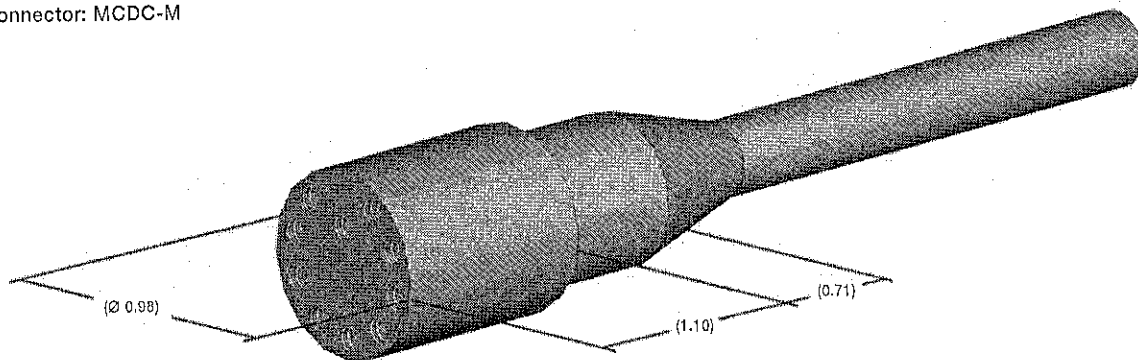
*** NOTE:**
Incorporation of special order cables will be determined on a case-by-case basis.

NOTES:

- Locking Sleeve: Optional (see page MWC 12).
- Dummy Connector: Optional.
- Dummy Shorting Plug Connector: Optional.
- Connectors must be lubricated prior to mating.

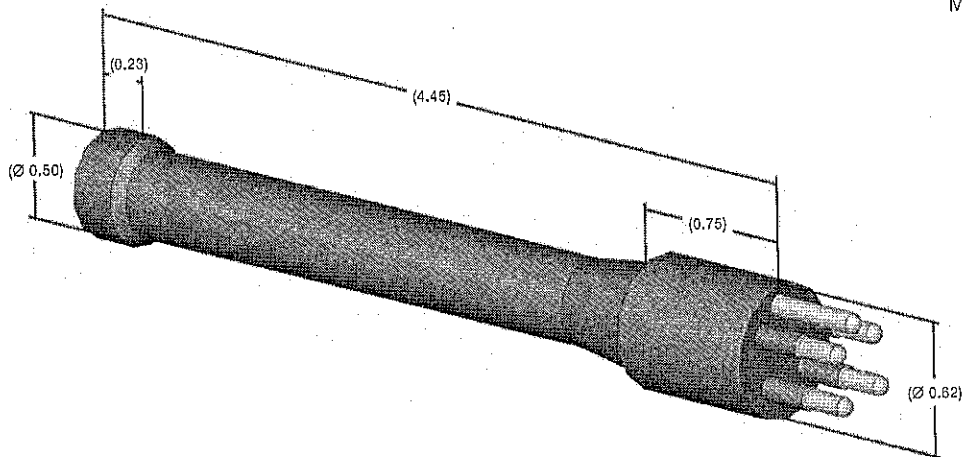
Micro WET-CON SERIES MCIL-F

Micro WET-CON In-Line Connector
(10 to 16 contacts)
Mates with MCIL-M & MCBH-M
Dummy Connector: MCDC-M



DIMENSION DETAILS

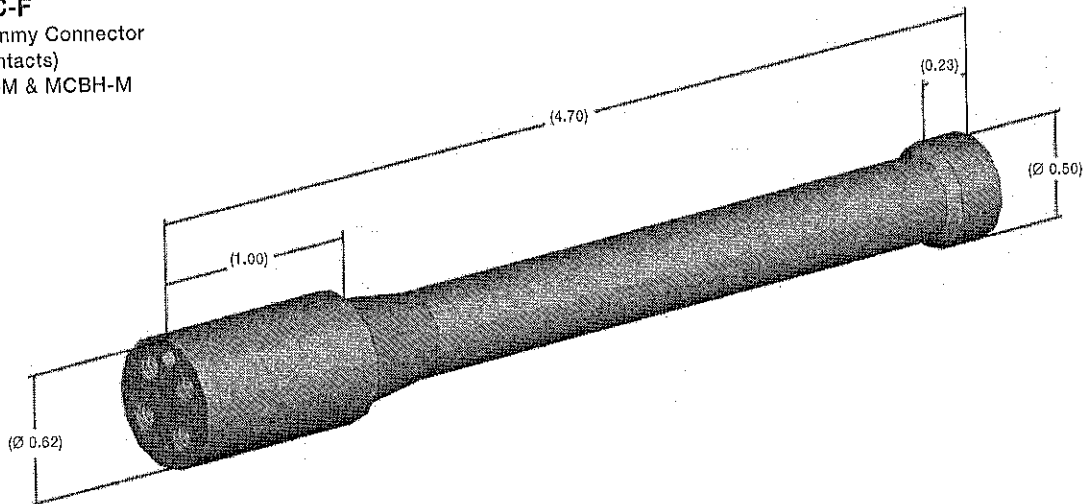
**Micro WET-CON SERIES
MDCD-M**
Micro WET-CON Dummy Connector
(2 to 8 contacts)
Mates with MCIL-F & MCBH-F



NOTES:

- Locking Sleeve: Optional (see page MWC 12).
- 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.

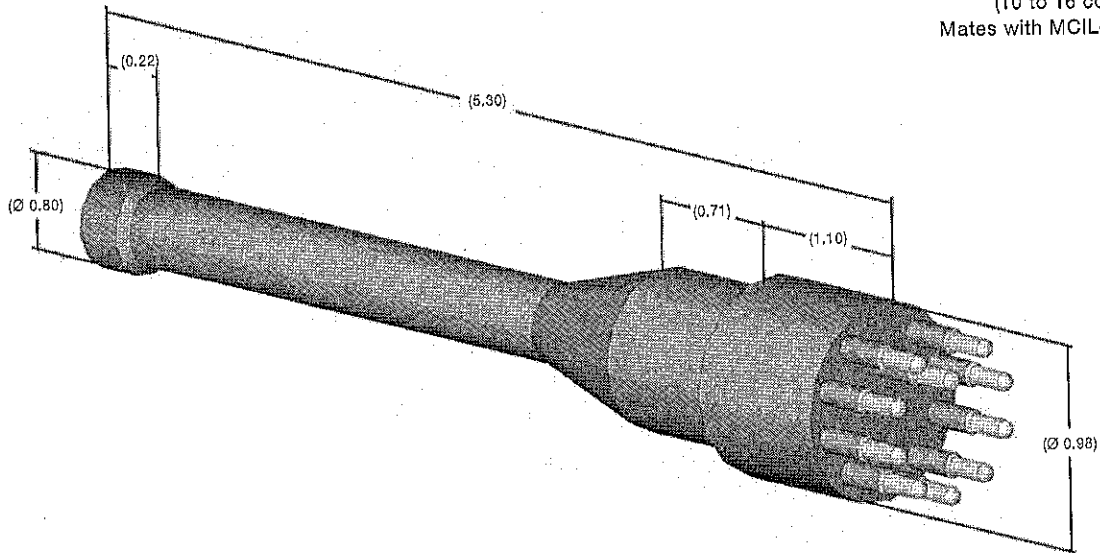
**Micro WET-CON SERIES
MDCD-F**
Micro WET-CON Dummy Connector
(2 to 8 contacts)
Mates with MCIL-M & MCBH-M



DIMENSION DETAILS

Micro WET-CON SERIES MDCD-M

Micro WET-CON Dummy Connector
(10 to 16 contacts)
Mates with MCIL-F & MCBH-F

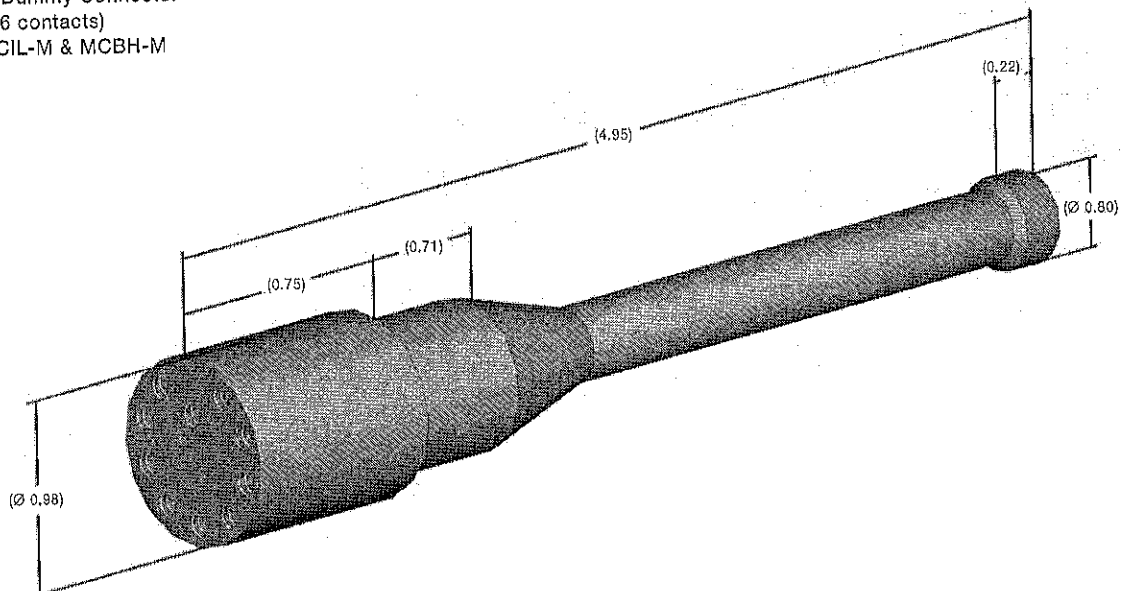


NOTES:

- Locking Sleeve: Optional (see page MWC 12).
- Dummy Shorting Plug Connector: Optional.
- Connectors must be lubricated prior to mating.

Micro WET-CON SERIES MDCD-F

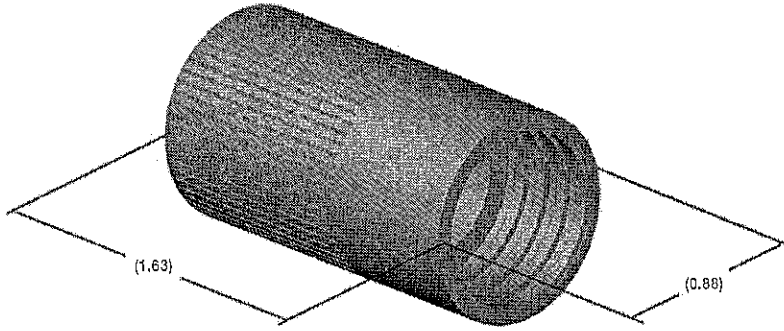
Micro WET-CON Dummy Connector
(10 to 16 contacts)
Mates with MCIL-M & MCBH-M



OPTIONAL PARTS

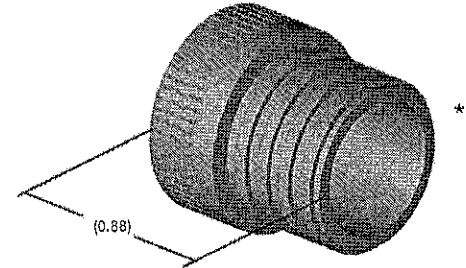
Micro WET-CON SERIES MCDLS-F

Micro WET-CON Locking Sleeve
(2 to 8 contacts)



Micro WET-CON SERIES MCDLS-M

Micro WET-CON Locking Sleeve
(2 to 8 contacts)



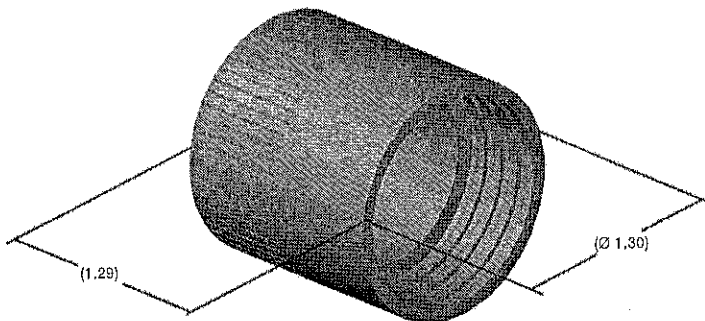
* NOTE:
Would only be required
for 10 to 16 contacts.

NOTES:

- Locking Sleeves: Delrin® (DuPont trademark for Acetal Resin).

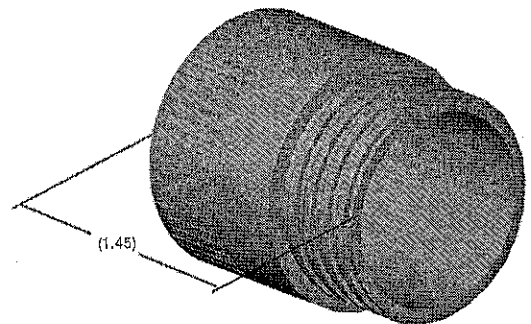
Micro WET-CON SERIES DLSA-F

Micro WET-CON Locking Sleeve
(10 to 16 contacts)



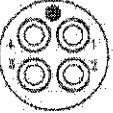

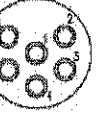






Micro WET-CON SERIES DLSA-M

Micro WET-CON Locking Sleeve
(10 to 16 contacts)



CONTACT CONFIGURATIONS

SIZE	Micro WBT-CON SERIES BULKHEAD/IN-LINE CONTACT CONFIGURATIONS AVAILABLE (MALE FACE VIEW)					
2-8	 MCBH/MCIL-2	 MCBH/MCIL-3	 MCBH/MCIL-4	 MCBH/MCIL-5	 MCBH/MCIL-6	 MCBH/MCIL-8
10-16	 MCBH/MCIL-10	 MCBH/MCIL-12	 MCBH/MCIL-16			

* For female face view contact configurations available please contact SEA CON®.