



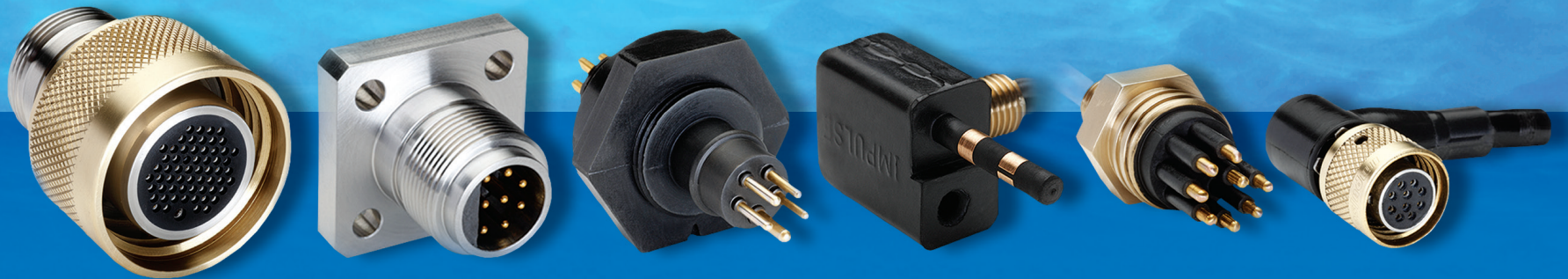
TECHNICAL MANUAL

INTERCONNECT SOLUTIONS



TELEDYNE IMPULSE

TECHNICAL MANUAL






MAKING CONNECTIONS IN HARSH ENVIRONMENTS



TELEDYNE IMPULSE

INTERCONNECT SOLUTIONS

www.teledyneimpulse.com  impulse@teledyne.com  800.327.0971  858.842.3100

PRODUCTS AND SERVICE

We at Teledyne Impulse have set our standards high to meet the needs and requirements of you, our valued customer.

Teledyne Impulse products and services include the following:

- Thermoset Glass Reinforced Epoxy Connectors
- Rubber Molded Connectors
- Rubber Molded Metal Shell Connectors
- Polyurethane Molded Connectors
- Metal Shell Connectors
- Pressure Balanced Oil Filled Connectors
- Magnetically Operated Proximity Switches
- Cable Termination
- Neoprene and Polyurethane Cable Splicing to Connectors
- Custom Breakouts
- Custom Connector Design and Fabrication
- Turnkey Solutions

Quality products, on time delivery, very competitive prices and excellence in CUSTOMER SERVICE are vital differences created at Teledyne Impulse.

At Teledyne Impulse we gear all our efforts to one simple conclusion:

CUSTOMER SATISFACTION

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GENERAL INFORMATION

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GENERAL INFORMATION

GENERAL SPECIFICATIONS

CONTACT CURRENT CAPACITY AND DIMENSIONS

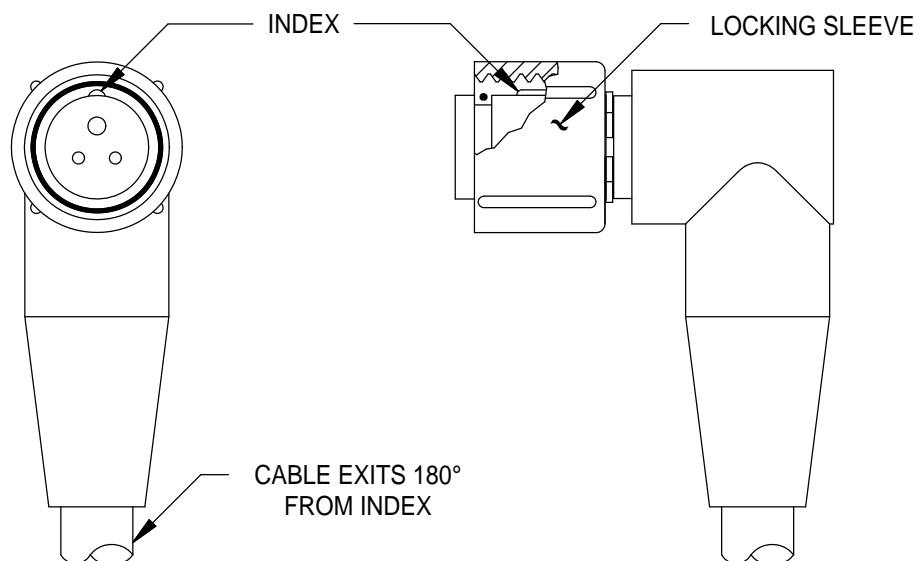
(Current capacities shown are for single contact only and do not reflect connector or cable current capacity.)

| AMERICAN WIRE GAUGE (AWG) | AMP/CAPACITY | DIA/INCHES | MM ² |
|---------------------------|--------------|------------|-----------------|
| #1/0 AWG | 200 | .355 | 65.8 |
| #4 AWG | 65 | .255 | 31.7 |
| #6 AWG | 55 | .218 | 24.1 |
| #8 AWG | 40 | .156 | 12.3 |
| #10 AWG | 25 | .125 | 7.9 |
| #12 AWG | 20 | .110 | 6.1 |
| #14 AWG | 15 | .093 | 4.4 |
| #16 AWG | 12 | .062 | 1.9 |
| #20 AWG | 3 | .038 | 0.73 |
| #22 AWG | 2 | .031 | 0.48 |

HEX DIMENSIONS

| DIMENSION ACROSS FLATS | APPROX OVERALL DIAMETER | DIMENSION ACROSS FLATS | APPROX OVERALL DIAMETER |
|------------------------|-------------------------|------------------------|-------------------------|
| .37 | .43 | 1.25 | 1.45 |
| .62 | .73 | 1.375 | 1.59 |
| .75 | .87 | 1.50 | 1.73 |
| .875 | 1.02 | 1.625 | 1.88 |
| .90 | 1.04 | 1.75 | 2.02 |
| 1.00 | 1.16 | 2.00 | 2.31 |
| 1.12 | 1.30 | 2.50 | 2.89 |

RIGHT ANGLE CONNECTOR INDEXING



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TELEDYNE IMPULSE REPRESENTATIVES AND DISTRIBUTORS

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Web: www.ses-services.com

TERMS AND CONDITIONS OF SALE

Teledyne Impulse Terms and Conditions of Sales can be found on our web site.

www.teledyneimpulse.com

BREAKOUTS

DESCRIPTION AND MATERIAL

- Molded neoprene or polyurethane.
- Cable jacket and conductor insulation determines overmold material.
- Number of conductors and cable diameter determines size of mold.
- Custom molds to customer specifications available upon request, contact factory for details.
- Up to 10,000psi.

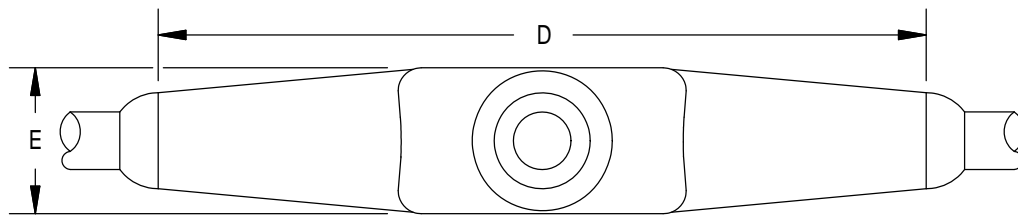
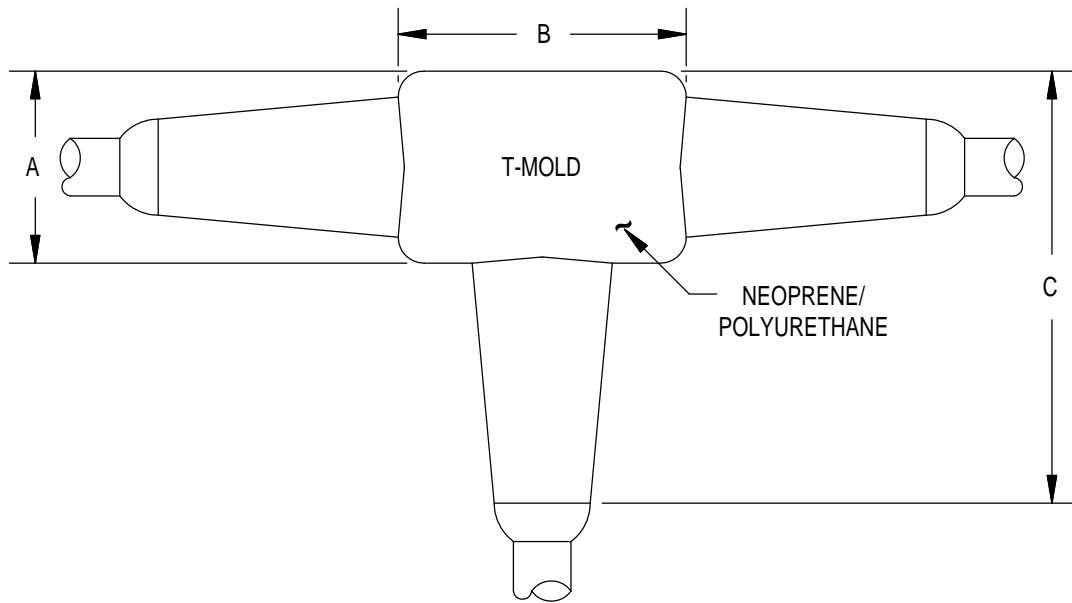
USES

- Splicing cable.
- Breakout to several cables.
- Connect multiple devices to one main line.
- Economic pressure proof junction box.

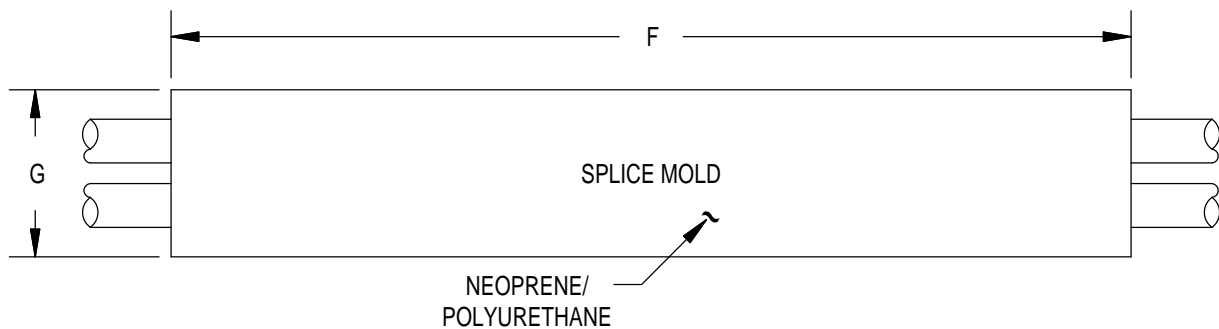
GUIDELINES

- Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time.

BREAKOUTS

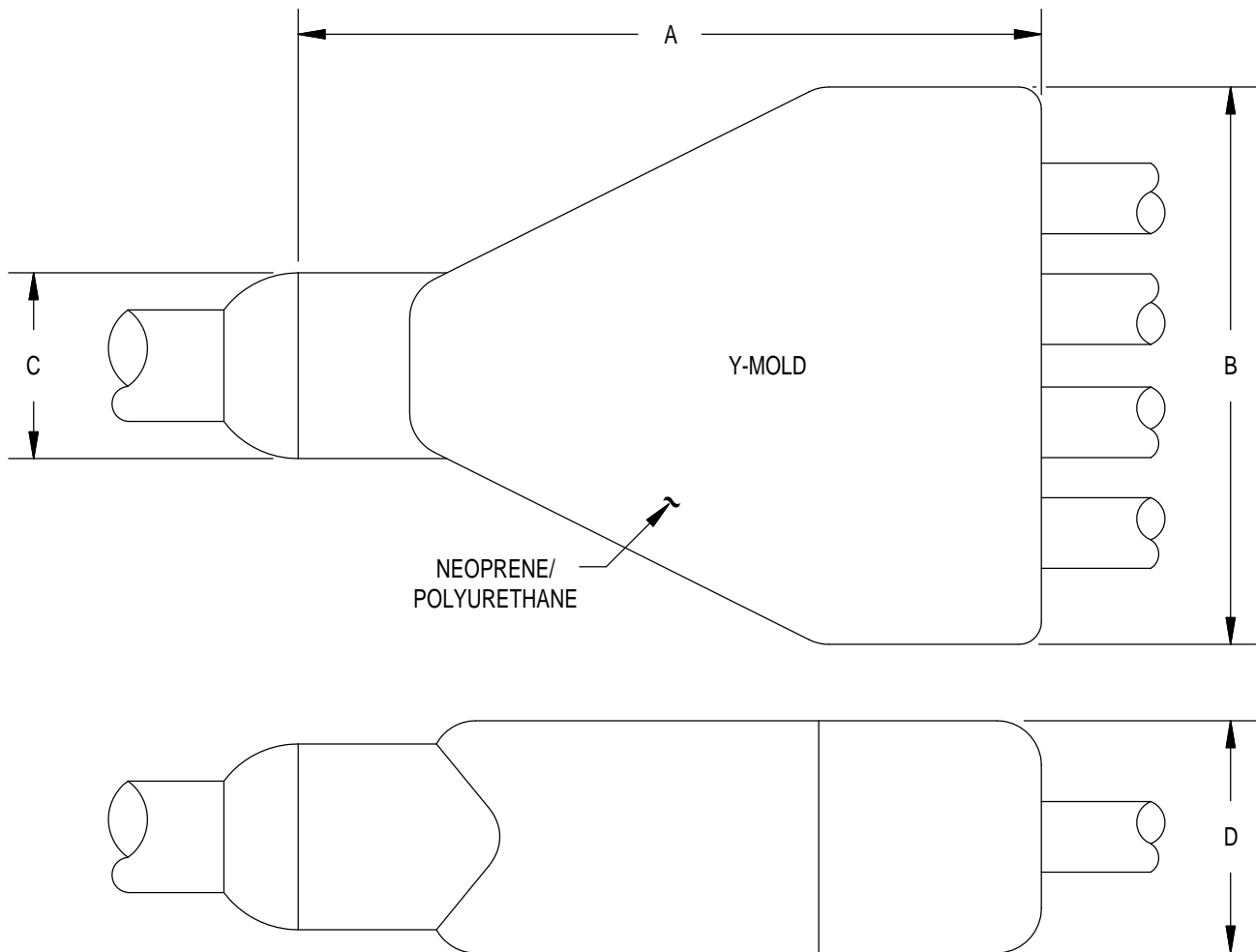


| T-MOLDS | | | | | |
|---------|------|------|------|------|------|
| SIZE | A | B | C | D | E |
| T-15 | 1.00 | 1.50 | 2.25 | 4.00 | .75 |
| T-20 | 1.50 | 2.00 | 3.25 | 5.45 | 1.36 |



| SPLICE MOLDS | | |
|--------------|------|-------|
| SIZE | F | G |
| SP-20 | 2.00 | ∅.87 |
| SP-30 | 3.00 | ∅1.50 |
| SP-40 | 4.00 | ∅.87 |
| SP-46 | 4.60 | ∅1.14 |

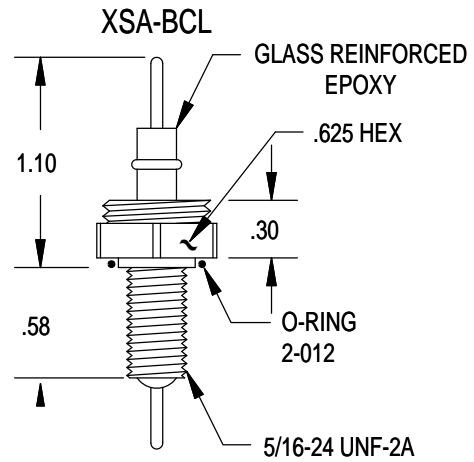
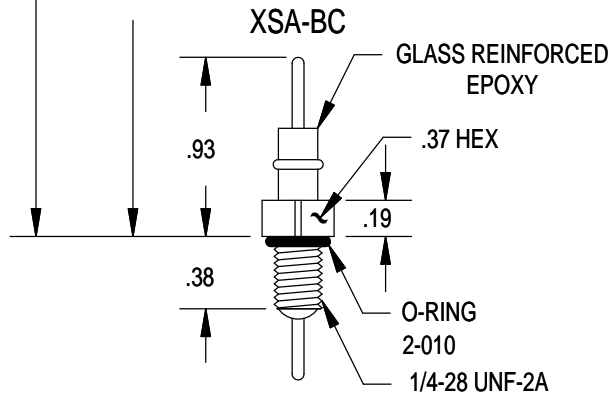
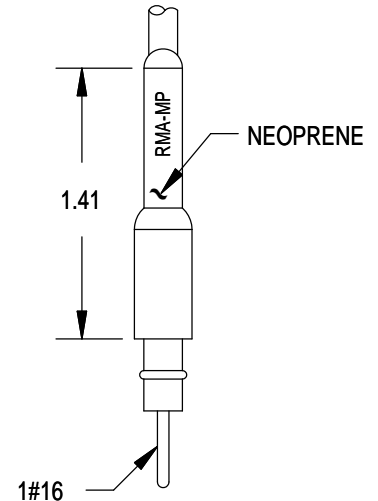
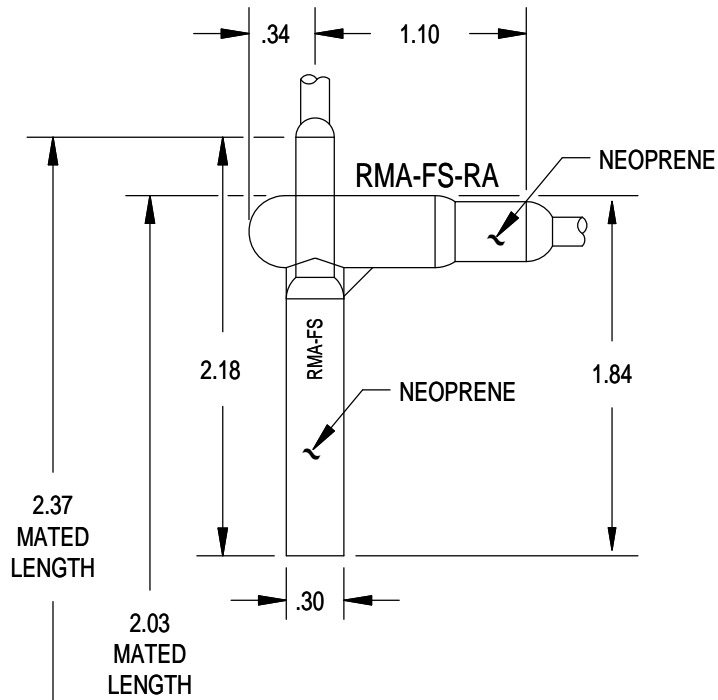
| SPLICE MOLDS | | |
|--------------|------|-------|
| SIZE | F | G |
| SP-50 | 5.00 | ∅.87 |
| SP-50L | 5.00 | ∅1.40 |
| SP-60 | 6.00 | ∅2.00 |



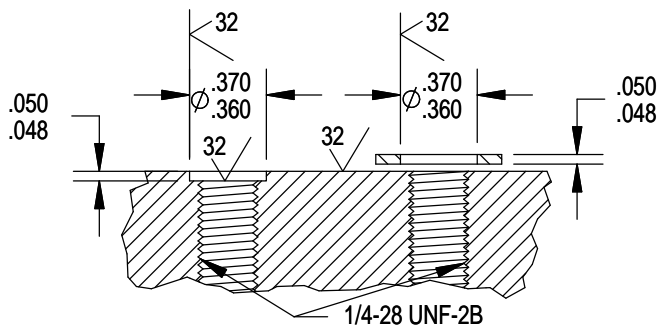
| Y-MOLDS | | | | |
|---------|------|------|------|------|
| SIZE | A | B | C | D |
| Y-20 | 3.00 | 2.00 | .75 | .75 |
| Y-30 | 4.00 | 2.80 | 1.00 | 1.25 |
| Y-35 | 4.34 | 3.50 | 1.00 | 1.50 |
| Y-45 | 5.50 | 4.40 | 1.25 | 1.75 |
| Y-60 | 6.60 | 6.00 | 1.50 | 2.00 |

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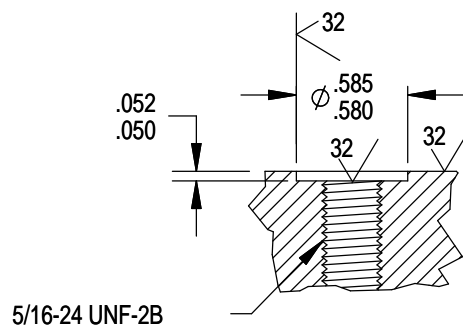
-
- DESCRIPTION AND MATERIAL**
- Molded neoprene or polyurethane (for G-size) inline connectors and glass reinforced epoxy bulkhead connectors.
 - One to twelve contacts.
 - Up to 600 VDC (For higher voltages, contact factory).
 - Up to 10,000 PSI in mated condition.
 - Bulkhead connector design open face pressure rated to 5000 psi.
 - Contacts gold plated per MIL-G-45204.
 - Field installable connectors with locking sleeve available.
 - Field installable connectors have a removable tapered boot for easy access to solder pots during field installation.
- CABLE**
- Connector's amperage and voltage may be limited by amperage and voltage rating of cable to which connector is molded.
 - Inline connectors in this series, except field installables, are provided on a standard 24" length of 18 AWG SO cable unless otherwise specified. (Note: RMA provided on 24" length of 20 AWG)
- USES**
- Light to medium duty applications.
 - Hazardous environment.
 - Power transmission.
 - Signal telemetry.
 - FIB - Field installable applications.
- GUIDELINES**
- All mounting surfaces require a 32 finish.
 - Accomplish mating with minimum twisting and flexing.
 - Align indexes.
 - Care must be taken not to damage or bend pins in unplugged conditions.
 - FS can trap water (suggest flush with alcohol and blow dry).
 - Lubricate MP mating side with 3M Silicone Lubricant or Dow Corning #111 Valve Lubricant or equivalent.
 - Lubricate o-rings with Dow Corning #111 Valve Lubricant or equivalent.
 - Avoid o-ring cuts and nicks.
 - Replace o-rings when re-using connectors.
 - Avoid contact with noxious solvents.
 - Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time.



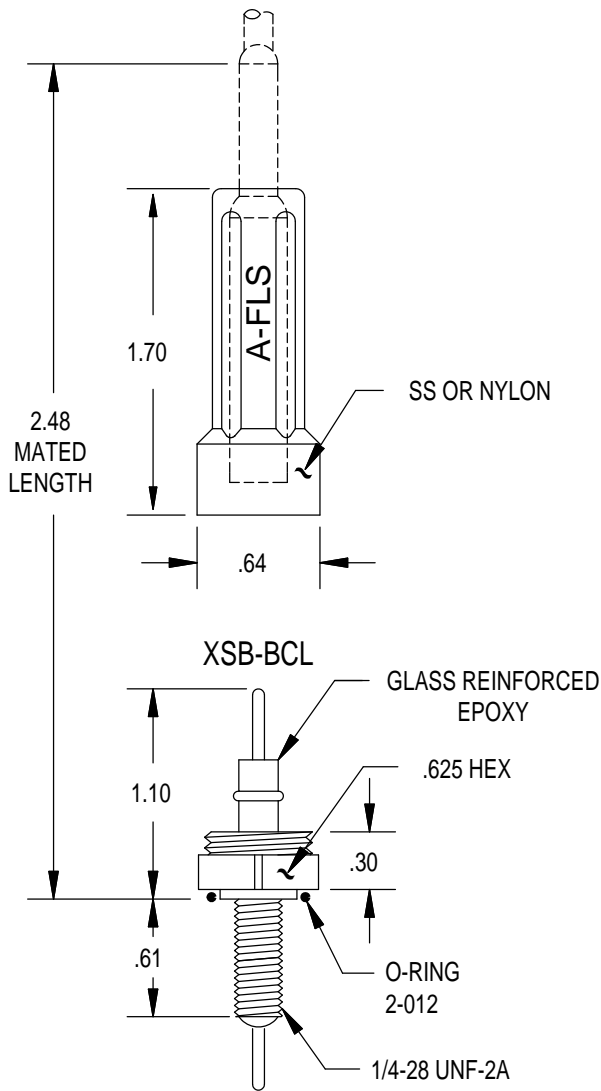
MOUNTING INSTRUCTIONS XSA-BC



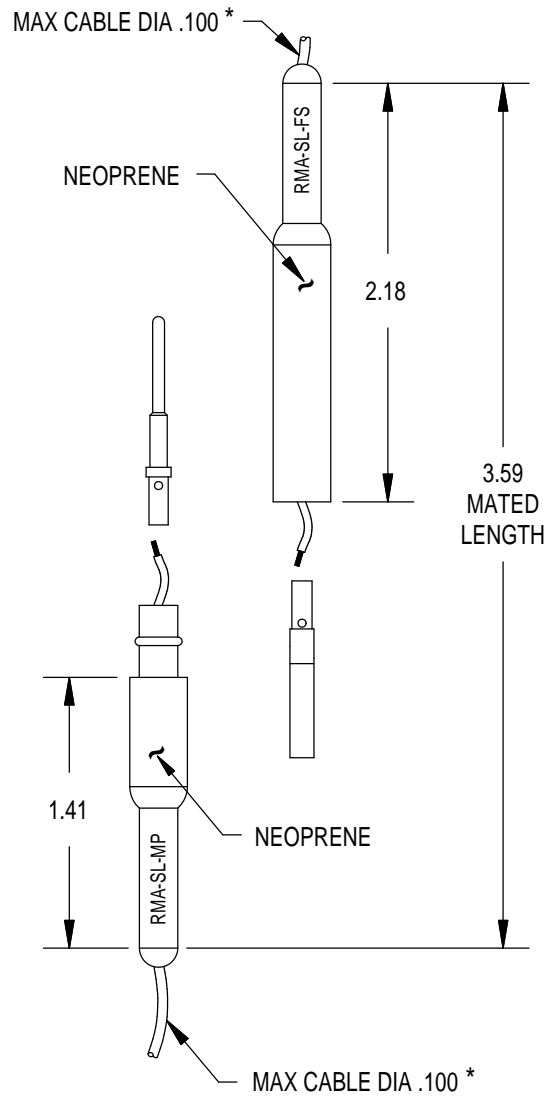
MOUNTING INSTRUCTIONS XSA-BCL



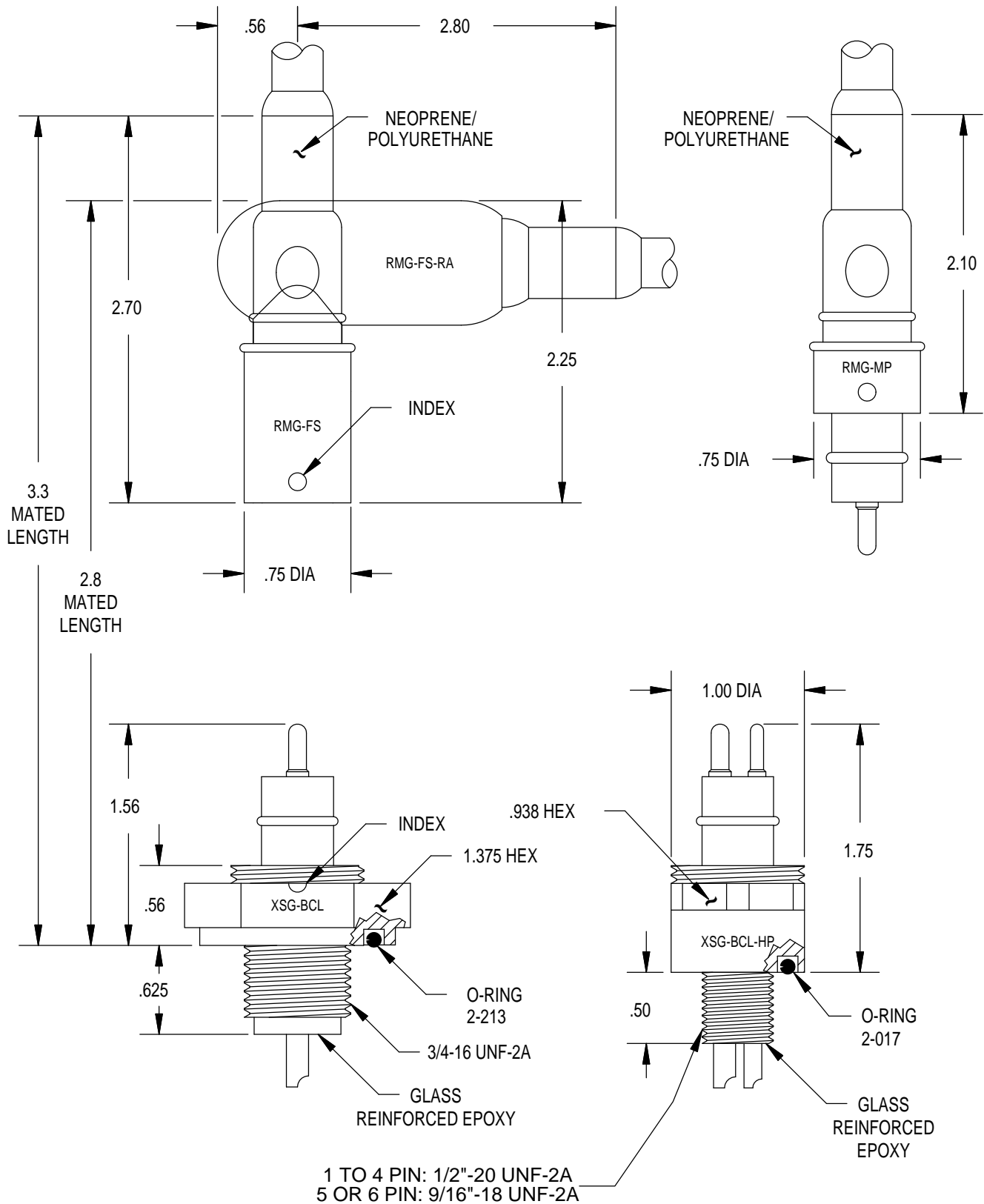
RMA-FS W/LOCKING SLEEVE

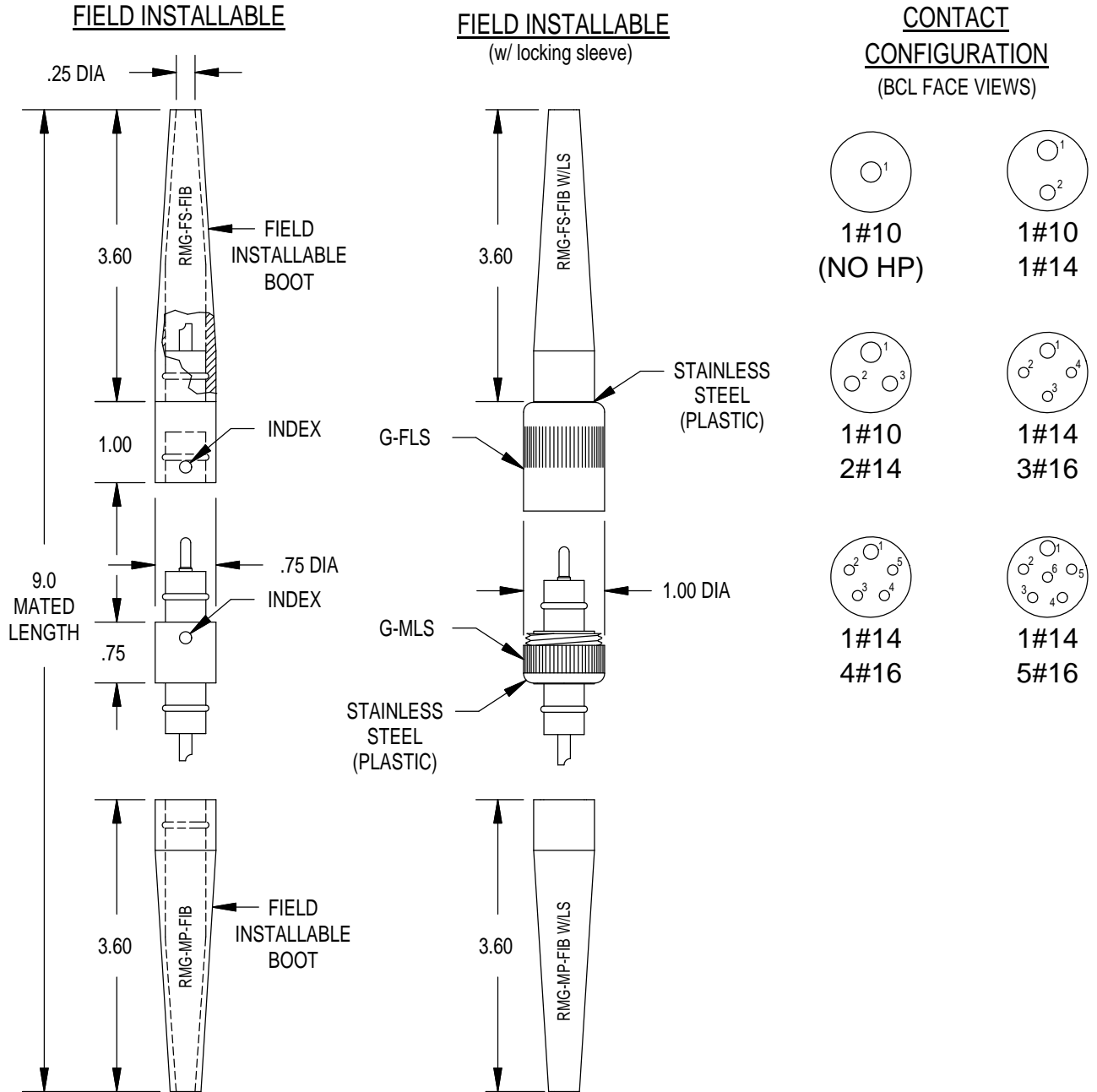


SLIP ON SERIES

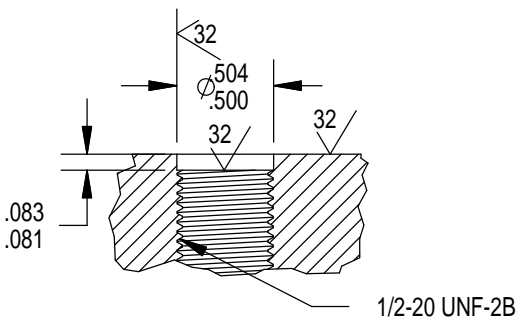
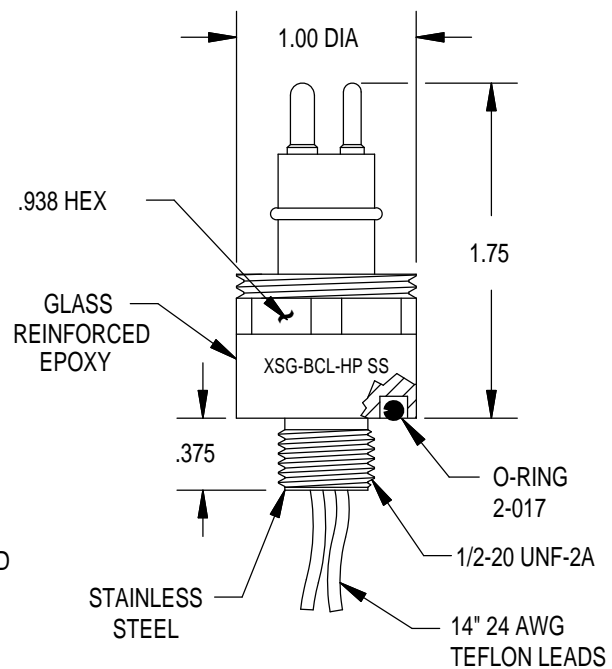
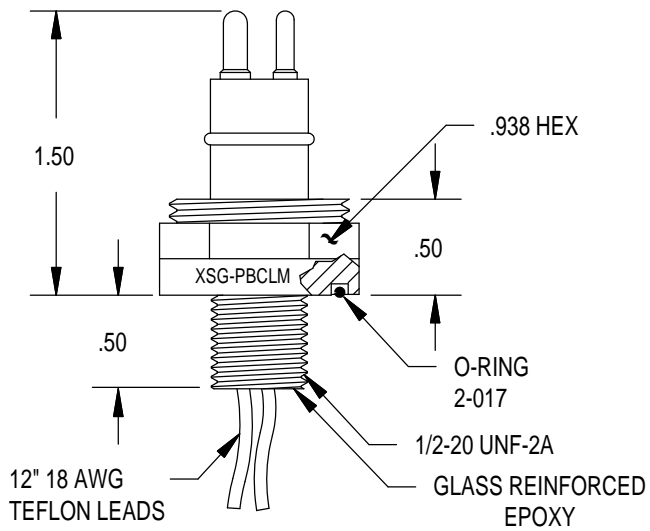
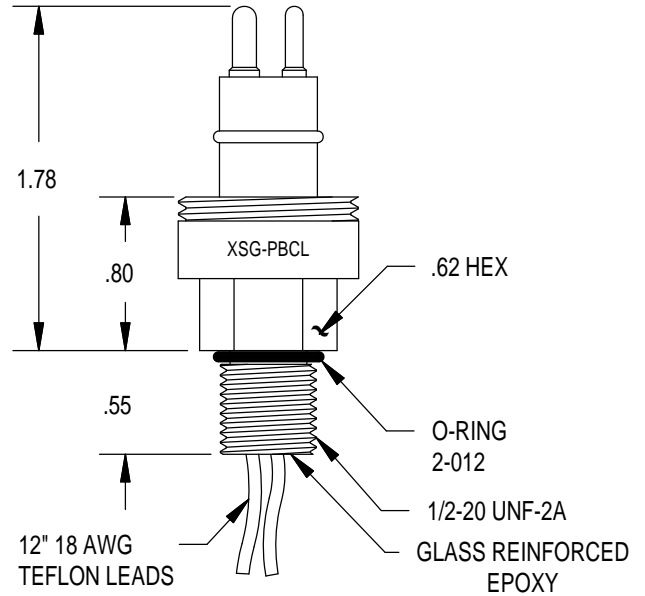
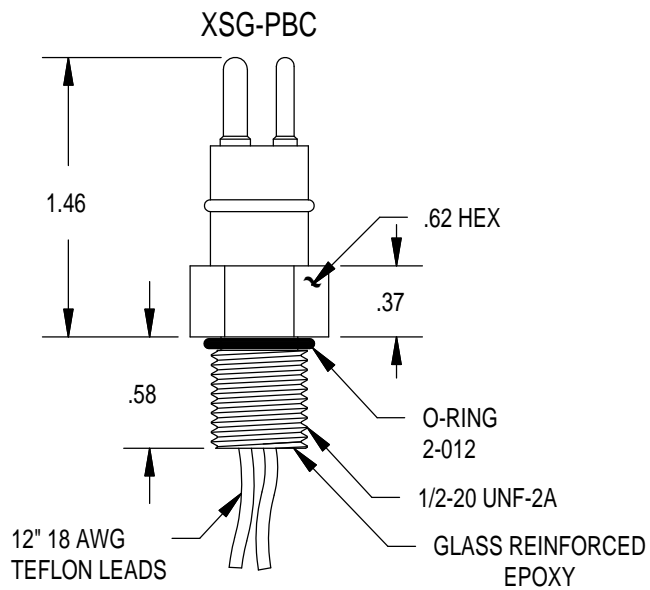


| | | | |
|---|------------------------|-----------------------------|------------------------|
| MOUNTING TORQUE FOR XSA-BC, XSB-BCL | not to exceed 6 in lbs | MOUNTING TORQUE FOR XSA-BCL | not to exceed 8 in lbs |
| | | MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR XSA-BC/BCL, XSB-BCL, RMA-MP | | DUMMY PLUG FOR RMA-FS | |
| RMA-FSD LP | | LOW PRESSURE < 4,000 psi | RMA-MPD-LP |
| | | HIGH PRESSURE > 4,000 psi | RMA-MPD-HP |
| NOTE: Locking sleeves available in plastic or stainless steel, see Technical Bulletin 20 40. * Must specify conductor diameter when ordering slip on series. | | | |

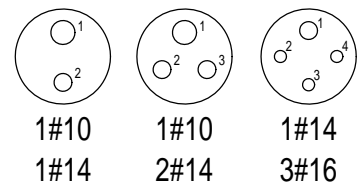




| | | | |
|--|-------------------------|--|--------------|
| MOUNTING TORQUE FOR XSG-BCL | not to exceed 70 in lbs | MATED PRESSURE RATING (psi) FOR XSG-BCL | 10,000 |
| MOUNTING TORQUE FOR XSG-BCL-HP | not to exceed 18 in lbs | MATED PRESSURE RATING (psi) FOR XSG-BCL-HP | 10,000 |
| DUMMY PLUG FOR XSG-BCL, RMG-MP | | DUMMY PLUG FOR RMG-FS | |
| RMG-*-FSD | | LOW PRESSURE < 4,000 psi | RMG-MPD-LP |
| | | HIGH PRESSURE > 4,000 psi | RMG-*-MPD-HP |
| NOTE: Locking sleeves available in plastic or stainless steel, see Technical Bulletin 20 40. * Please specify number of contacts. | | | |



CONTACT CONFIGURATION
(BCL FACE VIEWS)

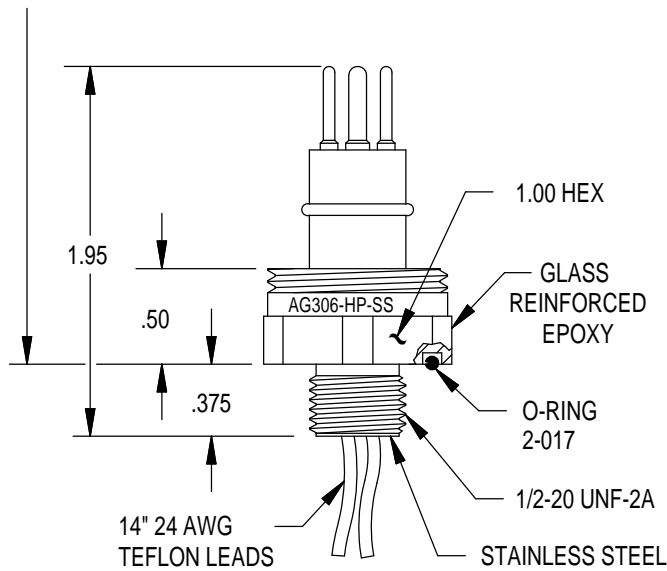
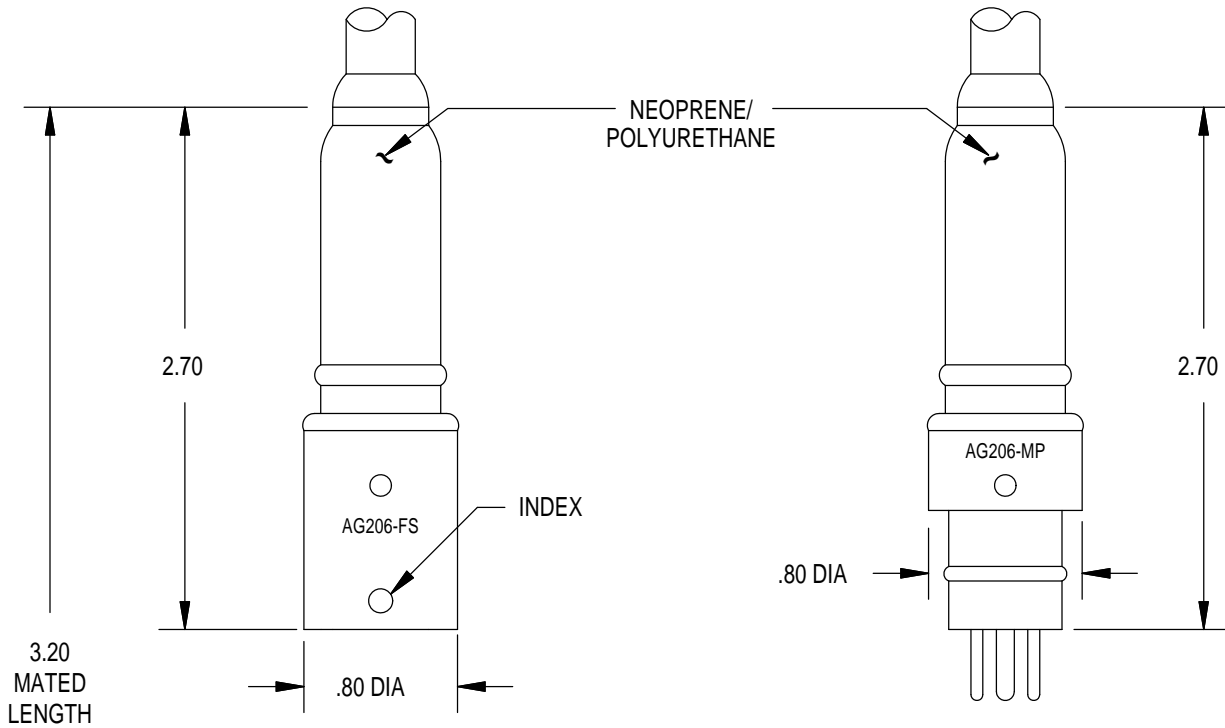


MOUNTING INSTRUCTIONS

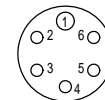
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|--|-------------------------|--|--------|
| MOUNTING TORQUE FOR XSG-PBC/PBCL/PBCLM | not to exceed 15 in lbs | MATED PRESSURE RATING (psi) FOR XSG-PBC/PBCL/PBCLM | 10,000 |
| NOTE: See Technical Bulletin 20 21 for dummy specifications. | | | |

AG206/AG306

GLASS REINFORCED EPOXY /
RUBBER / POLYURETHANE MOLDED SERIES

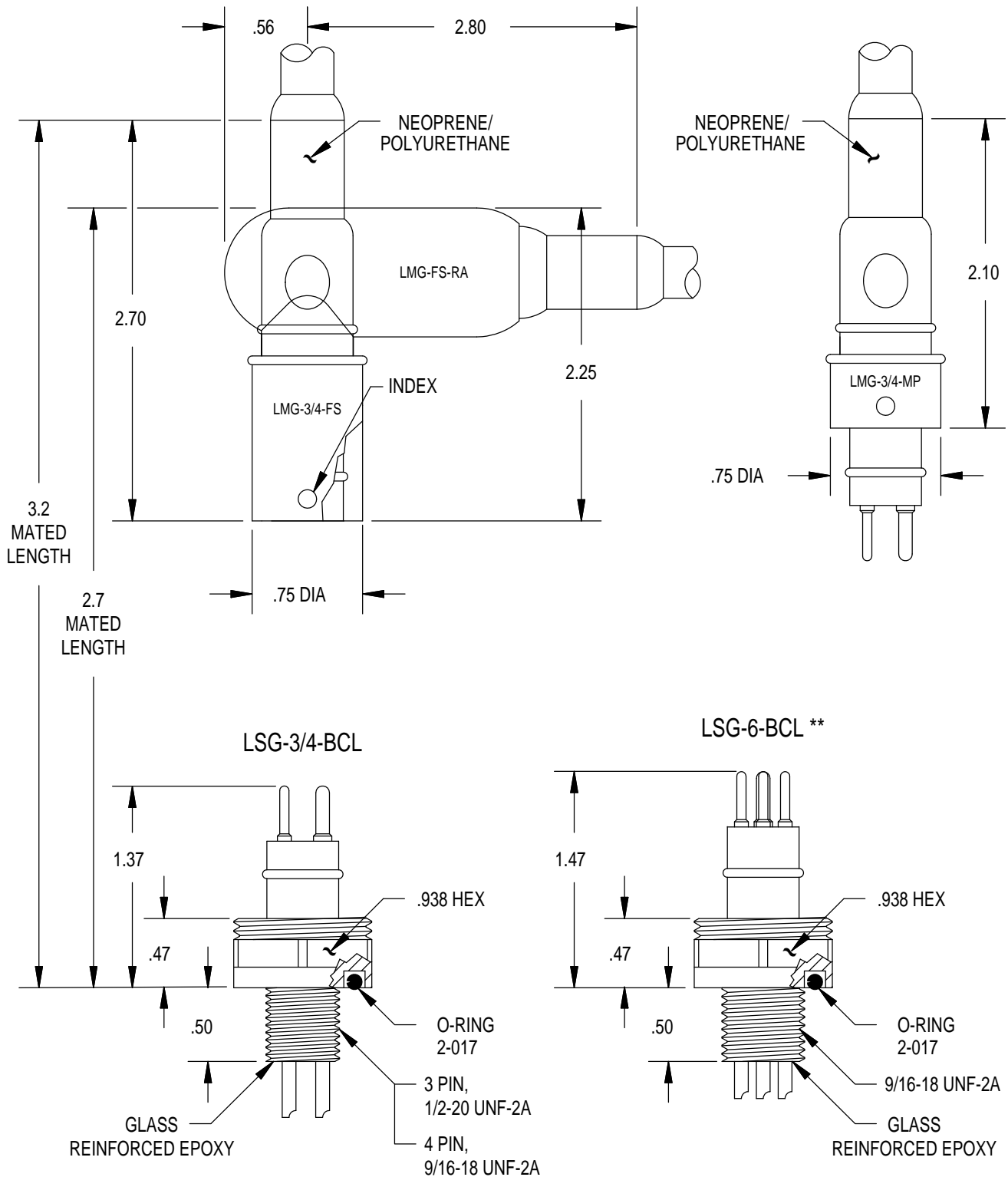


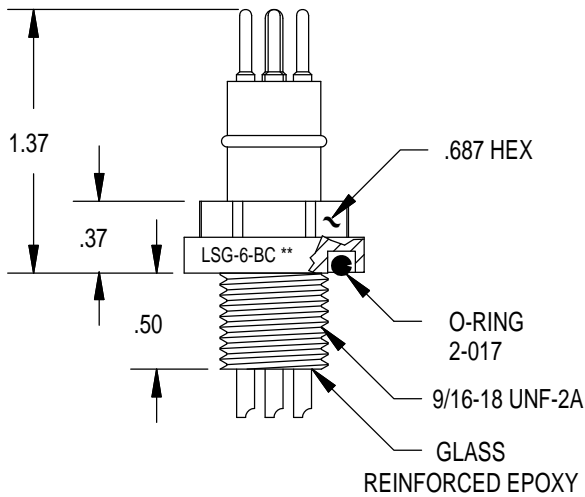
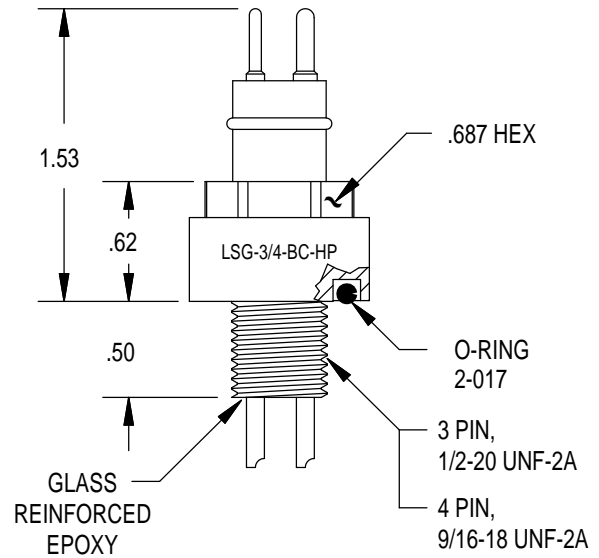
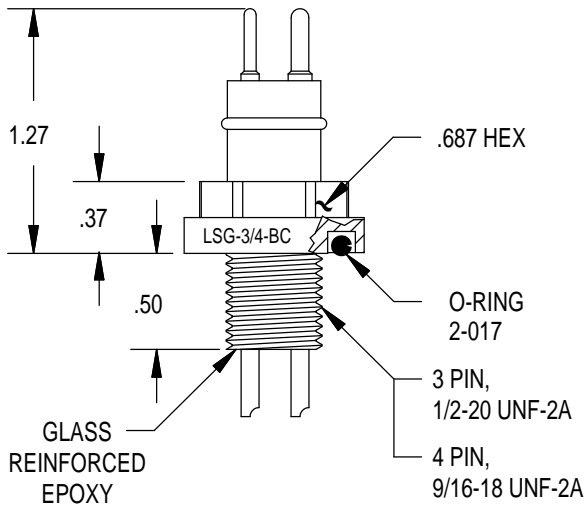
CONTACT CONFIGURATION
AG-206/306 ONLY
(FACE VIEW-BCL)



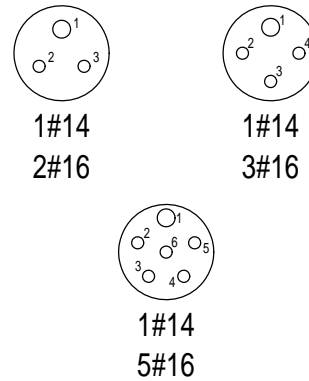
1#14
5#16

| | | | |
|--|-------------------------|-----------------------------|---------------|
| MOUNTING TORQUE FOR AG-306 | not to exceed 15 in lbs | MATED PRESSURE RATING (PSI) | 10,000 |
| DUMMY PLUG FOR AG-306 | | DUMMY PLUG FOR AG-206-FS | |
| AG-206-FSD | | LOW PRESSURE < 4,000 psi | AG-206-MPD-LP |
| | | HIGH PRESSURE > 4,000 psi | AG-206-MPD-HP |
| NOTE: Locking sleeves available in plastic or stainless steel, see Tech. Bulletin 20 40. | | | |

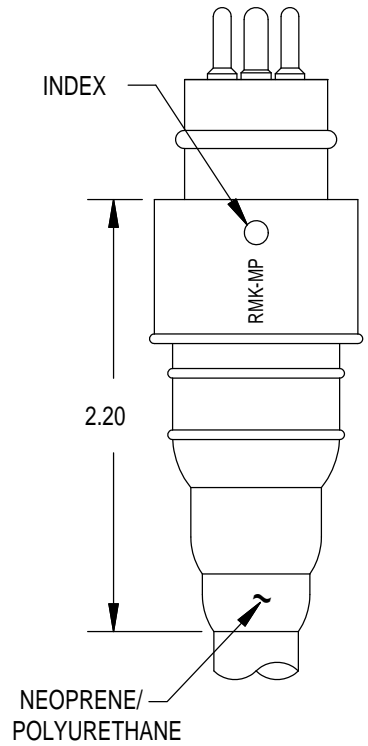
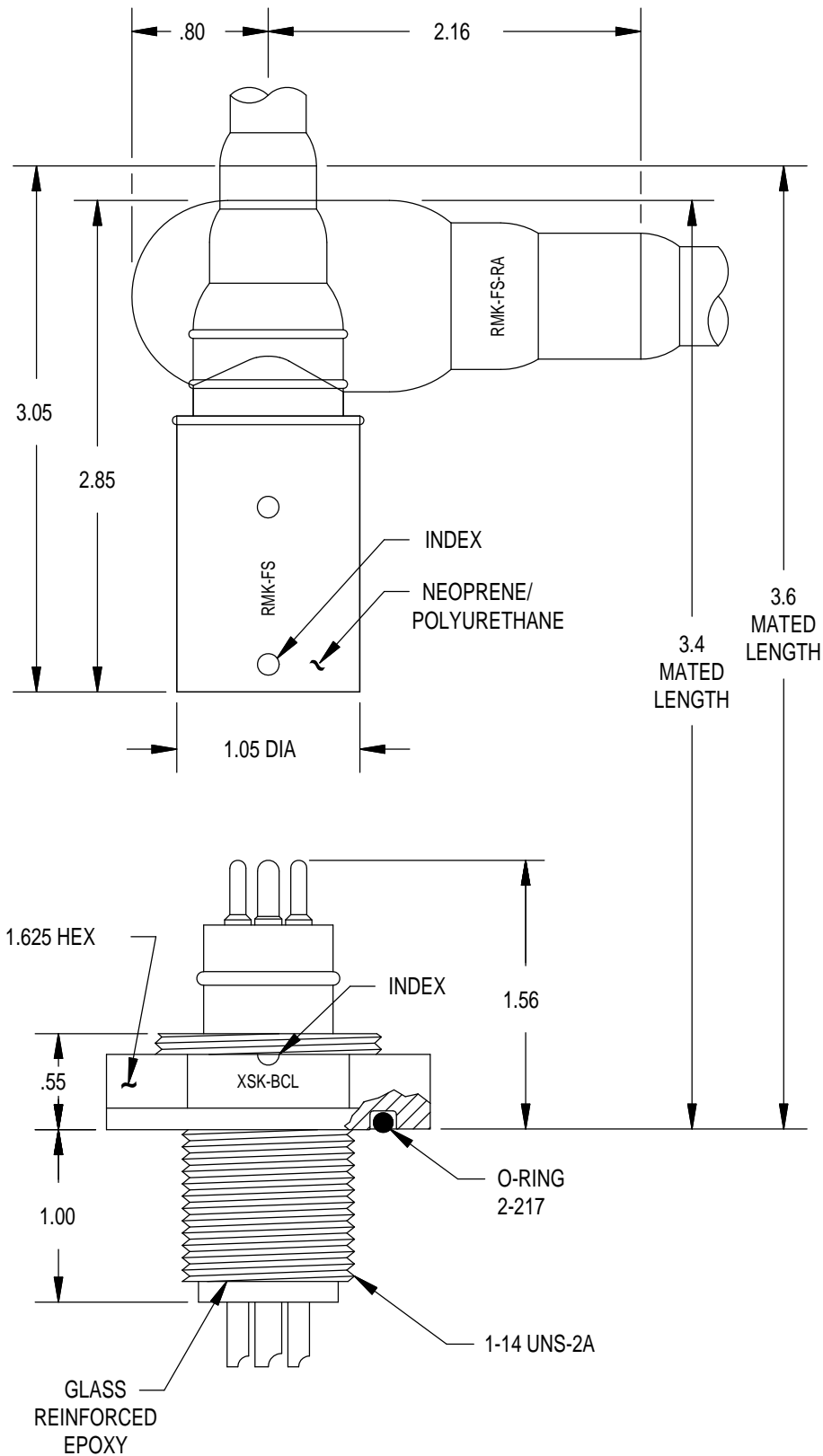




CONTACT CONFIGURATION
(BCL FACE VIEWS)

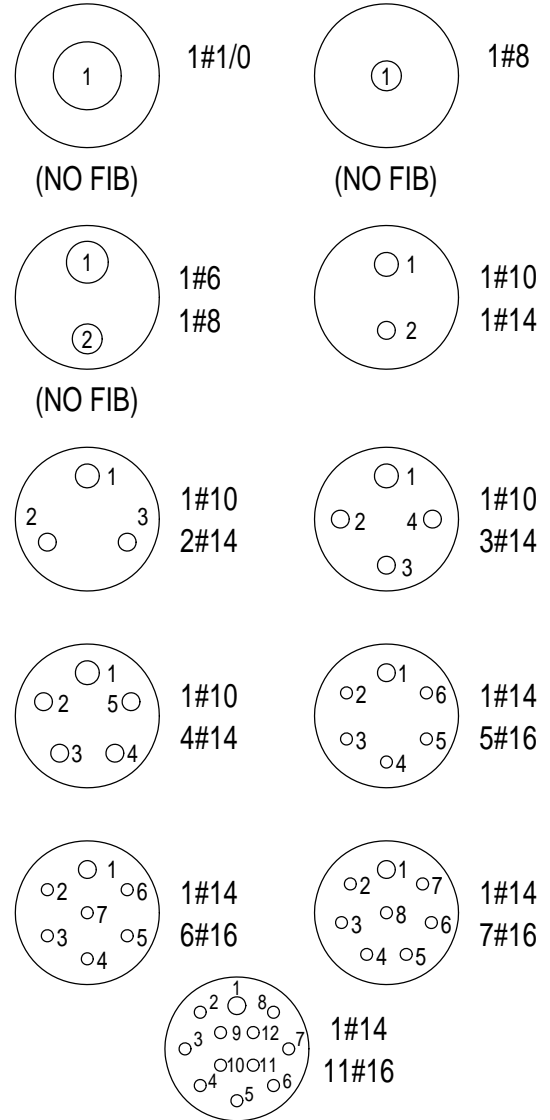
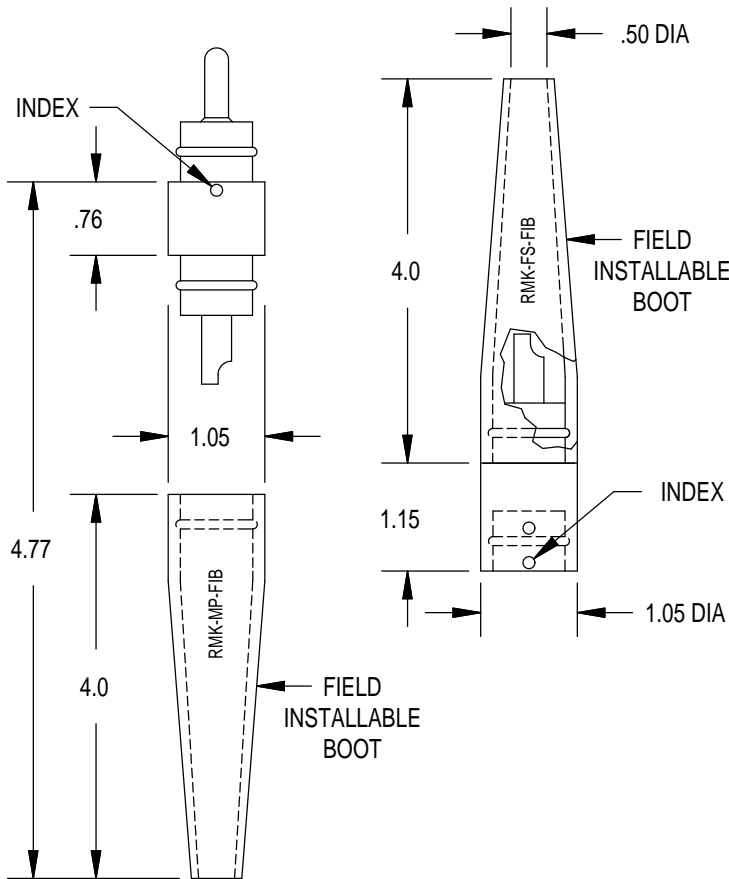


| | | | |
|---|---------------------------|--|--------|
| MOUNTING TORQUE FOR LSG-BCL/BC | not to exceed 18 in lbs | MATED PRESSURE RATING (psi) FOR LSG-BCL/BC | 3,000 |
| MOUNTING TORQUE FOR LSG-BC-HP | not to exceed 18 in lbs | MATED PRESSURE RATING (psi) FOR LSG-BC-HP | 10,000 |
| DUMMY PLUG FOR LSG-BCL/BC/BC-HP, LMG-MP | | DUMMY PLUG FOR LMG-FS | |
| LMG-*-FSD | LOW PRESSURE < 4,000 psi | LMG-*-MPD-LP | |
| | HIGH PRESSURE > 4,000 psi | LMG-*-MPD-HP | |
| NOTE: Locking sleeves available in plastic or stainless steel, see Technical Bulletin 20 40. * Please specify number of contacts (3 or 4). | | | |
| ** LSG-6 CONNECTORS MATE TO RMG-6-FS. See Technical Bulletin 20 20. | | | |



FIELD INSTALLABLE

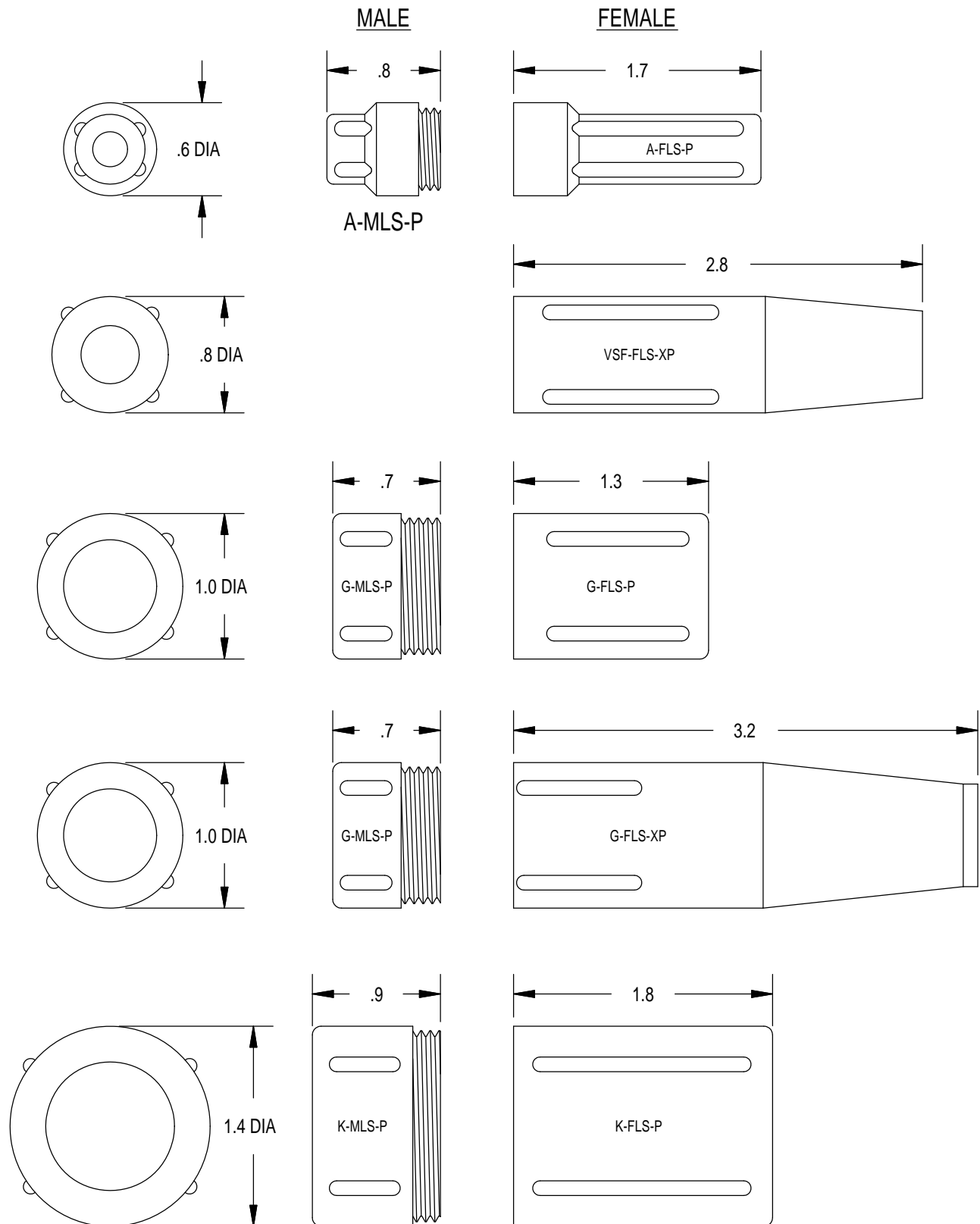
CONTACT CONFIGURATION
(BCL FACE VIEWS)



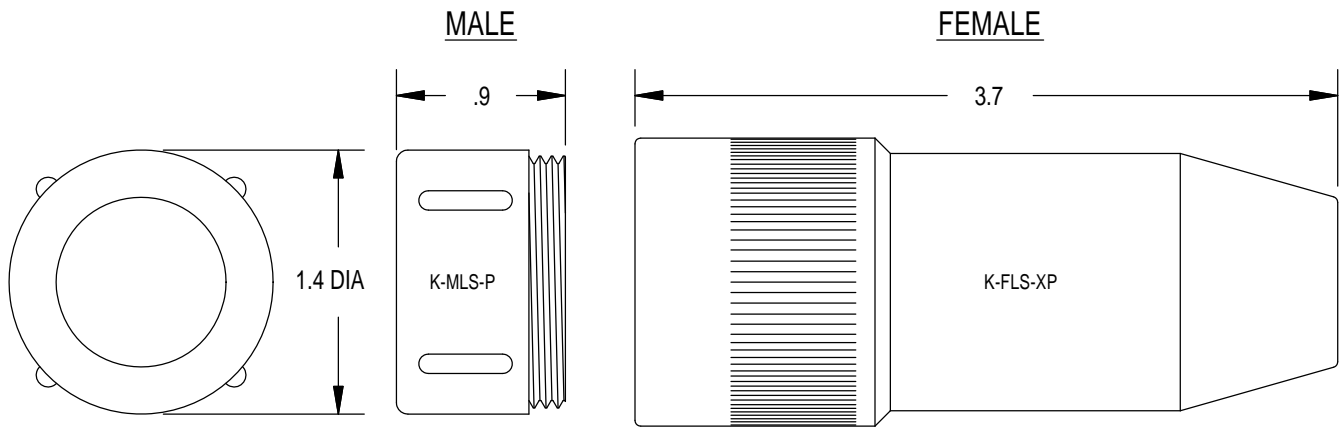
| | | | |
|--|---------------------------|---|--------|
| MOUNTING TORQUE FOR XSK-BCL | not to exceed 130 in lbs | MATED PRESSURE RATING (psi) FOR XSK-BCL | 10,000 |
| DUMMY PLUG FOR XSK-BCL, RMK-MP | | DUMMY PLUG FOR RMK-FS | |
| RMK*-FSD | LOW PRESSURE < 4,000 psi | RMK-MPD-LP | |
| | HIGH PRESSURE > 4,000 psi | RMK*-MPD-HP | |
| NOTE: Locking sleeves available in plastic or stainless steel, see Technical Bulletin 20 40. * Please specify number of contacts. | | | |

LOCKING SLEEVES

PLASTIC LOCKING SLEEVES

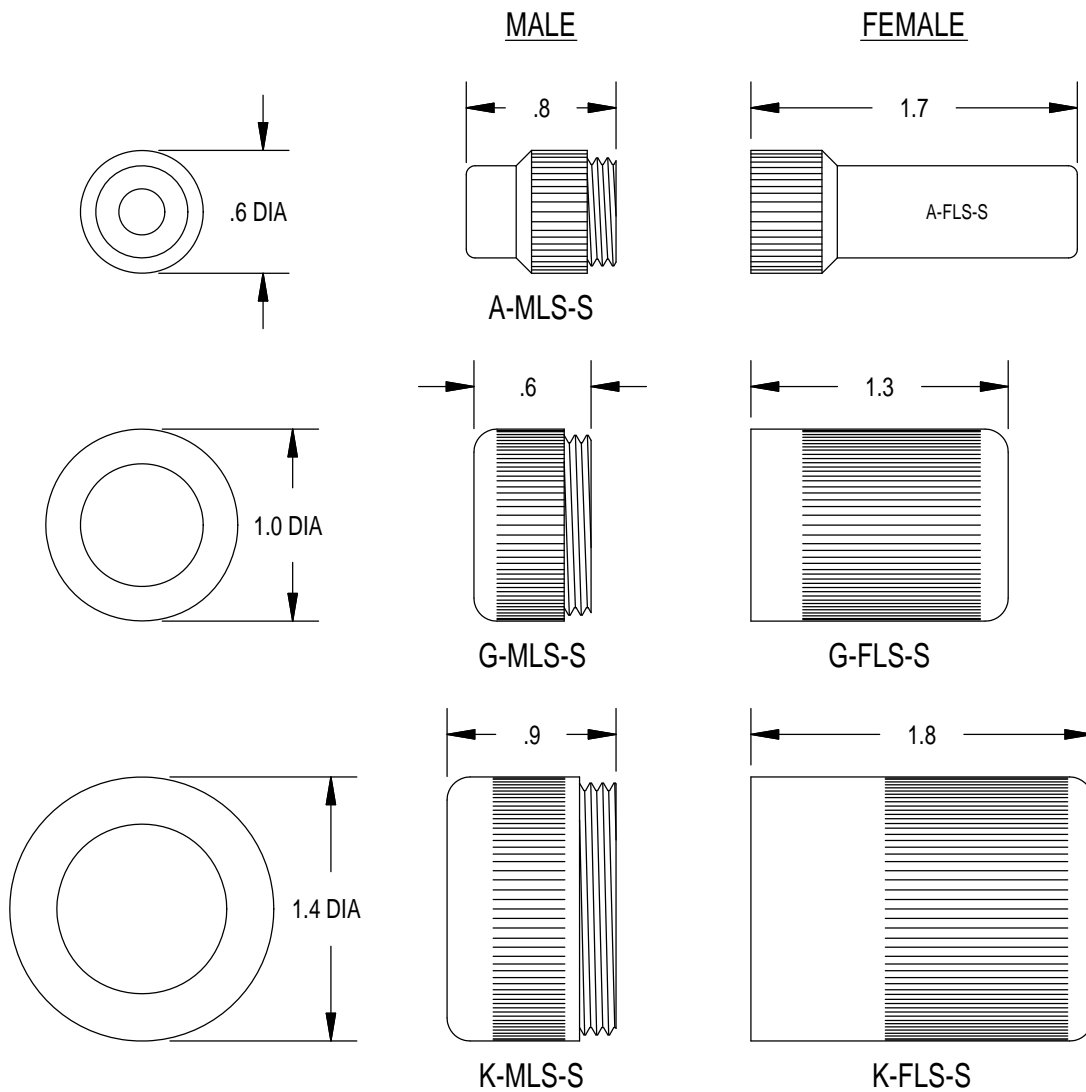


LOCKING SLEEVES



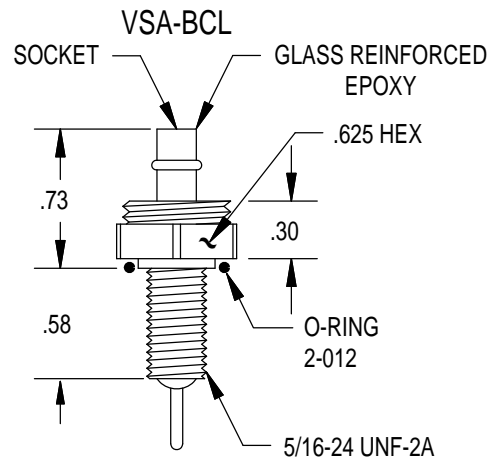
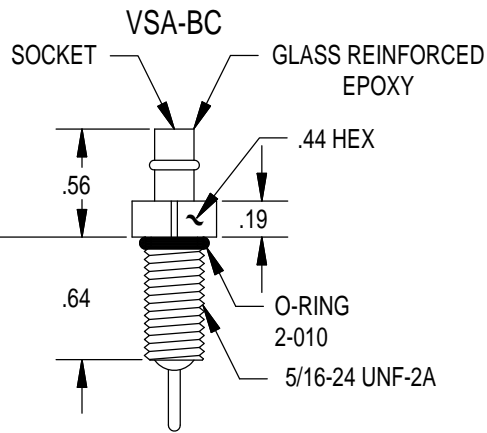
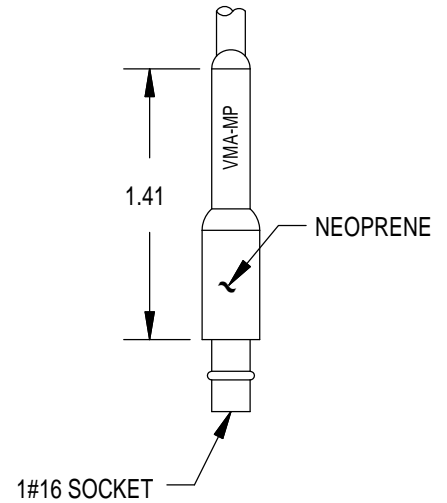
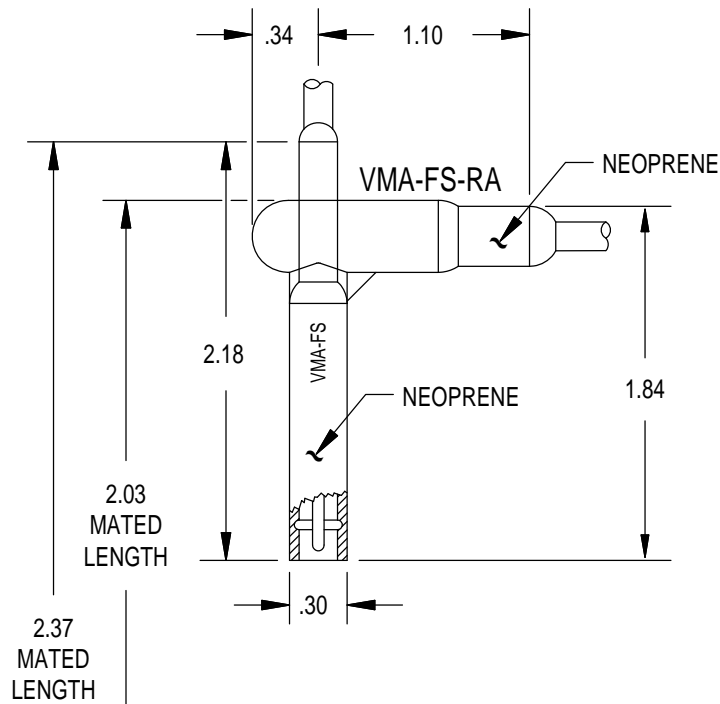
NOTE: XP is recommended to reduce conductor to contact fatigue.

STAINLESS STEEL LOCKING SLEEVES

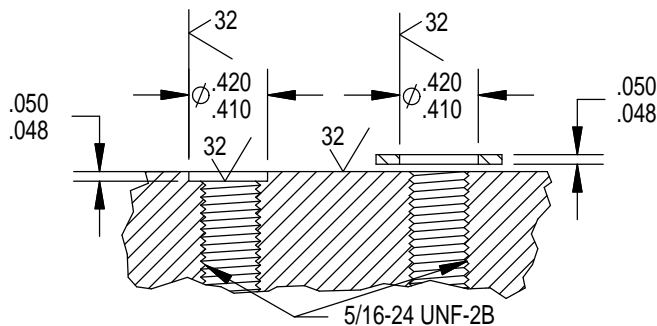


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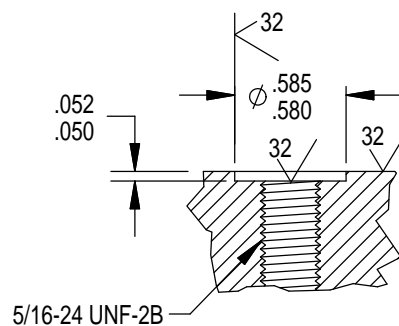
| | |
|--------------------------|--|
| DESCRIPTION AND MATERIAL | <ul style="list-style-type: none">• Identical to XS-RM connectors except sockets replace pins.• Molded neoprene or polyurethane (for G-size) inline connectors and glass reinforced epoxy, stainless steel or aluminum bulkhead connectors.• One to twelve contacts.• Up to 600 VDC (For higher voltages, contact factory).• Up to 10,000 PSI in mated condition.• Bulkhead connector design open face pressure rated to 5000 psi.• Contacts gold plated per MIL-G-45204.• Field installable connectors with locking sleeve available.• Field installable connectors have a removable tapered boot for easy access to solder pots during field installation. |
| CABLE | <ul style="list-style-type: none">• Connector's amperage and voltage may be limited by amperage and voltage rating of cable to which connector is molded.• Inline connectors in this series, except field installables, are provided on a standard 24" length of 18 AWG SO cable unless otherwise specified.(Note:VMA provided on 24" length of 20 AWG.) |
| USES | <ul style="list-style-type: none">• Light to medium duty applications.• Hazardous environment.• Power transmission.• Signal telemetry.• FIB - Field installable applications. |
| GUIDELINES | <ul style="list-style-type: none">• All mounting surfaces require a 32 finish.• Accomplish mating with minimum twisting and flexing.• Align indexes.• Because sockets replace pins in this series, there is less damage potential in unplugged conditions.• FS can trap water (suggest flush with alcohol and blow dry).• Lubricate MP mating side with 3M Silicone Lubricant or Dow Corning #111 Valve Lubricant or equivalent.• Lubricate o-rings with Dow Corning #111 Valve Lubricant or equivalent.• Avoid o-ring cuts and nicks.• Replace o-rings when re-using connectors.• Avoid contact with noxious solvents.• Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time. |



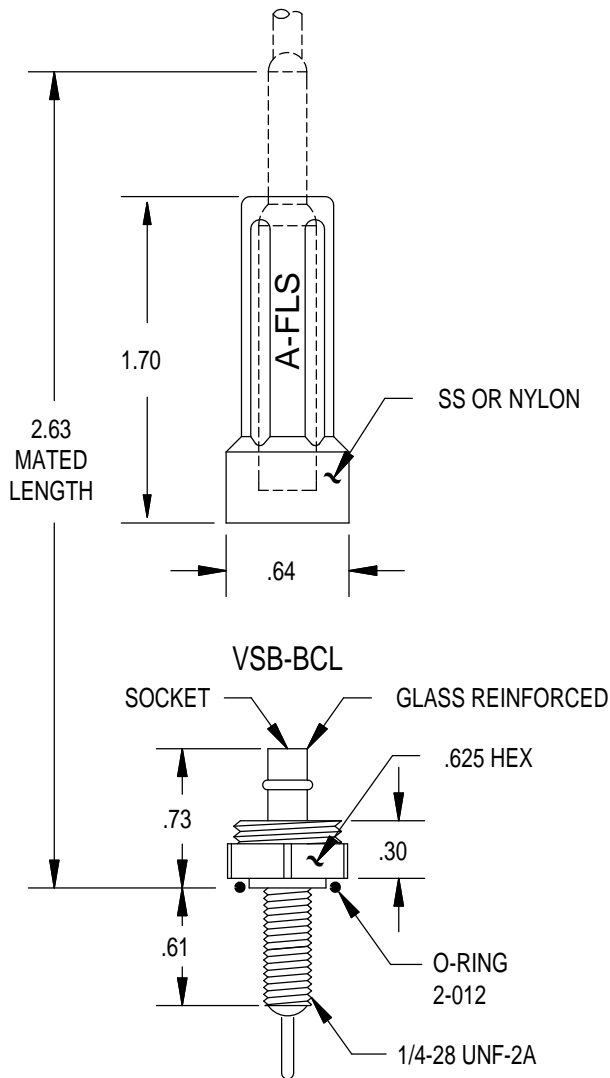
MOUNTING INSTRUCTIONS VSA-BC



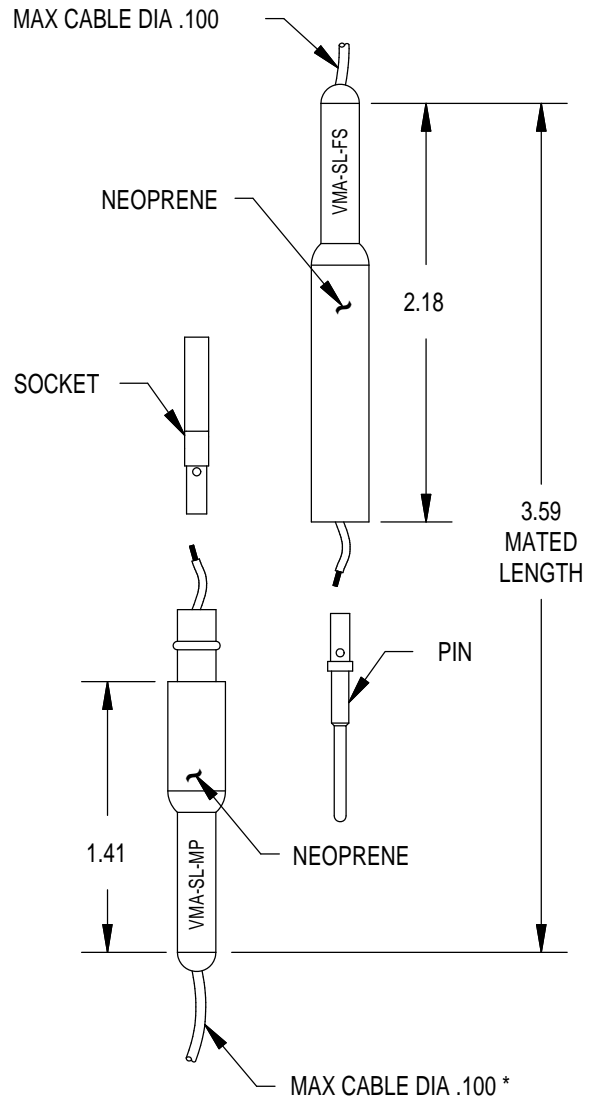
MOUNTING INSTRUCTIONS VSA-BCL



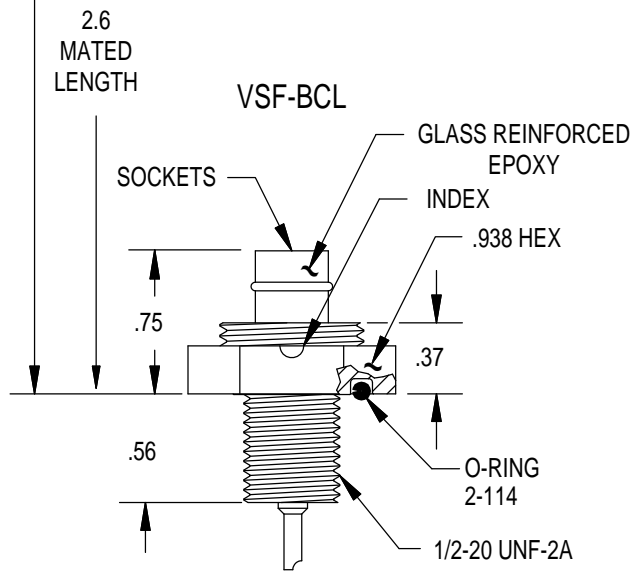
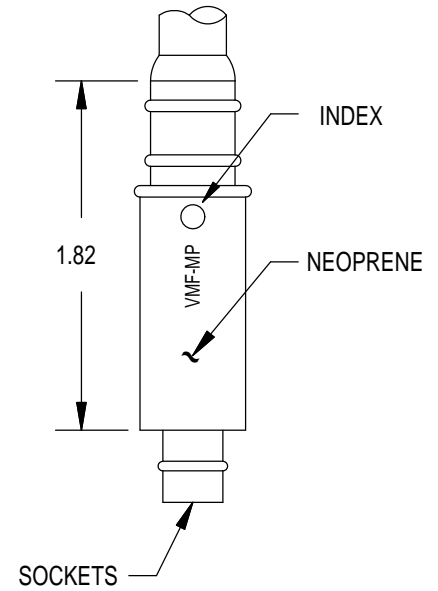
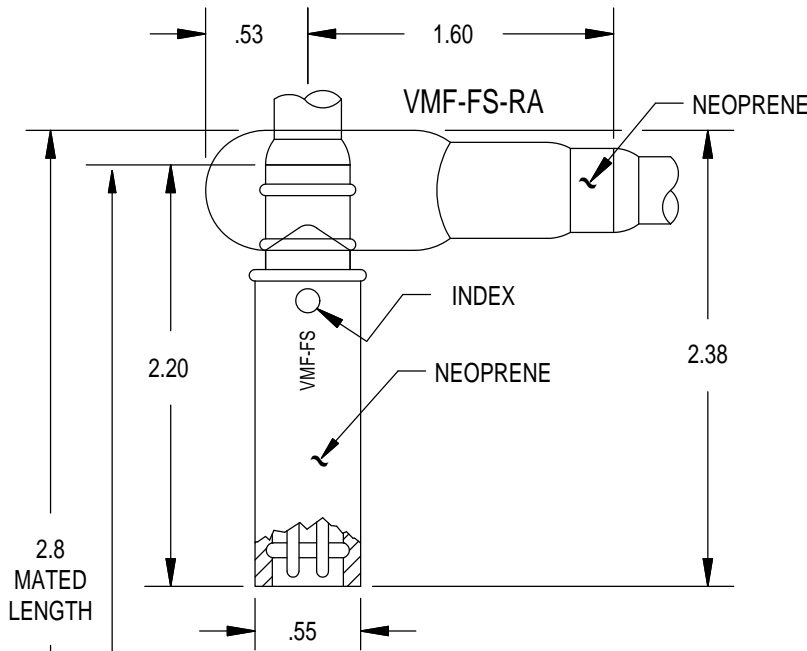
VMA-FS W/LOCKING SLEEVE



SLIP ON SERIES



| | | | |
|---|------------------------|-----------------------------|------------------------|
| MOUNTING TORQUE FOR VSA-BC | not to exceed 5 in lbs | MOUNTING TORQUE FOR VSA-BCL | not to exceed 8 in lbs |
| MOUNTING TORQUE FOR VSB-BCL | not to exceed 6 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR VSA-BC, VSA-BCL, VSB-BCL, VMA-MP | | DUMMY PLUG FOR VMA-FS | |
| LOW PRESSURE < 4,000 psi | VMA-FSD-LP | VMA-MPD | |
| HIGH PRESSURE > 4,000 psi | VMA-FSD-HP | | |
| NOTE: Locking sleeves available in plastic or stainless steel, see Tech. Bulletin 25 50. * Must specify conductor diameter when ordering slip on series. | | | |



CONTACT CONFIGURATION
(BCL FACE VIEWS)



1#14



1#16

1#20



2#16

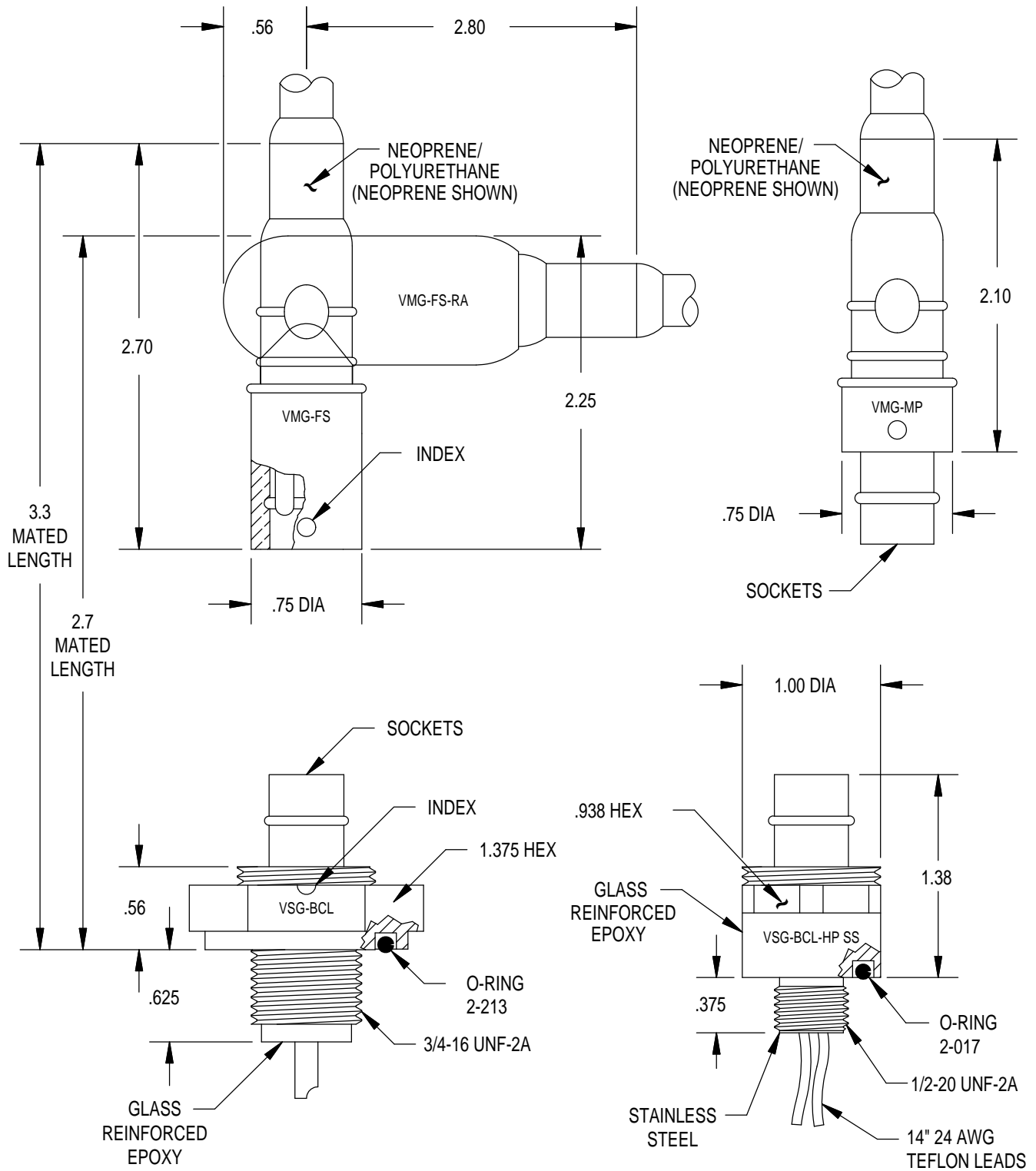


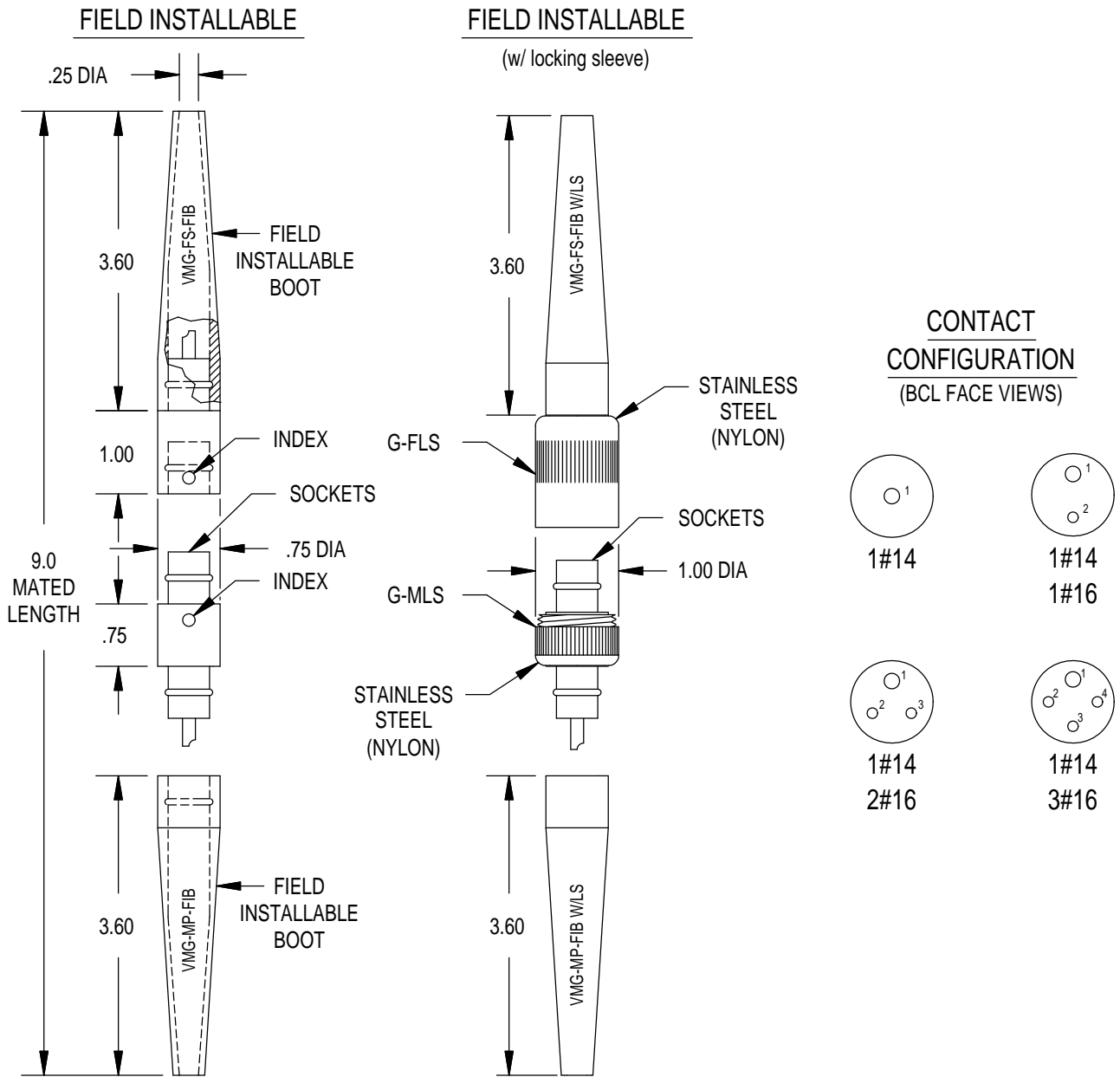
1#16

2#20

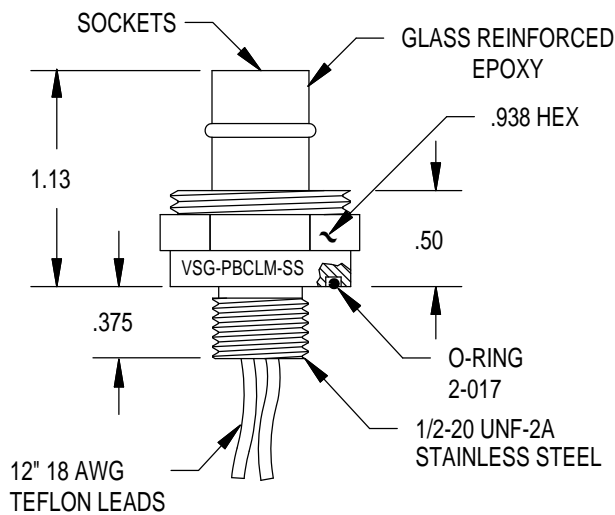
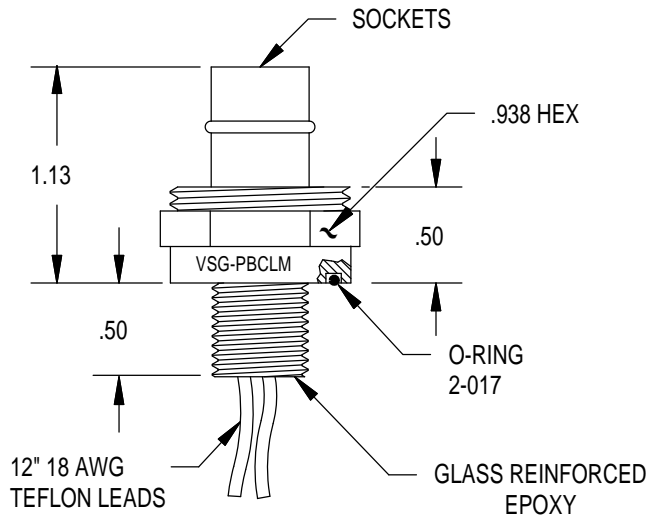
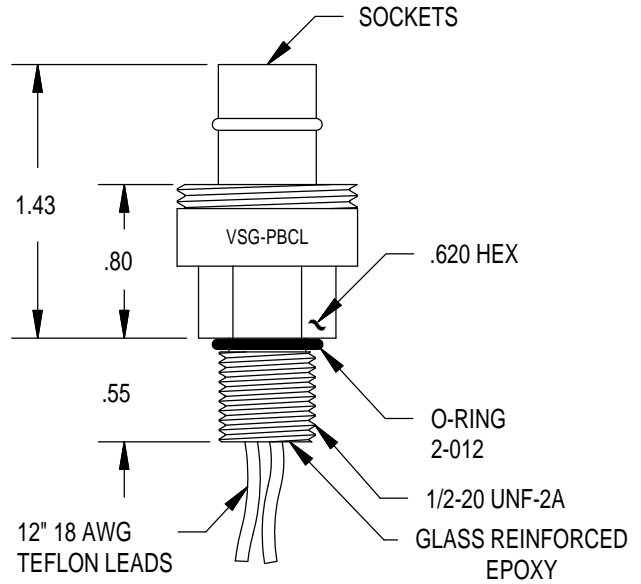
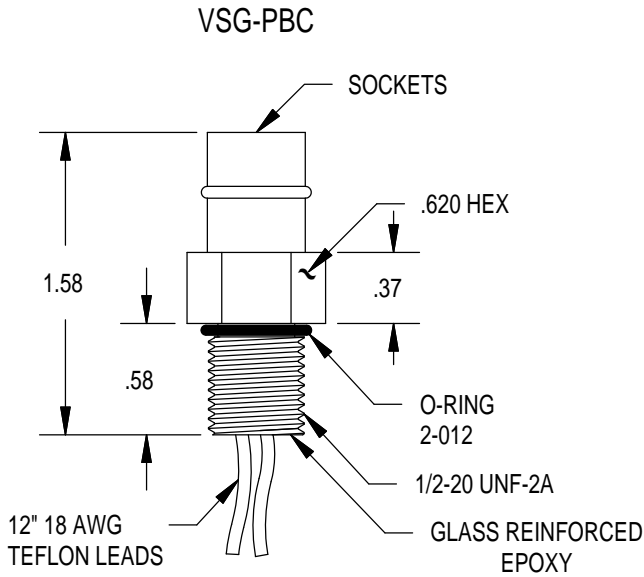
| | | | |
|---|-------------------------|-----------------------------|--------|
| MOUNTING TORQUE FOR BCL | not to exceed 15 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR VSF-BCL, VMF-MP | | DUMMY PLUG FOR VMF-FS | |
| LOW PRESSURE < 4,000 psi | VMF-FSD-LP | VMF-*-MPD | |
| HIGH PRESSURE > 4,000 psi | VMF*-FSD-HP | | |
| NOTE: Locking sleeves available in plastic, see Technical Bulletin 25 50. * Please specify number of contacts. | | | |

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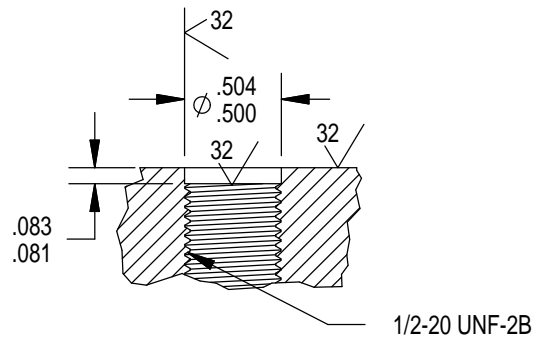




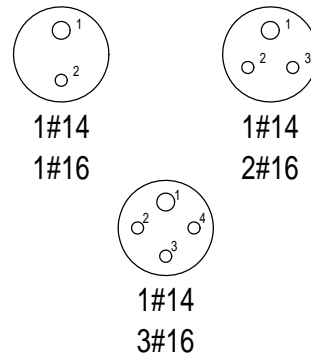
| | | | |
|--|-------------------------|---|--------|
| MOUNTING TORQUE FOR VSG-BCL | not to exceed 70 in lbs | MATED PRESSURE RATING (psi) FOR VSG-BCL | 10,000 |
| DUMMY PLUG FOR VSG-BCL/BCL HP SS/PBC/PBCL/PBCLM, VMG-MP | | DUMMY PLUG FOR VMG-FS | |
| LOW PRESSURE < 4,000 psi | VMG-FSD-LP | VMG*-MPD | |
| HIGH PRESSURE > 4,000 psi | VMG* -FSD-HP | | |
| NOTE: Locking sleeves available in plastic or stainless steel, see Technical Bulletin 25 50. * Please specify number of contacts. | | | |



MOUNTING INSTRUCTIONS

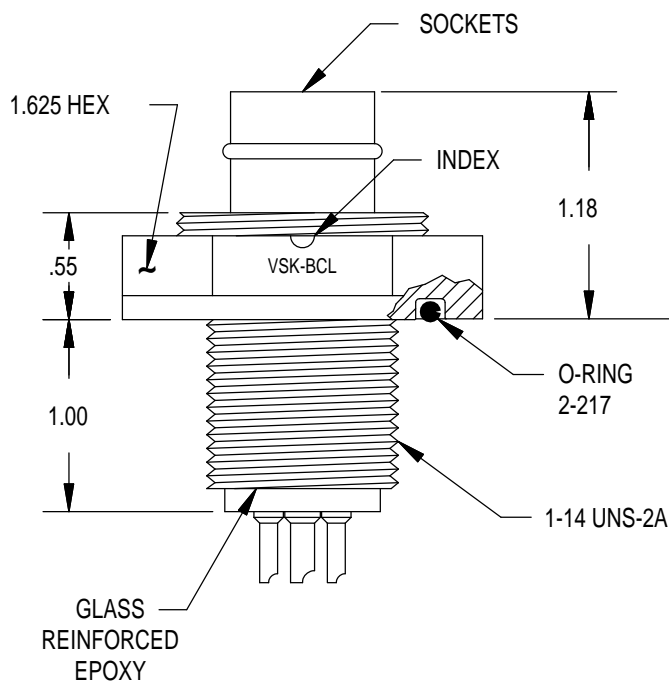
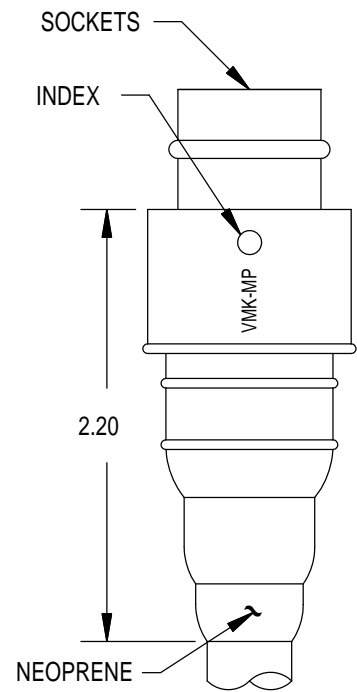
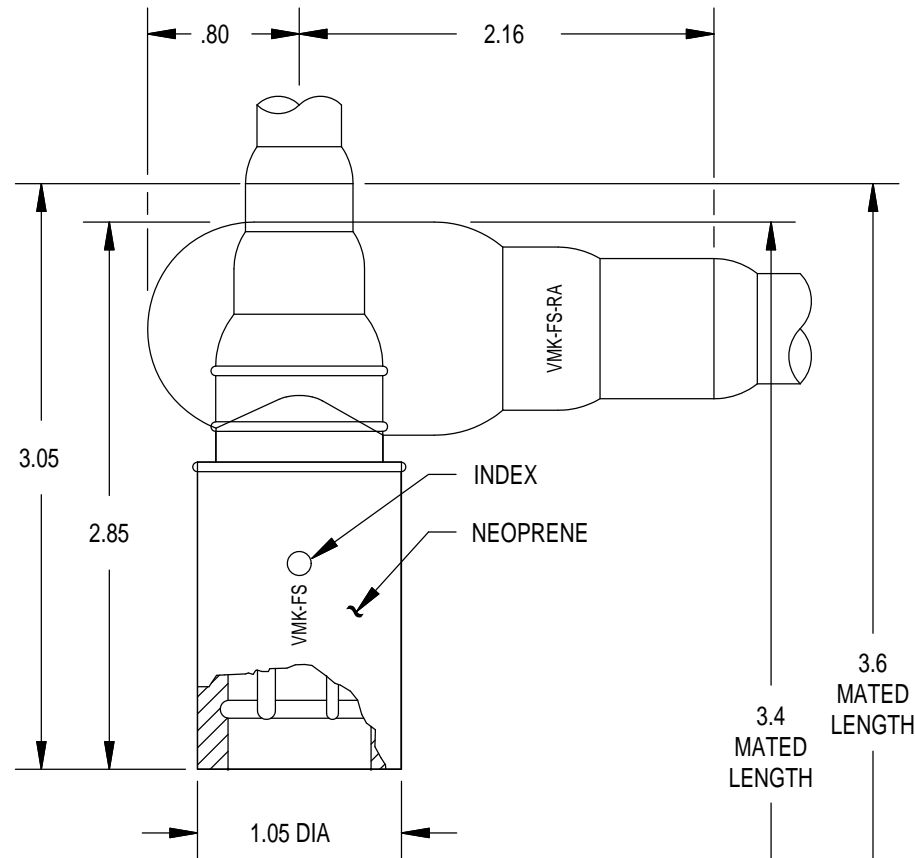


CONTACT CONFIGURATION (BCL FACE VIEWS)



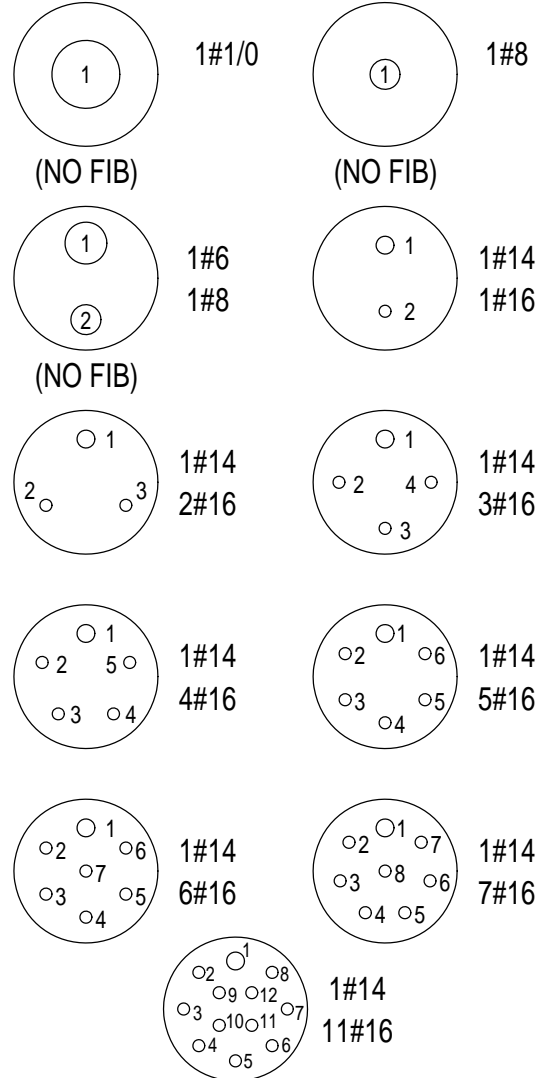
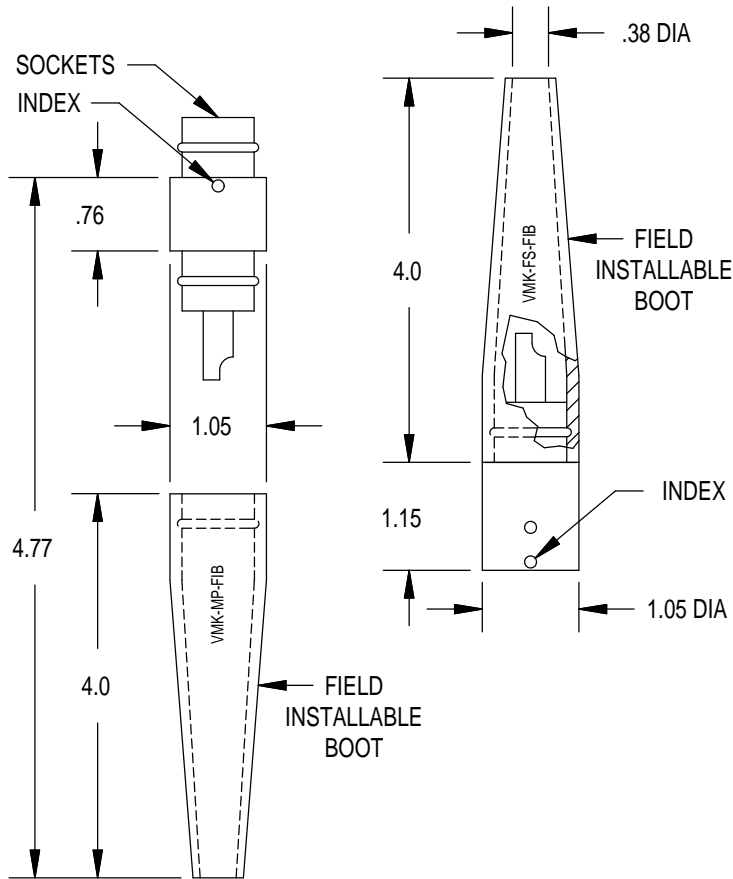
| | | | |
|--|-------------------------|--|-------|
| MOUNTING TORQUE FOR VSG-PBC/PBCL/PBCLM | not to exceed 15 in lbs | MATED PRESSURE RATING (psi) FOR VSG-PBC/PBCL/PBCLM | 5,000 |
| NOTE: See Technical Bulletin 25 31 for dummy specifications. | | | |

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FIELD INSTALLABLE

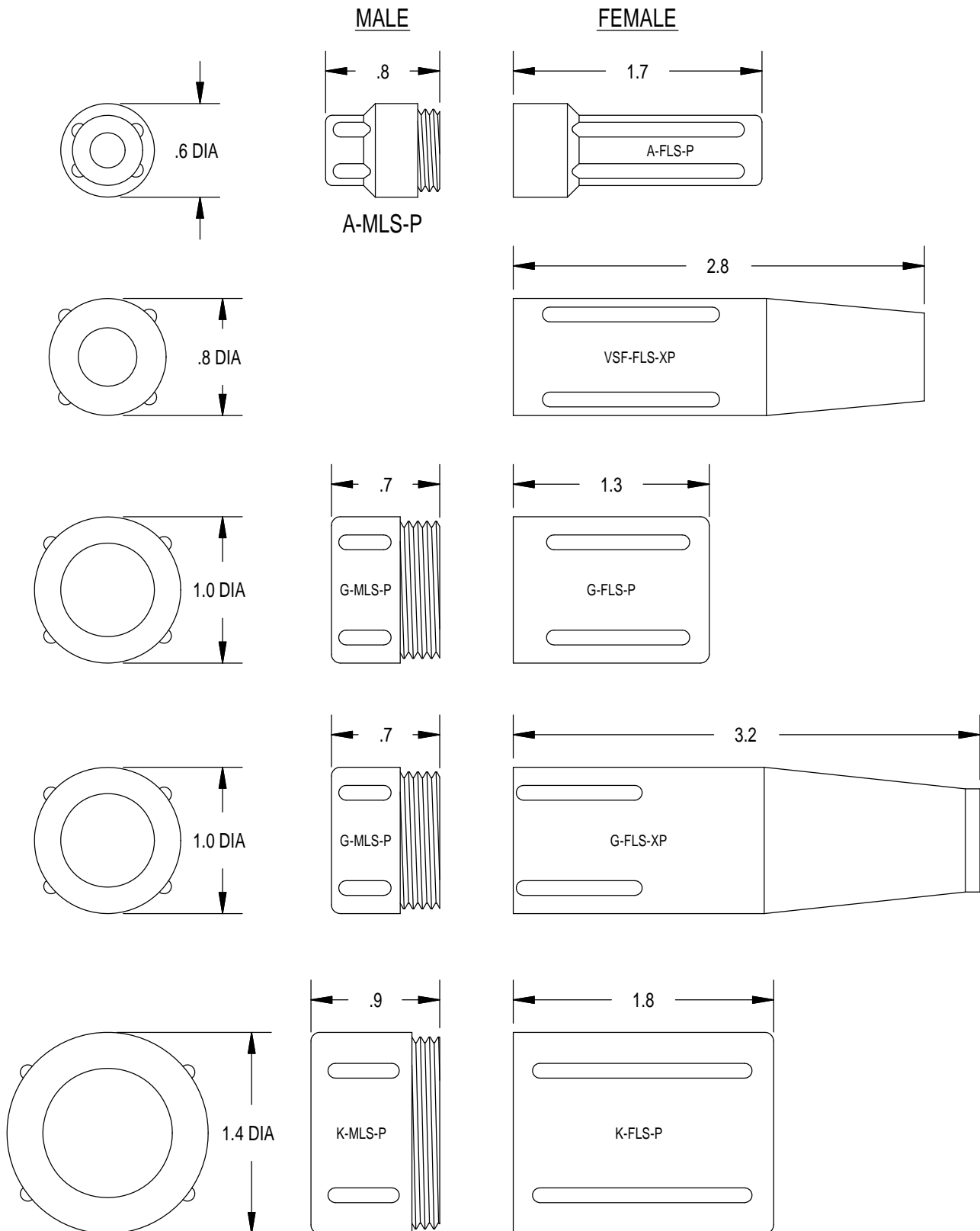
CONTACT CONFIGURATION
(FACE VIEW-BCL)



| | | | |
|--|--------------------------|---|--------|
| MOUNTING TORQUE FOR VSK-BCL | not to exceed 130 in lbs | MATED PRESSURE RATING (psi) FOR VSK-BCL | 10,000 |
| DUMMY PLUG FOR VSK-BCL, VMK-MP | | DUMMY PLUG FOR VMK-FS | |
| LOW PRESSURE < 4,000 psi | VMK-FSD-LP | VMK*-MPD | |
| HIGH PRESSURE > 4,000 psi | VMK*-FSD-HP | | |
| NOTE: Locking sleeves available in plastic or stainless steel, see Technical Bulletin 25 50. * Please specify number of contacts. | | | |

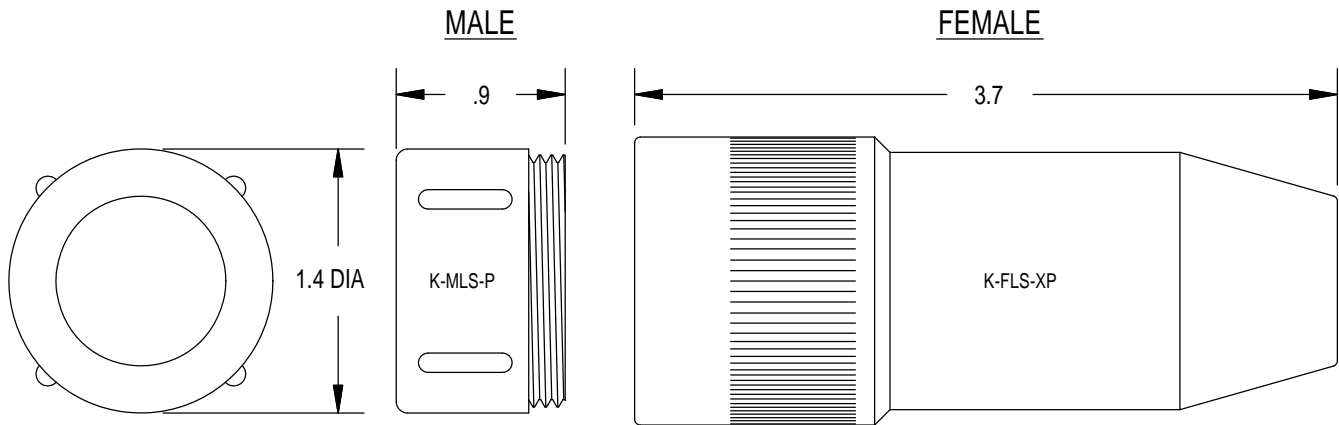
LOCKING SLEEVES

PLASTIC LOCKING SLEEVES



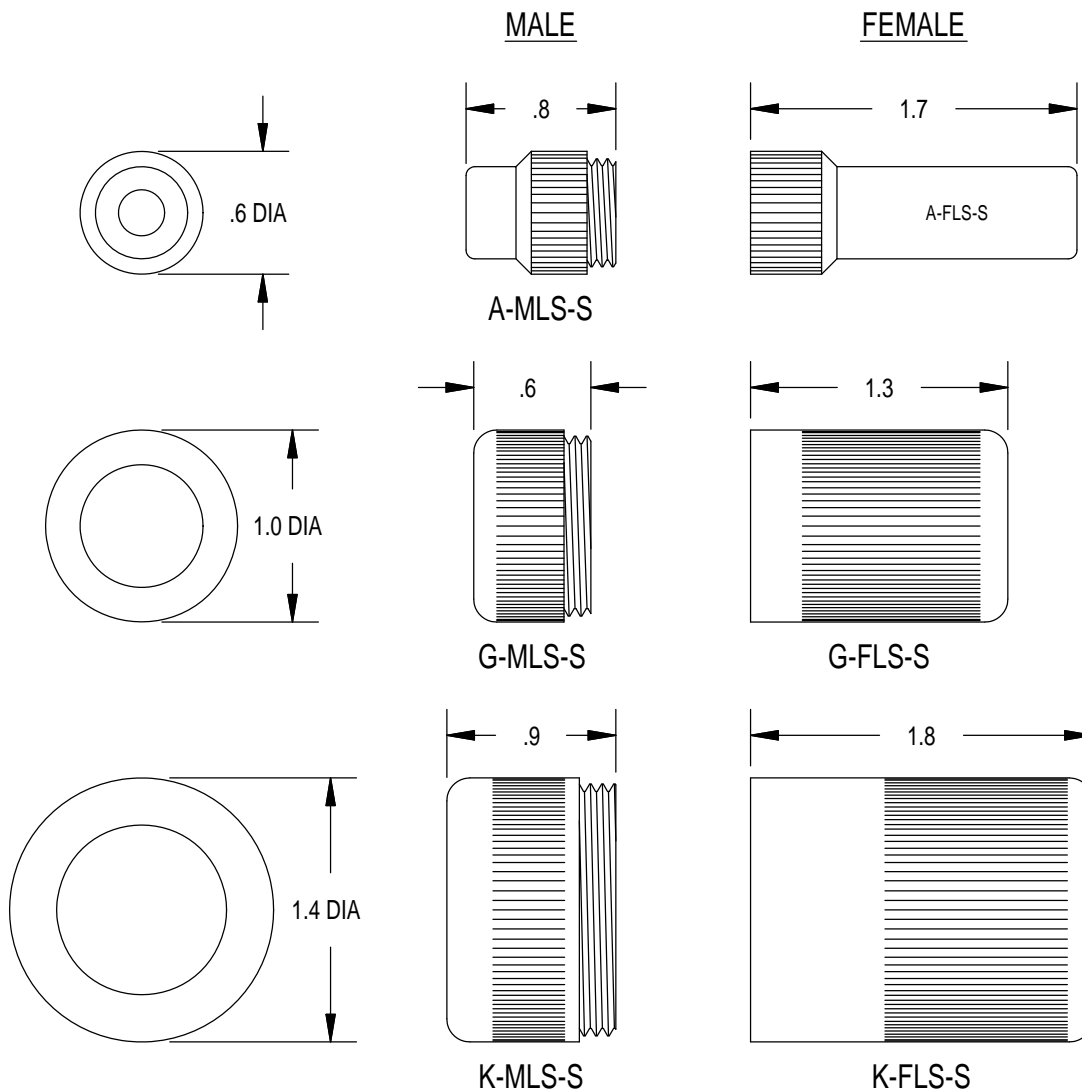
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LOCKING SLEEVES

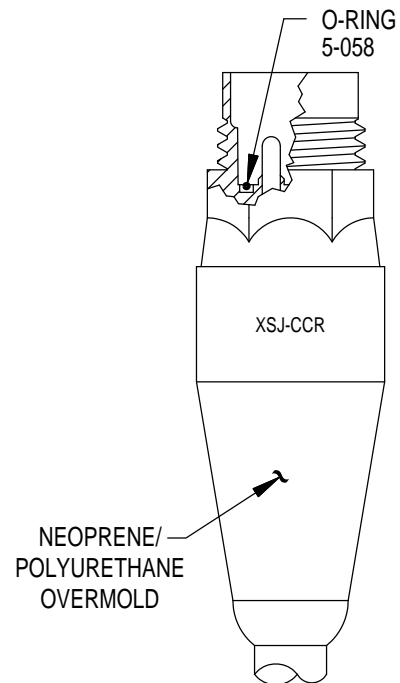
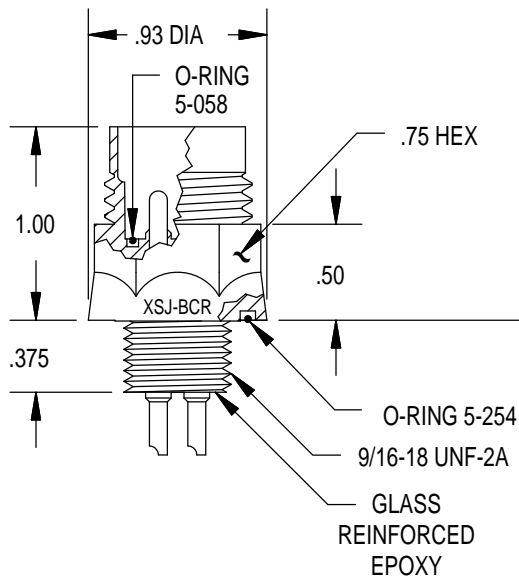
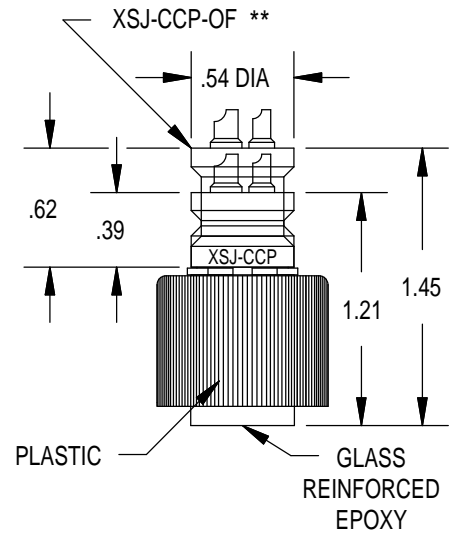
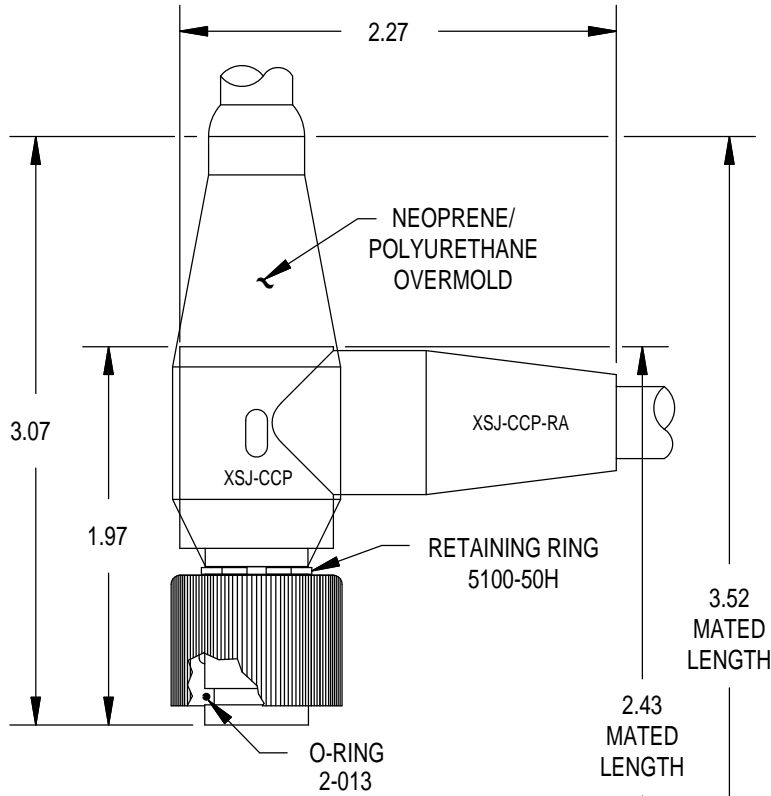


NOTE: XP is recommended to reduce conductor to contact fatigue.

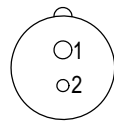
STAINLESS STEEL LOCKING SLEEVES



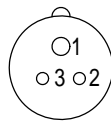
| | |
|--------------------------|---|
| DESCRIPTION AND MATERIAL | <ul style="list-style-type: none">• Molded glass reinforced epoxy.• One to 36 contacts.• 200 VDC to 600 VDC (higher voltage ratings available upon request).• Up to 20,000 PSI in mated condition.• Bulkhead connector design open face pressure rated to 5000 psi.• Contacts gold plated per MIL-G-45204.• XS-CCR/CCP connectors can be overmolded with polyurethane or neoprene.• Conductor insulation and jacket material of specified cable determines overmold material. |
| CABLE | <ul style="list-style-type: none">• Connector's amperage and voltage may be limited by amperage and voltage rating of cable to which connector is molded.• This series is not molded to cable unless specified at the time of order. |
| USES | <ul style="list-style-type: none">• Medium duty applications.• Hazardous environment.• Power transmission.• Signal telemetry.• CCR used in a variety of environments where cable to cable connection is necessary. |
| GUIDELINES | <ul style="list-style-type: none">• All mounting surfaces require a 32 finish.• Do not exceed mounting torque specifications.• Align indexes.• Use in areas not subject to high impact to avoid chipping and cracking.• Keep o-ring grooves clean.• Avoid o-ring cuts and nicks.• Lubricate o-rings with Dow Corning #111 Valve Lubricant or equivalent.• Replace o-rings when re-using connectors.• Avoid contact with noxious solvents.• Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time. |



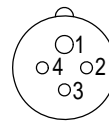
CONTACT
CONFIGURATION
(BCR FACE VIEWS)



1#14
1#16
600 VDC



1#14
2#16
600 VDC



1#14
3#16
300 VDC



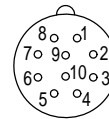
2#16
3#20
300 VDC



1#16
6#20
300 VDC

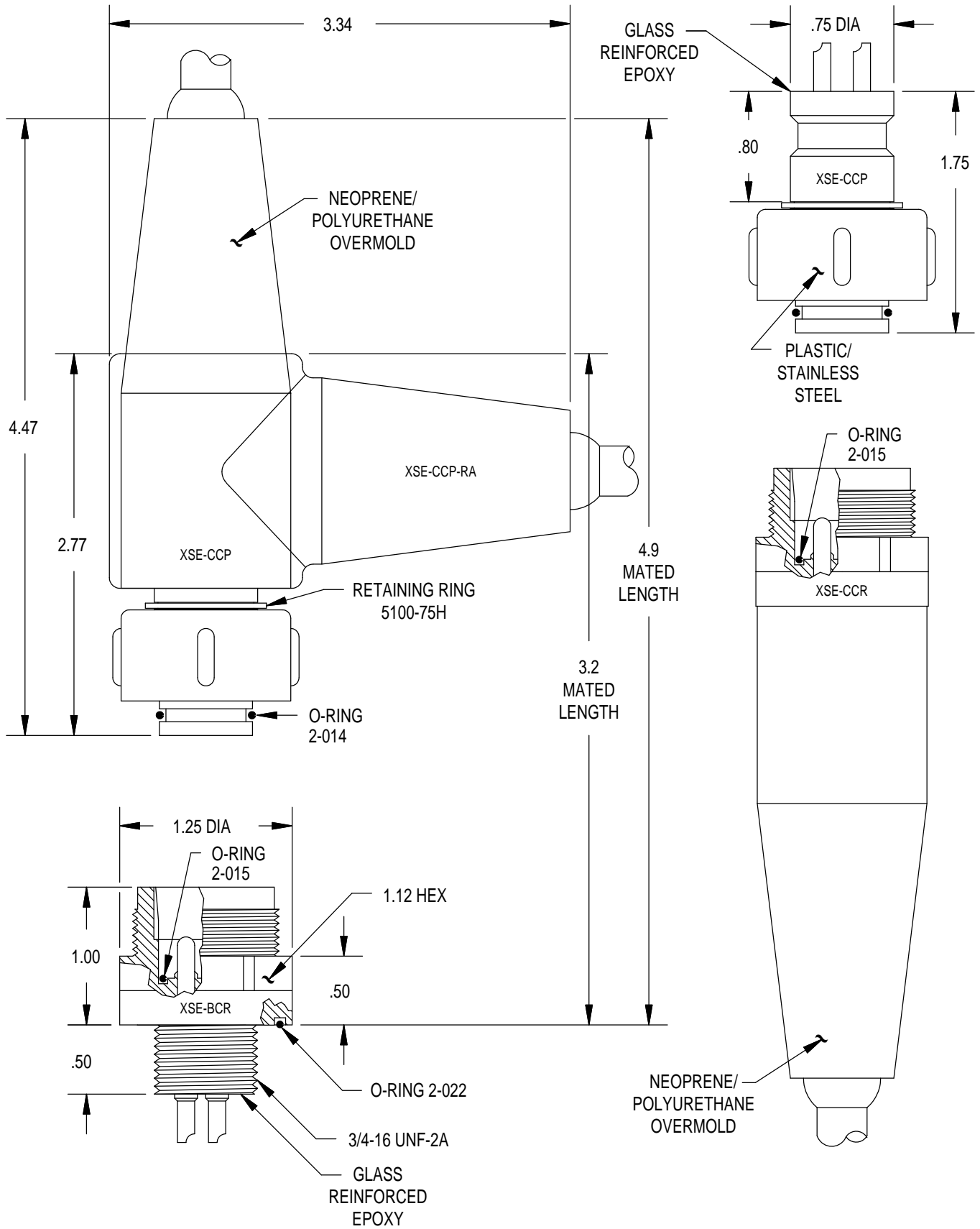


1#14
8#20
300 VDC

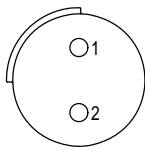


10#20
300 VDC

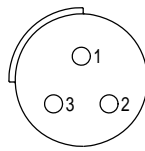
| | | | |
|--|-------------------------|-----------------------------|---------|
| MOUNTING TORQUE FOR XSJ-BCR | not to exceed 20 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR XSJ-BCR/CCR | XSJ*-SCP | DUMMY PLUG FOR XSJ-CCP | XSJ-SCR |
| <p>NOTE: CCP/CCR are not terminated to cable unless specified. * Please specify number of contacts. ** Extended backshell for Oil Filled assemblies.</p> | | | |



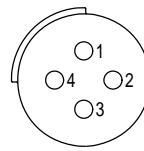
CONTACT
CONFIGURATION
(BCR FACE VIEWS)



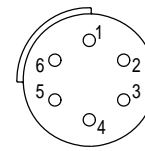
2#14
800 VDC



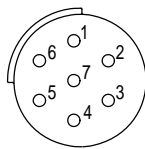
3#14
700 VDC



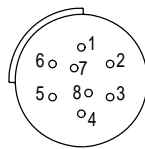
4#14
600 VDC



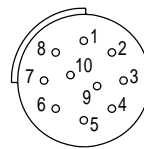
6#16
500 VDC



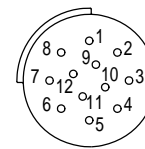
7#16
500 VDC



8#20
400 VDC

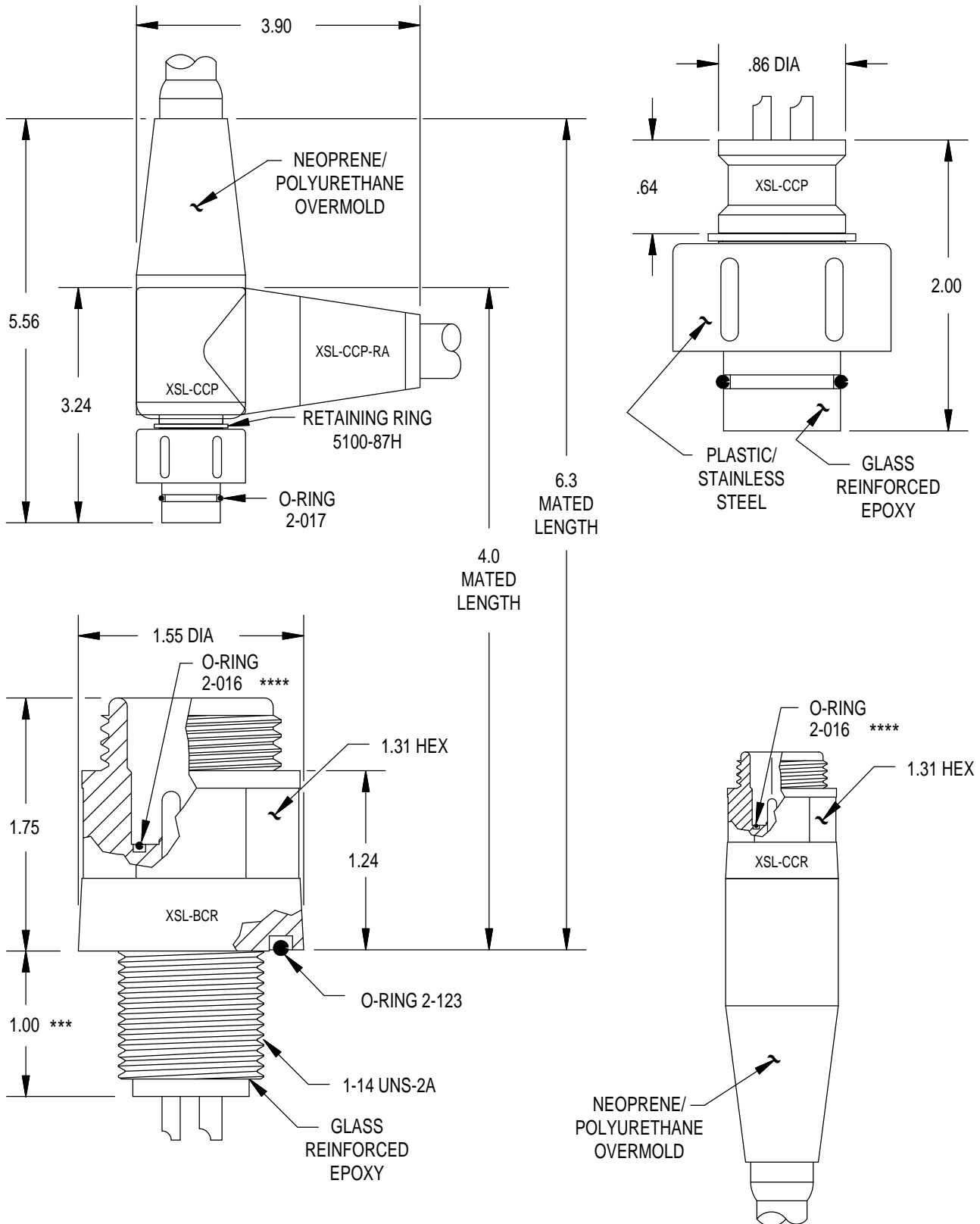


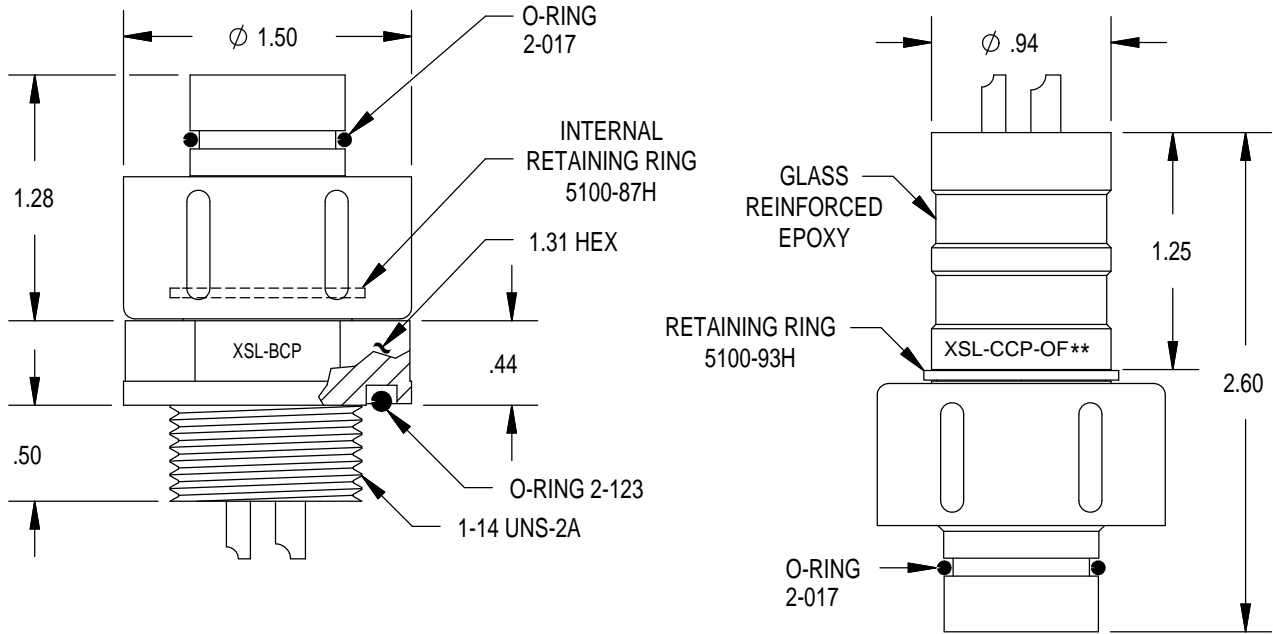
10#20
300 VDC



12#20
250 VDC

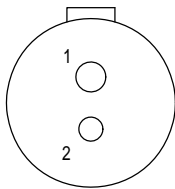
| | | | |
|---|----------------------------|-----------------------------|---------|
| MOUNTING TORQUE FOR XSE-BCR | not to exceed 75 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR XSE-BCR/CCR | XSE*-SCP | DUMMY PLUG FOR XSE-CCP | XSE-SCR |
| NOTE: CCP/CCR are not terminated to cable unless specified. * Please specify number of contacts. | | | |



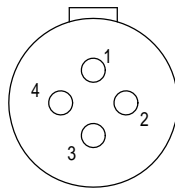


CONTACT CONFIGURATION
(BCR FACE VIEWS)

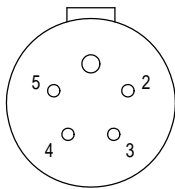
NOTE: Please specify narrow (.125) or wide (.250) key when ordering.



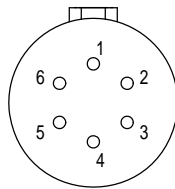
1#8/1#10
600 VDC



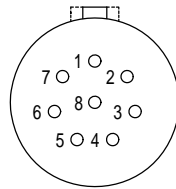
4#10
600 VDC



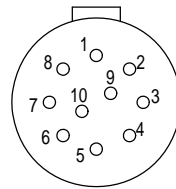
1#14/4#16
500 VDC



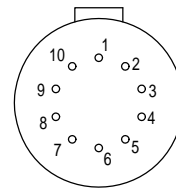
6#16
500 VDC



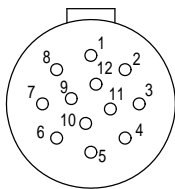
8#16
500 VDC



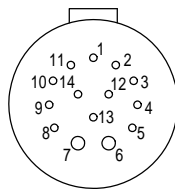
10#16
400 VDC



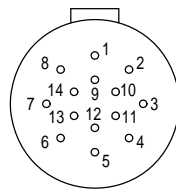
(PBOF)10#20
200 VDC



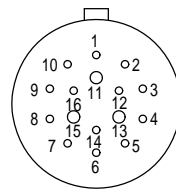
12#16
200 VDC



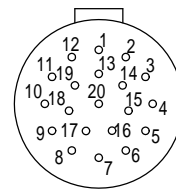
2#6/12#20
600 VDC



14#20
200 VDC



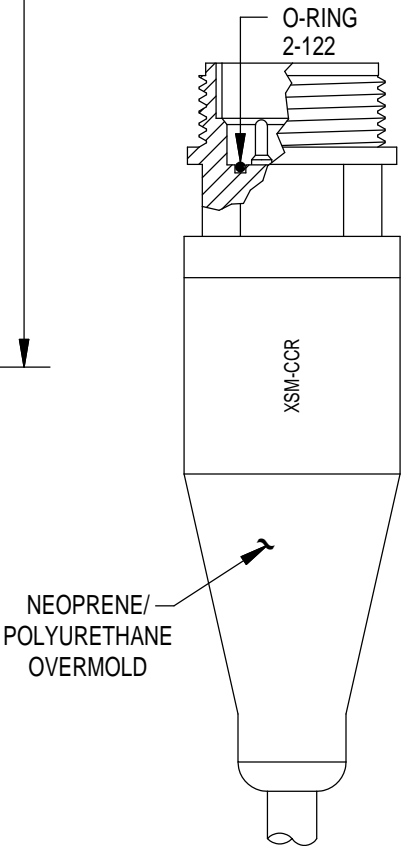
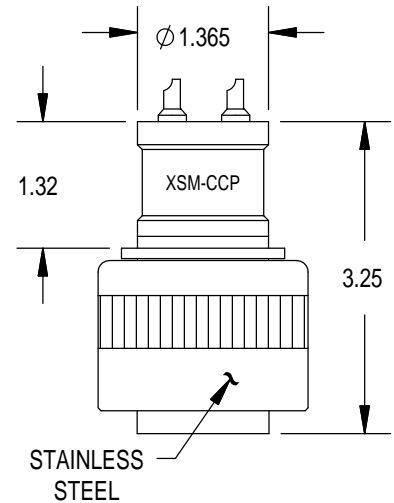
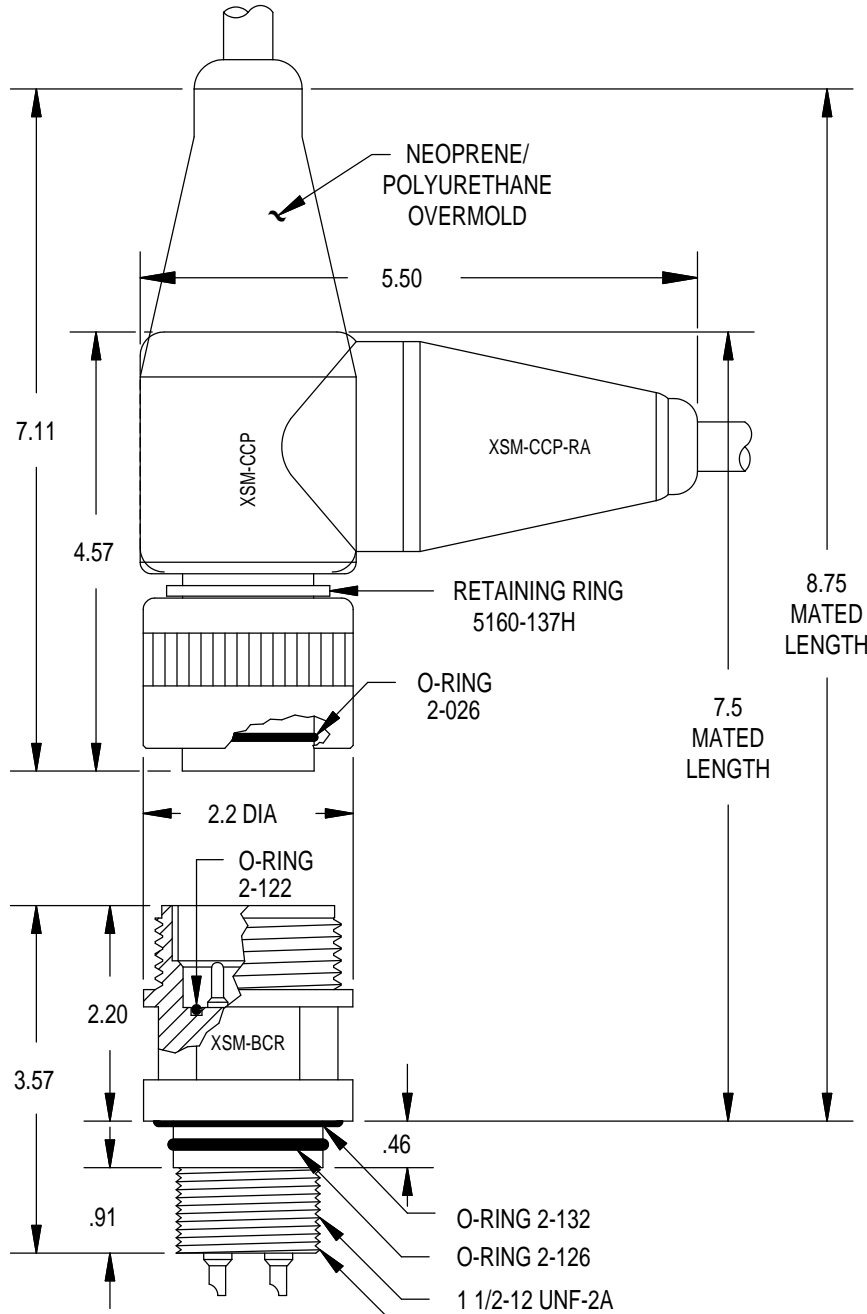
3#16/13#20
200 VDC



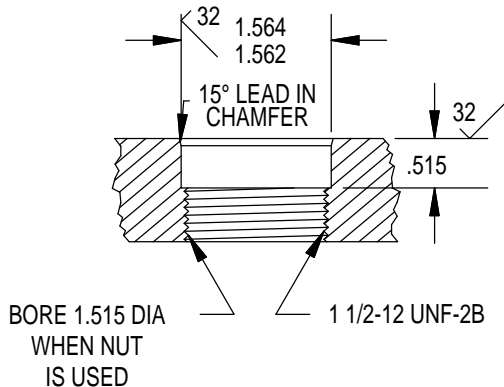
20#20
200 VDC

| | | | |
|---------------------------------|--------------------------|---------------------------------------|------------|
| MOUNTING TORQUE FOR XSL-BCR/BCP | not to exceed 130 in lbs | MATED PRESSURE RATING (psi) | 20,000 |
| DUMMY PLUG FOR XSL-BCR/CCR | XSL-* -SCP | DUMMY PLUG FOR XSL-CCP/BCP/CCP/CCP-OF | XSL-* -SCR |

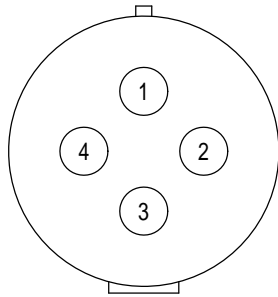
NOTE: CCP/CCR are not terminated to cable unless specified.
 * Please specify number of contacts.
 ** Extended backshell for Oil Filled assemblies.
 *** Also available in .50 thread length, 5-12 contacts only.
 **** XSL-20-BCR, XSL-20-CCR and XSL-20-SCR use o-ring 5-254.



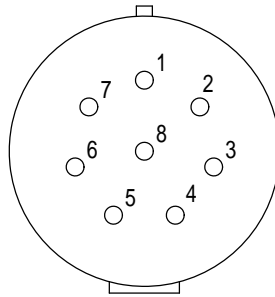
MOUNTING DETAIL



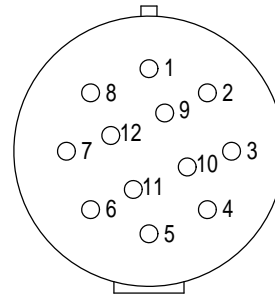
CONTACT
CONFIGURATION
(BCR FACE VIEWS)



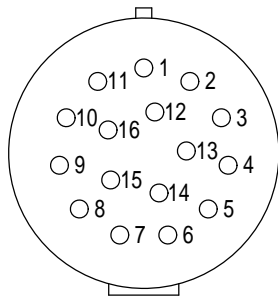
4#6
600 VDC



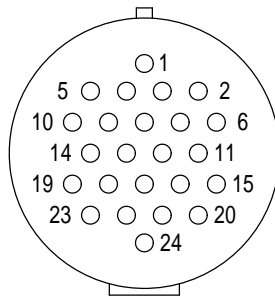
8#14
600 VDC



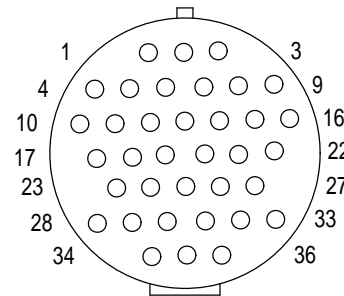
12#14
600 VDC



16#14
600 VDC



24#16
400 VDC



36#16
400 VDC

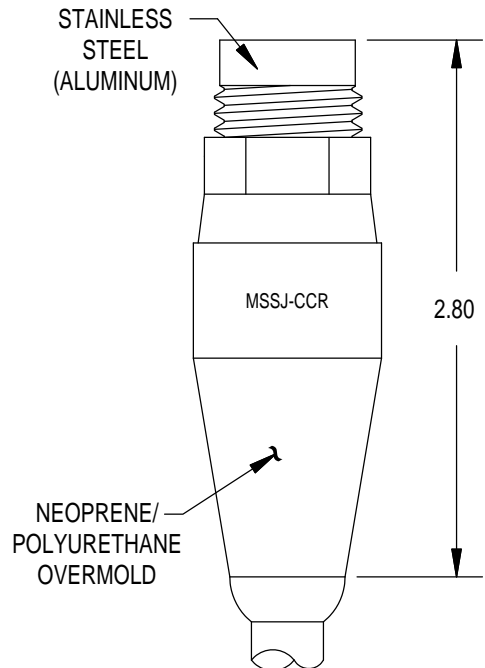
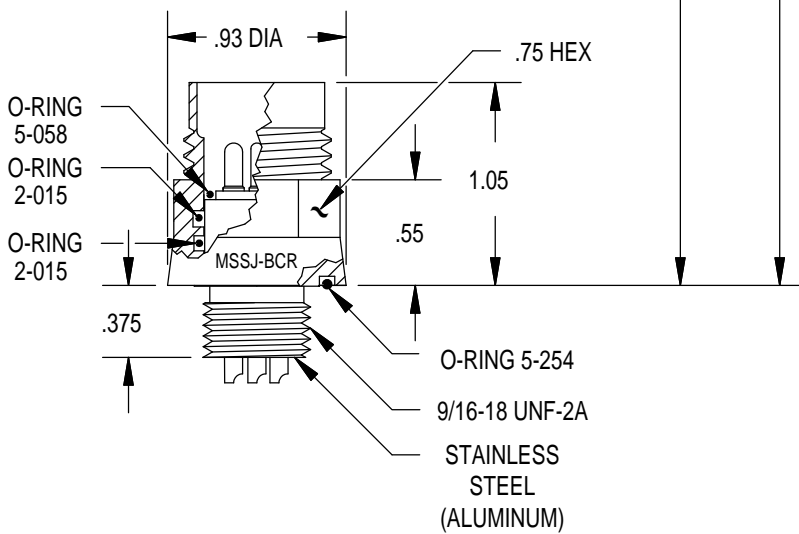
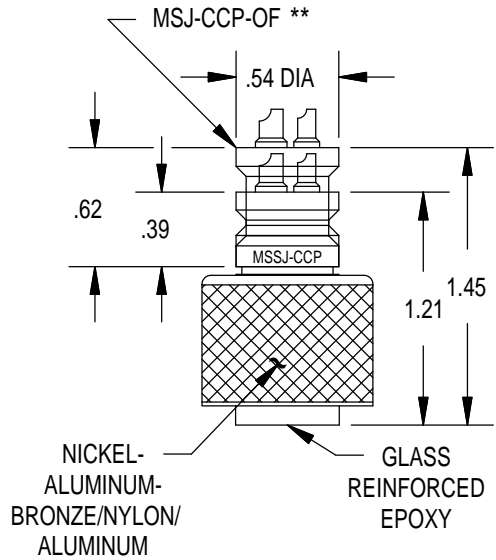
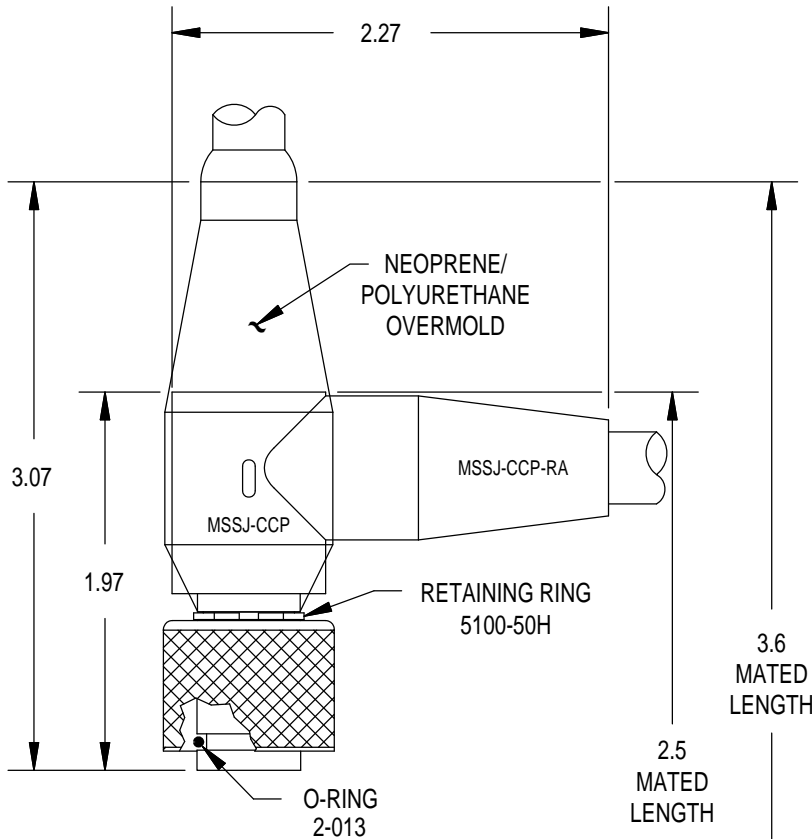
| | | | |
|---|--------------------------|-----------------------------|---------|
| MOUNTING TORQUE FOR BCR | not to exceed 200 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY CAP FOR BCR/CCR | XSM-*SCP | DUMMY CAP FOR CCP | XSM-SCR |
| NOTE: CCP/CCR are not terminated to cable unless specified. * Please specify number of contacts. | | | |

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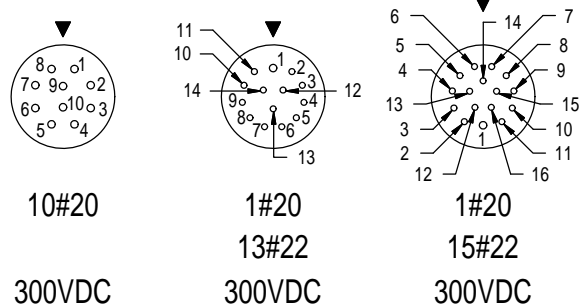
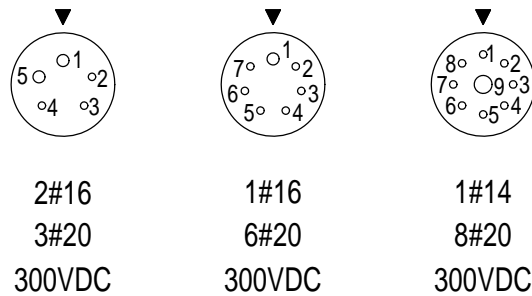
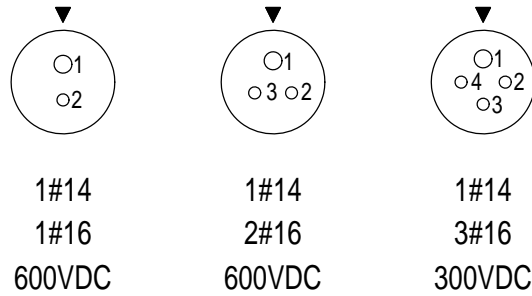
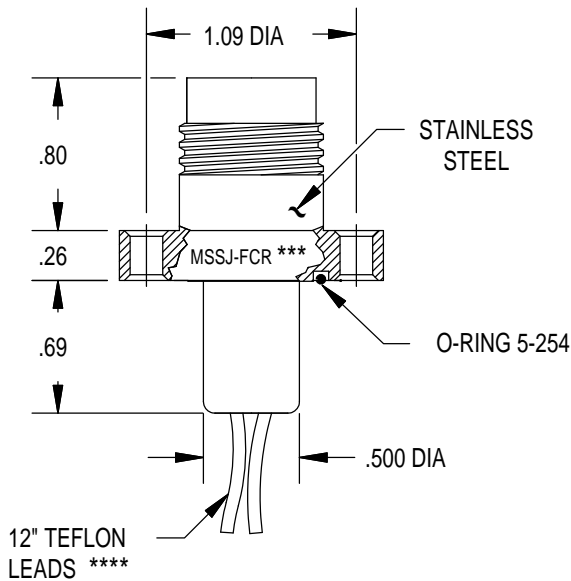
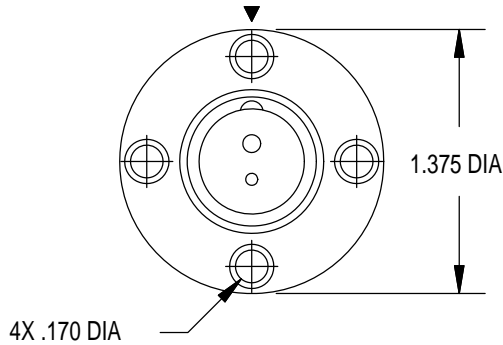
| | |
|--------------------------|---|
| DESCRIPTION AND MATERIAL | <ul style="list-style-type: none">• 316 stainless steel passivated per QQ-P-35 Type VI with naval bronze engaging nut.• Optional material is (MSA) 6061-T6 Aluminum, hard anodized per MIL-A-8625, Type III, Class 2.• Special alloys are available upon request (contact factory).• Contains a removable glass reinforced epoxy insert (with the exception of the MSSJ/MSAJ).• One to 96 contacts.• Up to 600 VDC. Up to 5000 VDC using high voltage insert.• From 10,000 PSI to 20,000 PSI in mated condition (higher pressure rating available using special alloy metal shell; please contact factory).• Bulkhead connector design open face pressure rated to 5000 psi.• MSS-CCR/CCP connectors can be overmolded with polyurethane or neoprene.• Conductor insulation and jacket material of specified cable determines overmold material.• Contacts are gold plated per MIL-G-45204. |
| CABLE MATERIAL | <ul style="list-style-type: none">• Connector's amperage and voltage may be limited by the amperage and voltage ratings of the cable to which the connector is molded.• This series is not molded to cable unless specified at the time of order. |
| USES MATERIAL | <ul style="list-style-type: none">• Heavy duty applications.• Hazardous, rugged environment.• Power transmission.• Signal telemetry.• FCR is mounted by use of six equally spaced bolts around the flange surface.• FCR is used in place of the BCR when the use of a bulkhead nut and washer is impractical.• For all open face pressures above 5,000 PSI the BCR, FCR must be back potted (please contact the factory).• The CCR is used in a variety of rugged environments where cable to cable termination is necessary. |
| GUIDELINES MATERIAL | <ul style="list-style-type: none">• Mounting torque should not exceed 200 in lbs. for this series.• All mounting surfaces require a 32 finish.• Align indexes.• Keep o-ring grooves clean.• Avoid o-ring cuts and nicks.• Lubricate o-rings with Dow Corning #111 Valve Lubricant or equivalent.• Replace o-rings when re-using connectors.• Avoid contact with noxious solvents.• Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time. |

MSSJ/MSAJ

METAL SHELL STAINLESS
STEEL / ALUMINUM SERIES



**CONTACT
CONFIGURATION**
(BCR FACE VIEWS)

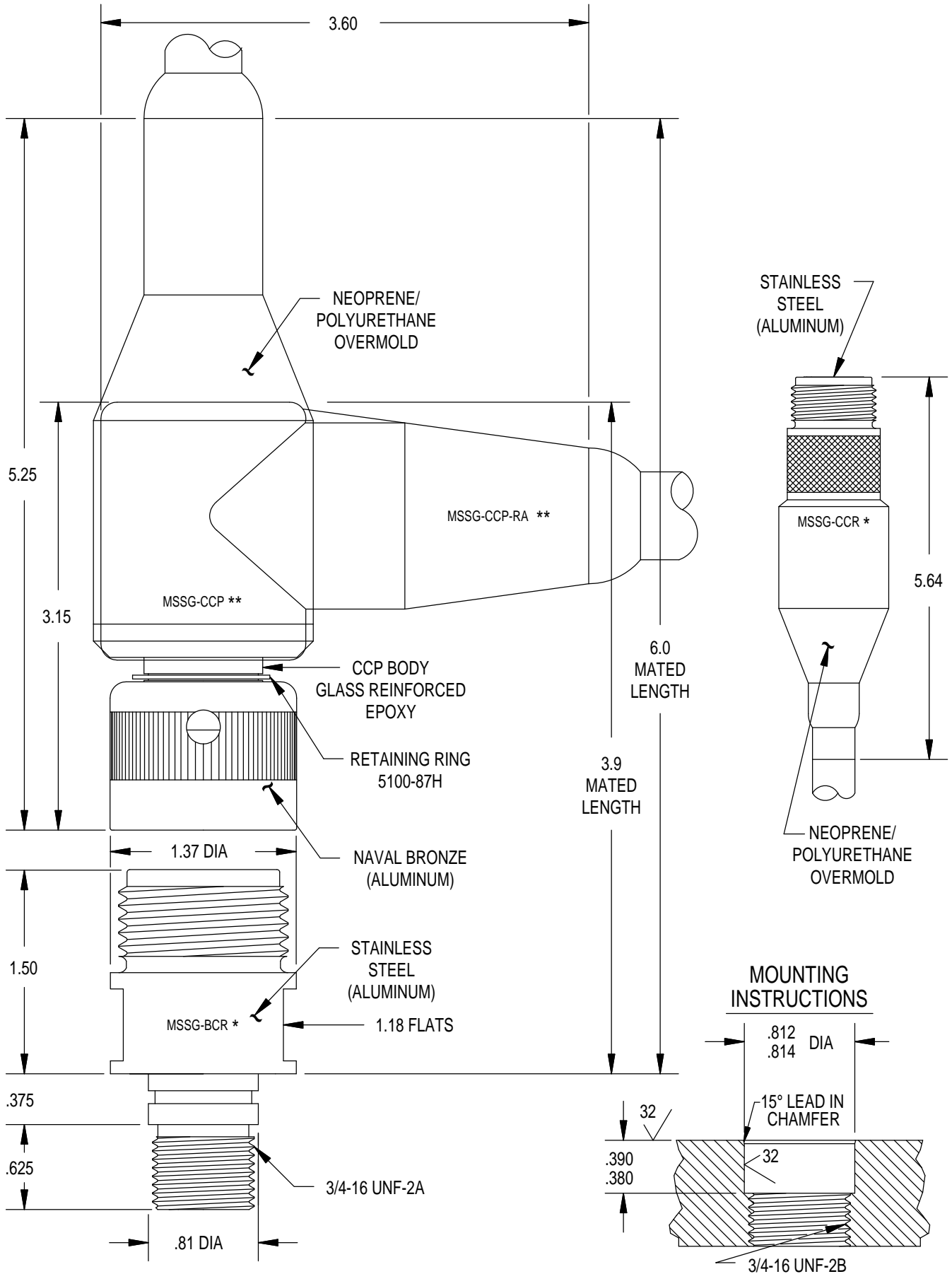


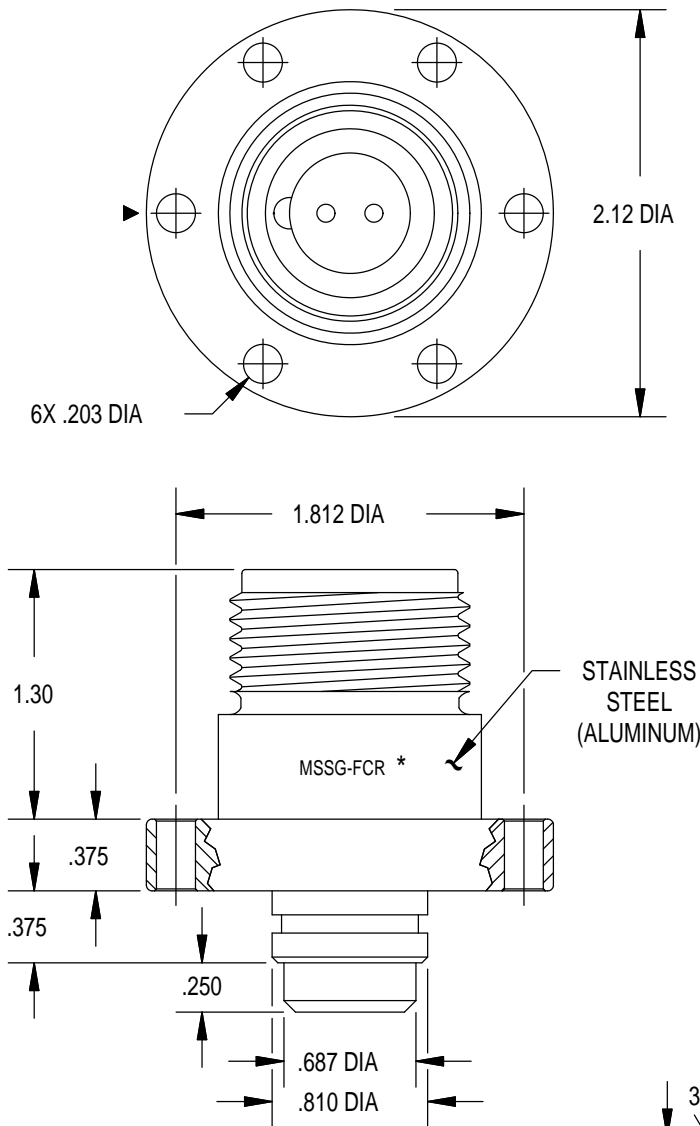
NOTE: Not available in OF.

| | | | |
|------------------------------------|--------------------------|-----------------------------------|-----------------|
| MOUNTING TORQUE FOR MSSJ, MSAJ-BCR | not to exceed 100 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR MSSJ-BCR/FCR/CCR | MSSJ-*-SCP | DUMMY PLUG FOR MSSJ-CCP, MSAJ-CCP | MSJ-SCR (Epoxy) |
| DUMMY PLUG FOR MSAJ-BCR/CCR | MSAJ-*-SCP | | |

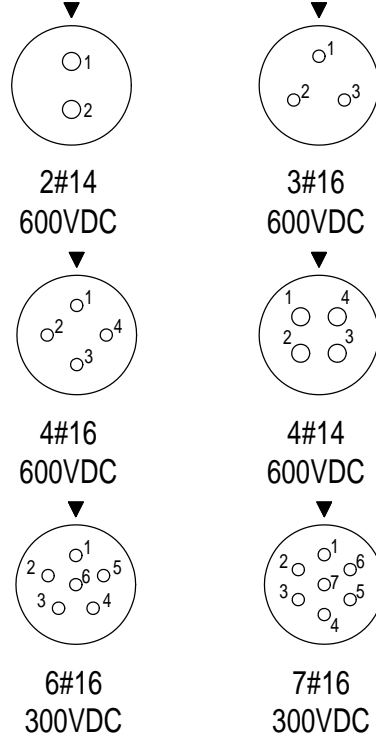
NOTE: CCP is not terminated to cable unless specified.

- * Please specify number of contacts.
- ** Extended backshell for Oil Filled assemblies.
- *** Internal assembly same as MSSJ/MSAJ-BCR (facing page).
- **** Solder cup version available.

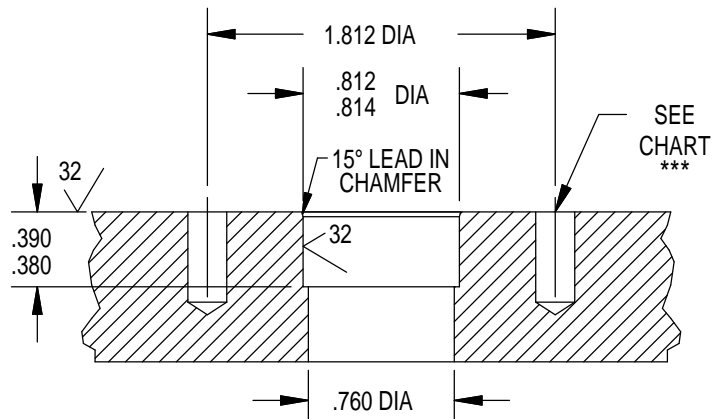




**CONTACT
CONFIGURATION
(BCR FACE VIEWS)**

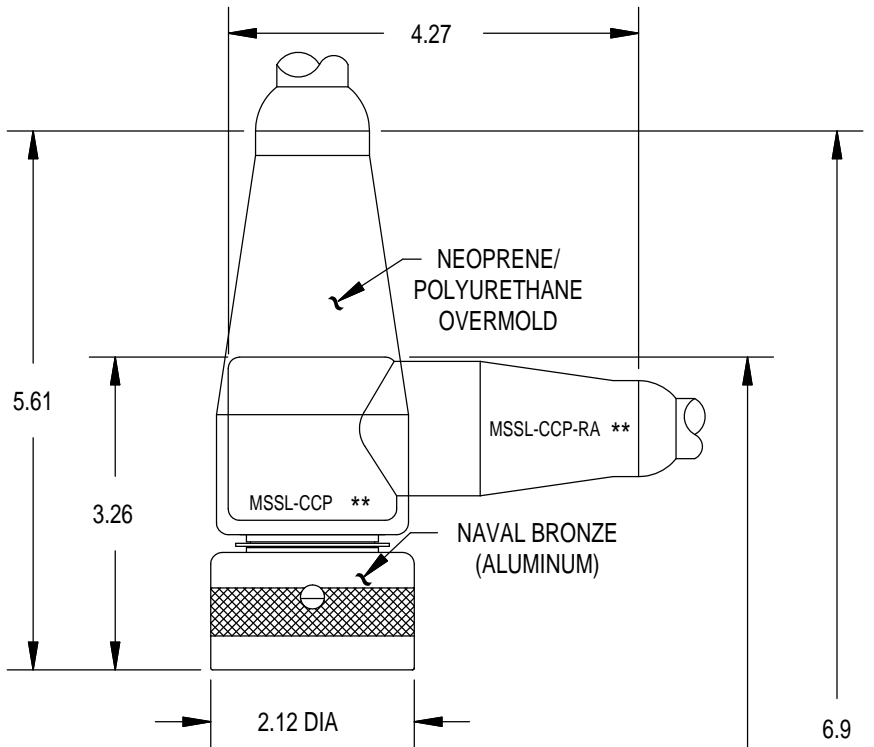


MOUNTING INSTRUCTIONS



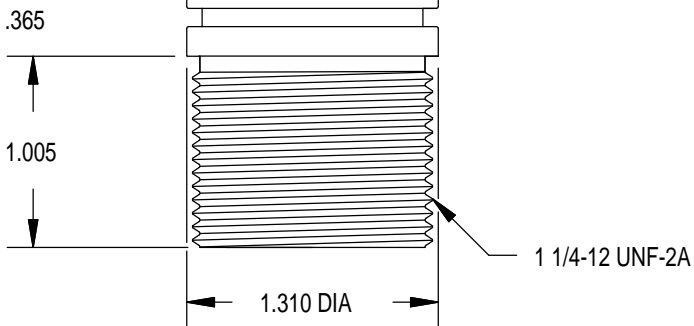
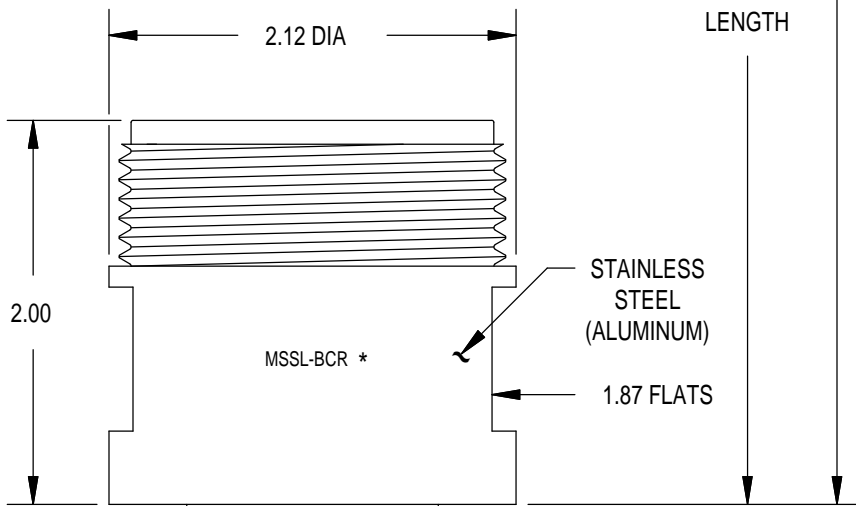
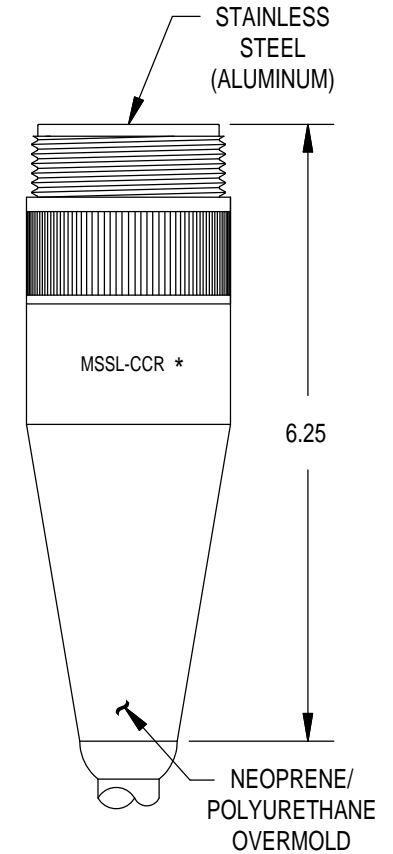
| | | | |
|------------------------------------|--------------------------|-----------------------------|----------|
| MOUNTING TORQUE FOR MSSG, MSAG-BCR | not to exceed 200 in lbs | MATED PRESSURE RATING (psi) | 20,000 |
| DUMMY PLUG FOR MSSG-BCR/FCR/CCR | MSSG-SCP | DUMMY PLUG FOR MSSG-CCP | MSSG-SCR |
| DUMMY PLUG FOR MSAG-BCR/FCR/CCR | MSAG-SCP | DUMMY PLUG FOR MSAG-CCP | MSAG-SCR |

NOTE: Delrin protective caps available upon request.
 * See Technical Bulletin 45 71 for internal assembly and hardware specifications.
 ** See Technical Bulletin 45 72 for internal assembly and hardware specifications.
 *** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.

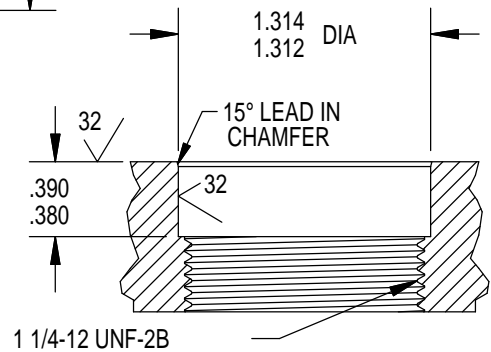


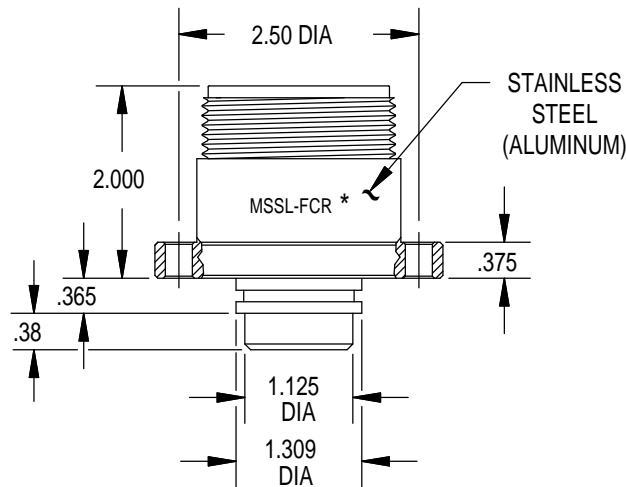
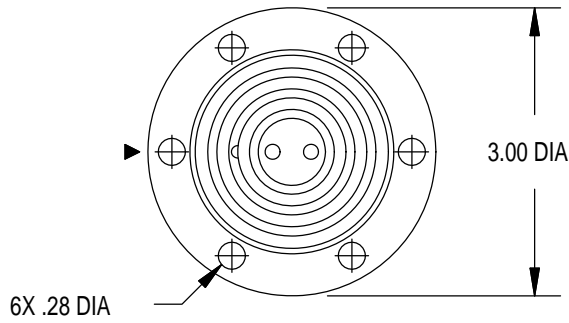
6.9
MATED
LENGTH

4.5
MATED
LENGTH

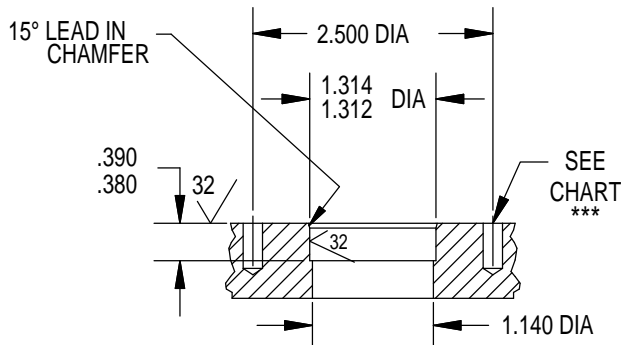


**MOUNTING
INSTRUCTIONS**





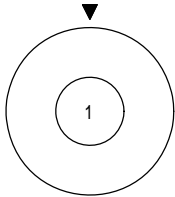
MOUNTING INSTRUCTIONS



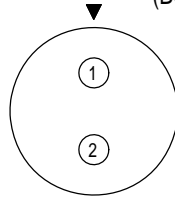
| | | | |
|------------------------------------|--------------------------|-----------------------------|----------|
| MOUNTING TORQUE FOR MSSL, MSAL-BCR | not to exceed 200 in lbs | MATED PRESSURE RATING (psi) | 20,000 |
| DUMMY PLUG FOR MSSL-BCR/FCR/CCR | MSSL-SCP | DUMMY PLUG FOR MSSL-CCP | MSSL-SCR |
| DUMMY PLUG FOR MSAL-BCR/FCR/CCR | MSAL-SCP | DUMMY PLUG FOR MSAL-CCP | MSAL-SCR |

NOTE: Delrin protective caps available upon request.
 * See Technical Bulletin 45 71 for internal assembly and hardware specifications.
 ** See Technical Bulletin 45 72 for internal assembly and hardware specifications.
 *** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.

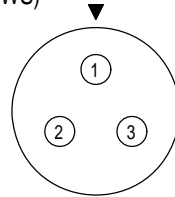
**CONTACT
CONFIGURATION**
(BCR FACE VIEWS)



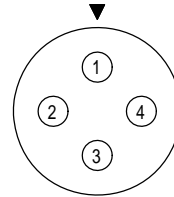
1#1/0
1000VDC



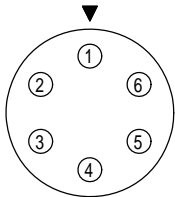
2#8
1000VDC



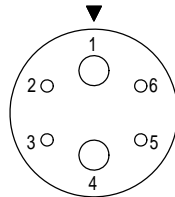
3#8
1000VDC



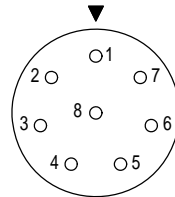
4#8 *
1000VDC



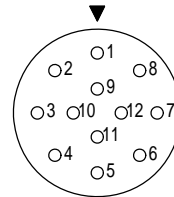
6#10
1000VDC



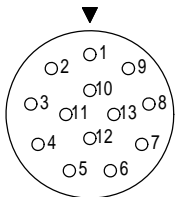
2#8
4#16
1000VDC



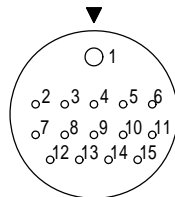
8#16
600VDC



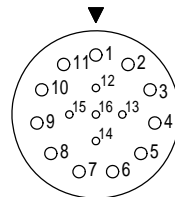
12#16
600VDC



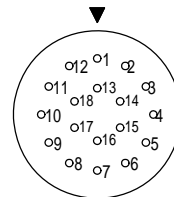
13#16
600VDC



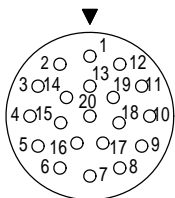
1#16
14#20
600VDC



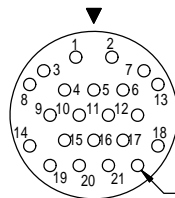
5#20
11#16
600VDC



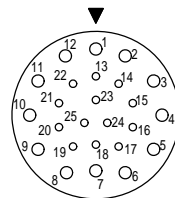
18#20
600VDC



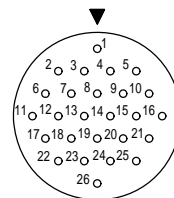
20#16
600VDC



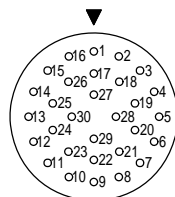
22#16
600VDC



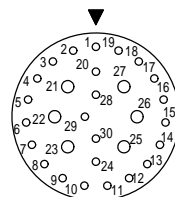
12#16
13#20
600VDC



26#20
600VDC



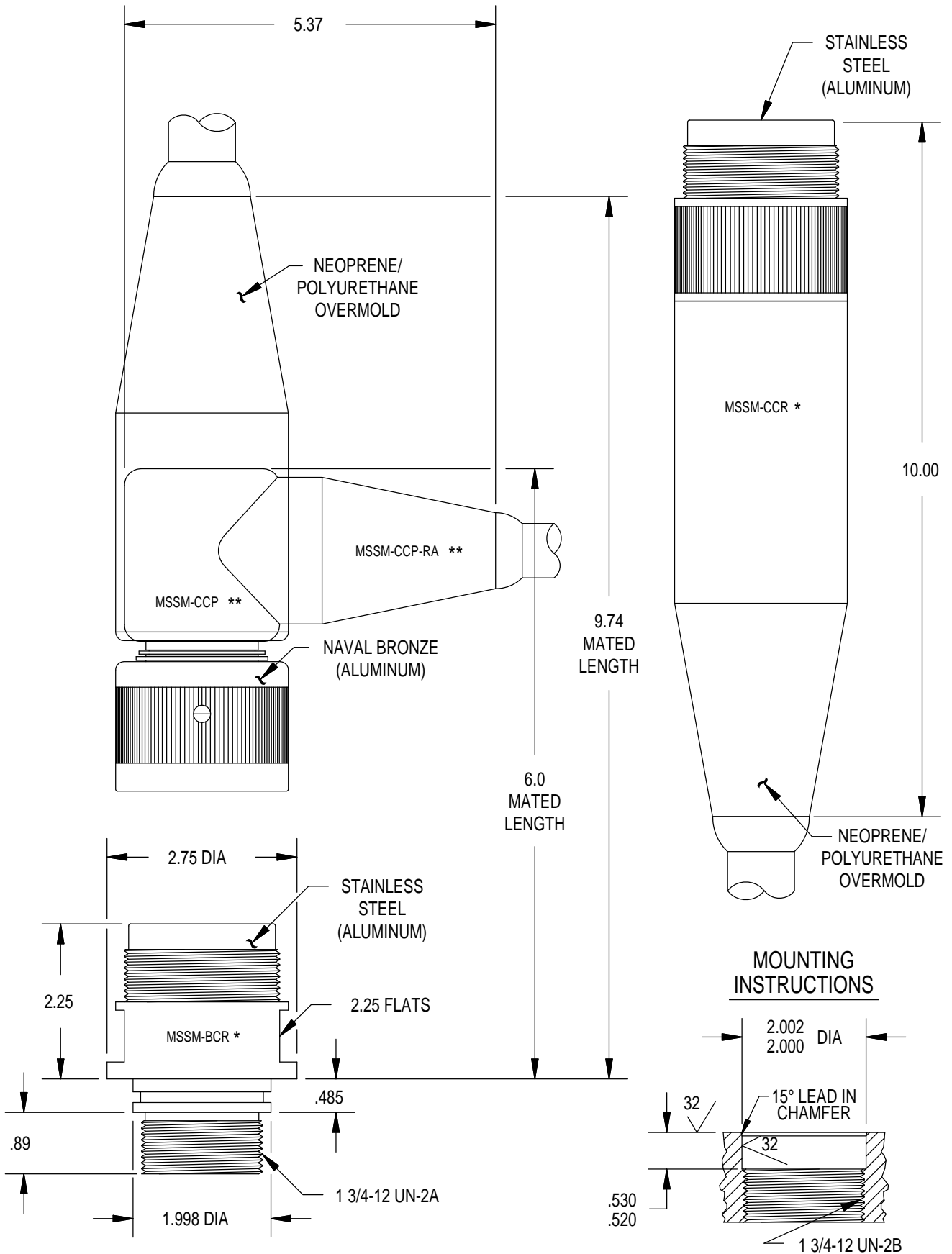
30#20
600VDC

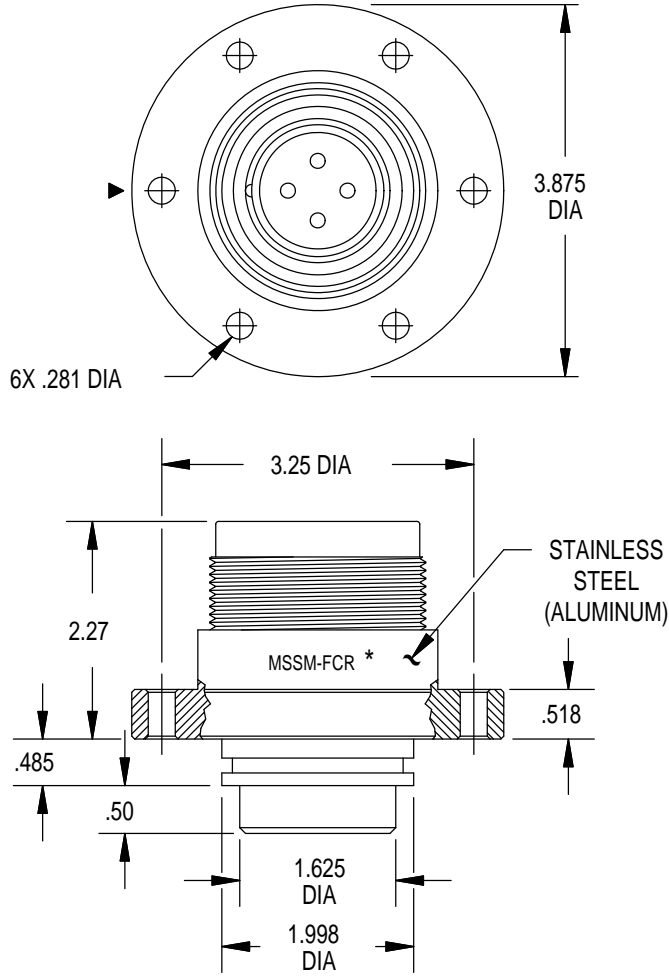


6#16
24#20
600VDC

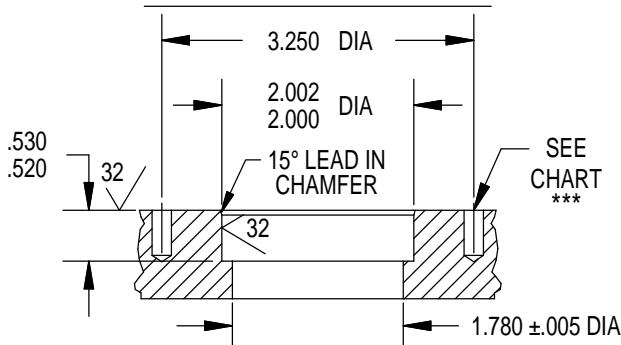
* Also available in high voltage.
(3000VDC)

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MOUNTING INSTRUCTIONS



| | | | |
|------------------------------------|--------------------------|-----------------------------|----------|
| MOUNTING TORQUE FOR MSSM, MSAM-BCR | not to exceed 200 in lbs | MATED PRESSURE RATING (psi) | 20,000 |
| DUMMY PLUG FOR MSSM-BCR/FCR/CCR | MSSM-SCP | DUMMY PLUG FOR MSSM-CCP | MSSM-SCR |
| DUMMY PLUG FOR MSAM-BCR/FCR/CCR | MSAM-SCP | DUMMY PLUG FOR MSAM-CCP | MSAM-SCR |

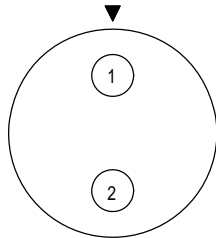
NOTE: Delrin protective caps available upon request.

* See Technical Bulletin 45 71 for internal assembly and hardware specifications.

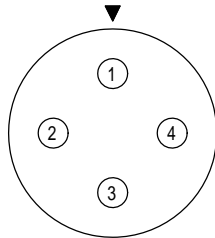
** See Technical Bulletin 45 72 for internal assembly and hardware specifications.

*** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.

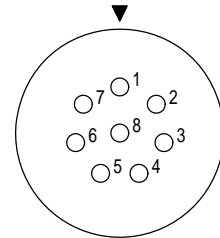
CONTACT
CONFIGURATION
(BCR FACE VIEWS)



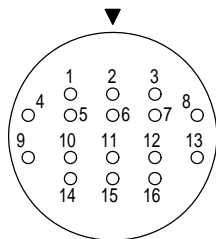
2#6 *
1500VDC



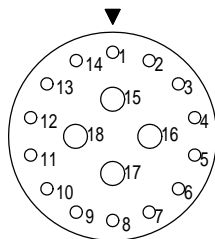
4#8 *
1500VDC



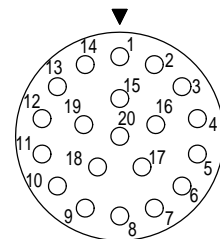
8#14
600VDC



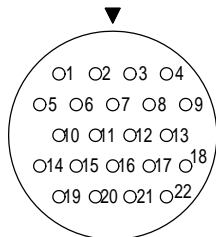
16#16
600VDC



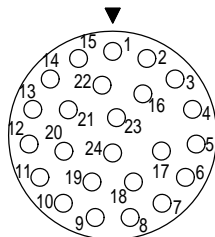
4#10
14#16
600VDC



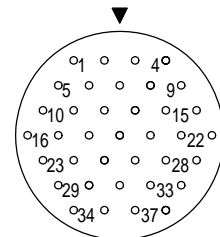
20#14
600VDC



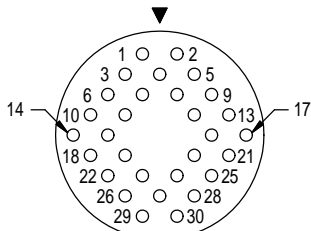
22#16
600VDC



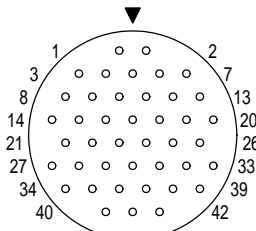
24#14
600VDC



37#20
600VDC



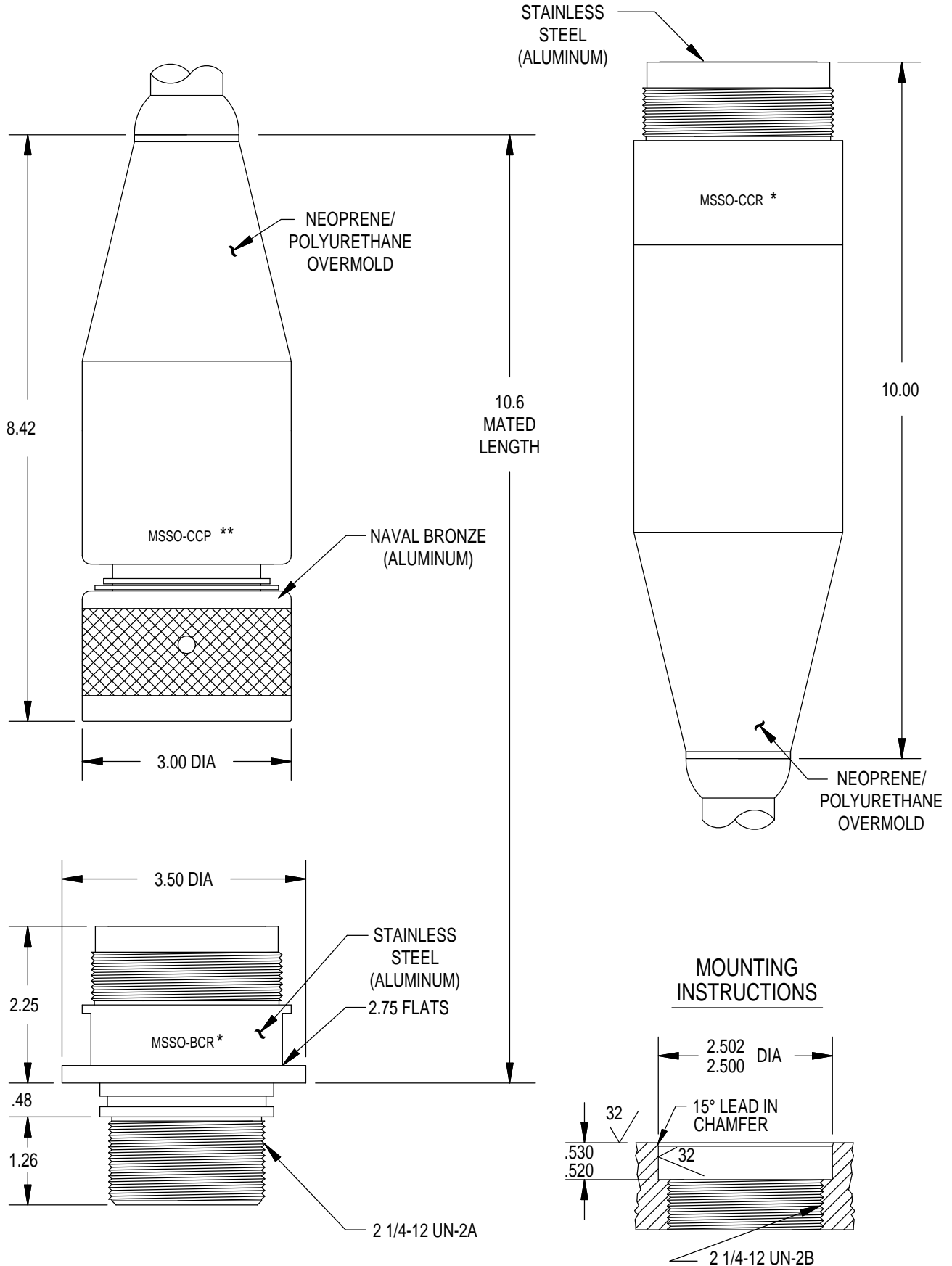
30#16
600VDC

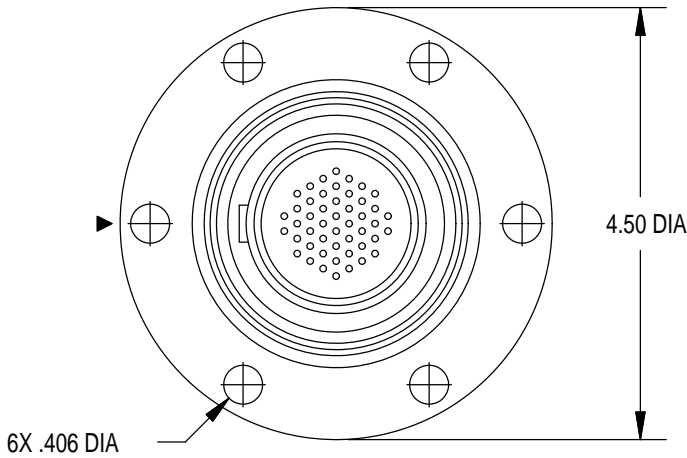


42#20
600VDC

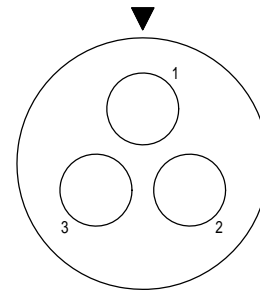
* Also available in high voltage.
(3000VDC)

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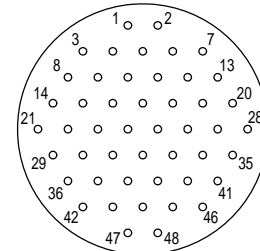




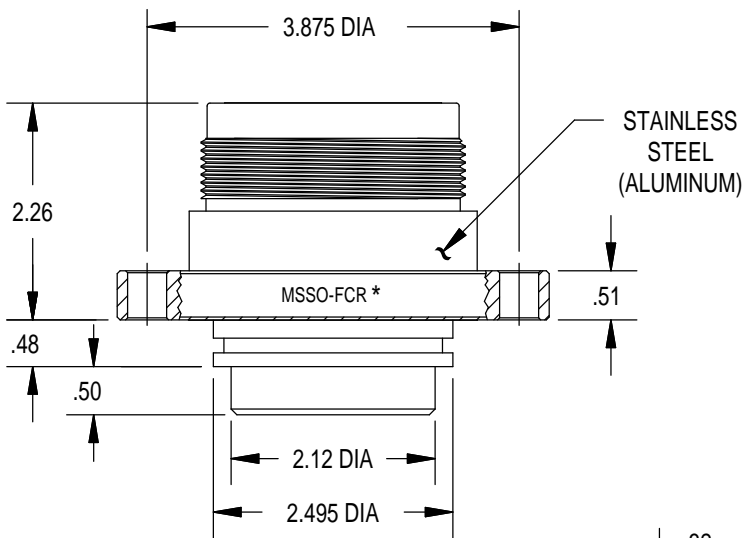
CONTACT CONFIGURATION
(BCR FACE VIEWS)



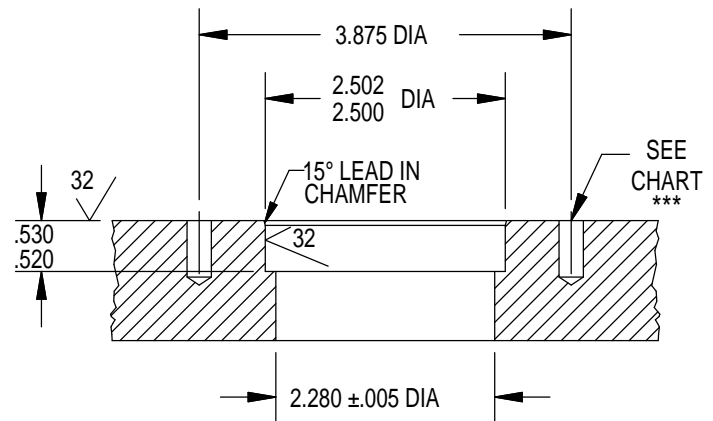
3#4
600VDC



48#20
600VDC



MOUNTING INSTRUCTIONS



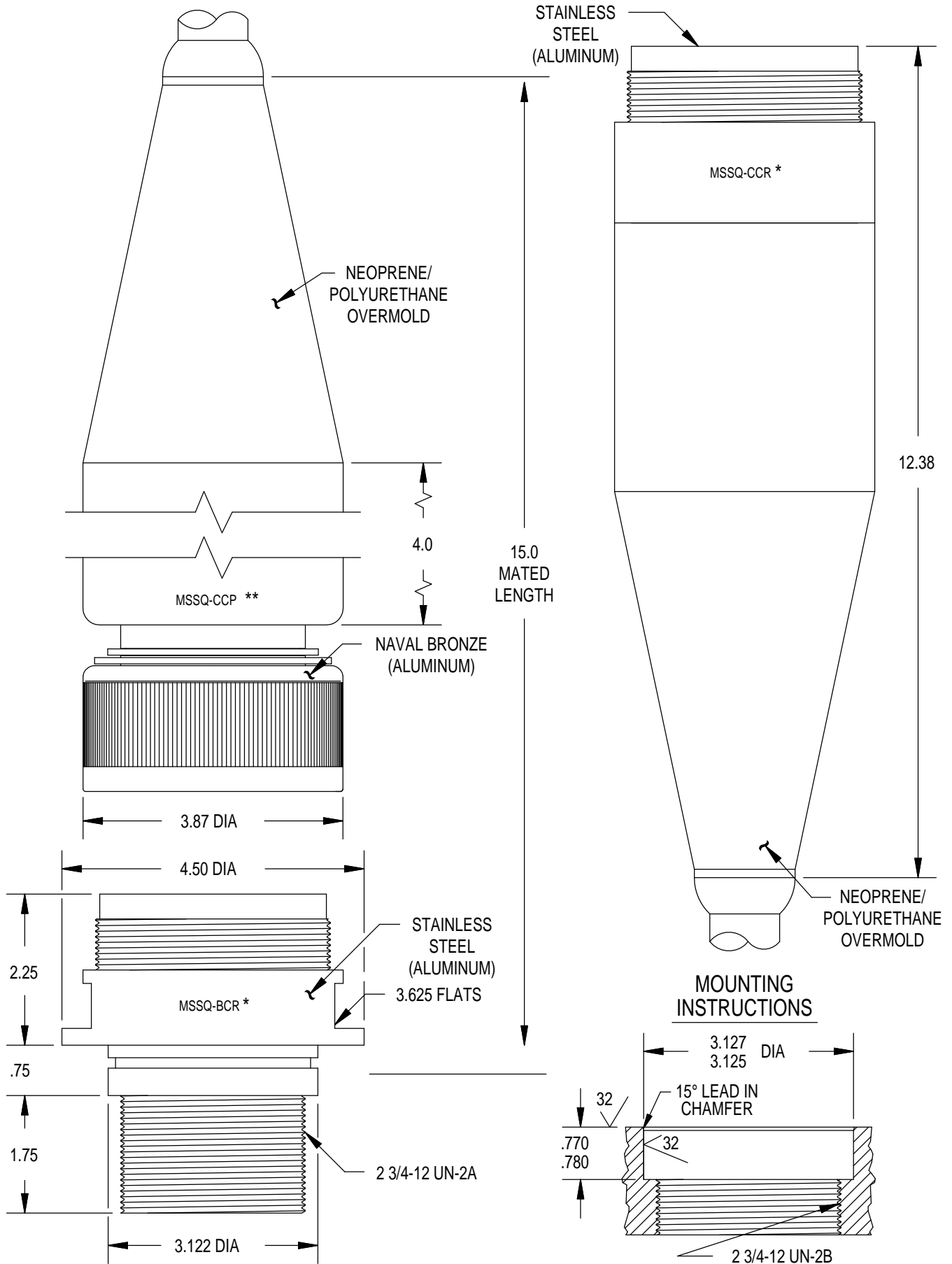
| | | | |
|------------------------------------|--------------------------|-----------------------------|----------|
| MOUNTING TORQUE FOR MSSO, MSAO-BCR | not to exceed 200 in lbs | MATED PRESSURE RATING (psi) | 20,000 |
| DUMMY PLUG FOR MSSO-BCR/FCR/CCR | MSSO-SCP | DUMMY PLUG FOR MSSO-CCP | MSSO-SCR |
| DUMMY PLUG FOR MSAO-BCR/FCR/CCR | MSAO-SCP | DUMMY PLUG FOR MSAO-CCP | MSAO-SCR |

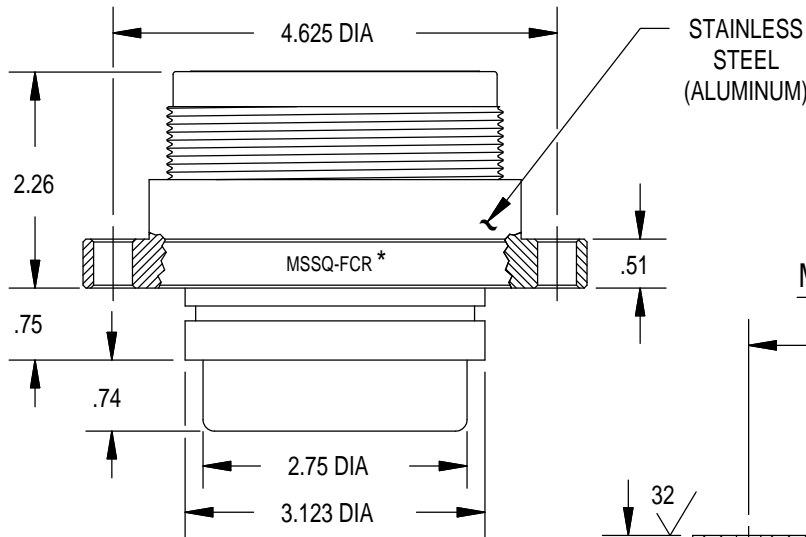
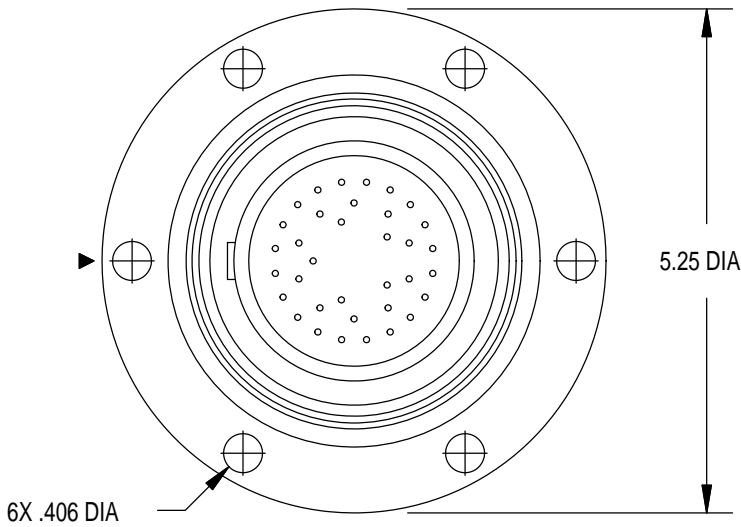
NOTE: Delrin protective caps available upon request.

* See Technical Bulletin 45 71 for internal assembly and hardware specifications.

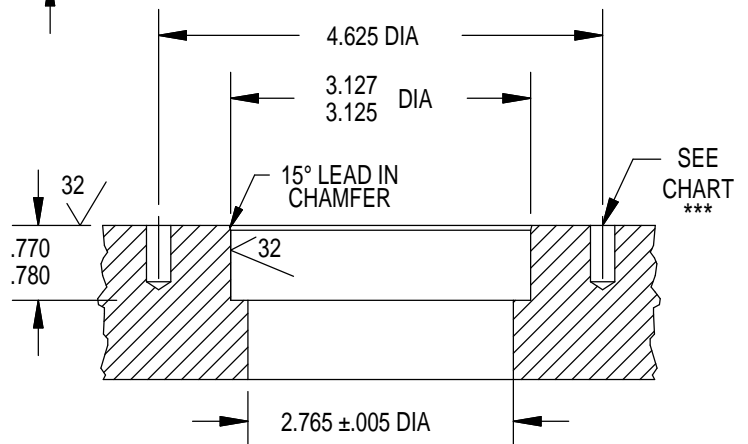
** See Technical Bulletin 45 72 for internal assembly and hardware specifications.

*** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.





MOUNTING INSTRUCTIONS



| | | | |
|------------------------------------|--------------------------|-----------------------------|----------|
| MOUNTING TORQUE FOR MSSQ, MSAQ-BCR | not to exceed 200 in lbs | MATED PRESSURE RATING (psi) | 20,000 |
| DUMMY PLUG FOR MSSQ-BCR/FCR/CCR | MSSQ-SCP | DUMMY PLUG FOR MSSQ-CCP | MSSQ-SCR |
| DUMMY PLUG FOR MSAQ-BCR/FCR/CCR | MSAQ-SCP | DUMMY PLUG FOR MSAQ-CCP | MSAQ-SCR |

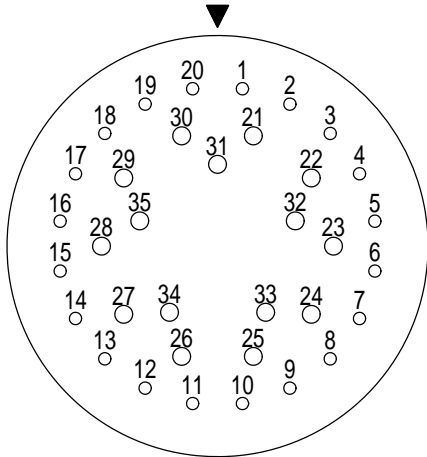
NOTE: Delrin protective caps available upon request.

* See Technical Bulletin 45 71 for internal assembly and hardware specifications.

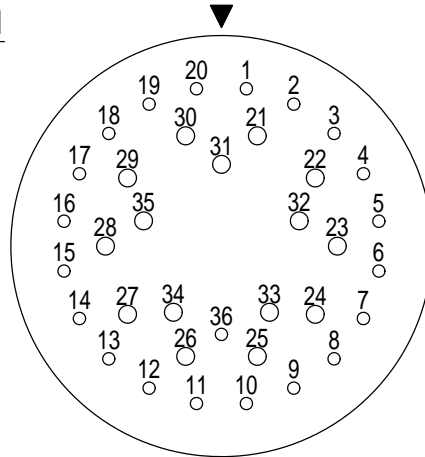
** See Technical Bulletin 45 72 for internal assembly and hardware specifications.

*** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.

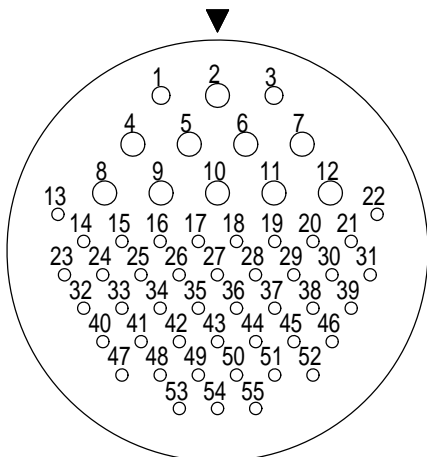
CONTACT
CONFIGURATION
(BCR FACE VIEWS)



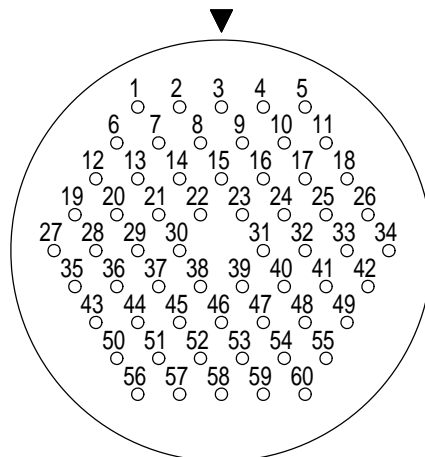
15#14
20#16
(High Voltage)
2000VDC



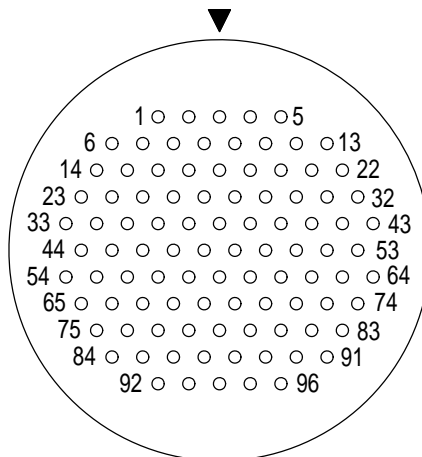
15#14
21#16
(High Voltage)
2000VDC



10#10
45#16
600VDC

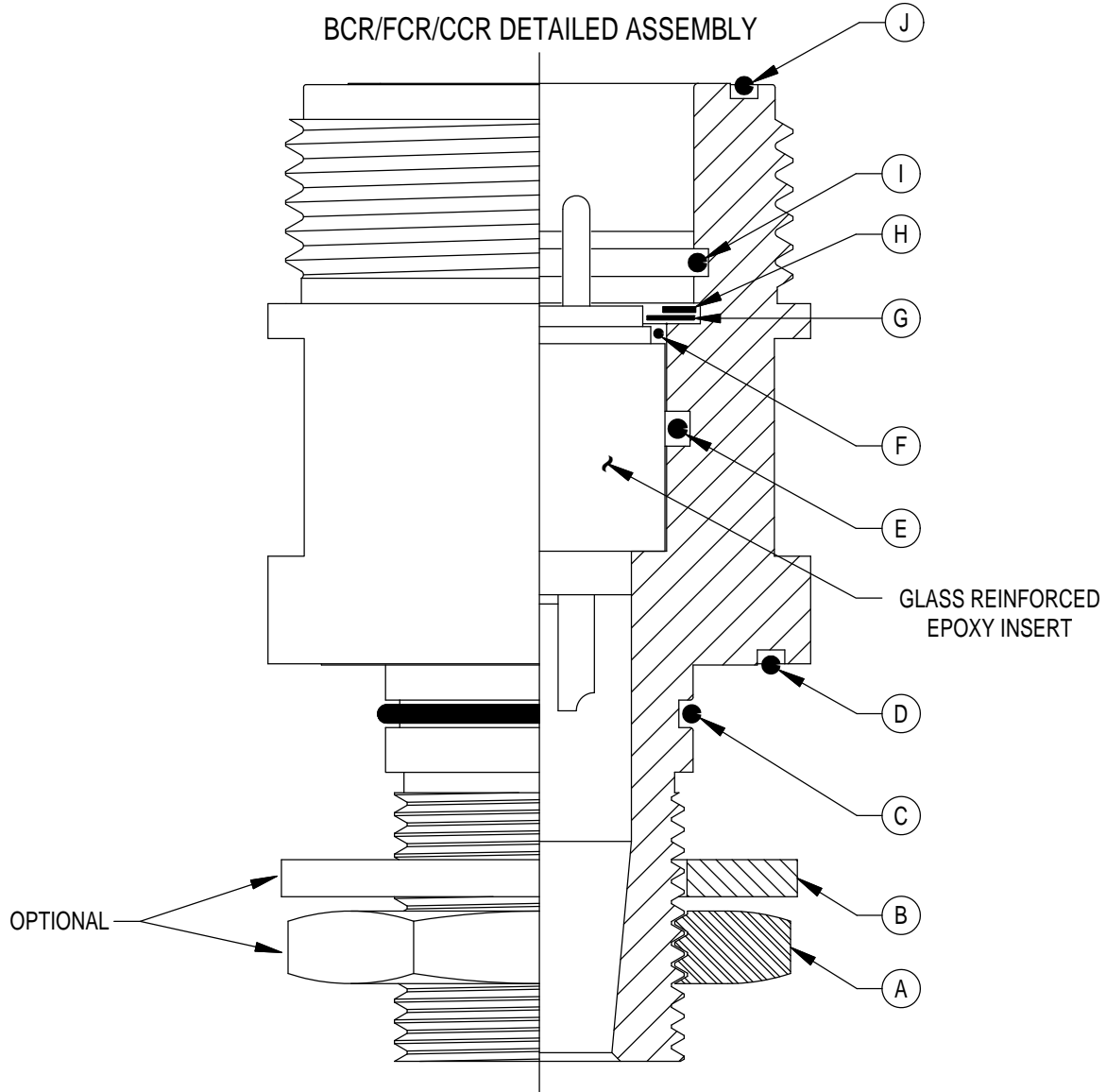


60#16
600VDC



96#16
600VDC

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SCALE NONE

| SHELL SIZE | G | K | L | M | O | Q |
|---------------------|------------|------------|------------|------------|------------|------------|
| A BULKHEAD NUT * | 35000 S 00 | 35000 S 01 | 35000 S 02 | 35000 S 03 | 35000 S 04 | 35000 S 06 |
| B BULKHEAD WASHER * | 35500 S 00 | 35500 S 01 | 35500 S 02 | 35500 S 03 | 35500 S 04 | 35500 S 06 |
| C O-RING ** | 2-017 | 2-021 | 2-122 | 2-224 | 2-228 | 2-233 |
| D O-RING ** | 2-023 | 2-029 | 2-131 | 2-142 | 2-234 | 2-241 *** |
| E O-RING | 2-016 | 2-118 | 2-122 | 2-126 | 2-225 | 2-230 |
| F O-RING | NONE | 2-018 | 2-022 | 2-123 | 2-131 | 2-141 |
| G INTERNAL WASHER | NONE | 35000 S 21 | 35000 S 22 | 35000 S 23 | 35000 S 24 | 35000 S 26 |
| H SPIROLOX RING | UR-62 | UR-106 | UR-131 | UR-150 | UR-187 | UR-250 |
| I O-RING | 2-016 | 2-023 | 2-027 | 2-128 | 2-225 | 2-230 |
| J O-RING | 2-020 | 2-027 | 5-320 | 2-132 | 2-140 | 2-151 |

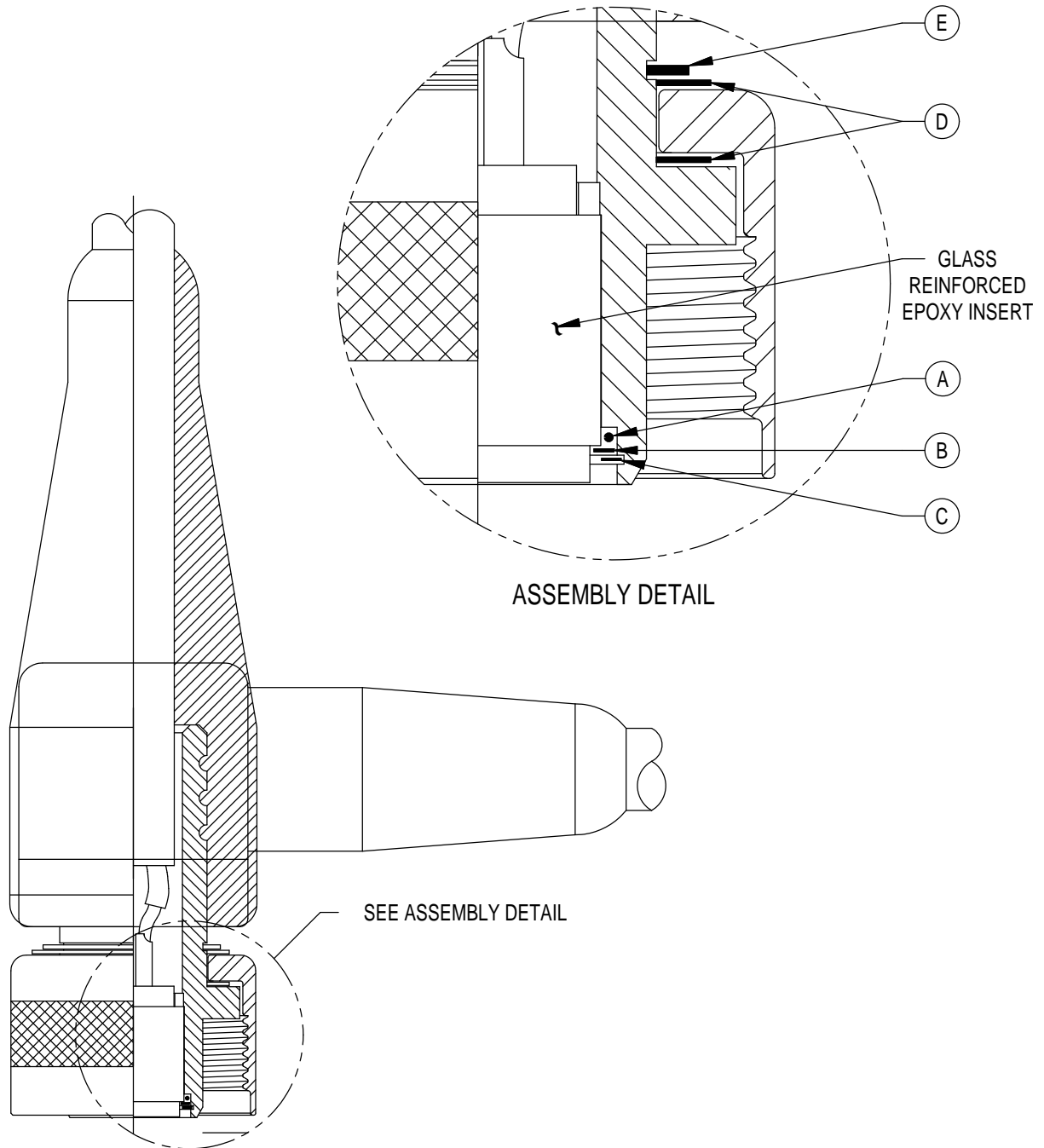
NOTE: See Technical Bulletin 45 10 for J size detailed assembly.

* Not required with FCR or CCR assemblies.

** Not required with CCR assembly.

*** FCR uses 2-240.

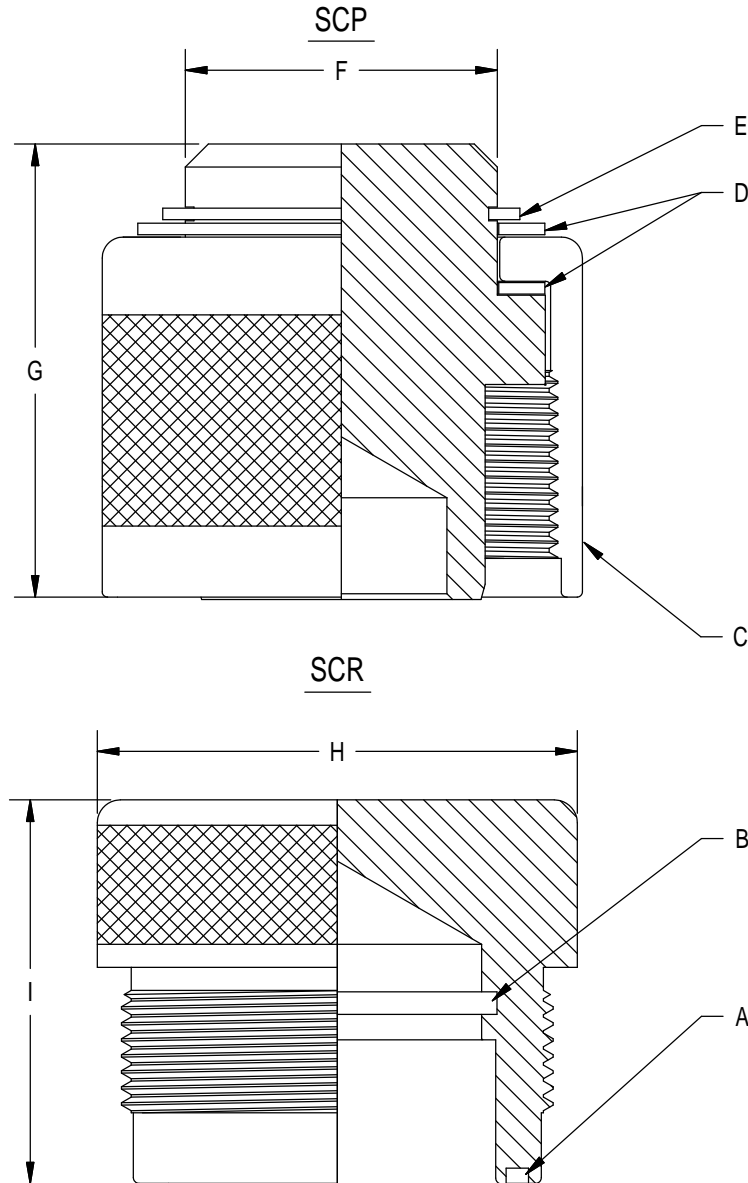
CCP DETAILED ASSEMBLY



SCALE NONE

| SHELL SIZE | G | K | L | M | O | Q |
|----------------------|---------|------------|------------|------------|------------|------------|
| A O-RING | NONE | 2-017 | 2-021 | 2-024 | 2-127 | 2-137 |
| B WASHER | NONE | 35000 S 31 | 35000 S 32 | 35000 S 33 | 35000 S 34 | 35000 S 36 |
| C SPIROLOX RING | NONE | UR-87 | UR-112 | UR-137 | UR-162 | UR-225 |
| D DELRIN WASHER (2X) | NONE | 35000 P 11 | 35000 P 12 | 35000 P 13 | 35000 P 14 | 35000 P 16 |
| E RETAINING RING | 5100-87 | 5100-112 | 5100-137 | 5100-162 | 5100-212 | 5100-275 |

NOTE: See Technical Bulletin 45 10 for J size detailed assembly.



| CONNECTOR SIZE | MSK | MSL | MSM | MSO | MSQ |
|--------------------------------|-----------|-----------|-----------|-----------|-----------|
| A O-RING | 2-027 | 5-320 | 2-132 | 2-140 | 2-151 |
| B O-RING | 2-023 | 2-027 | 2-128 | 2-225 | 2-230 |
| C ENGAGING NUT | 607406 | 607507 | 607606 | 607706 | 607917 |
| D DELRIN WASHER (2X) | 35000 P11 | 35000 P12 | 35000 P13 | 35000 P14 | 35000 P16 |
| E RETAINING RING | 5100-112 | 5100-137 | 5100-162 | 5100-212 | 5100-275 |
| F DIA | 1.11 | 1.38 | 1.62 | 2.12 | 2.75 |
| G | 1.56 | 1.56 | 2.37 | 2.37 | 2.37 |
| H DIA | 1.87 | 2.12 | 2.50 | 3.00 | 3.87 |
| I | 1.50 | 1.50 | 2.00 | 2.00 | 2.12 |
| MATED PRESSURE RATING (psi) | 20,000 | 20,000 | 20,000 | 20,000 | 20,000 |

SCALE NONE

DESCRIPTION AND
MATERIAL

- 316 stainless steel passivated per QQ-P-35 Type VI with naval bronze engaging nut.
- Optional material is (MSA) 6061-T6 Aluminum, hard anodized per MIL-A-8625, Type III, Class 2. (AVAILABLE IN STRAIGHT CONFIGURATION ONLY).
- Available in sizes: K, L, M & Q.
 - K - 1/2" O.D. Tube (Maximum)
 - L - 3/4" O.D. Tube (Maximum)
 - M - 1" O.D. Tube (Maximum)
 - Q - 1-1/4" O.D. Tube (Maximum)Customer to specify tube size at time of order.
- Up to 5,000 VDC.
- To 7,500 PSI in Mated Condition.

- Insert is glass reinforced epoxy with brass contacts.
- Contacts gold plated per MIL-G-45204.

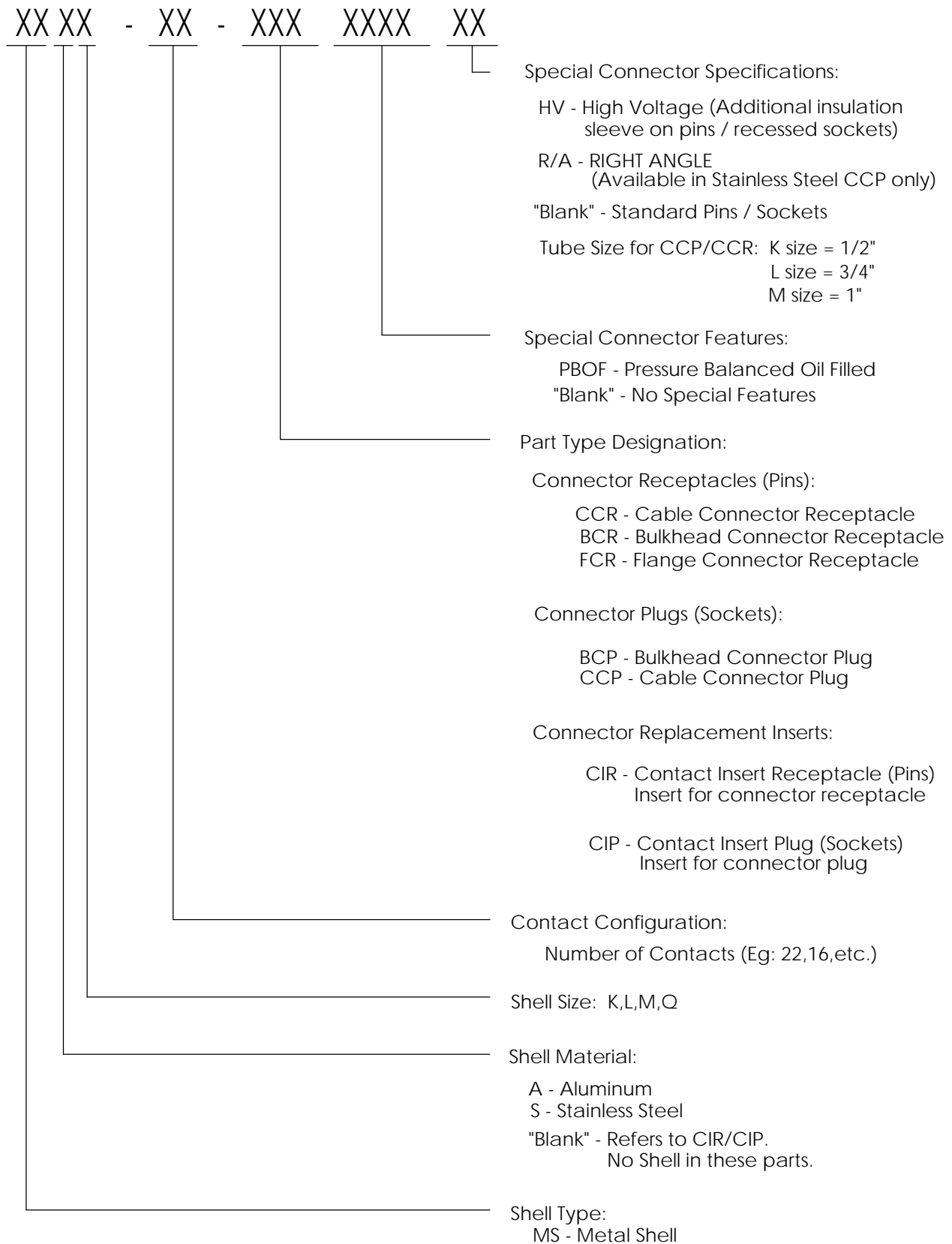
MATING

- PBOF Series mates with Metal Shell BCR, FCR, and CCR.

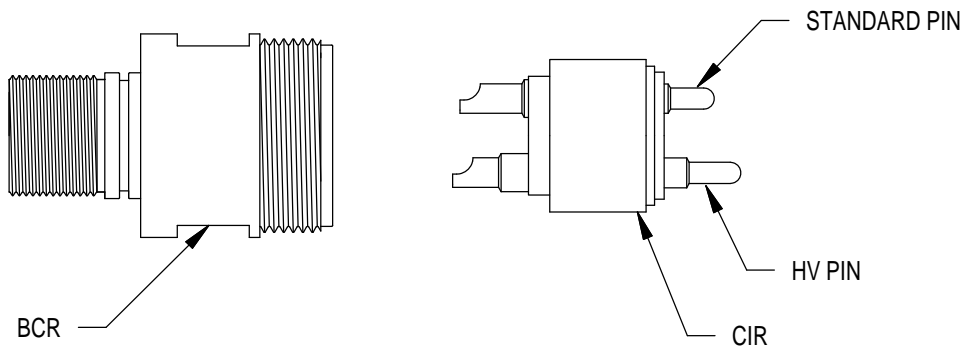
USES

- Heavy duty applications.
- Hazardous, rugged environments.
- Power transmission.
- Signal telemetry.
- Commonly used on ROV's and large transducers.

PBOF PART NUMBER GUIDE



BULKHEAD CONNECTOR RECEPTACLE

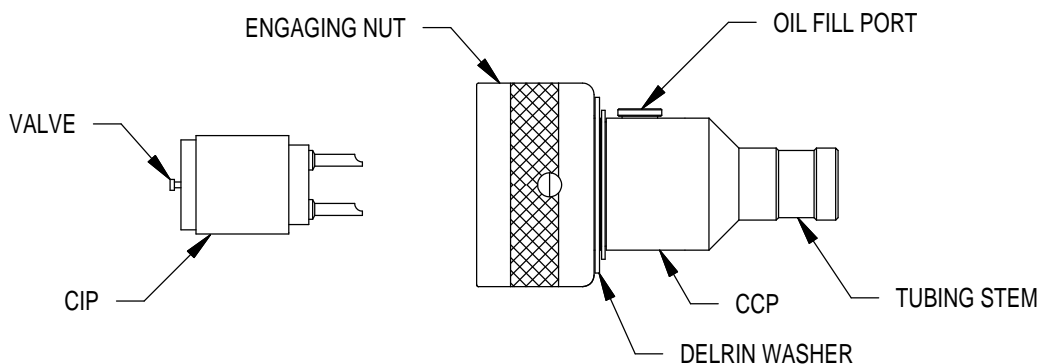


MSSL-*-BCR PBOF HV

DESCRIPTION:

SHELL TYPE: MS - METAL SHELL
 SHELL MATERIAL: S - STAINLESS STEEL
 SHELL SIZE: L
 CONTACT CONFIGURATION: *
 PART TYPE: BCR - BULKHEAD CONNECTOR RECEPTACLE
 SPECIAL FEATURES: PBOF - PRESSURE BALANCED OIL FILLED
 SPECIAL CONTACT SPECS: HV - HIGH VOLTAGE

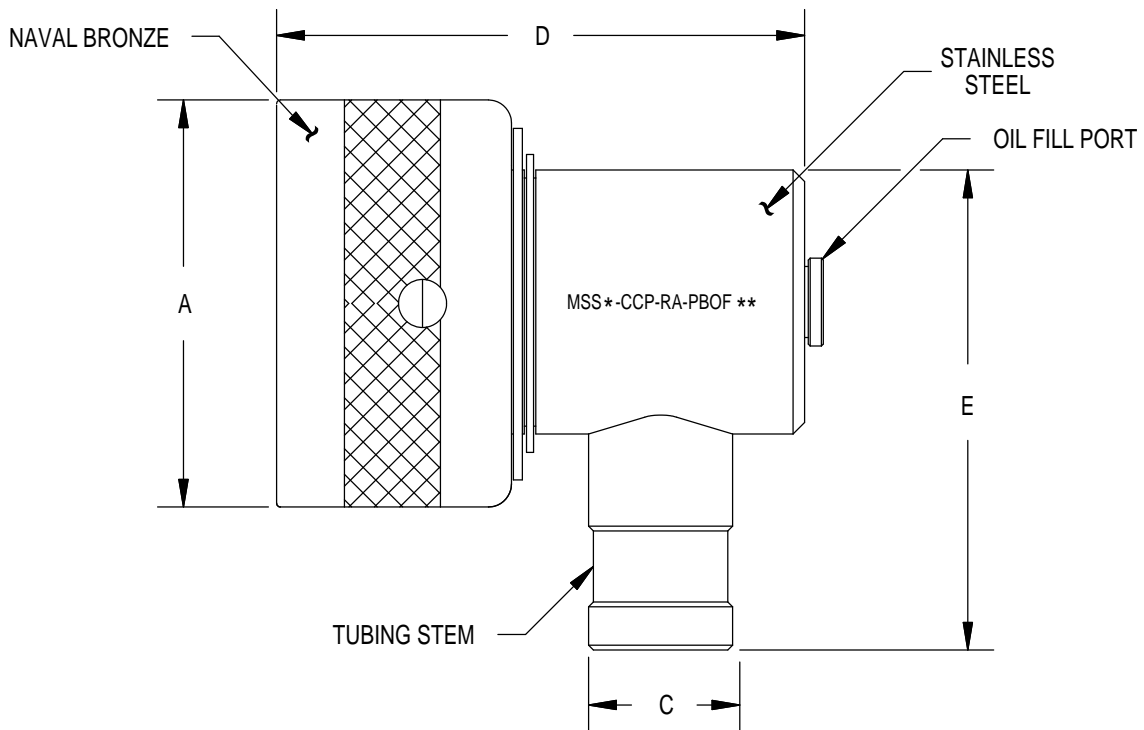
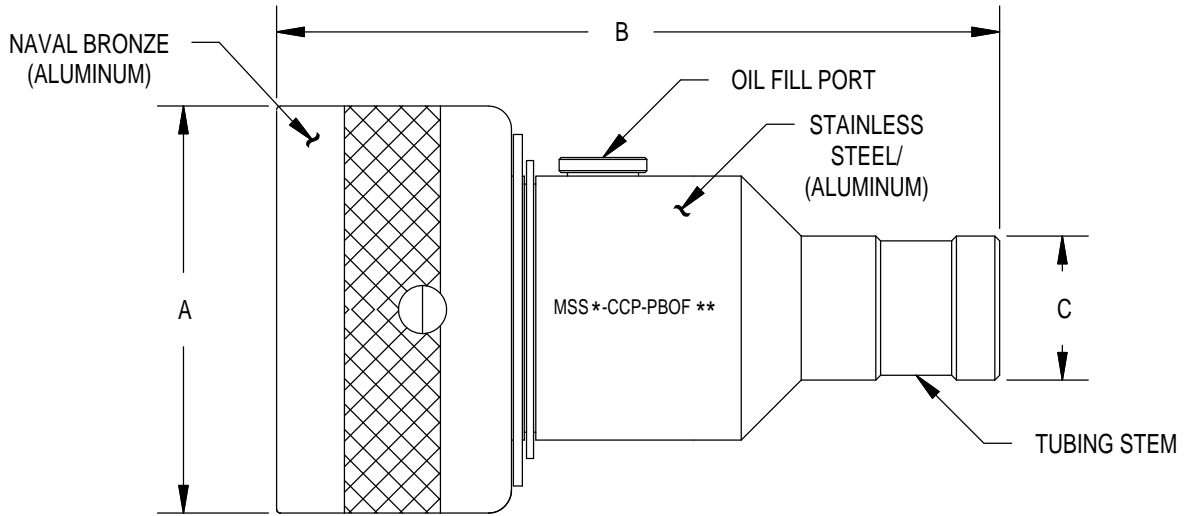
CABLE CONNECTOR PLUG



MSAL-*-CCP PBOF w/ 3/4" Tube

DESCRIPTION:

SHELL TYPE: MS - METAL SHELL
 SHELL MATERIAL: A - ALUMINUM
 SHELL SIZE: L
 CONTACT CONFIGURATION: *
 PART TYPE: CCP - CABLE CONNECTOR PLUG
 SPECIAL FEATURES: PBOF - PRESSURE BALANCED OIL FILLED
 3/4" TUBE - ID OF TUBING TO BE USED
 (3/4" STANDARD FOR OCEANEERING)



SHOWN SHELL SIZE 'L'

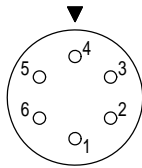
| SHELL SIZE | A | B | C | D | E |
|------------|------|------|------------|------|------|
| K | 1.87 | 3.50 | 1/2" MAX | 2.60 | 2.12 |
| L | 2.12 | 3.75 | 3/4" MAX | 2.75 | 2.50 |
| M | 2.50 | 5.00 | 1" MAX | 3.70 | 3.00 |
| Q | 3.87 | 7.00 | 1-1/4" MAX | 4.00 | 4.12 |

NOTE: Specify O.D. of tube at time of order.

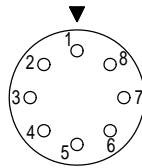
* Specify shell size.

** See Technical Bulletin 45 72 for internal assembly and hardware specifications.

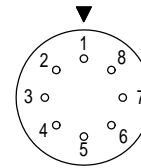
K SIZE CONTACT
CONFIGURATION
(BCR FACE VIEWS)



6#16
1500VDC

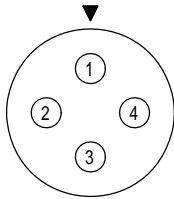


8#16
1000VDC

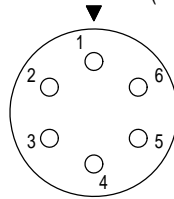


8#20
600VDC

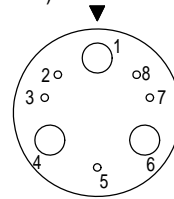
L SIZE CONTACT
CONFIGURATION
(BCR FACE VIEW)



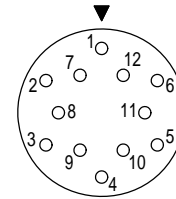
4#8
High Voltage
3000VDC



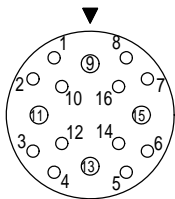
6#14
1000VDC



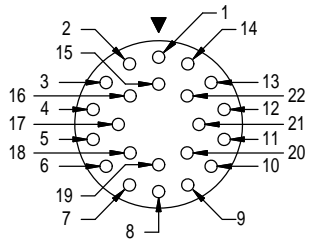
5#20
3#8
600VDC



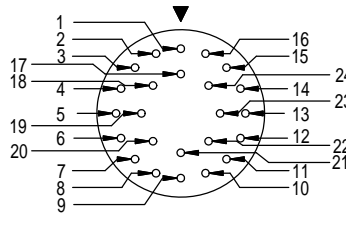
12#16
1000VDC



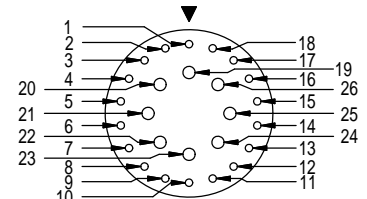
4#14
12#16
1000VDC



22#16
1000VDC

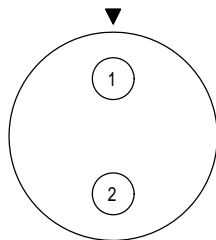


24#20
600VDC

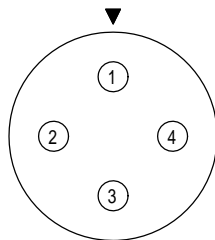


8#16
18#20
300VDC

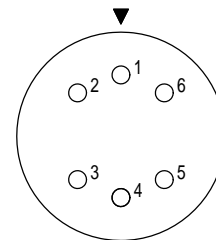
M SIZE CONTACT
CONFIGURATION
(BCR FACE VIEWS)



2#6
1000 VDC



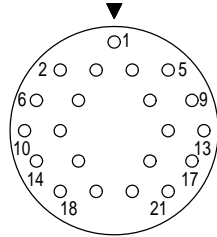
4#8 *
1000VDC



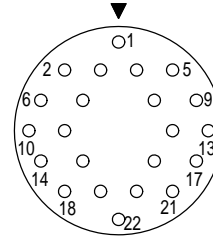
6#14
600VDC

* Also available in high voltage.
(3000 VDC)

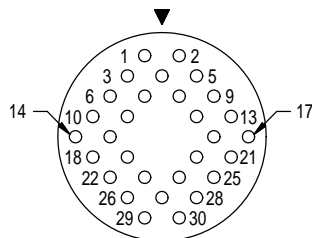
M SIZE CONTACT
CONFIGURATION
(BCR FACE VIEWS)



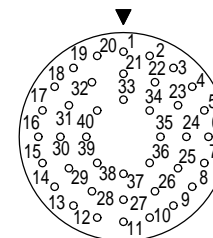
21#16
600VDC



22#16
600VDC

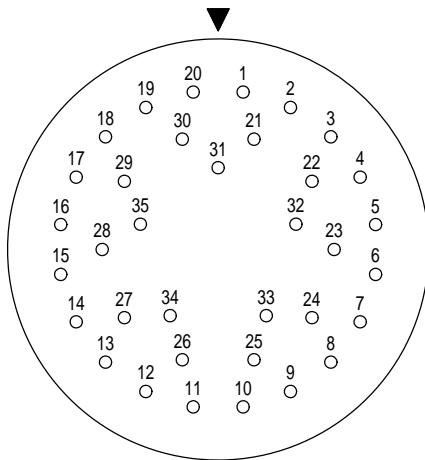


30#16
600VDC

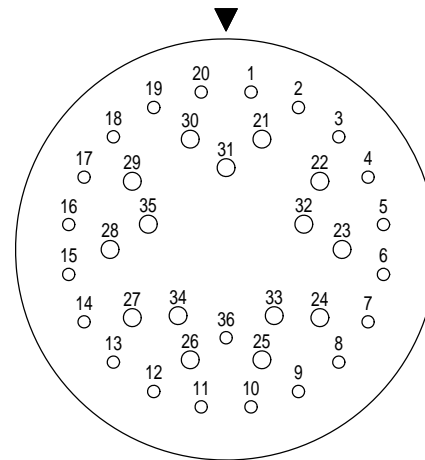


40#20
300VDC

Q SIZE CONTACT
CONFIGURATION
(BCR FACE VIEWS)

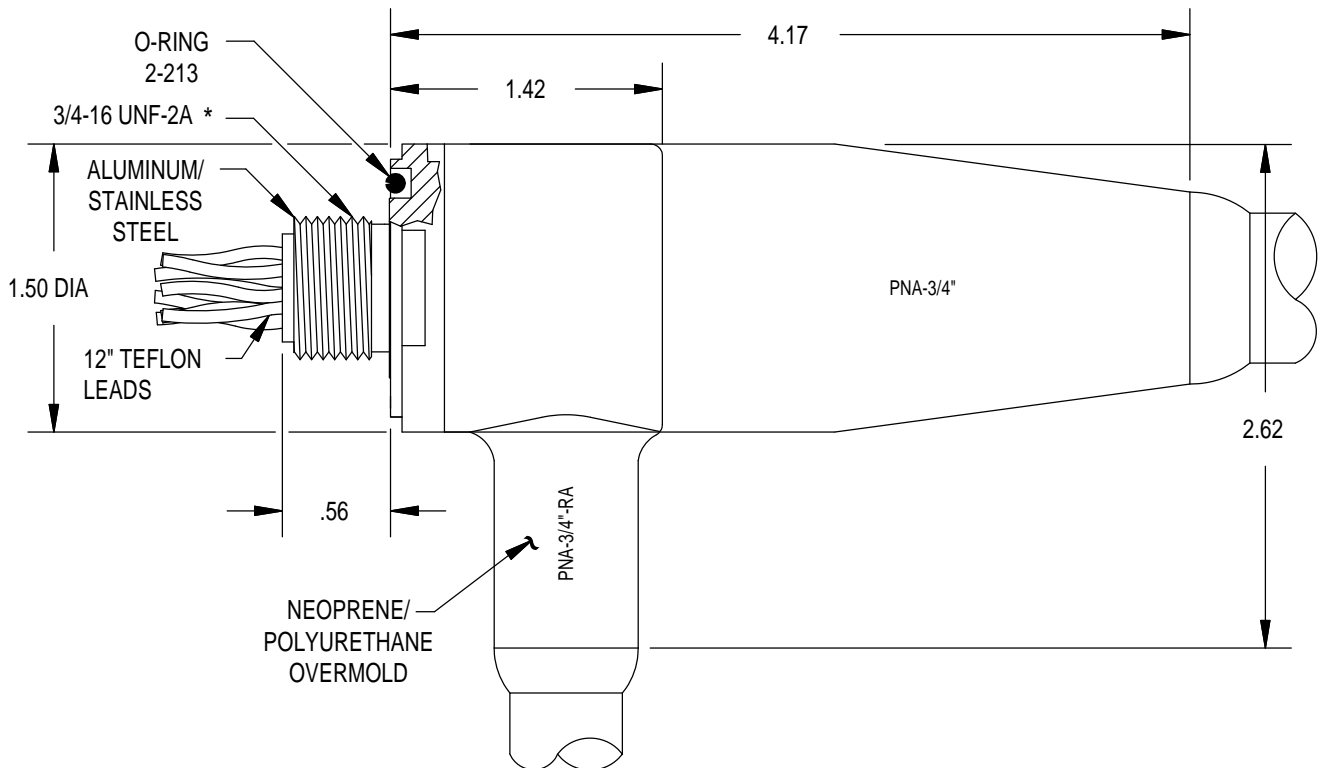
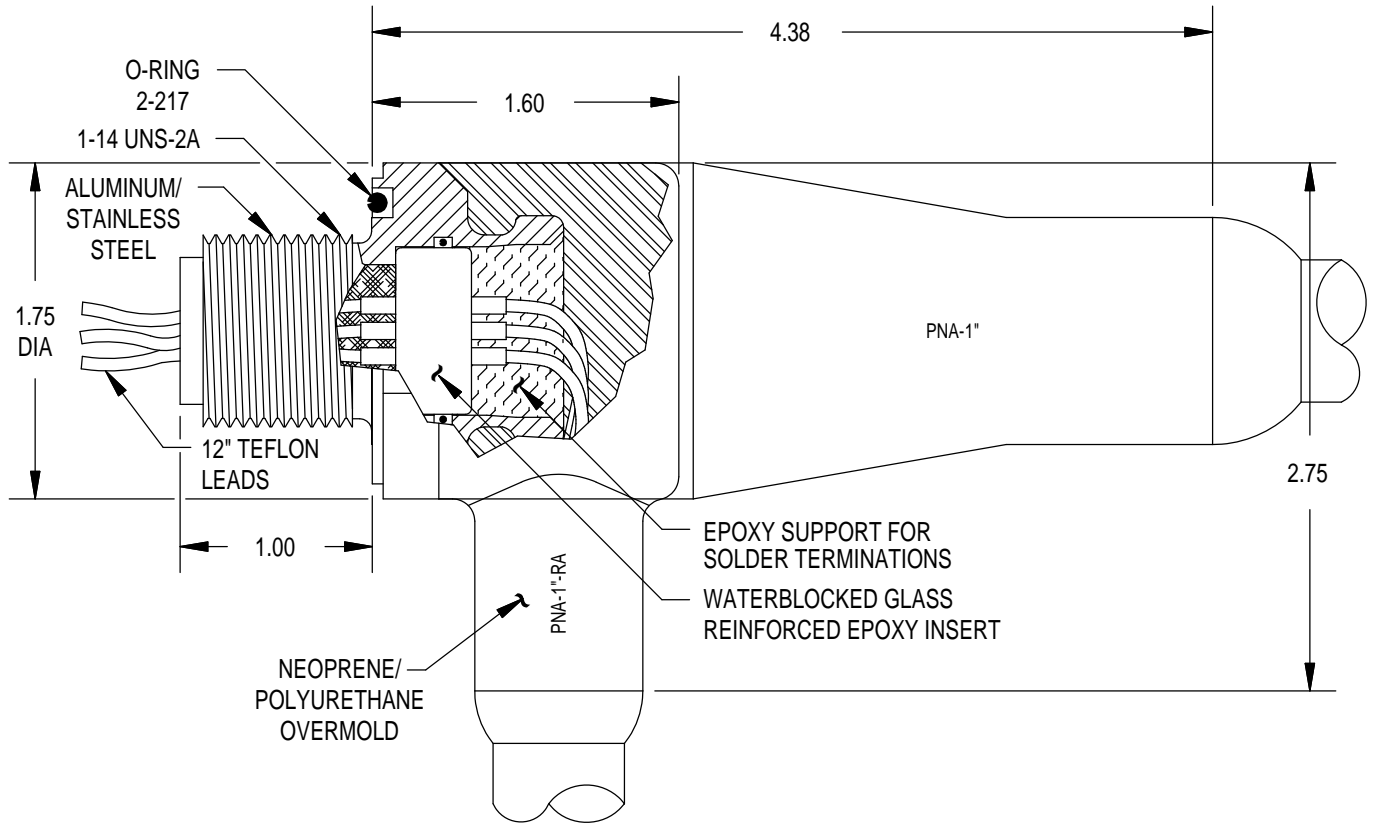


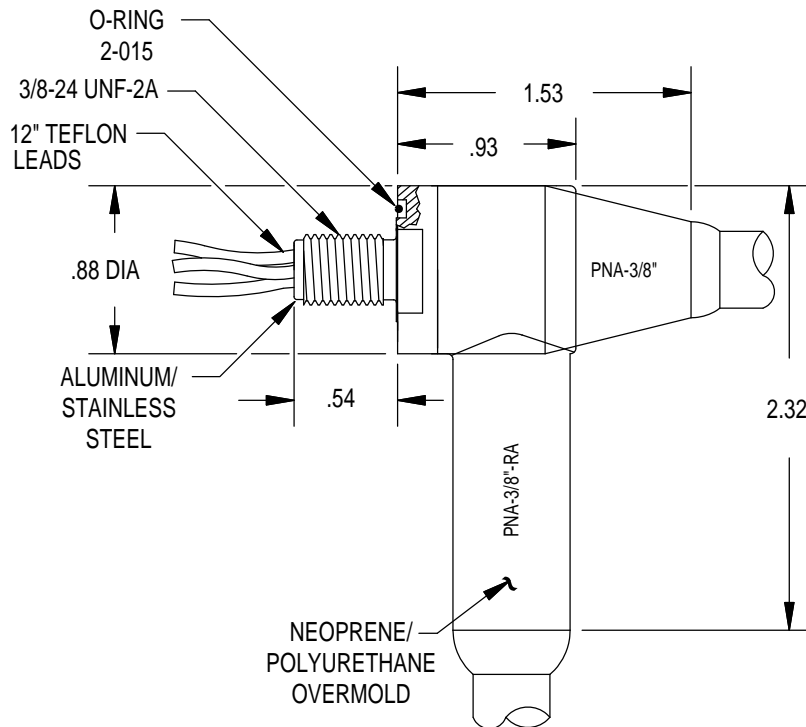
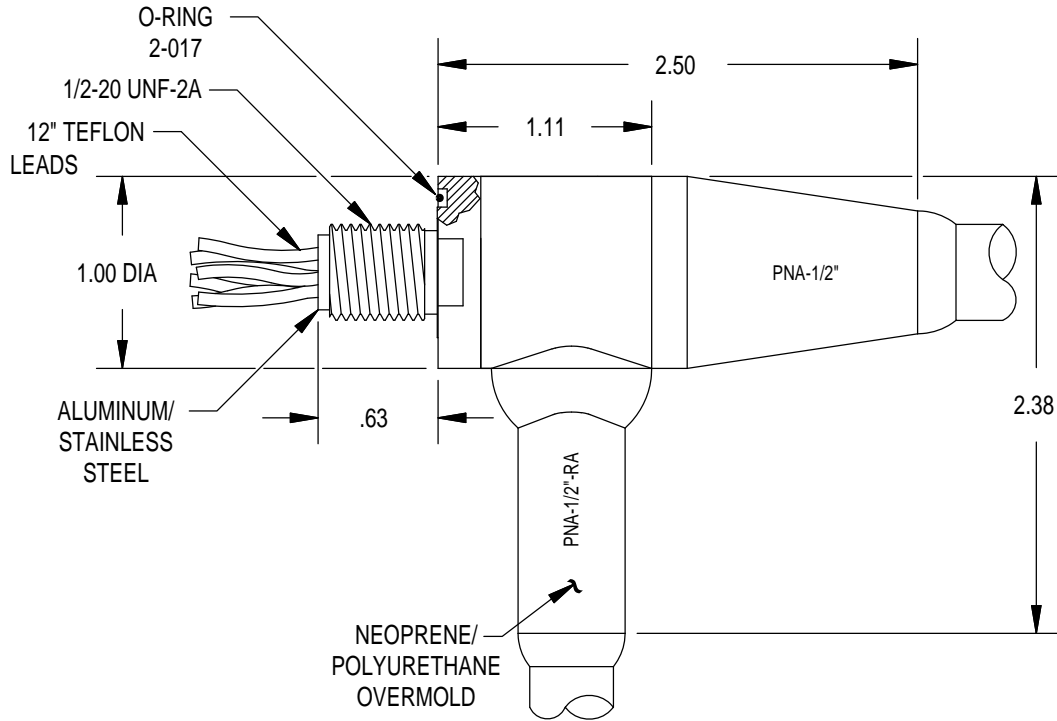
35#16
(High Voltage)
2000VDC



15#14
21#16
(High Voltage)
2000VDC

| | |
|--------------------------|---|
| DESCRIPTION AND MATERIAL | <ul style="list-style-type: none"> • 316 stainless steel body passivated per QQ-P-35 Type VI. • Optional body is 6061-T6 aluminum, hard anodized per MIL-A-8625, Type III, Class 2. • Metal body waterblocked with glass reinforced epoxy insert and neoprene or polyurethane overmolded. • One to 30 conductors depending on gauge of conductors. • Up to 600 VDC. • Up to 10,000 PSI. |
| MATING | <ul style="list-style-type: none"> • This penetrator is threaded at one end with wire leads coming through the thread hole. The opposite end away from the penetrator can be terminated to a rubber, epoxy or metal shell connector. See applicable sections of catalogue for details. |
| CABLE | <ul style="list-style-type: none"> • Penetrators have 12" teflon leads, Type E per MIL 16878/4 18 AWG(except 1" PNA-26 and 30 contact versions). • The penetrator's amperage and voltage may be limited by amperage and voltage ratings of the cable to which the penetrator is mated. |
| USES | <ul style="list-style-type: none"> • Light to medium duty applications. • Hazardous environment. • Power transmission. • Signal telemetry. • Keeps mating and unmating manipulation away from bulkhead. • Allows greater flexibility in mating cable away from bulkhead. • Waterblocked insert keeps bulkhead from flooding if accidental cable damage occurs. • Very low right angle profile. |
| GUIDELINES | <ul style="list-style-type: none"> • May be threaded into bulkhead or fastened by use of a nut and washer. • All mounting surfaces require a 32 finish. • Keep o-ring grooves clean. • Avoid o-ring cuts and nicks. • Lubricate o-rings with Dow Corning #111 Valve Lubricant or equivalent. • Replace o-rings when re-using connectors. • Avoid contact with noxious solvents. • Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time. |

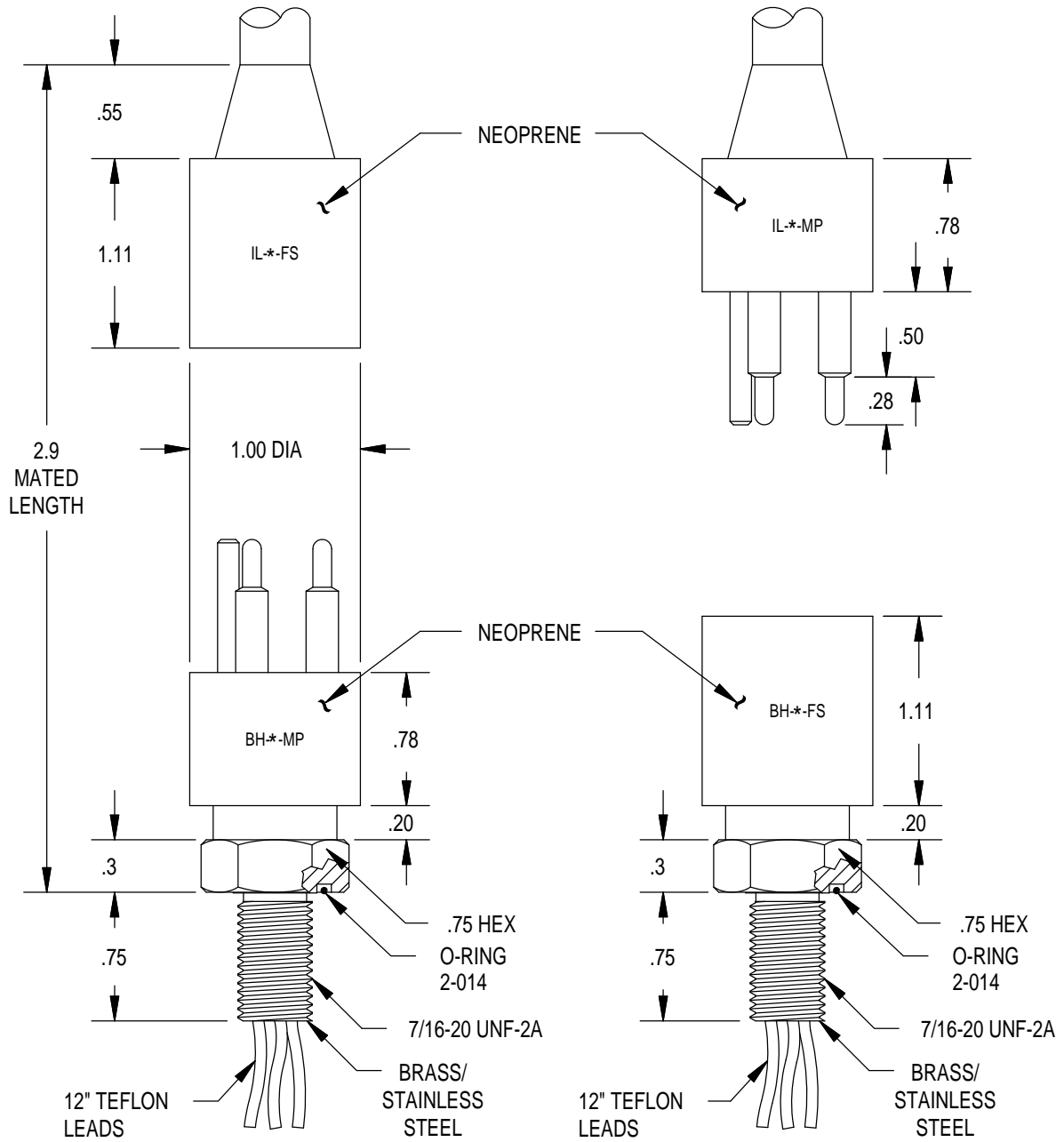


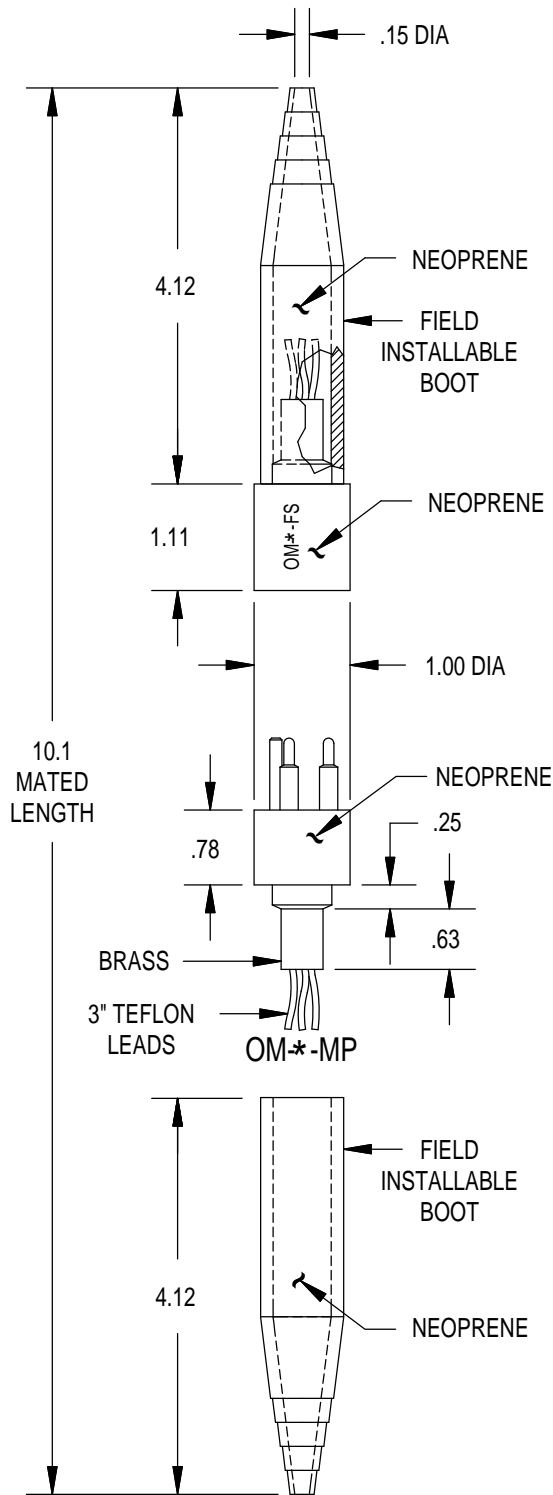


| PNA SIZE | MOUNTING TORQUE FOR SS PNA (in lbs) | MOUNTING TORQUE FOR ALUMINUM PNA (in lbs) | PRESSURE RATING (psi) | MAXIMUM # OF CONTACTS |
|--|-------------------------------------|---|-----------------------|-----------------------|
| 1" | 200 | 150 | 10,000 | 30 |
| 3/4" | 150 | 100 | 10,000 | 8 |
| 1/2" | 125 | 80 | 10,000 | 9 |
| 3/8" | 100 | 70 | 10,000 | 3(ALUM)/4(SS) |
| * Optional 5/8-18 UNF-2A stainless steel body available. | | | | |
| * Waterblocked glass reinforced epoxy insert available as separate item. | | | | |

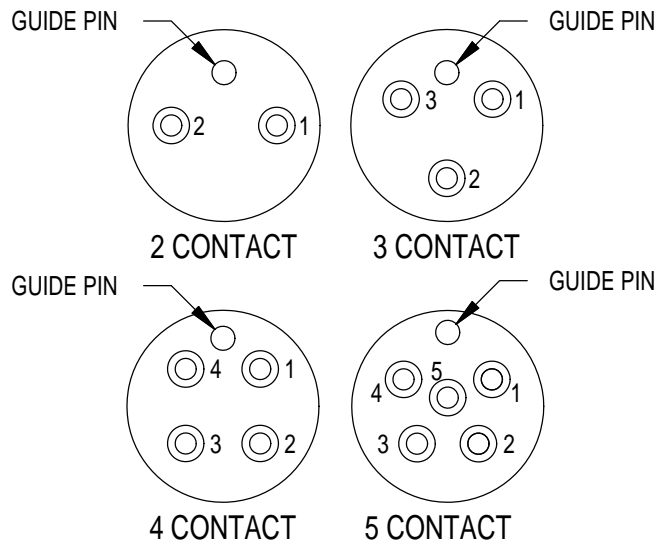
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| | |
|--------------------------|---|
| DESCRIPTION AND MATERIAL | <ul style="list-style-type: none">• Molded neoprene, some types available in polyurethane.• Two to twelve contacts, 12 AWG. (LPIL/LPBH-12 has 16 AWG. contacts.)• Up to 750 VDC.• Up to 10,000 PSI.• Bulkhead connector design open face pressure rated to 5,000 PSI.• Contacts gold plated per MIL-G-45204. |
| CABLE | <ul style="list-style-type: none">• Connectors in this series are molded on a standard 24" length of 16 AWG SO cable. IL-5, IL-12, LPIL-5 are molded on a standard 24" length of 18 AWG SO cable. LPIL-12 is molded on a standard 24" length of 20 AWG cable.• Custom lengths and cable types are available on request.• Bulkhead connectors have 12" teflon leads, Type E per MIL 16878/4 18 AWG. |
| USES | <ul style="list-style-type: none">• Light to heavy duty applications.• Hazardous environments. |
| GUIDELINES | <ul style="list-style-type: none">• All mounting surfaces require a 32 finish.• Lubricate mating surfaces with 3M Silicone Lubricant or equivalent, DO NOT grease! Connectors must be lubricated on a regular basis.• Lubricate o-rings with Dow Corning #111 Valve Lubricant or equivalent.• Align index pin prior to mating.• Avoid nicks and cuts around contacts as these are the sealing surfaces.• Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time.• Do not over tighten bulkhead nuts.• Do not pull on cable to disconnect.• Avoid sharp bends at cable entry to connector. |
| ORDERING INFORMATION | <ul style="list-style-type: none">• Locking sleeves are optional, specify when ordering.• Bulkhead connectors do not come with nuts and washers. If required, please specify when ordering.• OM connectors do not come with overmolding boots. If required, please specify when ordering. |
| NOTE | <ul style="list-style-type: none">• For Mini Wet Pluggable see Technical Bulletin page 65 80• For Micro Mini Wet Pluggable see Technical Bulletin page 65 109 |

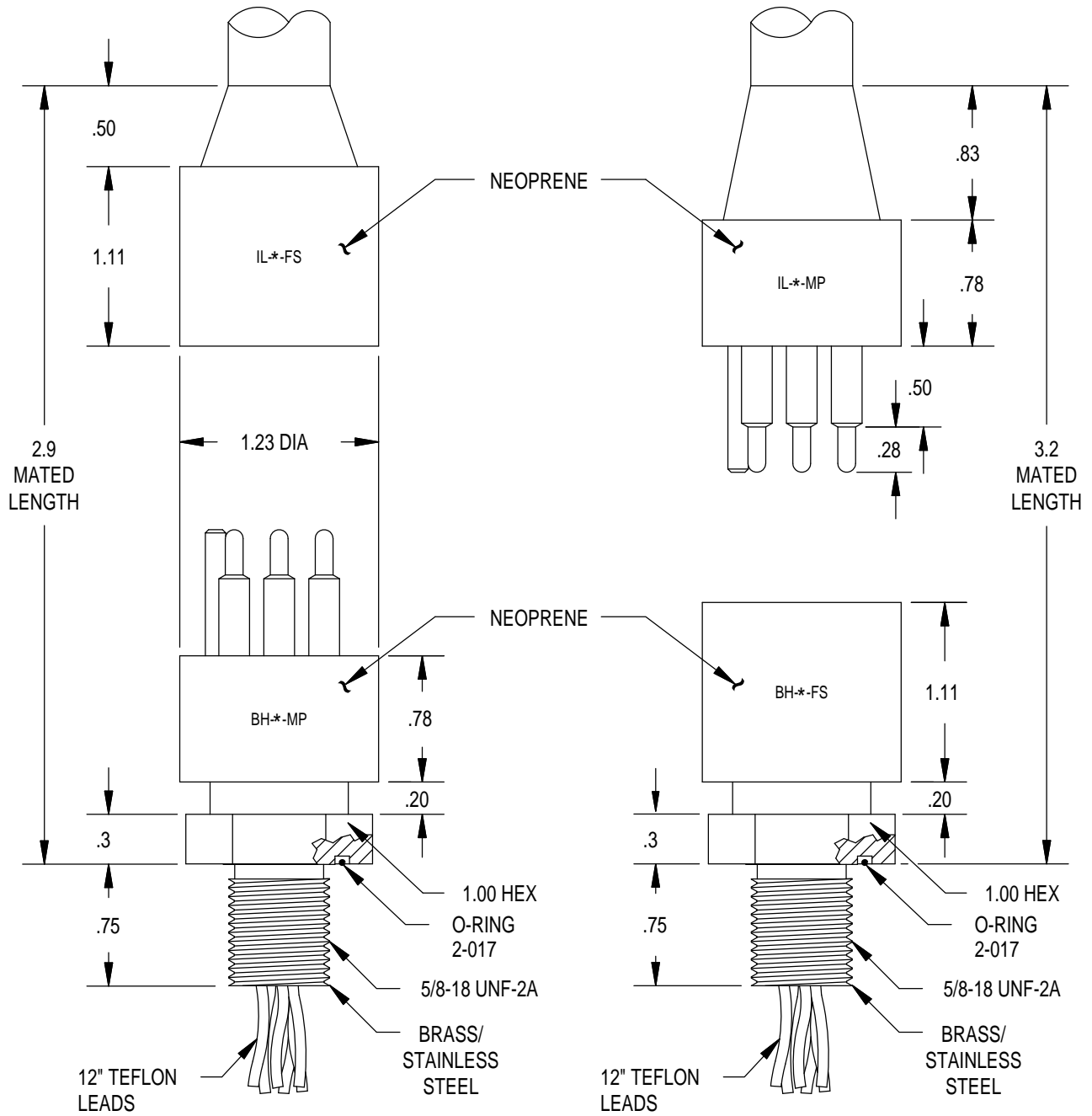


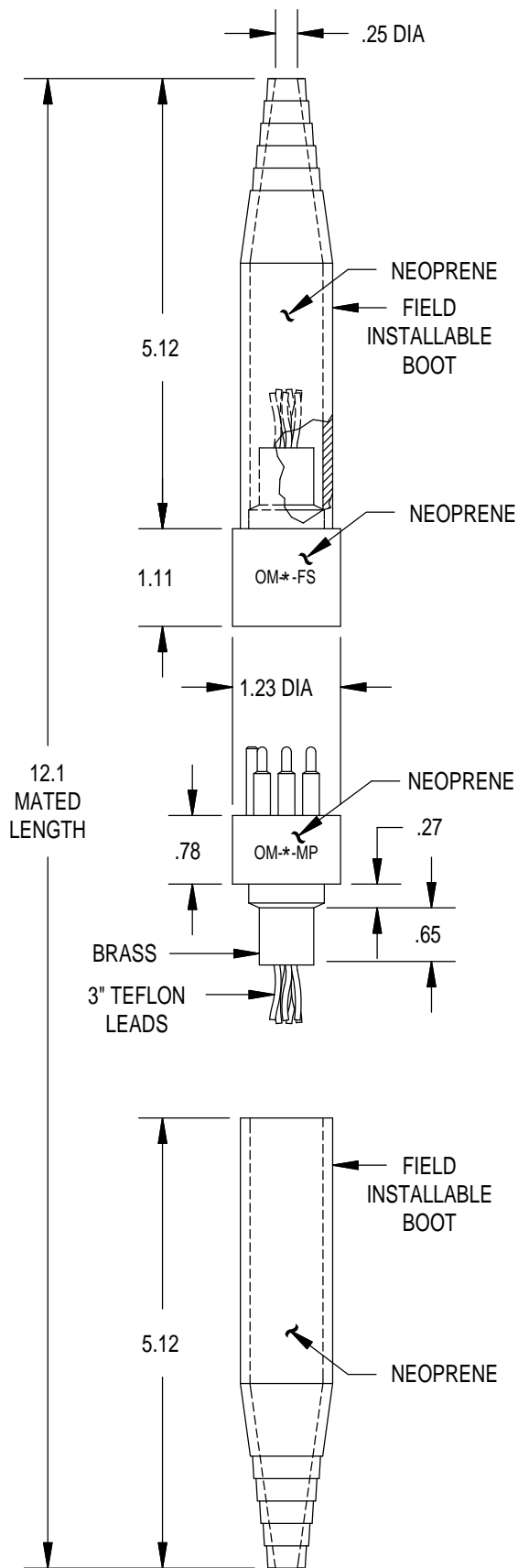


CONTACT CONFIGURATION
(MP FACE VIEWS)

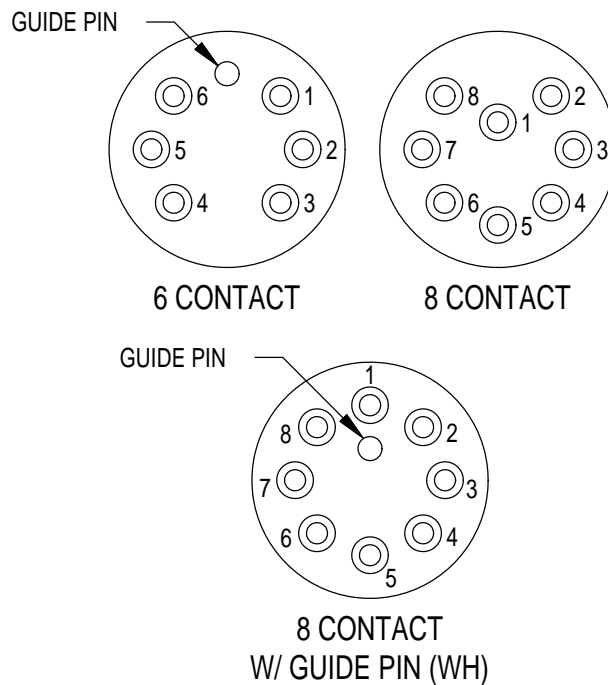


| | |
|---|--------------------------|
| MOUNTING TORQUE FOR BH-FS/MP | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR BH-FS, IL-FS, OM-FS | DC*-MP |
| DUMMY PLUG FOR BH-MP, IL-MP, OM-MP | DC*-FS |
| NOTE: Delrin locking sleeves available (DLSA-M or F). | |
| * Specify number of contacts. | |
| * Dummy Plugs found on page 65 32. | |

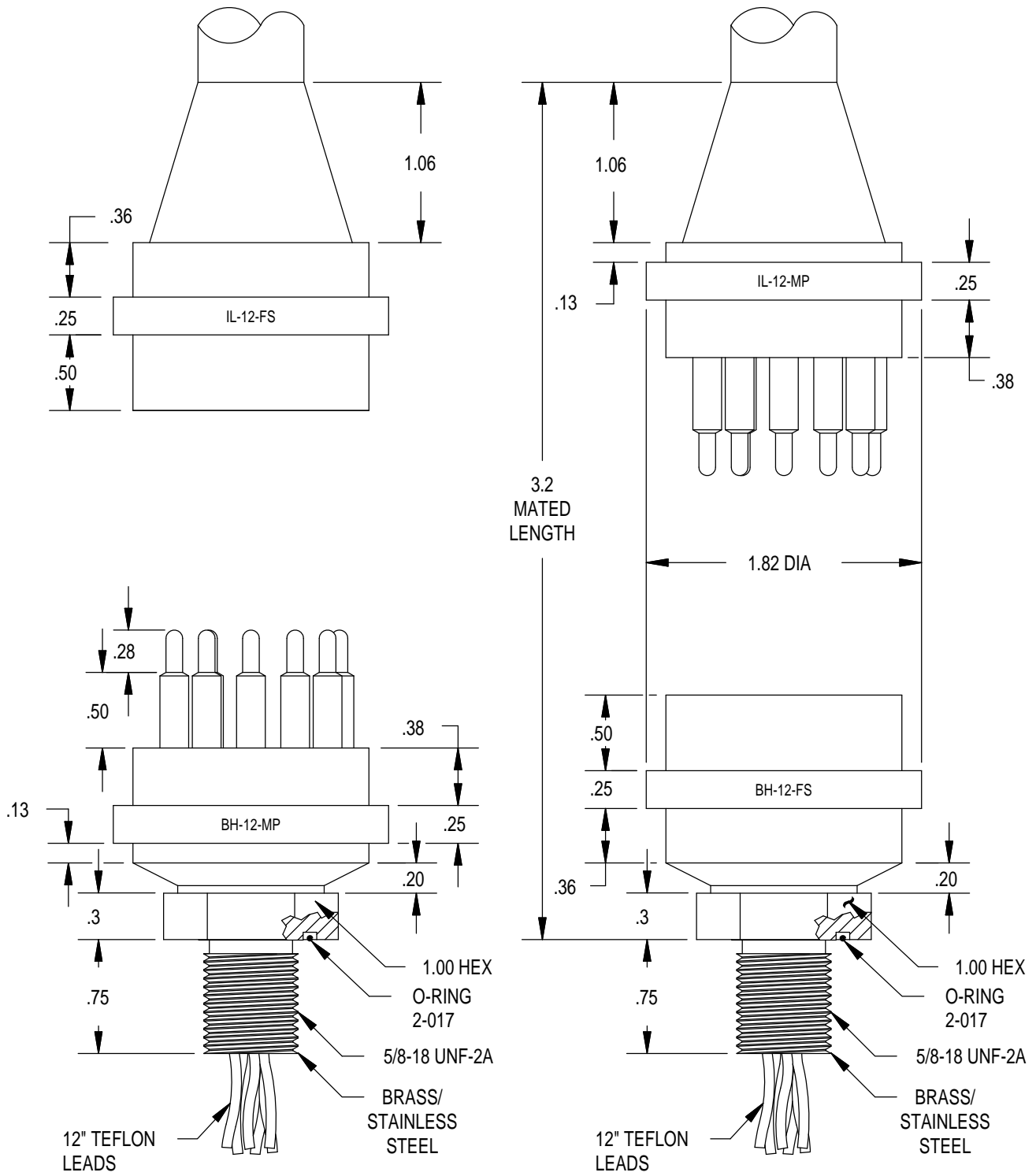


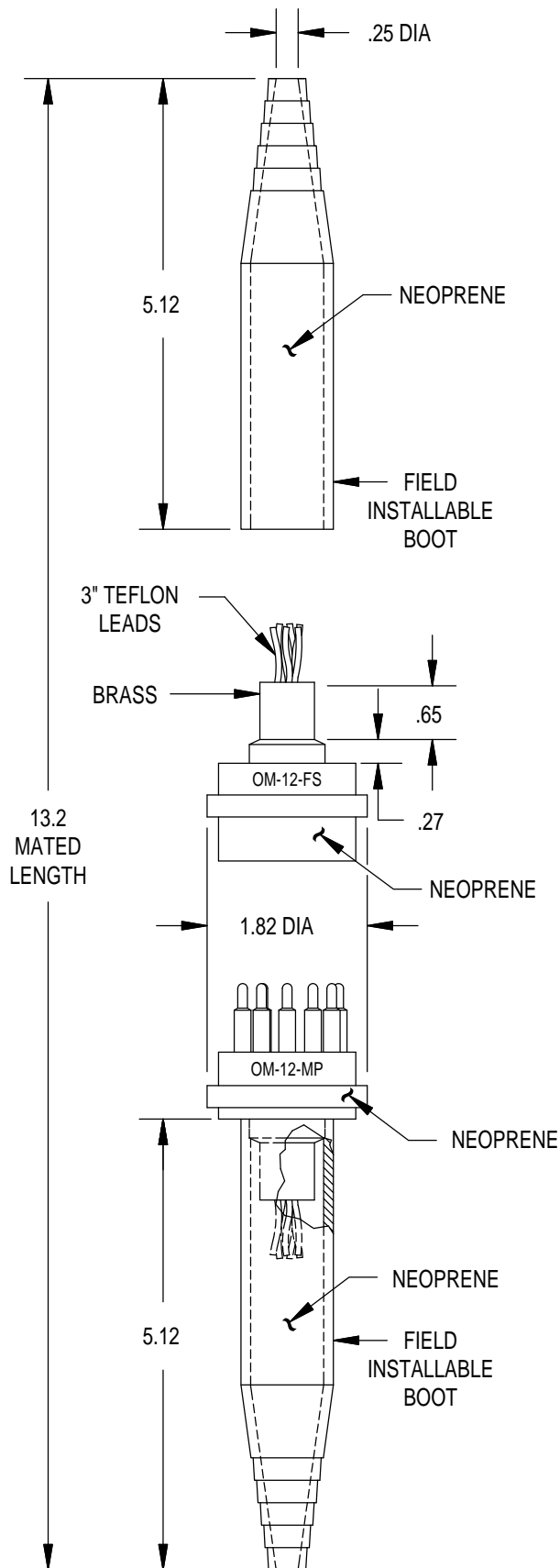


CONTACT CONFIGURATION
(MP FACE VIEWS)

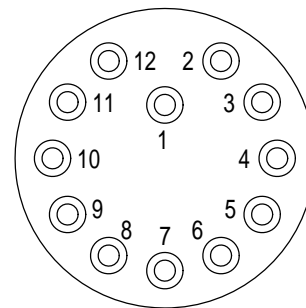


| | |
|---|--------------------------|
| MOUNTING TORQUE FOR BH-FS/MP | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR BH-FS, IL-FS, OM-FS | DC*-MP |
| DUMMY PLUG FOR BH-MP, IL-MP, OM-MP | DC*-FS |
| NOTE: Delrin locking sleeves available (DLSB-M or F). | |
| * Specify number of contacts. | |
| * Dummy Plugs found on page 65 32. | |



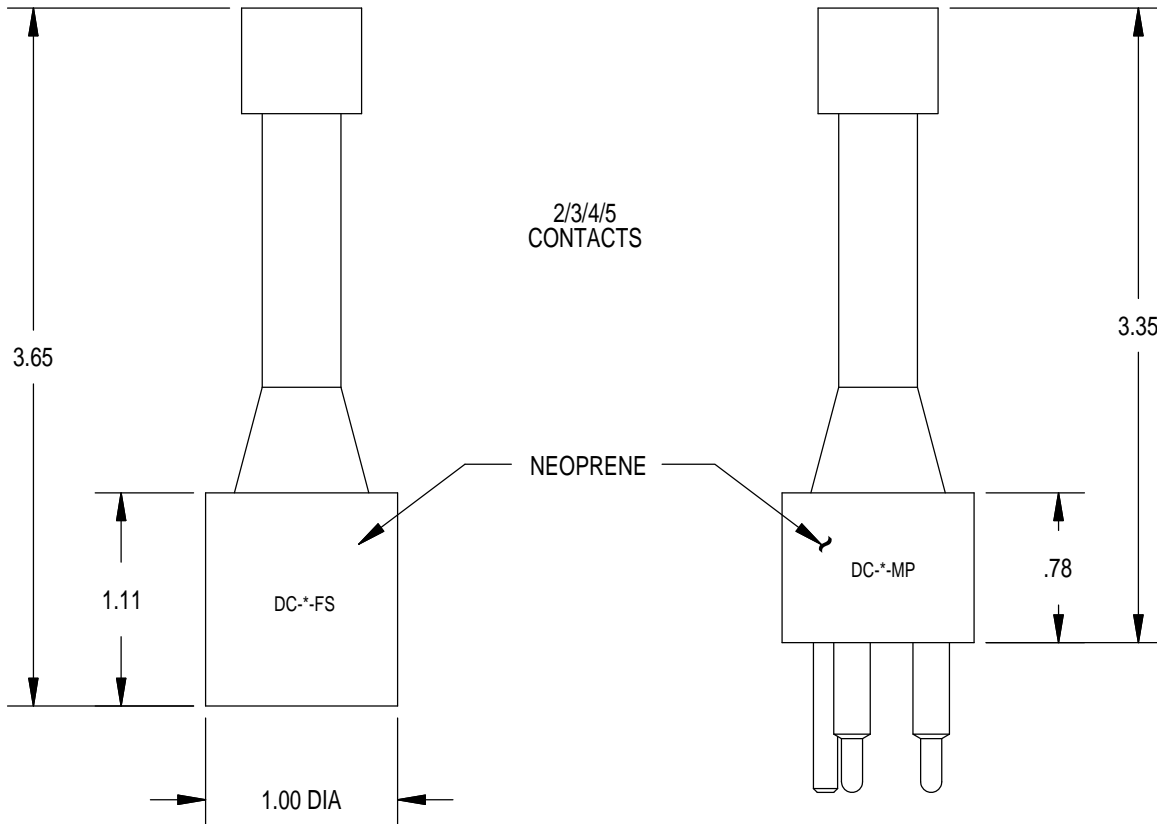


**CONTACT
CONFIGURATION**
(MP FACE VIEW)

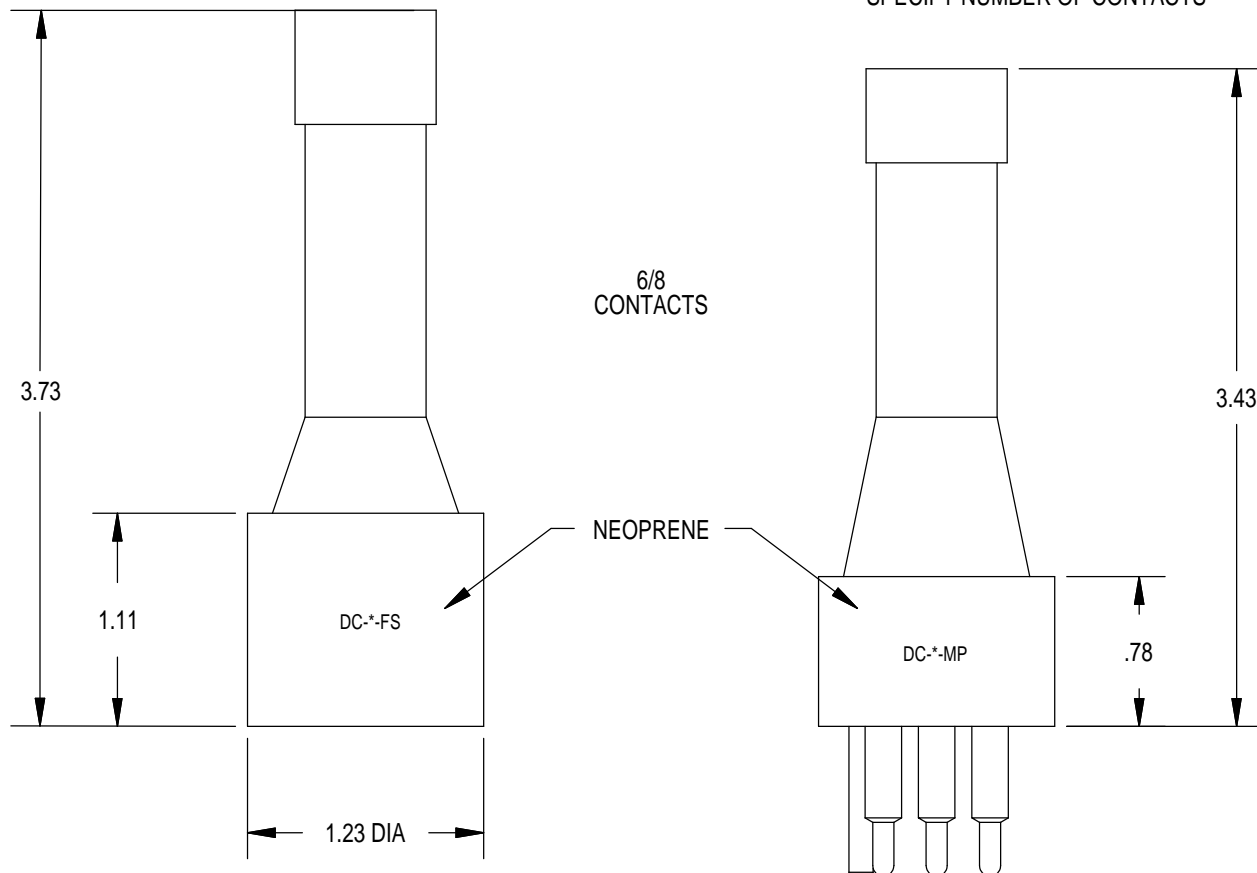


12 CONTACT

| | |
|--|--------------------------|
| MOUNTING TORQUE FOR BH-FS/MP | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR BH-FS, IL-FS, OM-FS | DC-12-MP |
| DUMMY PLUG FOR BH-MP, IL-MP, OM-MP | DC-12-FS |
| NOTE: Delrin locking sleeve available (DLSC-M or F). * Dummy Plugs found on page 65 33. | |

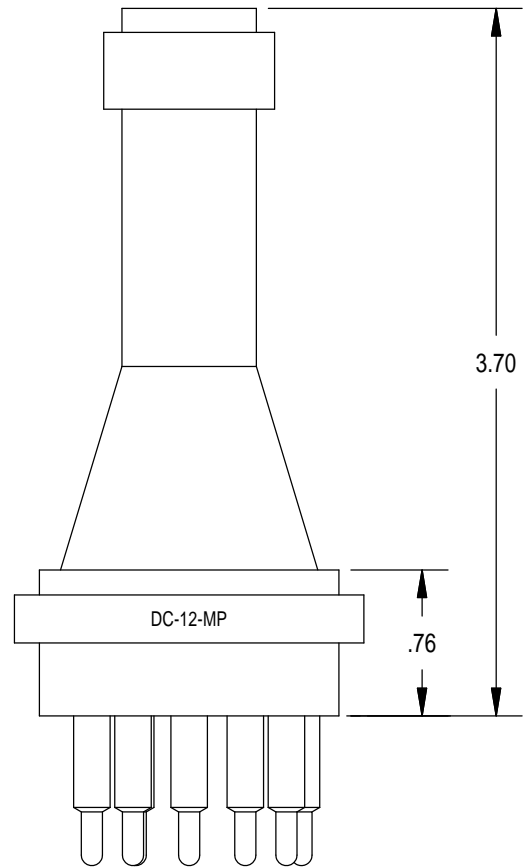
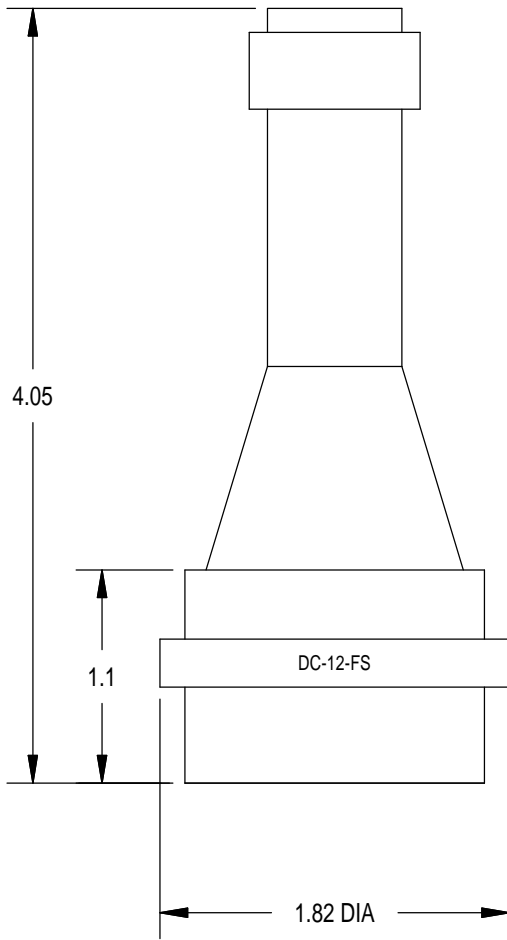


*SPECIFY NUMBER OF CONTACTS

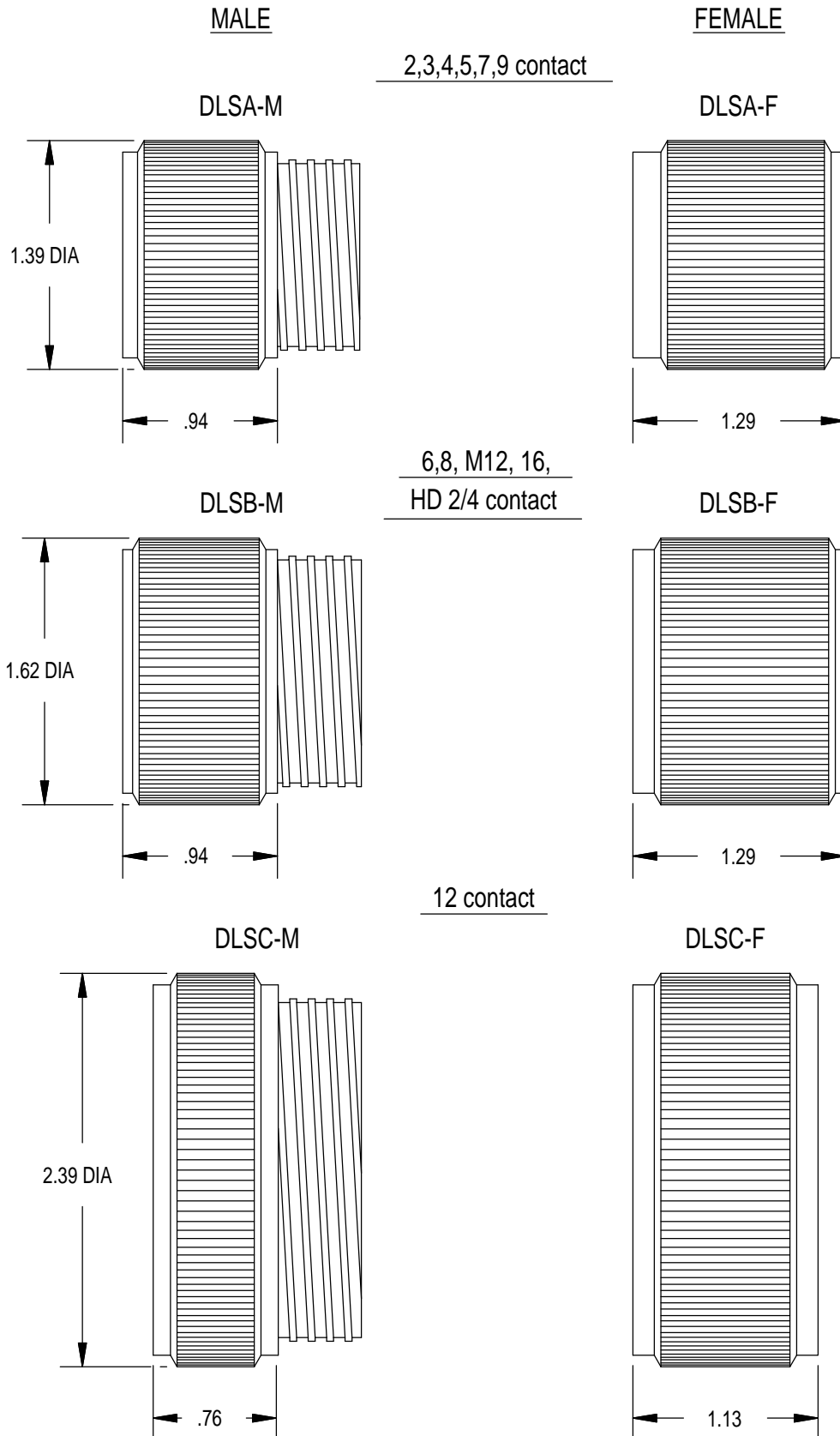


DC-12

WET
PLUGGABLE SERIES

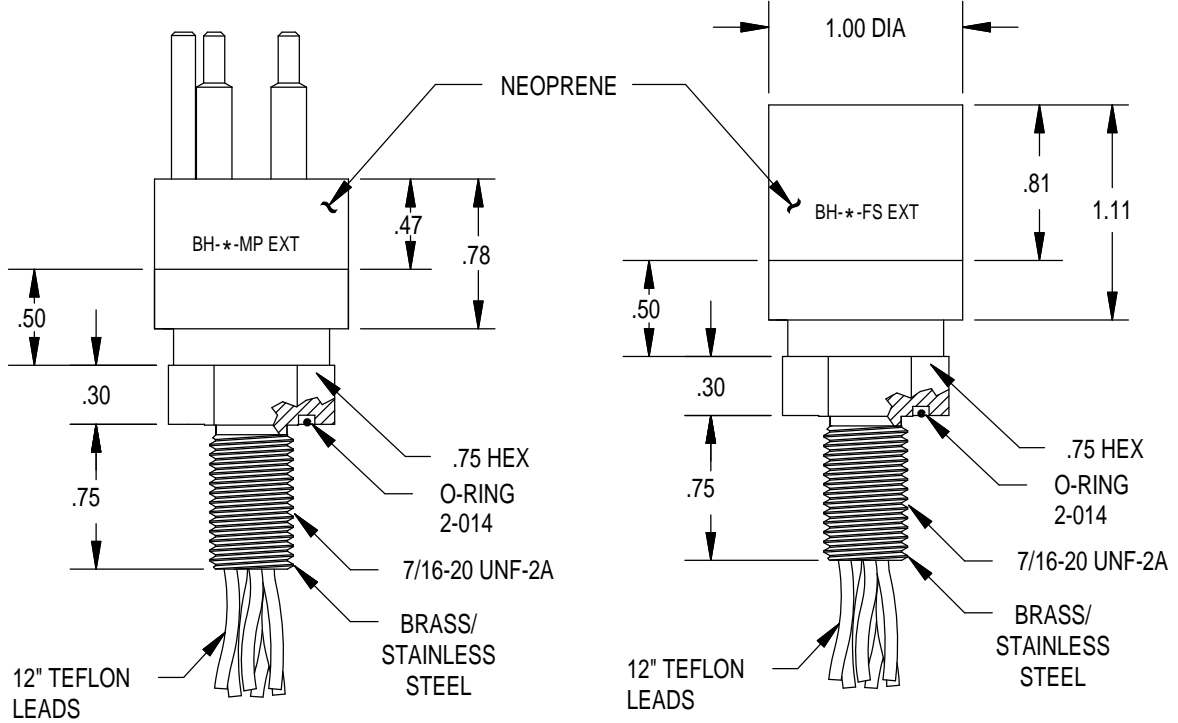
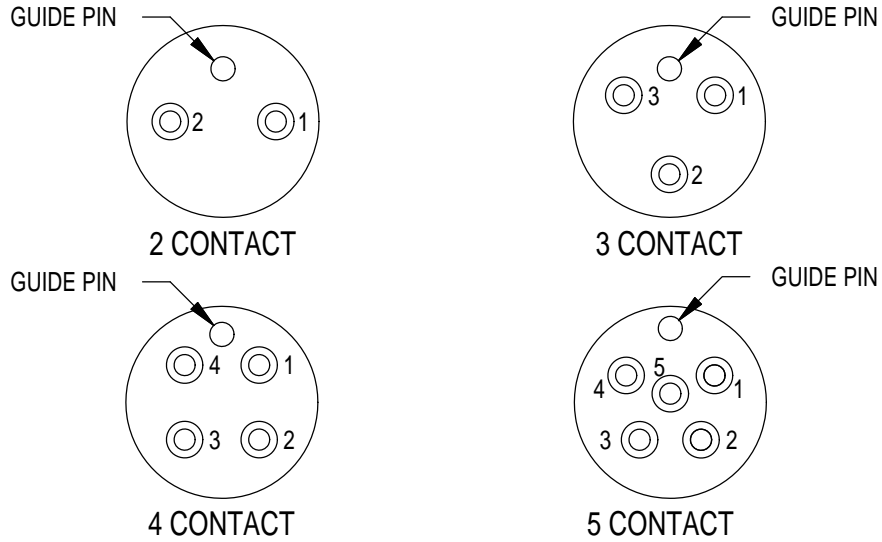


DELTRIN LOCKING SLEEVES



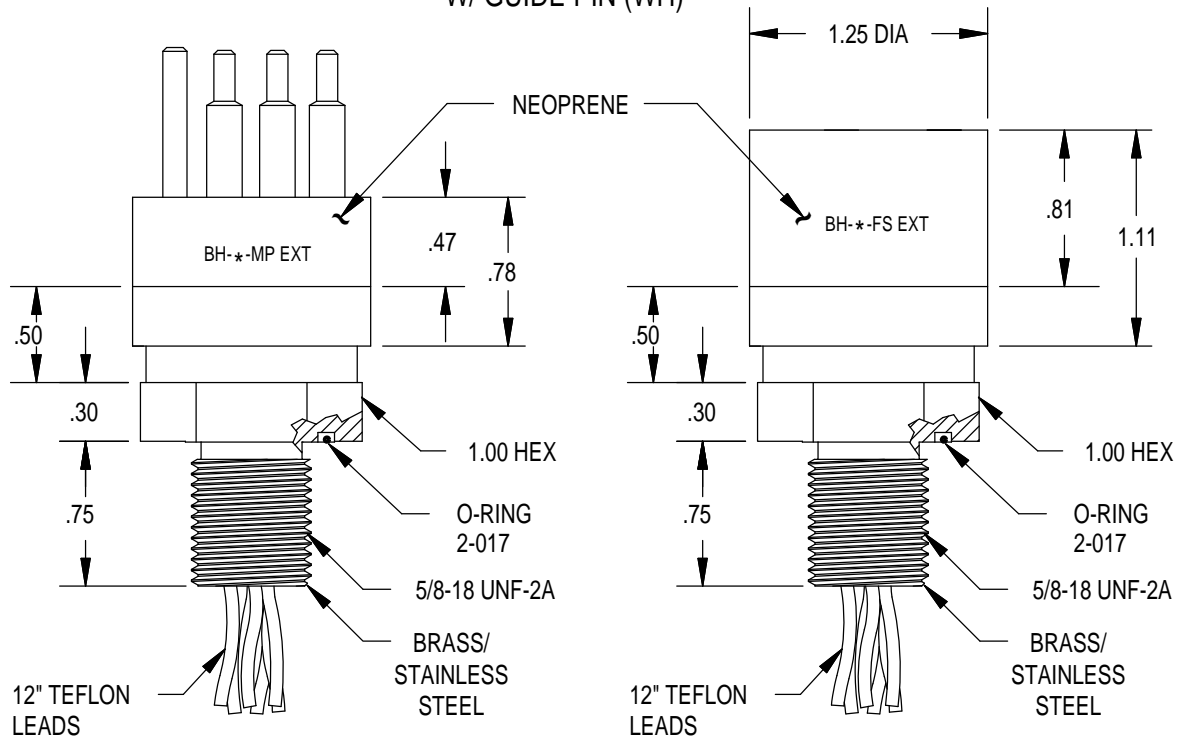
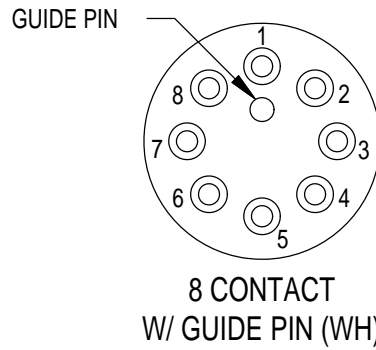
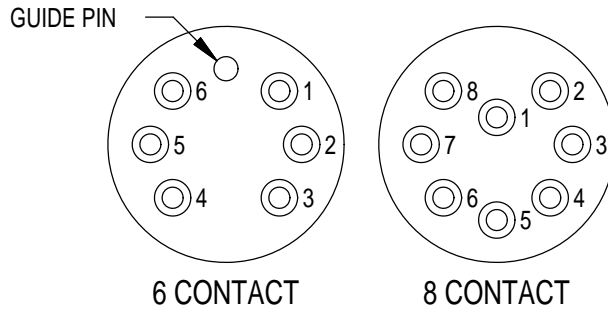
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**CONTACT
CONFIGURATION**
(MP FACE VIEWS)

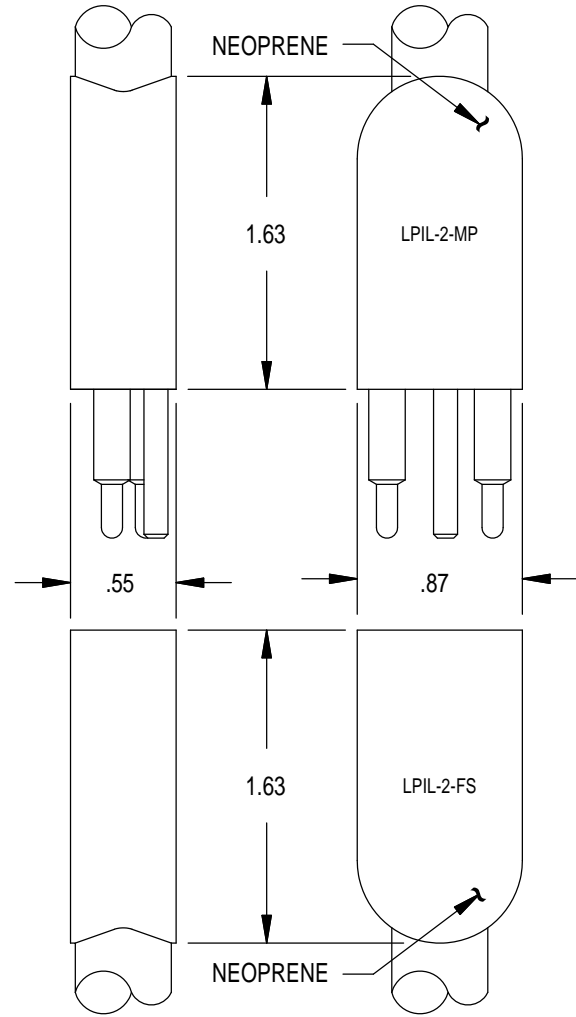
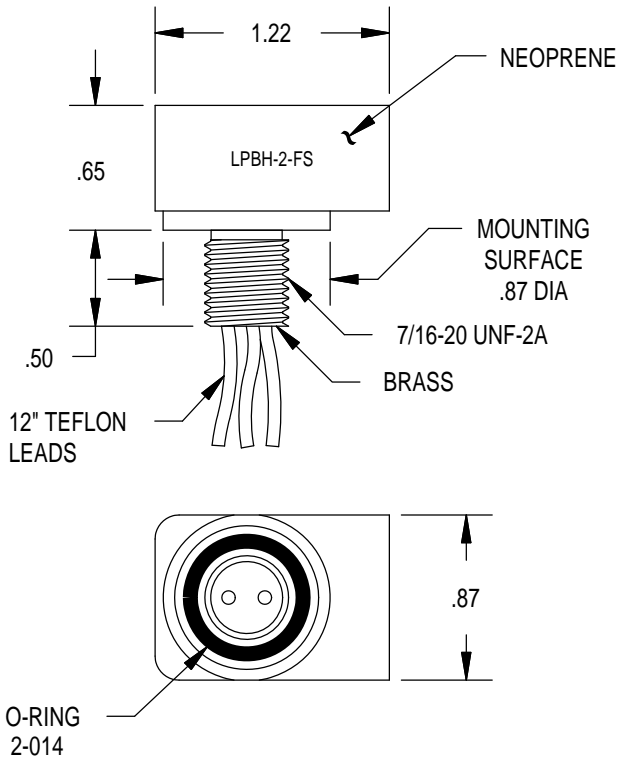
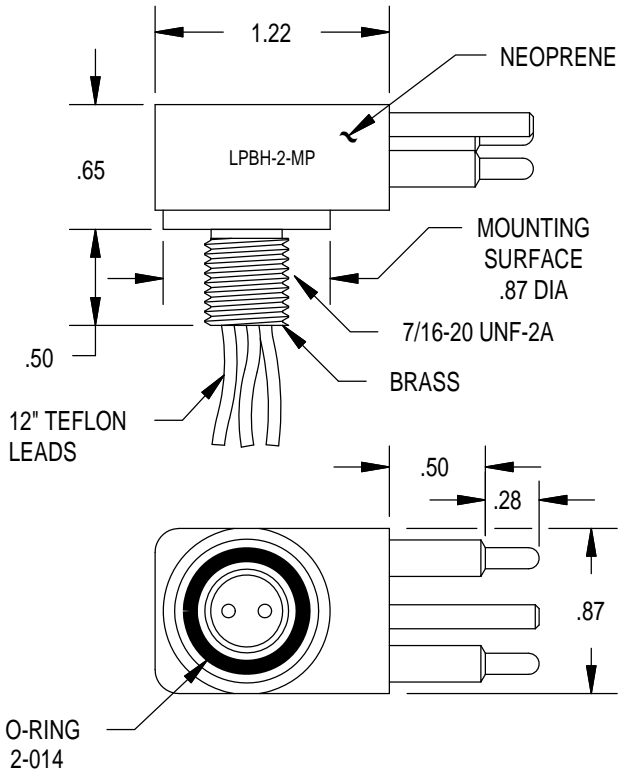


NOTE: For mating connectors see page 65 10
 For dummy connectors see page 65 32
 Delrin locking sleeves available (DLSA-M or F) see Page 65 35

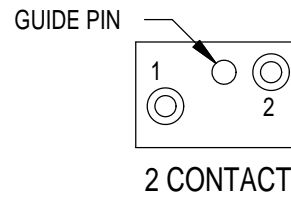
CONTACT
CONFIGURATION
(MP FACE VIEWS)



NOTE: For mating connectors see page 65 20
 For dummy connectors see page 65 32
 Delrin locking sleeves available (DLSB-M or F) see Page 65 35



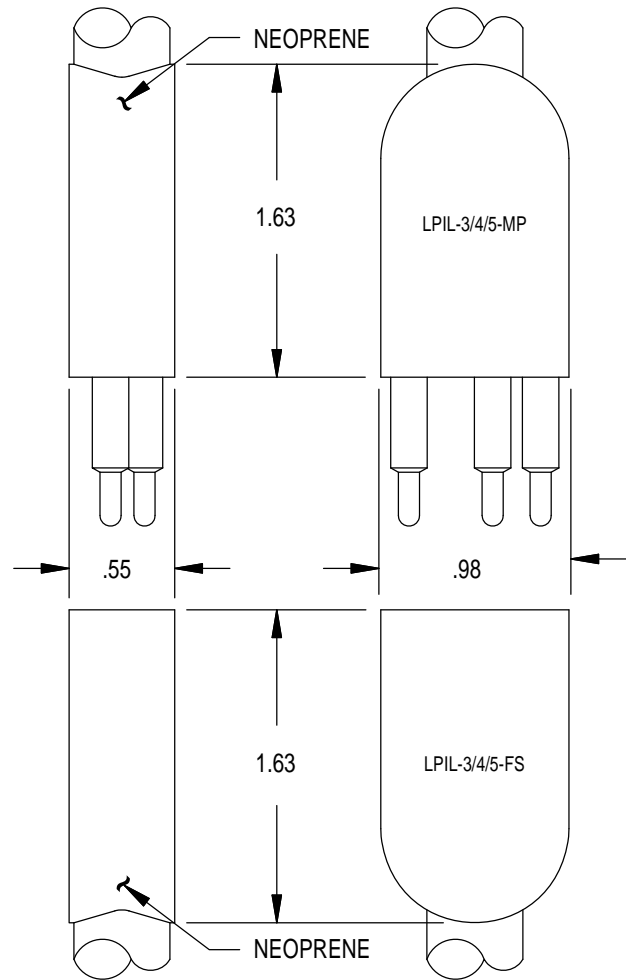
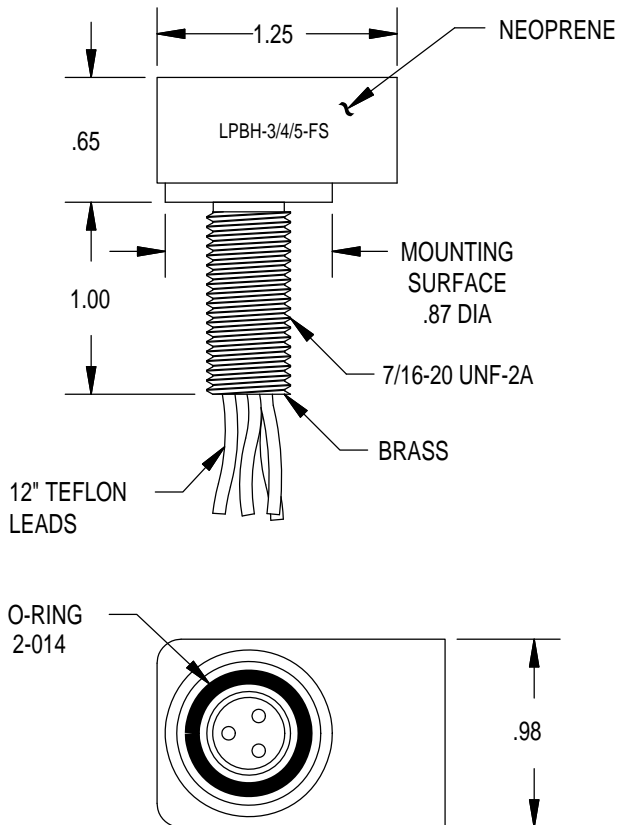
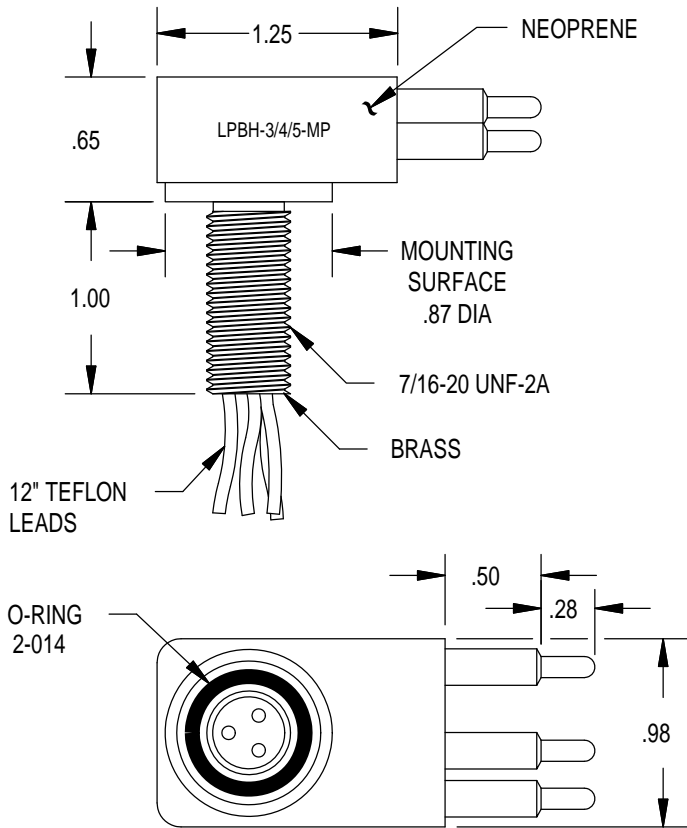
**CONTACT
CONFIGURATION**
(MP FACE VIEW)



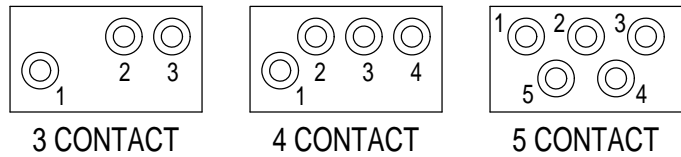
| | |
|---|--------------------------|
| MOUNTING TORQUE FOR LPBH-FS/MP | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR LPBH-2-FS, LPIL-2-FS | LPDC-2-MP |
| DUMMY PLUG FOR LPBH-2-MP, LPIL-2-MP | LPDC-2-FS |
| NOTE: Bulkhead body available in stainless steel. Standard 1/2" thread length. * Dummy Plugs found on page 65 71. | |

LPBH/LPIL-3/4/5

LOW PROFILE WET
PLUGGABLE SERIES



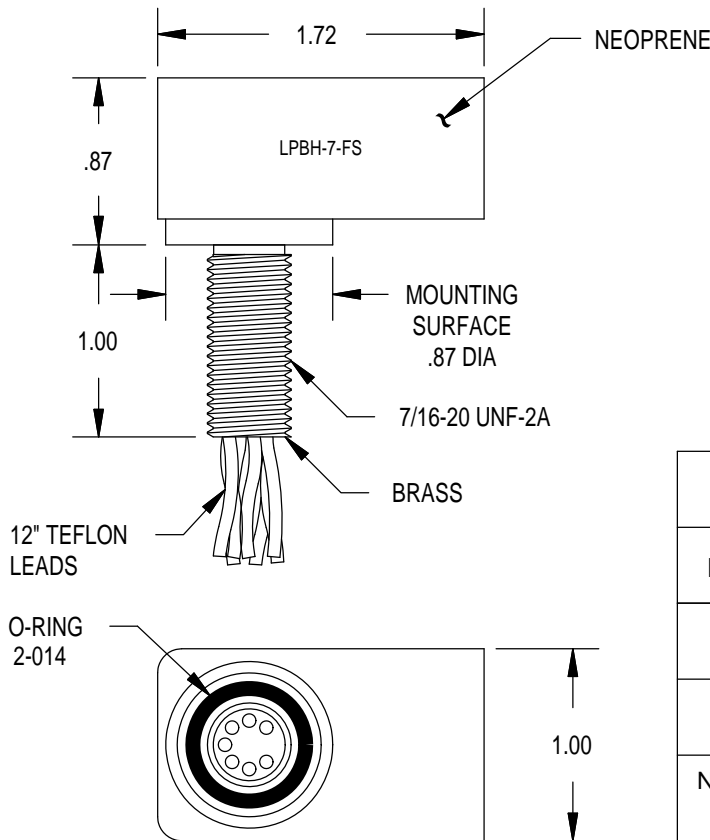
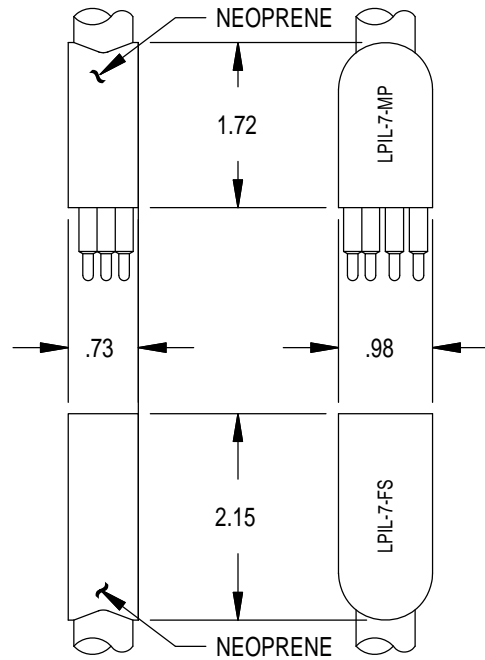
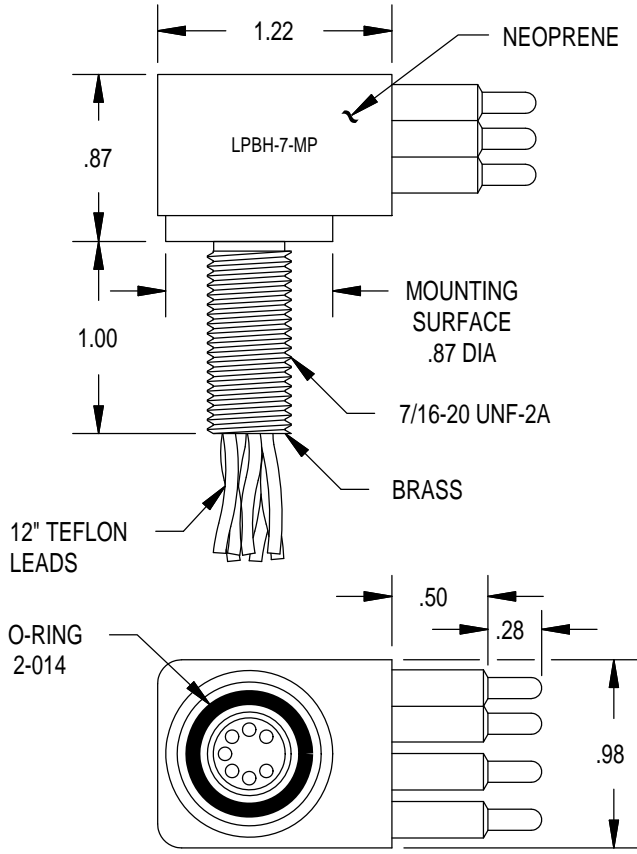
CONTACT CONFIGURATION (MP FACE VIEWS)



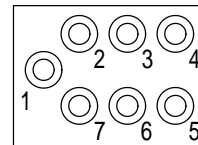
| | |
|--|--------------------------|
| MOUNTING TORQUE FOR LPBH-FS/MP | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR LPBH-3/4/5-FS, LPIL-3/4/5-FS | LPDC-3/4/5-MP |
| DUMMY PLUG FOR LPBH-3/4/5-MP, LPIL-3/4/5-MP | LPDC-3/4/5-FS |
| NOTE: Bulkhead body available in stainless steel. Standard 1" thread length. * Dummy Plugs found on page 65 71. | |

LPBH/LPIL-7

LOW PROFILE WET
PLUGGABLE SERIES



CONTACT CONFIGURATION (MP FACE VIEW)

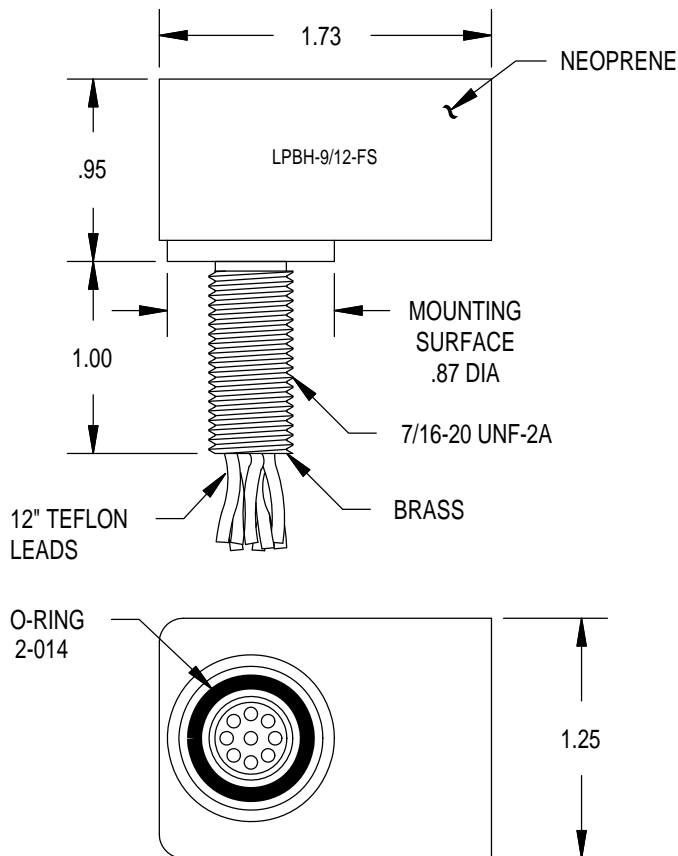
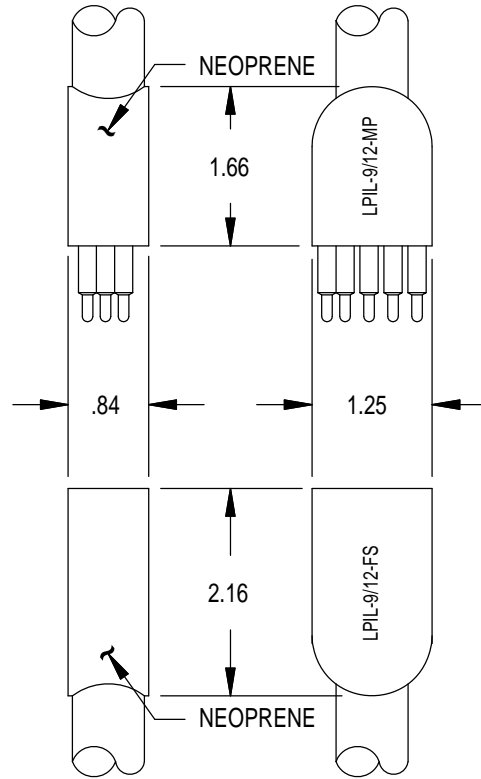
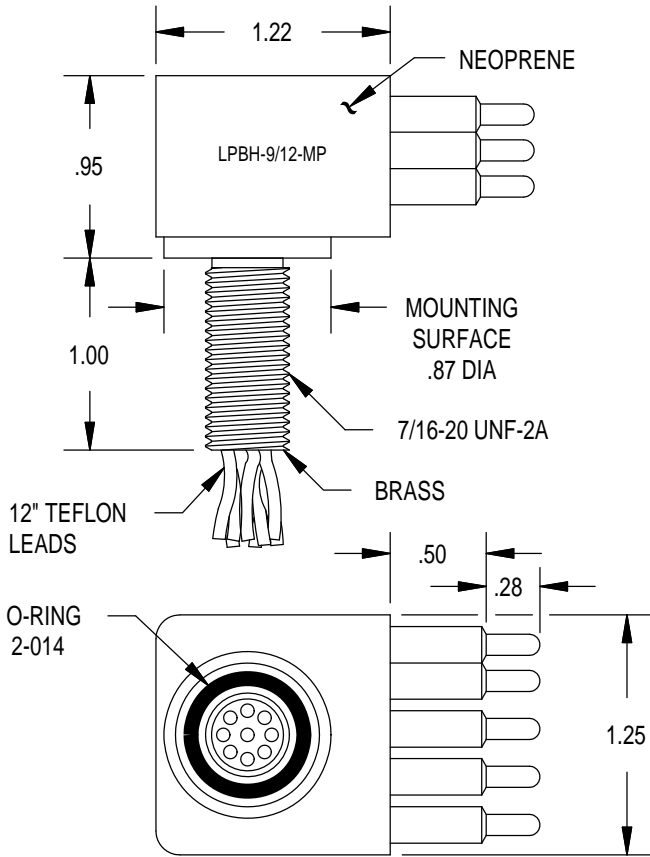


7 CONTACT

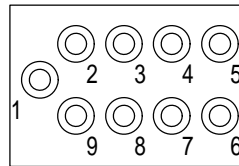
| | |
|---|--------------------------|
| MOUNTING TORQUE FOR LPBH-FS/MP | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR LPBH-7-FS, LPIL-7-FS | LPDC-7-MP |
| DUMMY PLUG FOR LPBH-7-MP, LPIL-7-MP | LPDC-7-FS |
| NOTE: Bulkhead body available in stainless steel. Standard 1" thread length. * Dummy Plugs found on page 65 72. | |

LPBH/LPIL-9/12

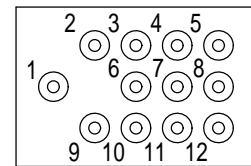
LOW PROFILE WET
PLUGGABLE SERIES



CONTACT CONFIGURATION (MP FACE VIEW)



9 CONTACT

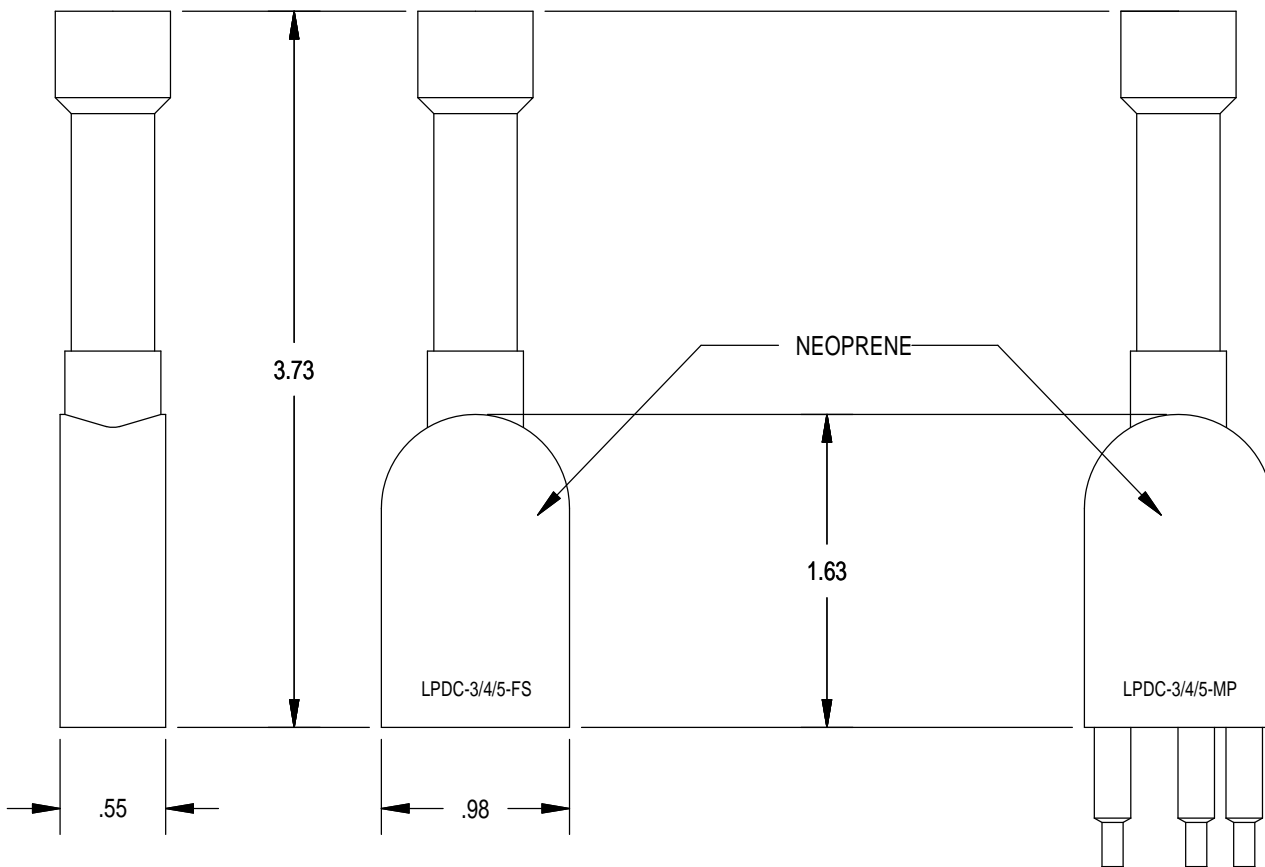
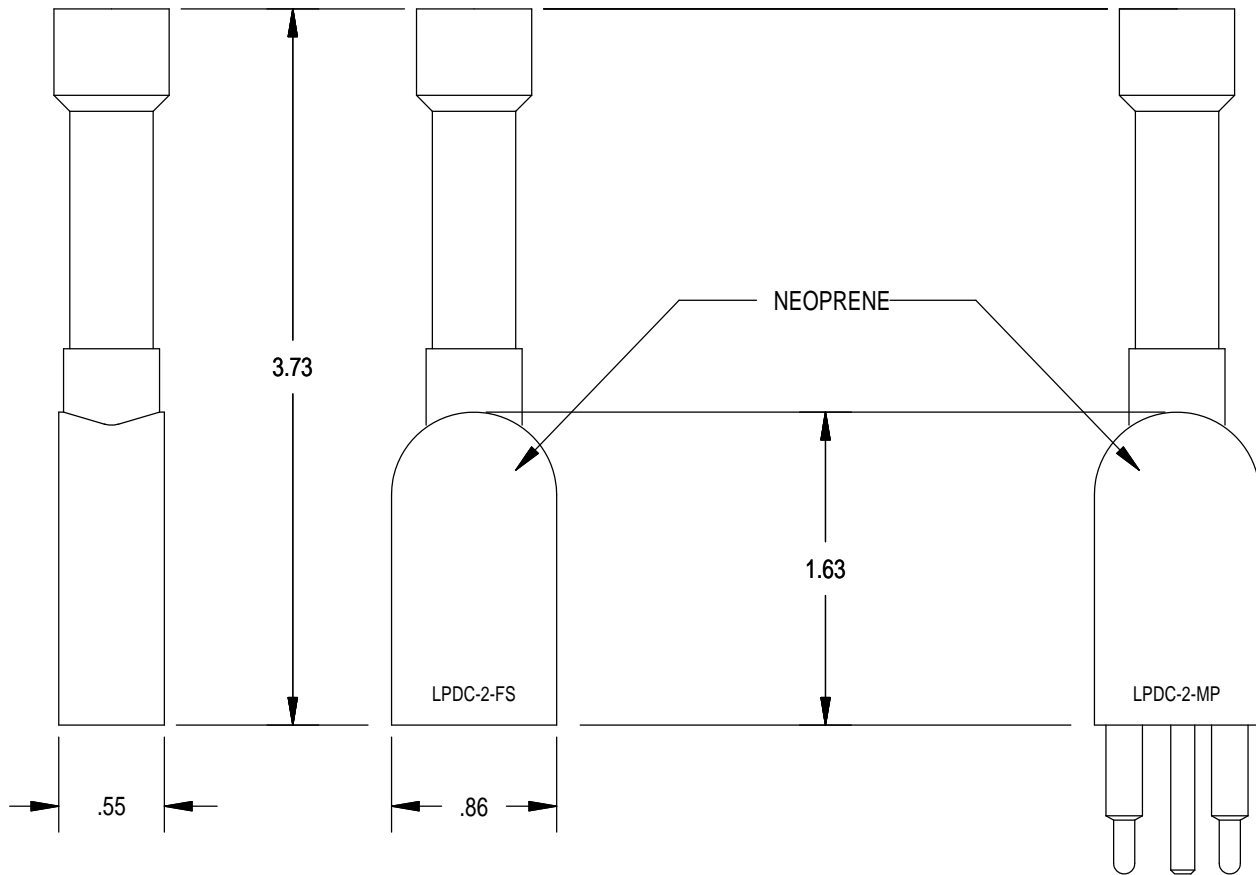


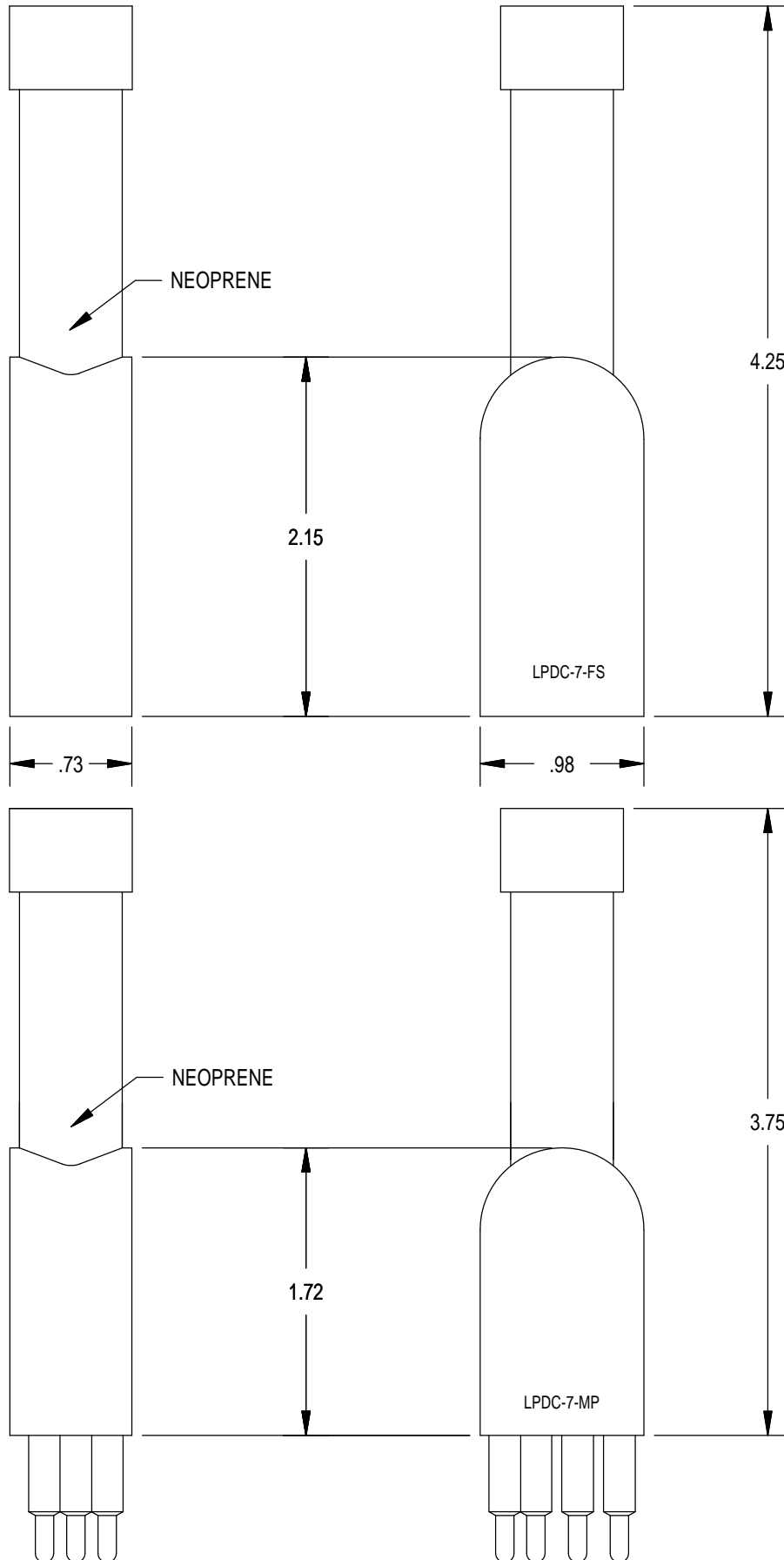
12 CONTACT

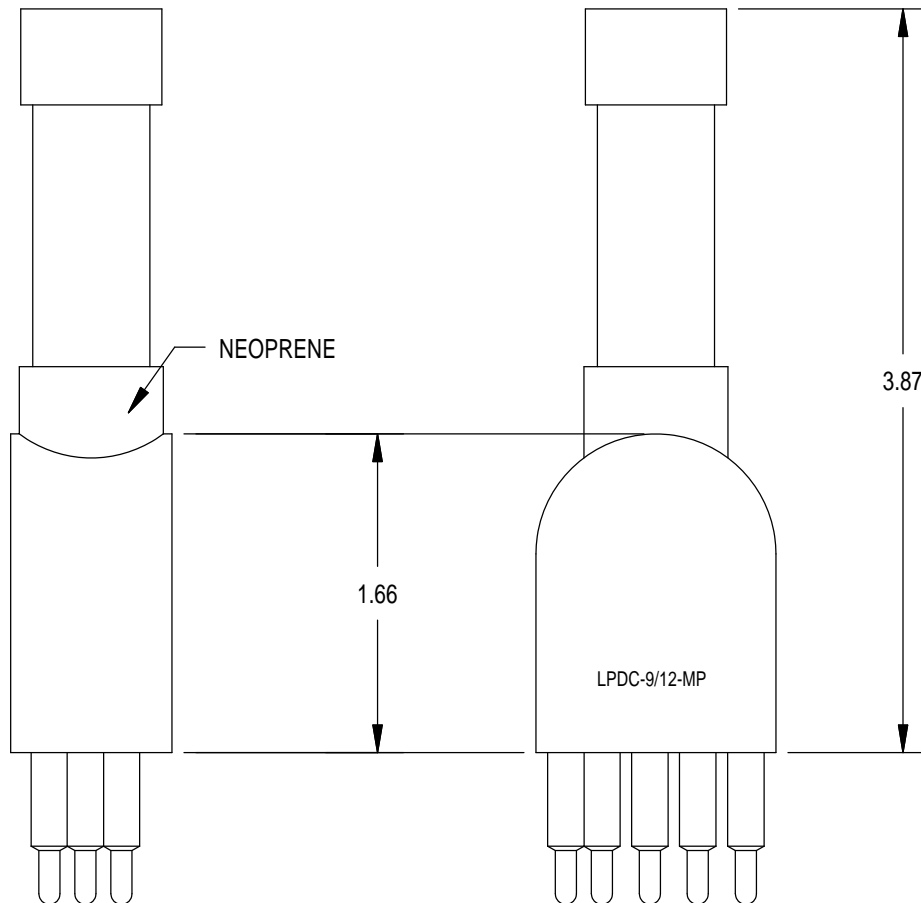
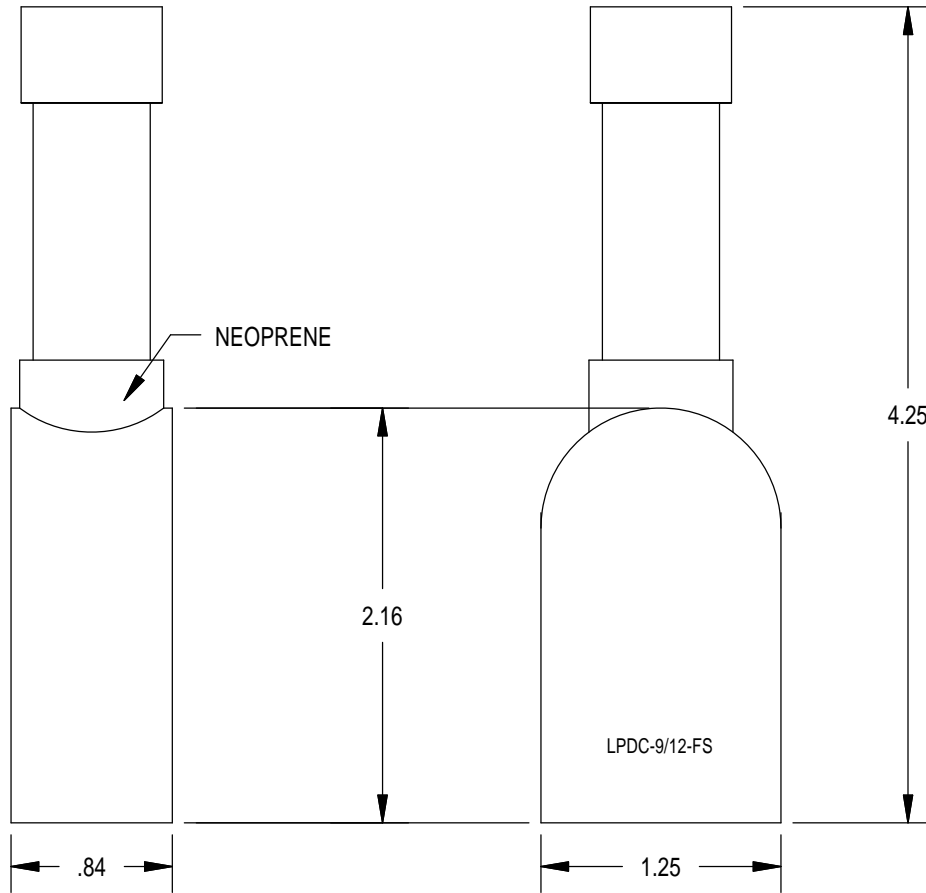
| | |
|---|--------------------------|
| MOUNTING TORQUE FOR LPBH-FS/MP | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR LPBH-9-FS, LPIL-9-FS | LPDC-9-MP |
| DUMMY PLUG FOR LPBH-9-MP, LPIL-9-MP | LPDC-9-FS |
| NOTE: Bulkhead body available in stainless steel. Standard 1" thread length. * Dummy Plugs found on page 65 73. | |

LPDC-2/3/4/5

LOW PROFILE WET
PLUGGABLE SERIES



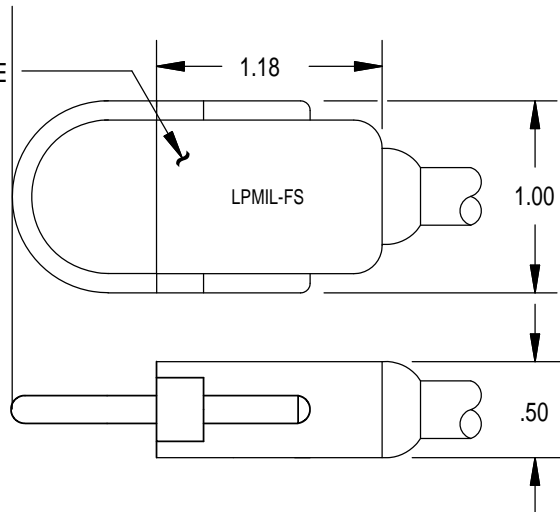
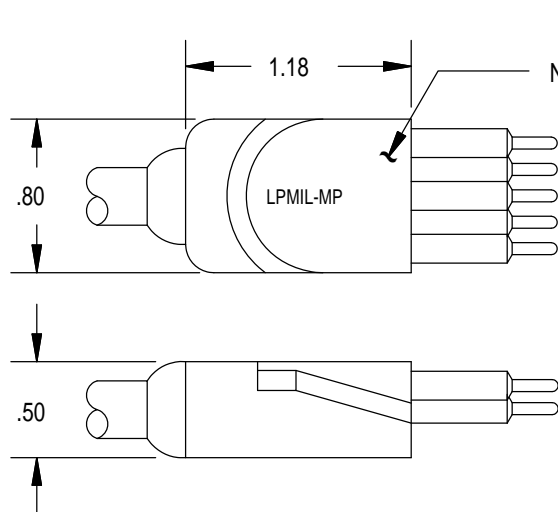
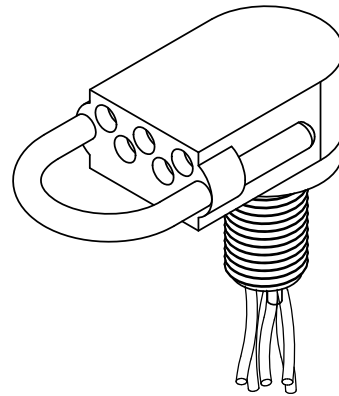
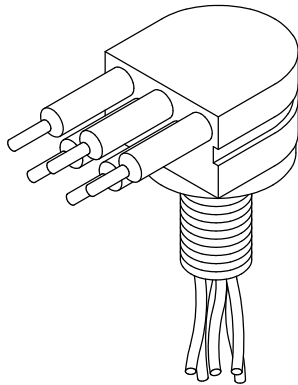
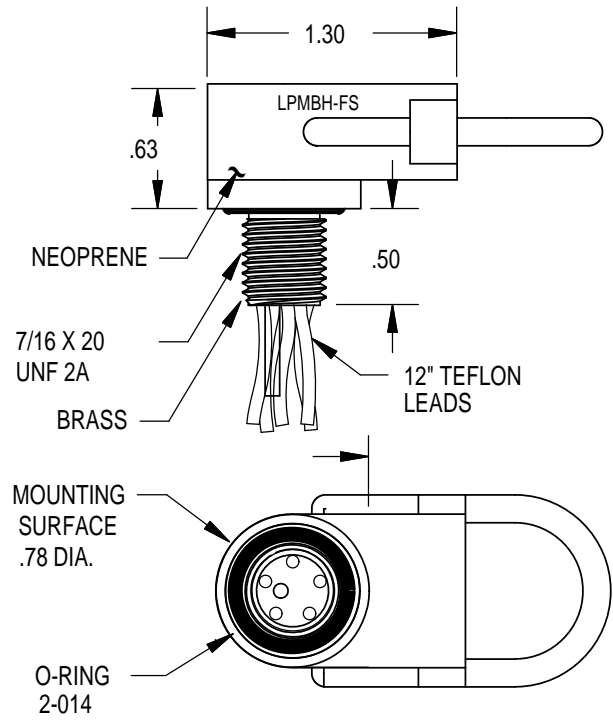
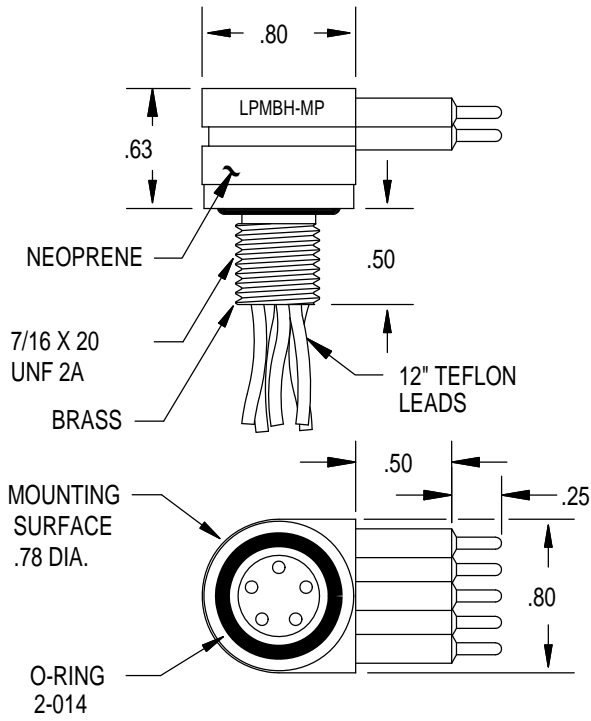




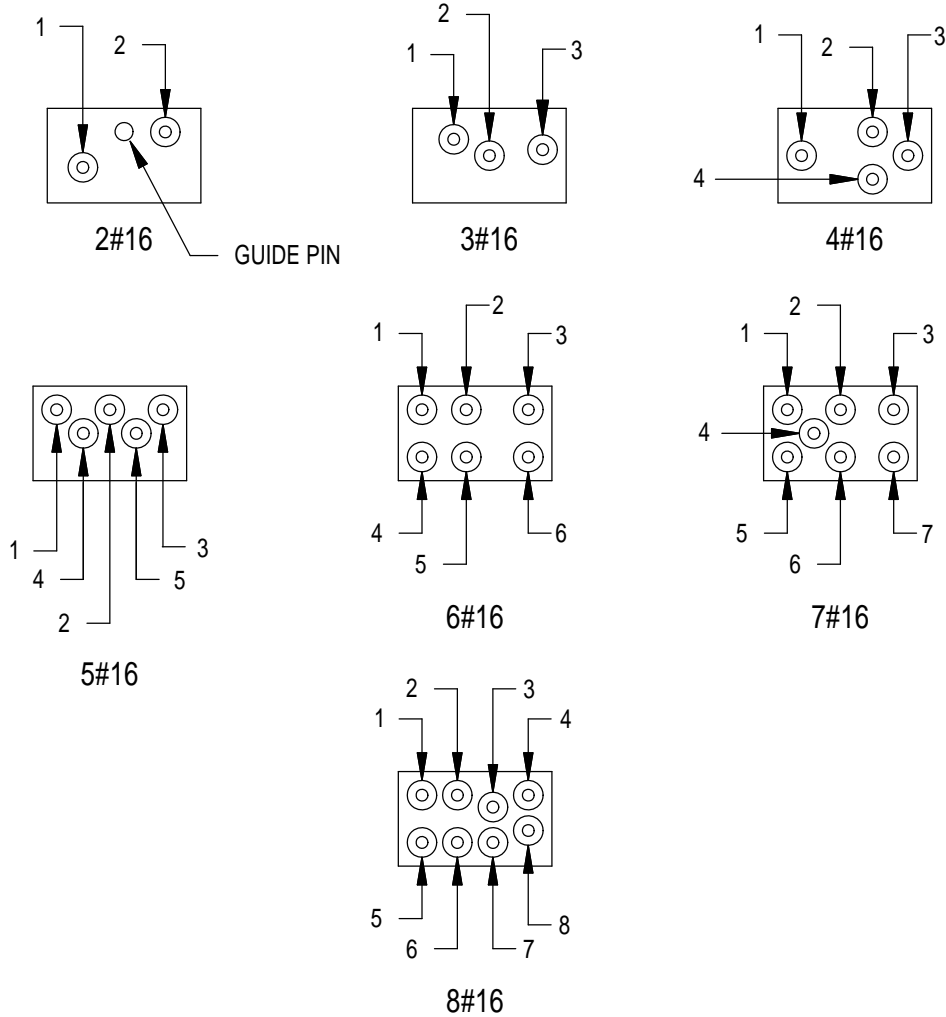
| | |
|--------------------------|--|
| DESCRIPTION AND MATERIAL | <ul style="list-style-type: none">• Molded neoprene or polyurethane.• Two to eighteen contacts, 16 AWG.• Up to 750 VDC.• Up to 10,000 PSI, mated.• Bulkhead connector design open face pressure rated to 5000 PSI.• Contacts gold plated per MIL-G-45204. |
| CABLE | <ul style="list-style-type: none">• Inline connectors in this series are molded on a standard 24" length of cable, #20 AWG, unless otherwise specified.• Bulkhead connectors have 12" teflon leads, Type E per MIL 16878/4, 18 AWG. |
| USES | <ul style="list-style-type: none">• Light to medium duty applications.• Hazardous environments. |
| GUIDELINES | <ul style="list-style-type: none">• All mounting surfaces require a 32 finish.• Lubricate mating surface with 3M Silicone Lubricant or equivalent, DO NOT grease! Connectors must be lubricated on a regular basis.• Lubricate o-ring with Dow Corning #111 Valve Lubricant or equivalent.• Replace o-rings when re-using connectors.• Avoid nicks and cuts around contacts as these are the sealing surfaces.• Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time.• Connectors should not be allowed to dry out. If this occurs soak in water before use.• Do not over tighten bulkhead nuts.• Do not pull on cable to disconnect.• Avoid sharp bends at cable entry to connector. |
| ORDERING INFORMATION | <ul style="list-style-type: none">• Bulkhead connectors do not come with nuts and washers. Nuts and washers should be ordered separately. |

LPMBH/LPMIL

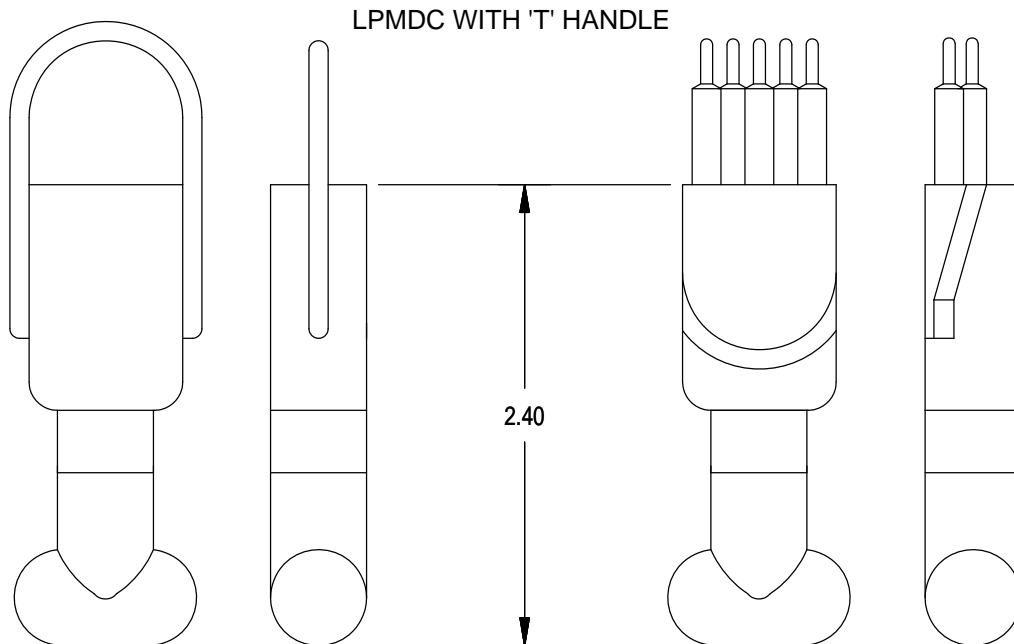
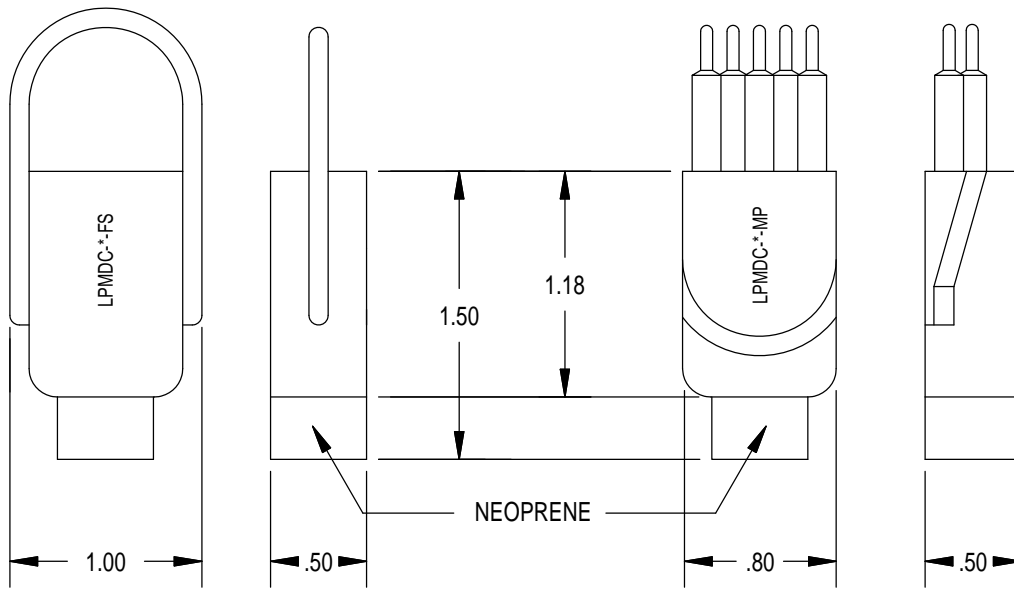
MINI WET PLUGGABLE SERIES



**CONTACT
CONFIGURATION**
(MP FACE VIEWS)

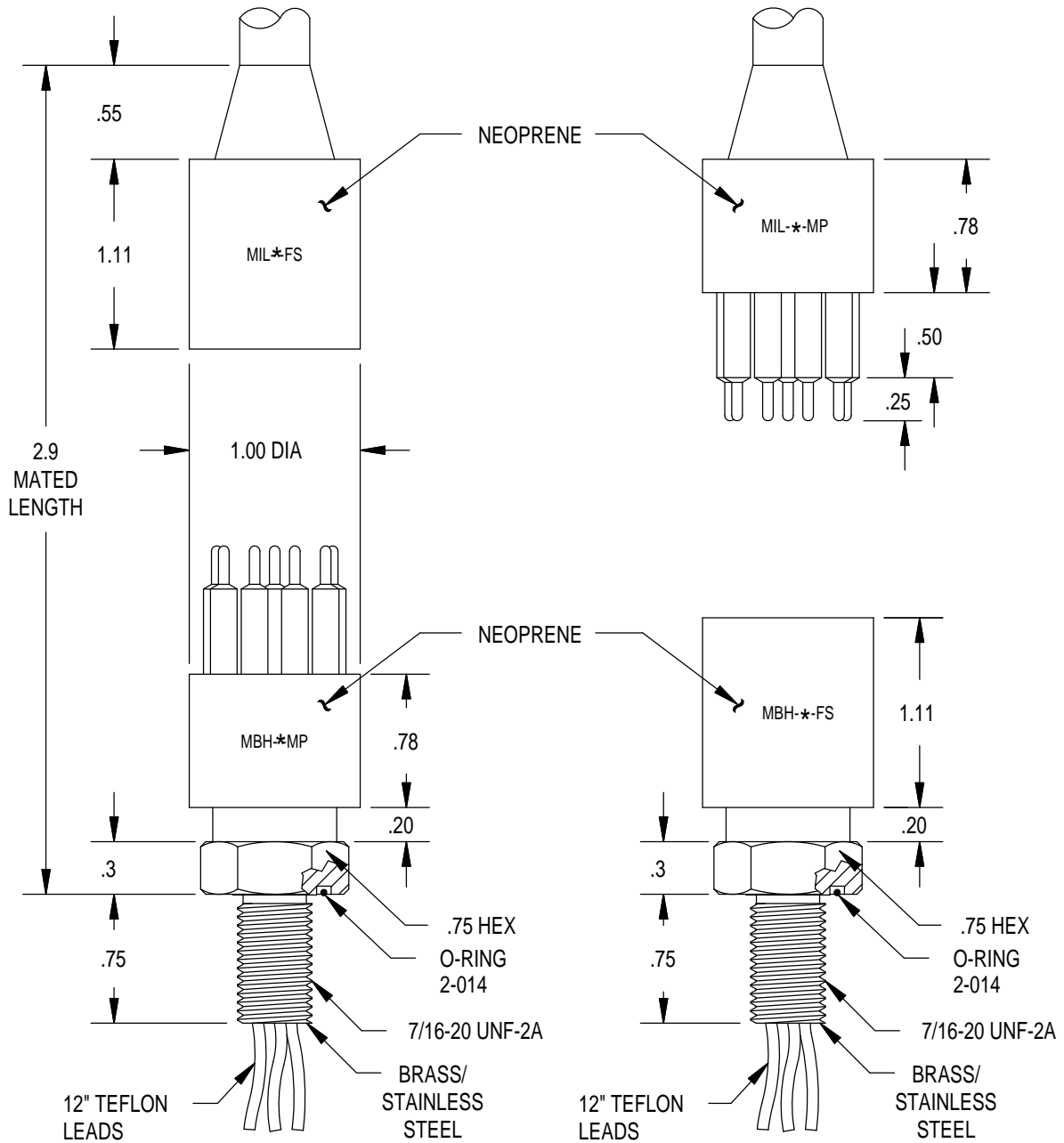


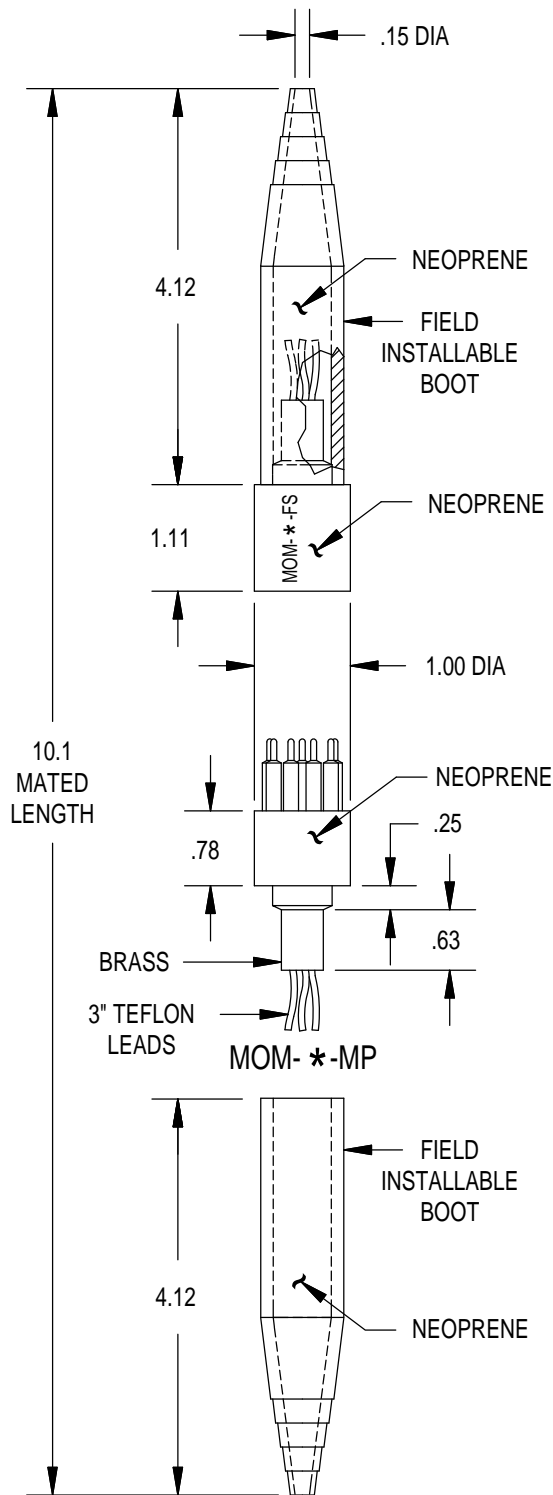
| | | | |
|--|-----------------------------|--------------------------------------|-------------|
| MOUNTING TORQUE LPMBH | not to exceed 100 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR LPMBH-MP, LPMIL-MP | LPMDC-**-FS | DUMMY PLUG FOR LPMBH-FS, LPMIL-FS | LPMDC-**-MP |
| <p>NOTE: Standard 1/2" thread length. * Specify number of contacts. * Dummy plugs found on page 65 83.</p> | | | |



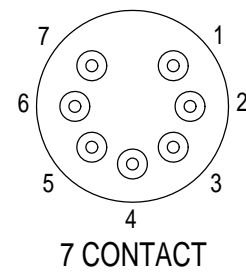
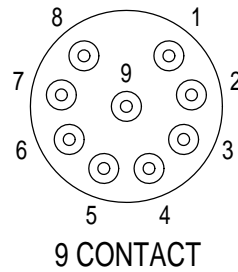
* Specify number of contacts.

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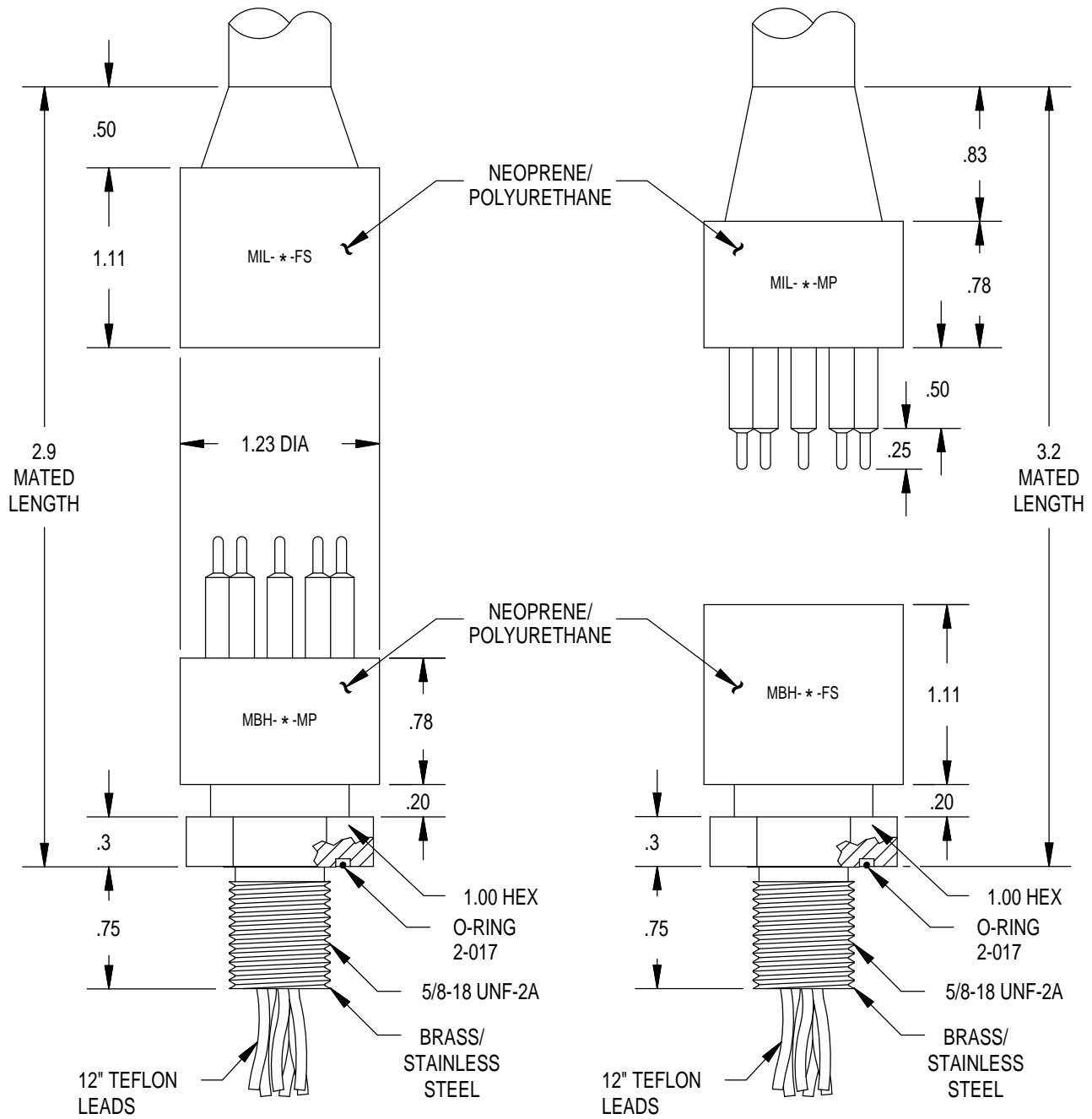


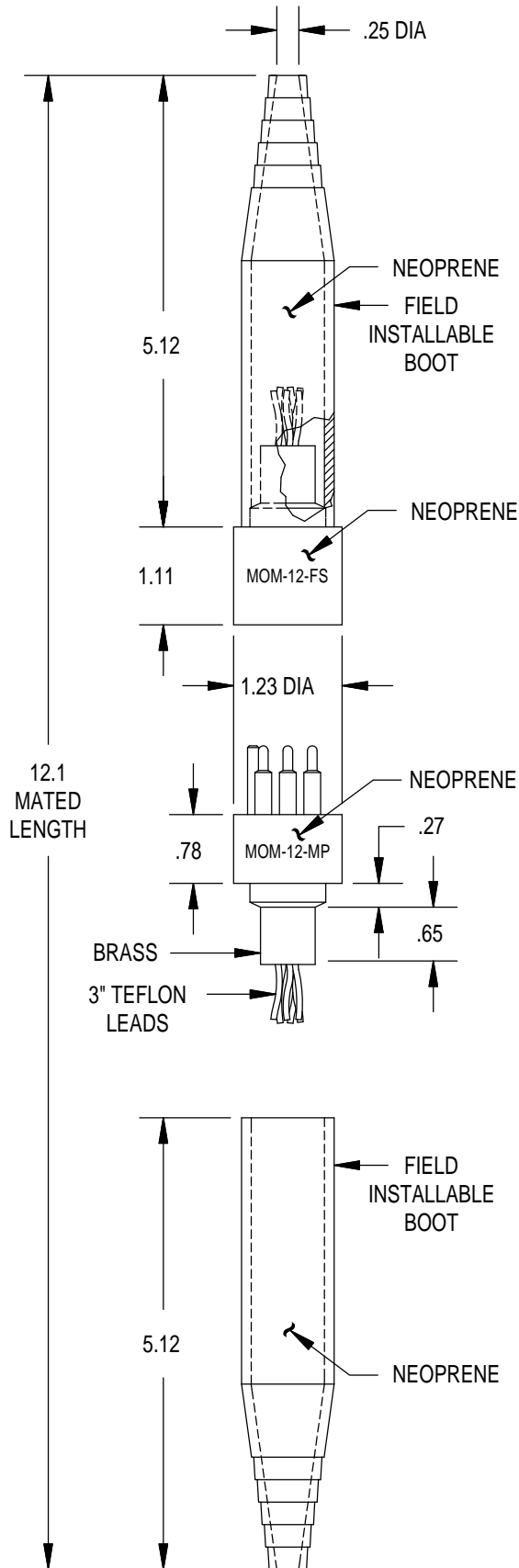


**CONTACT
CONFIGURATION**
(MP FACE VIEW)

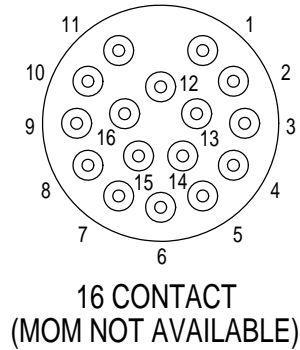
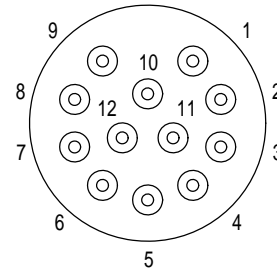


| | |
|--|--------------------------|
| MOUNTING TORQUE FOR MBH-FS/MP | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR MBH-FS, MIL-FS, MOM-FS | MDC-*MP |
| DUMMY PLUG FOR MBH-MP, MIL-MP, MOM-MP | MDC-*FS |
| <p>NOTE: Delrin locking sleeves available (DLSA-M or F). * Specify number of contacts. * Dummy plugs found on page 65 97</p> | |



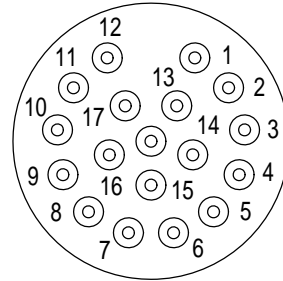


**CONTACT
CONFIGURATION
(MP FACE VIEW)**

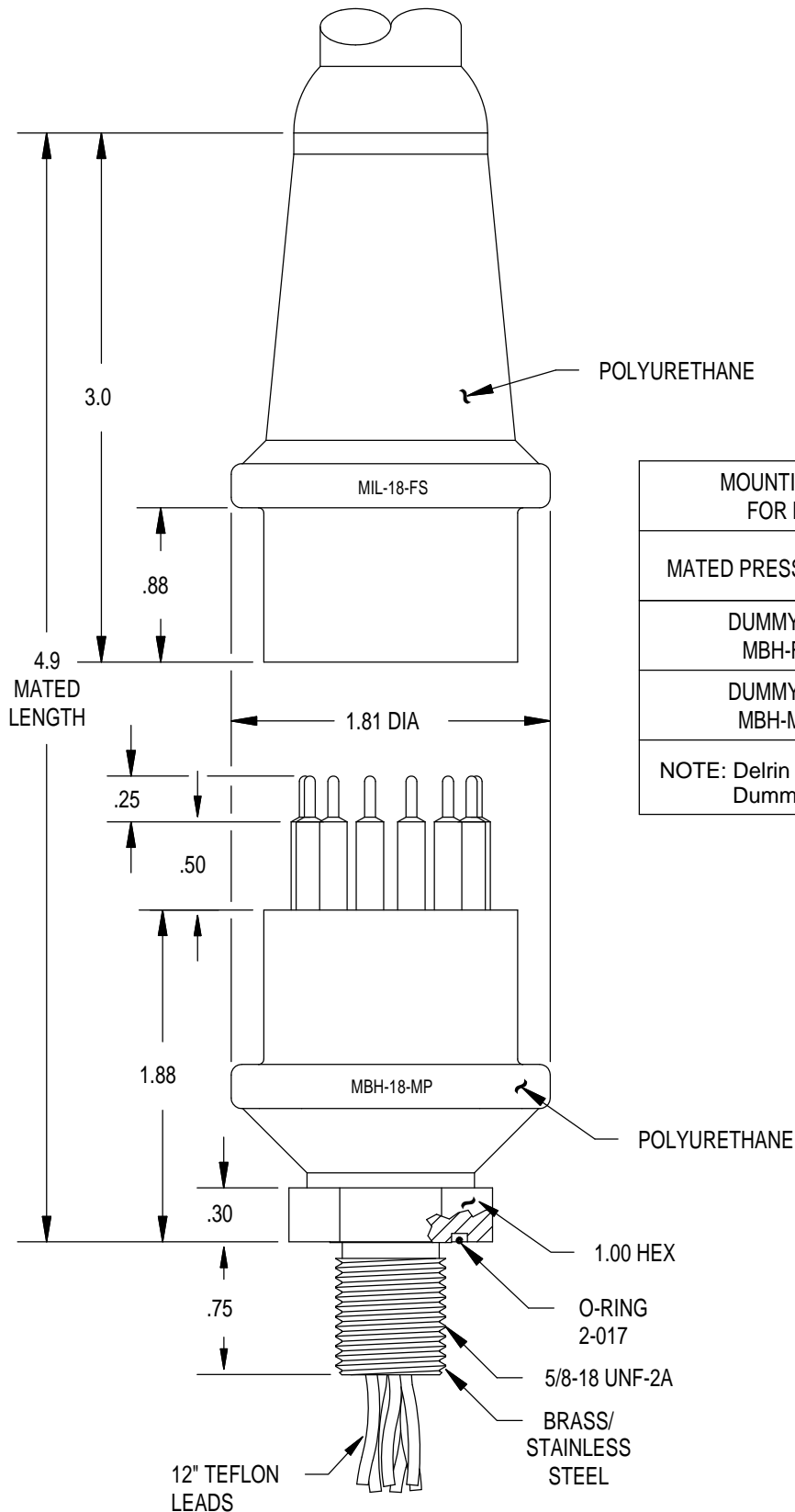


| | |
|---|--------------------------|
| MOUNTING TORQUE FOR MBH-FS/MP | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR MBH-FS, MIL-FS, MOM-FS | MDC-**-MP |
| DUMMY PLUG FOR MBH-MP, MIL-MP, MOM-MP | MDC-**-FS |
| NOTE: Delrin locking sleeves available (DLSB-M or F). * Specify number of contacts. * Dummy plugs found on page 65 97 | |

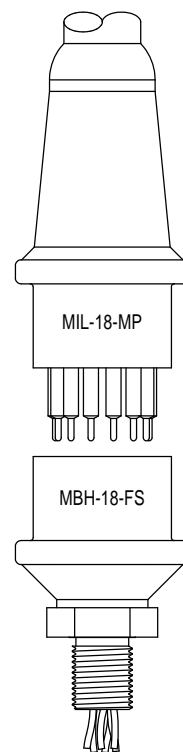
CONTACT
CONFIGURATION
(MP FACE VIEW)

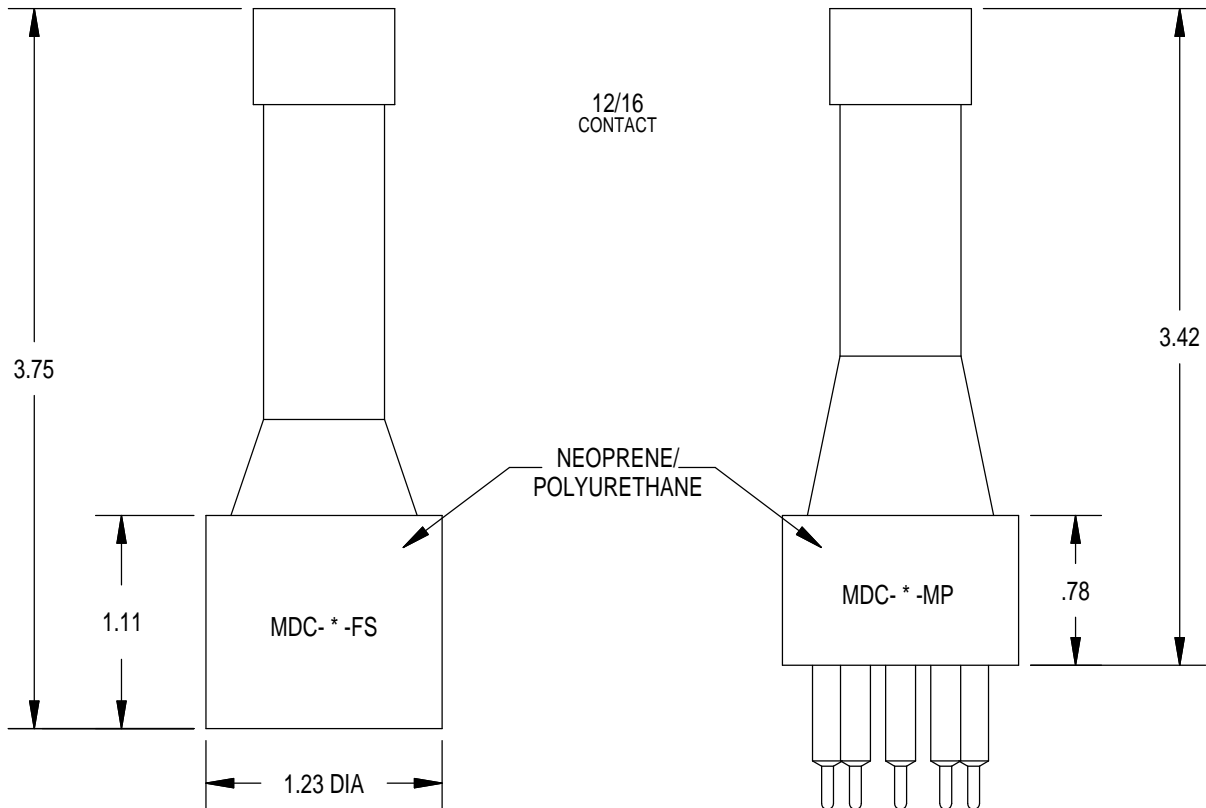
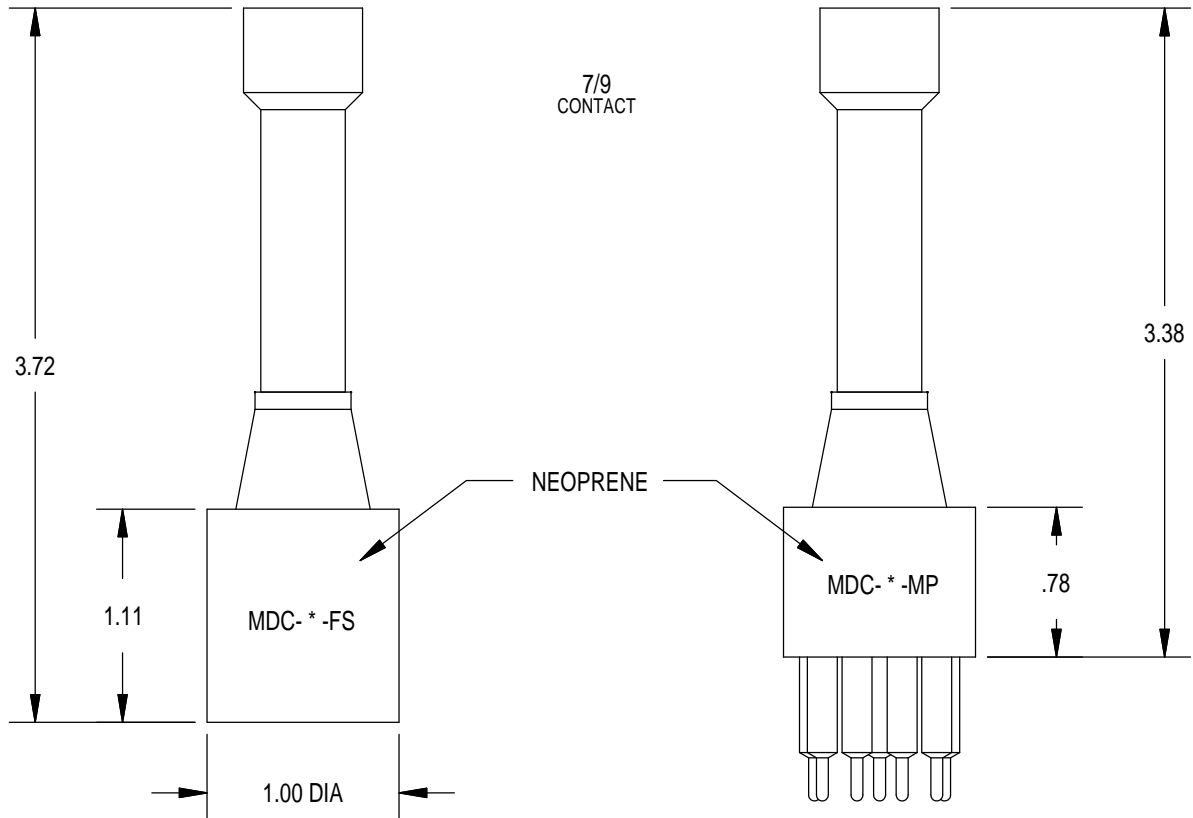


18 CONTACT

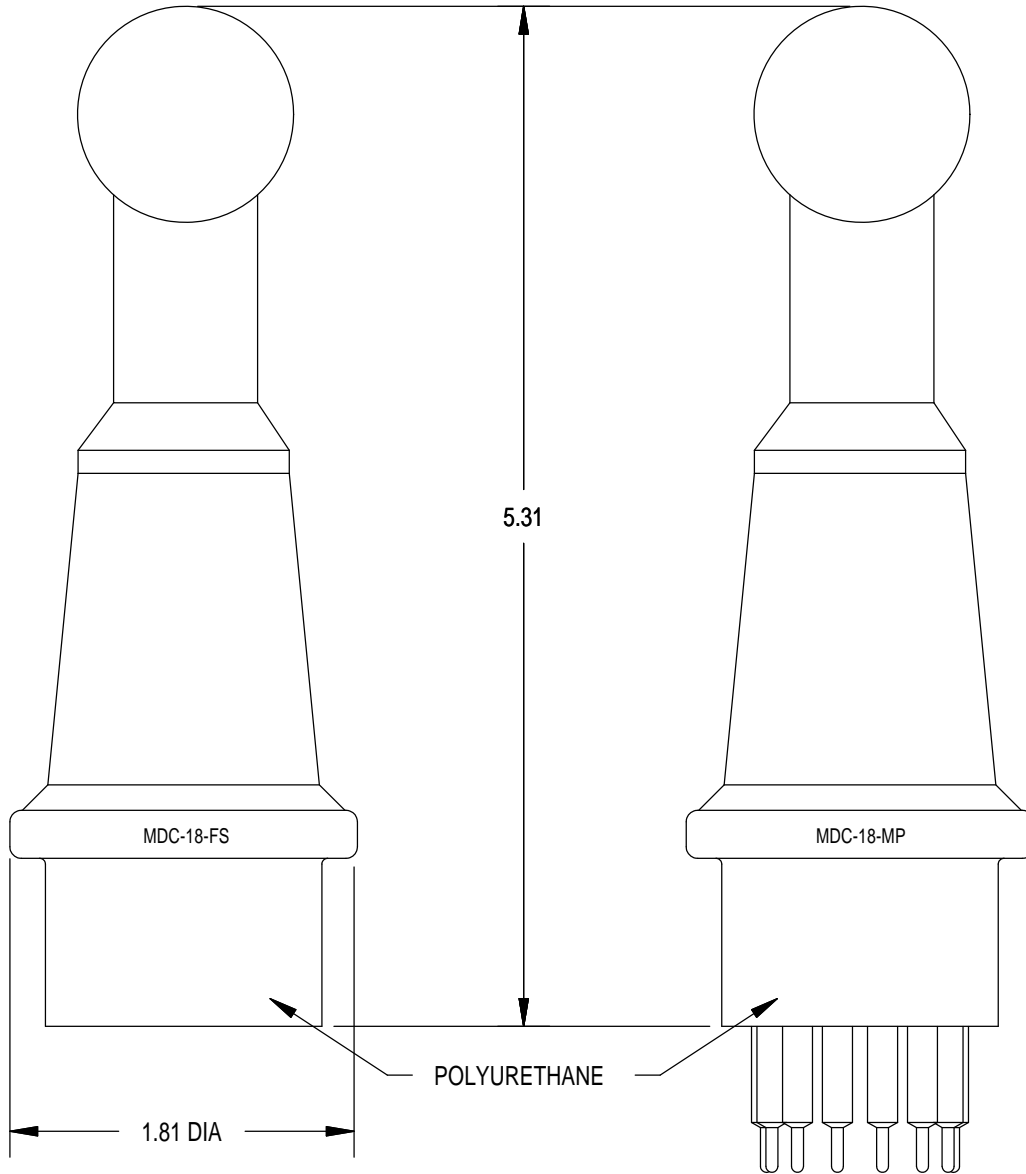


| | |
|--|--------------------------|
| MOUNTING TORQUE FOR BH-FS/MP | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR MBH-FS, MIL-FS | MDC-18-MP |
| DUMMY PLUG FOR MBH-MP, MIL-MP | MDC-18-FS |
| NOTE: Delrin locking sleeve available (DLSD-M or F). Dummy plugs found on page 65 98 | |





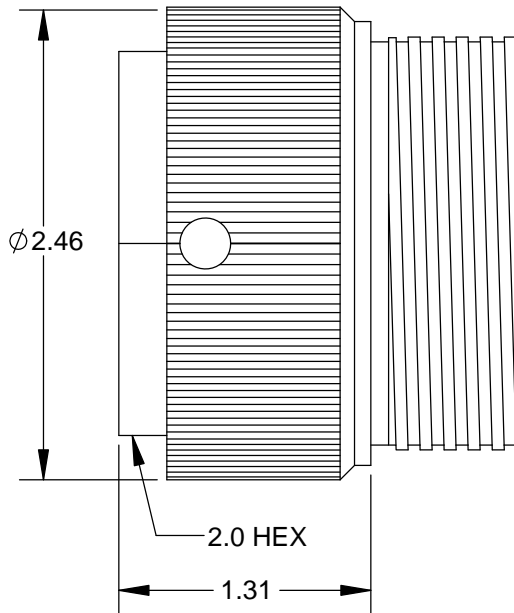
*Specify number of contacts



DELTRIN LOCKING SLEEVES

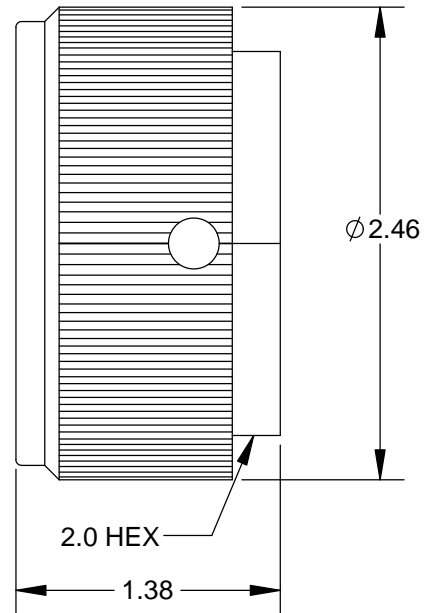
MALE

DLSD-M



FEMALE

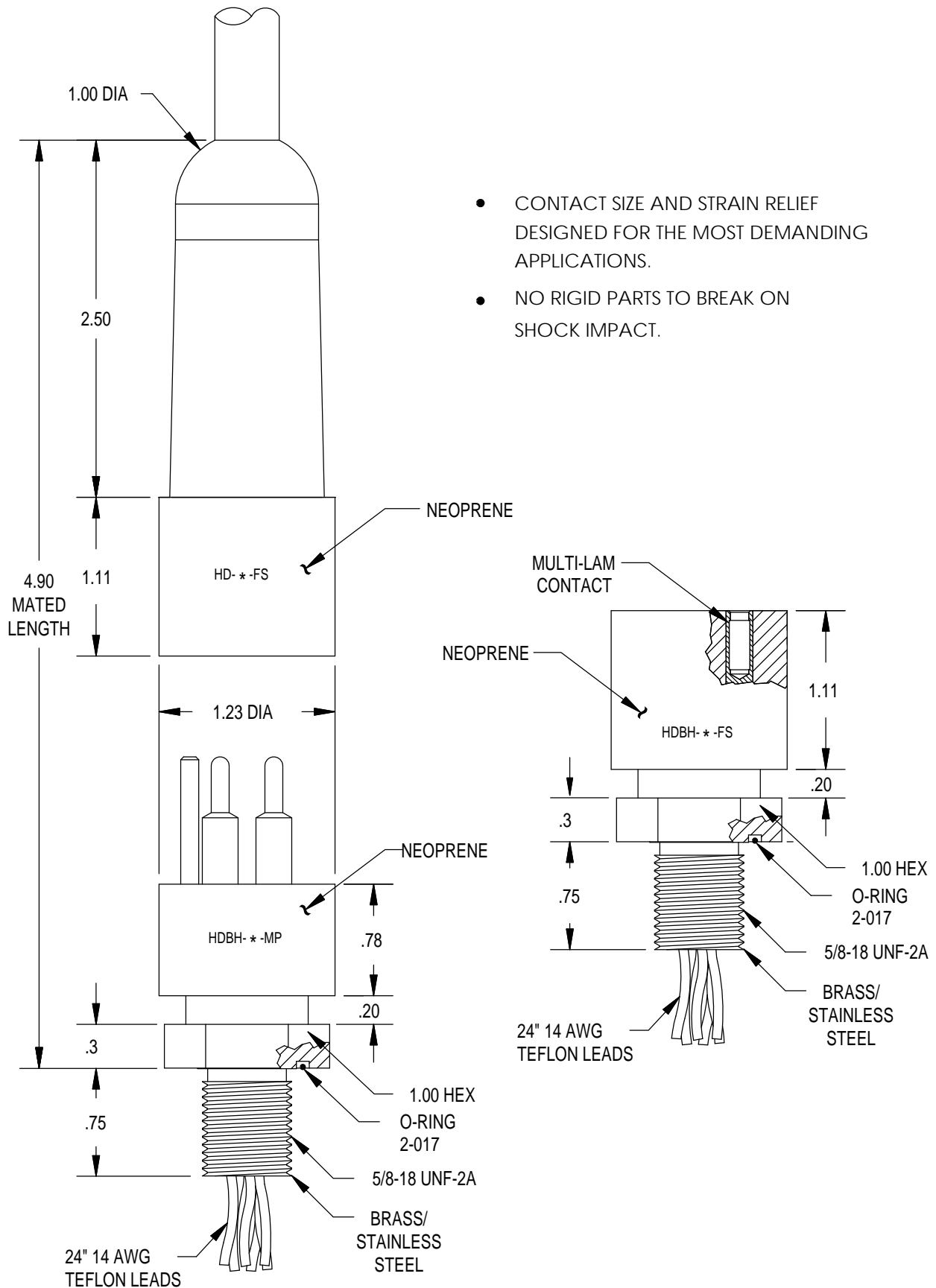
DLSD-F

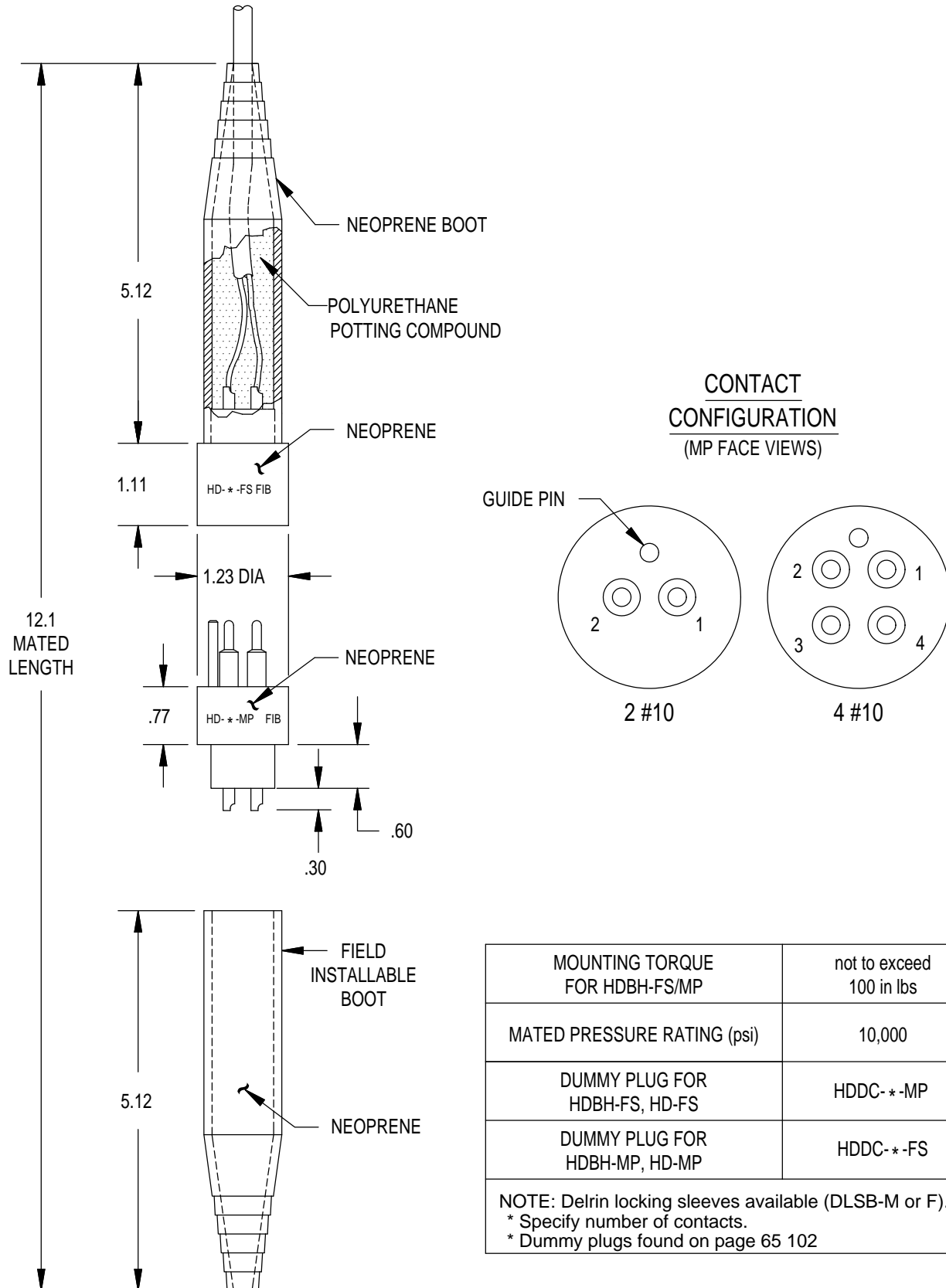


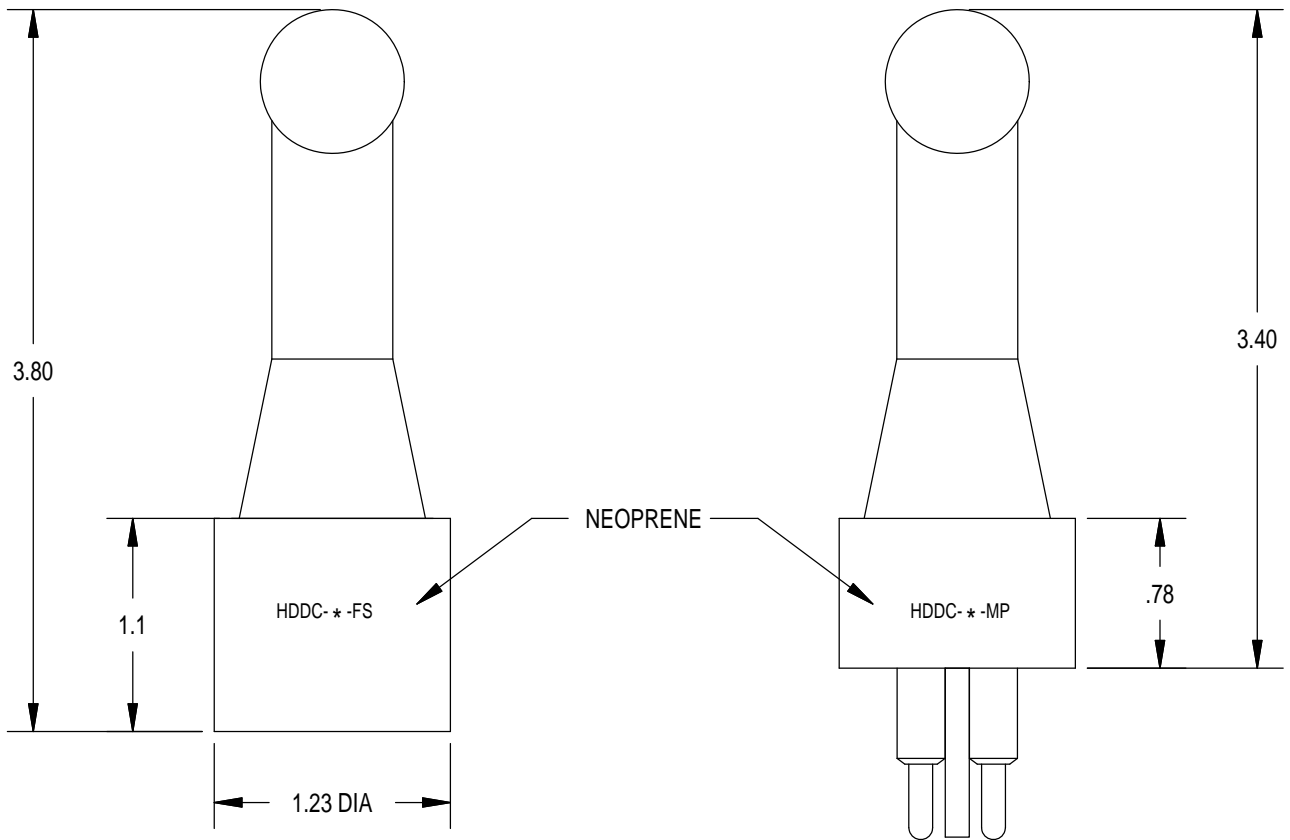
LOCKING SLEEVES FOR:
MBH/MIL-18-FS/MP

HDBH-2/4

GEOPHYSICAL CONNECTORS

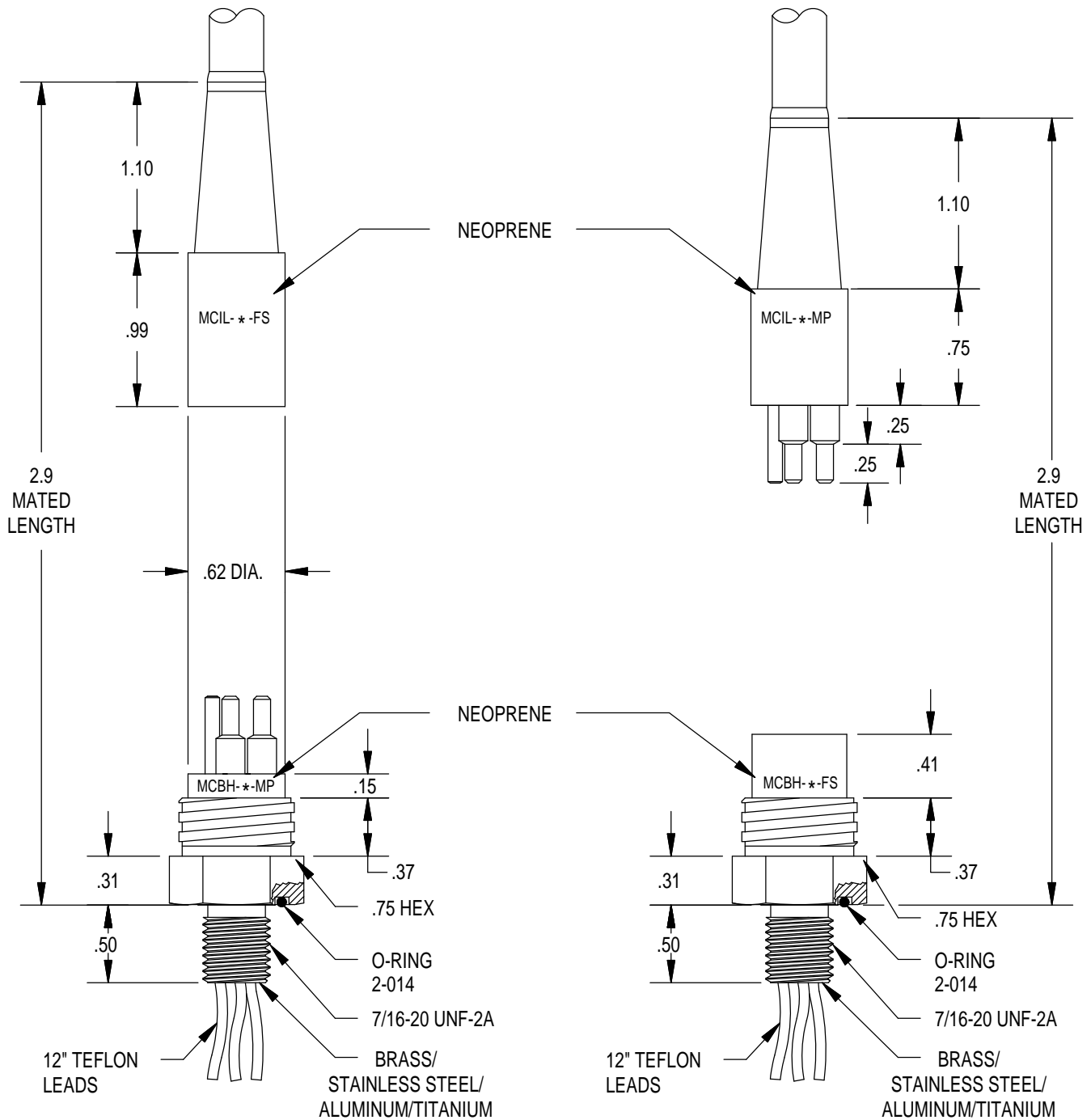


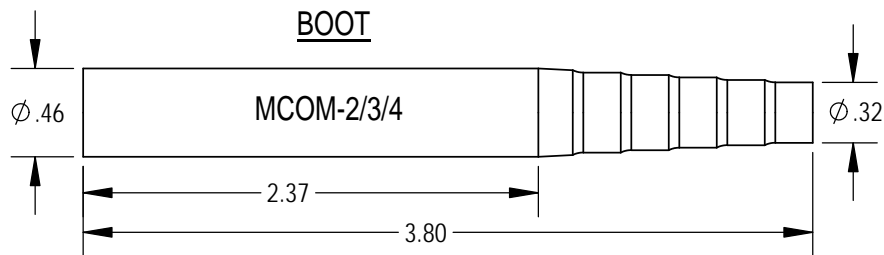
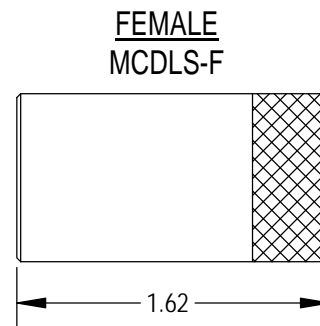
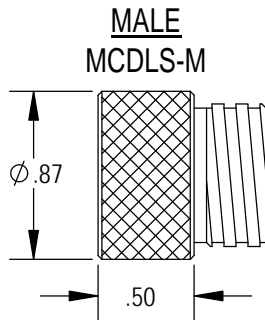
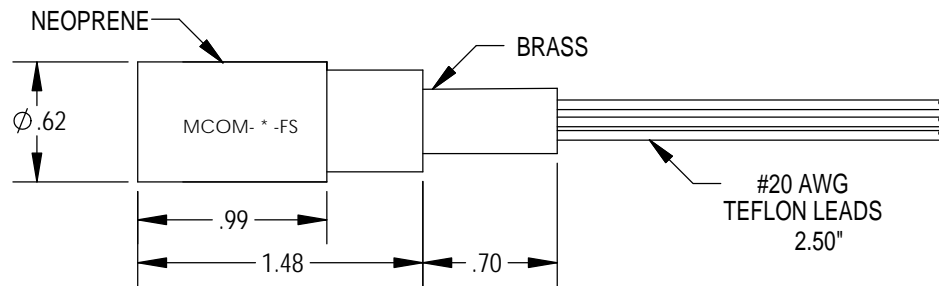
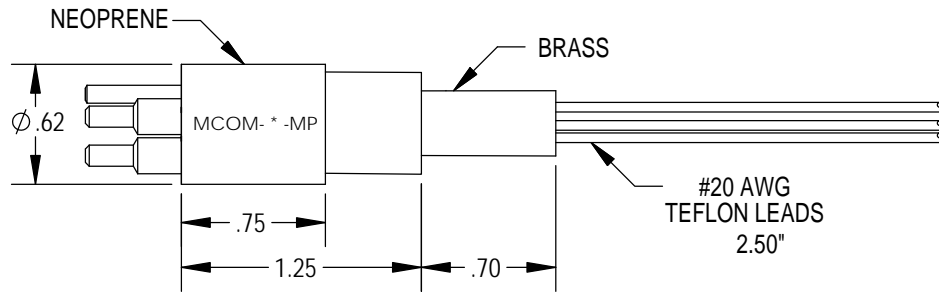




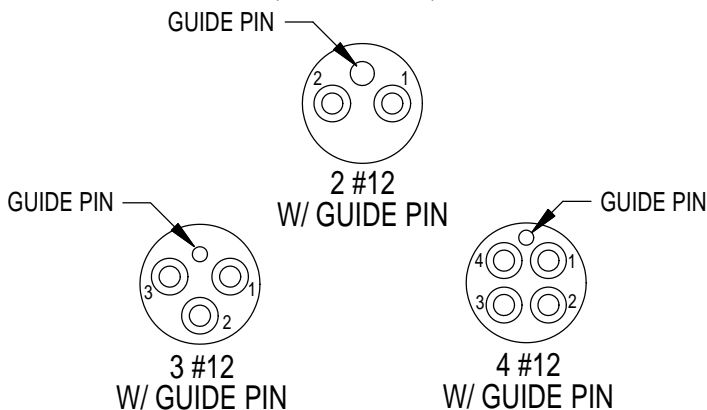
*Specify number of contacts

| | |
|--------------------------|---|
| DESCRIPTION AND MATERIAL | <ul style="list-style-type: none">• Molded neoprene or polyurethane.• Two to eight contacts.• Up to 750 VDC.• Up to 10,000 PSI, mated.• Bulkhead connector design open face pressure rated to 5000 PSI.• Contacts gold plated per MIL-G-45204. |
| CABLE | <ul style="list-style-type: none">• Inline connectors in this series are molded on a standard 24" length of cable, 20 AWG, unless otherwise specified.• Bulkhead connectors have 12" teflon leads, Type E per MIL 16878/4, 20 AWG, (2-4, 9-18 contact) or 22 AWG (5-8 contact).• MCOM connectors have 12" teflon leads, Type E per MIL 16878/4, 20 AWG (2-4 contact) or 22 AWG (5-8 contact) |
| USES | <ul style="list-style-type: none">• Light to medium duty applications.• Hazardous environments. |
| GUIDELINES | <ul style="list-style-type: none">• All mounting surfaces require a 32 finish.• Lubricate mating surface with 3M Silicone Spray or equivalent, DO NOT grease! Connectors must be lubricated on a regular basis.• Lubricate o-ring with Dow Corning #111 Valve Lubricant or equivalent.• Replace o-rings when re-using connectors.• Avoid nicks and cuts around contacts as these are the sealing surfaces.• Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time.• Do not over tighten bulkhead nuts.• Grip main body of connector during mating or unmating. Do not pull on cable to disconnect.• Avoid sharp bends at cable entry to connector. |
| ORDERING INFORMATION | <ul style="list-style-type: none">• Bulkhead connectors do not come with nuts and washers. Nuts and washers should be ordered separately. |

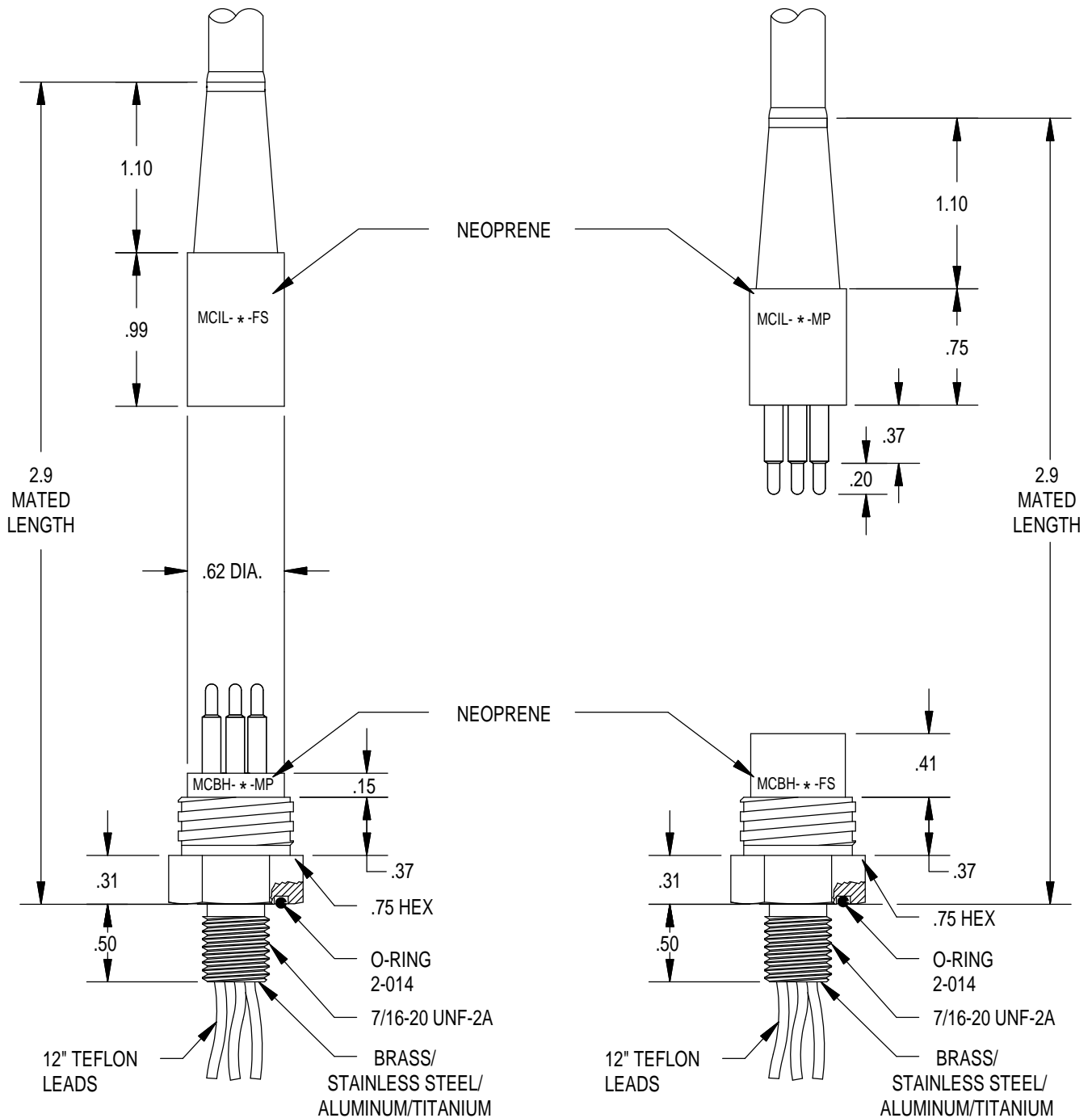


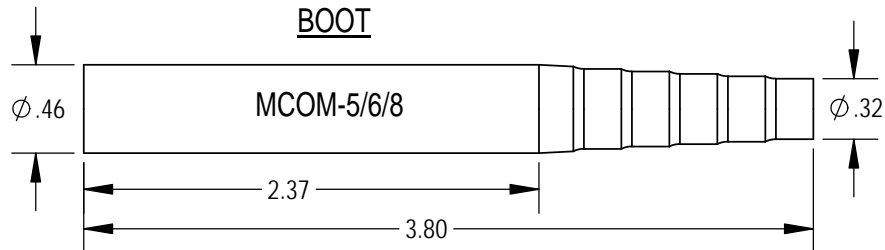
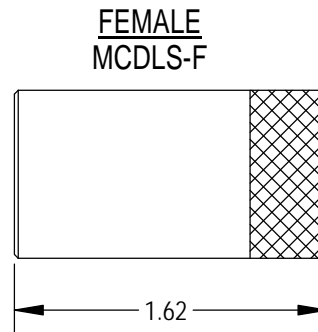
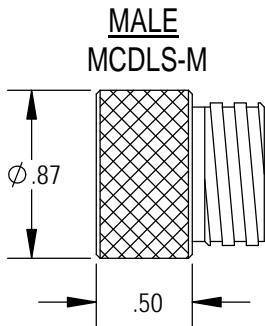
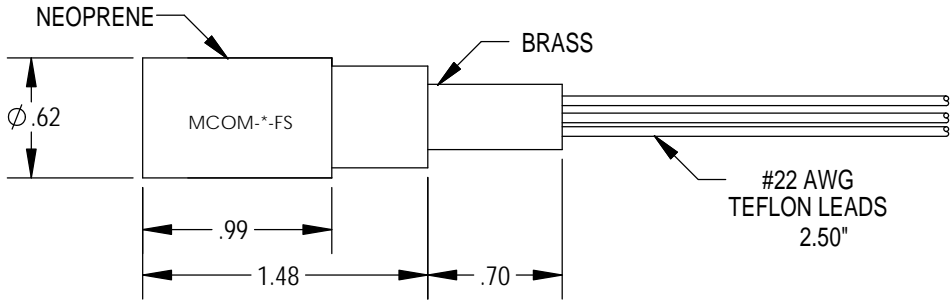
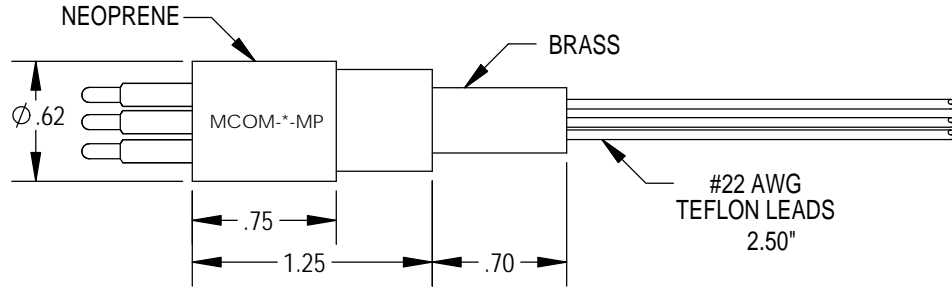


**CONTACT
CONFIGURATION**
(MP FACE VIEW)

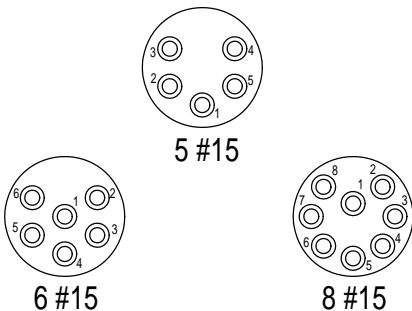


| | |
|--|--------------------------|
| MOUNTING TORQUE FOR MCBH-FS/MP | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR MCIL/BH-FS | MCDC- * -MP |
| DUMMY PLUG FOR MCIL/BH-MP | MCDC- * -FS |
| * Specify number of contacts. | |
| NOTE: Bulkhead body available in Titanium. Standard 3/4" thread length. | |

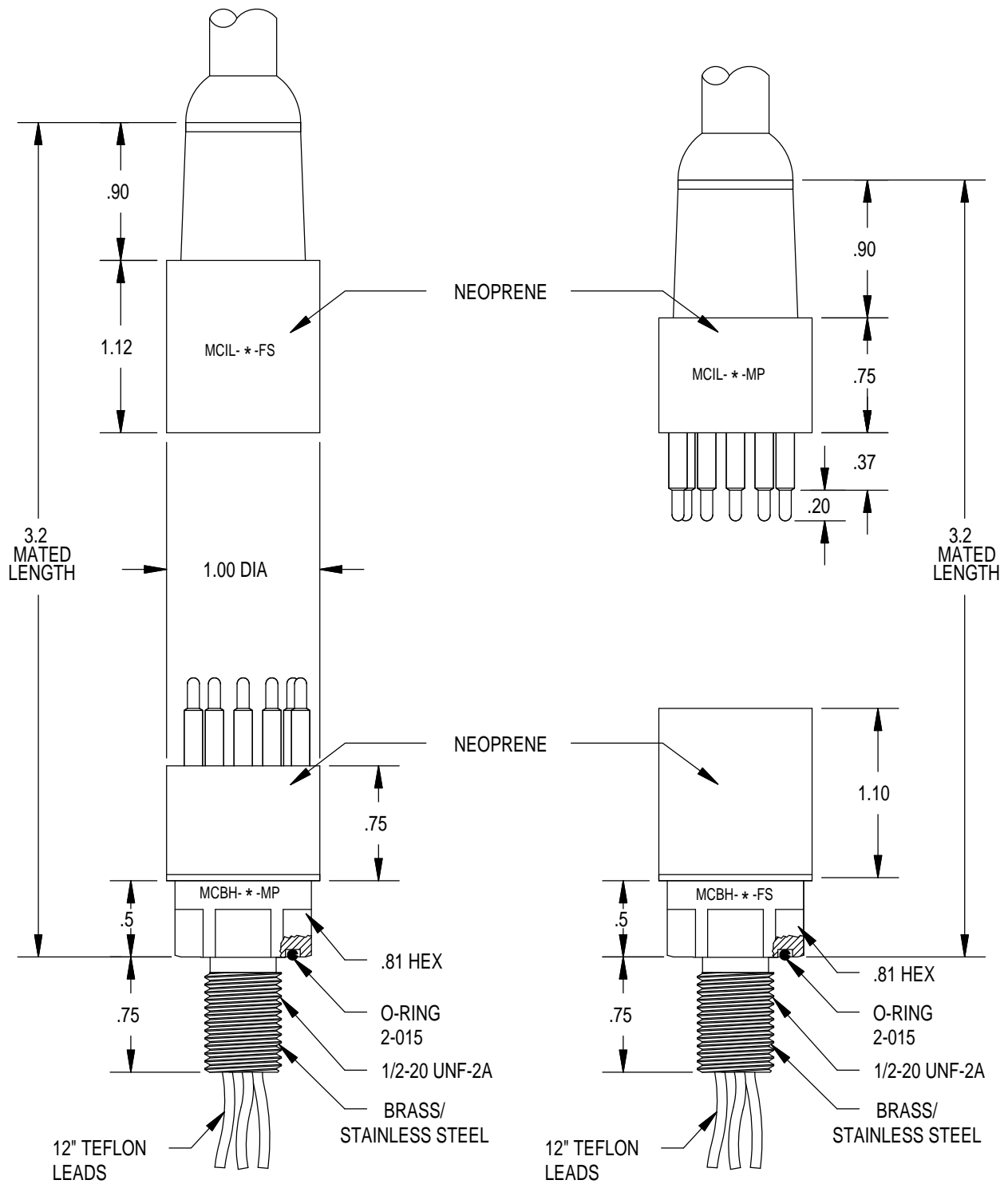




**CONTACT
CONFIGURATION**
(MP FACE VIEW)



| | |
|--|--------------------------|
| MOUNTING TORQUE FOR MCBH-FS/MP | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR MCIL/BH-FS | MCDC- * -MP |
| DUMMY PLUG FOR MCIL/BH-MP | MCDC- * -FS |
| * Specify number of contacts. | |
| NOTE: Bulkhead body available in Titanium. Standard 3/4" thread length. | |

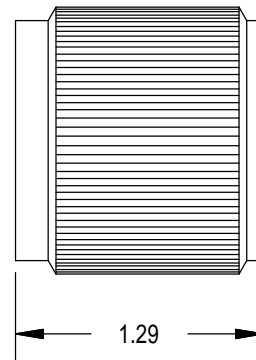
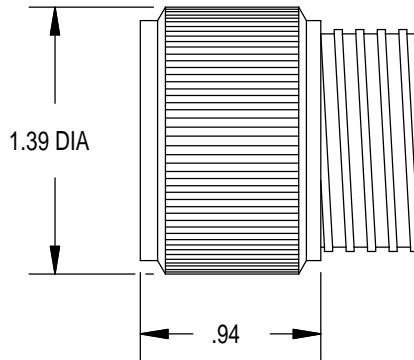


MALE

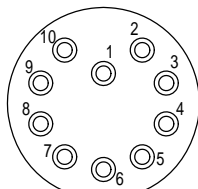
FEMALE

DLSA-M

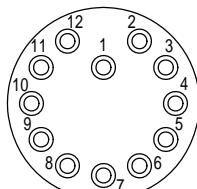
DLSA-F



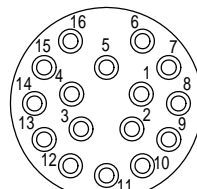
CONTACT
CONFIGURATION
(MP FACE VIEW)



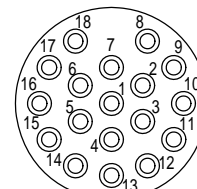
10 #15



12 #15



16 #15

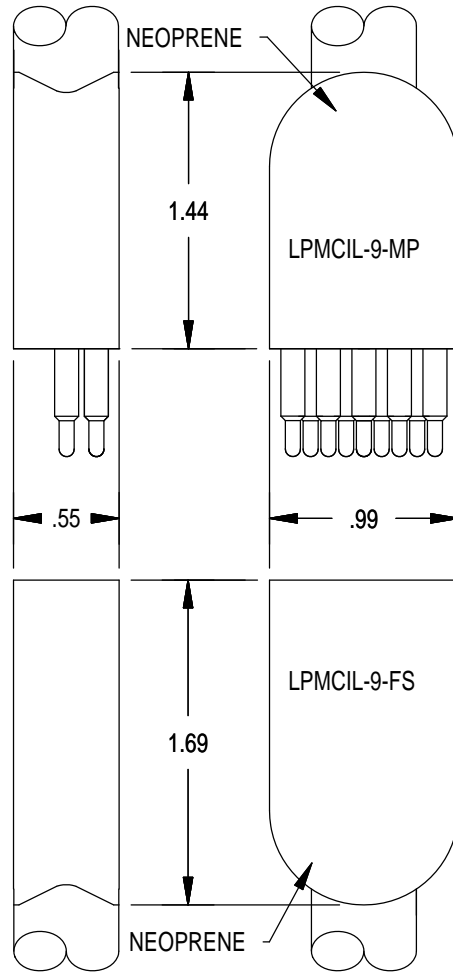
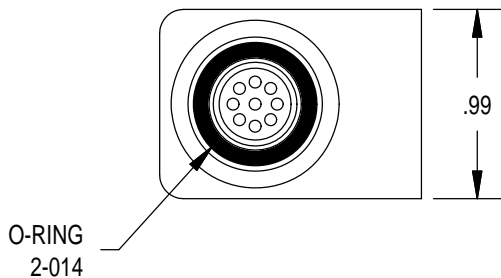
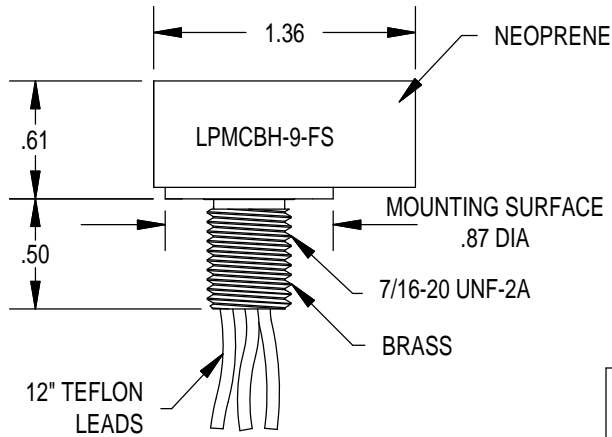
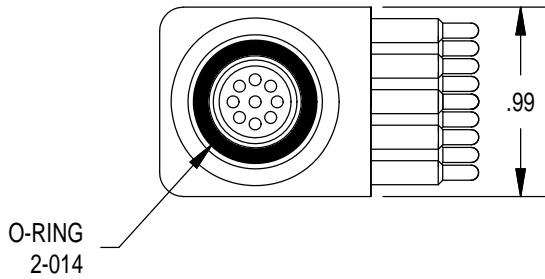
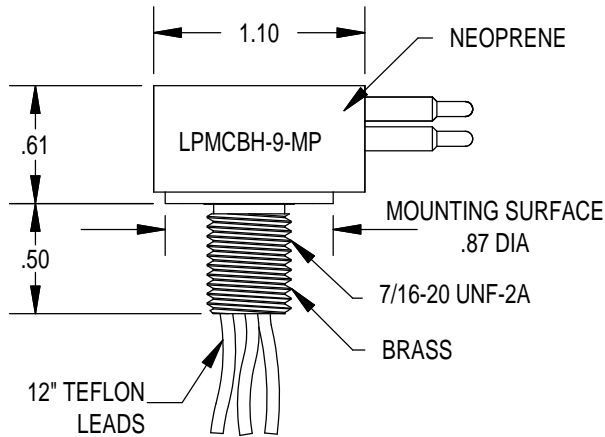


18 #15

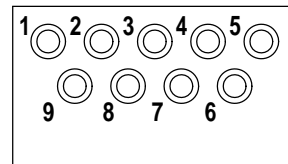
| | |
|--|--------------------------|
| MOUNTING TORQUE FOR MCBH-FS/MP | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR MCIL/BH-FS | MCDC- * -MP |
| DUMMY PLUG FOR MCIL/BH-MP | MCDC- * -FS |
| * Specify number of contacts. * Dummy plugs found on page 65 126 | |
| NOTE: Bulkhead body available in Titanium. Standard 3/4" thread length. | |

LPMCBH/LPMCIL-9

MICRO MINI WET
PLUGGABLE SERIES



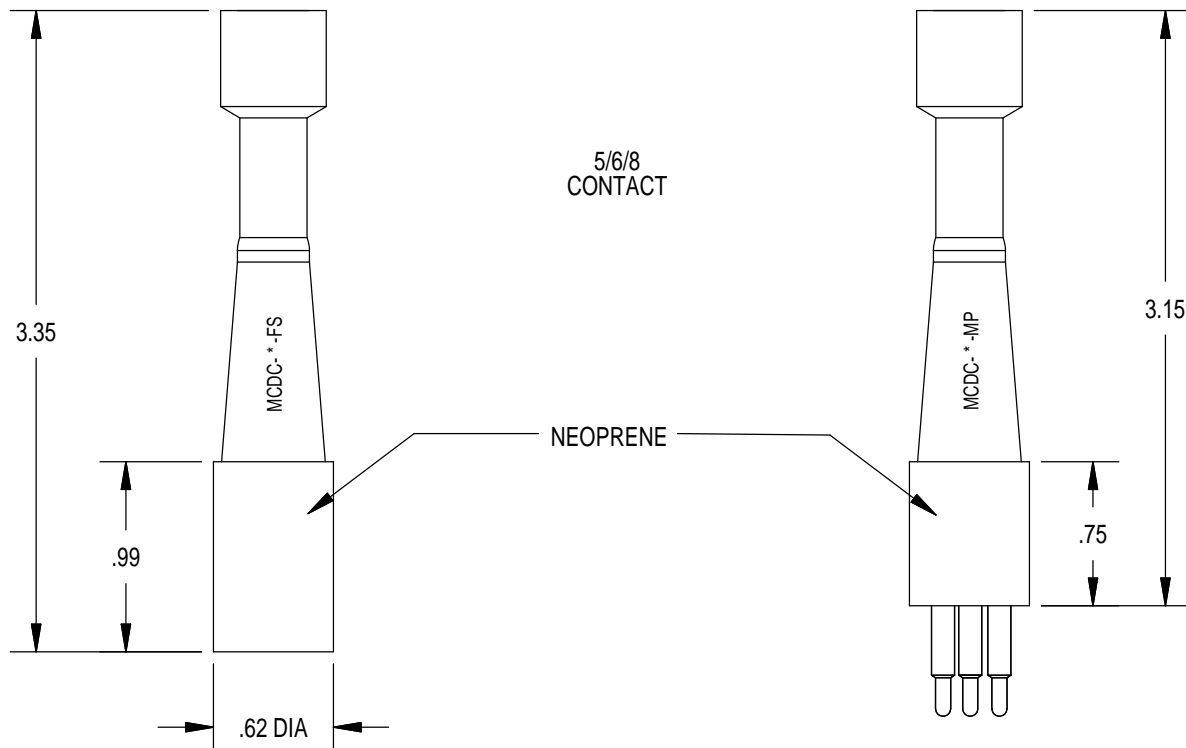
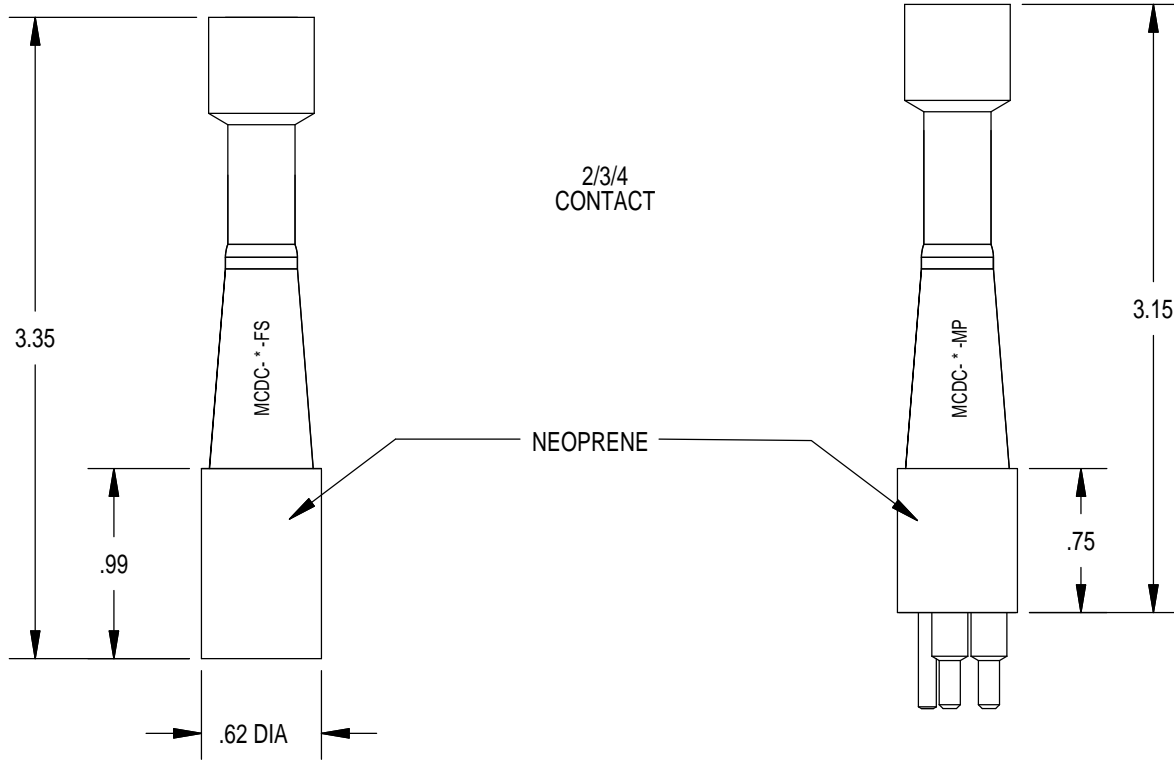
CONTACT CONFIGURATION (MP FACE VIEW)



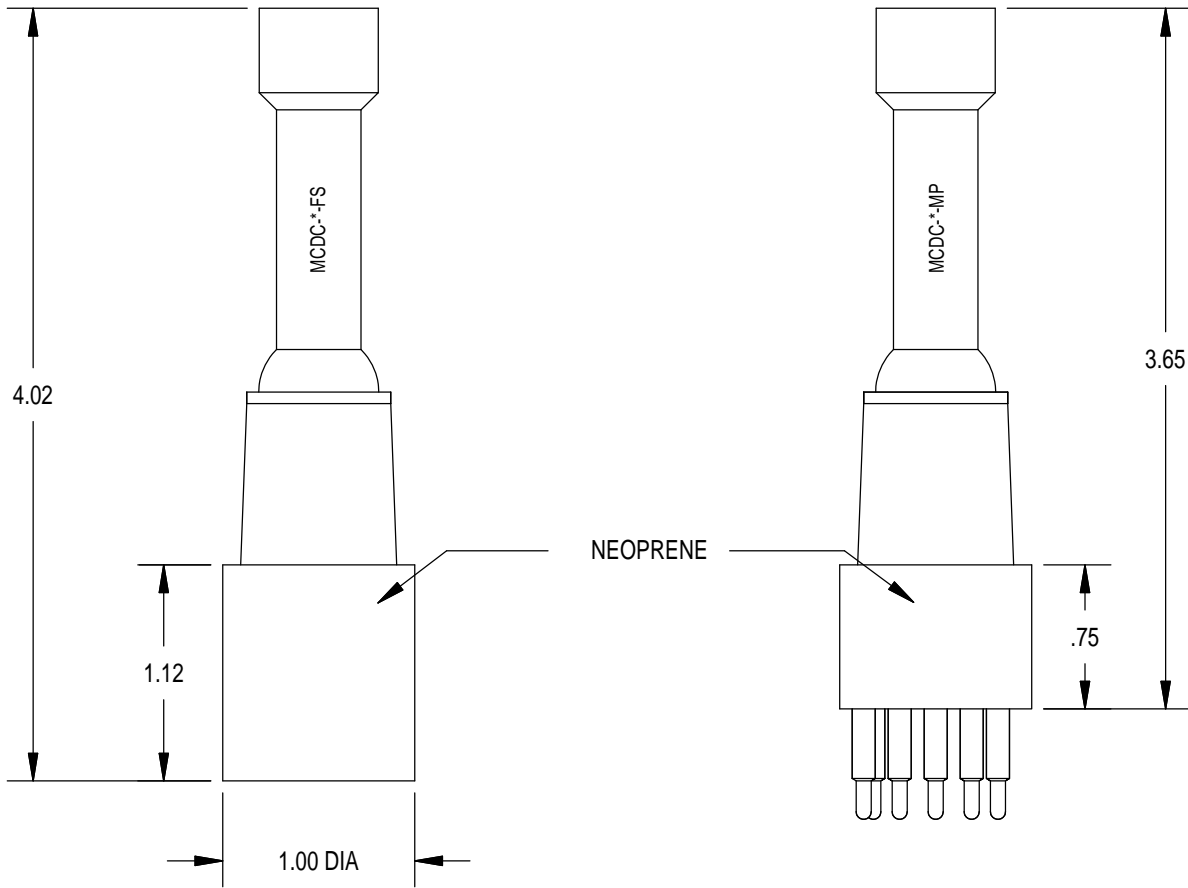
| | |
|---|--------------------------|
| MOUNTING TORQUE FOR LPMCBH-FS/MP | not to exceed 100 in/lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR LPMCIL/BH-FS | LPMCDC- *-MP |
| DUMMY PLUG FOR LPMCIL/BH-MP | LPMCDC- *-FS |
| NOTE: Bulkhead body available in Stainless Steel. Standard 1/2" thread length. Dummy plugs found on page 65 127 | |

MCDC-2/3/4/5/6/8

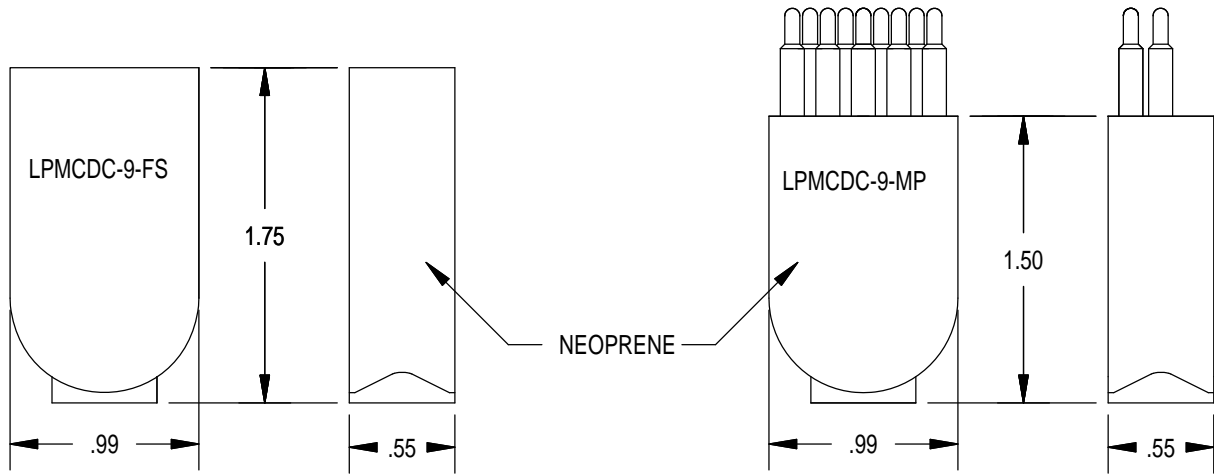
MICRO MINI WET PLUGGABLE SERIES

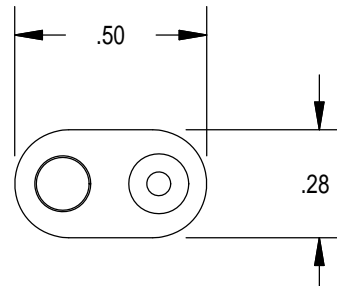
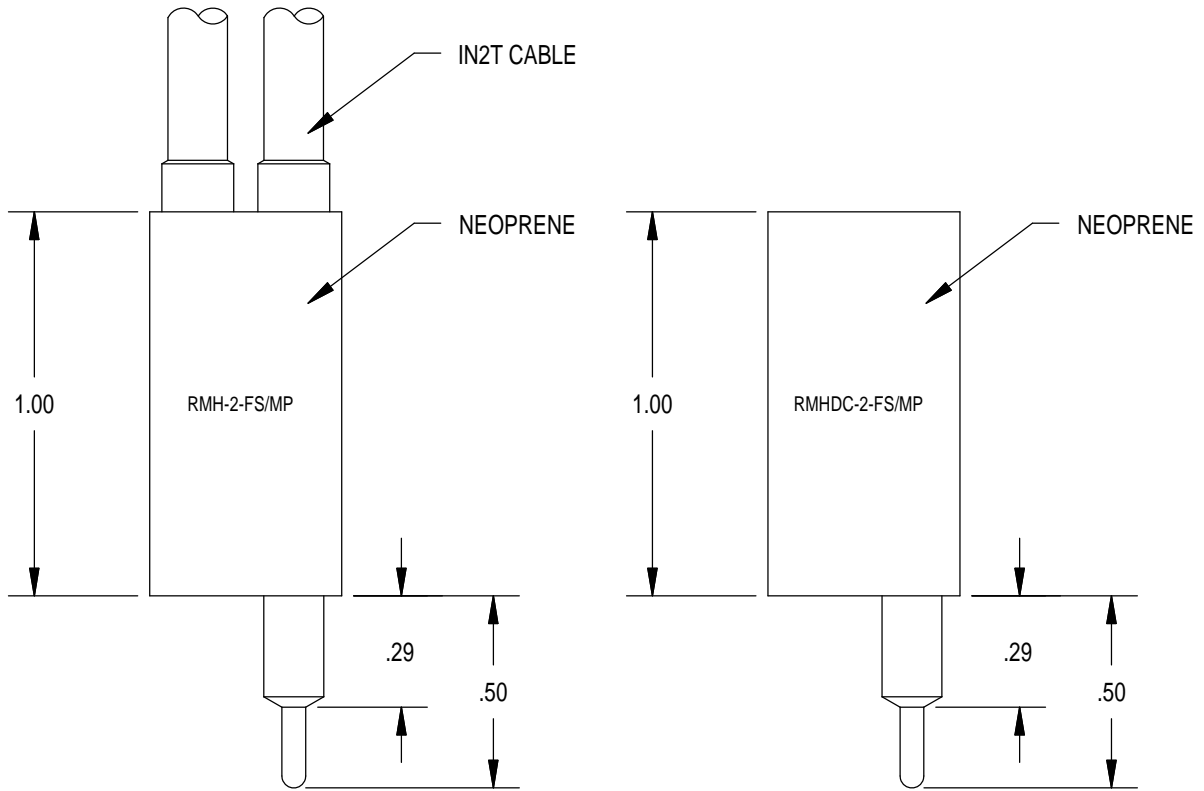


* Specify number of contacts



* Specify number of contacts



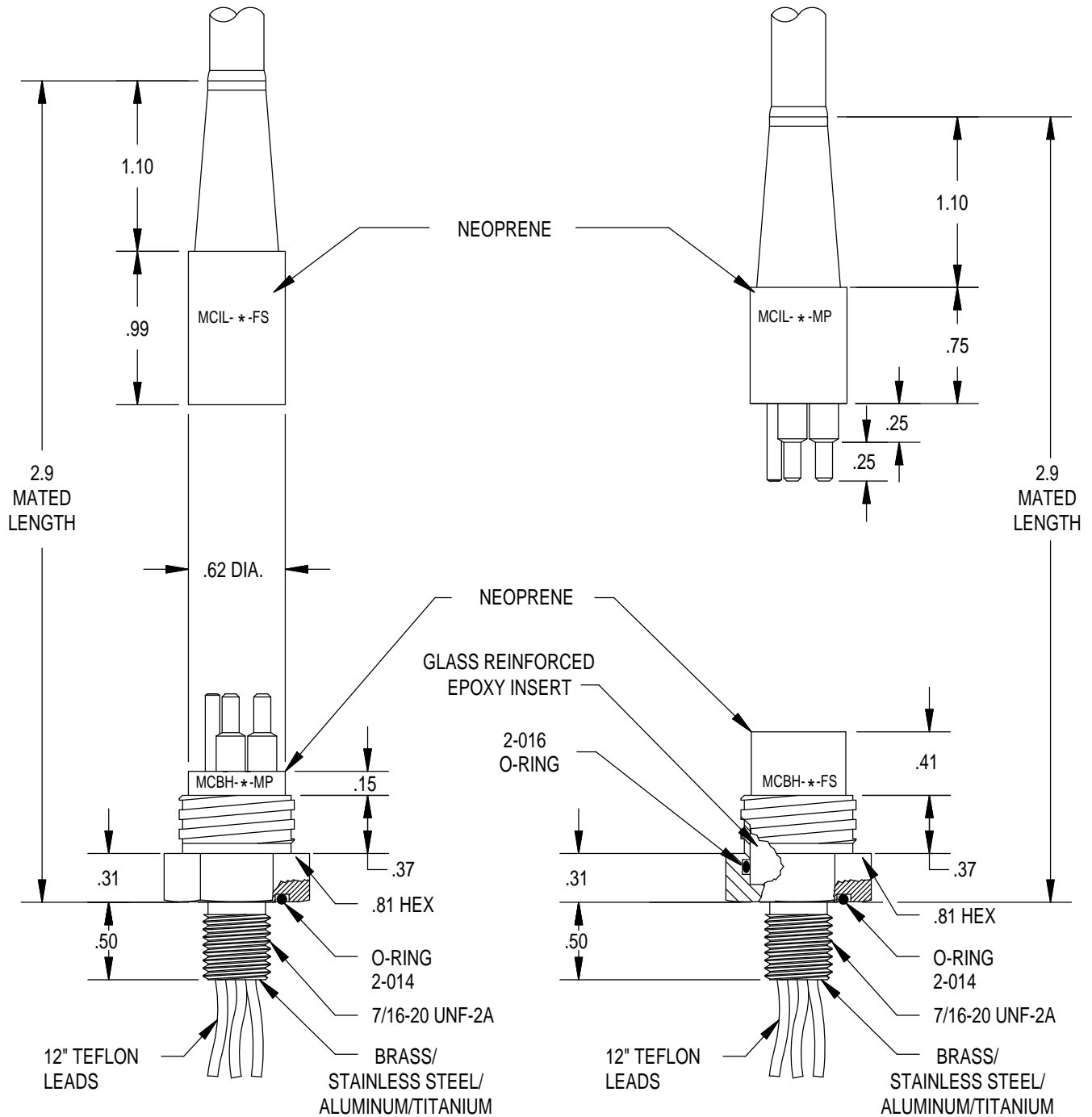


| | |
|-----------------------------|---------------|
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR RMH-2-FS/MP | RMHDC-2-FS/MP |

| | |
|--------------------------|--|
| DESCRIPTION AND MATERIAL | <ul style="list-style-type: none">• Molded neoprene.• Two to eight contacts.• Up to 600 VDC.• Up to 10,000 PSI, mated.• Glass reinforced epoxy puck with o-ring seal provides waterblock in event of damage to neoprene face of bulkhead.• Bulkhead connector design open face pressure rated to 5000 PSI.• Contacts gold plated per MIL-G-45204. |
| CABLE | <ul style="list-style-type: none">• Inline connectors in this series are molded on a standard 24" length of cable, #20 AWG, unless otherwise specified.• Bulkhead connectors have 12" teflon leads, Type E per MIL 16878/4, two to four contact - #20 AWG, five to eight contact - #22 AWG. |
| USES | <ul style="list-style-type: none">• Light to medium duty applications.• Hazardous environments. |
| GUIDELINES | <ul style="list-style-type: none">• All mounting surfaces require a 32 finish.• Lubricate mating surface with 3M Silicone Spray or equivalent, DO NOT grease! Connectors must be lubricated on a regular basis.• Lubricate o-ring with Dow Corning #111 Valve Lubricant or equivalent.• Replace o-rings when re-using connectors.• Avoid nicks and cuts around contacts as these are the sealing surfaces.• Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time.• Do not over tighten bulkhead nuts.• Do not pull on cable to disconnect.• Avoid sharp bends at cable entry to connector. |
| ORDERING INFORMATION | <ul style="list-style-type: none">• Bulkhead connectors do not come with nuts and washers. Nuts and washers should be ordered separately. |

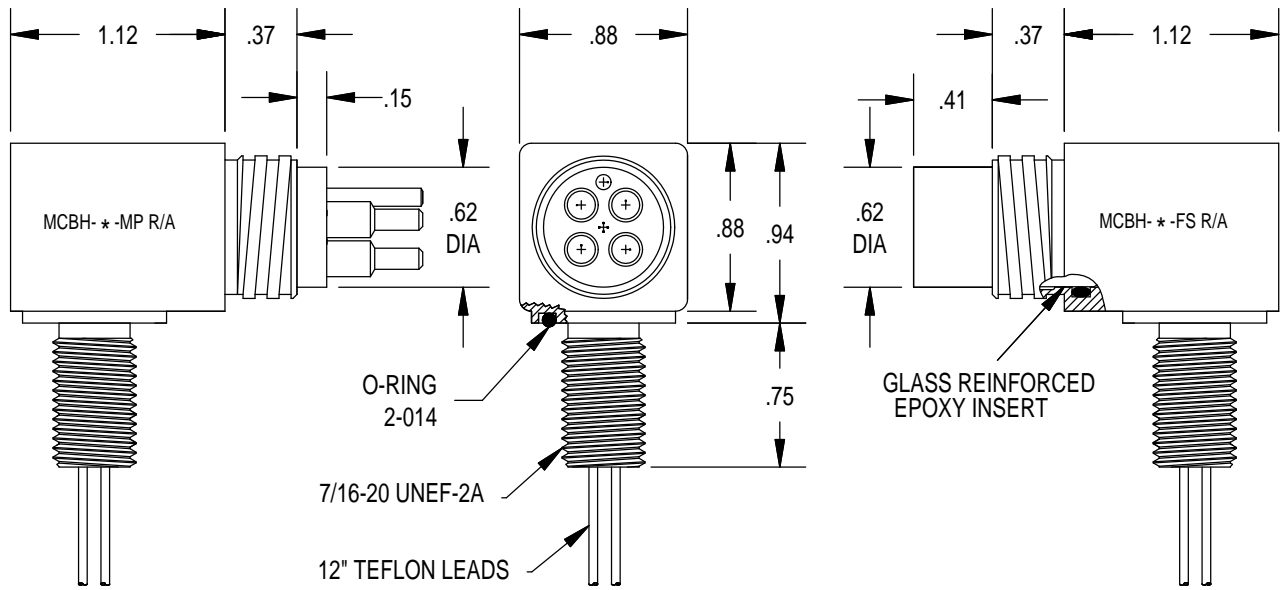
MCIL/BH (WB)-2/3/4

MICRO MINI WET
PLUGGABLE (WATERBLOCKED) SERIES

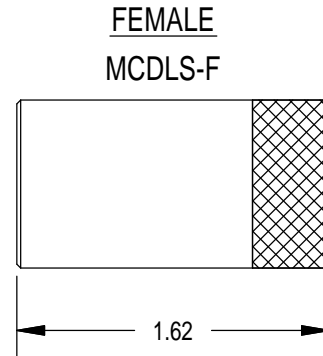
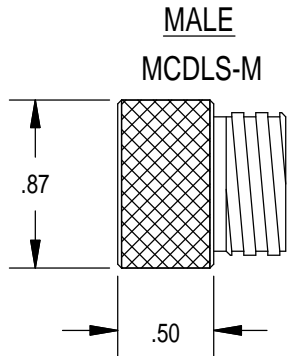


MCIL/BH (WB)-2/3/4-R/A

MICRO MINI WET
PLUGGABLE (WATERBLOCKED) SERIES

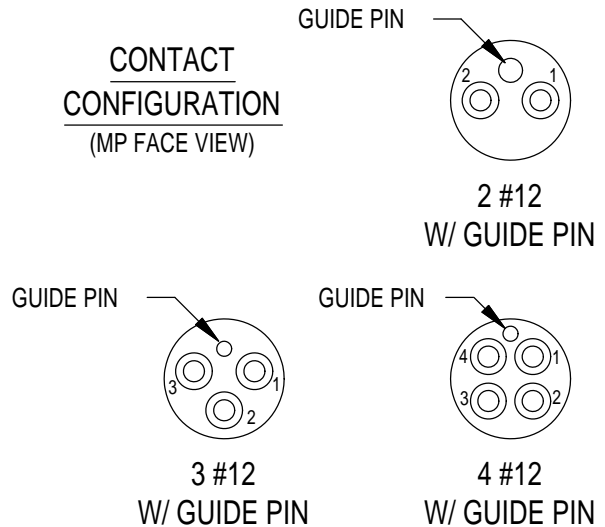


DELTRIN LOCKING SLEEVES



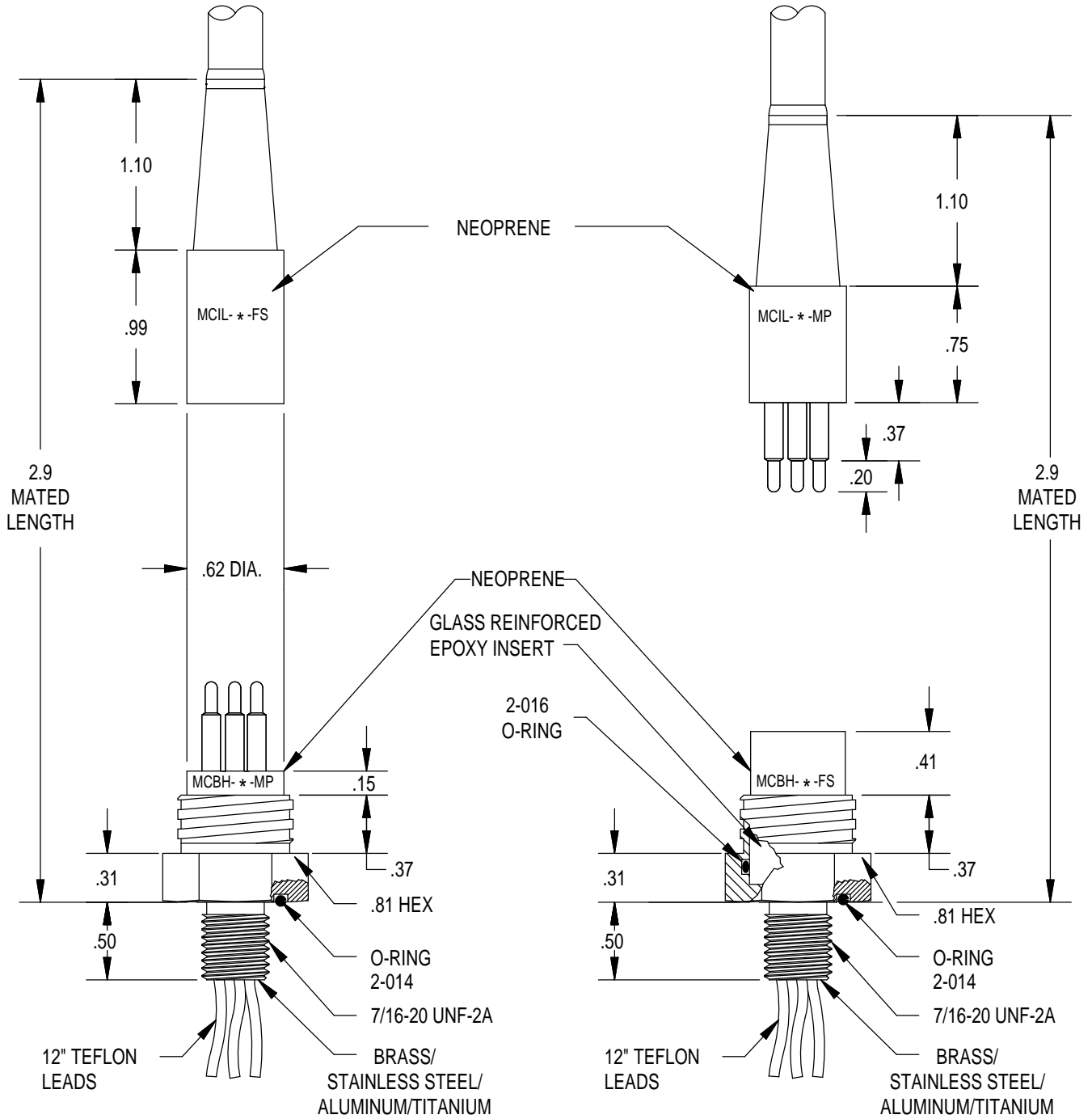
| | |
|---|--------------------------|
| MOUNTING TORQUE FOR MCIL/BH (WB)-FS/MP | not to exceed 100 in/lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR MCIL/BH (WB)-FS | MCDC- * -MP |
| DUMMY PLUG FOR MCIL/BH (WB)-MP | MCDC- * -FS |
| * Specify number of contacts. * Dummy plugs found on page 65 125 | |

CONTACT CONFIGURATION (MP FACE VIEW)



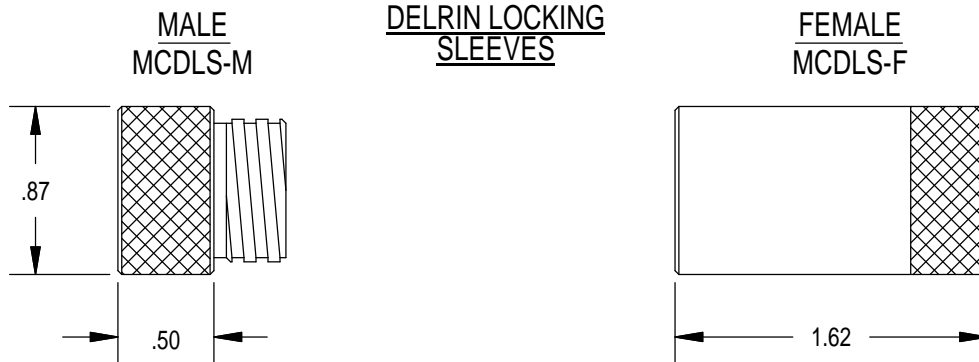
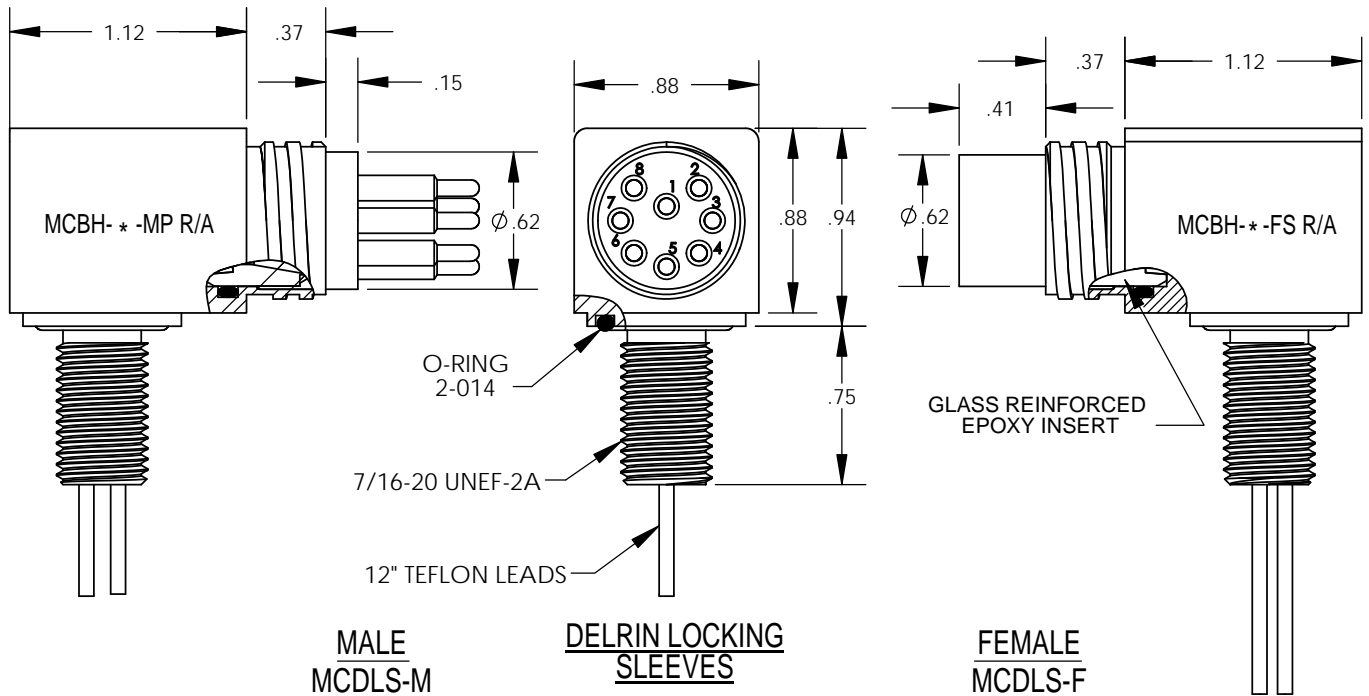
MCIL/BH (WB)-5/6/8

MICRO MINI WET
PLUGGABLE (WATERBLOCKED) SERIES

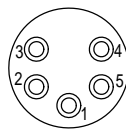


MCIL/BH (WB)-5/6/8

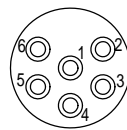
MICRO MINI WET PLUGGABLE (WATERBLOCKED) SERIES



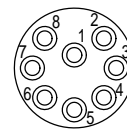
CONTACT CONFIGURATION (MP FACE VIEW)



5 #15



6 #15



8 #15

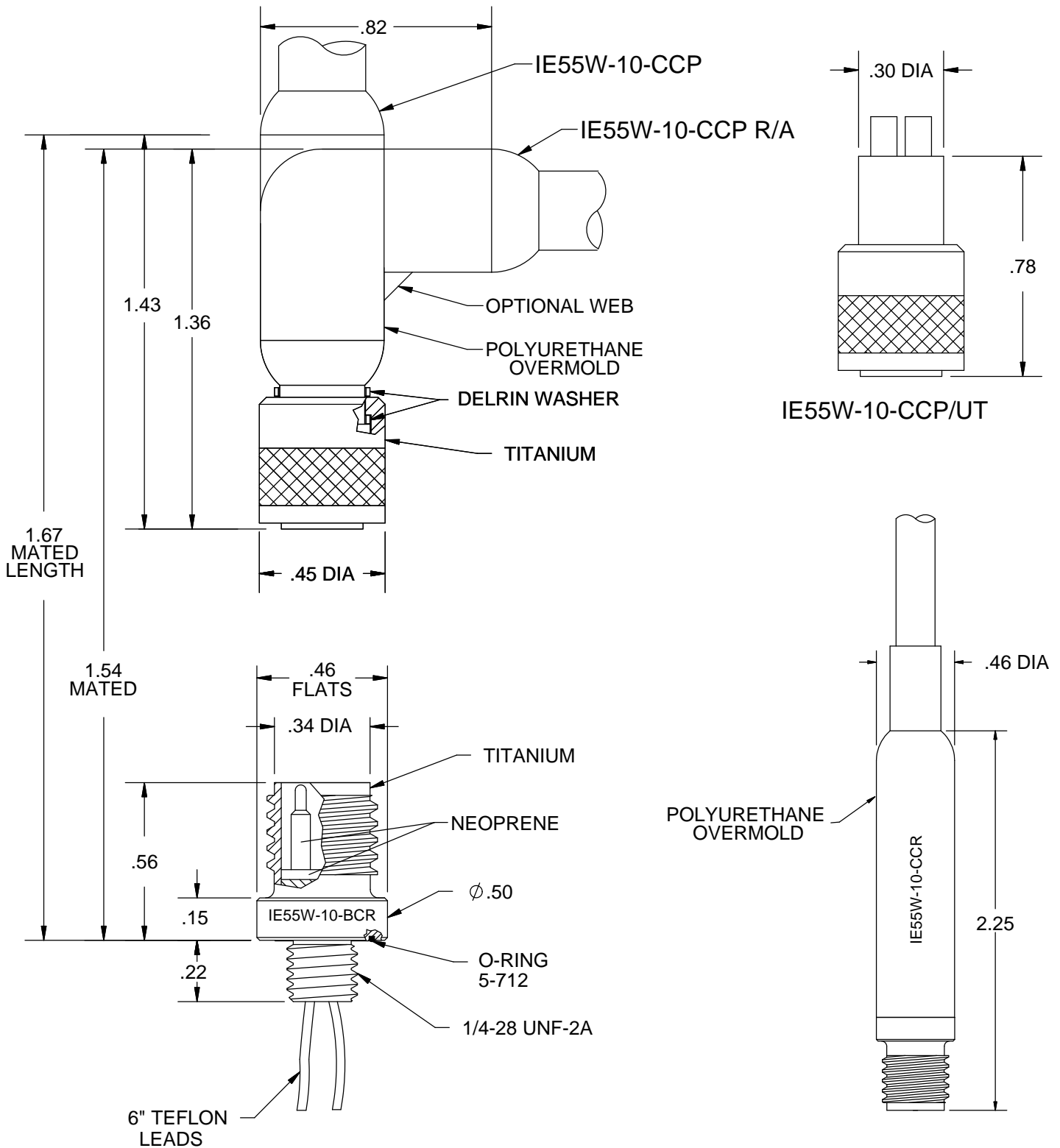
| | |
|---|--------------------------|
| MOUNTING TORQUE FOR MCIL/BH (WB)-FS/MP | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR MCIL/BH (WB)-FS | MCDC- * -MP |
| DUMMY PLUG FOR MCIL/BH (WB)-MP | MCDC- * -FS |
| * Specify number of contacts. * Dummy plugs found on page 65 125 | |

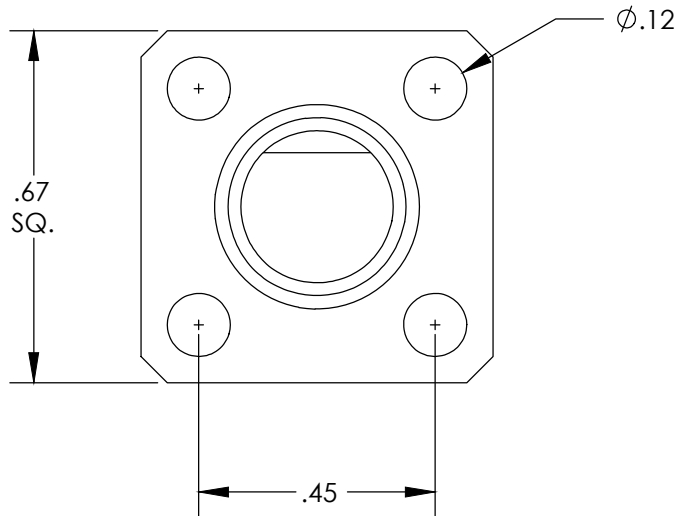
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| | |
|---|---|
| DESCRIPTION AND MATERIAL | <ul style="list-style-type: none"> • Body and engaging nut are 316 Stainless Steel, passivated per QQ-P-35 Type VI. • To 10,000 PSI in mated condition. • Bulkhead connector design open face pressure rated to 5000 PSI. • Contacts gold plated per MIL-G-45204. • Engaging nuts have Acme threads for rugged applications and for quick connection (shell size 15 has standard V thread). • Working voltage - 600 VDC (contact factory for high voltage applications). |
| CABLE | <ul style="list-style-type: none"> • CCP, CCP-R/A and CCR are molded on standard 24" length of 16 AWG SO cable. IE55-1508 is molded on a standard 24" length of 18 AWG SO cable. • Other cable options available at customer's request. • BCR/FCR have 48" teflon leads, Type E per MIL 16878/4 16 AWG. • Un-Terminated versions of CCP available. |
| USES | <ul style="list-style-type: none"> • Heavy Duty applications. • Hazardous environment. • Power Transmission. • Signal Telemetry. • ROV applications. |
| GUIDELINES | <ul style="list-style-type: none"> • All mounting and sealing surfaces require a 32 finish. • Lubricate mating surfaces with 3M Silicone Lubricant or equivalent, DO NOT GREASE! Connectors must be lubricated on a regular basis. • Lubricate o-rings with Dow Corning #111 Valve Lubricant or equivalent. • Use Dust Caps and keep connectors clean to prevent damage in storage and service. • Keep o-ring grooves clean and avoid cuts, nicks and tears on rubber surfaces. • Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time. • Clean plugs and receptacles with soap and fresh water. Rinse out with alcohol, allowing connector to air dry. • Replace o-rings when re-using connectors. |
| NOTE | <ul style="list-style-type: none"> • Also available as inverted series, see following section. |
| <p>Specifications for: SUBMINIATURE CONNECTOR (Bulletin 70 03/06)</p> | <ul style="list-style-type: none"> • Body and engaging nut are 6AL-4V Titanium. Engaging nut is Tiodized per AMS 2488 TYPE II. • Working voltage - 300 VDC. • IE55-1204/06-CCP, CCP-R/A and CCR are molded on standard 24" 22 AWG polyurethane jacketed cable. IE55W-1002/03-CCP, CCP-R/A and CCR are molded on standard 24" 20 AWG Belden cable. • IE55-1204/06-BCR/FCR are molded on standard 6" Teflon lead, Type E per MIL16878/4, 24 AWG. IE55W-1002/03-BCR/FCR are molded on standard 6" Teflon lead, Type E per MIL 16878/4, 22 AWG. • Mainly used on small sensor packages. • Light duty applications only. |

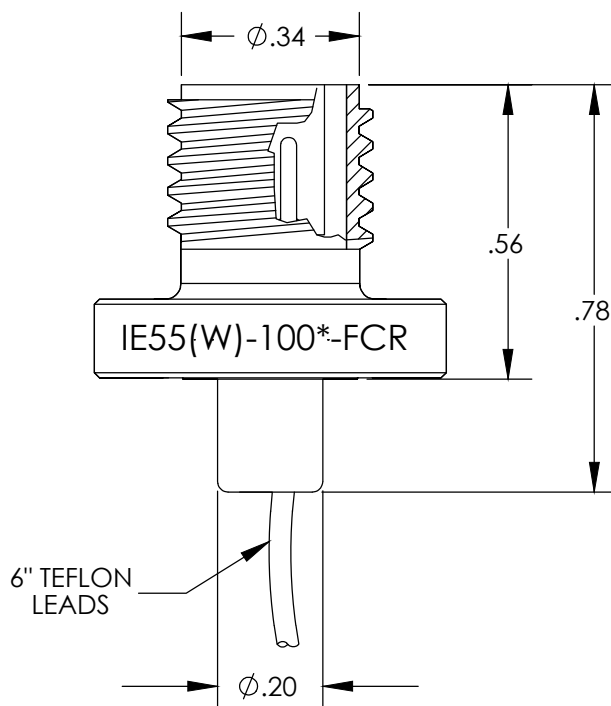
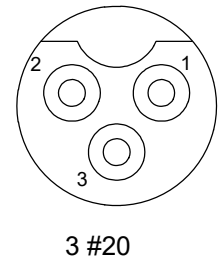
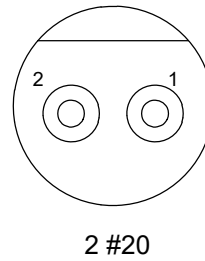
IE55W-10

IE55(W) WET PLUGGABLE RUBBER MOLDED METAL SHELL SERIES





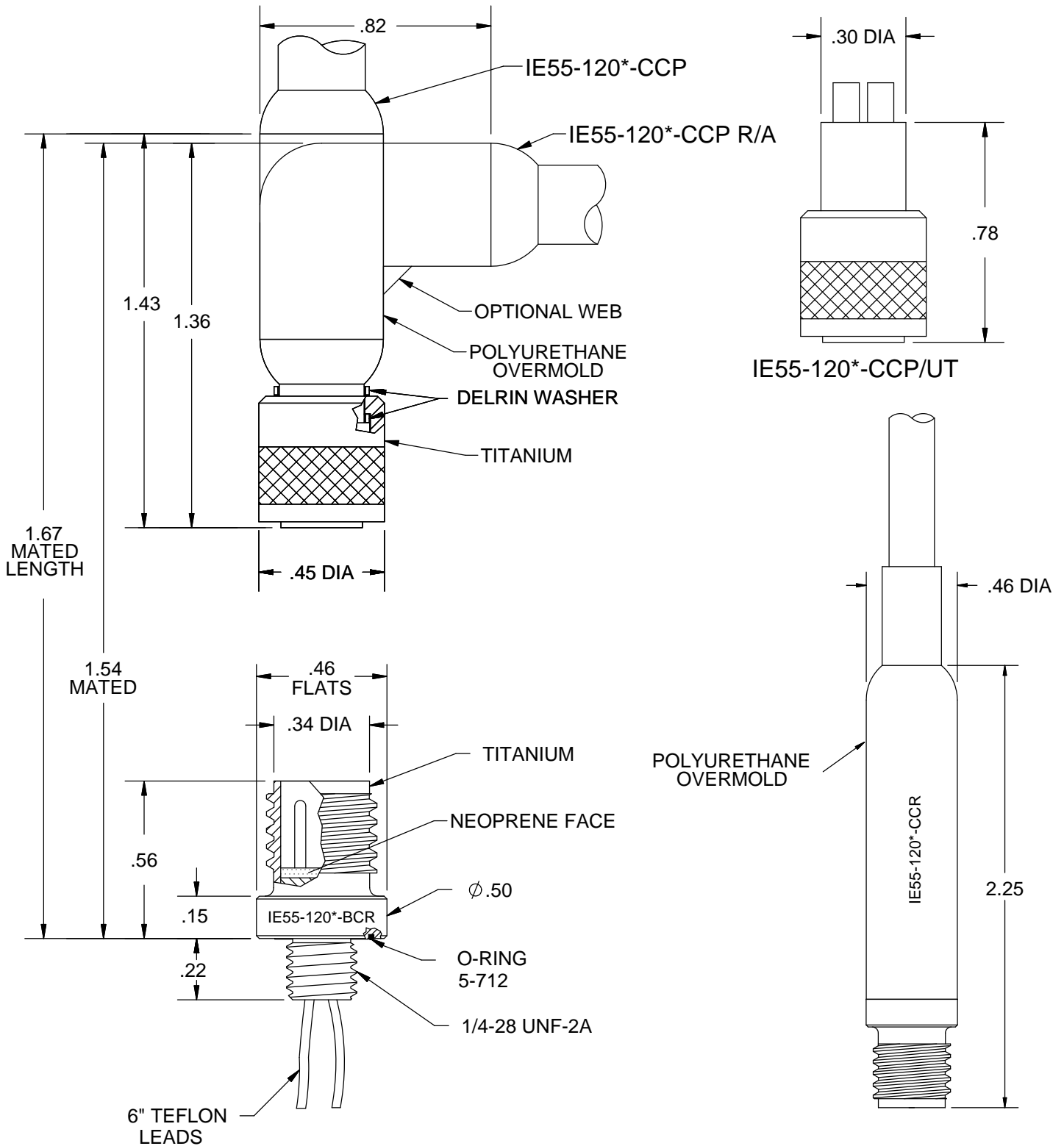
CONTACT CONFIGURATION
(BCR FACE VIEW)

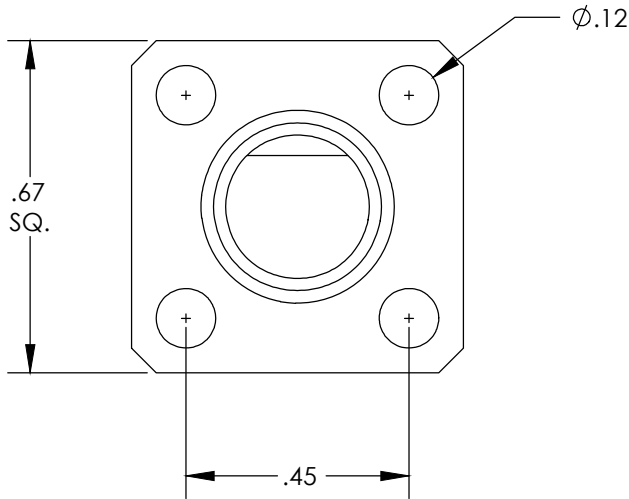


| | |
|--------------------------------------|-------------------------|
| MATED PRESSURE RATING (psi) | 10,000 |
| MOUNTING TORQUE FOR BCR | not to exceed 15 in lbs |
| MATING TORQUE FOR CCP TO BCR/CCR/FCR | not to exceed 4 in lbs |
| DUMMY PLUG FOR BCR | IE55W-10*-SCP |
| DUMMY PLUG FOR CCP | IE55W-10*-SCR |
| * Specify number of contacts. | |

IE55-12

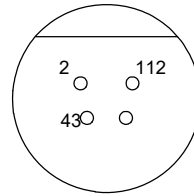
IE55 RUBBER MOLDED
METAL SHELL SERIES



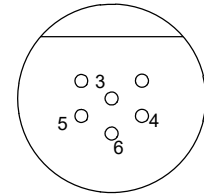


CONTACT CONFIGURATION

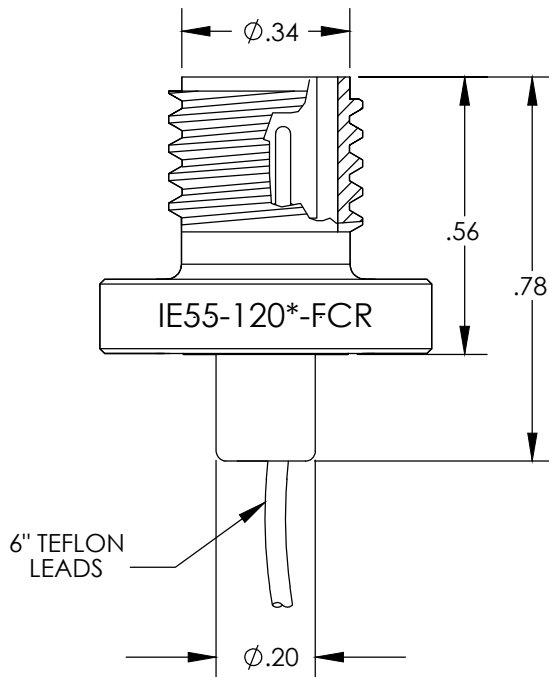
(BCR FACE VIEW)



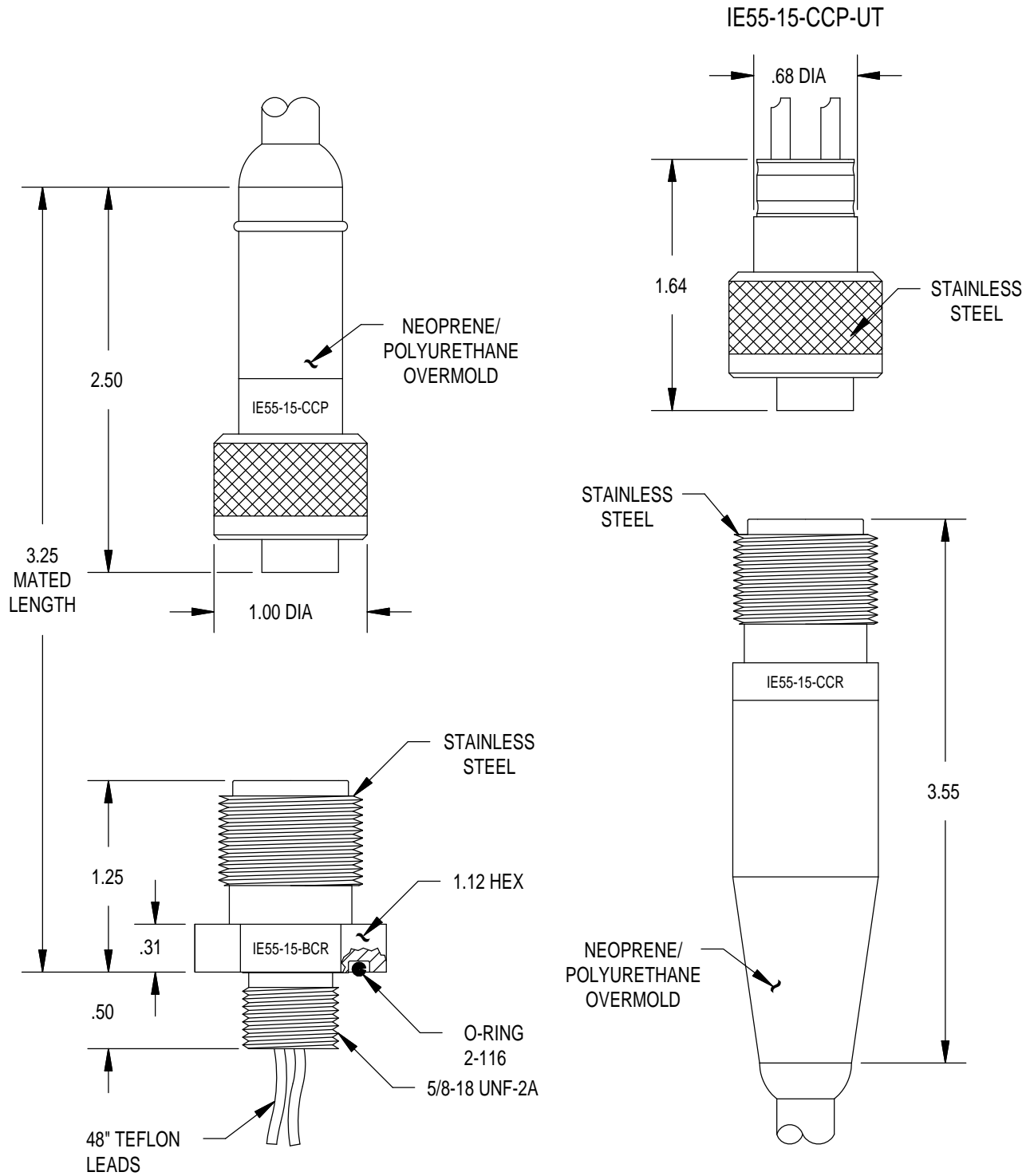
4 #22

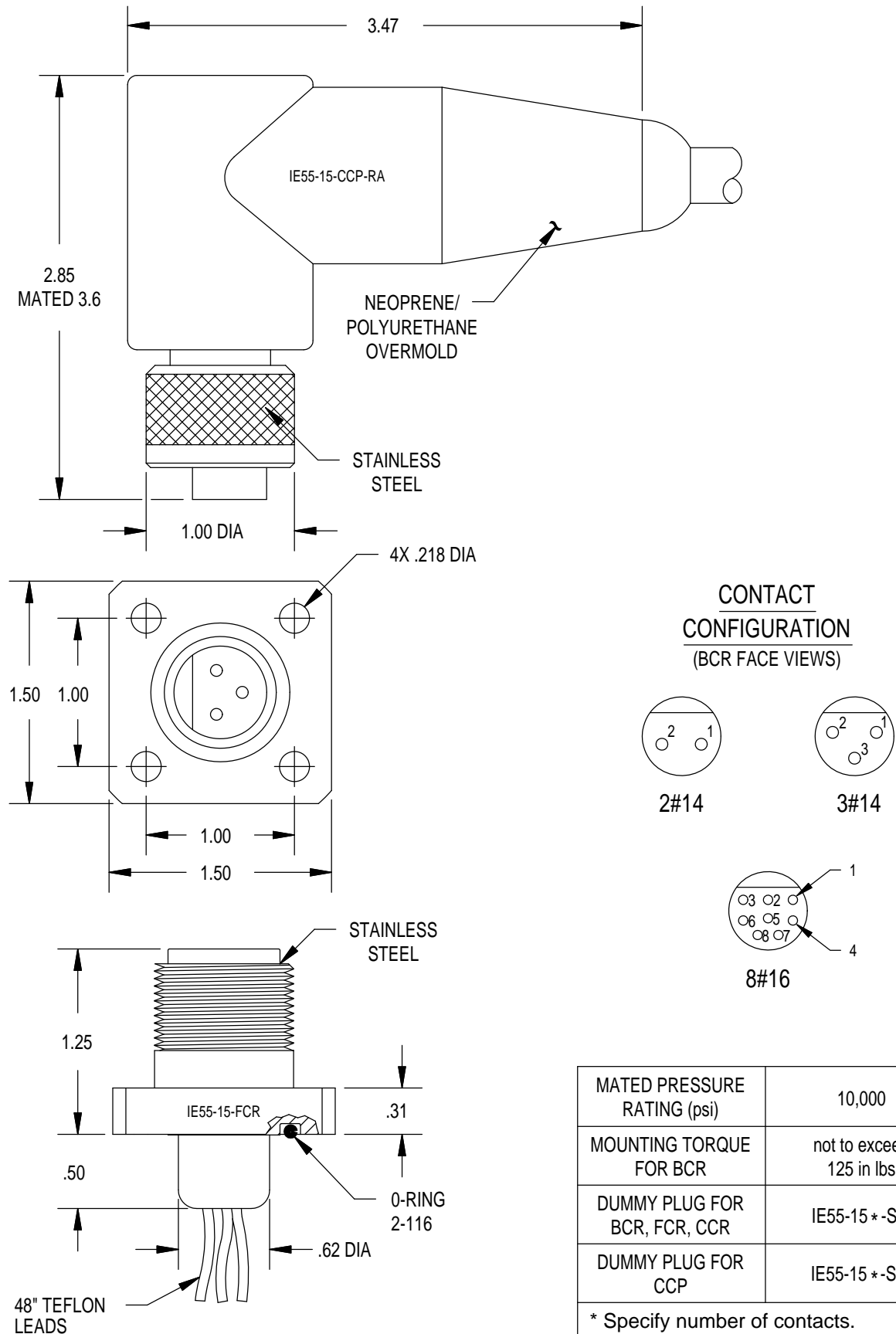


6 #22



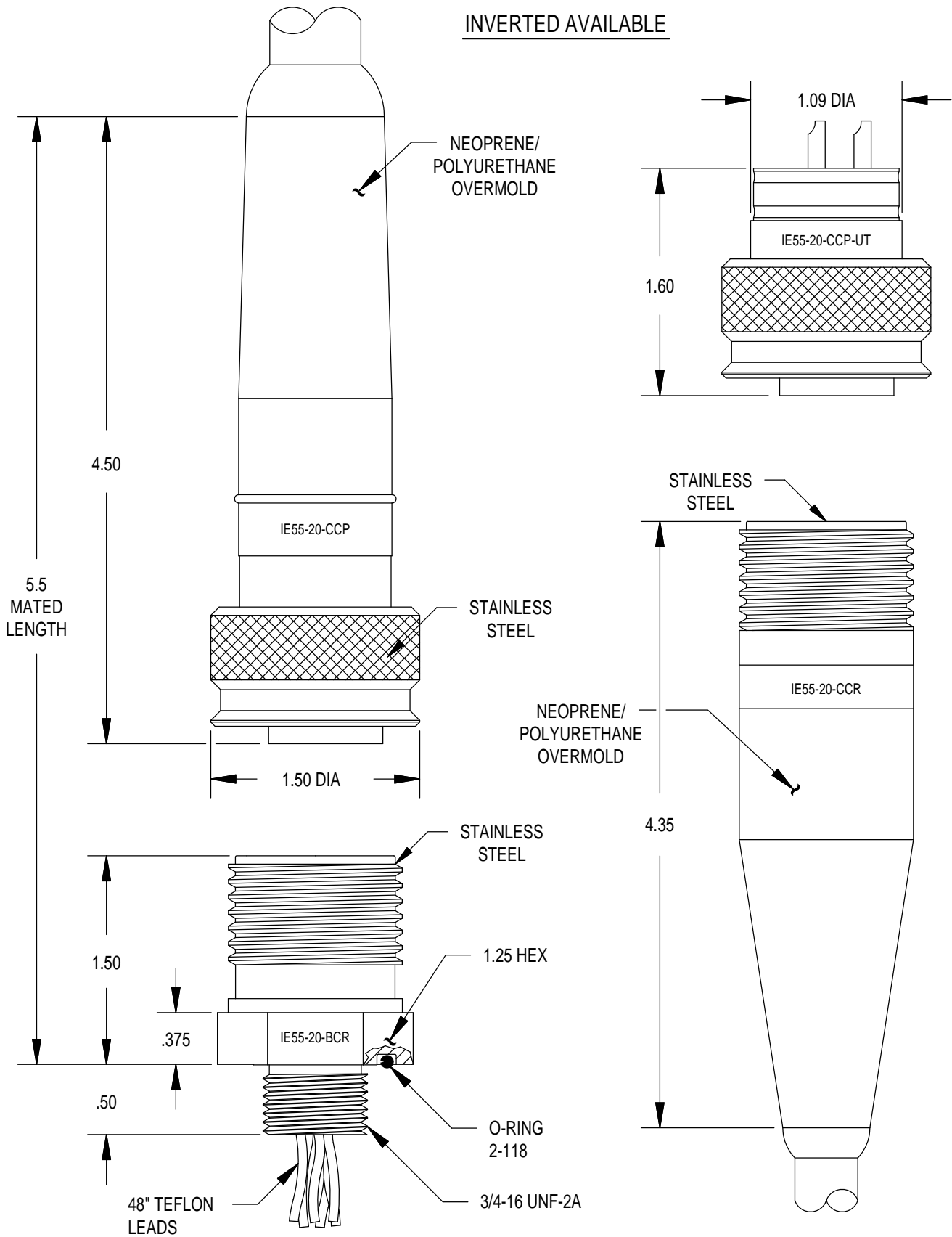
| | |
|--------------------------------------|-------------------------|
| MATED PRESSURE RATING (psi) | 10,000 |
| MOUNTING TORQUE FOR BCR | not to exceed 15 in lbs |
| MATING TORQUE FOR CCP TO BCR/CCR/FCR | not to exceed 4 in lbs |
| DUMMY PLUG FOR BCR | IE55-12*-SCP |
| DUMMY PLUG FOR CCP | IE55-12*-SCR |
| * Specify number of contacts | |

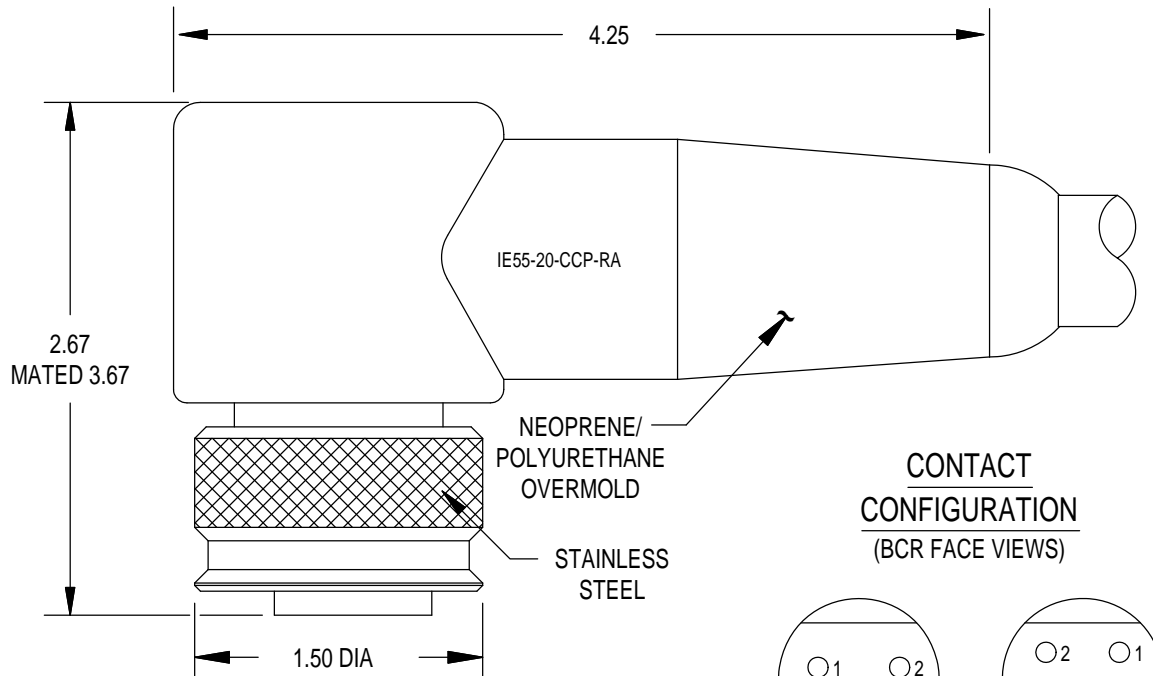




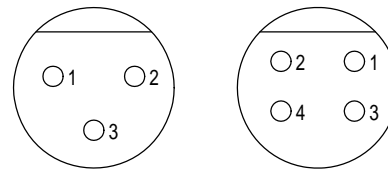
| | |
|-------------------------------|--------------------------|
| MATED PRESSURE RATING (psi) | 10,000 |
| MOUNTING TORQUE FOR BCR | not to exceed 125 in lbs |
| DUMMY PLUG FOR BCR, FCR, CCR | IE55-15 *-SCP |
| DUMMY PLUG FOR CCP | IE55-15 *-SCR |
| * Specify number of contacts. | |

INVERTED AVAILABLE

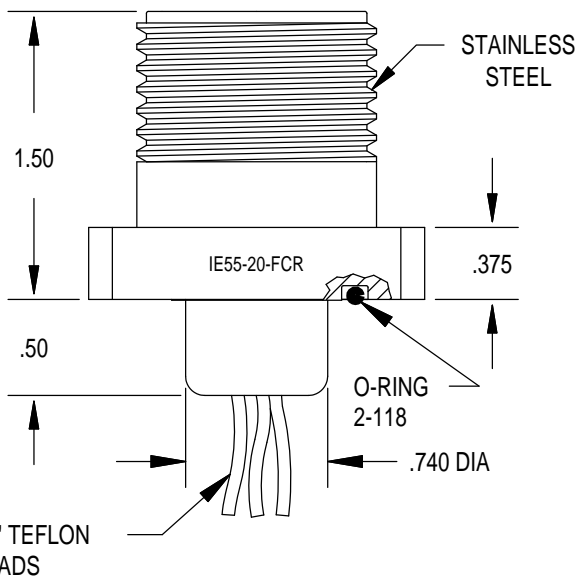
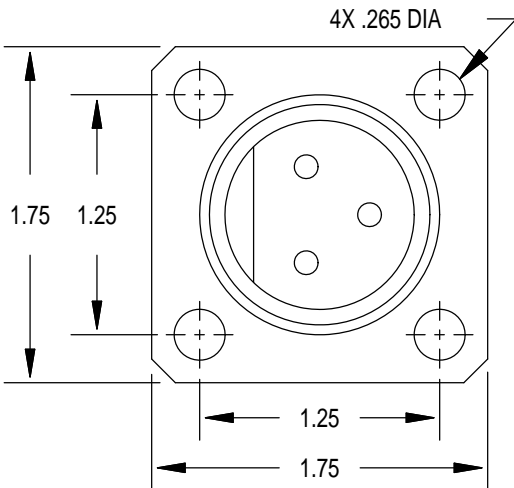
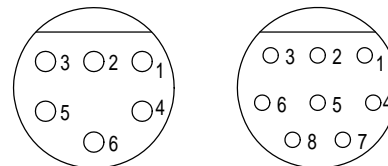




**CONTACT
CONFIGURATION**
(BCR FACE VIEWS)



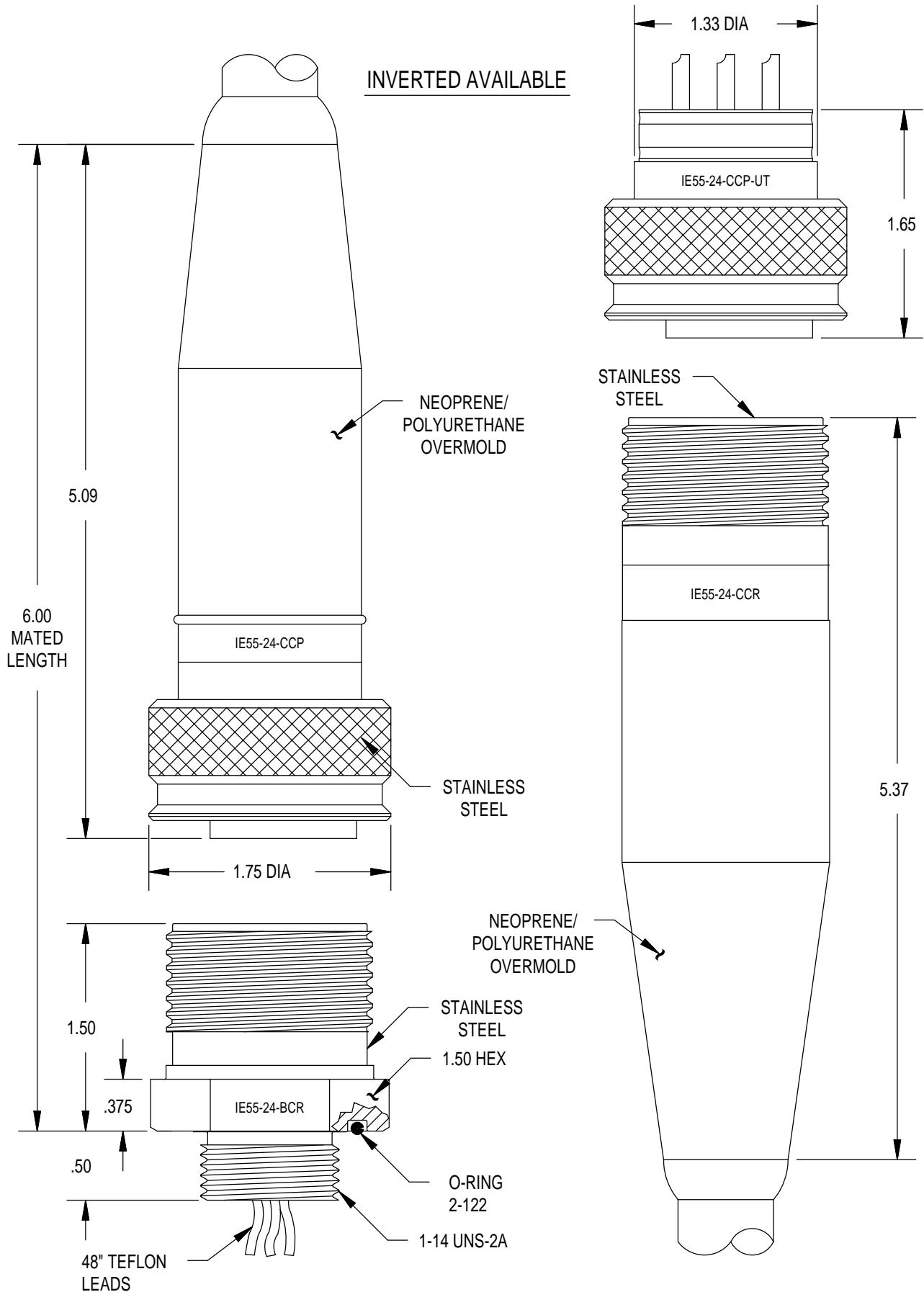
**1#8 / 3#10
(High Voltage)**



| | |
|---|--------------------------|
| MATED PRESSURE RATING (psi) | 10,000 |
| MOUNTING TORQUE FOR BCR | not to exceed 165 in lbs |
| DUMMY PLUG FOR BCR, FCR, CCR | IE55-20 *-SCP |
| DUMMY PLUG FOR CCP | IE55-20 *-SCR |
| * Specify number of contacts. ** Available in high voltage | |

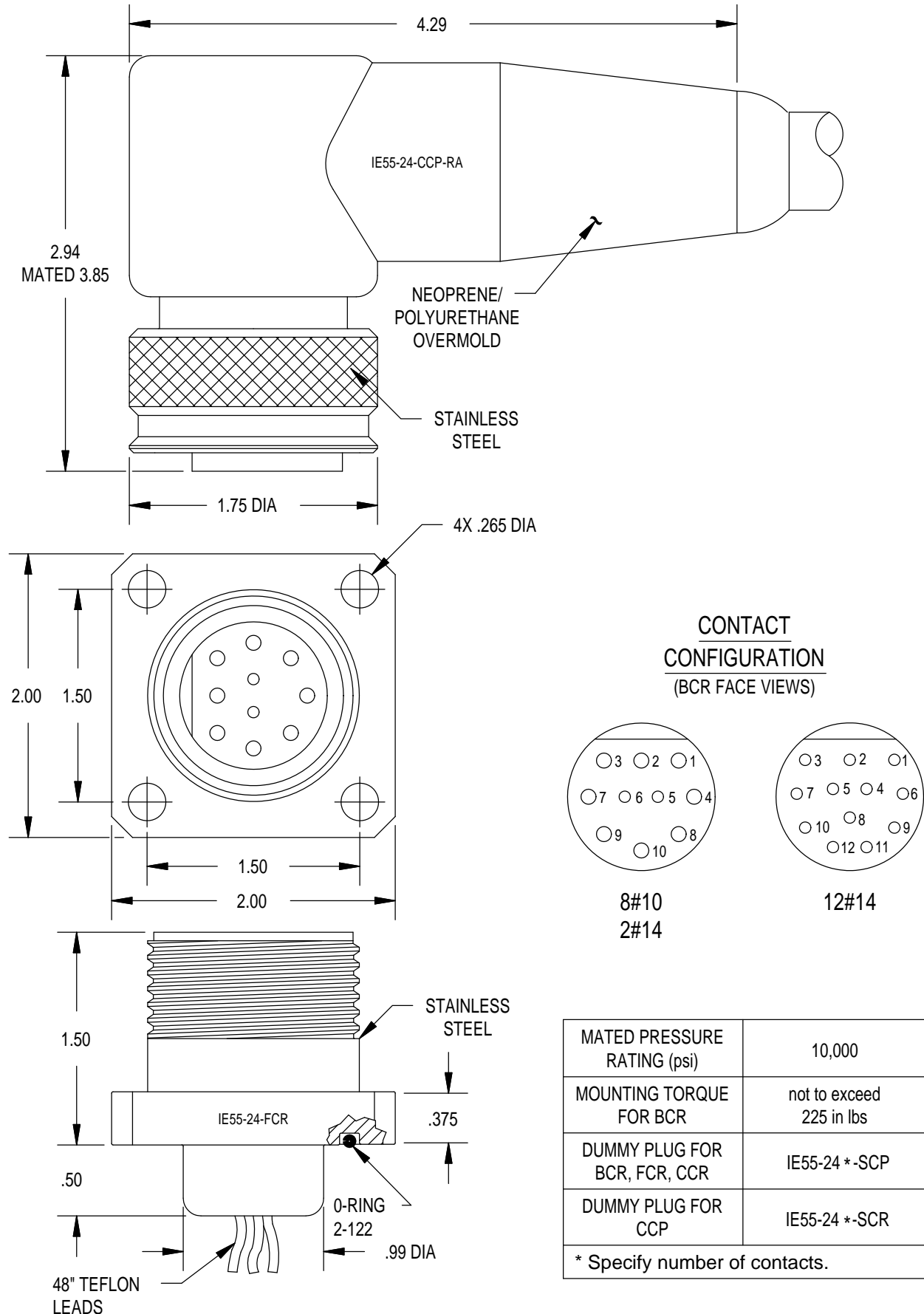
IE55-24

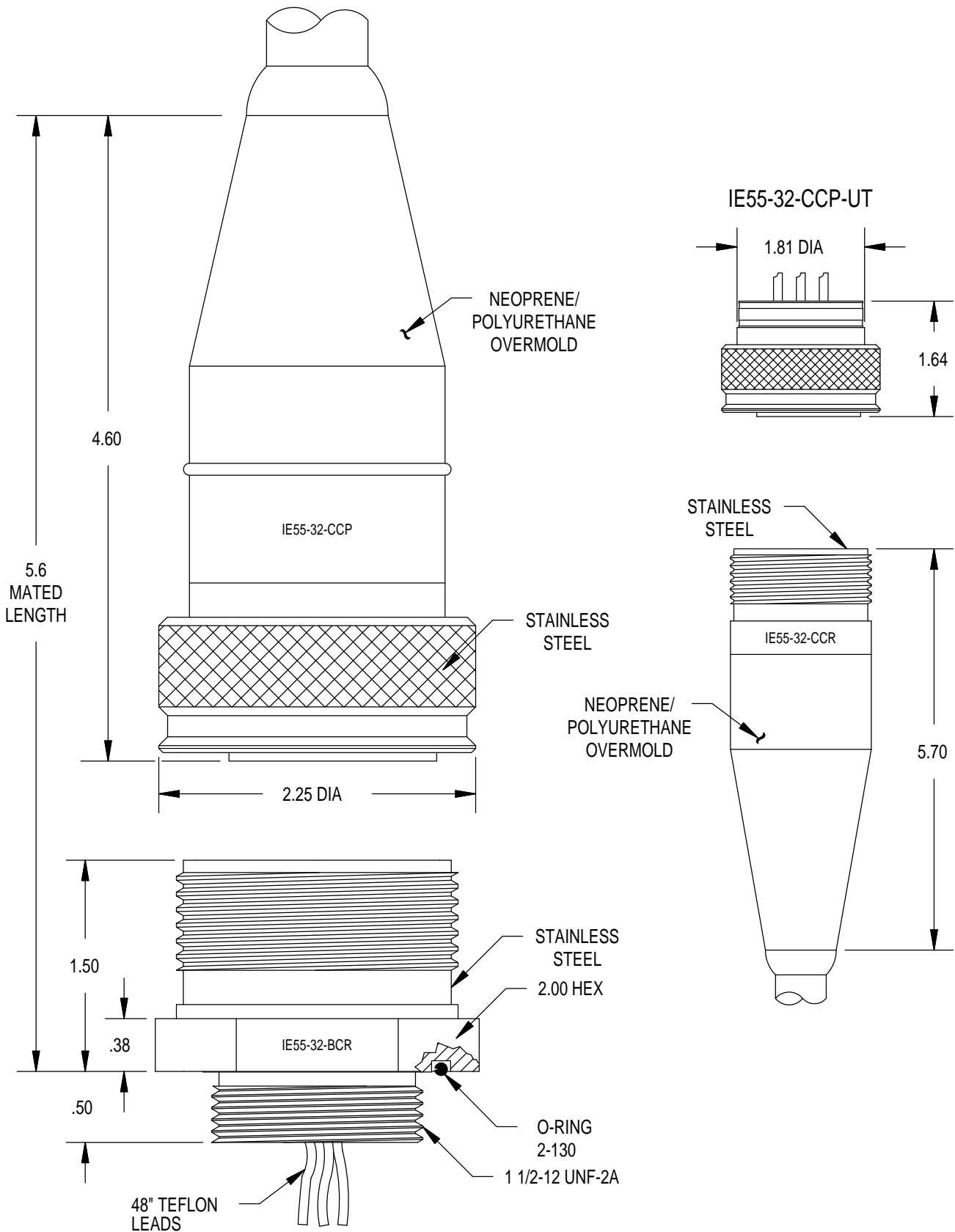
IE55 RUBBER MOLDED
METAL SHELL SERIES

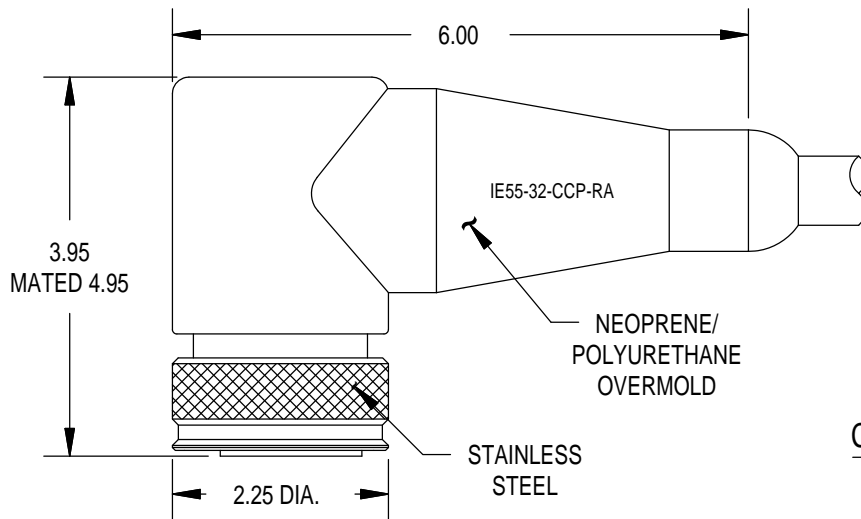


IE55-24

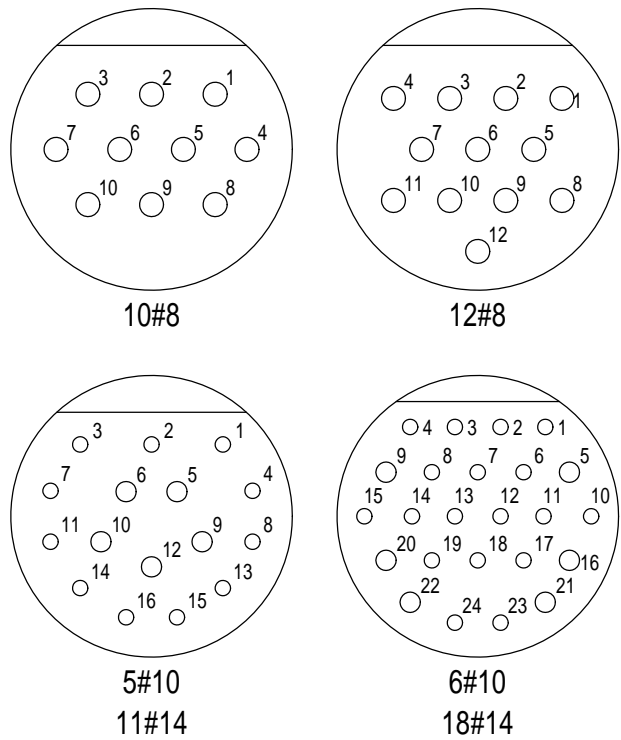
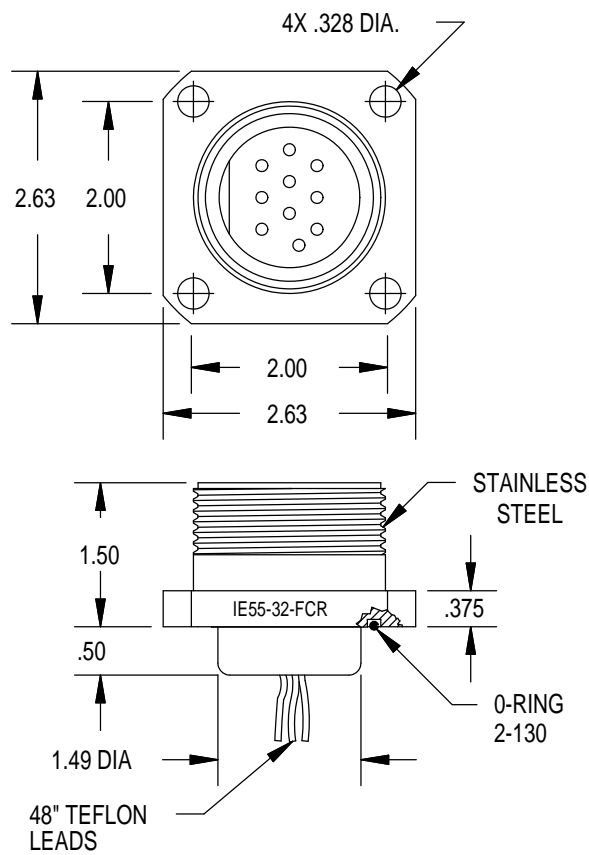
IE55 RUBBER MOLDED METAL SHELL SERIES







**CONTACT
CONFIGURATION**
(BCR FACE VIEWS)



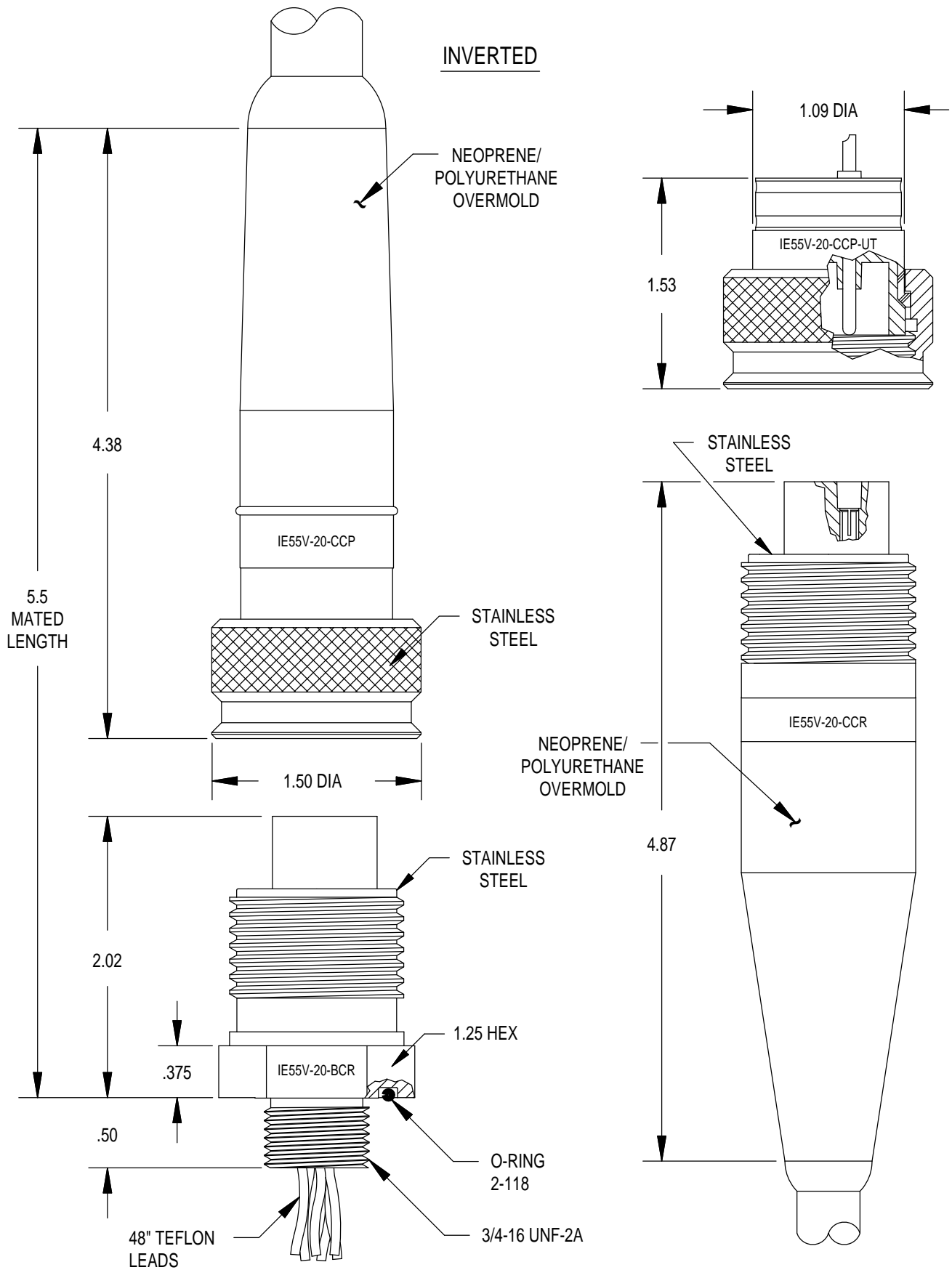
| | |
|-------------------------------|--------------------------|
| MATED PRESSURE RATING (psi) | 10,000 |
| MOUNTING TORQUE FOR BCR | not to exceed 335 in lbs |
| DUMMY PLUG FOR BCR, FCR, CCR | IE55-32 *-SCP |
| DUMMY PLUG FOR CCP | IE55-32 *-SCR |
| * Specify number of contacts. | |

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|--------------------------|--|
| DESCRIPTION AND MATERIAL | <ul style="list-style-type: none">• Body and engaging nut are 316 Stainless Steel, passivated per QQ-P-35 Type VI.• To 10,000 PSI in mated condition.• Bulkhead connector design open face pressure rated to 5,000 PSI.• Contacts gold plated per MIL-G-45204.• Engaging nuts have Acme threads for rugged applications and a quick connection.• Working voltage - 600 VDC (Contact factory for high voltage applications.)• Bulkhead has sockets, cable connector plug has pins. |
| CABLE | <ul style="list-style-type: none">• CCP, CCP-R/A and CCR are molded on standard 24" 16 AWG SO cable.• Other cable options available at customer's request.• BCR/FCR on standard 48" teflon leads, Type E per MIL 16878/4 16 AWG.• Un-Terminated versions of CCP available. |
| USES | <ul style="list-style-type: none">• Heavy Duty applications.• Hazardous environment.• Power Transmission.• Signal Telemetry.• ROV applications. |
| GUIDELINES | <ul style="list-style-type: none">• All mounting and sealing surfaces require a 32 finish.• Lubricate mating surfaces with 3M Silicone Lubricant or equivalent, DO NOT grease! Connectors must be lubricated on a regular basis.• Lubricate o-rings with Dow Corning #111 Valve Lubricant or equivalent.• Use Dust Caps and keep connectors clean to prevent damage in storage and service.• Keep o-ring grooves clean and avoid cuts, nicks and tears on rubber surfaces.• Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time.• Clean plugs and receptacles with soap and fresh water. Rinse out with alcohol, allowing connector to air dry.• Replace o-rings when re-using connectors. |

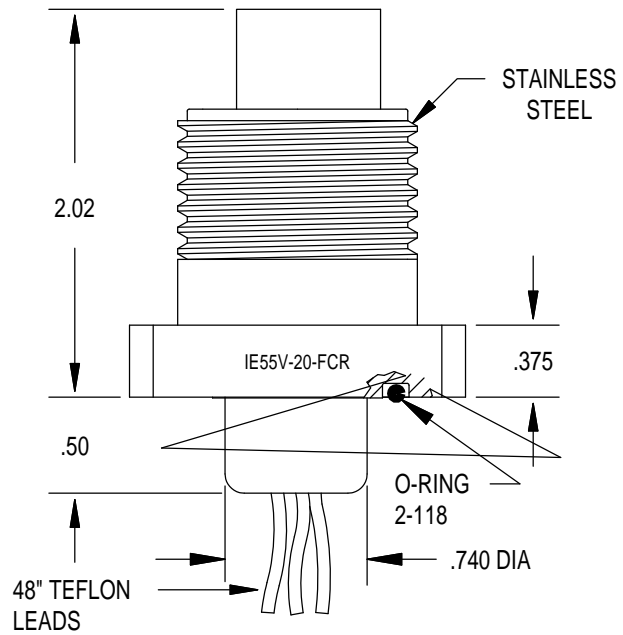
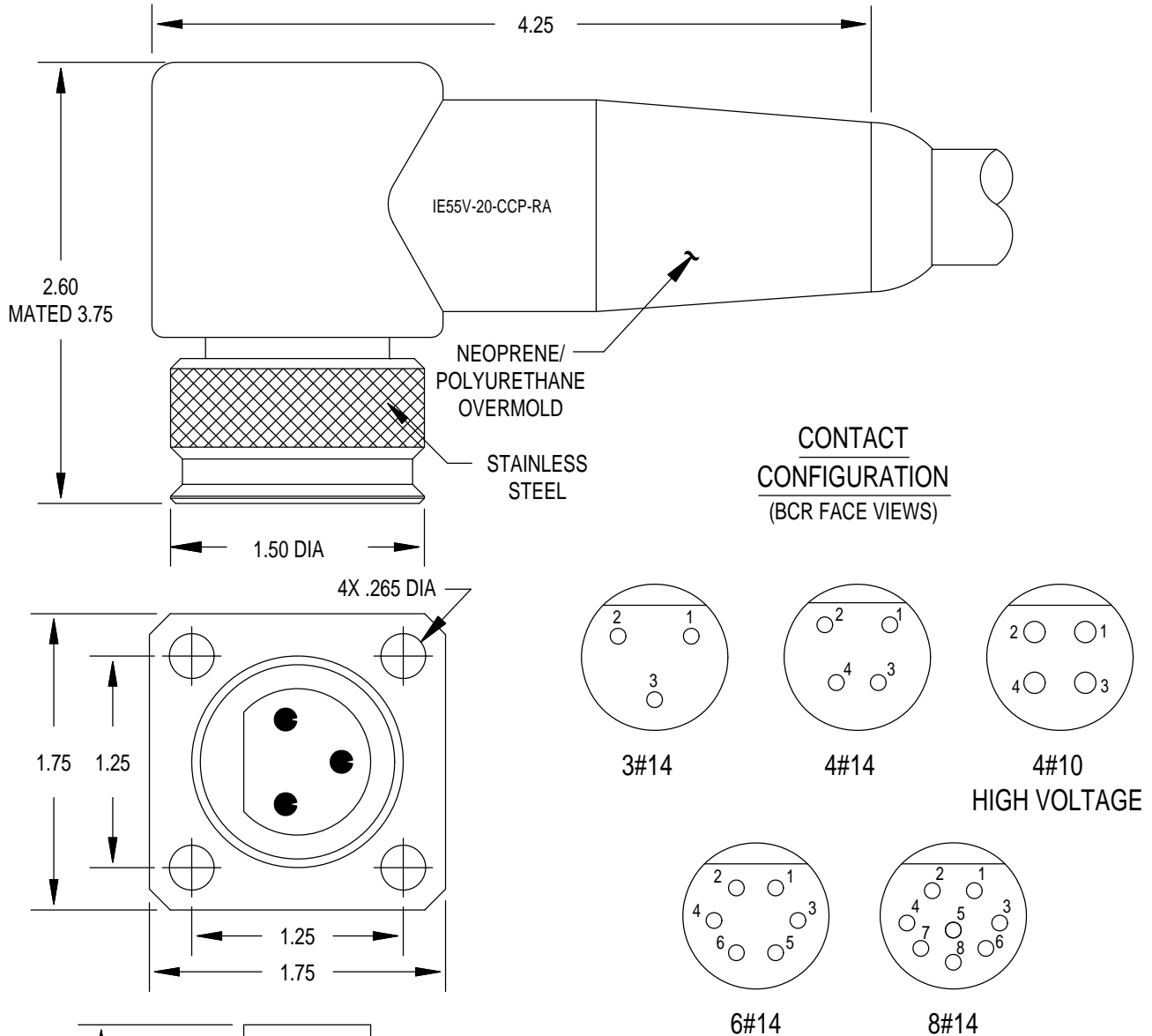
IE55V-20

IE55V INVERTED RUBBER MOLDED METAL SHELL SERIES



IE55V-20

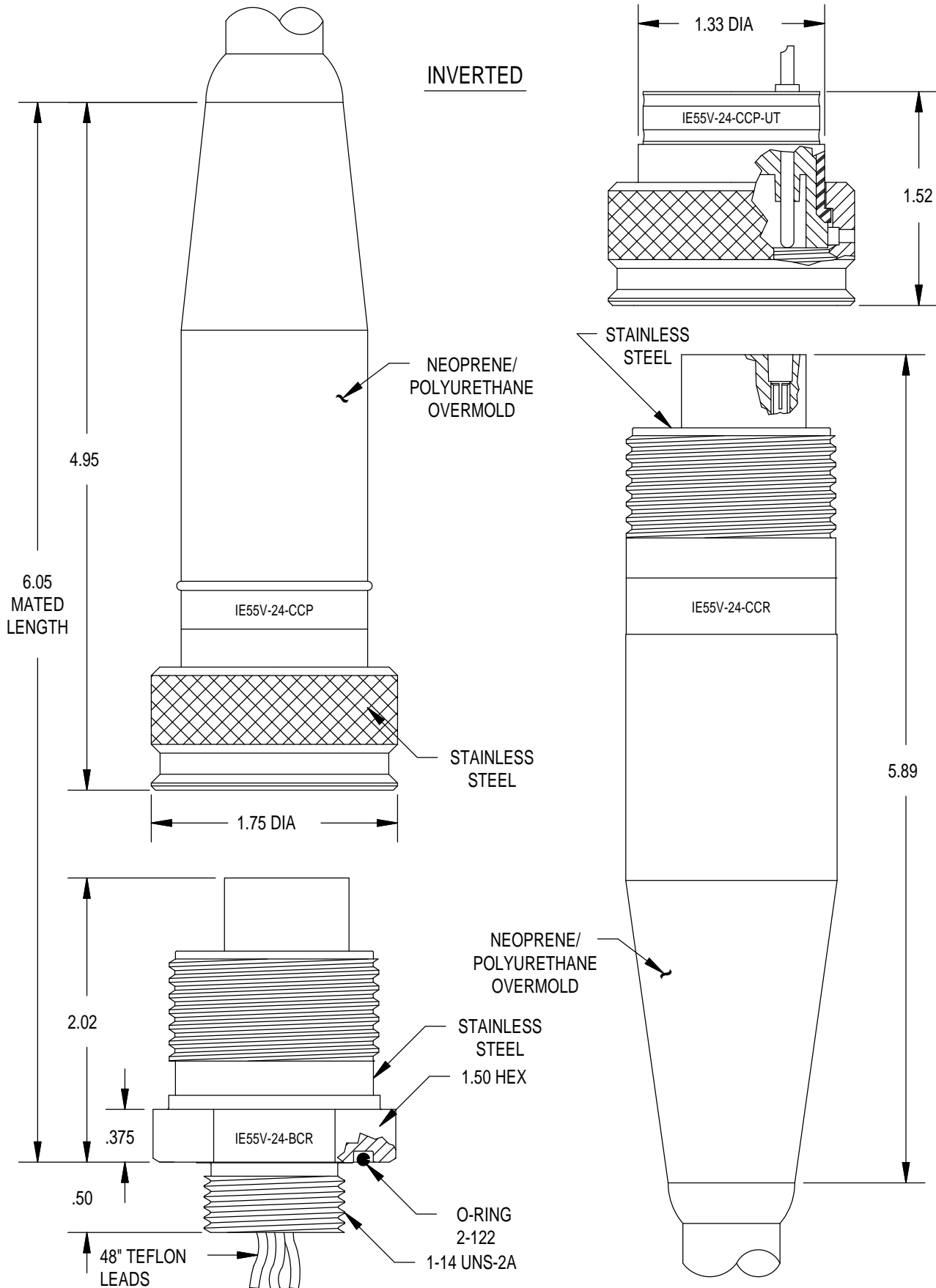
IE55V INVERTED RUBBER MOLDED METAL SHELL SERIES



| | |
|-------------------------------|--------------------------|
| MATED PRESSURE RATING (psi) | 10,000 |
| MOUNTING TORQUE FOR BCR | not to exceed 165 in lbs |
| DUMMY PLUG FOR BCR, FCR, CCR | IE55V-20 *-SCP |
| DUMMY PLUG FOR CCP | IE55V-20 *-SCR |
| * Specify number of contacts. | |

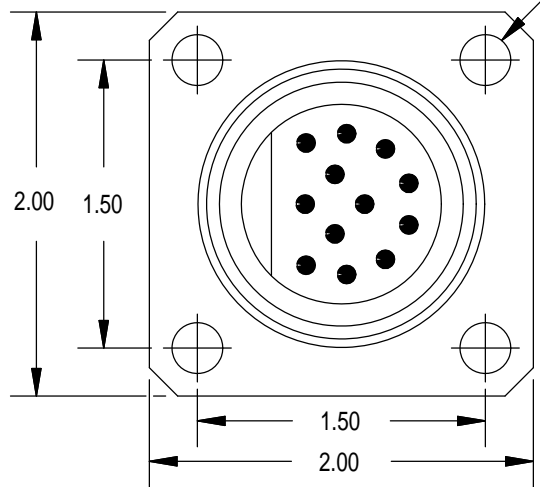
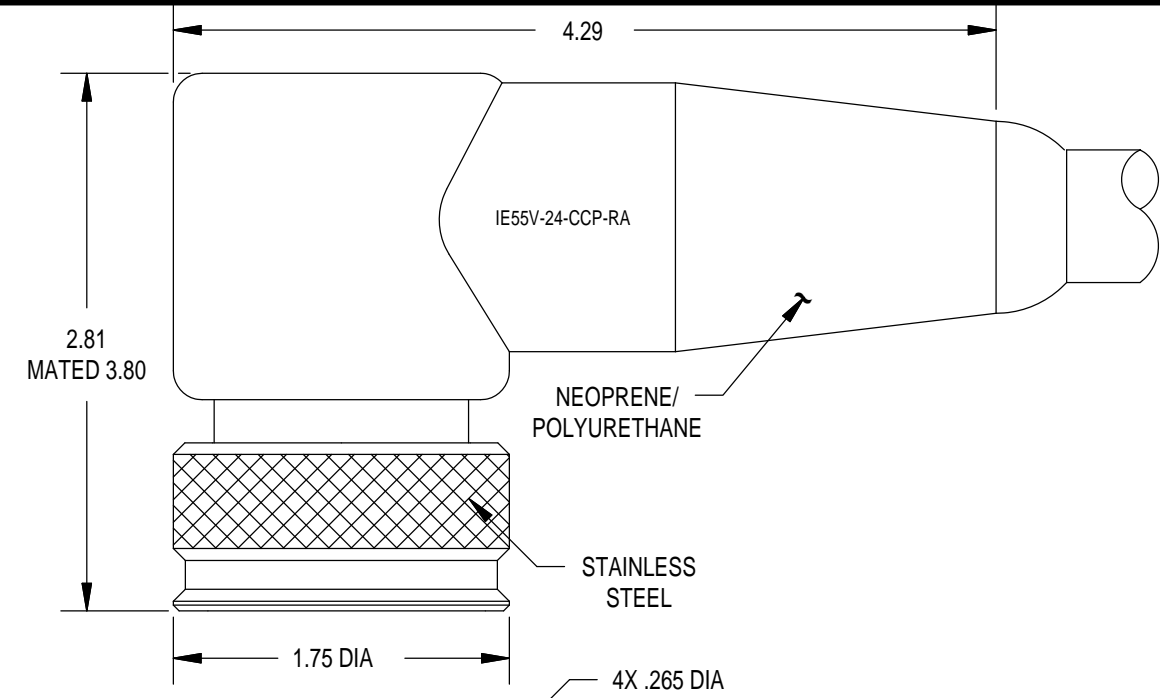
IE55V-24

IE55V INVERTED RUBBER MOLDED METAL SHELL SERIES

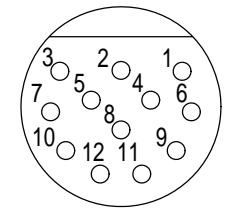


IE55V-24

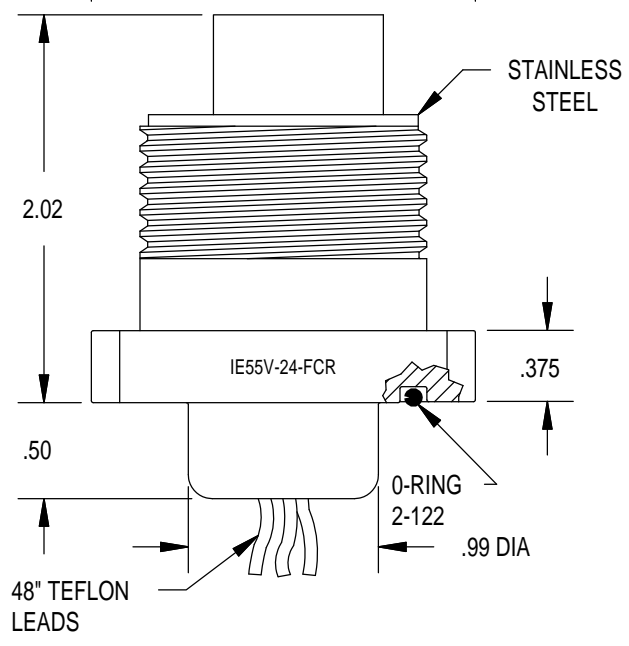
IE55V INVERTED RUBBER MOLDED METAL SHELL SERIES



CONTACT CONFIGURATION (BCR FACE VIEW)



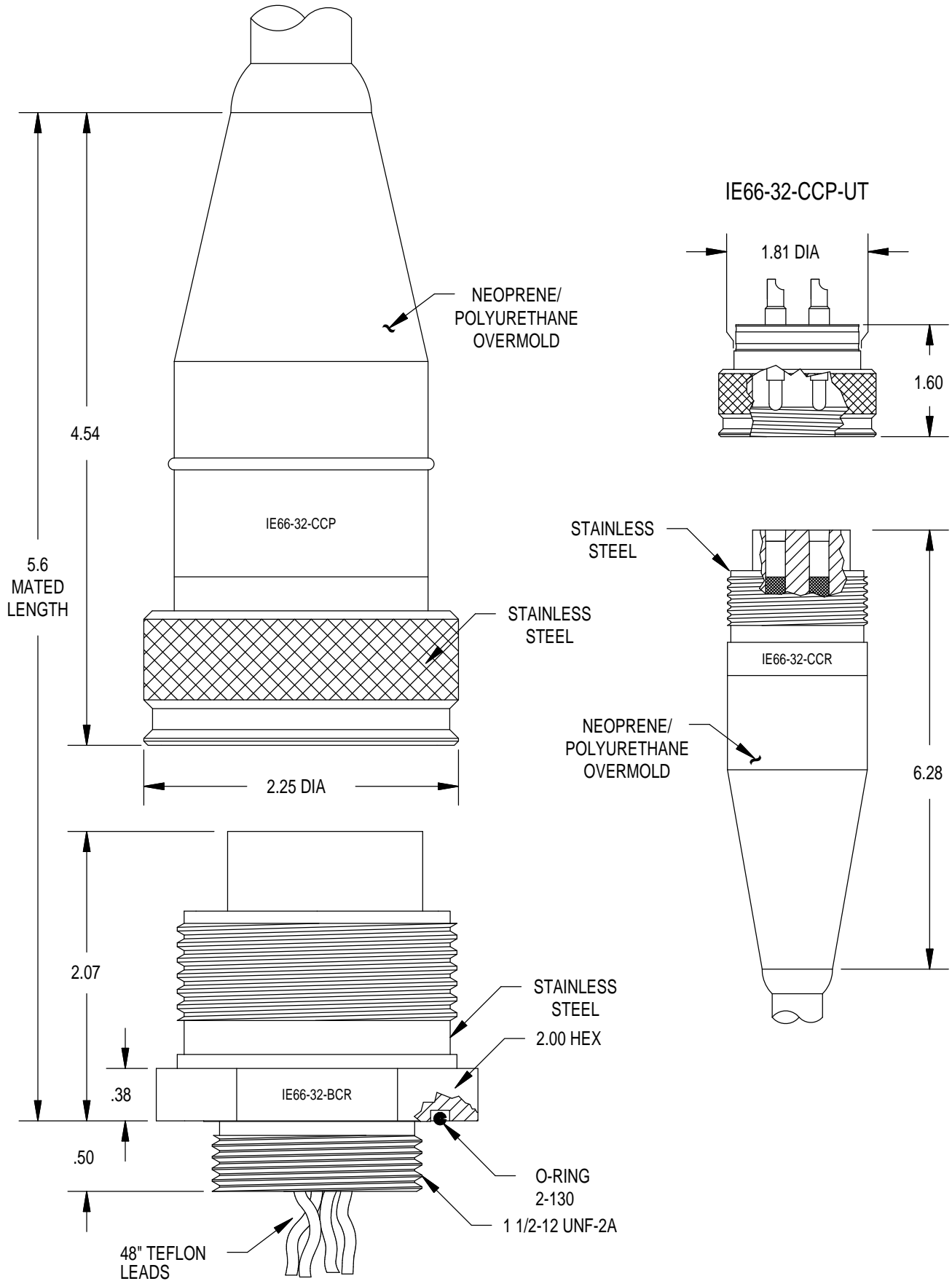
12#14

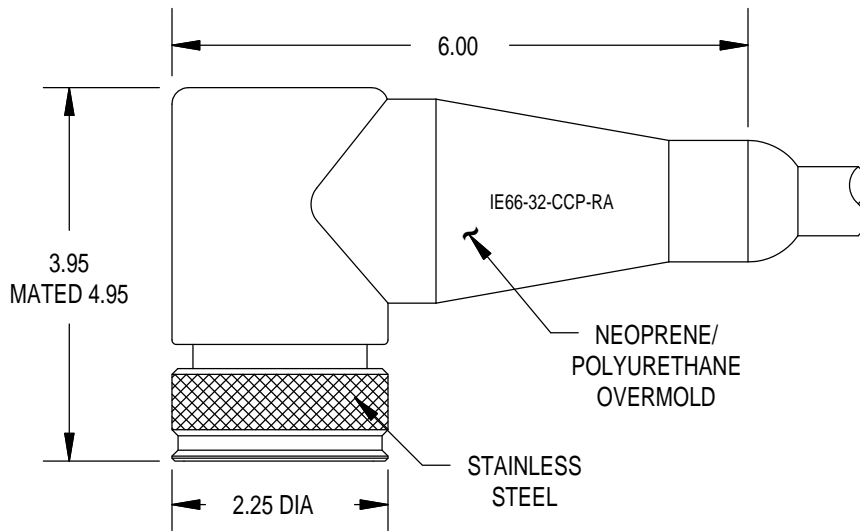


| | |
|------------------------------|--------------------------|
| MATED PRESSURE RATING (psi) | 10,000 |
| MOUNTING TORQUE FOR BCR | not to exceed 225 in lbs |
| DUMMY PLUG FOR BCR, FCR, CCR | IE55V-2412-SCP |
| DUMMY PLUG FOR CCP | IE55V-2412-SCR |

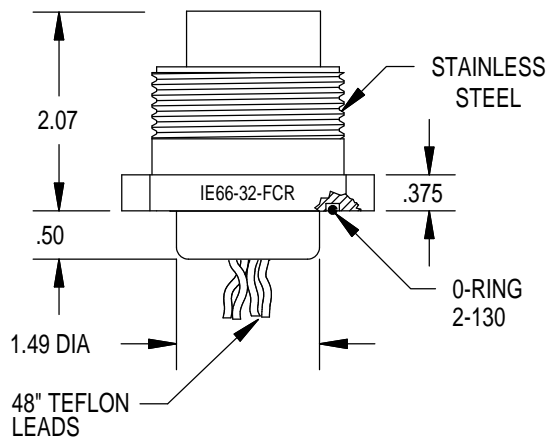
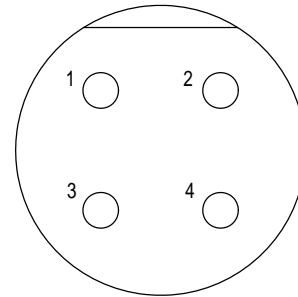
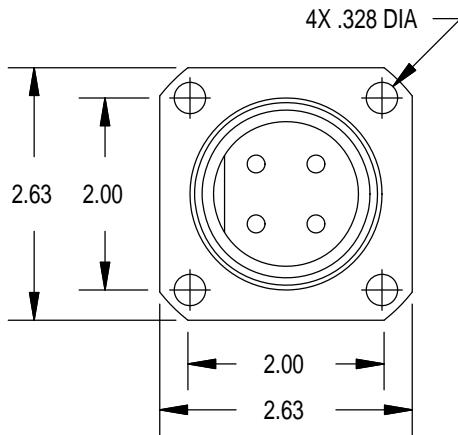
IE66-32

IE66 RUBBER MOLDED
METAL SHELL SERIES





**CONTACT
CONFIGURATION**
(BCR FACE VIEWS)



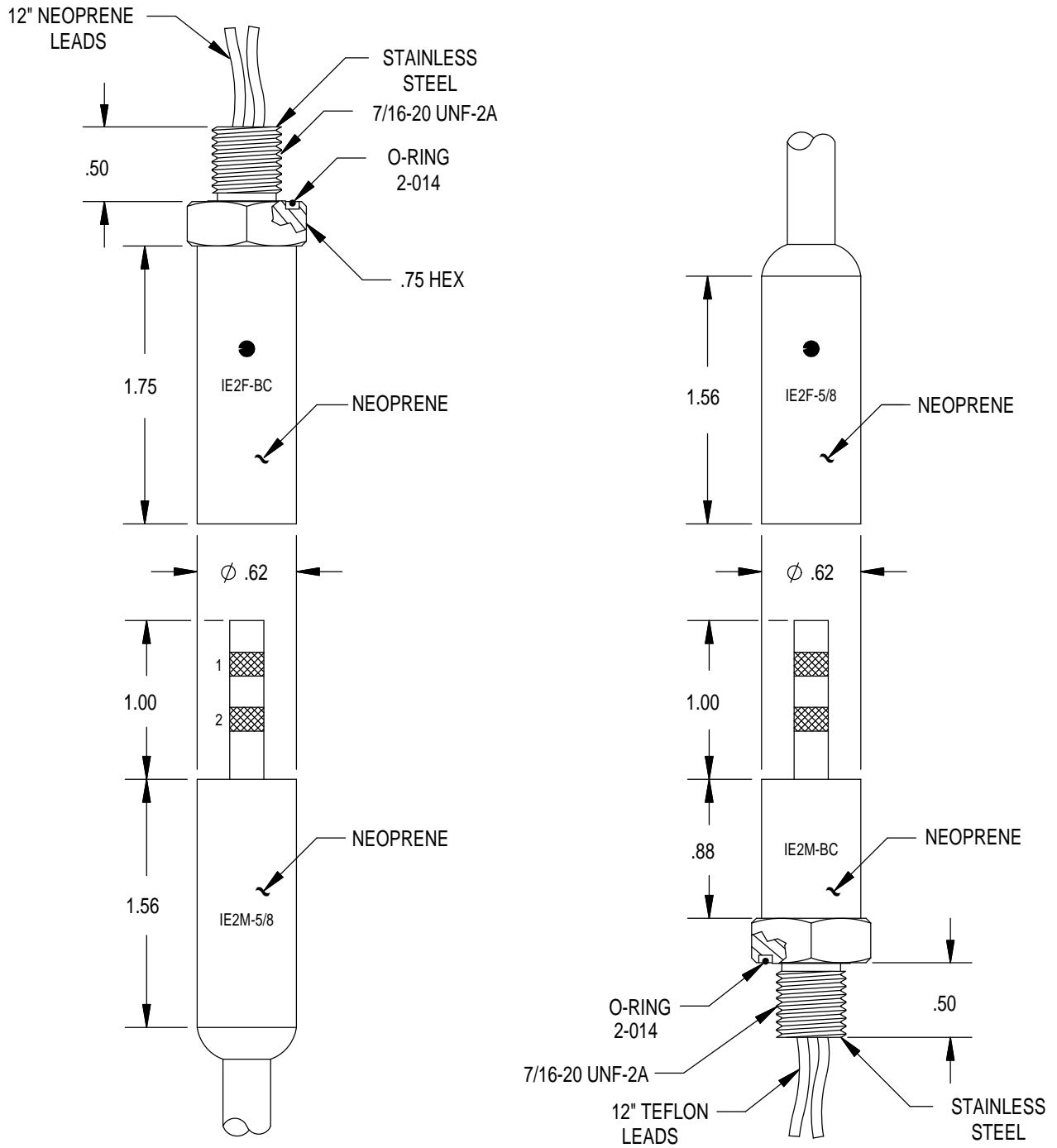
| | |
|------------------------------|--------------------------|
| MATED PRESSURE RATING (psi) | 10,000 |
| MOUNTING TORQUE FOR BCR | not to exceed 335 in lbs |
| DUMMY PLUG FOR BCR, FCR, CCR | IE66-3204-SCP |
| DUMMY PLUG FOR CCP | IE66-3204-SCR |

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| | |
|--------------------------|--|
| DESCRIPTION AND MATERIAL | <ul style="list-style-type: none">• Molded neoprene with improved sealing ability.• Two to eight contacts.• Up to 300 VDC, 7 AMPS.• Rated to 10,000 psi, contact factory for higher rating.• Bulkhead connector design open face pressure rated to 5000 PSI.• O-rings molded in female connector. |
| CABLE | <ul style="list-style-type: none">• Connectors in this series are molded on a 24" length of 18 AWG SO cable (2 contact on SJO) unless otherwise specified.• Bulkhead connectors have 12" teflon leads, Type E per MIL 16878/4 18 AWG, or 12" Belden 34918 leads (Neoprene jacket). |
| USES | <ul style="list-style-type: none">• Mates with other manufacturers connectors of same design.• Permits underwater plugging and unplugging with power off.• Light to heavy duty applications.• Hazardous environments. |
| GUIDELINES | <ul style="list-style-type: none">• All mounting surfaces require a 32 finish.• Lubricate male pins liberally with Dow Corning #111 Valve Lubricant or equivalent and apply a small amount in each hole of female socket. Connectors must be lubricated on a regular basis.• Lubricate o-rings with Dow Corning #111 Valve Lubricant or equivalent.• Replace o-rings when re-using connectors.• Align index pin prior to mating.• Avoid nicks and cuts around contacts as these are the sealing surfaces.• Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time.• Do not over tighten bulkhead nuts.• Do not pull on cable to disconnect.• Avoid sharp bends at cable entry to connector. |

IE2-BC

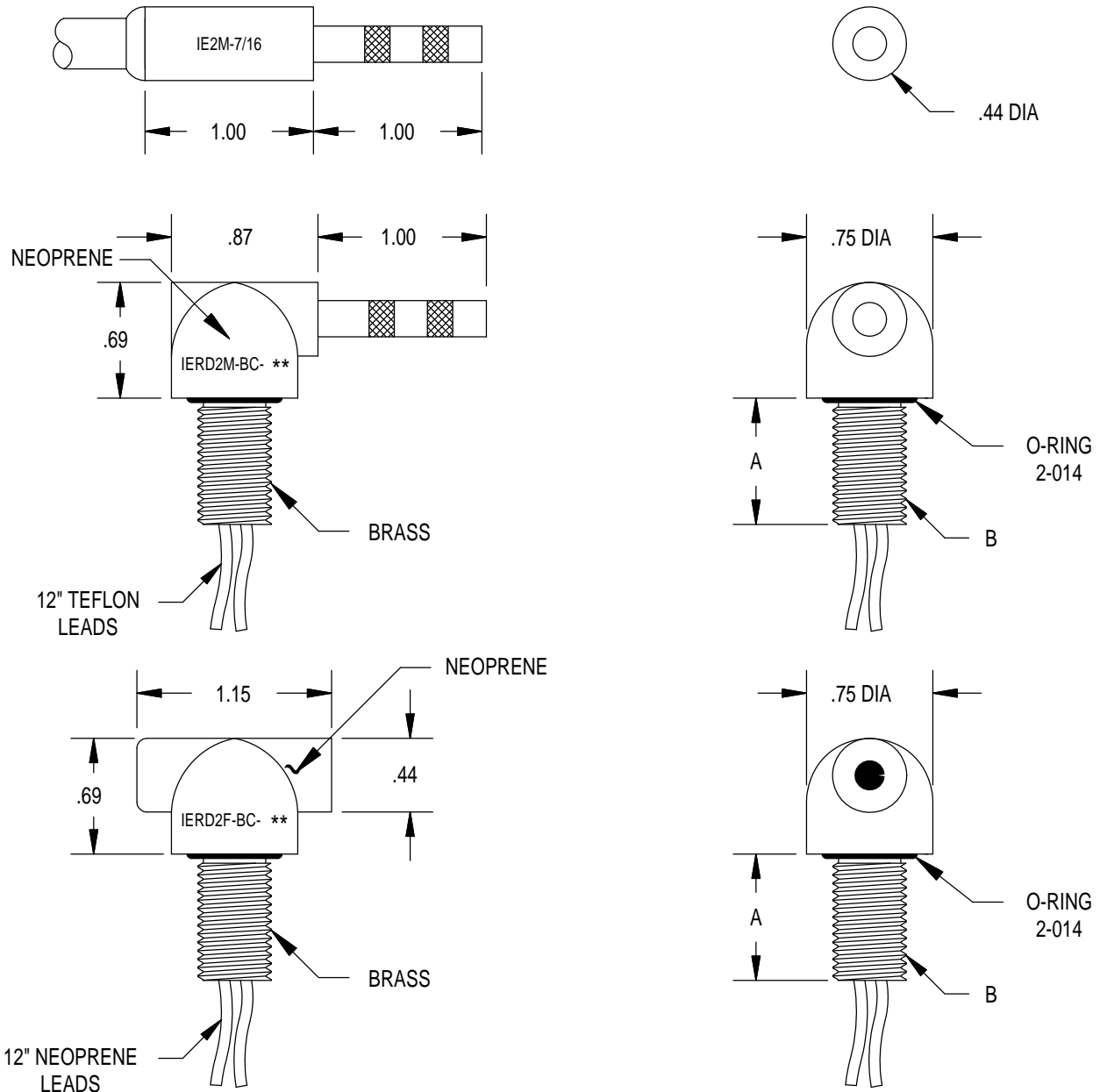
IE UNDERWATER PLUGGABLE SERIES



| | |
|--|--------------------------|
| MOUNTING TORQUE FOR BC | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR IE2M-5/8, IE2M-BC | IE2F-5/8-DO * |
| DUMMY PLUG FOR IE2F-BC, IE2F-5/8 | IE2M-5/8-DO * |
| * Dummy plugs found on Page 75 62. * Shorted dummies (DS) available upon request. | |

IERD2-BC

IE UNDERWATER
PLUGGABLE SERIES

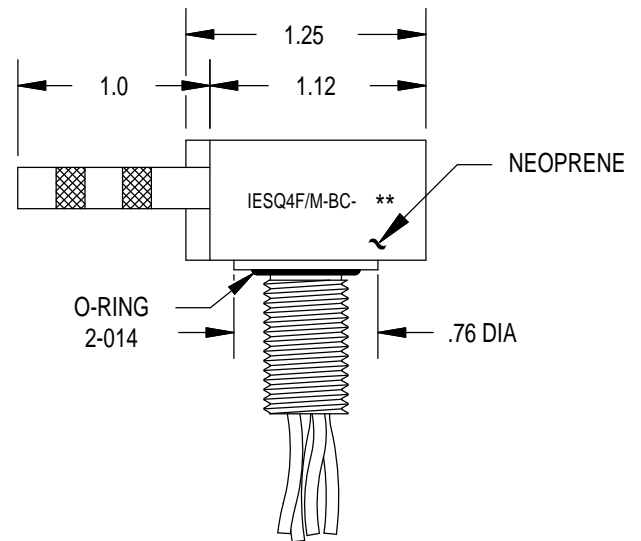
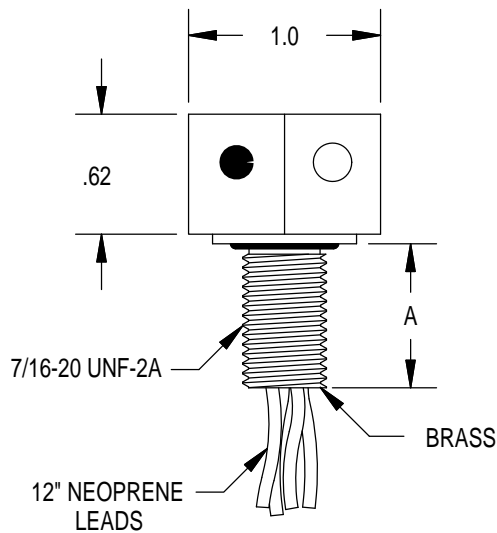
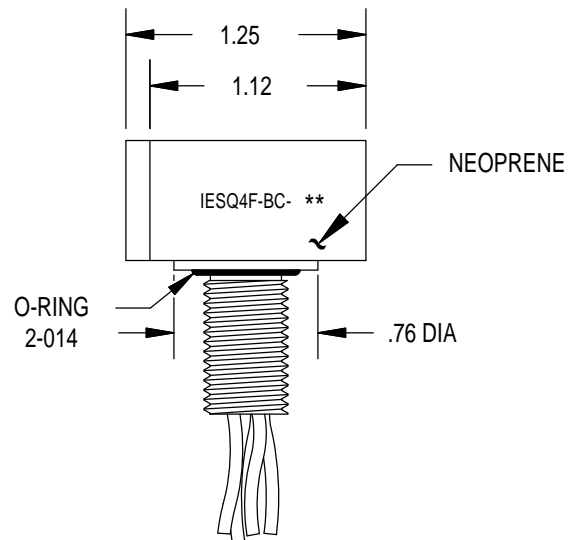
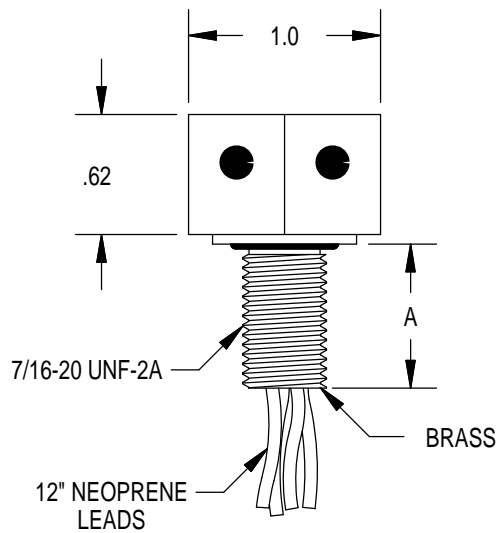
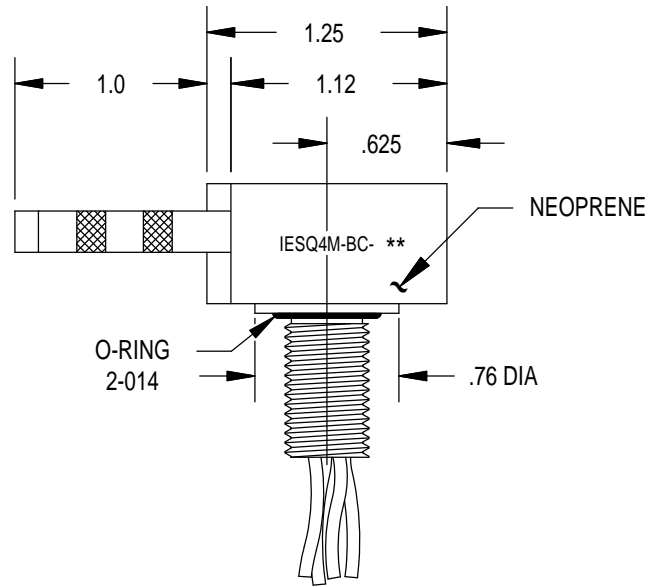
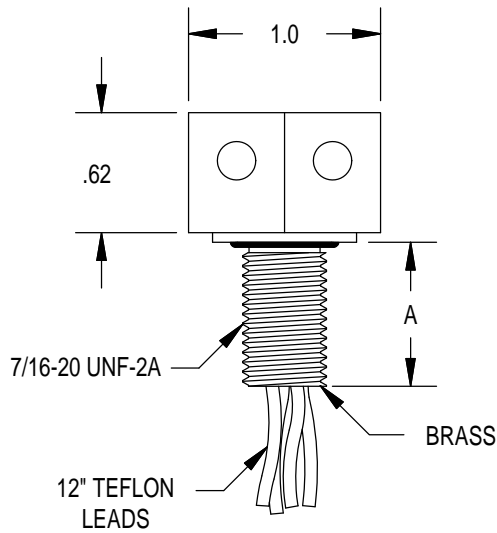


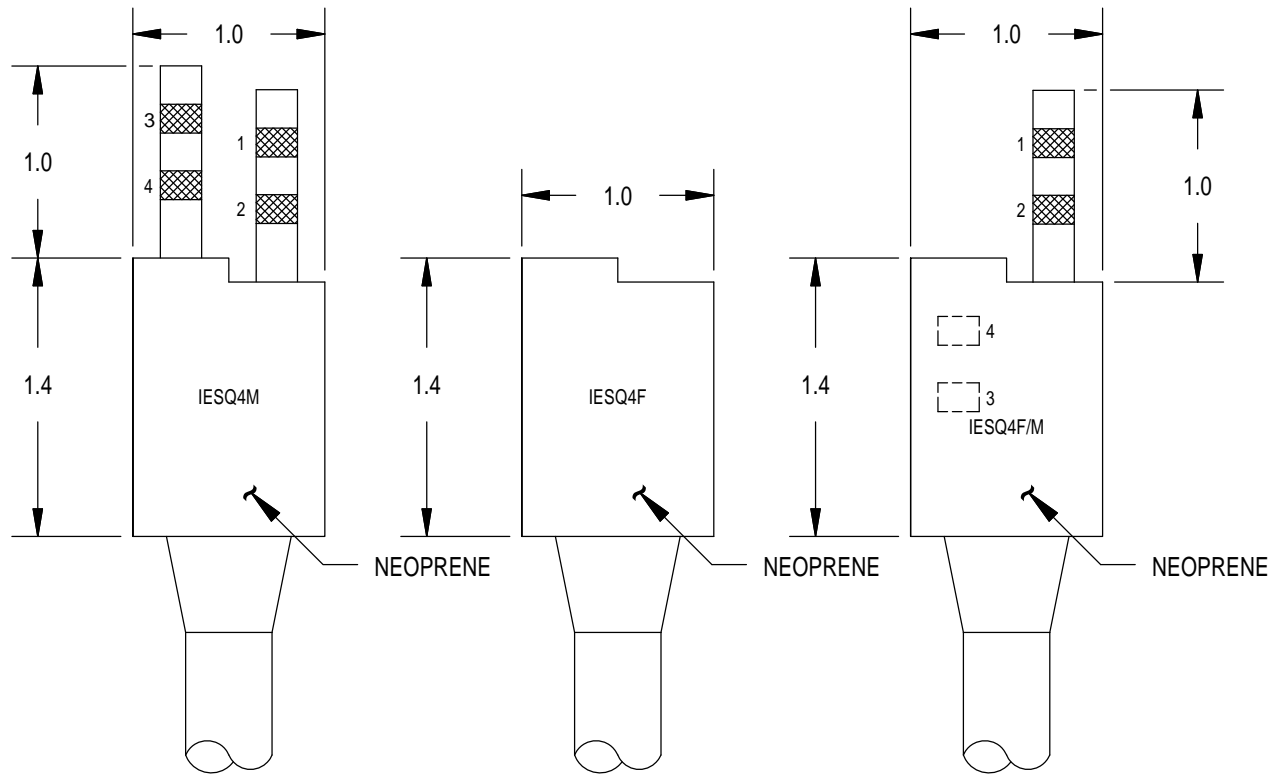
| | |
|--|--------------------------|
| MOUNTING TORQUE FOR BC | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR IERD2F-BC | IE2M-7/16-DO * |
| DUMMY PLUG FOR IERD2M-BC | IE2F-5/8 DO * |
| <p>* Dummy plugs found on Page 75 62. ** Shorted dummies (DS) available upon request. *** See chart for thread specifications. **** Specify M/F</p> | |

| PART NUMBER | B | A |
|----------------|----------------|------|
| IERD2****-BC-1 | 3/8-24 UNF-2A | .50 |
| IERD2****-BC-2 | 3/8-24 UNF-2A | .75 |
| IERD2****-BC-3 | 3/8-24 UNF-2A | 1.00 |
| IERD2****-BC-4 | 7/16-20 UNF-2A | .50 |
| IERD2****-BC-5 | 7/16-20 UNF-2A | .75 |
| IERD2****-BC-6 | 7/16-20 UNF-2A | 1.00 |

IESQ4-BC

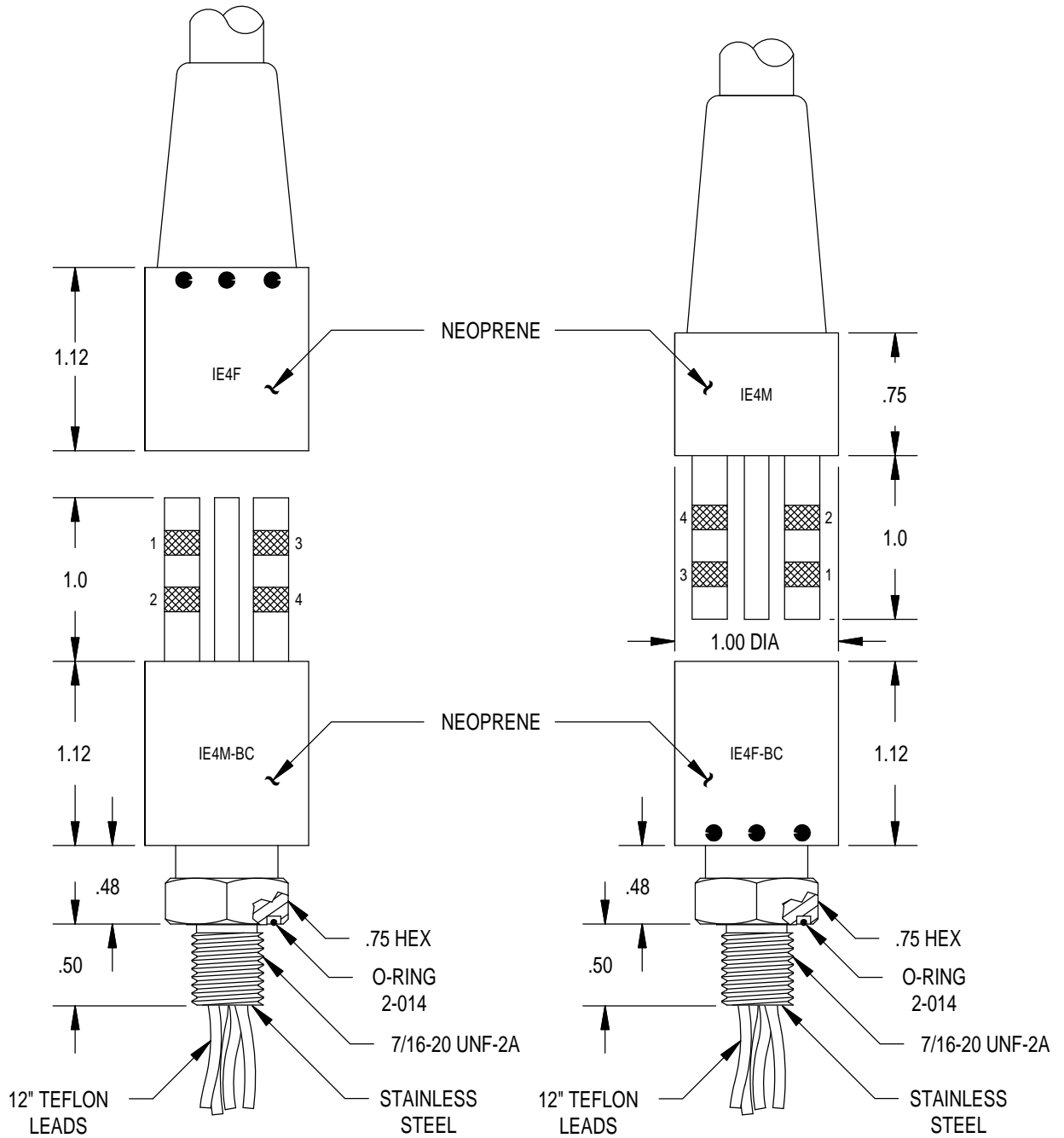
IE UNDERWATER
PLUGGABLE SERIES





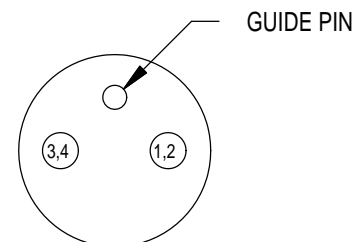
| | |
|---|--------------------------|
| MOUNTING TORQUE FOR BC | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 5,000 |
| DUMMY PLUG FOR IESQ4M-BC, IESQ4M | IESQ4F-DO * |
| DUMMY PLUG FOR IESQ4F-BC, IE2F | IESQ4M-DO * |
| DUMMY PLUG FOR IESQ4MF-BC, IESQ4F/M | IESQ4F/M-DO * |
| <p>* Dummy plugs found on Page 75 62. ** Shorted dummies available upon request. *** See chart for thread specifications. **** Specify M, F, F/M</p> | |

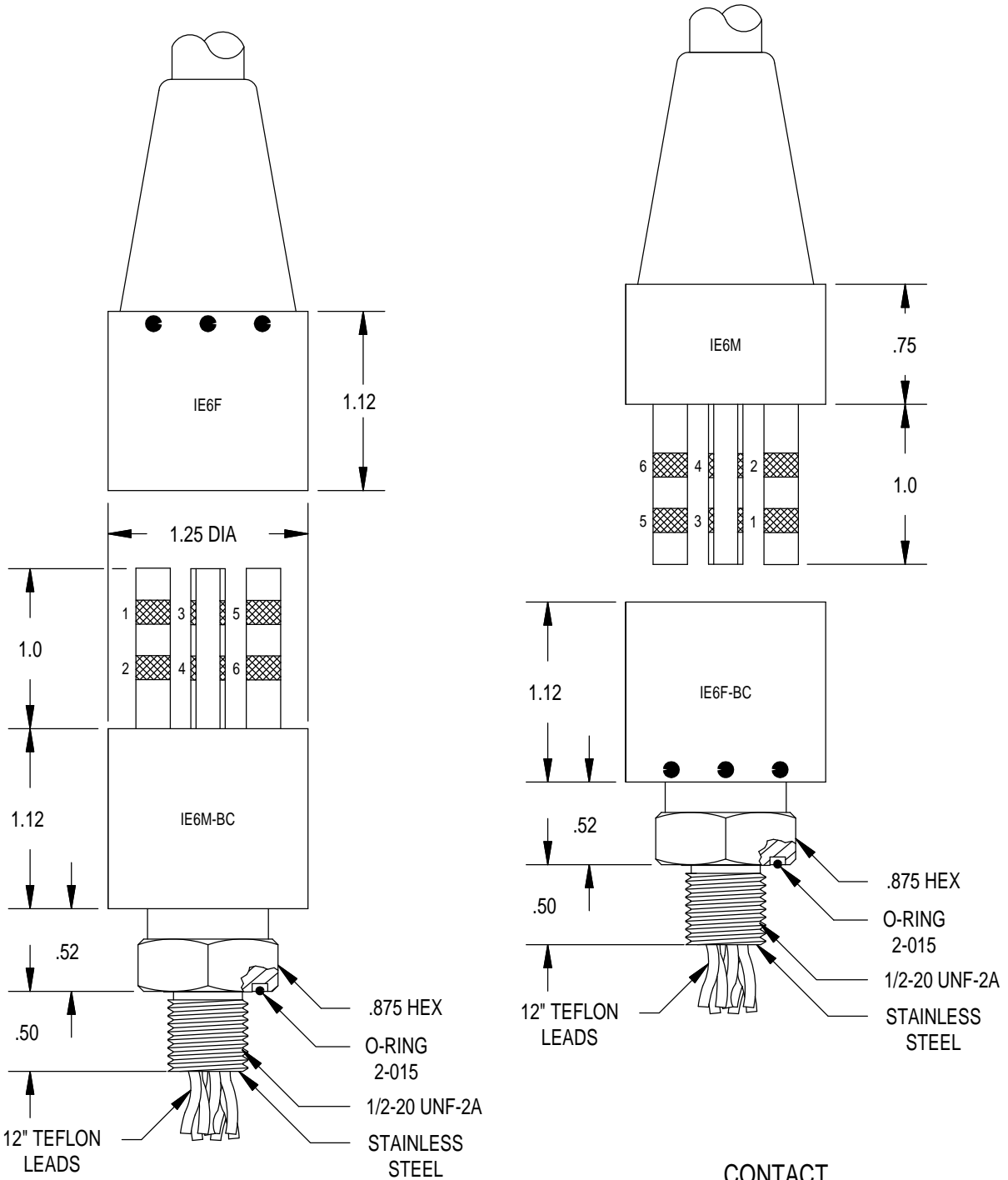
| BULKHEAD | |
|----------------|------|
| PART NUMBER | A |
| IESQ4****-BC-1 | .50 |
| IESQ4****-BC-2 | .75 |
| IESQ4****-BC-3 | 1.00 |



| | |
|---|--------------------------|
| MOUNTING TORQUE FOR BC | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR IE4M-BC, IE4M | IE4F-DO * |
| DUMMY PLUG FOR IE4F-BC, IE4F | IE4M-DO * |
| * Dummied found on Page 75 63. ** Shorted dummies (DS) available upon request. | |

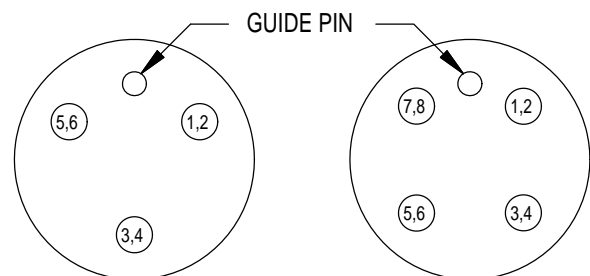
CONTACT CONFIGURATION
(IE4M FACE VIEW)

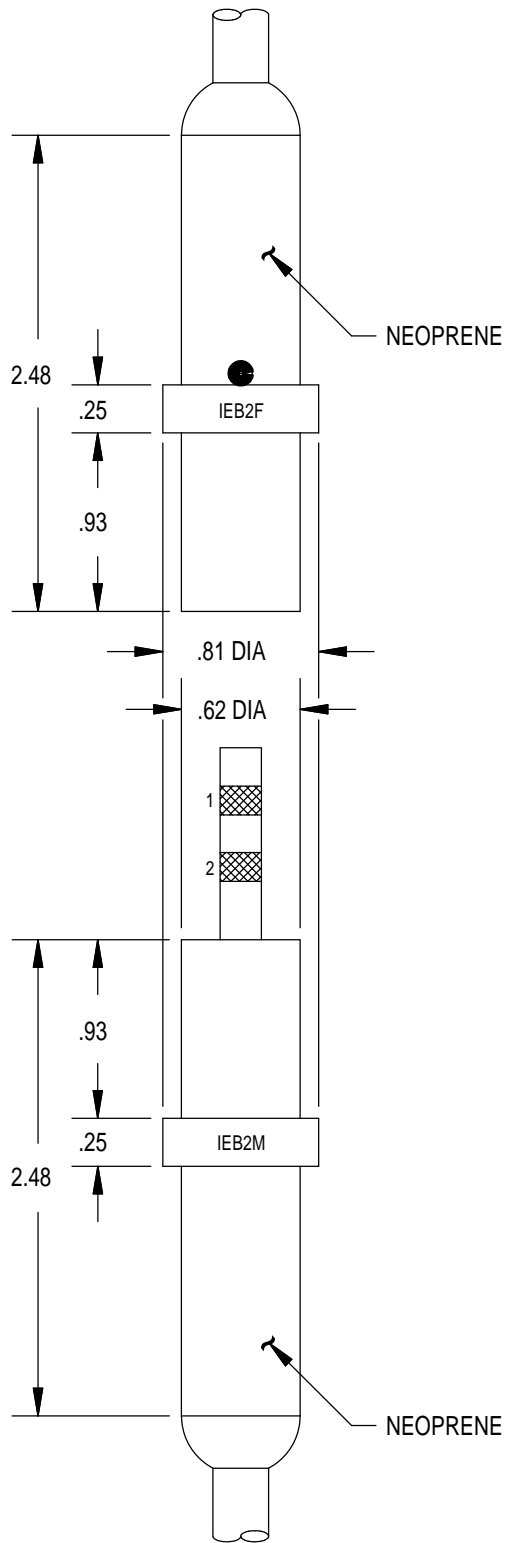




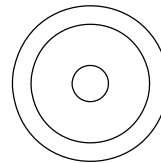
| | |
|---|--------------------------|
| MOUNTING TORQUE FOR BC | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR IE6/8M-BC, IE6/8M | IE6/8F-DO * |
| DUMMY PLUG FOR IE6/8F-BC, IE6/8F | IE6/8M-DO * |
| * Dummy plugs found on Page 75 63. ** Shorted dummies (DS) available upon request. | |

CONTACT CONFIGURATIONS
(IE6/8M FACE VIEWS)

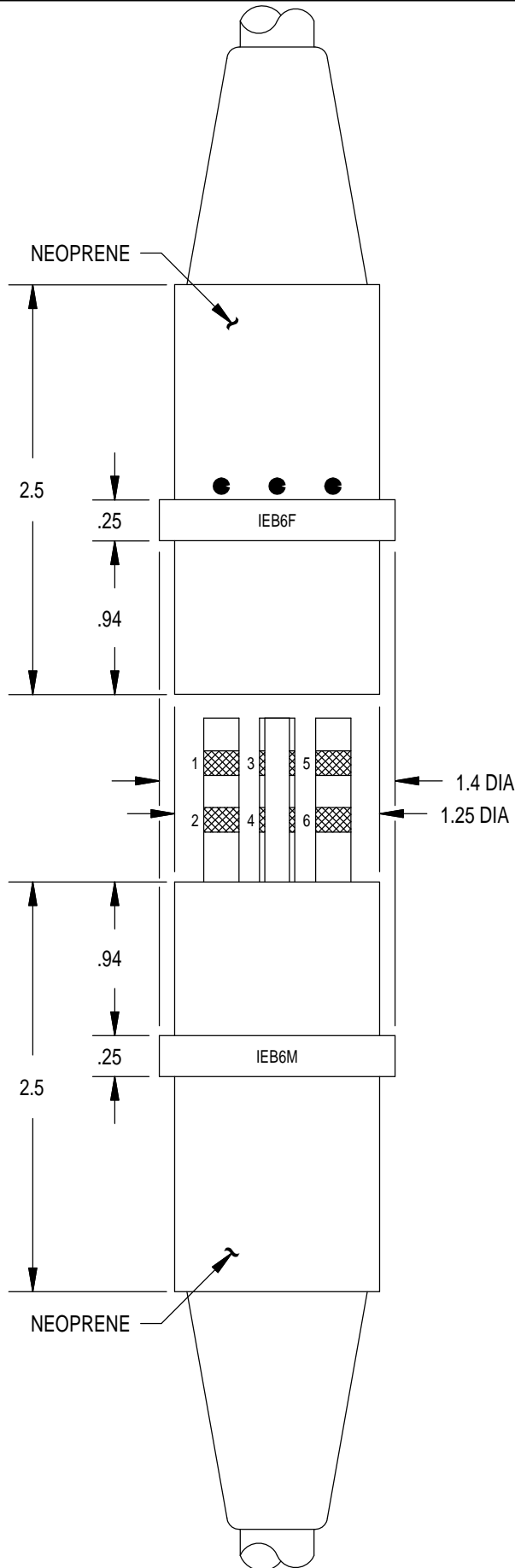




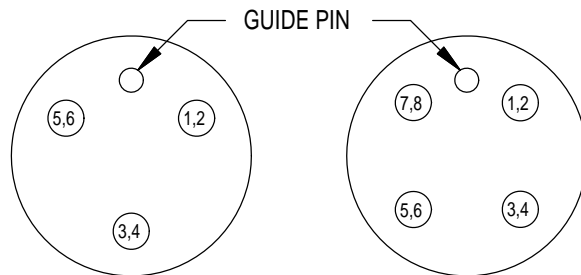
IEB2M FACE VIEW



| | |
|---|------------|
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR IEB2M | IEB2F-DO * |
| DUMMY PLUG FOR IEB2F | IEB2M-DO * |
| * Dummy plugs found on Page 75 62. ** Shorted dummies (DS) available upon request. | |



CONTACT CONFIGURATIONS
(IEB6/8M FACE VIEWS)



| | |
|--|--------------|
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR IEB6/8M | IEB6/8F-DO * |
| DUMMY PLUG FOR IEB6/8F | IEB6/8M-DO * |
| <p>* Dummy plugs found on Page 75 63. ** Shorted dummies (DS) available upon request. *** Locking Sleeves found on Page 75 61.</p> | |

DELTRIN LOCKING SLEEVES

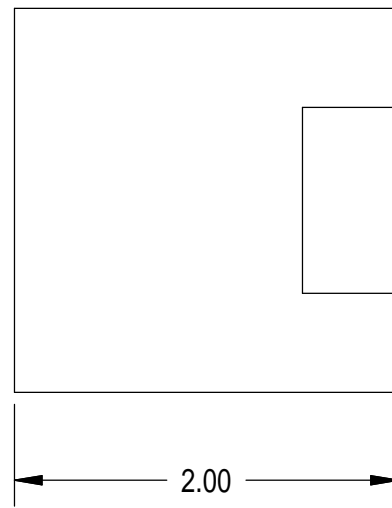
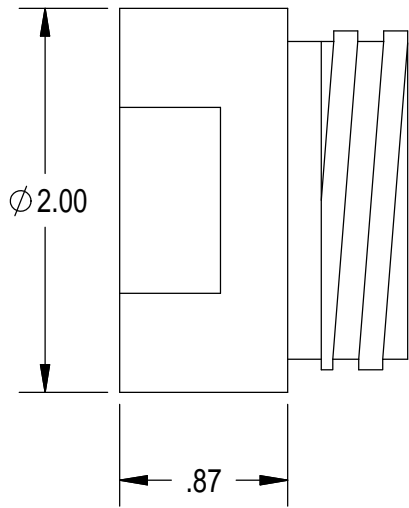
MALE

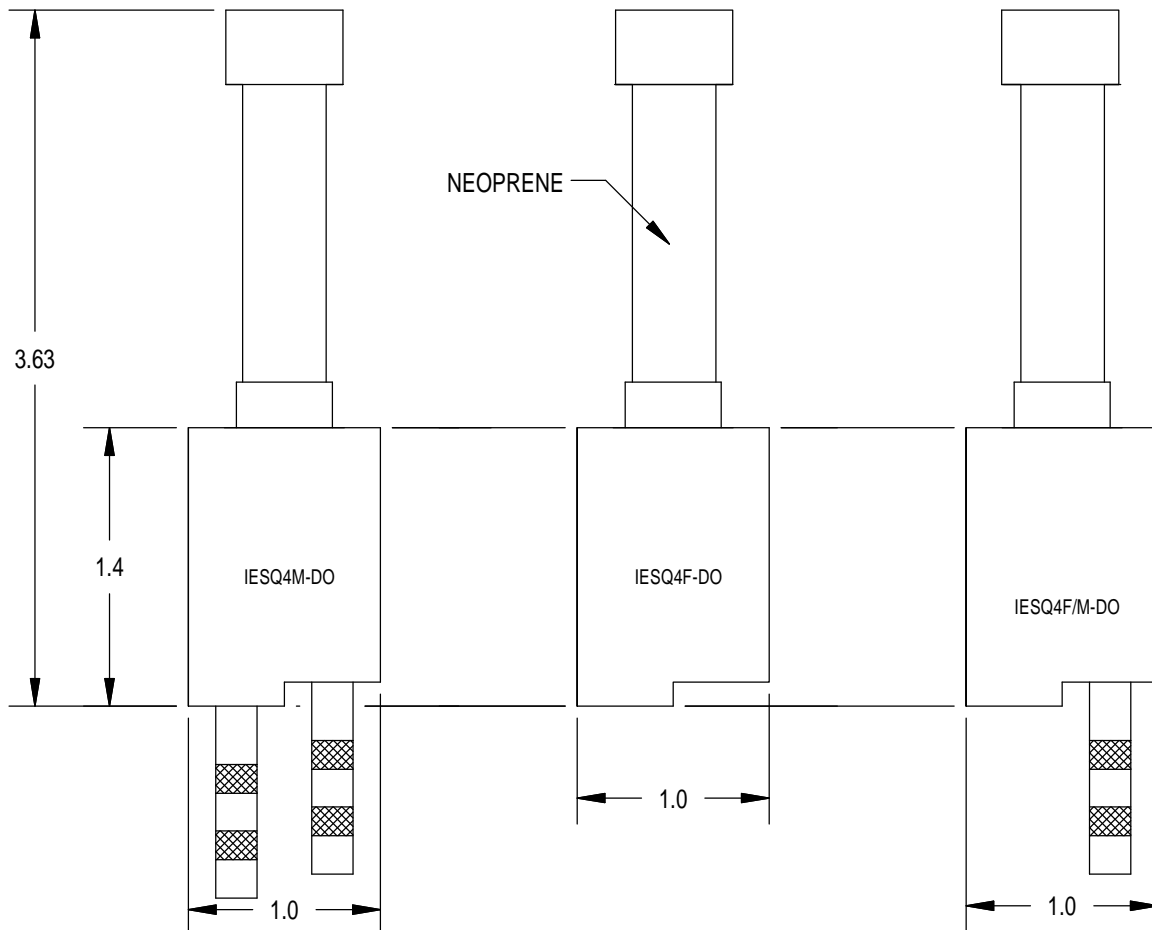
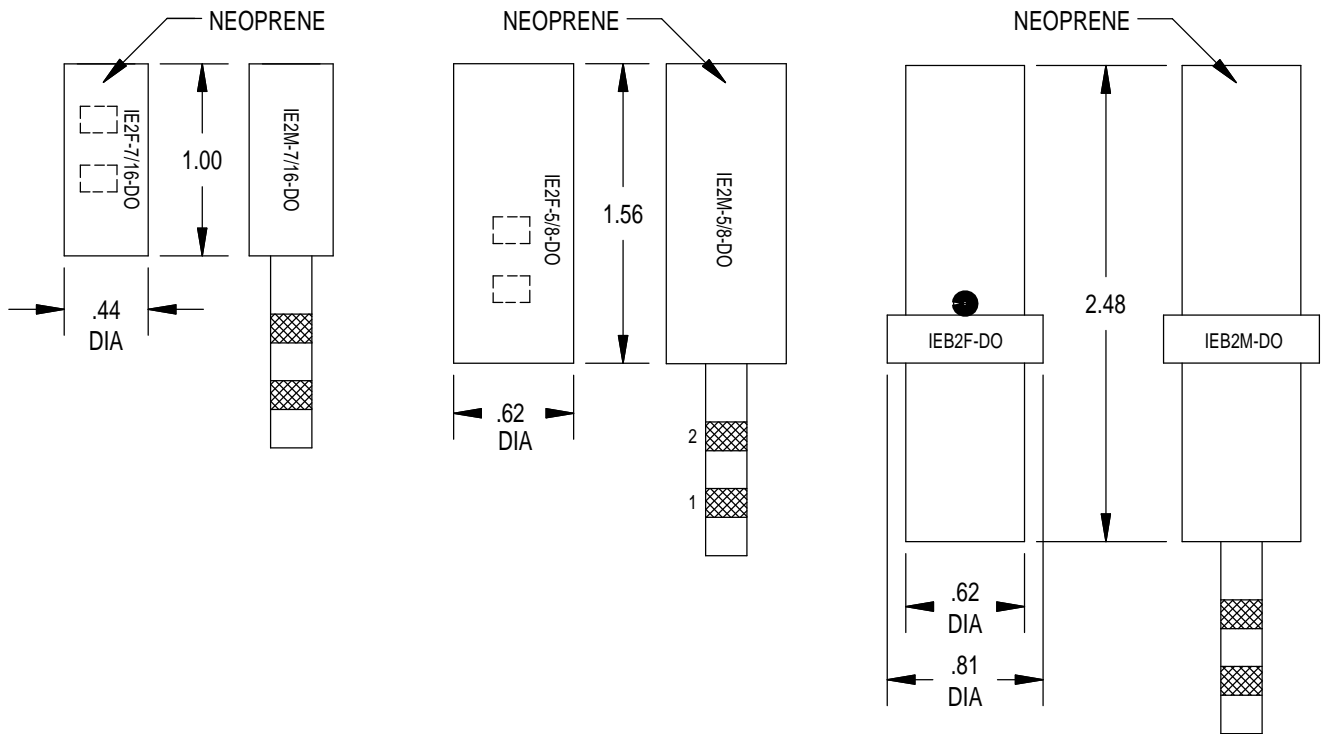
6/8 CONTACT

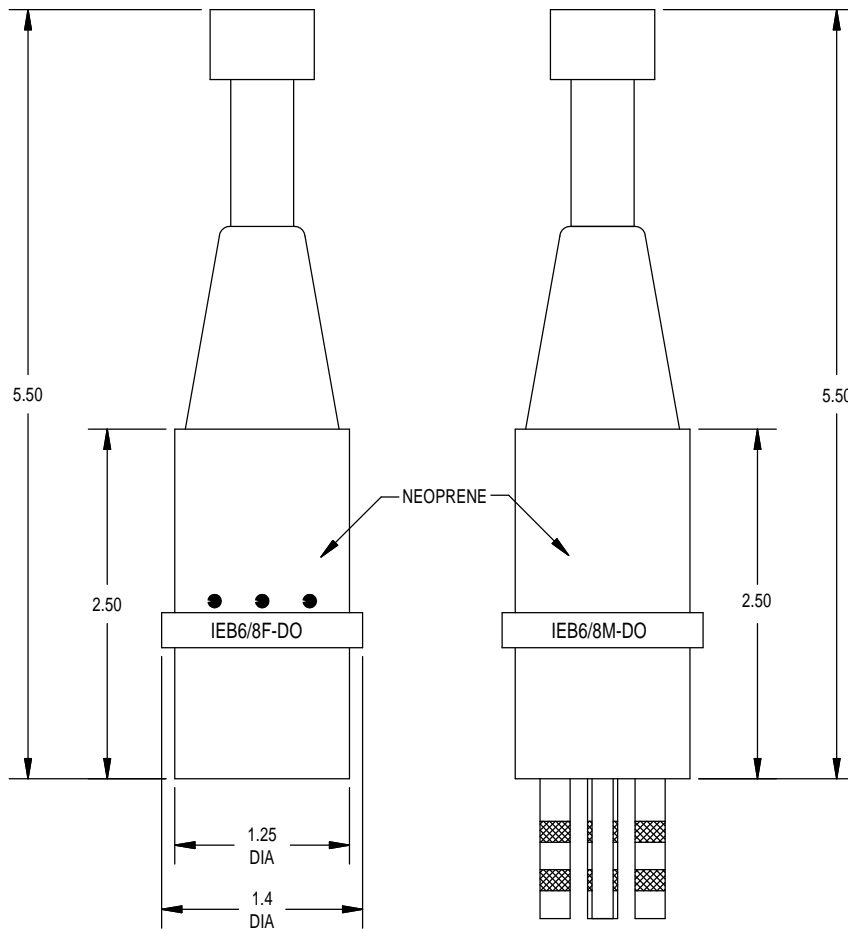
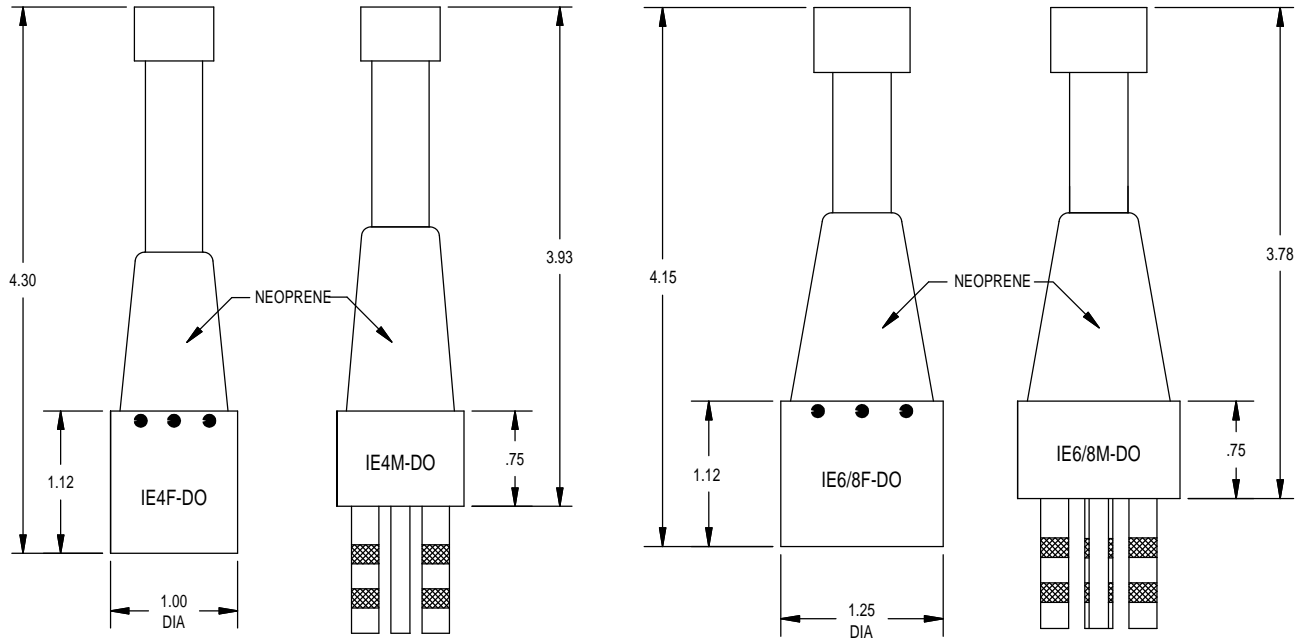
FEMALE

IEB-6/8-MLS

IEB-6/8-FLS



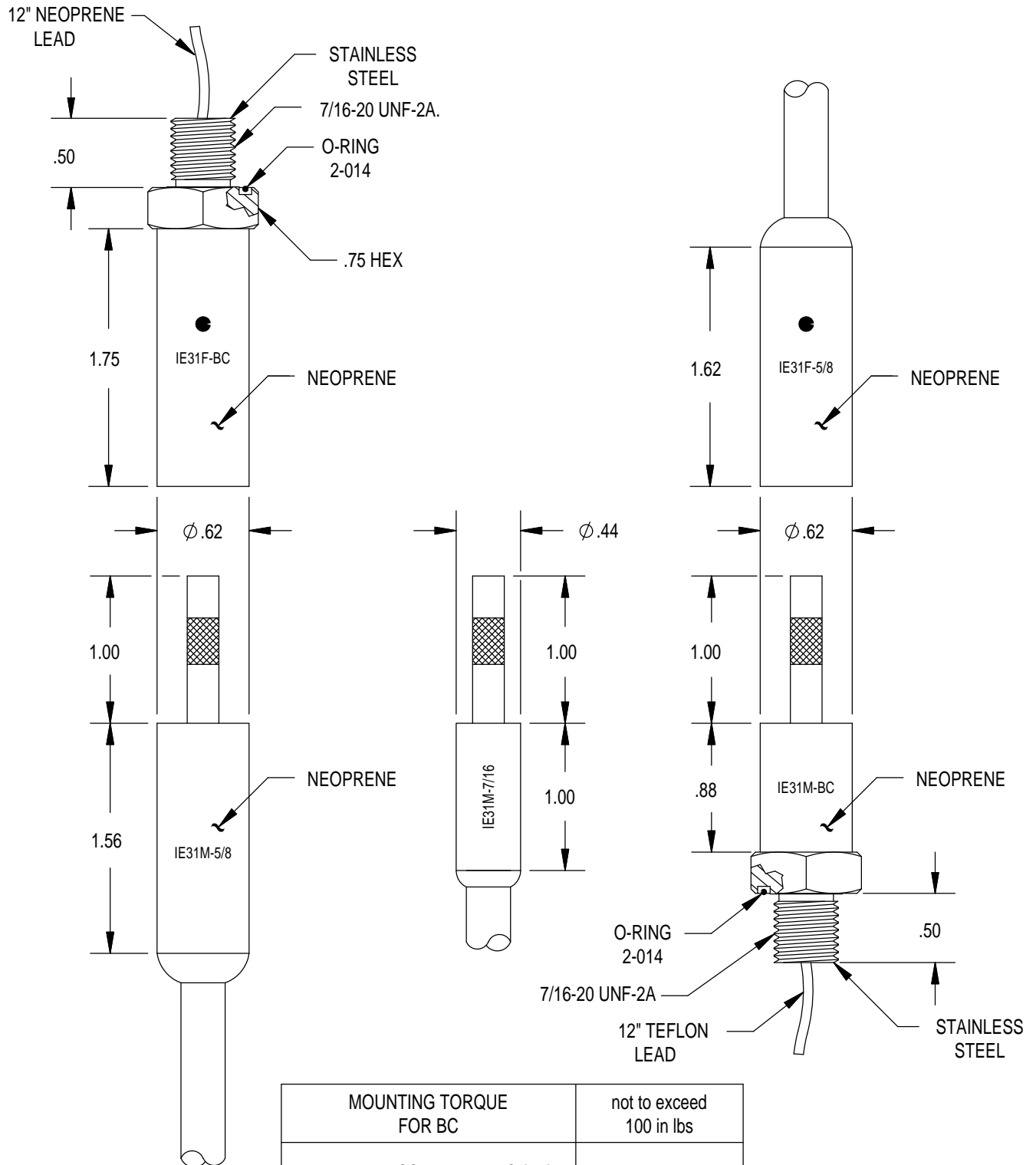




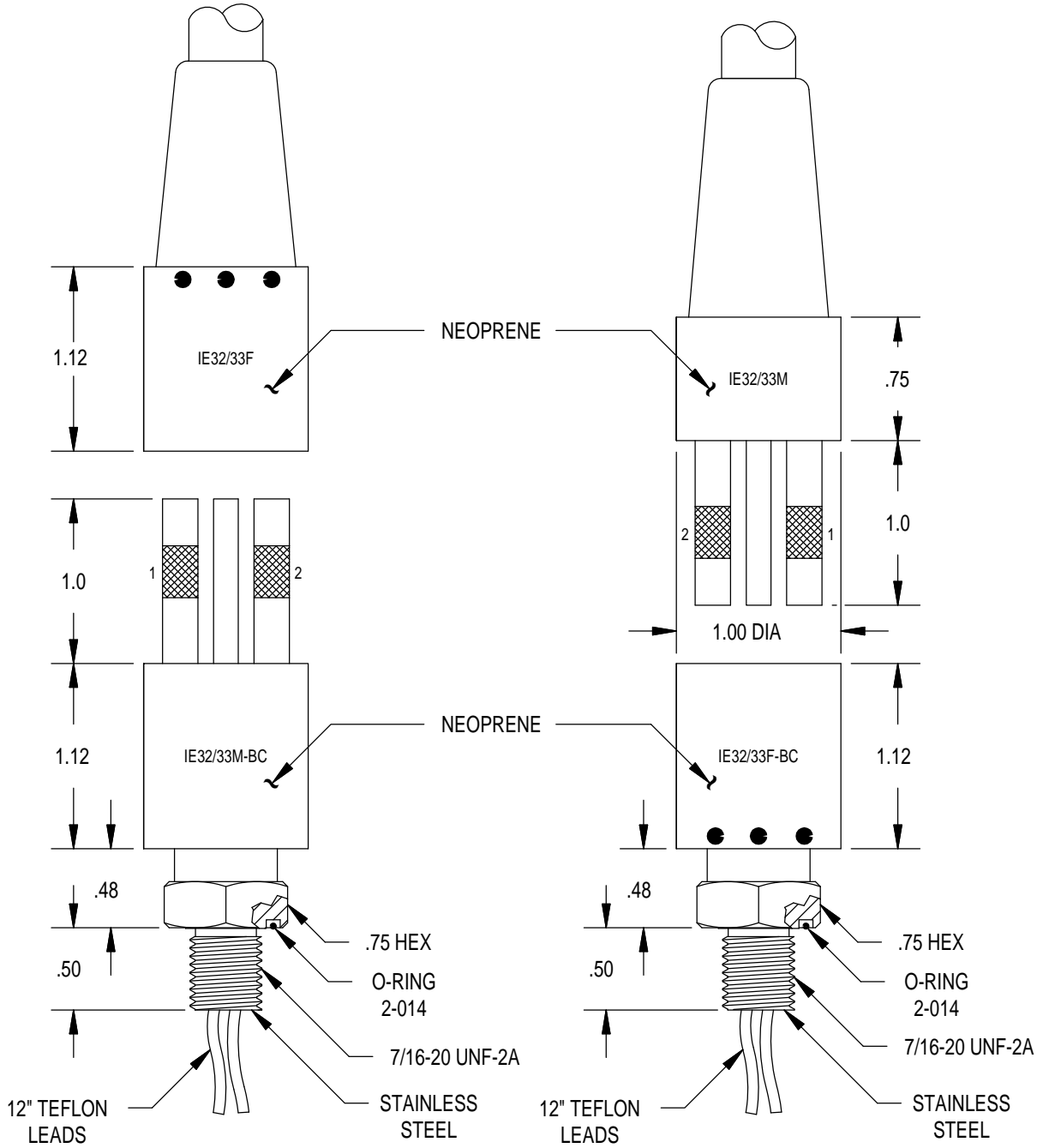
| | |
|--------------------------|--|
| DESCRIPTION AND MATERIAL | <ul style="list-style-type: none">• Molded neoprene with improved sealing ability.• One to four contacts.• Up to 600 VDC, 10 AMPS.• Rated to 10,000 psi, contact factory for higher rating.• Bulkhead connector design open face pressure rated to 5000 PSI.• O-rings molded in female connector. |
| CABLE | <ul style="list-style-type: none">• Connectors in this series are molded on a 24" length of 16 AWG SO cable unless otherwise specified.• Bulkhead connectors have 12" teflon leads, Type E per MIL 16878/4 16 AWG, or 12" Belden 34416 leads (Neoprene jacket). |
| USES | <ul style="list-style-type: none">• Mates with other manufacturers connectors of same design.• Permits underwater plugging and unplugging with power off.• Light to heavy duty applications.• Hazardous environments. |
| GUIDELINES | <ul style="list-style-type: none">• All mounting surfaces require a 32 finish.• Lubricate male pins liberally with Dow Corning #111 Valve Lubricant or equivalent and apply a small amount in each hole of female socket. Connectors must be lubricated on a regular basis.• Lubricate o-rings with Dow Corning #111 Valve Lubricant or equivalent.• Replace o-rings when re-using connectors.• Align index pin prior to mating.• Avoid nicks and cuts around contacts as these are the sealing surfaces.• Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time.• Do not over tighten bulkhead nuts.• Do not pull on cable to disconnect.• Avoid sharp bends at cable entry to connector. |

IE31-BC

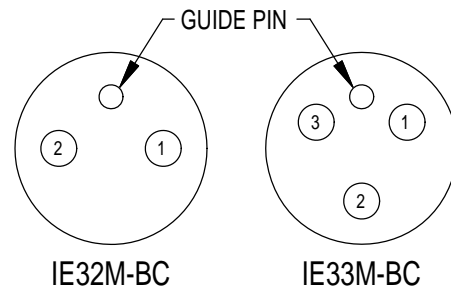
IE UNDERWATER PLUGGABLE SERIES 3



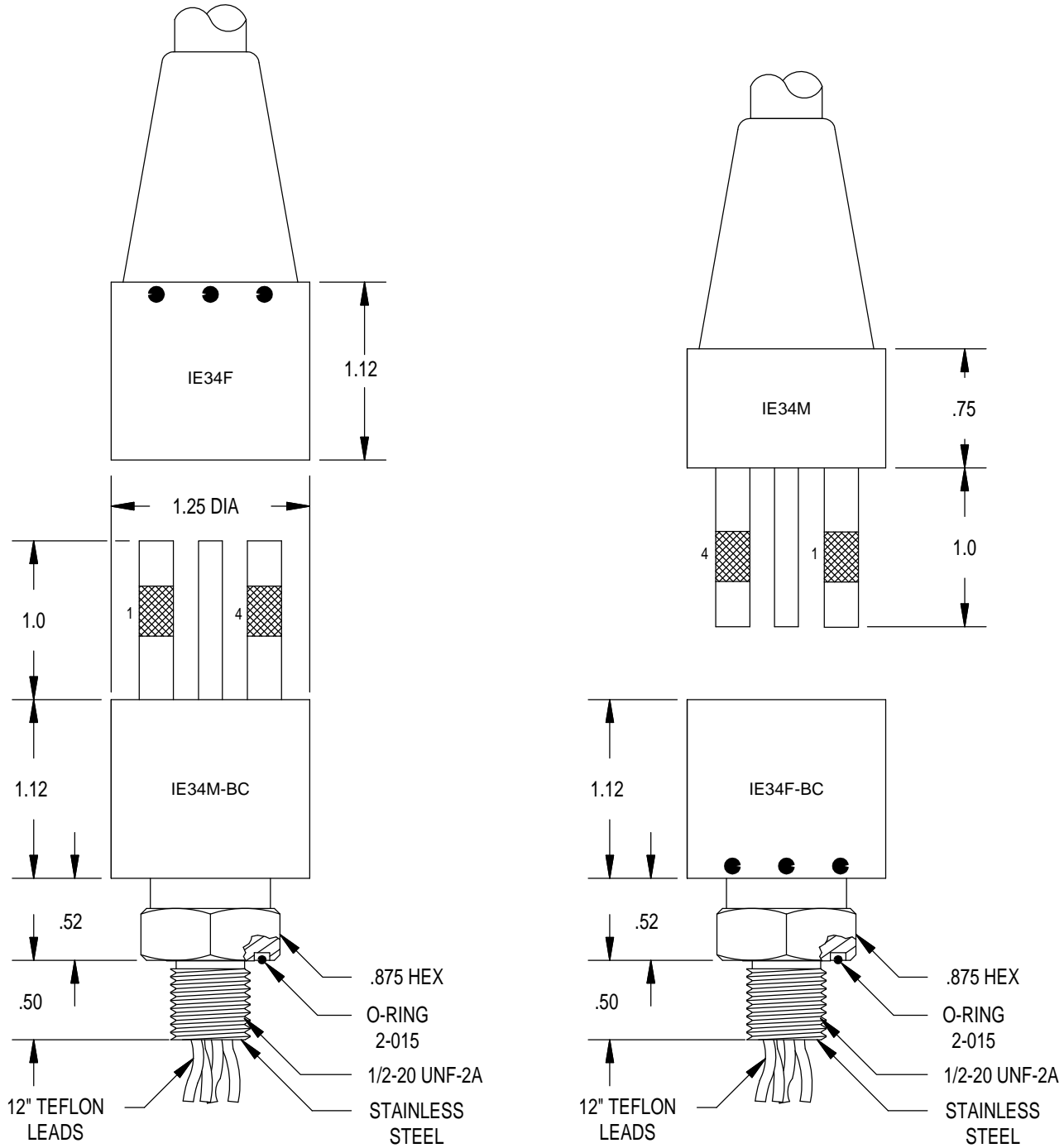
| | |
|--|--------------------------|
| MOUNTING TORQUE FOR BC | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR IE31M-5/8, IE31M-BC | IE31F-5/8-DO * |
| DUMMY PLUG FOR IE31F-BC, IE31F-5/8 | IE31M-5/8-DO * |
| * Dummy plugs found on Page 75 110 | |
| ** Shorted dummies (DS) available upon request | |



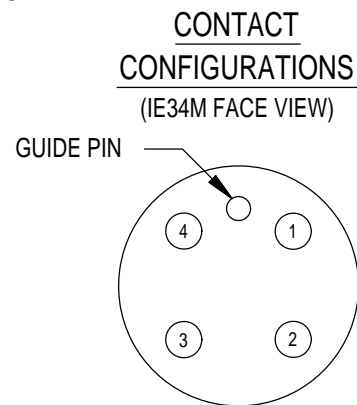
**CONTACT
CONFIGURATION**
(BC FACE VIEWS)

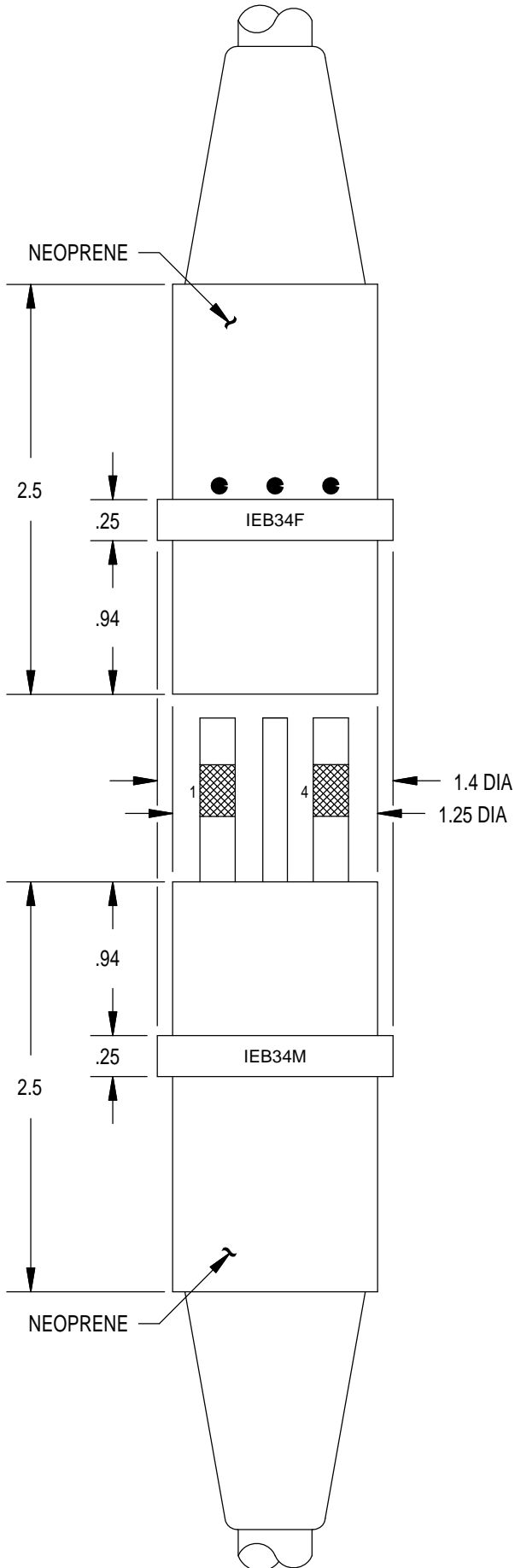


| | |
|---|--------------------------|
| MOUNTING TORQUE FOR BC | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR IE32/33M-BC, IE32/33M | IE32/33F-DO * |
| DUMMY PLUG FOR IE32/33F-BC, IE32/33F | IE32/33M-DO * |
| * Dummy plugs found on Page 75 110. ** Shorted dummies (DS) available upon request | |

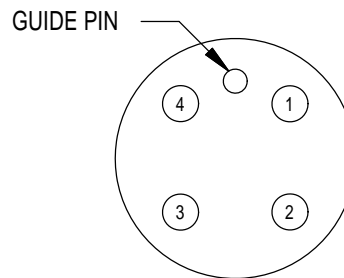


| | |
|--|--------------------------|
| MOUNTING TORQUE FOR BC | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR IE34M-BC, IE34M | IE34F-DO * |
| DUMMY PLUG FOR IE34F-BC, IE34F | IE34M-DO * |
| * Dummy plugs found on Page 75 111. ** Shorted dummies (DS) available upon request. | |





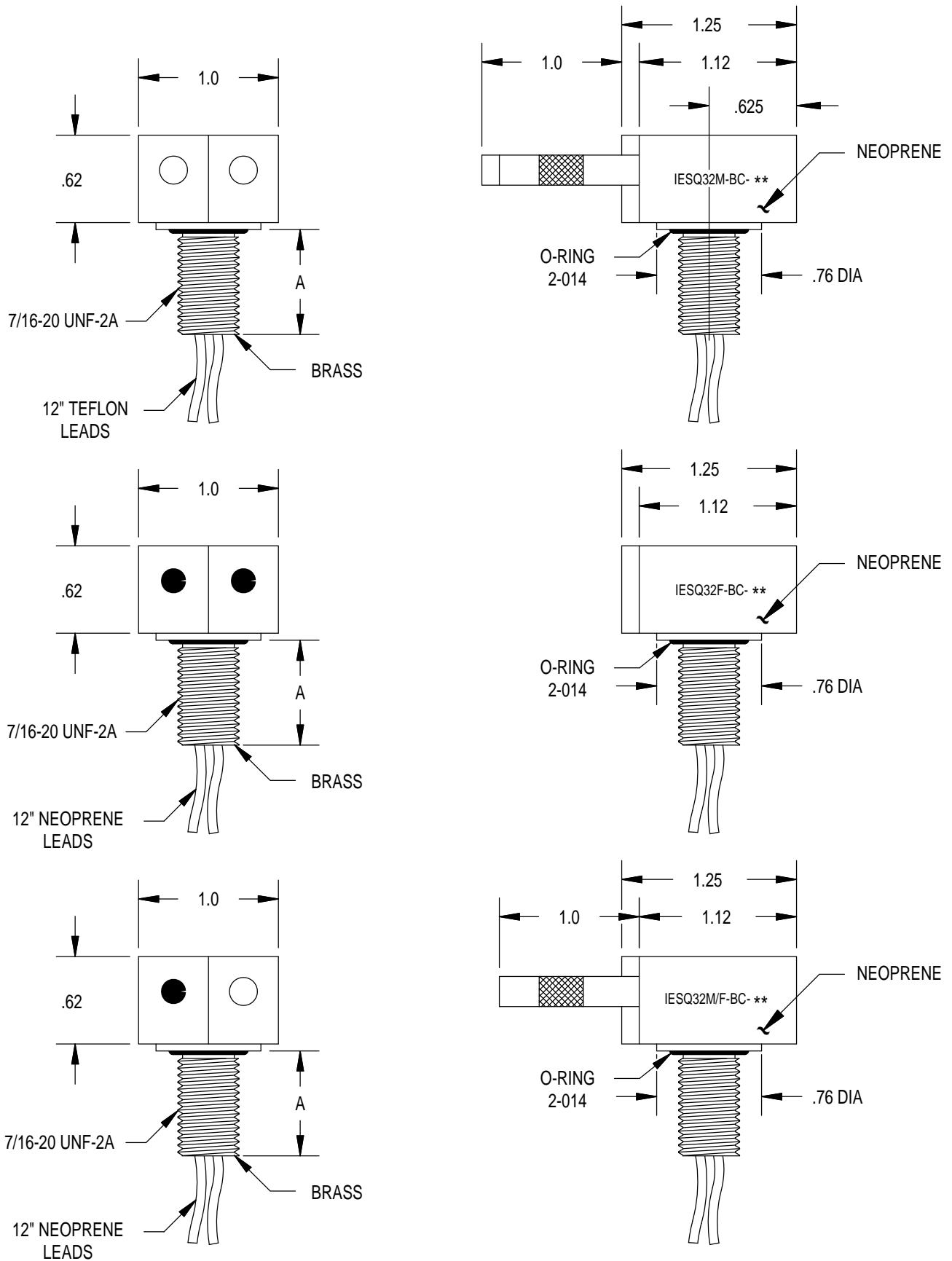
CONTACT
CONFIGURATIONS
(IEB34M FACE VIEW)

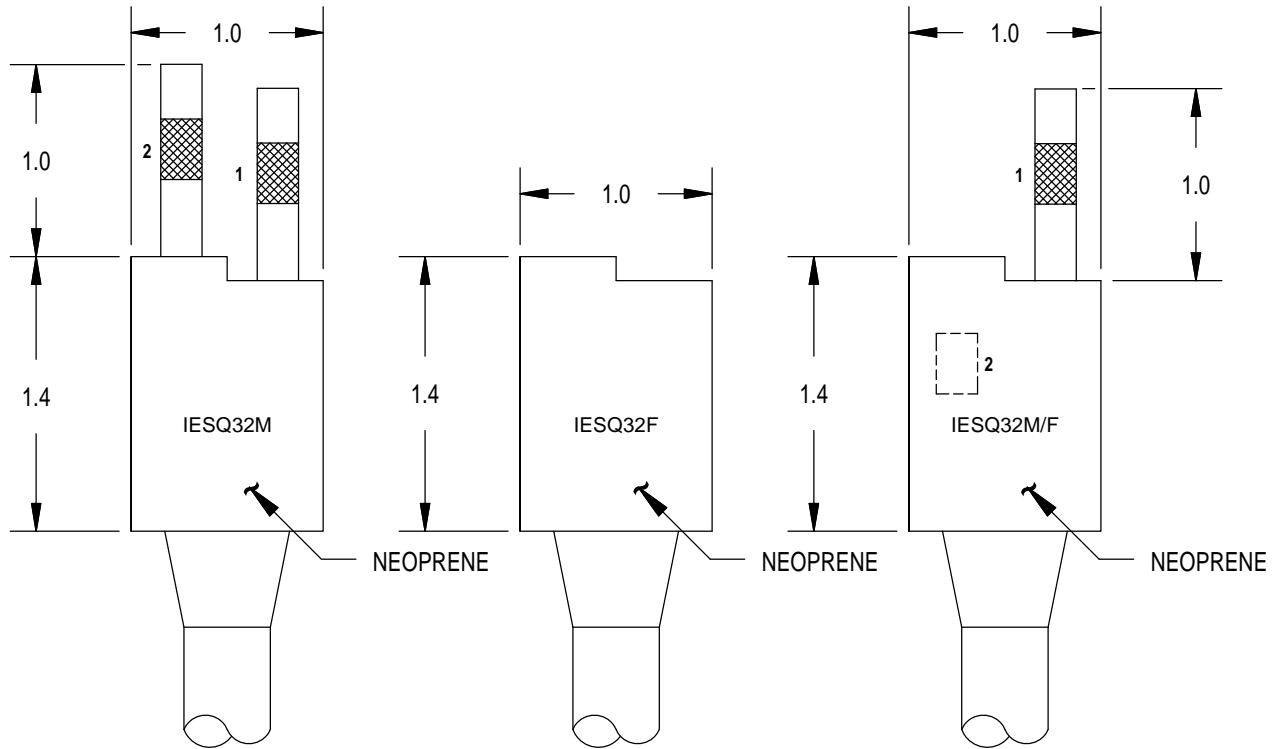


| | |
|--|-------------|
| MATED PRESSURE RATING (psi) | 20,000 |
| DUMMY PLUG FOR IEB34M | IEB34F-DO * |
| DUMMY PLUG FOR IEB34F | IEB34M-DO * |
| * Dummy plugs found on Page 75 111. ** Shorted dummies (DS) available upon request. | |

IESQ32-BC

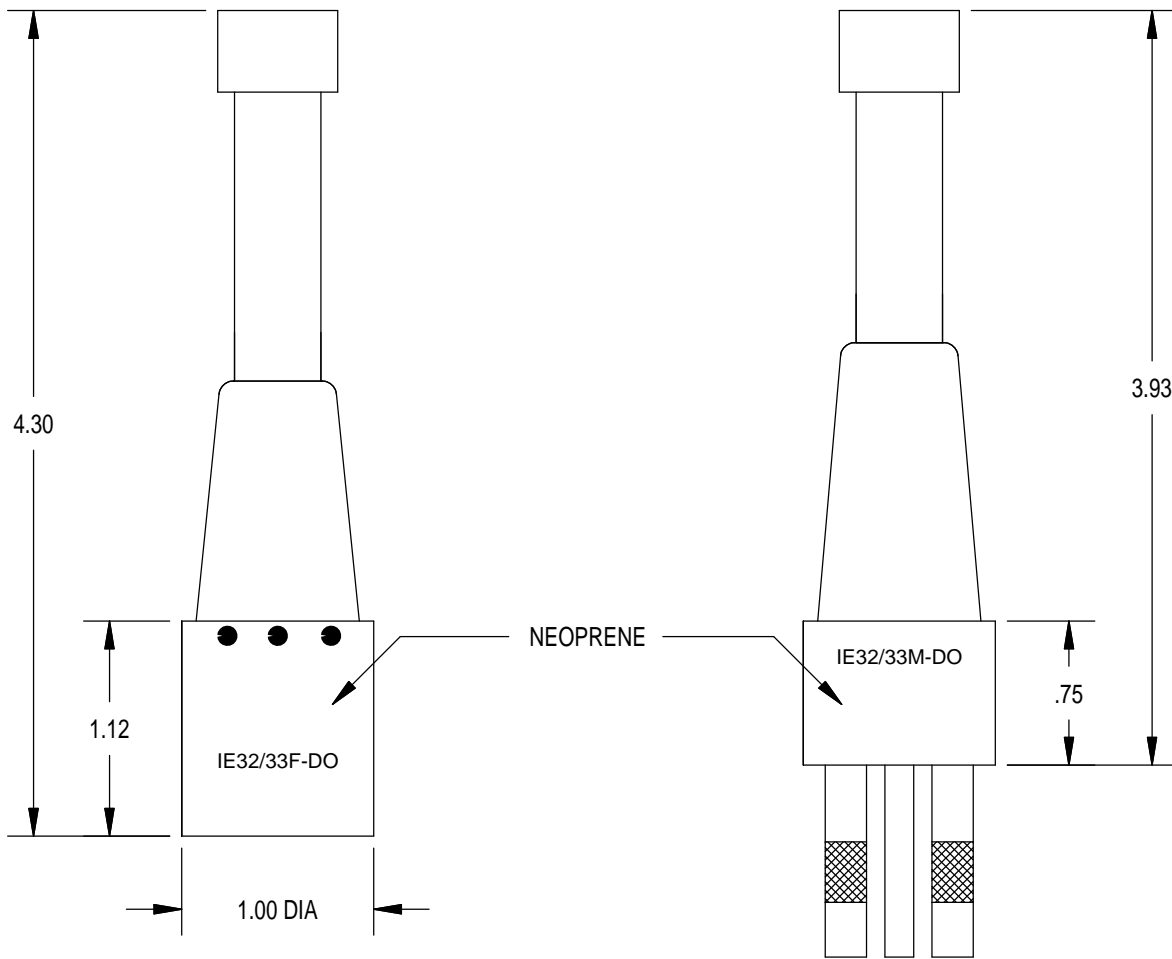
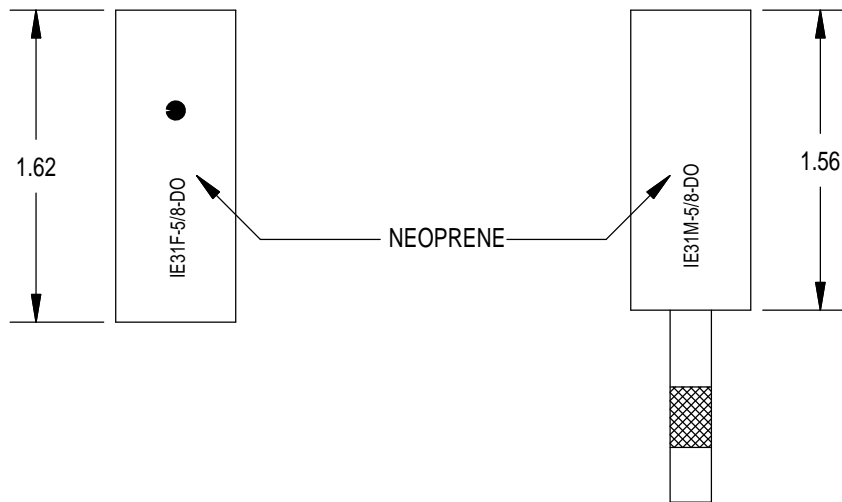
IE UNDERWATER
PLUGGABLE SERIES 3

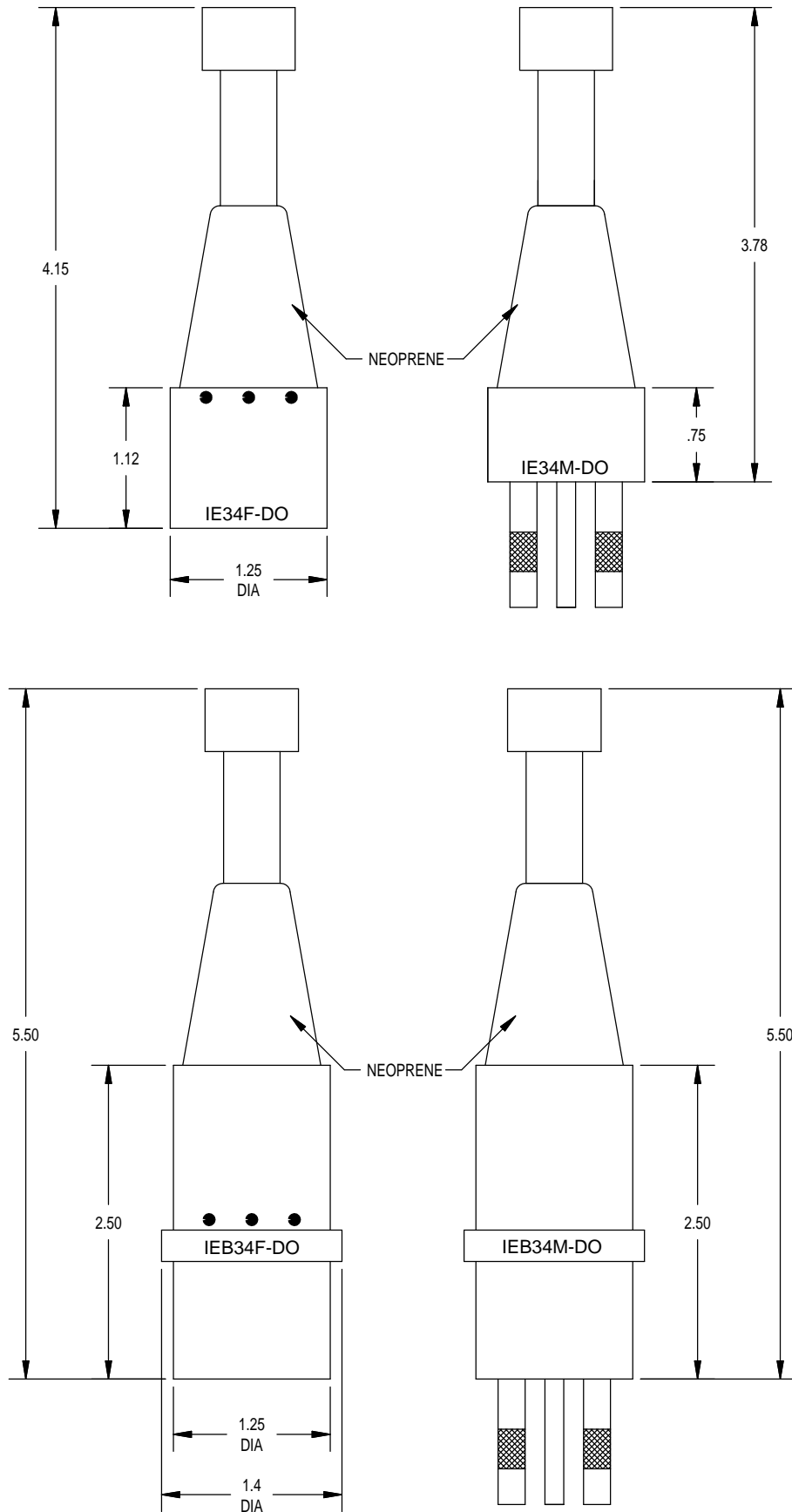


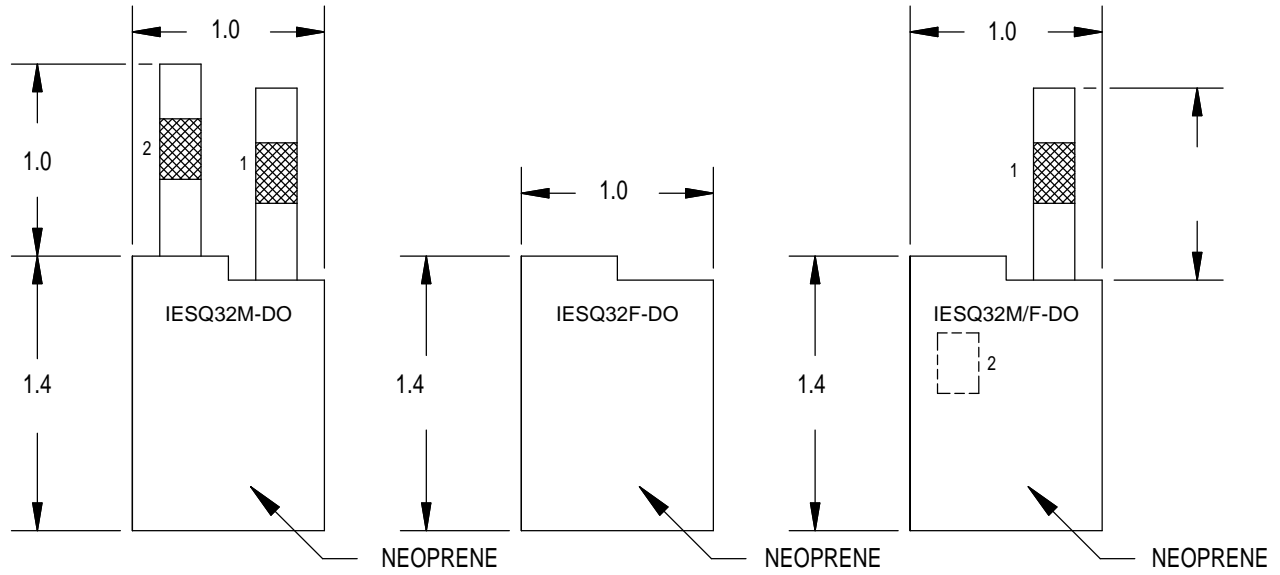


| | |
|---|--------------------------|
| MOUNTING TORQUE FOR BC | not to exceed 100 in lbs |
| MATED PRESSURE RATING (psi) | 5,000 |
| DUMMY PLUG FOR IESQ32M-BC, IESQ32M | IESQ32F-DO * |
| DUMMY PLUG FOR IESQ32F-BC, IESQ32F | IESQ32M-DO * |
| DUMMY PLUG FOR IESQ32M/F-BC, IESQ32M/F | IESQ32M/F-DO * |
| <p>* Dummy plugs found on Page 75 112. ** Shorted dummies available upon request. *** See chart for thread specifications. **** Specify M/F/MF</p> | |

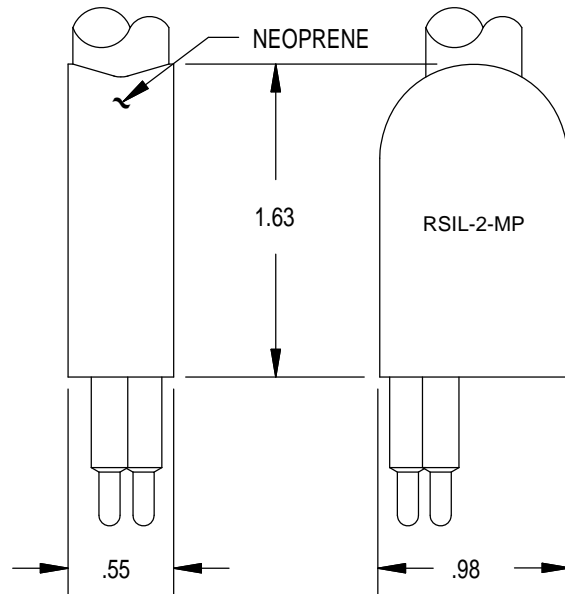
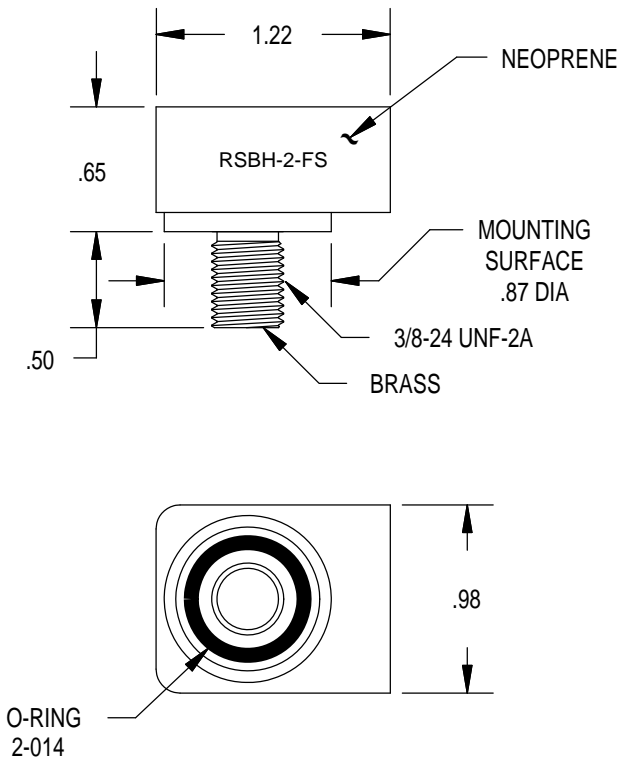
| BULKHEAD | |
|-------------------|------|
| PART NUMBER | A |
| IESQ32 **** -BC-1 | .50 |
| IESQ32 **** -BC-2 | .75 |
| IESQ32 **** -BC-3 | 1.00 |



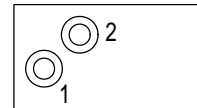




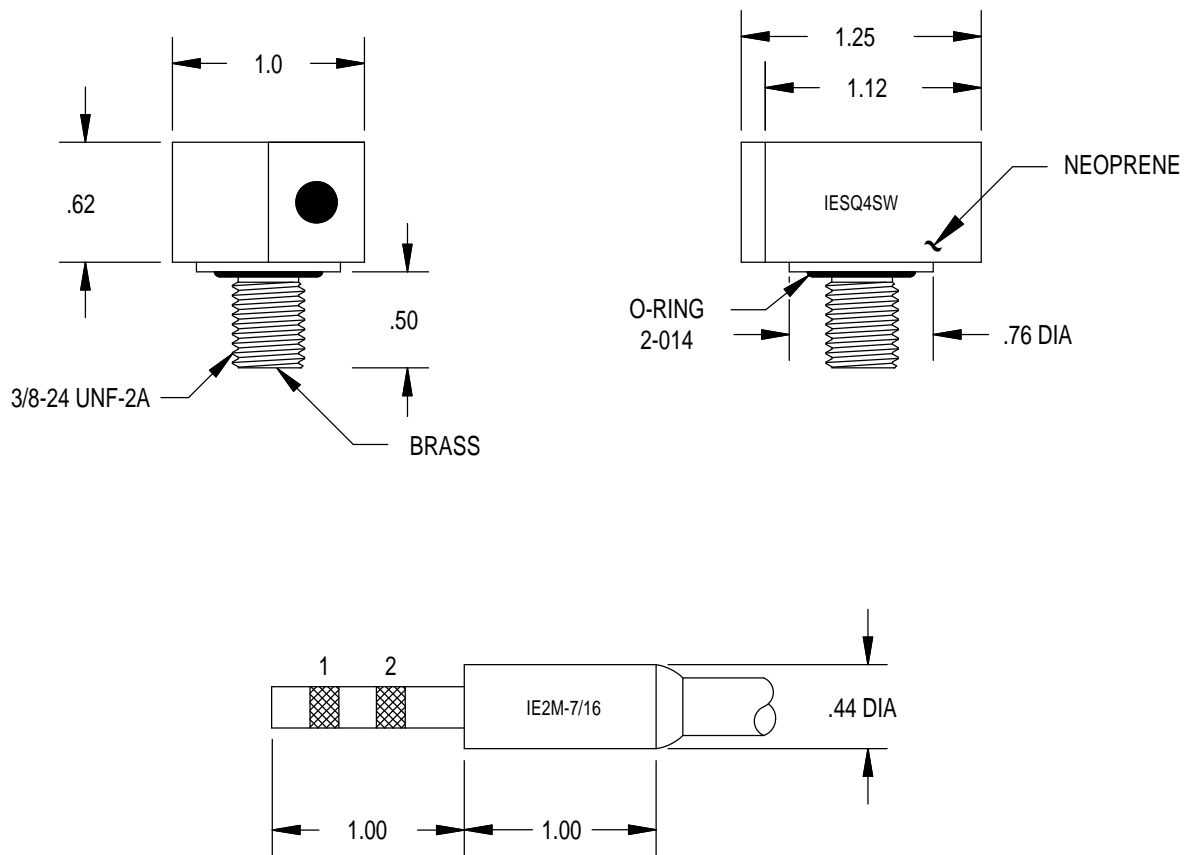
| | |
|--------------------------|--|
| DESCRIPTION AND MATERIAL | <ul style="list-style-type: none">• Molded neoprene.• Up to 200 VDC.• Up to 5,000 PSI.• Bulkhead switch design open face pressure rated to 5000 PSI.• Switches are normally open. |
| CABLE | <ul style="list-style-type: none">• Connectors in this series are molded on a standard 24" length of SO cable. |
| USES | <ul style="list-style-type: none">• Current meters.• Safety devices.• Device monitoring.• Light to heavy duty applications.• Hazardous environments. |
| GUIDELINES | <ul style="list-style-type: none">• All mounting surfaces require a 32 finish.• Lubricate mating surfaces of RSBH/RSIL with 3M Silicone Spray or equivalent, DO NOT grease! Connectors must be lubricated on a regular bases.• Lubricate male pin of IE2M-7/16 liberally with Dow Corning #111 Valve Lubricant or equivalent and apply a small amount in the female socket. Connectors must be lubricated on a regular basis.• Lubricate o-rings with Dow Corning #111 Valve Lubricant or equivalent.• Avoid nicks and cuts around contacts as these are the sealing surfaces.• Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time.• Do not over tighten bulkhead nuts.• Do not pull on cable to disconnect.• Avoid sharp bends at cable entry to connector. |
| ORDERING INFORMATION | <ul style="list-style-type: none">• Bulkhead connectors do not come with nuts and washers. If required, please specify when ordering. |



**CONTACT
CONFIGURATION**
(MP FACE VIEW)



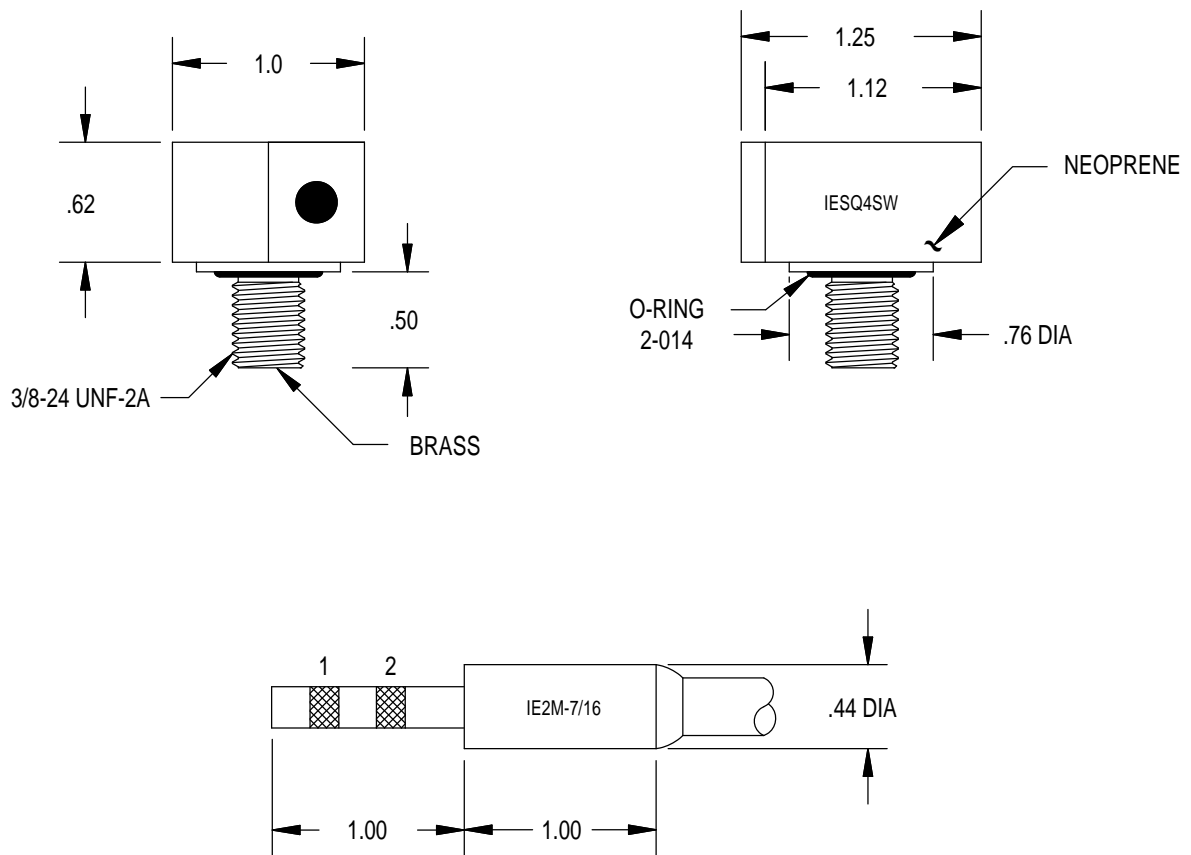
| SWITCH RATINGS | | CONNECTOR RATINGS | |
|--|-----------|-----------------------------|-----------------------------|
| CURRENT | 0.5 A | MOUNTING TORQUE | not to exceed 100 in lbs |
| VOLTAGE | 200VDC | MATED PRESSURE RATING (psi) | 5,000 |
| RESISTANCE | 0.100 OHM | DUMMY PLUG FOR RSBH-2-FS | RSDC-2-MP |
| OPERATING TIME (MAX) | 0.6 mS | DUMMY PLUG FOR RSIL-2-MP | RSDC-2-FS |
| RELEASE TIME (MAX) | 0.1 mS | | |
| <p>NOTE: Bulkhead available in stainless steel. Standard 1/2" thread length. Bulkhead available with inboard leads + mating connector or inboard leads without mating connector.</p> | | | |



| SWITCH RATINGS | | CONNECTOR RATINGS | |
|----------------------|-----------|-----------------------------|--------------------------|
| CURRENT | 0.5 A | MOUNTING TORQUE | not to exceed 100 in lbs |
| VOLTAGE | 200VDC | MATED PRESSURE RATING (psi) | 5,000 |
| RESISTANCE | 0.100 OHM | DUMMY PLUG FOR IESQ4SW | IE2M-7/16-DO * |
| OPERATING TIME (MAX) | 0.6 mS | DUMMY PLUG FOR IE2M-7/16 | IE2F-7/16-DO * |
| RELEASE TIME (MAX) | 0.1 mS | | |

NOTE: Bulkhead available in stainless steel.
Standard 1/2" thread length.
Bulkhead available with inboard leads + mating connector or inboard leads without mating connector.
* Shorted dummies (DS) available upon request.

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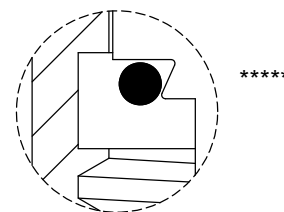
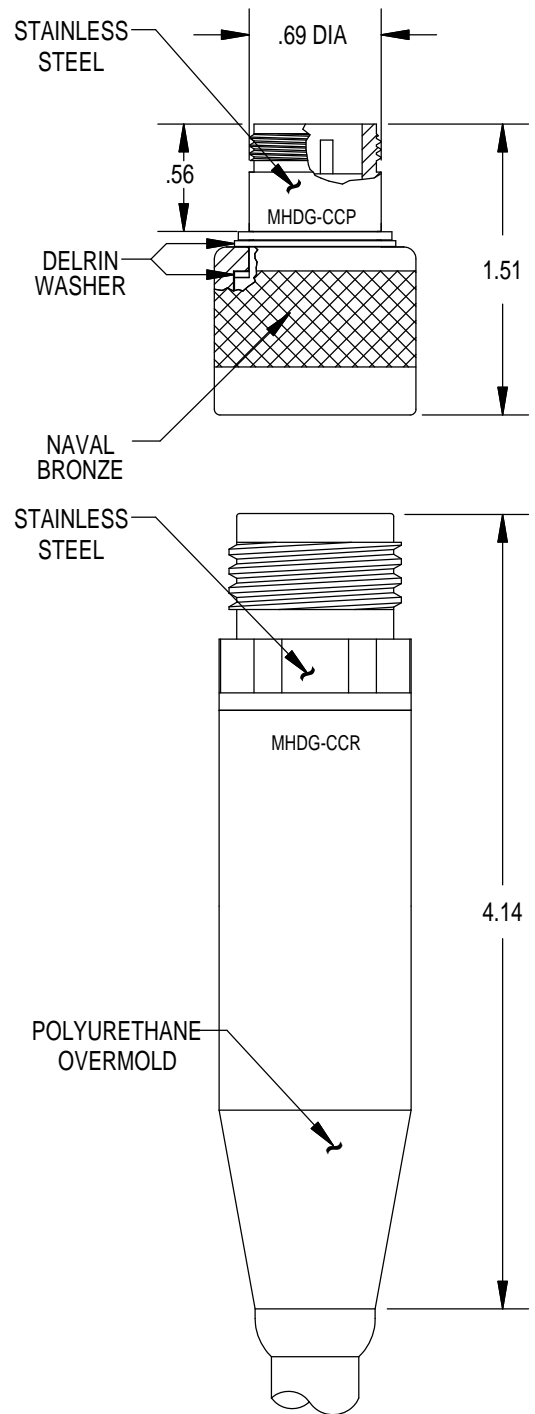
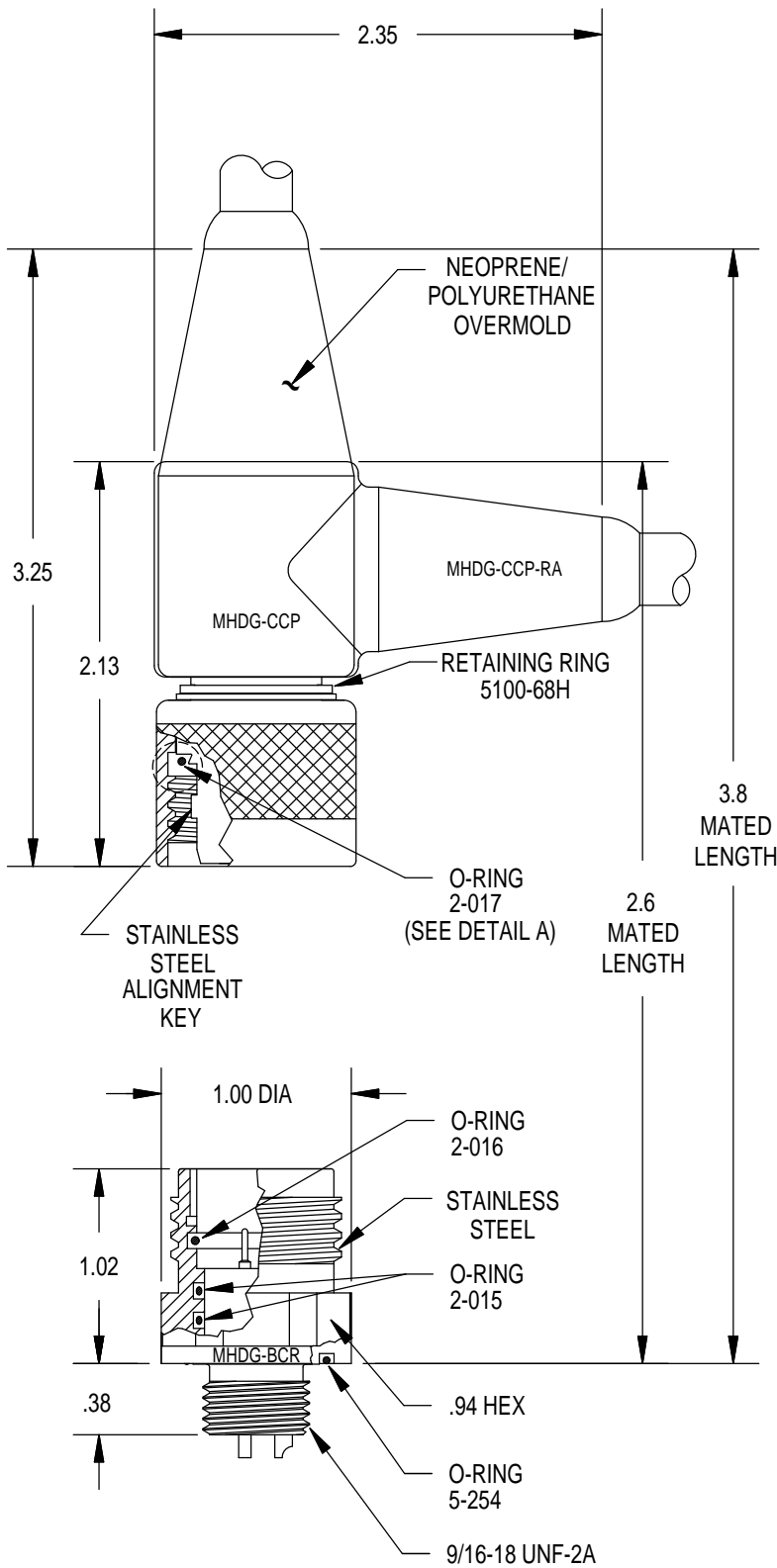


| SWITCH RATINGS | | CONNECTOR RATINGS | |
|--|-----------|-----------------------------|--------------------------|
| CURRENT | 0.5 A | MOUNTING TORQUE | not to exceed 100 in lbs |
| VOLTAGE | 200VDC | MATED PRESSURE RATING (psi) | 5,000 |
| RESISTANCE | 0.100 OHM | DUMMY PLUG FOR IESQ4SW | IE2M-7/16-DO * |
| OPERATING TIME (MAX) | 0.6 mS | DUMMY PLUG FOR IE2M-7/16 | IE2F-7/16-DO * |
| RELEASE TIME (MAX) | 0.1 mS | | |
| <p>NOTE: Bulkhead available in stainless steel. Standard 1/2" thread length. Bulkhead available with inboard leads + mating connector or inboard leads without mating connector. * Shorted dummies (DS) available upon request.</p> | | | |

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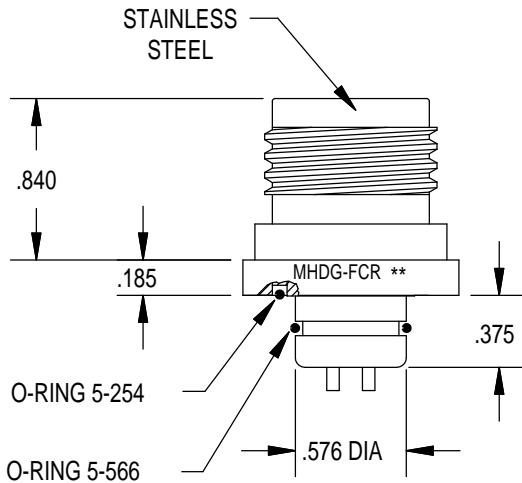
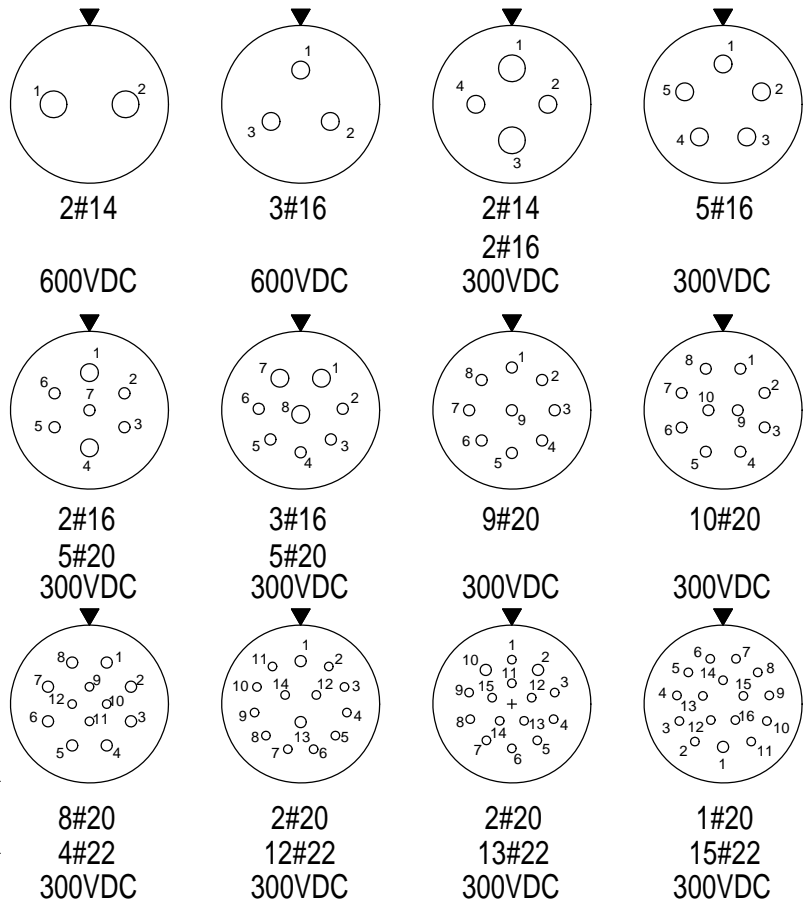
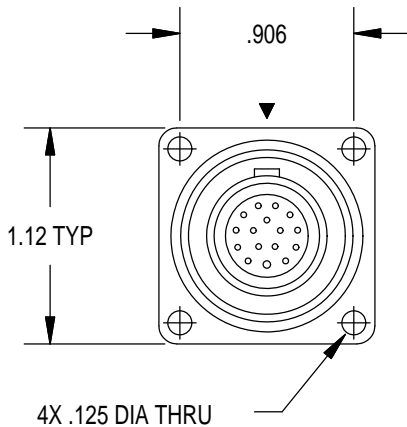
MINIATURE HIGH DENSITY SERIES

- DESCRIPTION AND MATERIAL**
- 316 stainless steel passivated per QQ-P-35 Type VI with naval bronze engaging nut.
 - Special alloys are available upon request (contact factory).
 - Contains a removable glass reinforced epoxy insert.
(Except for MHDG series and CCP's)
 - Up to 96 contacts.
 - Up to 600 VDC.
 - 10,000 PSI in mated condition (higher pressure rating available using special alloy metal shell; please contact factory).
 - Bulkhead connector design open face pressure rated to 5,000 psi.
 - MHD-CCR/CCP connectors can be overmolded with polyurethane.
 - Contacts are gold plated per MIL-G-45204.
- CABLE**
- Connector's amperage and voltage may be limited by the amperage and voltage ratings of the cable to which the connector is molded.
 - This series is not molded to cable unless specified at the time of order.
- USES**
- Signal telemetry.
 - Hazardous environment.
 - FCR is mounted by use of four equally spaced bolts around the flange surface.
 - FCR is used in place of the BCR when the use of a bulkhead nut and washer is impractical.
 - For all open face pressures above 5,000 PSI the BCR, FCR must be back potted (please contact the factory).
 - The CCR is used in a variety of environments where cable to cable termination is necessary.
- GUIDELINES**
- Mounting torque should not exceed 150 in lbs. for this series.
 - All mounting surfaces require a 32 finish.
 - Align indexes.
 - Keep o-ring grooves clean.
 - Avoid o-ring cuts and nicks.
 - Lubricate o-rings with Dow Corning #111 Valve Lubricant or equivalent.
 - Replace o-rings when re-using connectors.
 - Avoid contact with noxious solvents.
 - Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time.

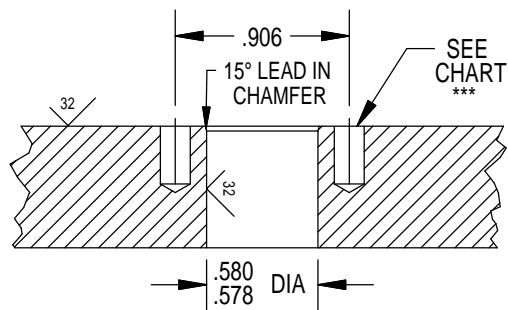


DETAIL A

CONTACT CONFIGURATION
(BCR FACE VIEW)



MOUNTING INSTRUCTIONS



| | | | |
|---------------------------------|--------------------------|-----------------------------|----------|
| MOUNTING TORQUE FOR MHDG-BCR | not to exceed 150 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR MHDG-BCR/FCR/CCR | MHDG-SCP | DUMMY PLUG FOR MHDG-CCP | MHDG-SCR |

NOTE: CCP is not terminated to cable unless specified.

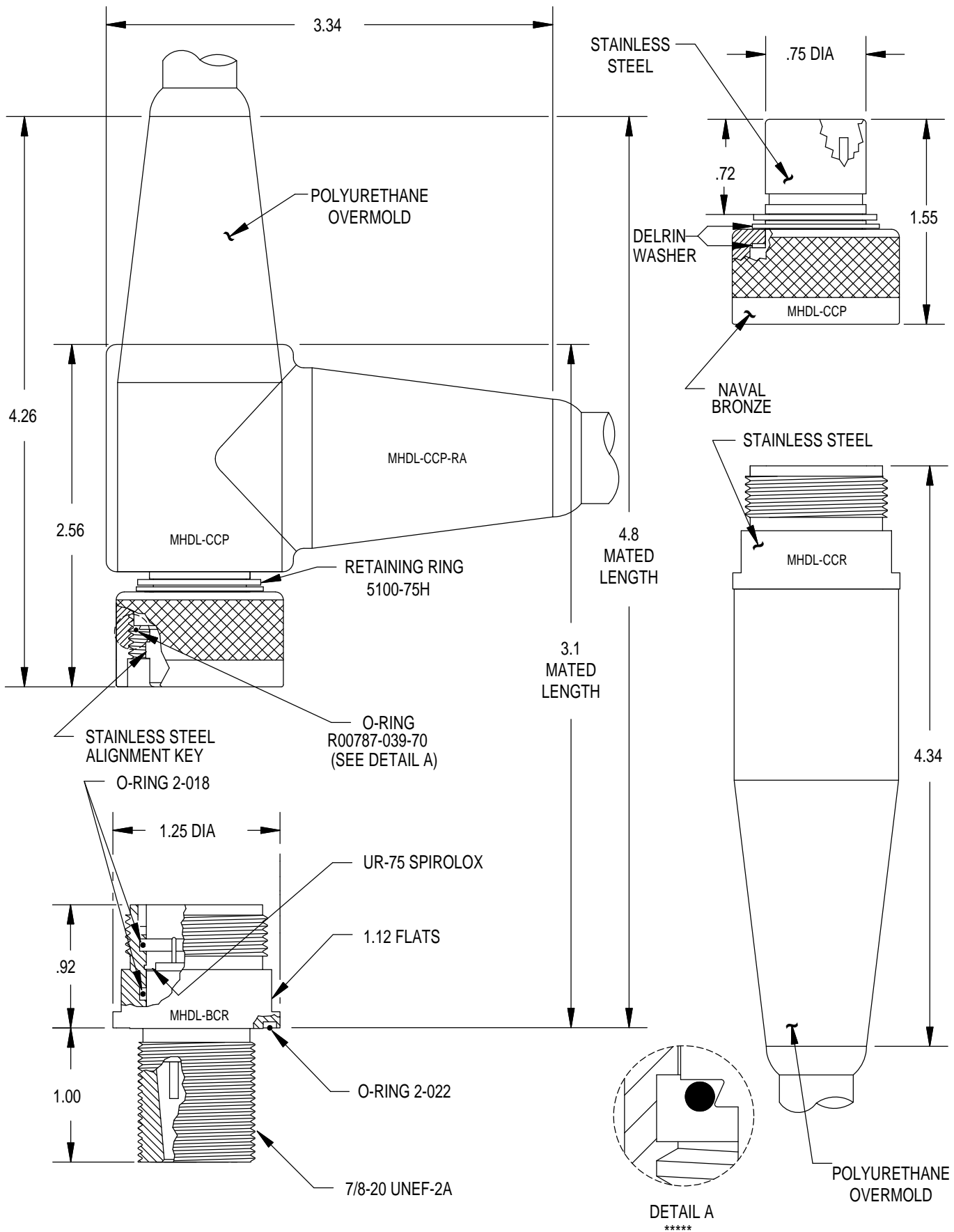
* Please specify number of contacts.

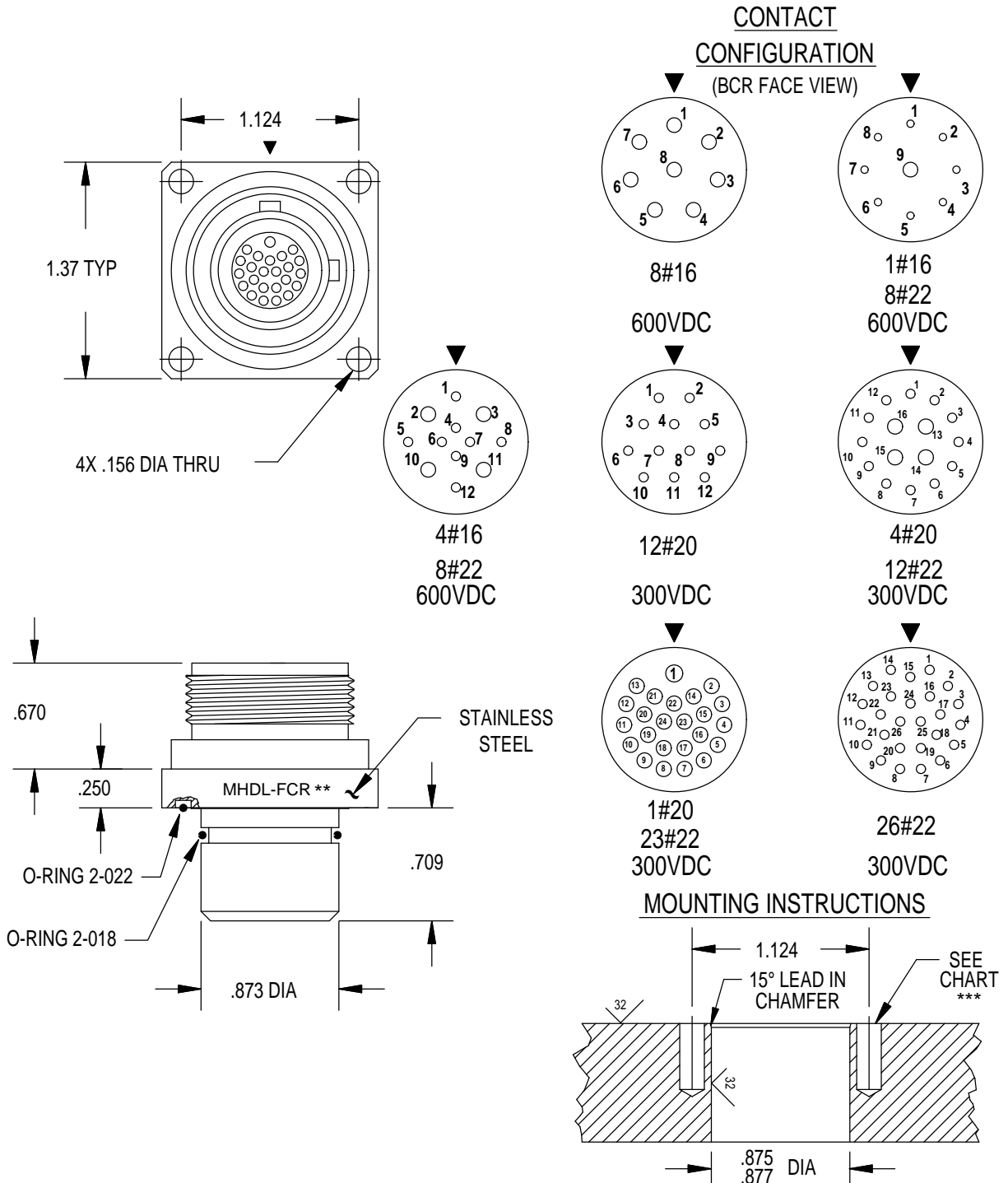
** Internal assembly same as MHDG-BCR (facing page).

*** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.

**** Oil filled version available. See section 86.

***** O-Ring installation tool available - Contact factory for further details.





| | | | |
|----------------------------------|--------------------------|-----------------------------|-----------|
| MOUNTING TORQUE FOR MHDLC-BCR | not to exceed 200 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR MHDLC-BCR/FCR/CCR | MHDLC-SCP | DUMMY PLUG FOR MHDLC-CCP | MHDLC-SCR |

NOTE: CCP is not terminated to cable unless specified.

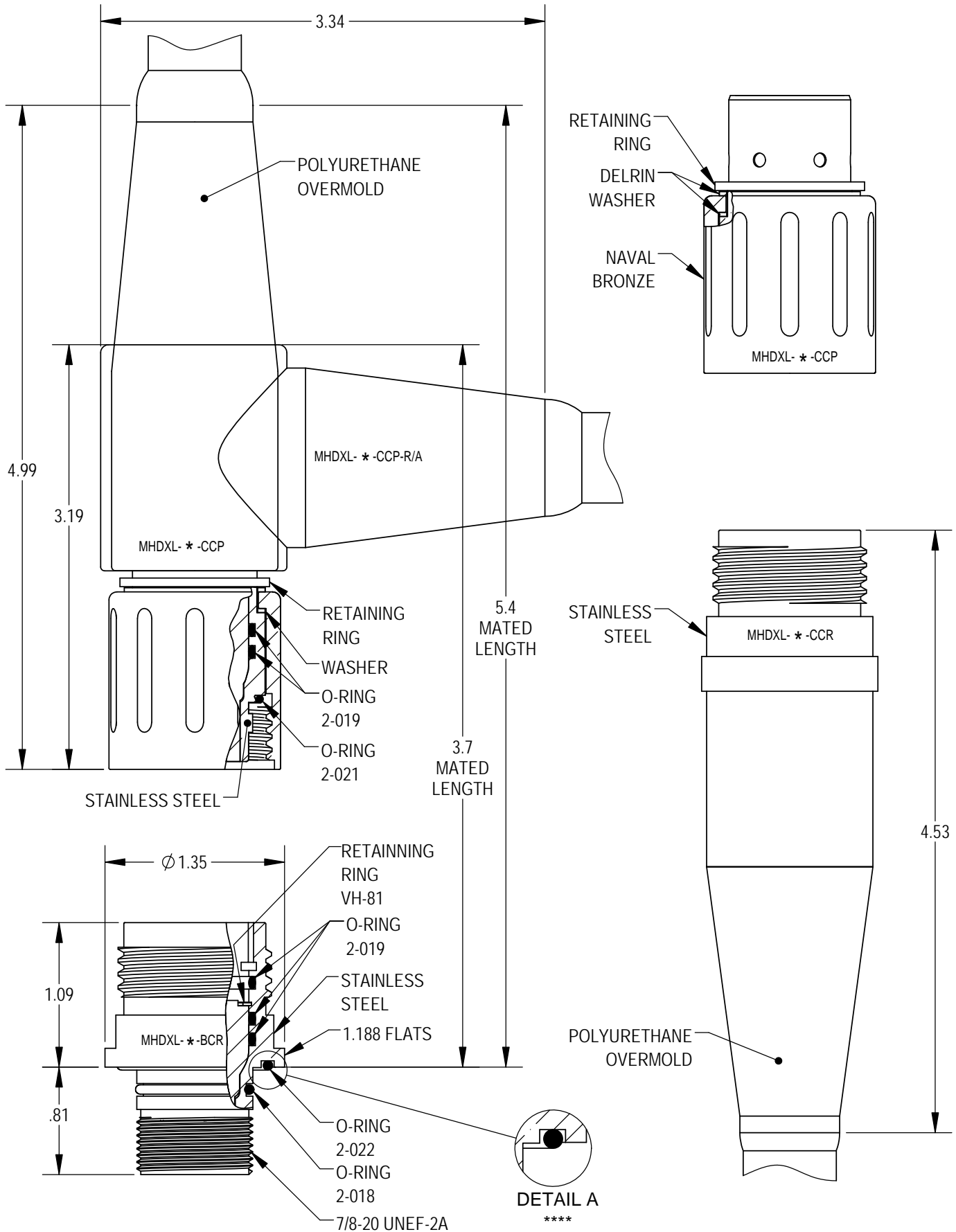
* Please specify number of contacts.

** Internal assembly same as MHDLC-BCR (facing page).

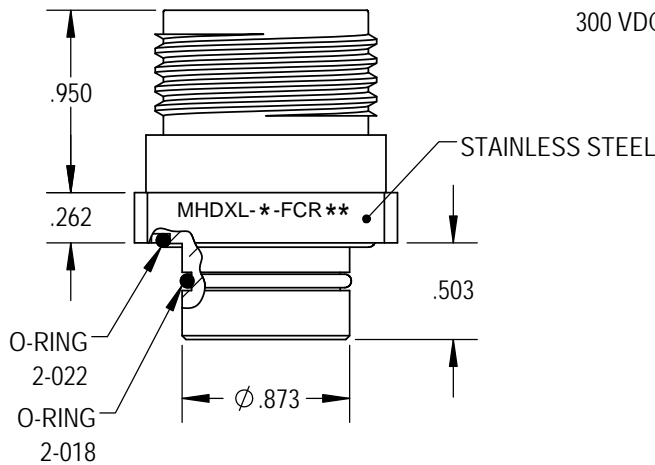
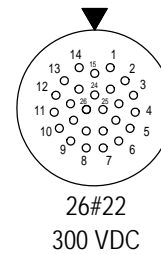
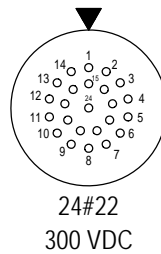
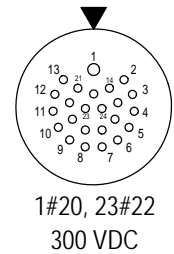
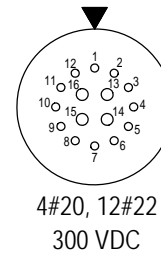
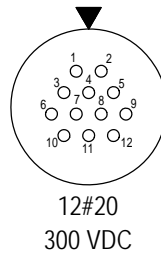
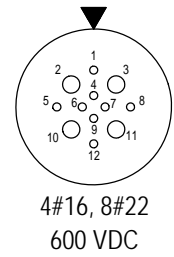
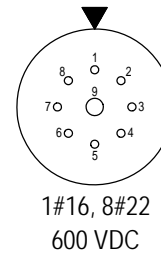
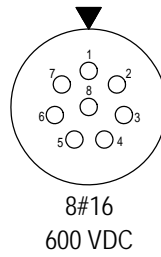
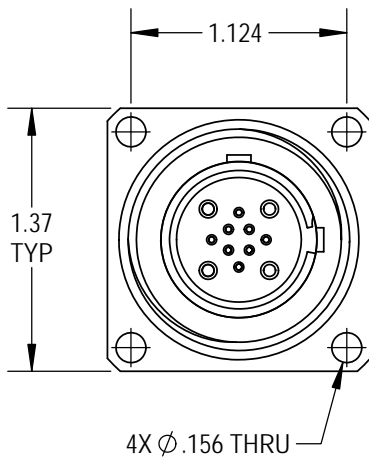
*** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.

**** Oil filled version available upon request. See section 86.

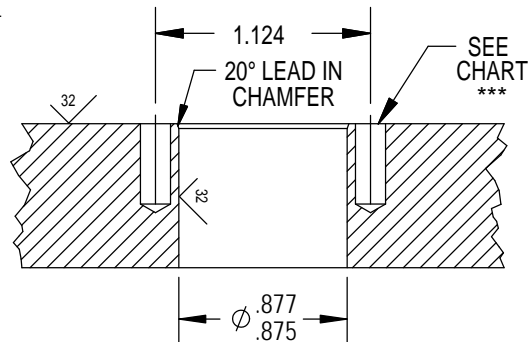
***** O-Ring installation tool available - Contact factory for further details.



CONTACT CONFIGURATION
(BCR FACE VIEW)

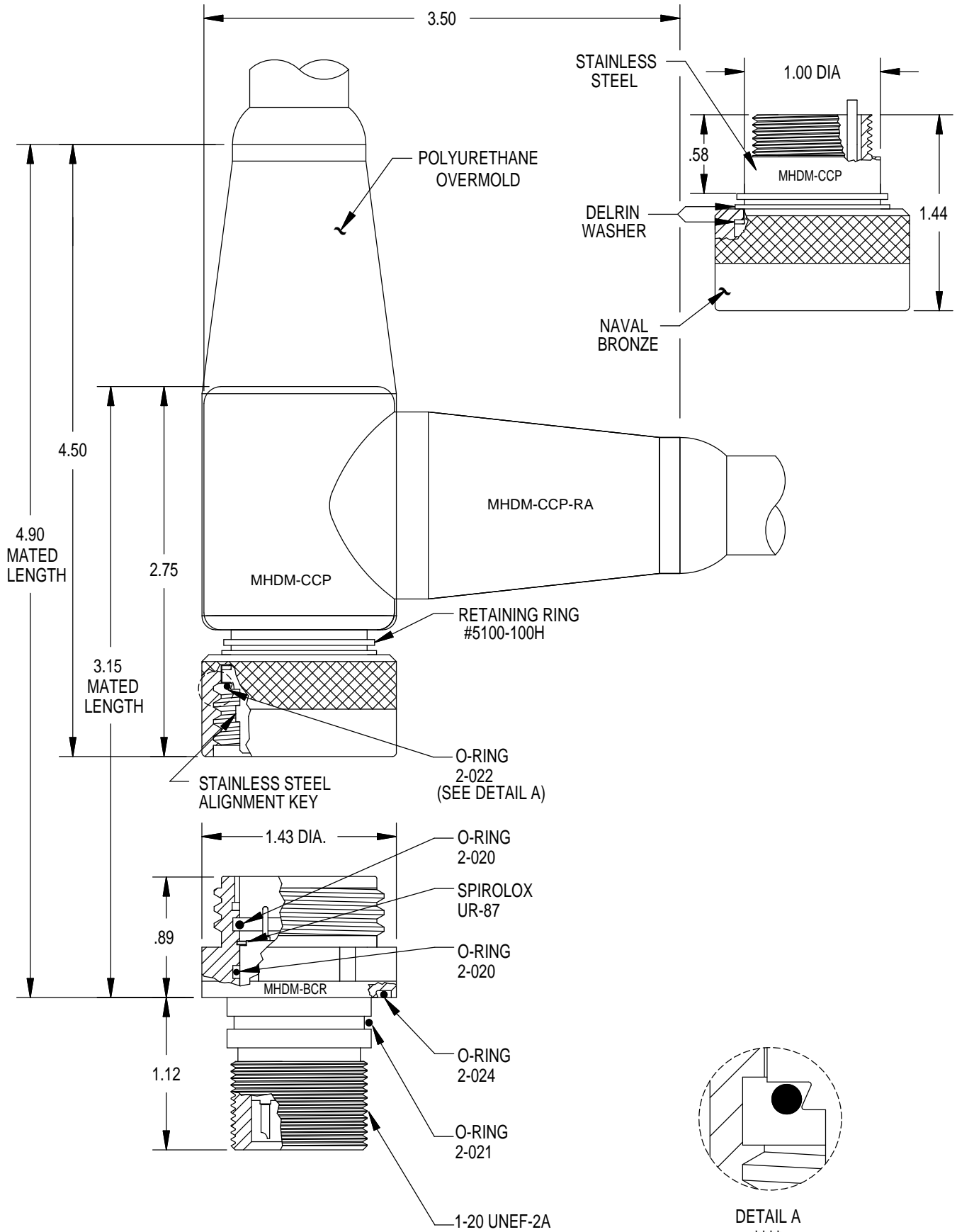


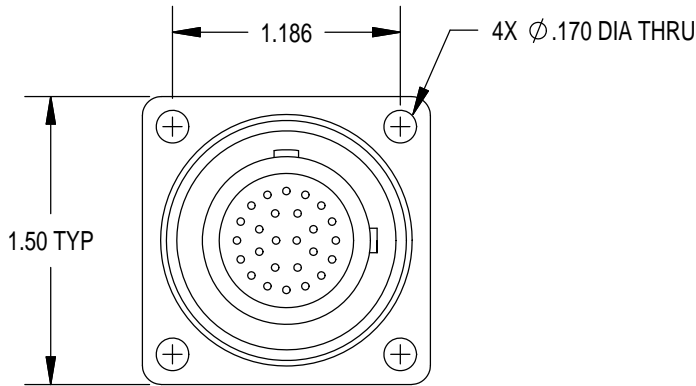
MOUNTING INSTRUCTIONS



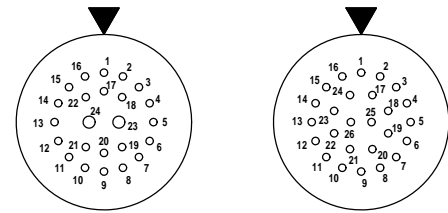
| | | | |
|----------------------------------|--------------------------|-----------------------------|-----------|
| MOUNTING TORQUE FOR MHDXL-BCR | not to exceed 200 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR MHDXL-BCR/FCR/CCR | MHDXL-SCP | DUMMY PLUG FOR MHDXL-CCP | MHDXL-SCR |

NOTE: CCP is not terminated to cable unless specified.
 * Please specify number of contacts.
 ** Internal assembly same as MHDXL-BCR (facing page).
 *** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.
 **** O-Ring installation tool available - Contact factory for further details.



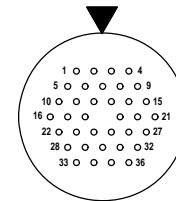


CONTACT CONFIGURATION (BCR FACE VIEW)

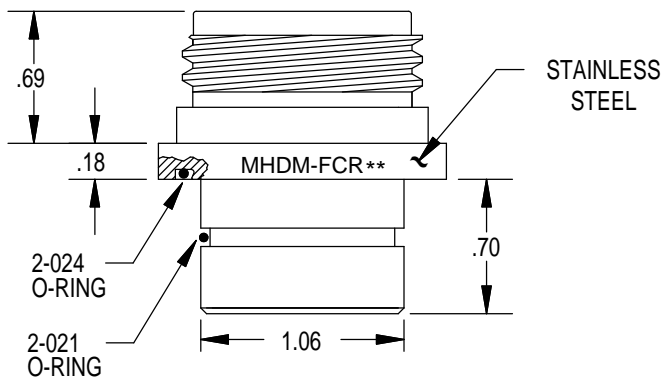


2#20
22#22
300VDC

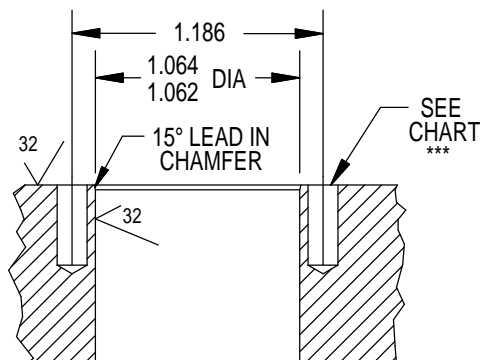
26#20
300VDC



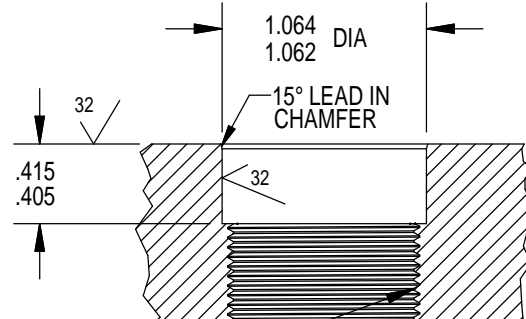
36#22
300VDC



FCR MOUNTING INSTRUCTIONS



BCR MOUNTING INSTRUCTIONS



| | | | |
|-------------------------|--------------------------|-----------------------------|----------|
| MOUNTING TORQUE FOR BCR | not to exceed 200 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR BCR | MHDM-SCP | DUMMY PLUG FOR CCP | MHDM-SCR |

NOTE: CCP is not terminated to cable unless specified.

* Please specify number of contacts.

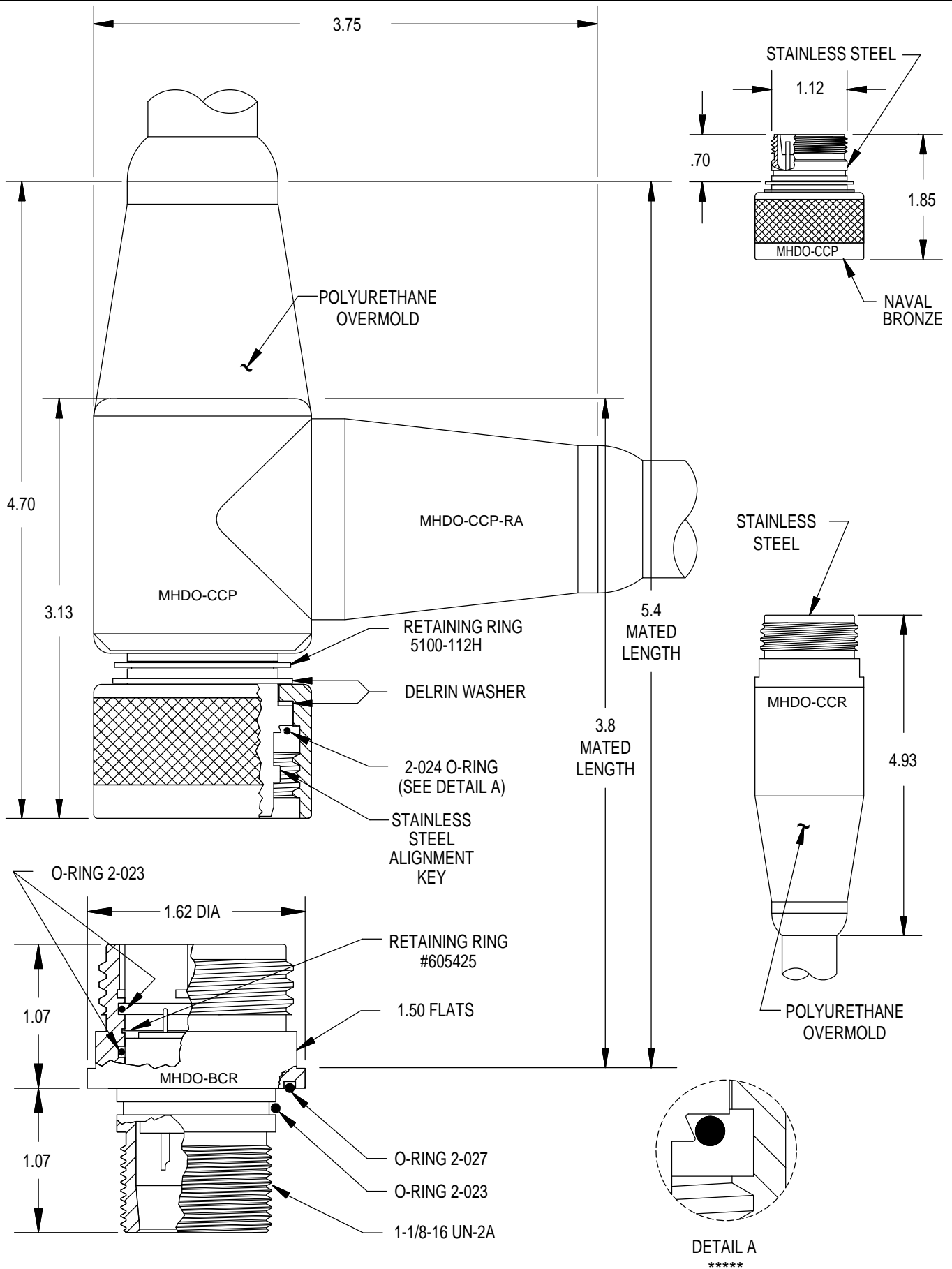
** Internal assembly is the same as the MHDM-BCR (facing page).

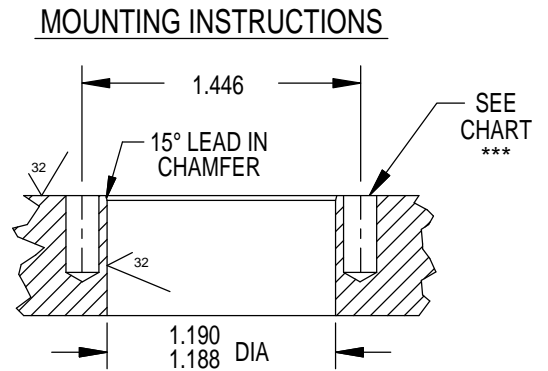
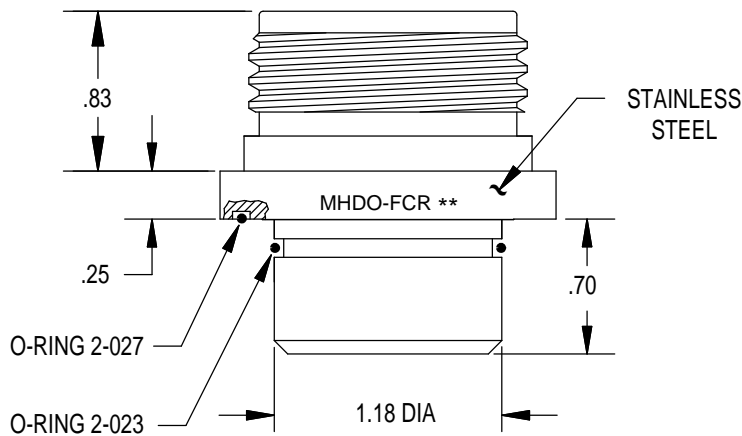
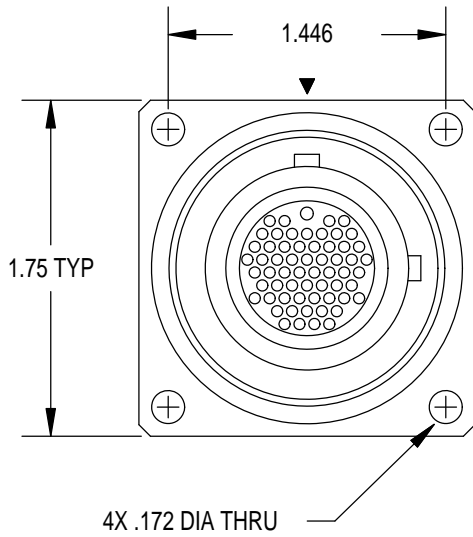
*** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.

**** O-Ring installation tool available - Contact factory for further details.

MHDO

MINIATURE HIGH DENSITY SERIES





| | | | |
|---------------------------------|--------------------------|-----------------------------|----------|
| MOUNTING TORQUE FOR MHDO-BCR | not to exceed 200 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR MHDO-BCR/FCR/CCR | MHDO-SCP | DUMMY PLUG FOR MHDO-CCP | MHDO-SCR |

NOTE: CCP and CCR are not terminated to cable unless specified.

* Please specify number of contacts.

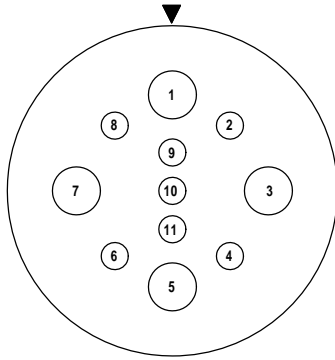
** Internal assembly same as MHDO-BCR (facing page).

*** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.

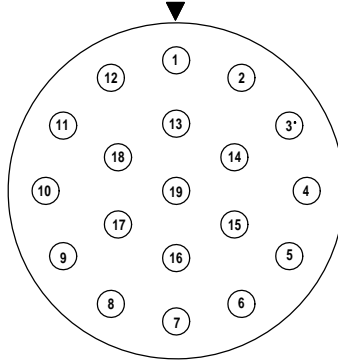
**** Oil filled version available. See section 86.

***** O-Ring installation tool available - Contact factory for further details.

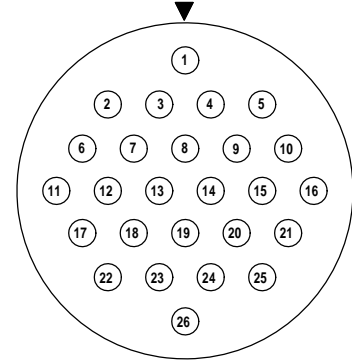
CONTACT
CONFIGURATION
(BCR FACE VIEW)



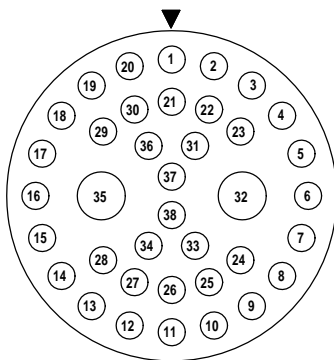
7#22
4#10
600VDC



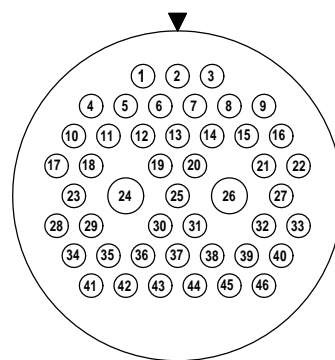
19#16
600VDC



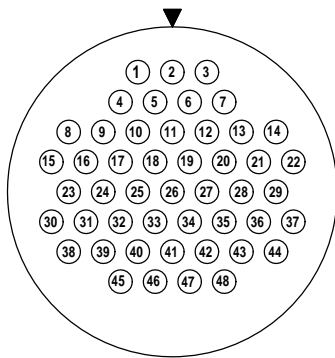
26#20
450VDC



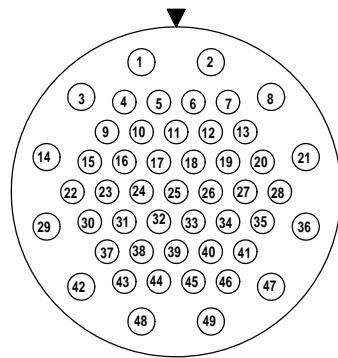
2#10
36#22
300VDC



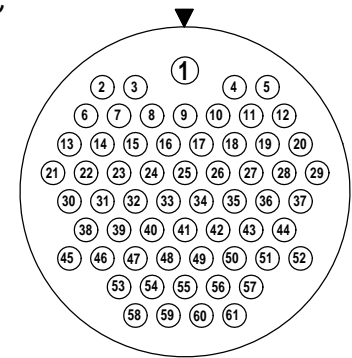
44#22
2#16
300VDC



48#22
300VDC

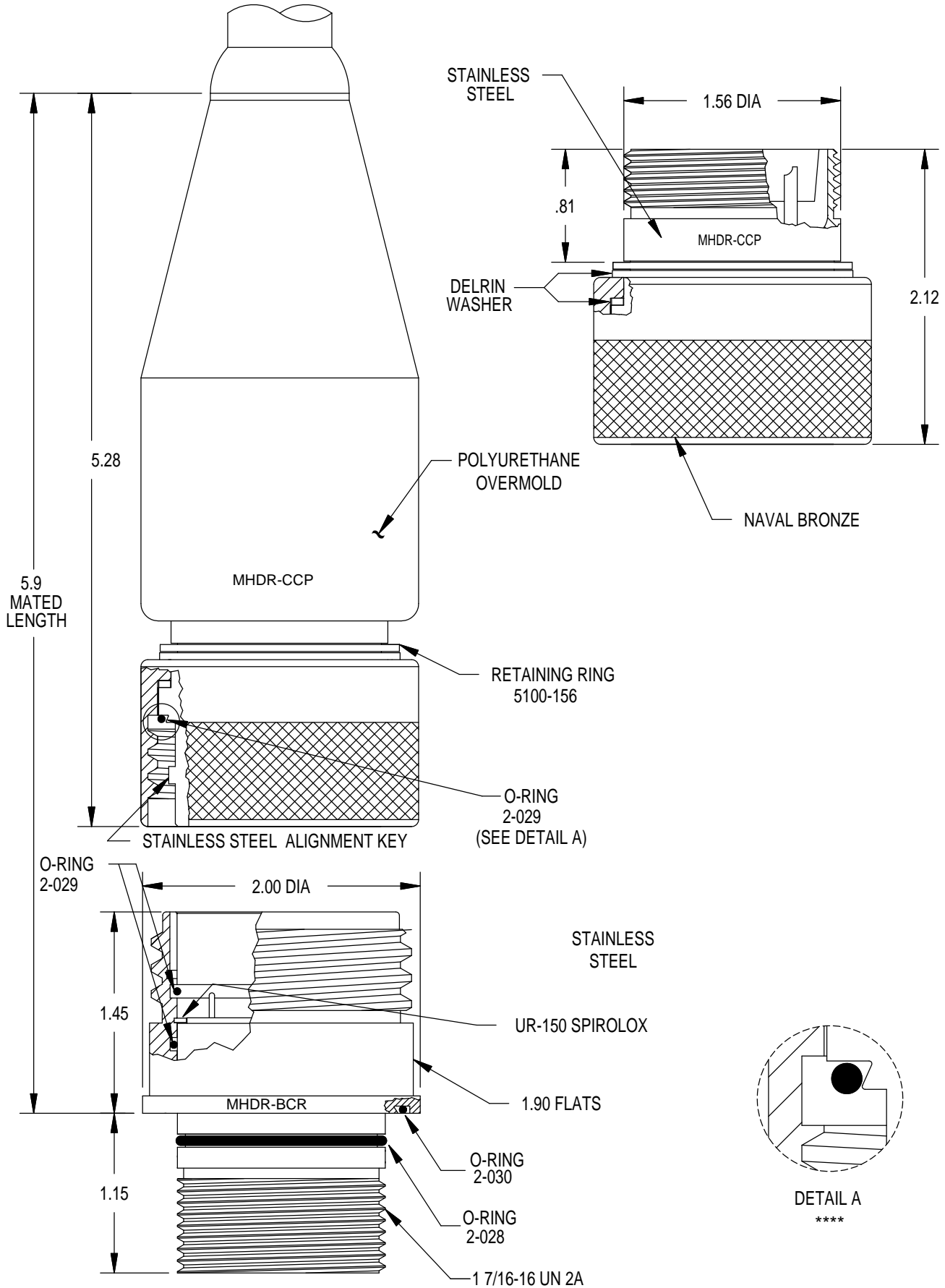


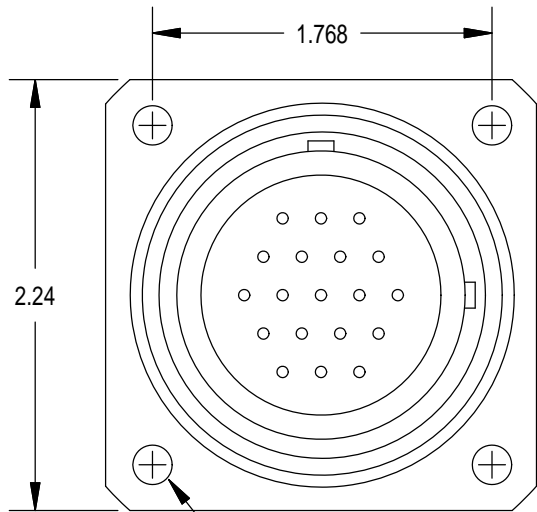
12#20
37#22
300VDC



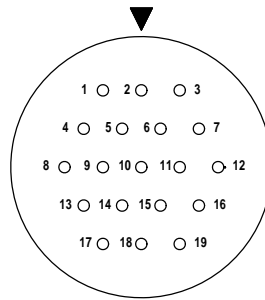
1#20
60#22
300VDC

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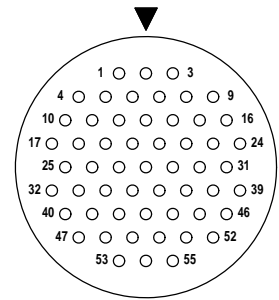


4X .205 DIA THRU



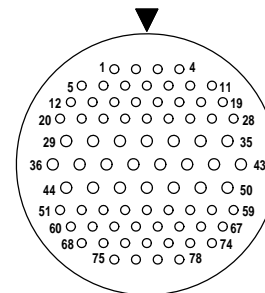
19#20

600VDC



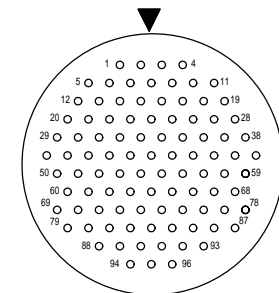
55#20

600VDC



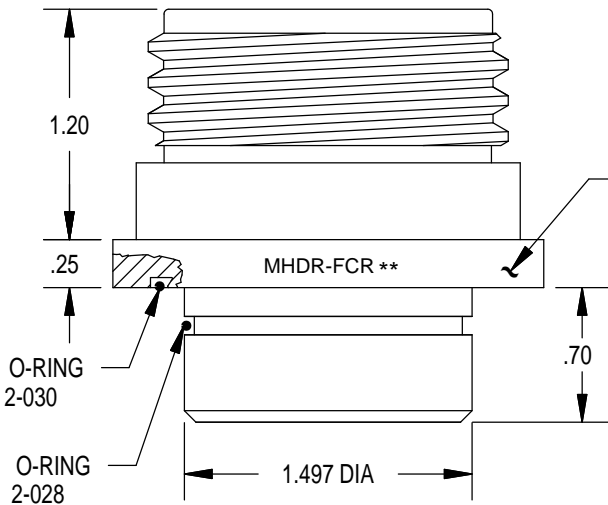
22#20

56#22
600VDC



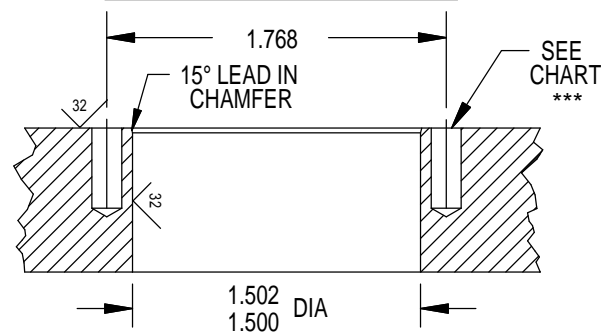
96#20

600VDC



STAINLESS STEEL

MOUNTING INSTRUCTIONS



| | | | |
|---------------------------------|--------------------------|-----------------------------|----------|
| MOUNTING TORQUE FOR MHDR-BCR | not to exceed 200 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR MHDR-BCR/FCR/CCR | MHDR-SCP | DUMMY PLUG FOR MHDR-CCP | MHDR-SCR |

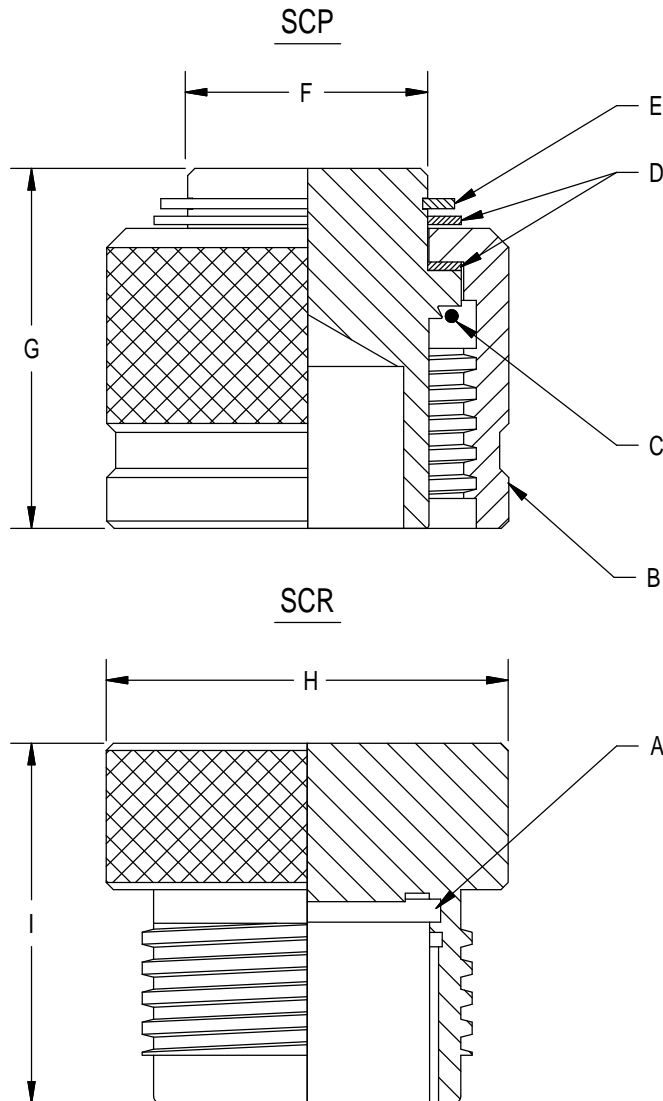
NOTE: CCP is not terminated to cable unless specified.

* Please specify number of contacts.

** Internal assembly same as MHDR-BCR (facing page).

*** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.

**** O-Ring installation tool available - Contact factory for further details.



| CONNECTOR SIZE | MHDG | MHDL | MHDM | MHDO | MHDR |
|-----------------------------|---------|----------------|----------|----------|----------|
| A O-RING | 2-016 | 2-018 | 2-020 | 2-023 | 2-029 |
| B ENGAGING NUT | 605165 | 605280 | 602004 | 605450 | 602261 |
| C O-RING | 2-017 | R00787-039-070 | 2-022 | 2-024 | 2-029 |
| D DELRIN WASHER(2X) | 605101 | | 605273 | 602005 | 605430 |
| E RETAINING RING | 5100-68 | 5100-75 | 5100-100 | 5100-112 | 5100-156 |
| F DIA | .69 | .75 | 1.00 | 1.12 | 1.56 |
| G | 1.05 | .95 | .97 | 1.25 | 1.45 |
| H DIA | 1.00 | 1.25 | 1.43 | 1.62 | 2.00 |
| I | 1.00 | .90 | .87 | 1.25 | 1.45 |
| MATED PRESSURE RATING (psi) | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 |

DESCRIPTION AND MATERIAL

- 316 stainless steel passivated per QQ-P-35 Type VI with naval bronze engaging nut.
- Bulkhead connectors available as a threaded or flanged version with a removable glass reinforced epoxy insert. (Except for MHDG Series and CCP's)
- Up to 61 contacts.
- Up to 600 VDC.
- 5,000 PSI in mated condition.
- Bulkhead connector design open face pressure rated to 5,000 psi.
- Contacts are gold plated per MIL-G-45204.

USES

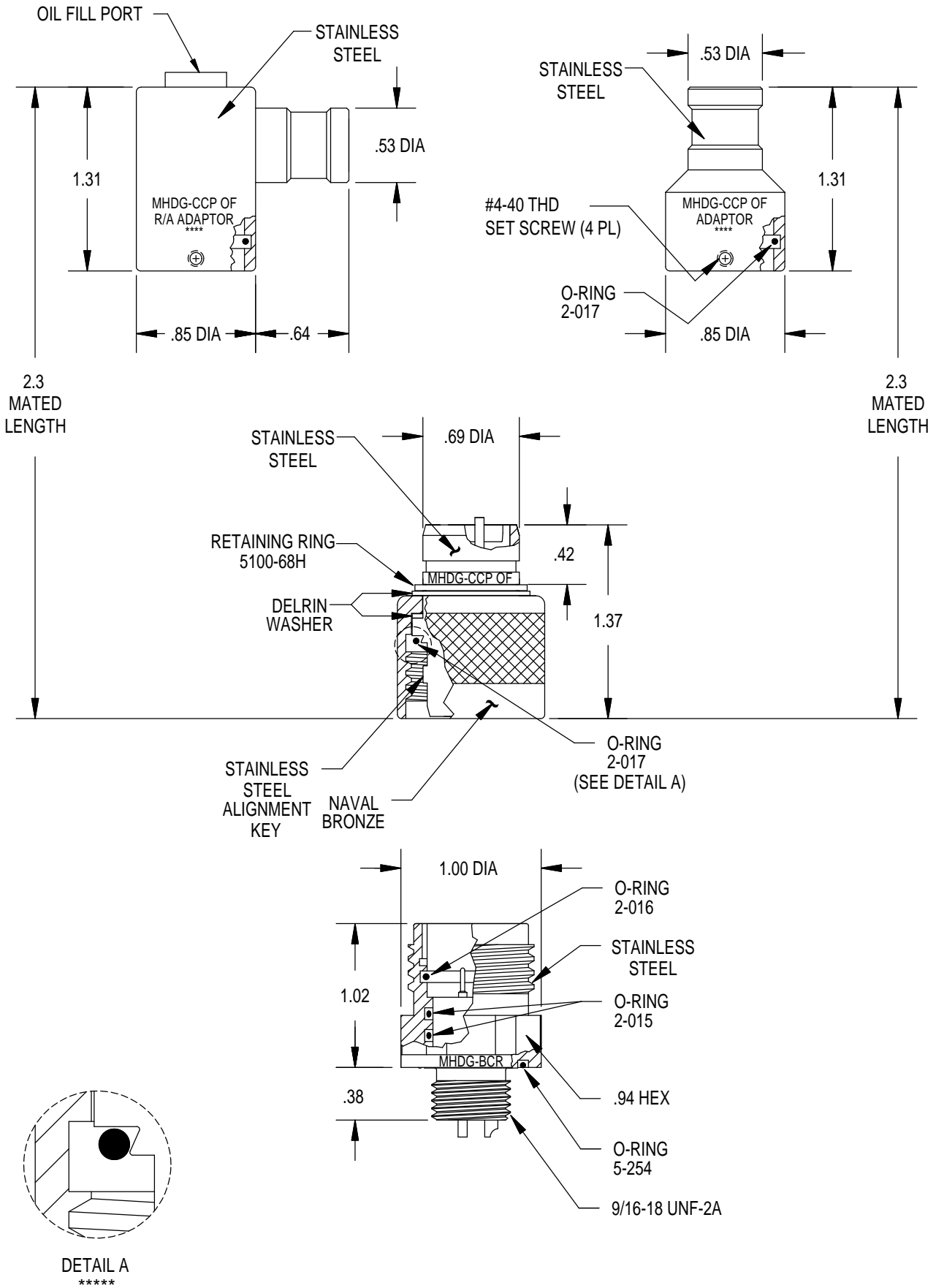
- For use with oil filled tubes.
- Signal telemetry.
- Hazardous environment.

GUIDELINES

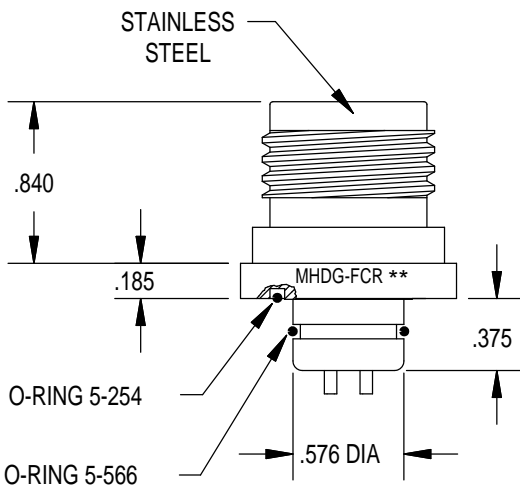
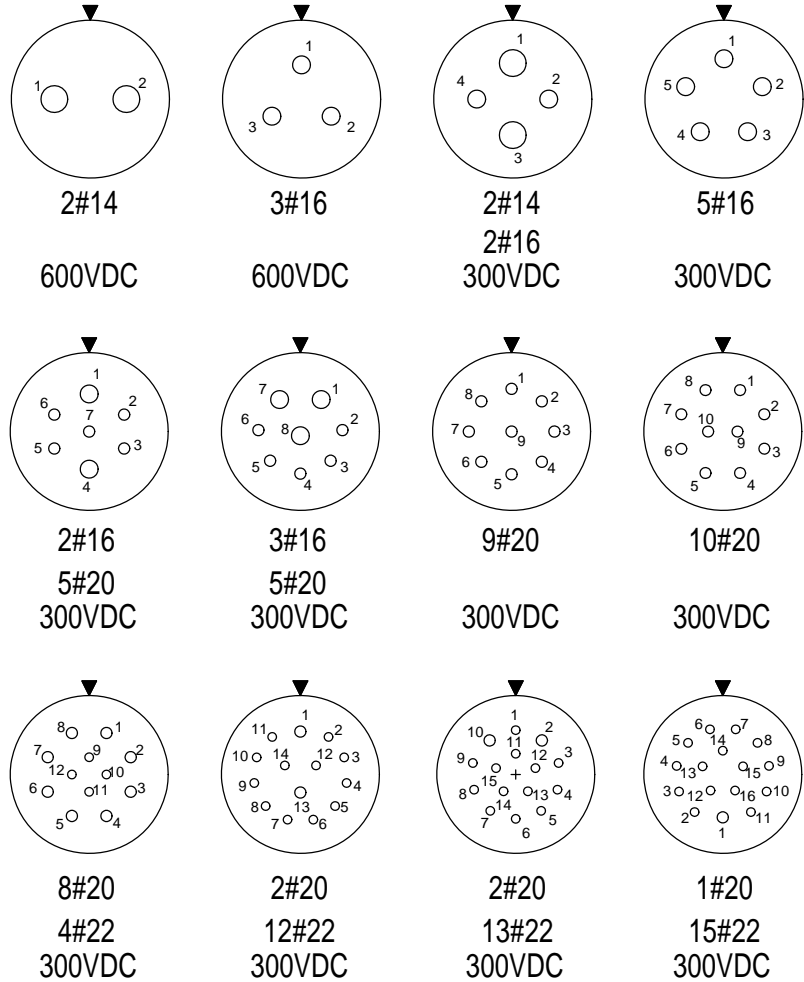
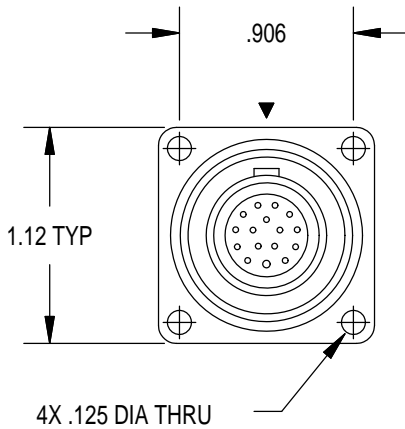
- Mounting torque should not exceed 150 in/lbs. for this series.
- All mounting surfaces require a 32 finish.
- Align indexes.
- Keep o-ring grooves clean.
- Avoid o-ring cuts and nicks.
- Lubricate o-rings with Dow Corning #111 Valve Lubricant or equivalent.
- Replace o-rings when re-using connectors.
- Avoid contact with noxious solvents.
- Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time.
- Slight leakage of oil through CCP face may occur.

MHDG-OF

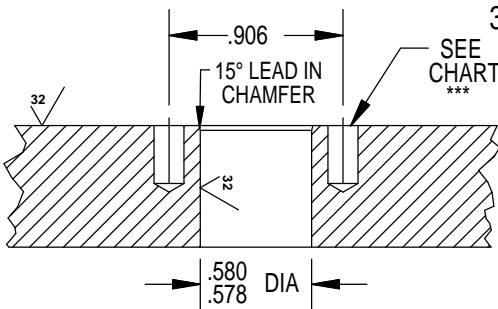
MINIATURE HIGH DENSITY SERIES - OIL FILLED



CONTACT CONFIGURATION
(BCR FACE VIEW)



MOUNTING INSTRUCTIONS

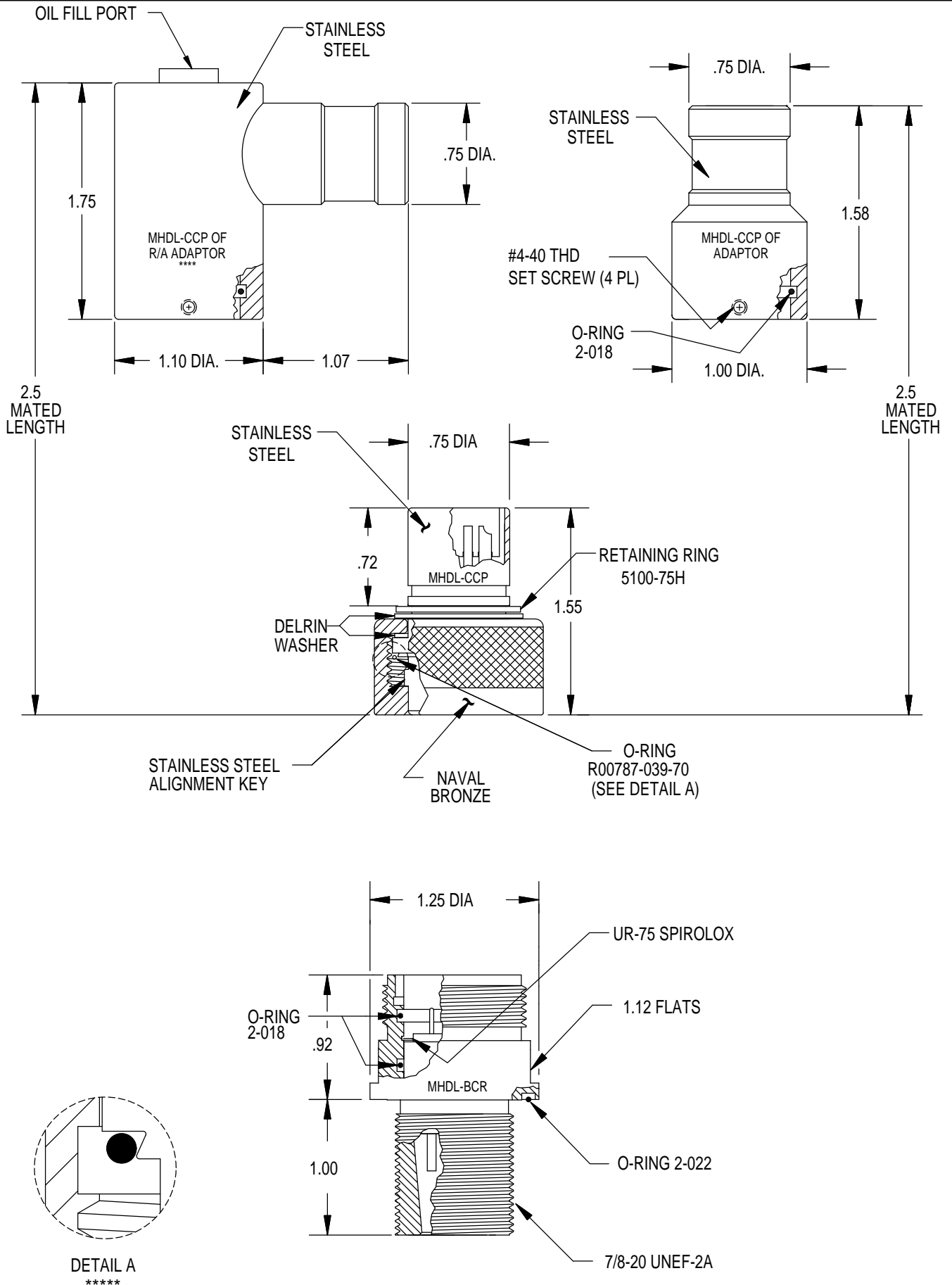


| | | | |
|---------------------------------|--------------------------|-----------------------------|----------|
| MOUNTING TORQUE FOR MHDG-BCR | not to exceed 150 in lbs | MATED PRESSURE RATING (psi) | 5,000 |
| DUMMY PLUG FOR MHDG-BCR/FCR/CCR | MHDG-SCP | DUMMY PLUG FOR MHDG-CCP | MHDG-SCR |

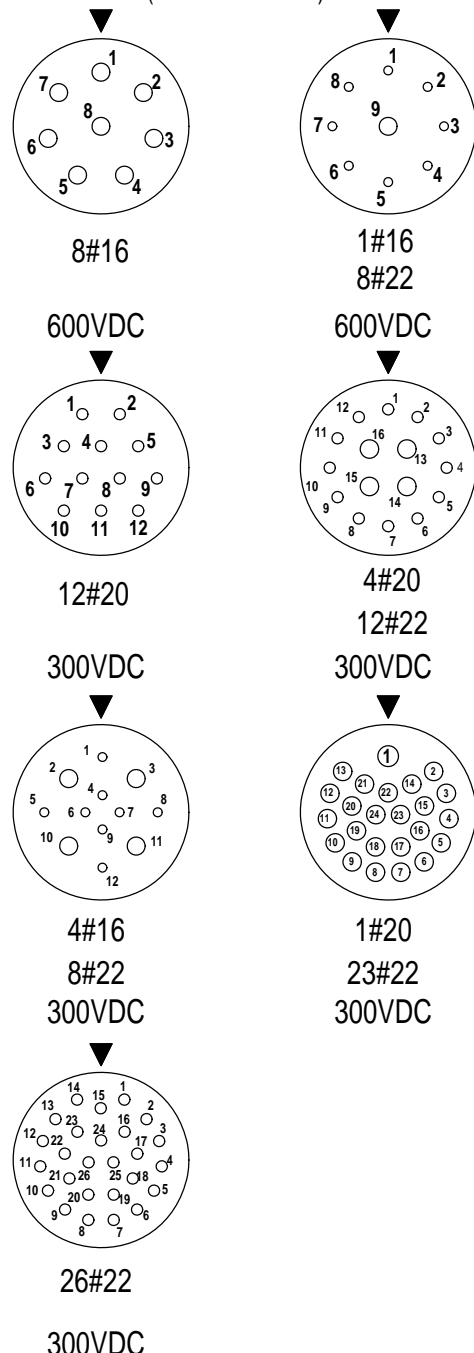
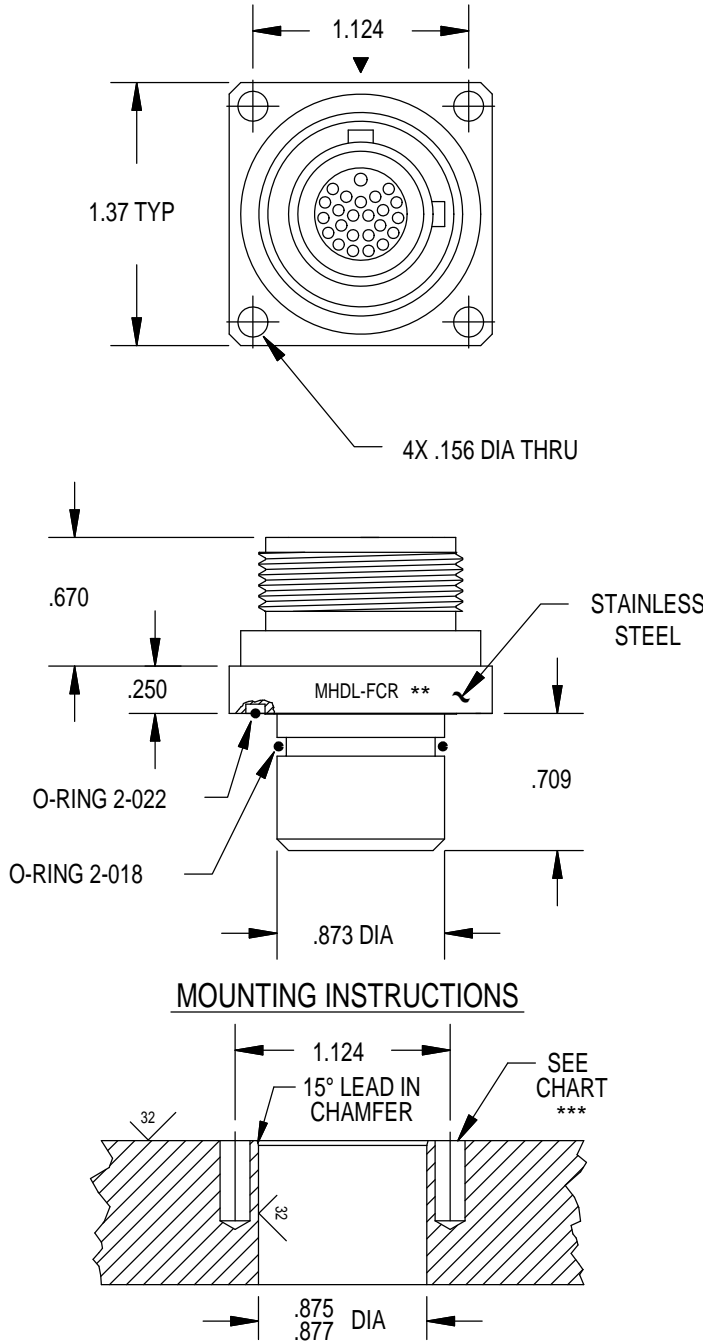
- * Please specify number of contacts.
- ** Internal assembly same as MHDG-BCR (facing page).
- *** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.
- **** OF adaptors should only be used with CCP-OF bodies.
- ***** O-Ring installation tool available - Contact factory for further details.

MHDL-OF

MINIATURE HIGH DENSITY SERIES - OIL FILLED



CONTACT CONFIGURATION
(BCR FACE VIEW)

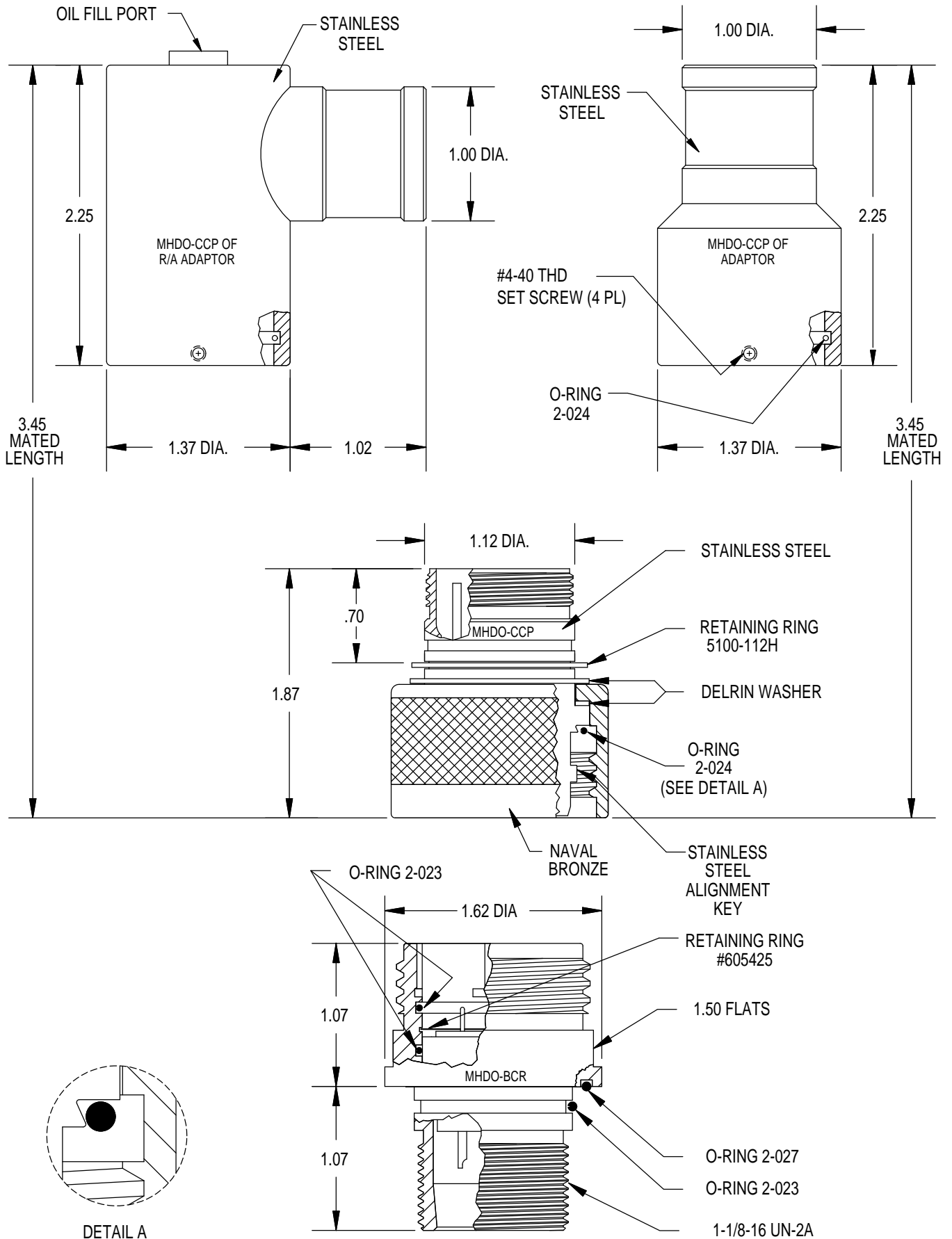


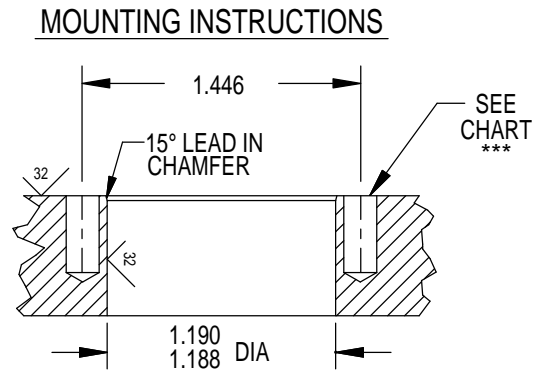
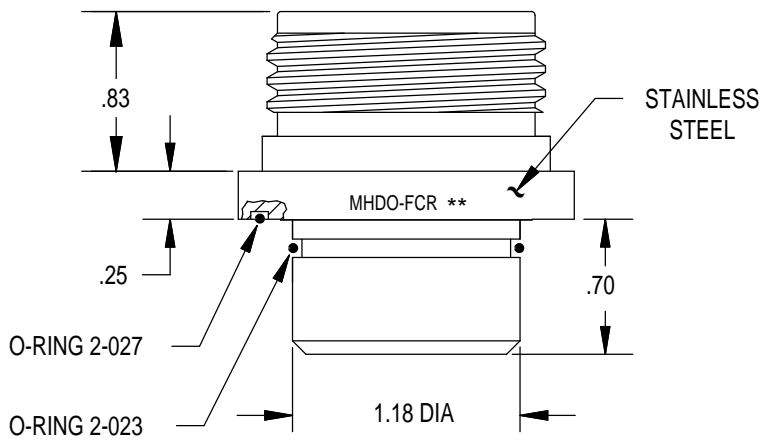
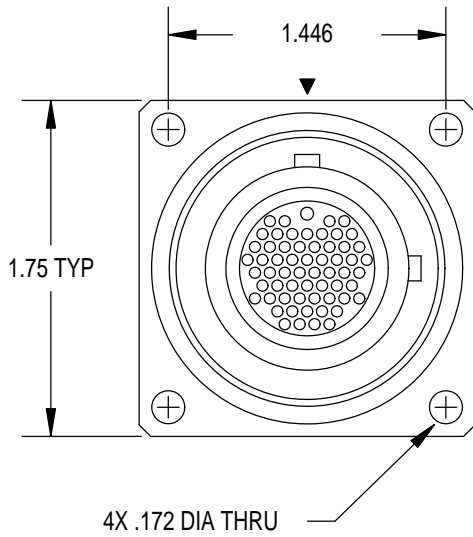
| | | | |
|---------------------------------|--------------------------|-----------------------------|----------|
| MOUNTING TORQUE FOR MHDL-BCR | not to exceed 200 in lbs | MATED PRESSURE RATING (psi) | 5,000 |
| DUMMY PLUG FOR MHDL-BCR/FCR/CCR | MHDL-SCP | DUMMY PLUG FOR MHDL-CCP | MHDL-SCR |

* Please specify number of contacts.
 ** Internal assembly same as MHDL-BCR (facing page).
 *** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.
 **** O-Ring installation tool available - Contact factory for further details.

MHDO-OF

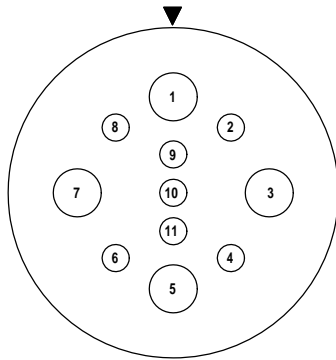
MINIATURE HIGH DENSITY SERIES - OIL FILLED



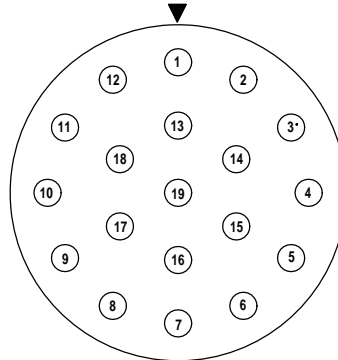


| | | | |
|--|--------------------------|-----------------------------|----------|
| MOUNTING TORQUE FOR MHDO-BCR | not to exceed 200 in lbs | MATED PRESSURE RATING (psi) | 5,000 |
| DUMMY PLUG FOR MHDO-BCR/FCR/CCR | MHDO-SCP | DUMMY PLUG FOR MHDO-CCP | MHDO-SCR |
| <p>* Please specify number of contacts.</p> <p>** Internal assembly same as MHDO-BCR (facing page).</p> <p>*** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.</p> <p>**** O-Ring installation tool available - Contact factory for further information.</p> | | | |

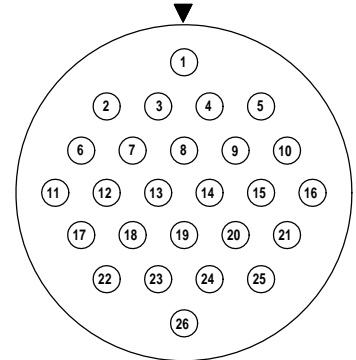
CONTACT
CONFIGURATION
(BCR FACE VIEW)



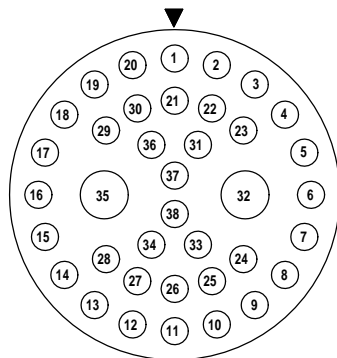
7#22
4#10
600VDC



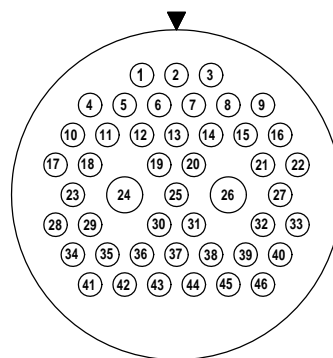
19#16
600VDC



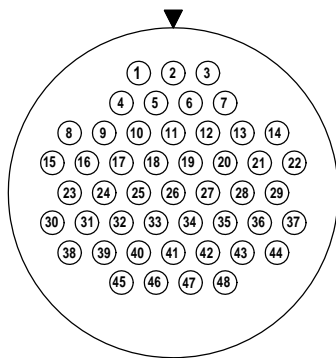
26#20
450VDC



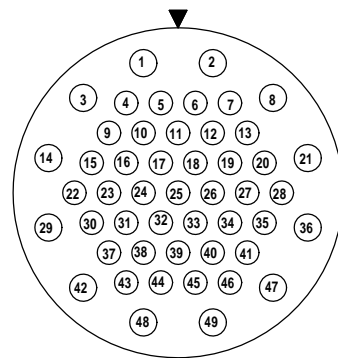
2#10
36#22
300VDC



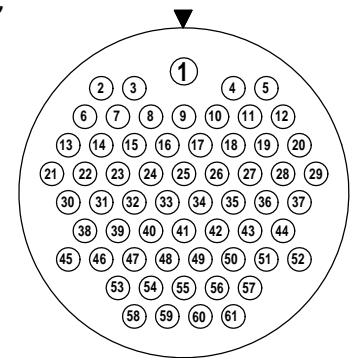
44#22
2#16
300VDC



48#22
300VDC

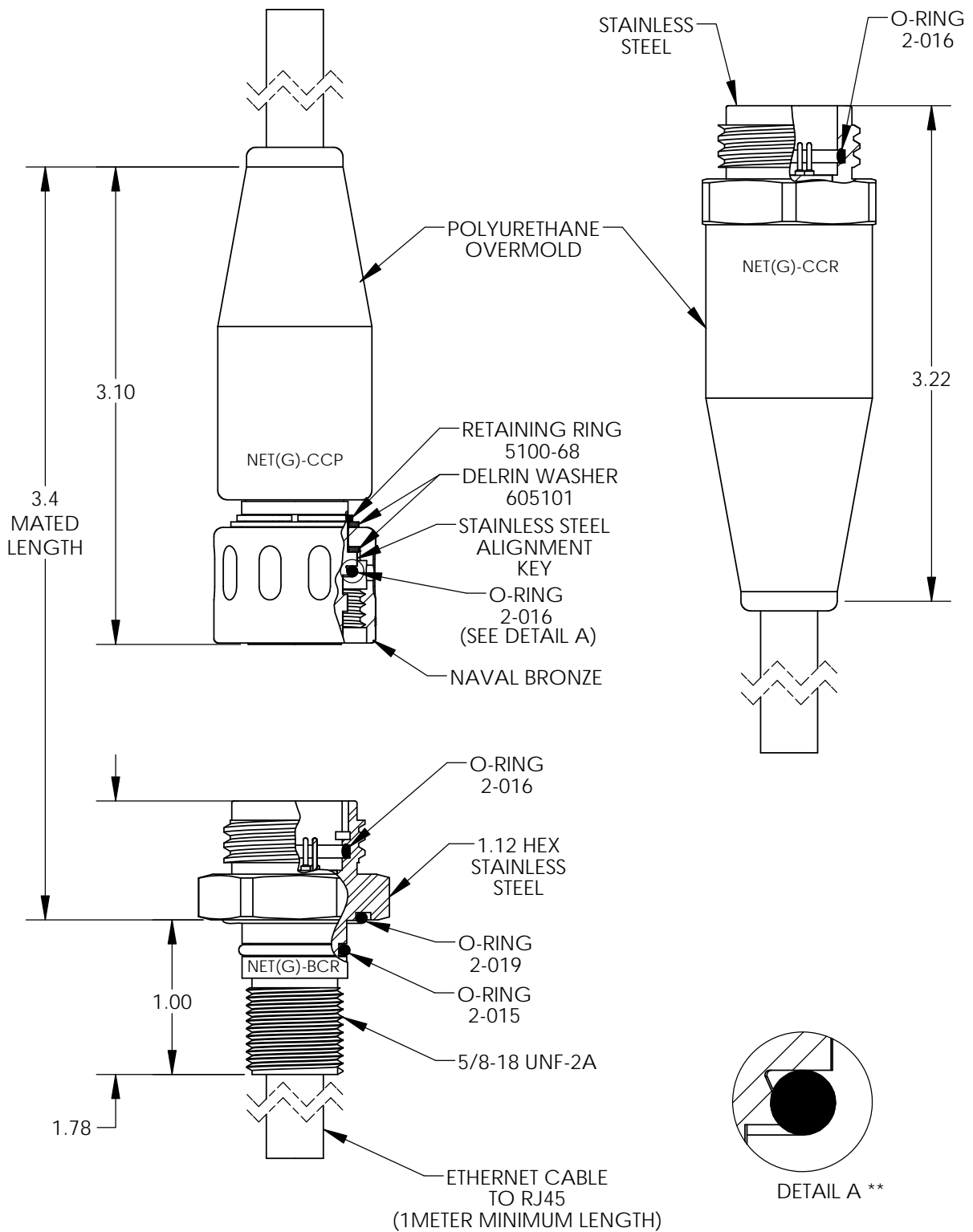


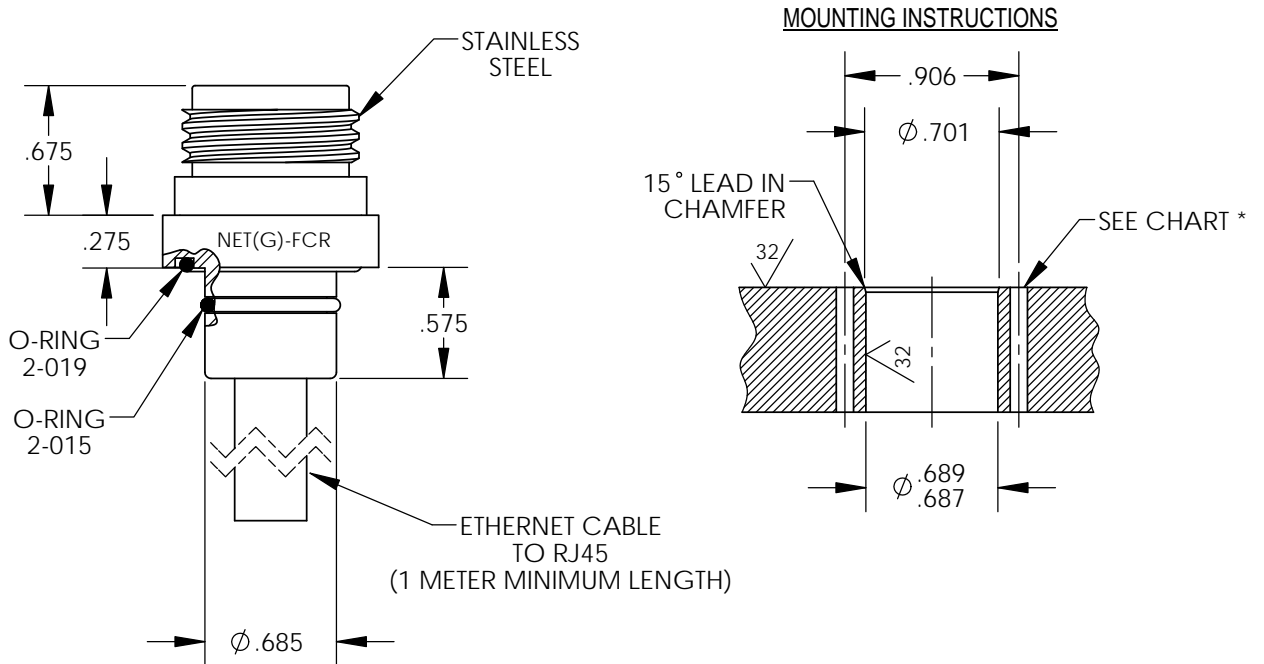
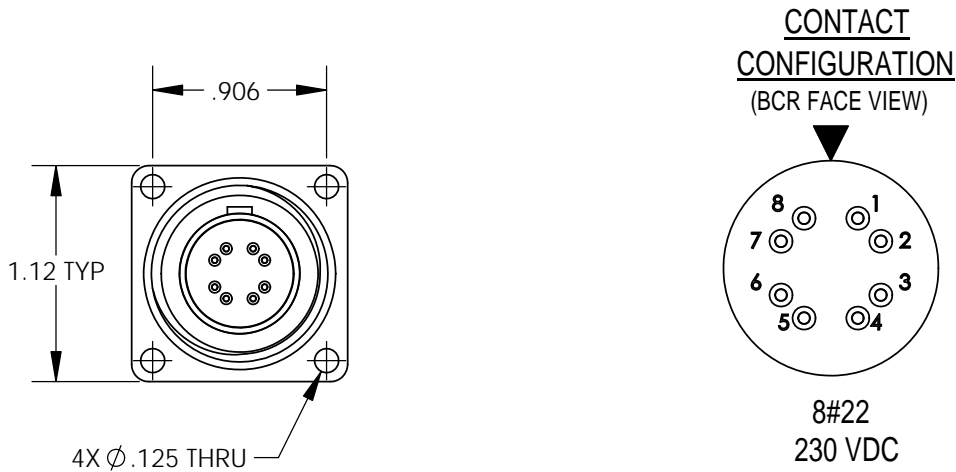
12#20
37#22
300VDC



1#20
60#22
300VDC

| | |
|--------------------------|---|
| DESCRIPTION AND MATERIAL | <ul style="list-style-type: none">• Metal to metal key for position alignment.• 316 stainless steel passivated per QQ-P-35 Type VI with naval bronze engaging nut.• Special alloys are available upon request (contact factory).• 8 contacts (#22) for 4 twisted pairs.• Contacts are gold plated per MIL-G-45204.• Working voltage up to 230 VDC.• 10,000 PSI in mated condition (higher pressure rating available using special alloy metal shell; please contact factory).• NET-CCR/CCP connectors are overmolded with polyurethane. |
| CABLE | <ul style="list-style-type: none">• Connector's amperage and voltage is limited by the amperage and voltage ratings of the cable to which the connector is molded.• This series is molded to Teledyne Impulse qualified cable (maximum length 70 m for 1 Gbit/s transmissions). Customer specified cables can be used, but would require testing to verify data rate. |
| USES | <ul style="list-style-type: none">• ROV applications.• Signal telemetry.• Hazardous environment. |
| GUIDELINES | <ul style="list-style-type: none">• FCR is mounted by use of four equally spaced bolts around the flange surface.• FCR is used in place of the BCR when the use of a bulkhead nut and washer is impractical.• Mounting torque should not exceed 150 in lbs. for this series.• All mounting surfaces require a 32 finish.• Align indexes.• Keep o-ring grooves clean.• Avoid o-ring cuts and nicks.• Lubricate o-rings with Dow Corning #111 Valve Lubricant or equivalent.• Replace o-rings when re-using connectors.• Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time. |



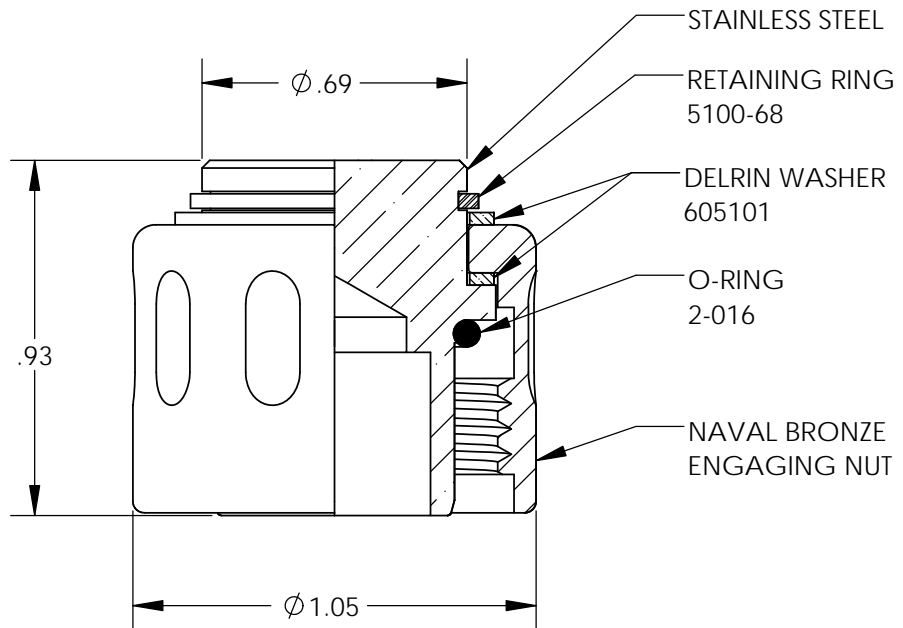


| | | | |
|-----------------------------------|--------------------------|-----------------------------|------------|
| MOUNTING TORQUE FOR NET(G)-BCR | not to exceed 150 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR NET(G)-BCR/FCR/CCR | NET(G)-SCP | DUMMY PLUG FOR NET(G)-CCP | NET(G)-SCR |

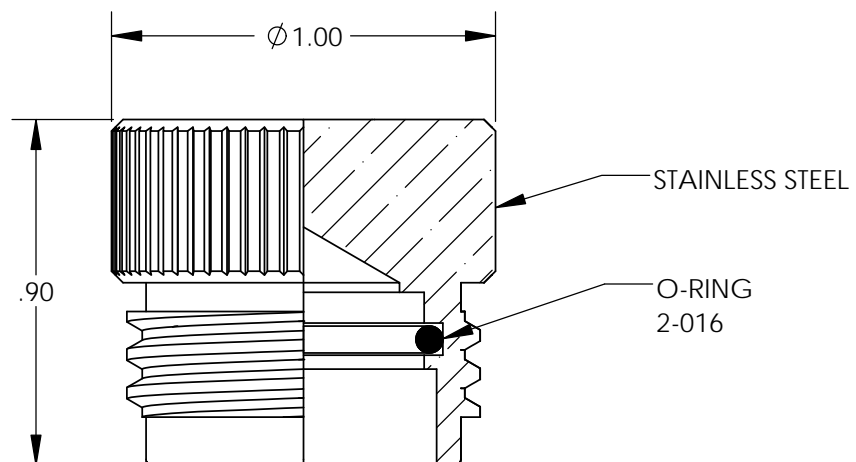
NOTE:

- * Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.
- ** O-Ring installation tool available - contact factory for further details.
- *** Total assembly length not to exceed 70 meters for 1 Gbit transmission.

SCP

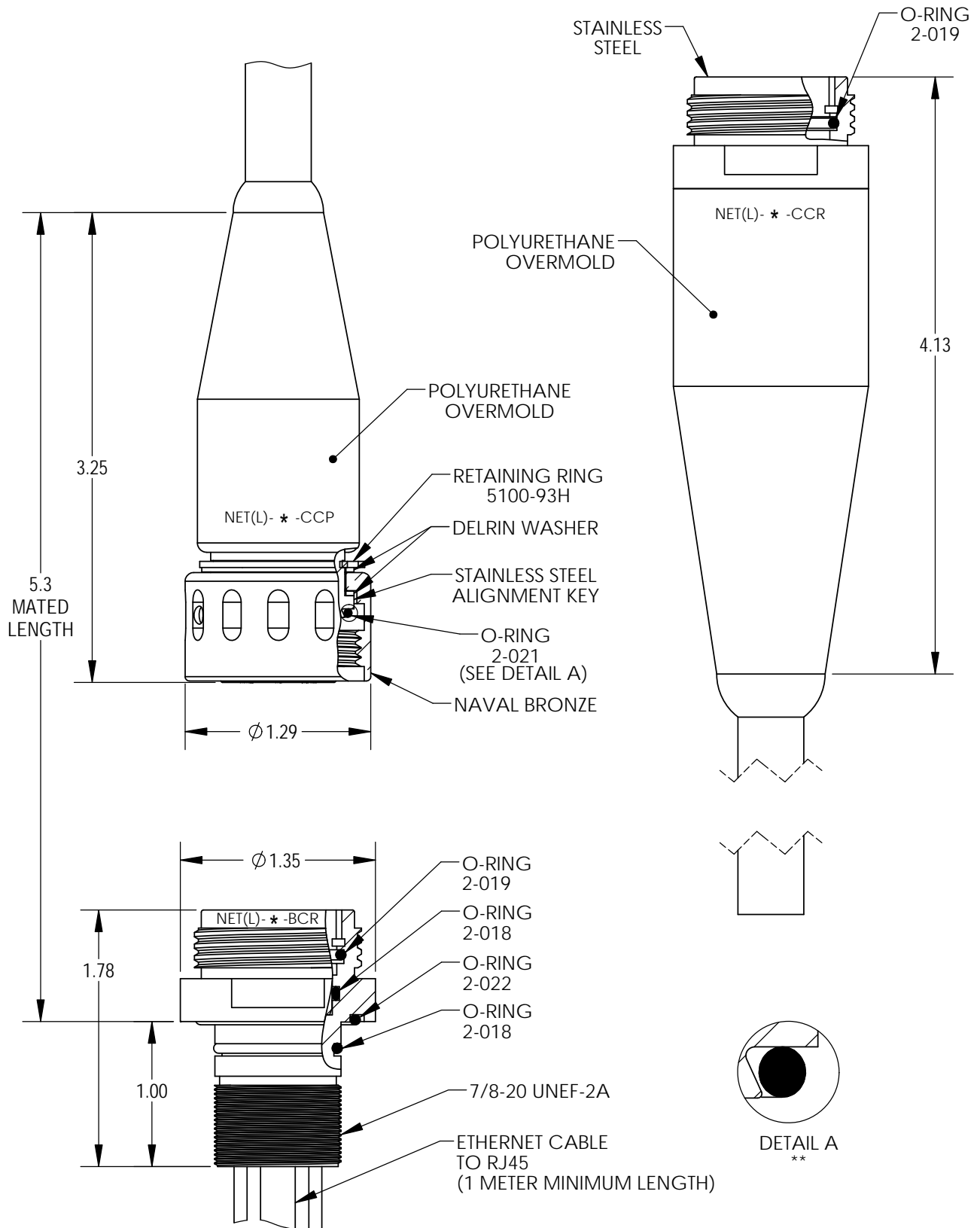


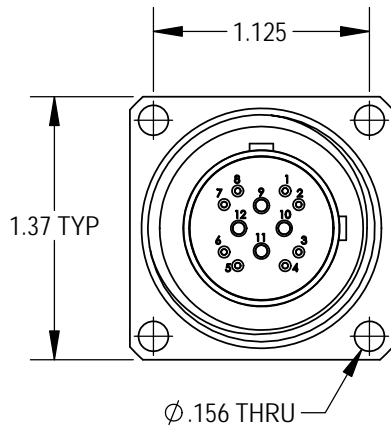
SCR



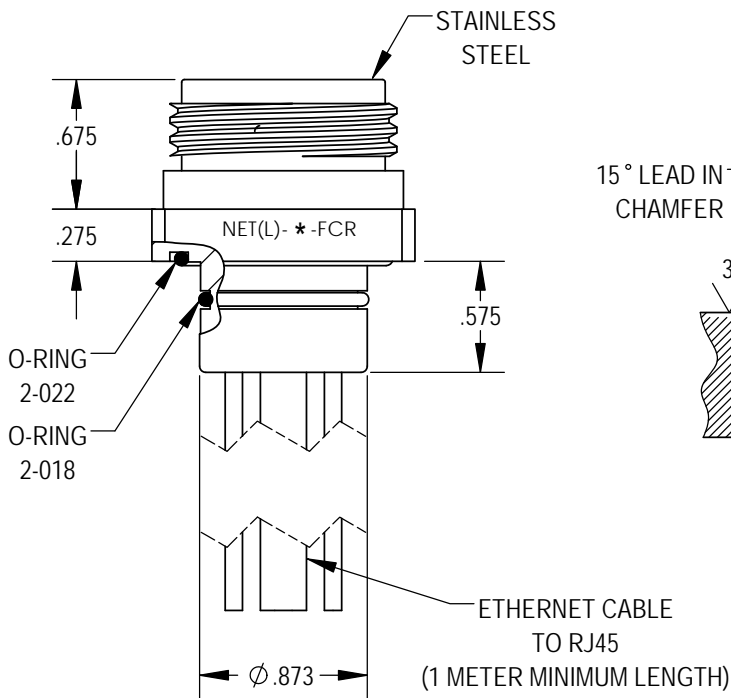
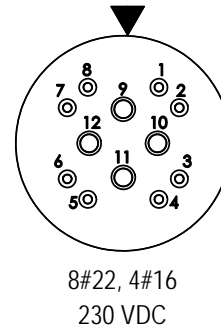
NET(L)

NET SERIES 1 GIGABIT ETHERNET

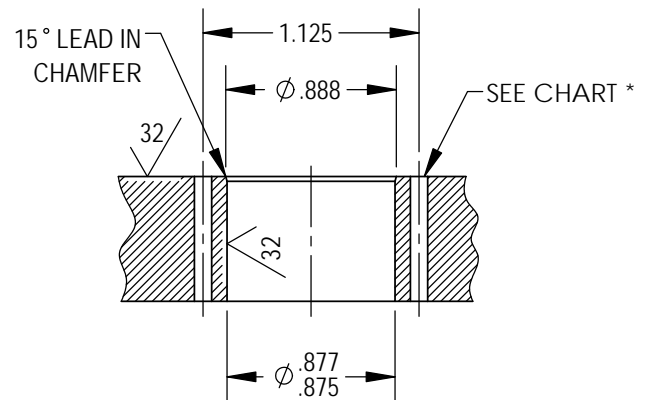




CONTACT CONFIGURATION
(BCR FACE VIEW)



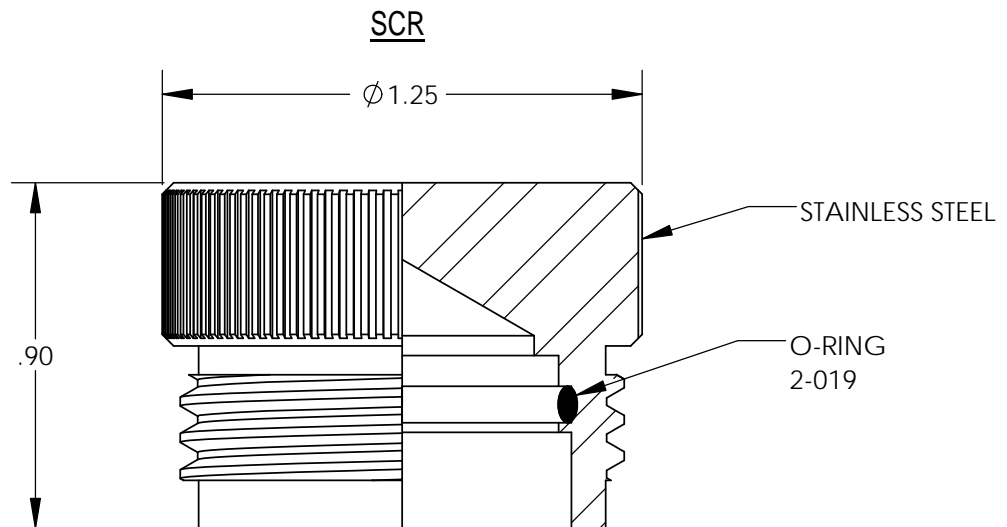
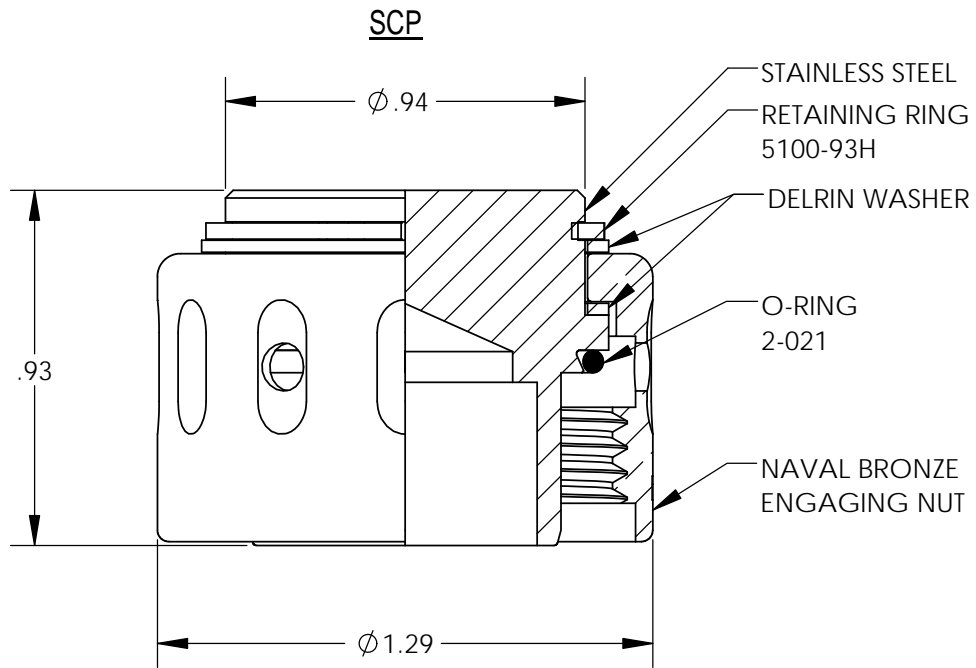
MOUNTING INSTRUCTIONS



| | | | |
|-----------------------------------|--------------------------|-----------------------------|------------|
| MOUNTING TORQUE FOR NET(L)-BCR | not to exceed 150 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
| DUMMY PLUG FOR NET(L)-BCR/FCR/CCR | NET(L)-SCP | DUMMY PLUG FOR NET(L)-CCP | NET(L)-SCR |

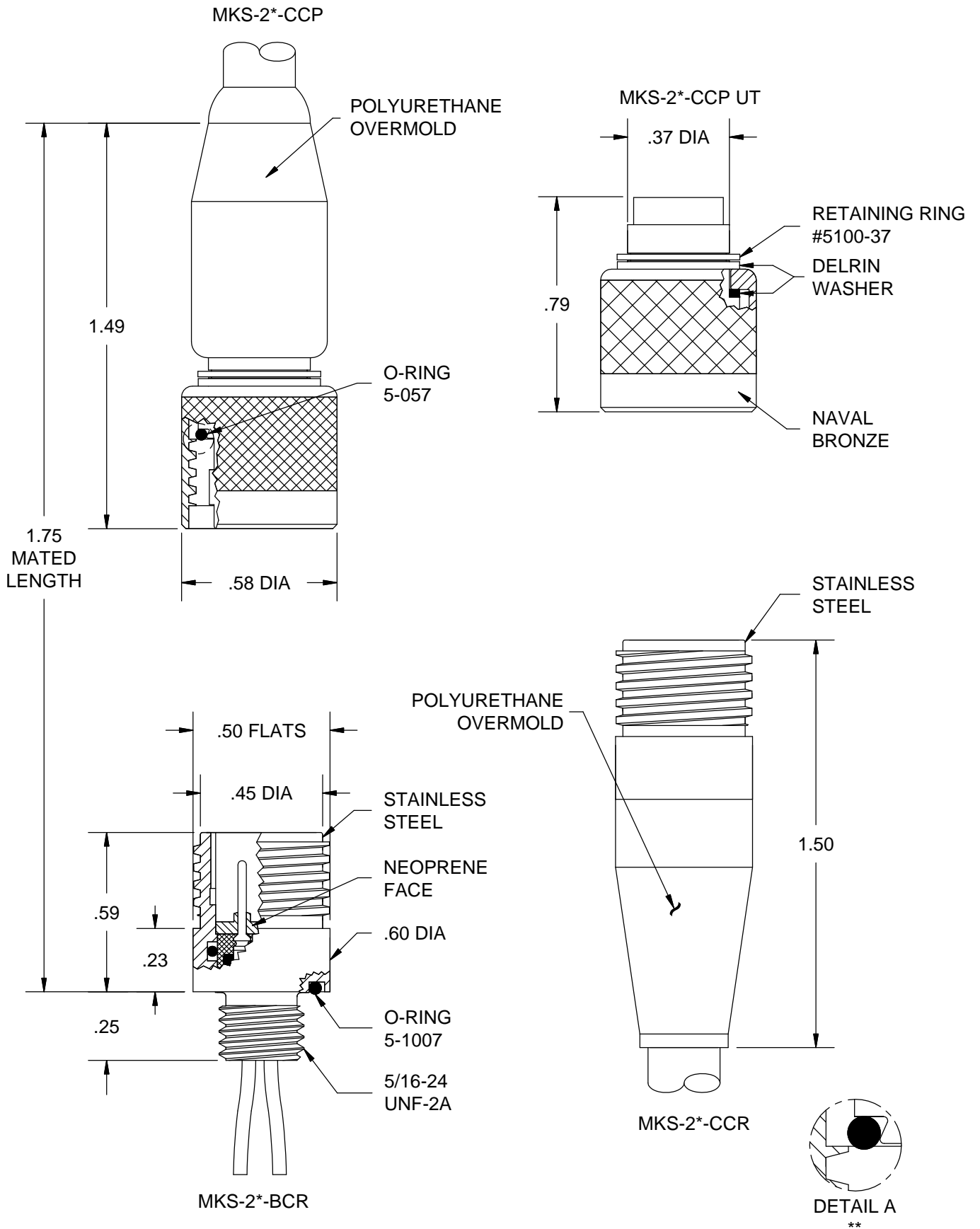
NOTE:

- * Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.
- ** O-Ring installation tool available - contact factory for further details.
- *** Total assembly length not to exceed 70 meters for 1 Gbit transmission.

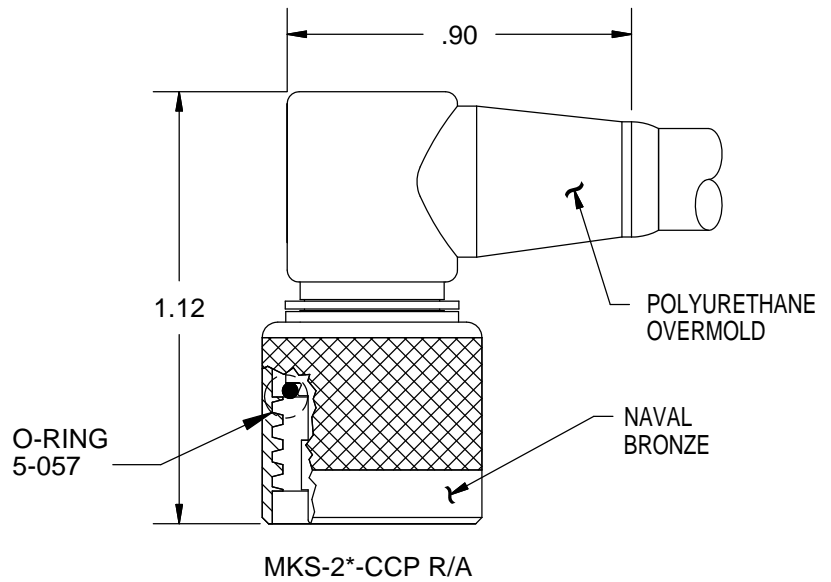
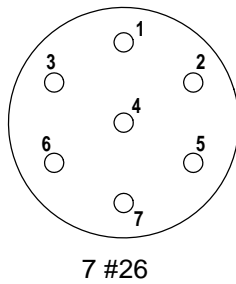
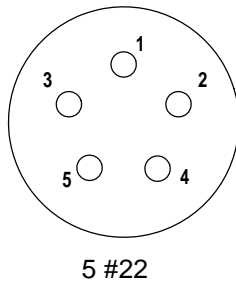


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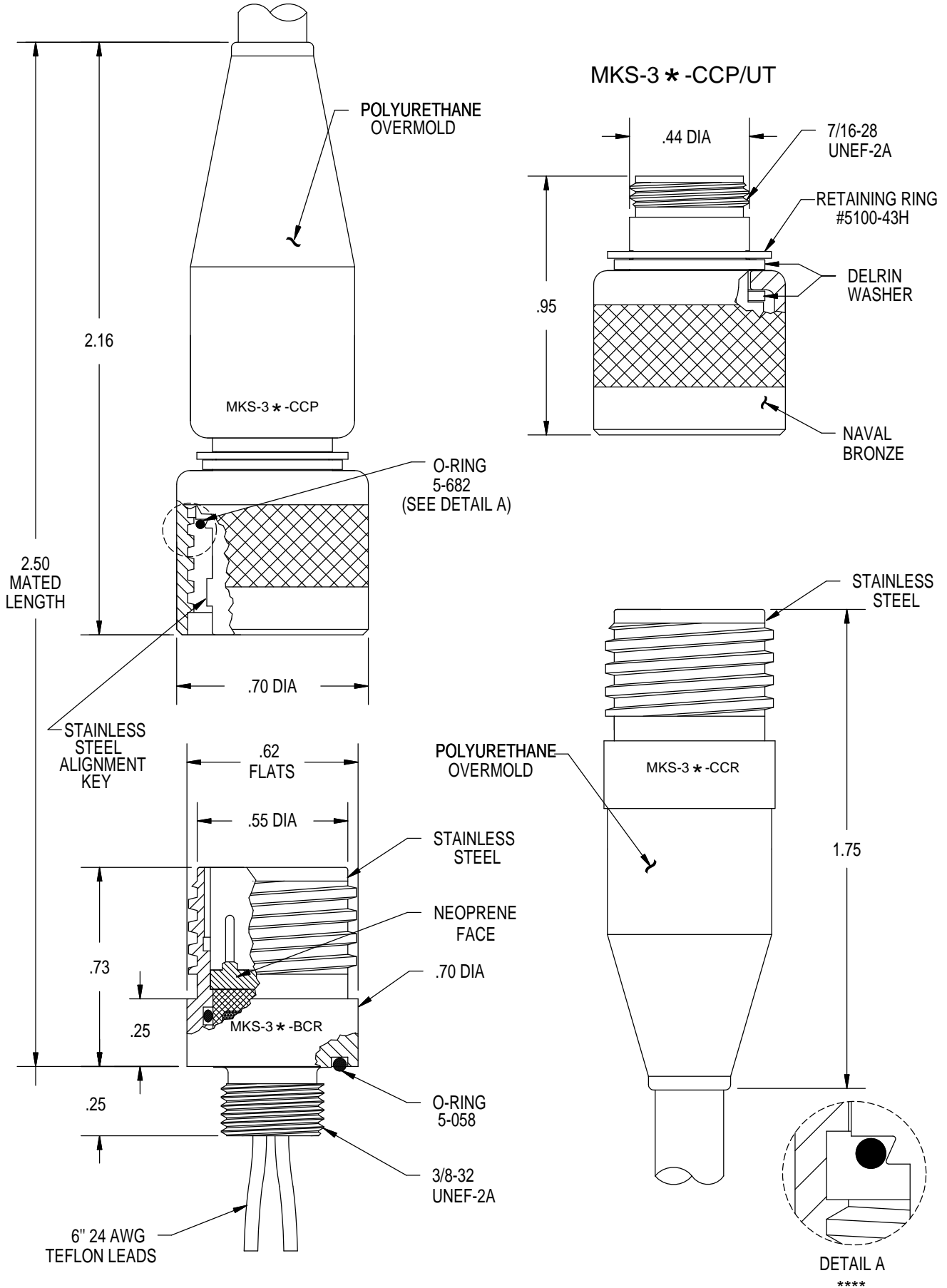
-
- | | |
|--------------------------|--|
| DESCRIPTION AND MATERIAL | <ul style="list-style-type: none">• Metal to metal key for positive alignment.• 316 Stainless Steel passivated per QQ-P-35 Type VI with naval bronze engaging nut.• Special alloys are available upon request (contact factory).• 10,000 PSI in mated condition.• Bulkhead connector design open face pressure rated to 5000 PSI.• Contacts gold plated per MIL-G-45204.• Engaging nuts have Acme threads for rugged applications and for quick connection.• Working voltage - 300 VDC |
| CABLE | <ul style="list-style-type: none">• CCP is not terminated to cable unless specified at the time of order• BCR has teflon leads, Type E per MIL 16878/4 |
| USES | <ul style="list-style-type: none">• Light and Heavy Duty applications.• Hazardous environment.• Power Transmission.• Signal Telemetry.• ROV applications. |
| GUIDELINES | <ul style="list-style-type: none">• All mounting and sealing surfaces require a 32 finish.• Lubricate mating surfaces with 3M Silicone Spray or equivalent, DO NOT grease! Connectors must be lubricated on a regular basis.• Lubricate o-rings with Dow Corning #111 Valve Lubricant or equivalent.• Use Dust Caps and keep connectors clean to prevent damage in storage and service.• Keep o-ring grooves clean and avoid cuts, nicks and tears on rubber surfaces.• Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time.• Clean plugs and receptacles with soap and fresh water. Rinse out with alcohol, allowing connector to air dry.• Replace o-rings when re-using connectors. |

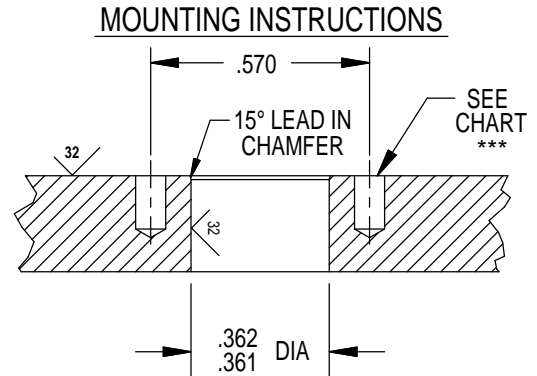
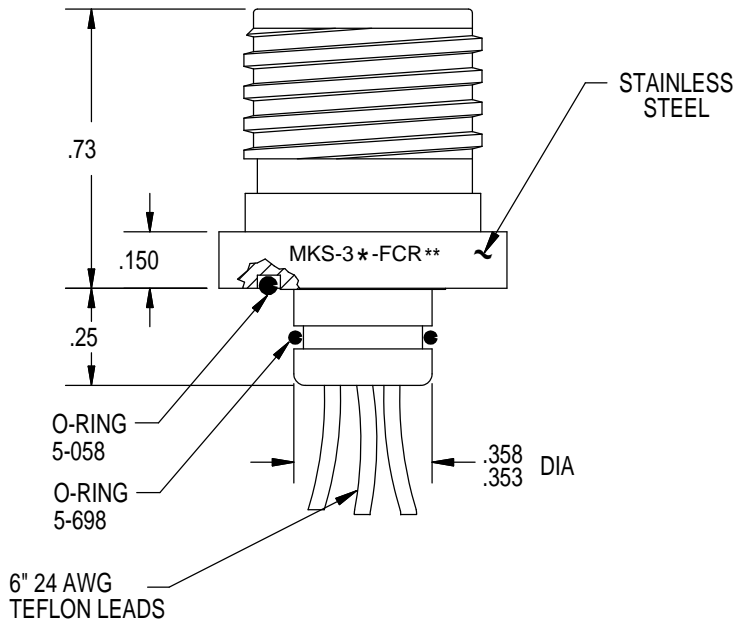
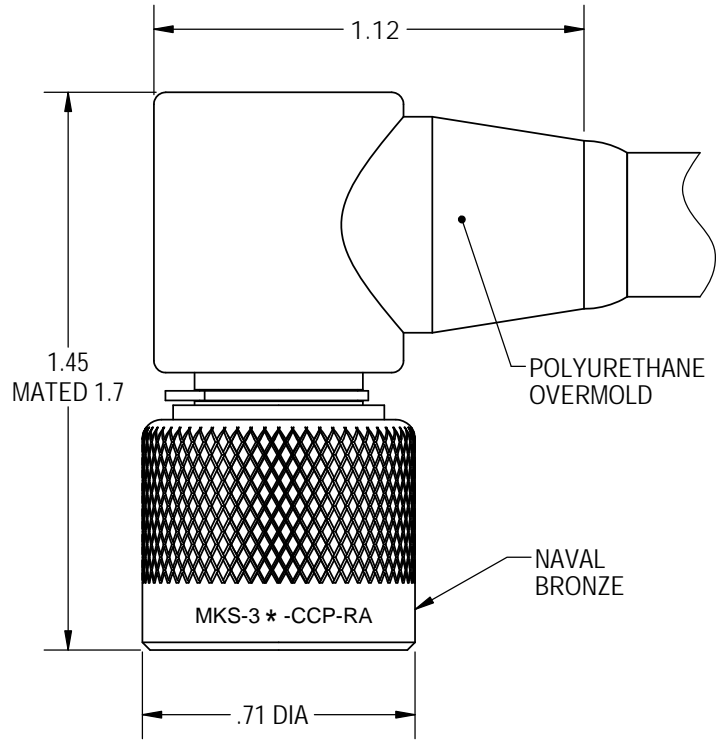
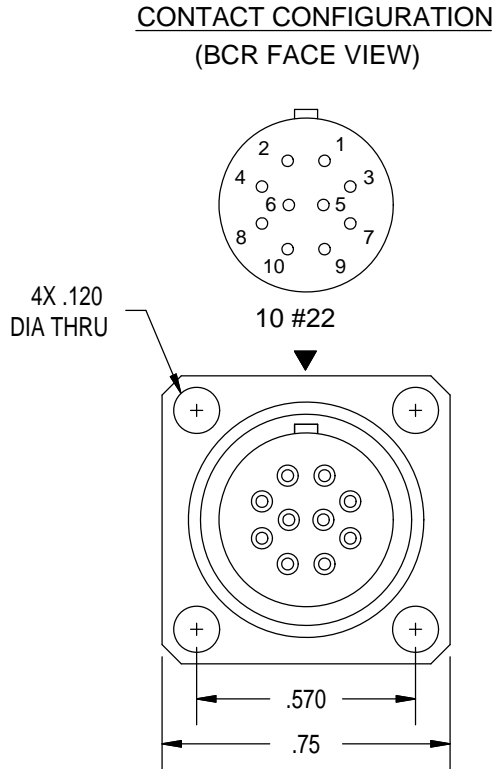


**CONTACT CONFIGURATION
(BCR FACE VIEW)**



| | | | |
|---|-------------------------|-----------------------------|--------|
| MOUNTING TORQUE FOR BCR | not to exceed 50 in-lbs | MATED PRESSURE RATING (psi) | 10,000 |
| See page 95 80 for SCP/SCR information | | | |
| <p>NOTE: CCP is not terminated to cable unless specified.</p> <p>* Please specify number of contacts.</p> <p>** O-Ring installation tool available - Contact factory for further details.</p> | | | |





| | | | |
|-------------------------|-------------------------|-----------------------------|--------|
| MOUNTING TORQUE FOR BCR | not to exceed 50 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
|-------------------------|-------------------------|-----------------------------|--------|

See pg. 9580 for SCP/SCR information

NOTE: CCP is not terminated to cable unless specified.

* Please specify number of contacts.

** Internal assembly same as MKS-3 * -BCR (facing page).

*** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.

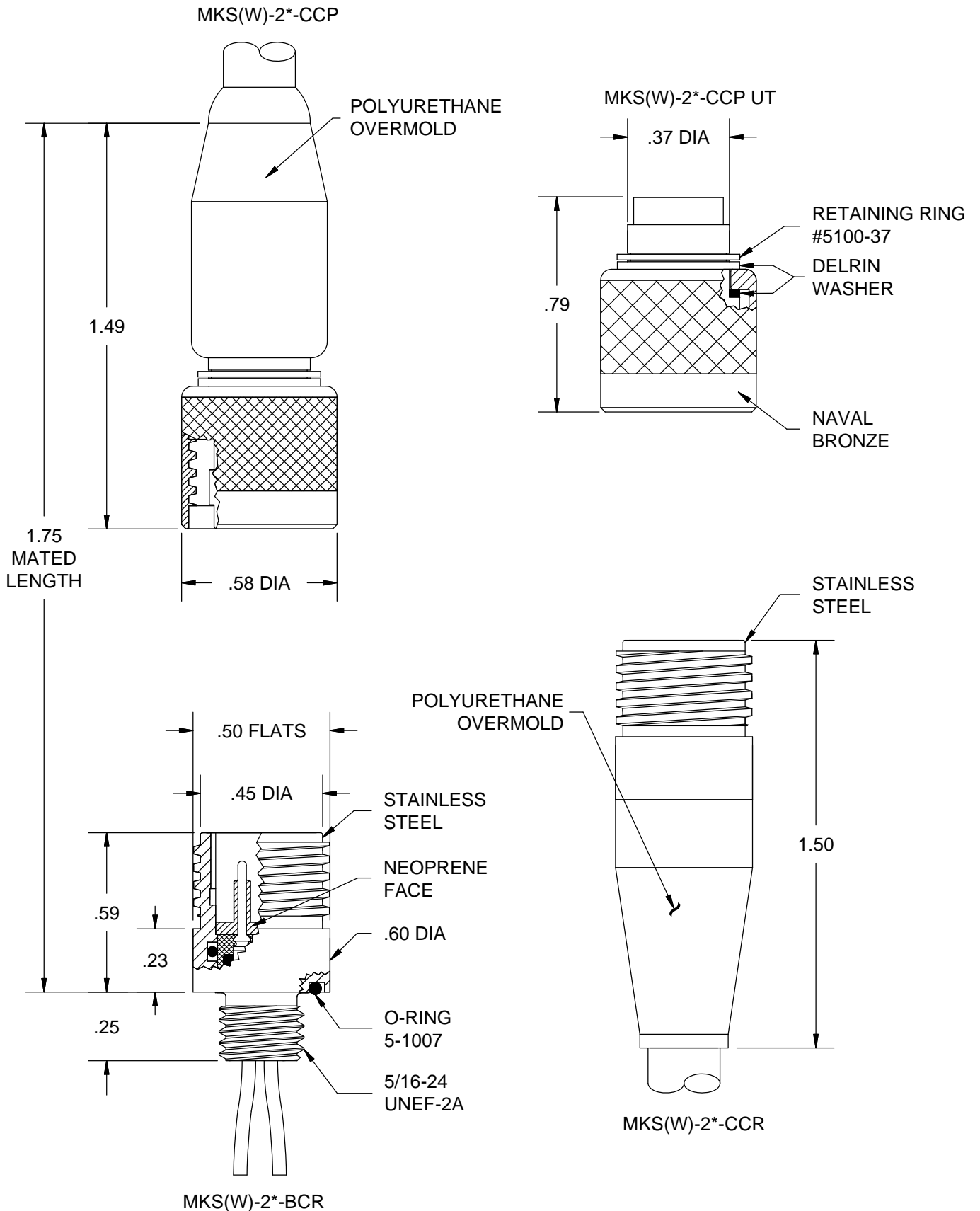
**** O-Ring installation tool available - Contact factory for further details.

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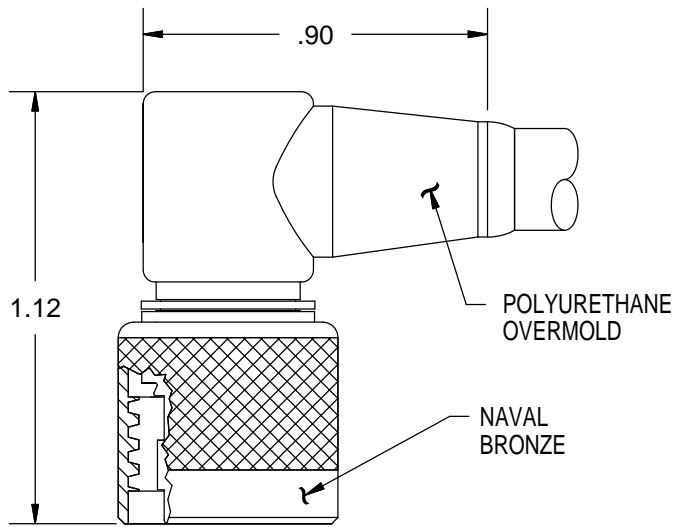
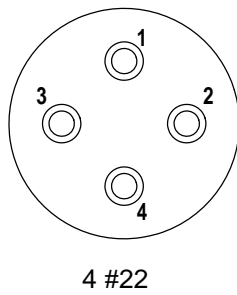
| | |
|--------------------------|--|
| DESCRIPTION AND MATERIAL | <ul style="list-style-type: none">• Wet Pluggable.• Metal to metal key for positive alignment.• 316 Stainless Steel passivated per QQ-P-35 Type VI with naval bronze engaging nut.• Special alloys are available upon request (contact factory).• 10,000 PSI in mated condition.• Bulkhead connector design open face pressure rated to 5000 PSI.• Contacts gold plated per MIL-G-45204.• Engaging nuts have Acme threads for rugged applications and for quick connection.• Working voltage for MKS-200/300/3L00/400-BCR/FCR/CCP is 300 VDC.• Working voltage for MKS-500/700/900-BCR/FCR/CCP is 600 VDC. |
| CABLE | <ul style="list-style-type: none">• CCP is not terminated to cable unless specified at the time of order• MKS-200/300/3L00/400-BCR/FCR has Type E leads per MIL 16878/4.• MKS-500/700/900-BCR/FCR has Type EE leads per MIL 16878/5. |
| USES | <ul style="list-style-type: none">• Light and Heavy Duty applications.• Hazardous environment.• Power Transmission.• Signal Telemetry.• ROV applications. |
| GUIDELINES | <ul style="list-style-type: none">• All mounting and sealing surfaces require a 32 finish.• Lubricate mating surfaces with 3M Silicone Lubricant or equivalent, DO NOT grease! Connectors must be lubricated on a regular basis.• Lubricate o-rings with Dow Corning #111 Valve Lubricant or equivalent.• Use Dust Caps and keep connectors clean to prevent damage in storage and service.• Keep o-ring grooves clean and avoid cuts, nicks and tears on rubber surfaces.• Elastomers can be seriously degraded if exposed to direct sunlight or high ozone levels for extended periods of time.• Clean plugs and receptacles with soap and fresh water. Rinse out with alcohol, allowing connector to air dry.• Replace o-rings when re-using connectors. |

MKS(W)-2

METAL KEY RUBBER MOLDED
TITAN™ SERIES



CONTACT CONFIGURATION
(BCR FACE VIEW)

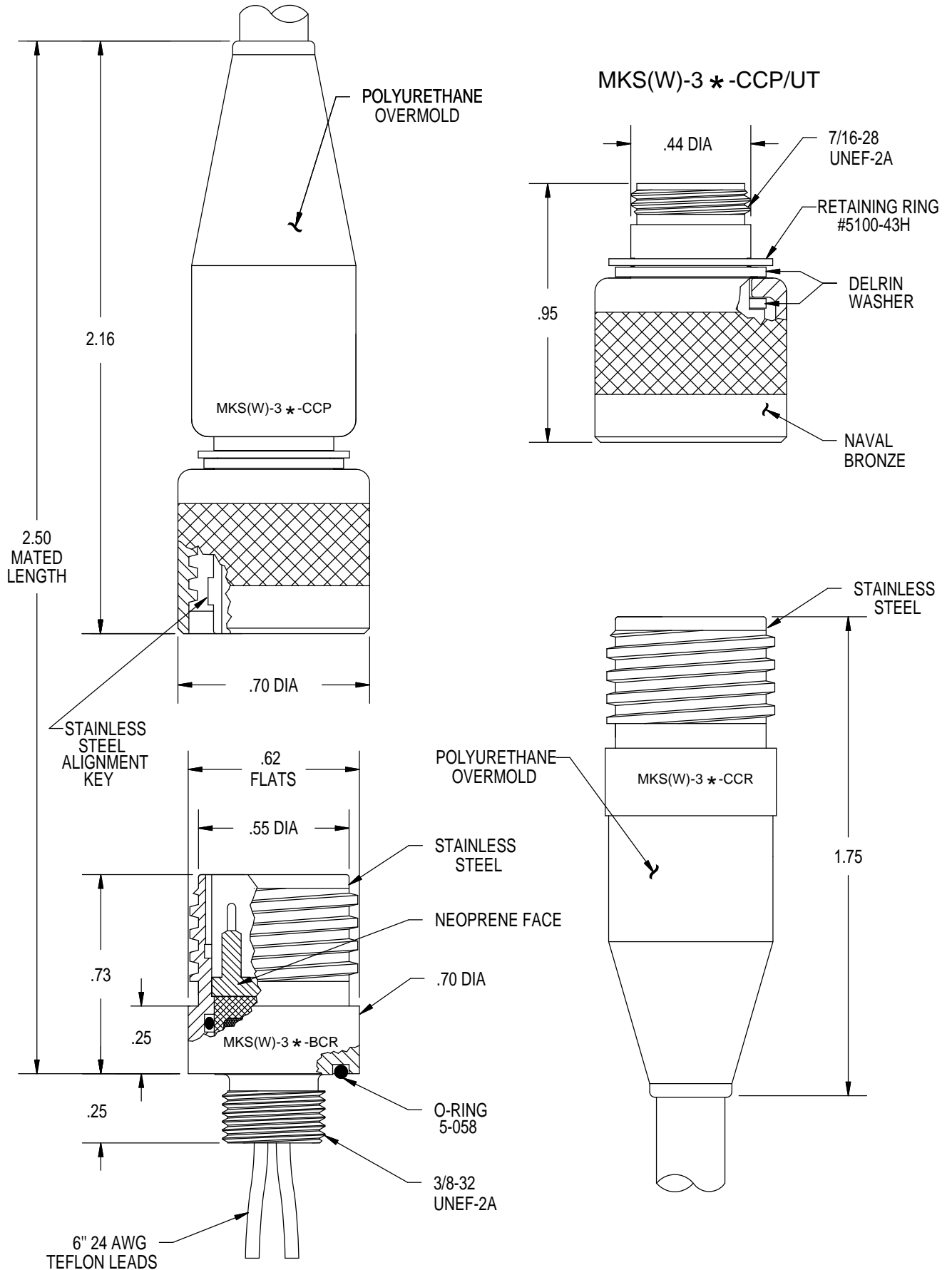


MKS(W)-2*-CCP R/A

| | | | |
|---|----------------------------|-----------------------------|--------|
| MOUNTING TORQUE FOR BCR | not to exceed 50 in-lbs | MATED PRESSURE RATING (psi) | 10,000 |
| See page 95 80 for SCP/SCR information | | | |
| <p>NOTE: CCP is not terminated to cable unless specified.</p> <p>* Please specify number of contacts.</p> <p>** O-Ring installation tool available - Contact factory for further details.</p> | | | |

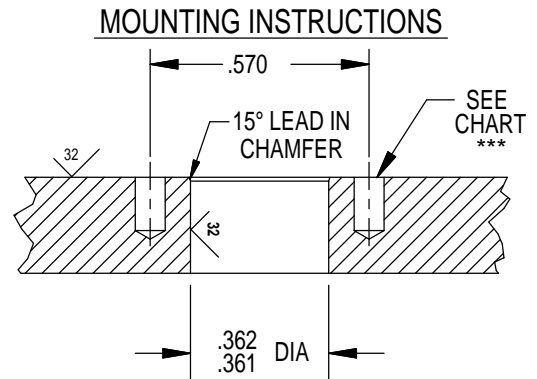
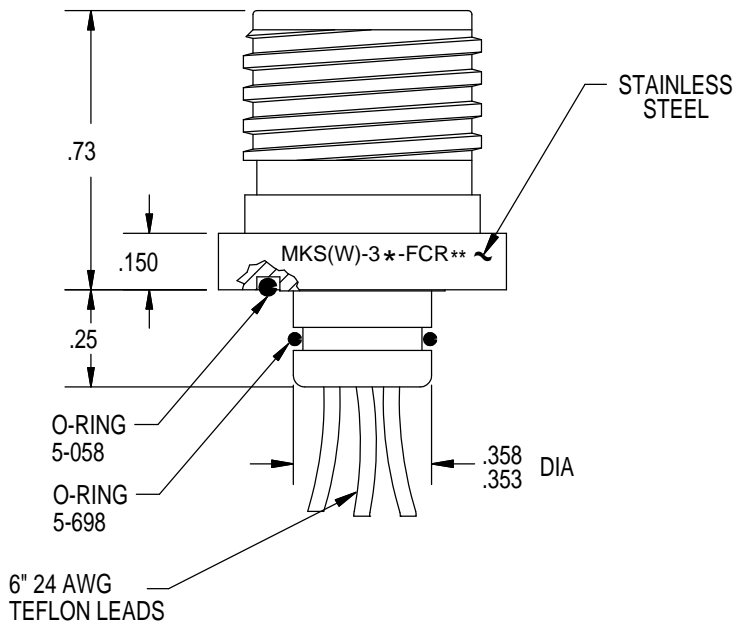
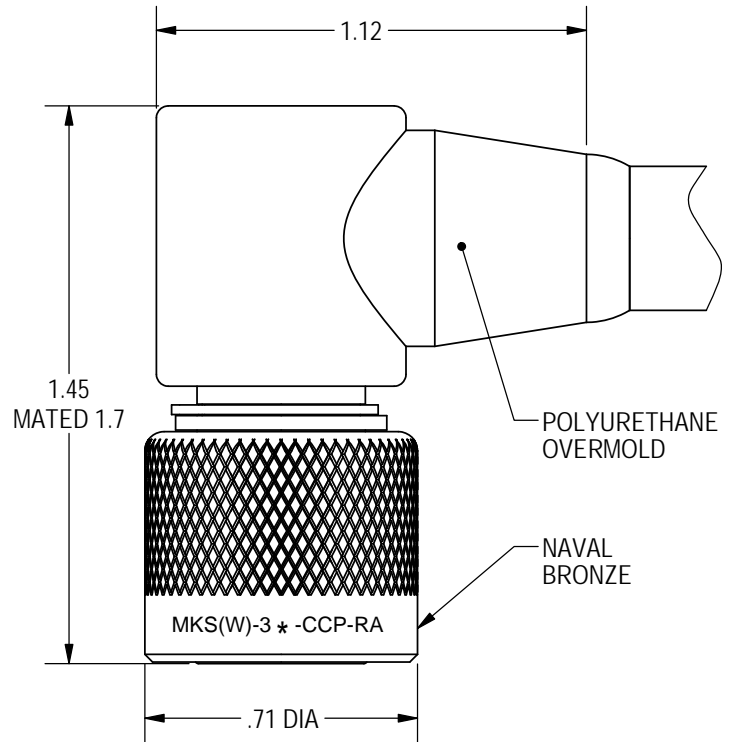
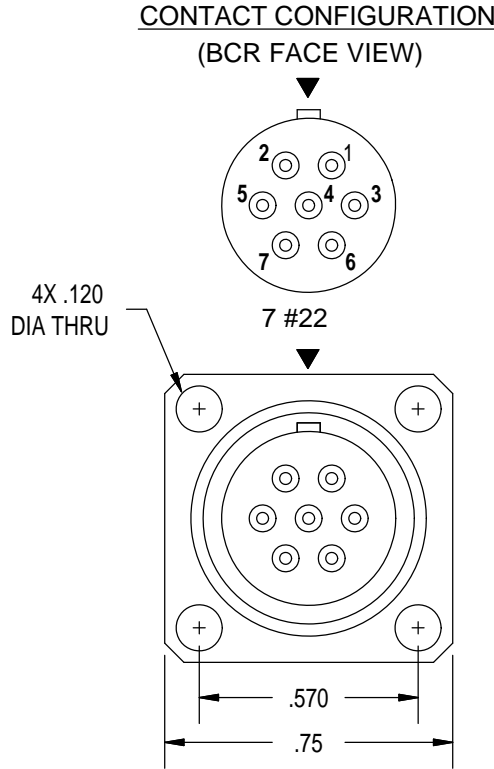
MKS(W)-3

METAL KEY WET PLUGGABLE RUBBER MOLDED TITAN™ SERIES



MKS(W)-3

METAL KEY WET PLUGGABLE RUBBER MOLDED TITAN™ SERIES



| | | | |
|-------------------------|-------------------------|-----------------------------|--------|
| MOUNTING TORQUE FOR BCR | not to exceed 50 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
|-------------------------|-------------------------|-----------------------------|--------|

See pg. 9580 for SCP/SCR information

NOTE: CCP is not terminated to cable unless specified.

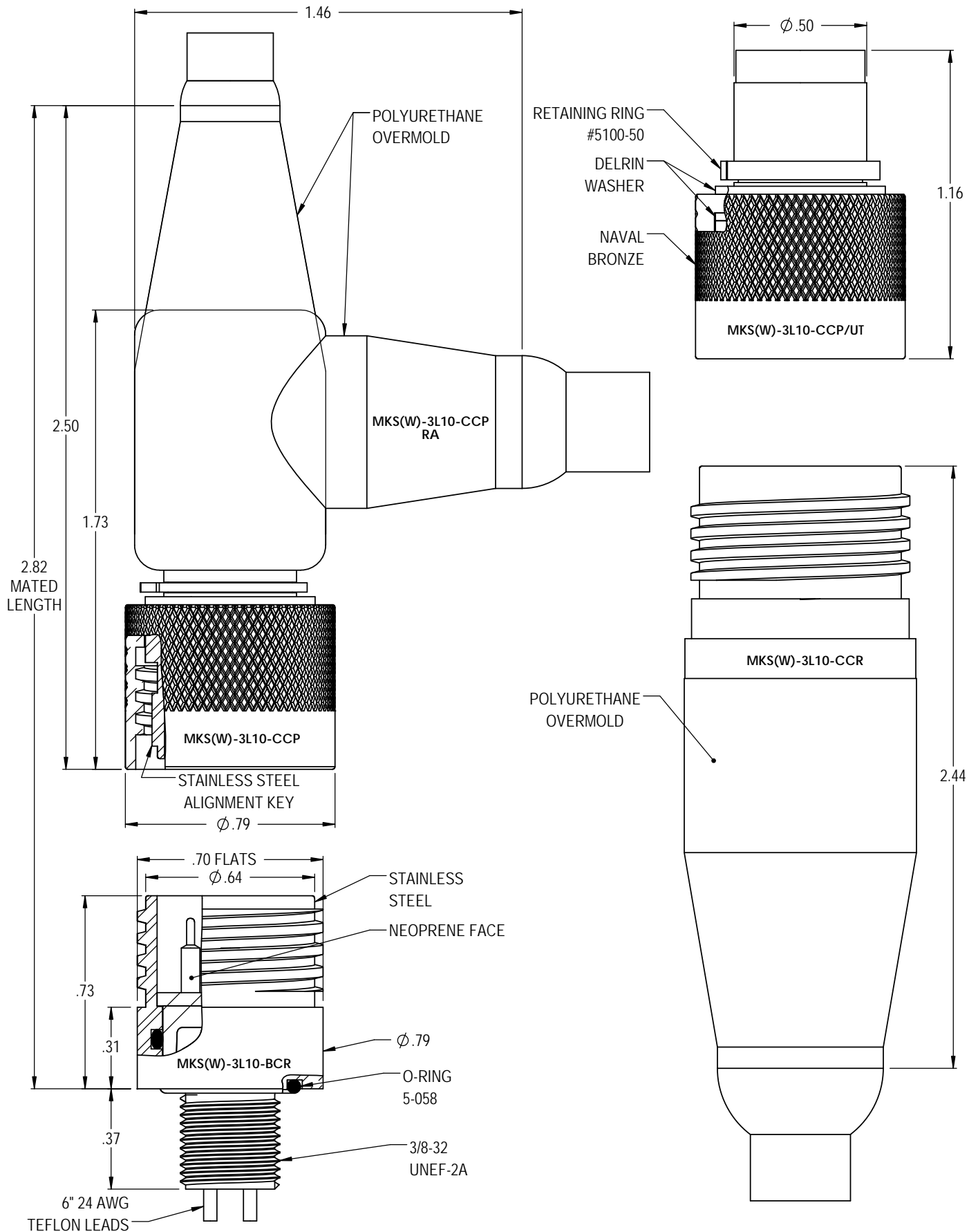
* Please specify number of contacts.

** Internal assembly same as MKS(W)-3* -BCR (facing page).

*** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.

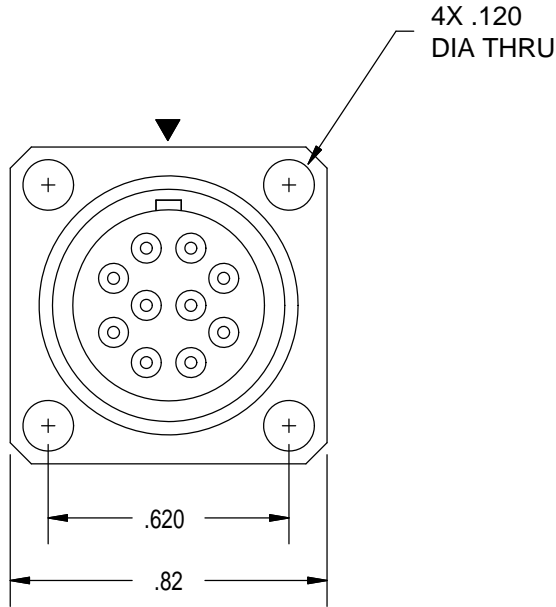
MKS(W)-3L10

METAL KEY WET PLUGGABLE RUBBER MOLDED
TITAN™ SERIES

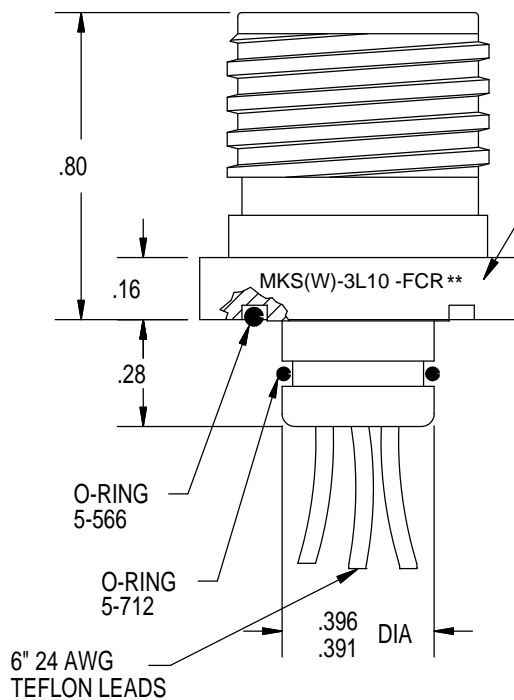
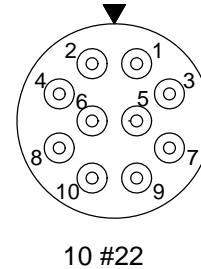


MKS(W)-3L10

METAL KEY WET PLUGGABLE RUBBER MOLDED
TITAN SERIES

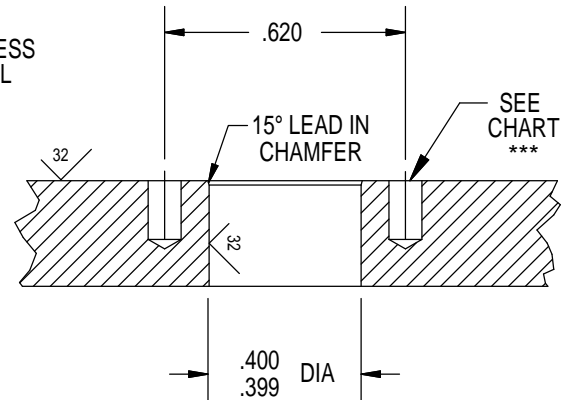


CONTACT CONFIGURATION (BCR FACE VIEW)



STAINLESS
STEEL

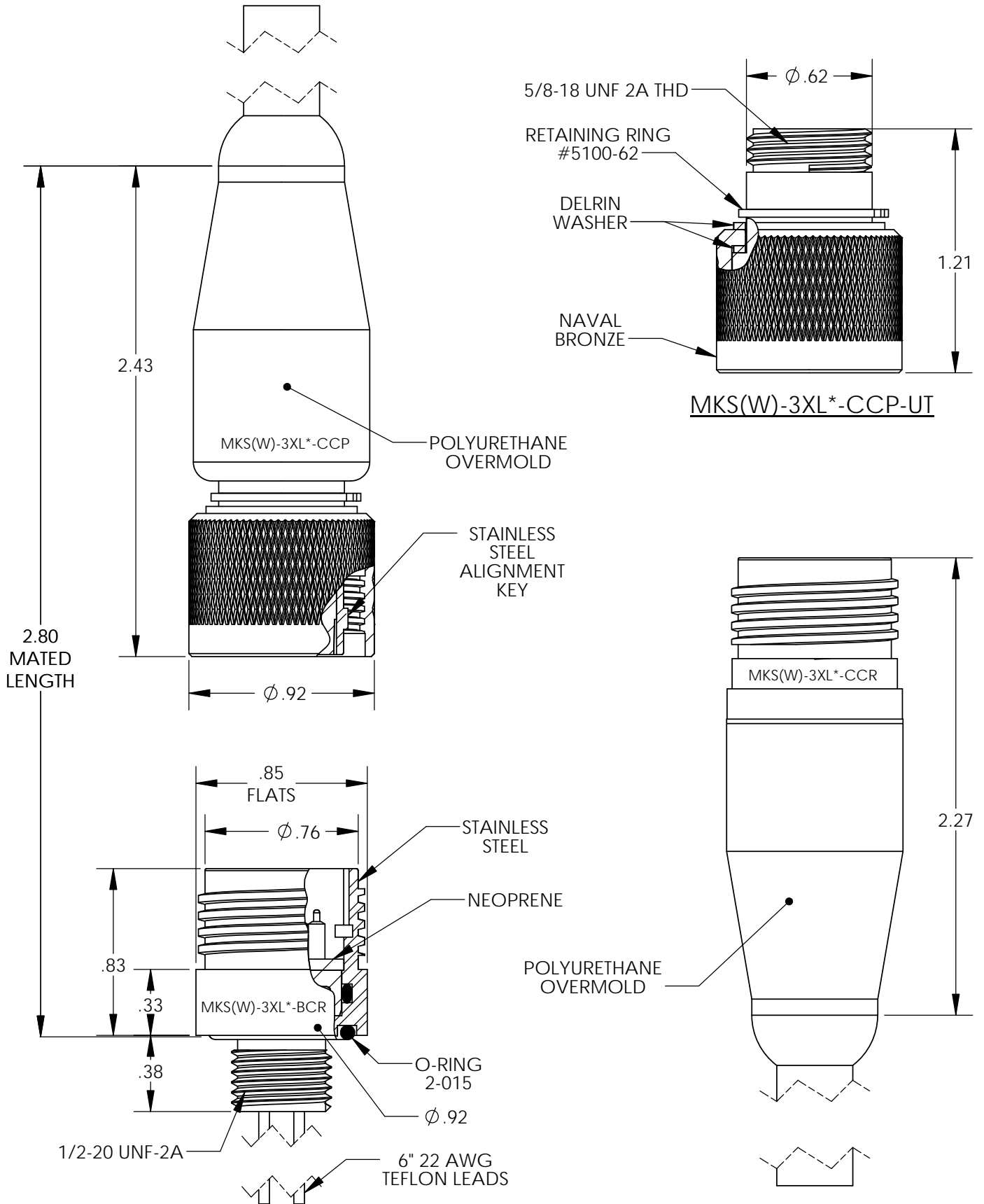
MOUNTING INSTRUCTIONS

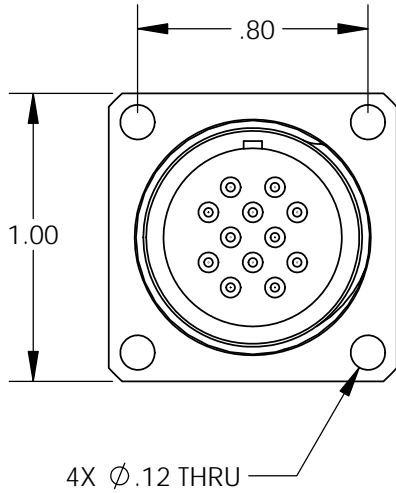


| MOUNTING TORQUE FOR BCR | not to exceed 50 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
|--|-------------------------|-----------------------------|--------|
| <p>NOTE: CCP is not terminated to cable unless specified.</p> <p>* Please specify number of contacts.</p> <p>**Internal assembly same as MKS(W)-3L10-BCR (facing page).</p> <p>*** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.</p> | | | |

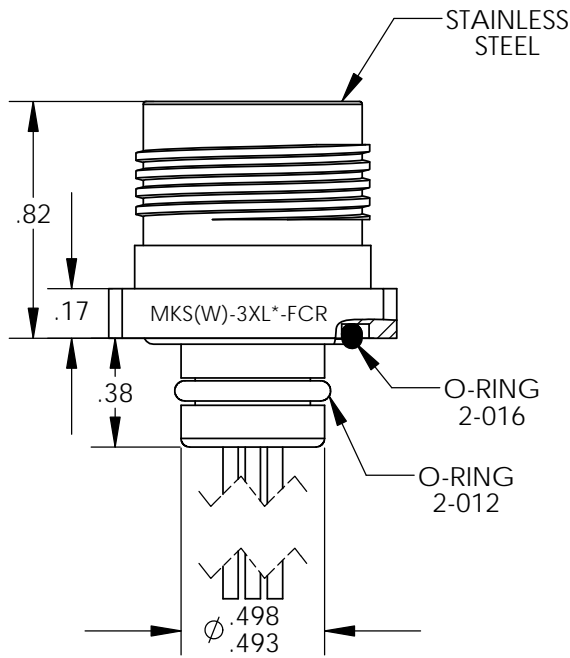
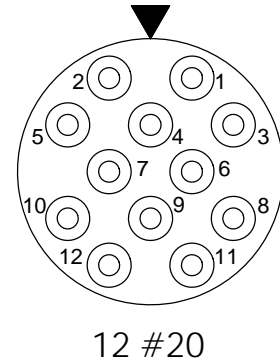
MKS(W)-3XL

METAL KEY WET PLUGGABLE RUBBER MOLDED
TITAN™ SERIES

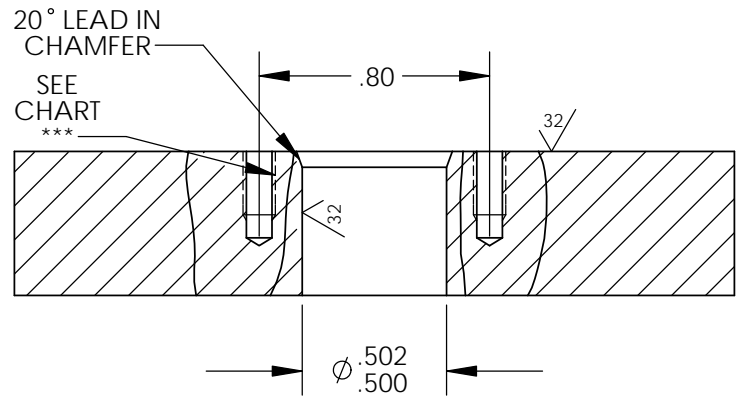




CONTACT CONFIGURATION
(BCR FACE VIEW)



MOUNTING INSTRUCTIONS

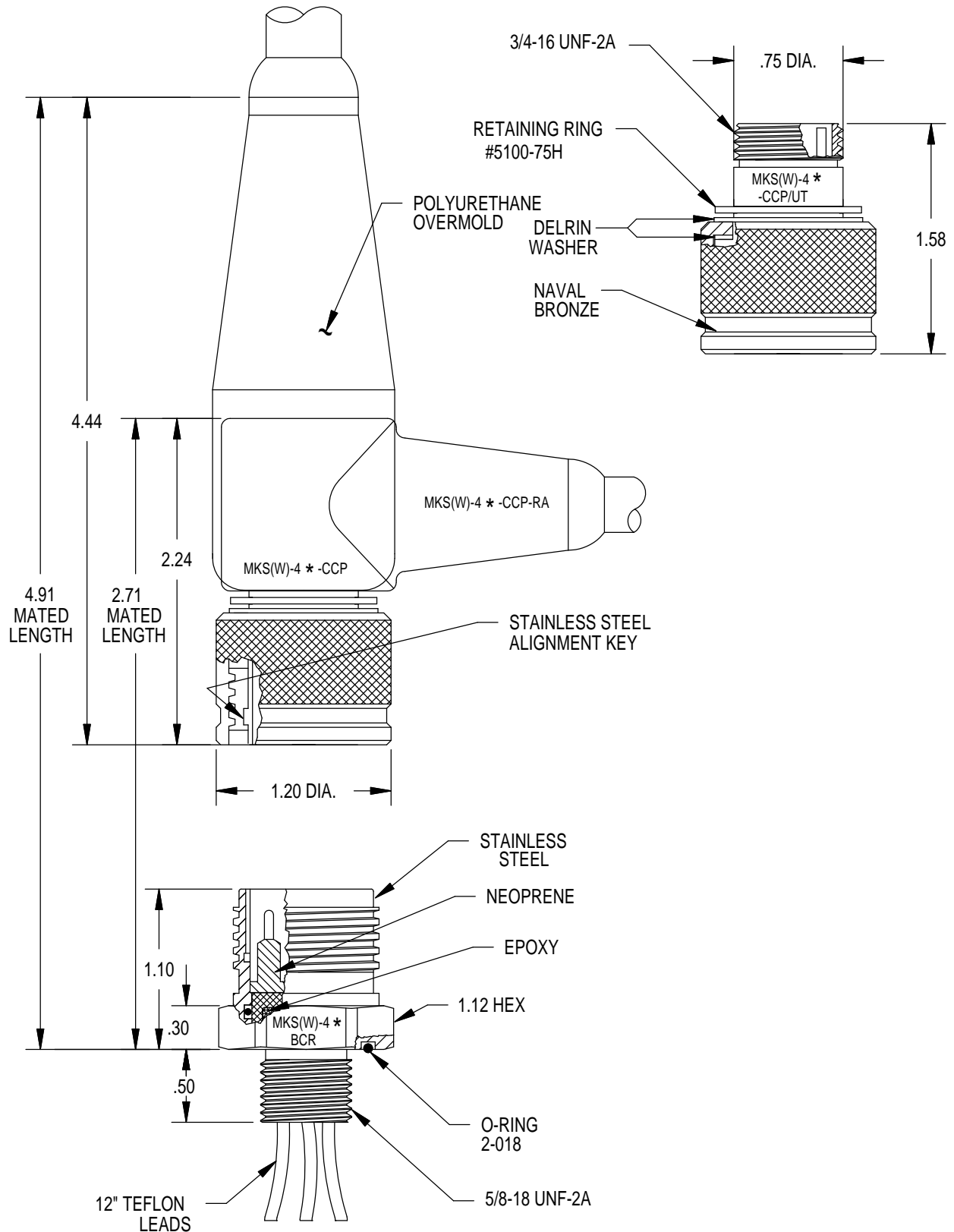


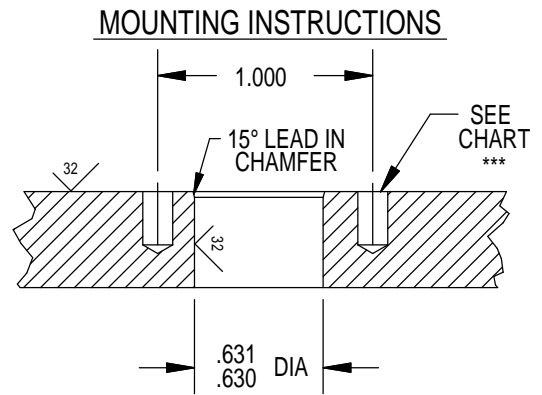
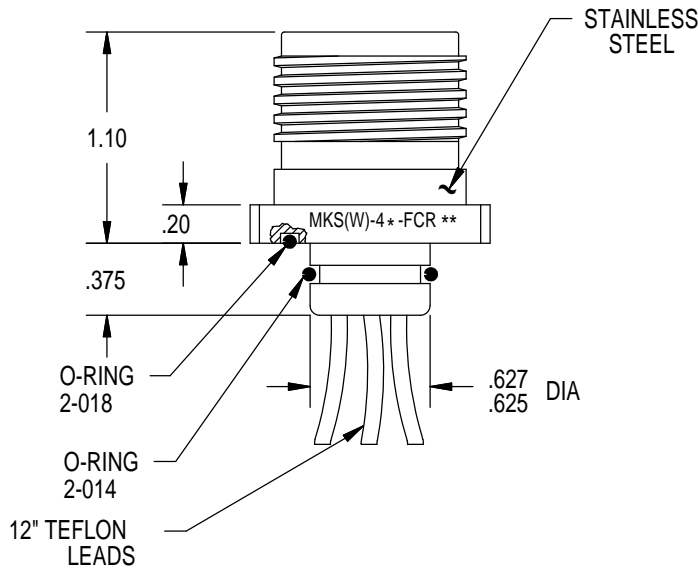
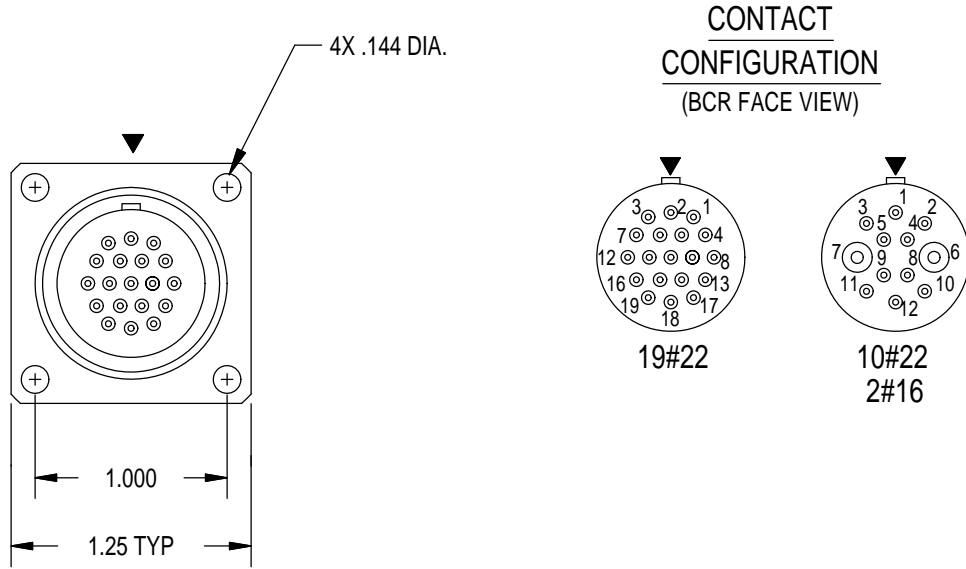
| | | | |
|-------------------------|-------------------------|-----------------------------|--------|
| MOUNTING TORQUE FOR BCR | not to exceed 50 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
|-------------------------|-------------------------|-----------------------------|--------|

NOTE: CCP is not terminated to cable unless specified.
 * Please specify number of contacts.
 **Internal assembly same as MKS(W)-3XL*-BCR (facing page).
 *** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.

MKS(W)-4

METAL KEY WET PLUGGABLE RUBBER MOLDED TITAN™ SERIES

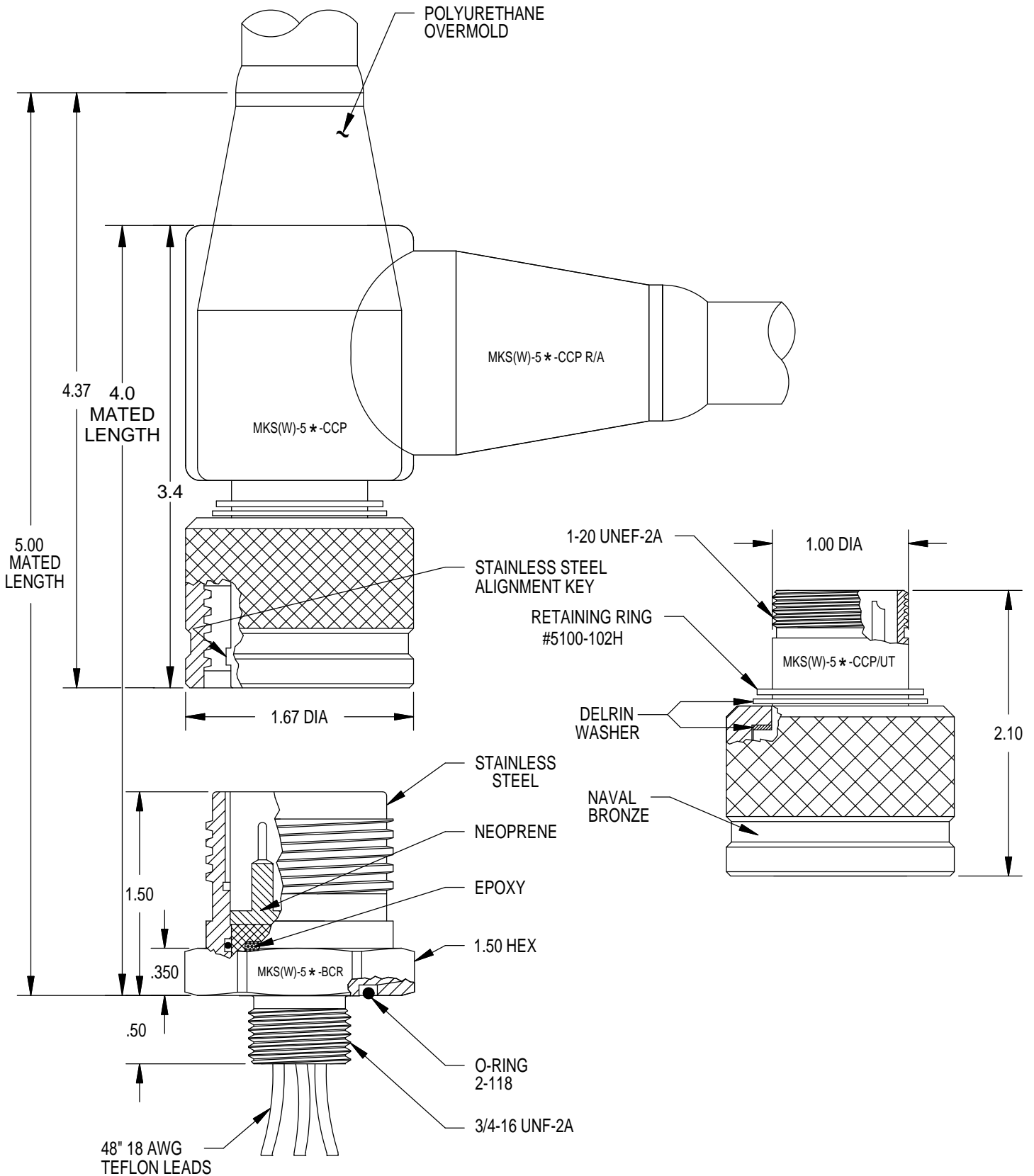




| | | | |
|--|--------------------------|-----------------------------|--------|
| MOUNTING TORQUE FOR BCR | not to exceed 100 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
| See pg. 9580 for SCP/SCR information. | | | |
| <p>NOTE: CCP is not terminated to cable unless specified.</p> <p>* Please specify number of contacts.</p> <p>** Internal assembly same as MKS(W)-4* -BCR (facing page).</p> <p>*** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.</p> | | | |

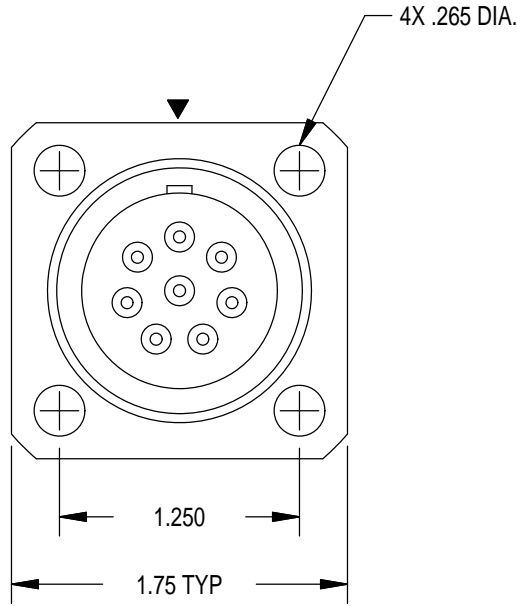
MKS(W)-5

METAL KEY WET PLUGGABLE RUBBER MOLDED TITAN™ SERIES

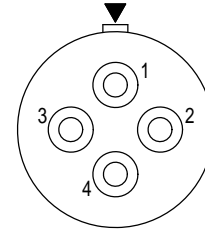


MKS(W)-5

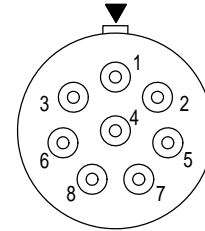
METAL KEY WET PLUGGABLE RUBBER MOLDED TITAN™ SERIES



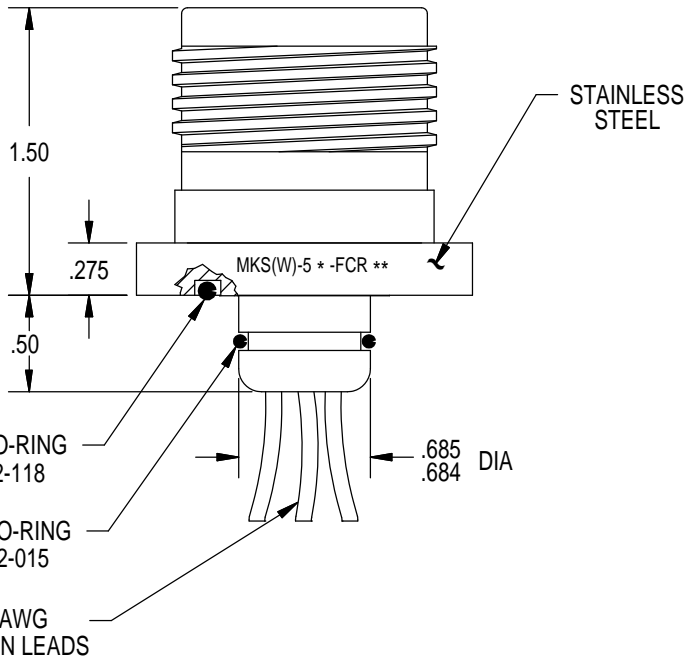
CONTACT CONFIGURATIONS (BCR FACE VIEW)



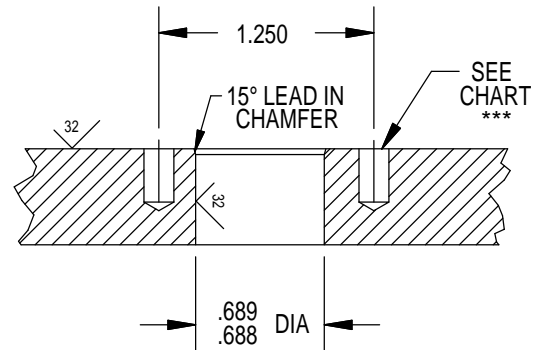
4#10



8#16



MOUNTING INSTRUCTIONS



| | | | |
|-------------------------|--------------------------|-----------------------------|--------|
| MOUNTING TORQUE FOR BCR | not to exceed 165 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
|-------------------------|--------------------------|-----------------------------|--------|

See pg. 9580 for SCP/SCR information.

NOTE: CCP is not terminated to cable unless specified.

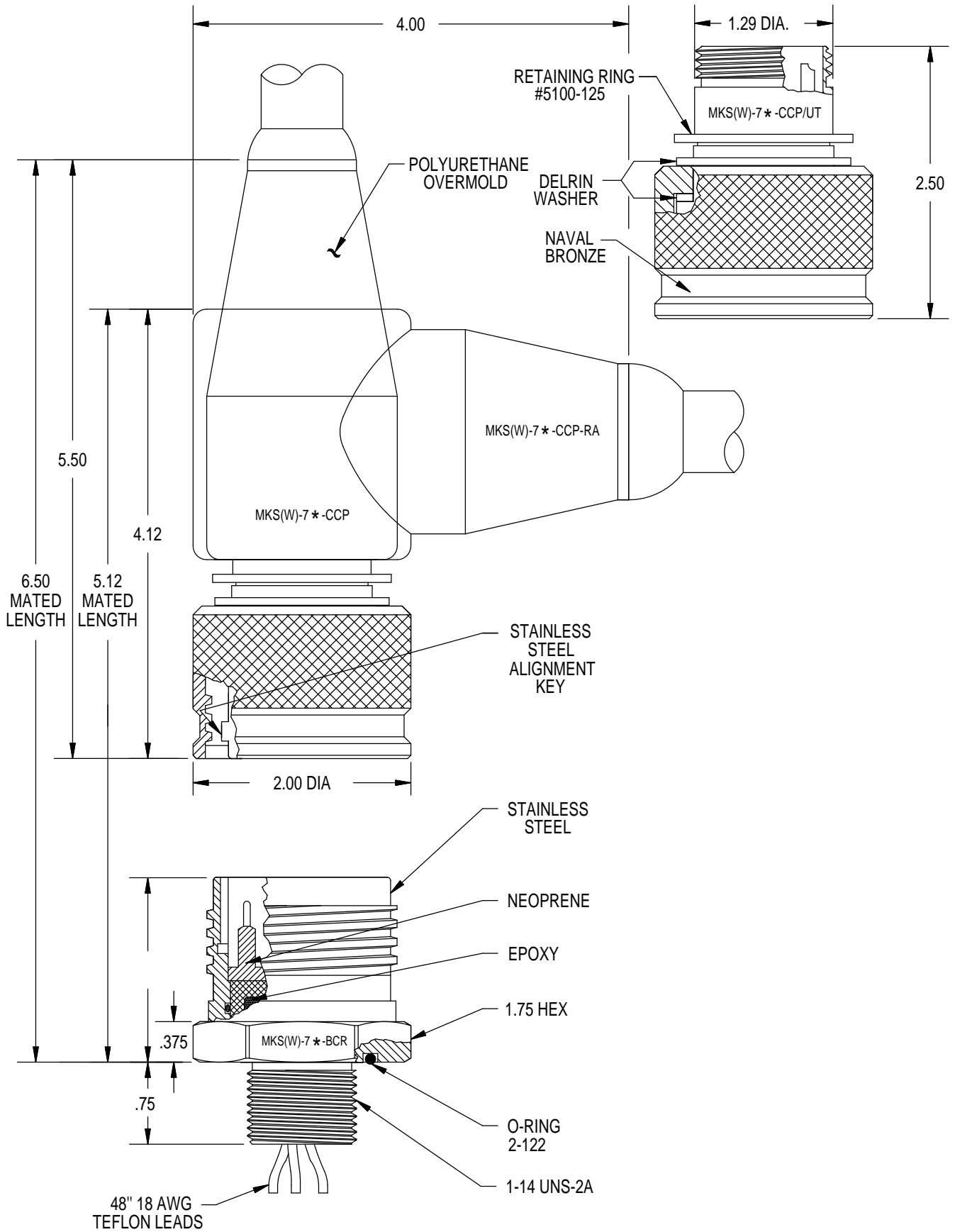
* Please specify number of contacts.

** Internal assembly same as MKS(W)-5* -BCR (facing page).

*** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.

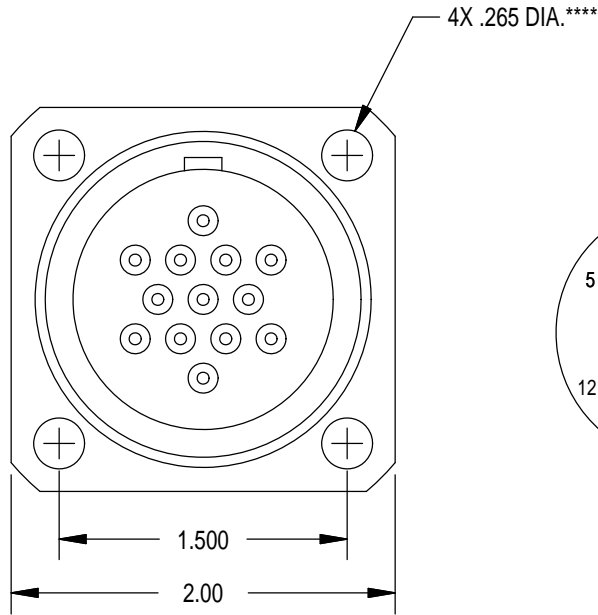
MKS(W)-7

METAL KEY WET PLUGGABLE RUBBER MOLDED TITAN™ SERIES

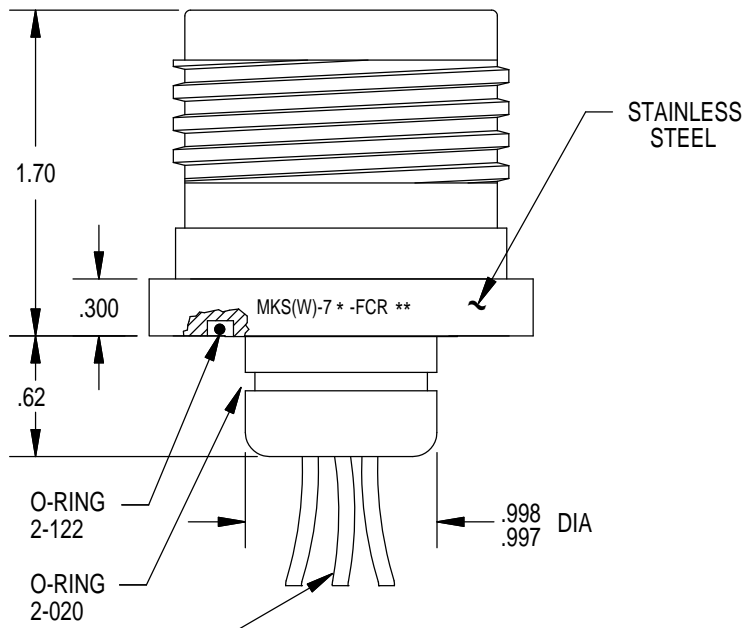
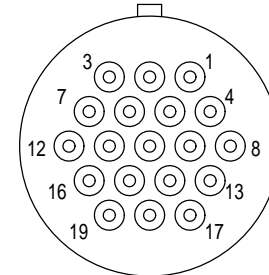
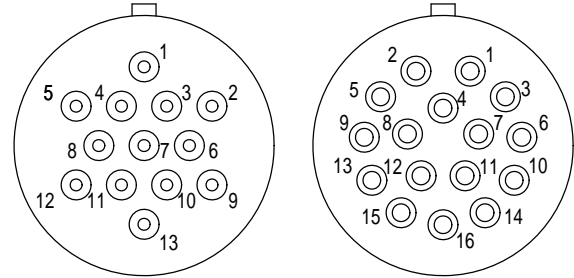


MKS(W)-7

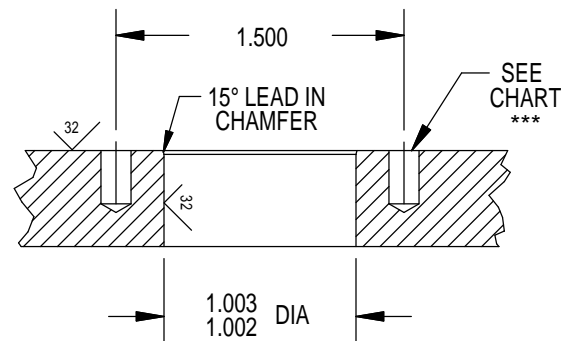
METAL KEY WET PLUGGABLE RUBBER MOLDED TITAN™ SERIES



CONTACT CONFIGURATION (BCR FACE VIEW)



MOUNTING INSTRUCTIONS

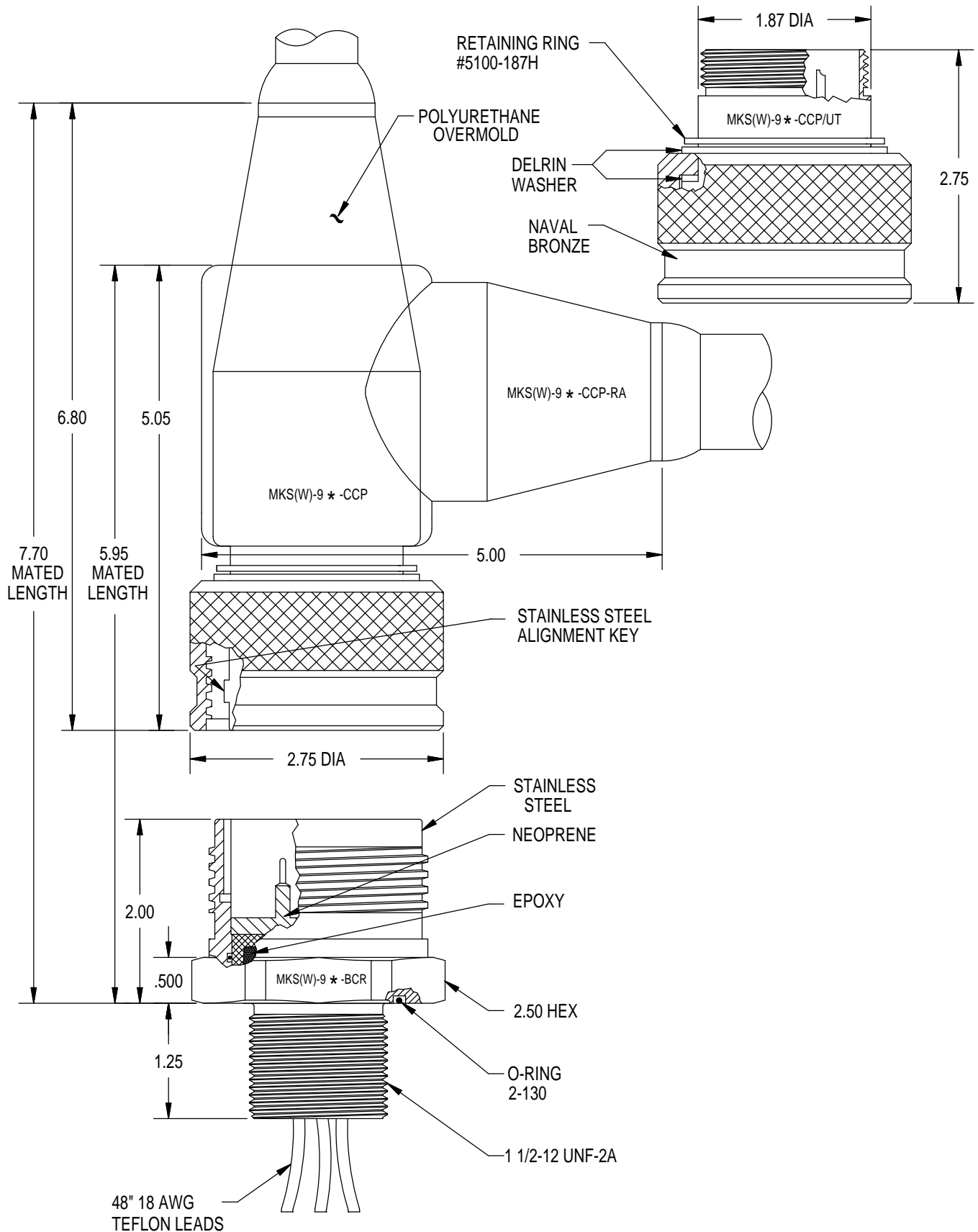


48" 18 AWG
TEFLON LEADS

| | | | |
|---|--------------------------|-----------------------------|--------|
| MOUNTING TORQUE FOR BCR | not to exceed 225 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
| See pg. 9580 for SCP/SCR information. | | | |
| <p>NOTE: CCP is not terminated to cable unless specified.</p> <p>* Please specify number of contacts.</p> <p>** Internal assembly same as MKS(W)-7* -BCR (facing page).</p> <p>*** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.</p> <p>**** Modified M6 socket head cap bolts are available.</p> | | | |

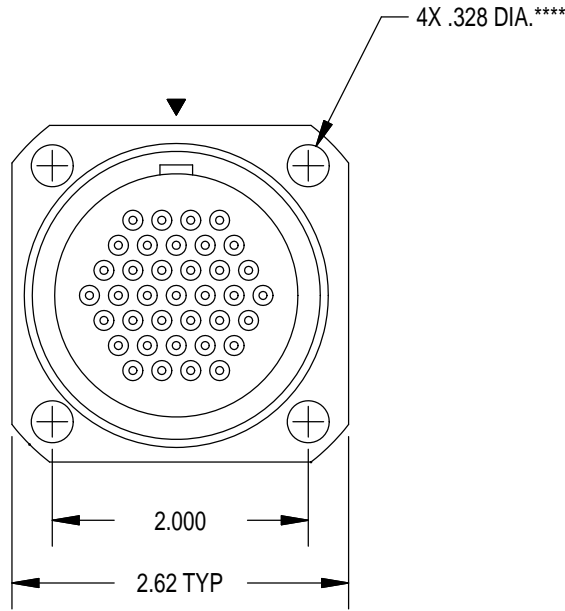
MKS(W)-9

METAL KEY WET PLUGGABLE RUBBER MOLDED TITAN™ SERIES

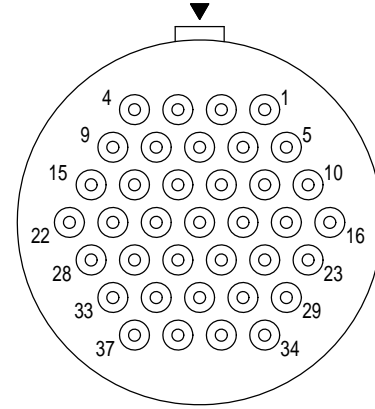


MKS(W)-9

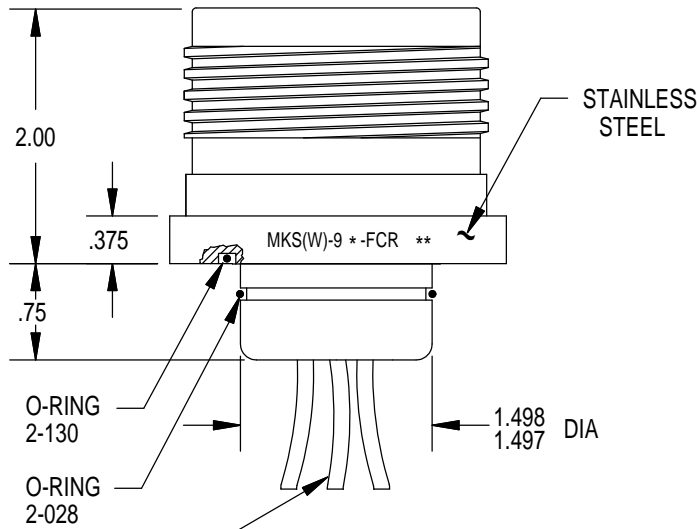
METAL KEY WET PLUGGABLE RUBBER MOLDED TITAN™ SERIES



CONTACT CONFIGURATION (BCR FACE VIEW)

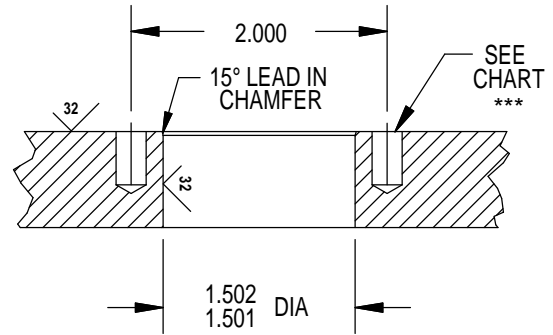


37#16

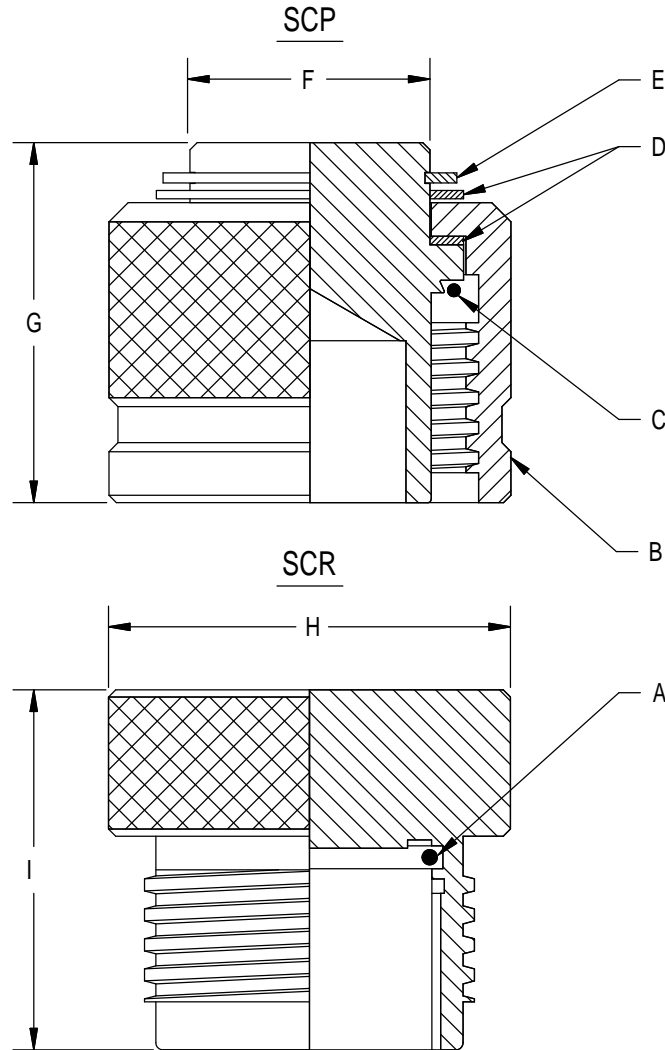


48" 18 AWG
TEFLON LEADS

MOUNTING INSTRUCTIONS



| | | | |
|--|--------------------------|-----------------------------|--------|
| MOUNTING TORQUE FOR BCR | not to exceed 335 in lbs | MATED PRESSURE RATING (psi) | 10,000 |
| See pg. 9580 for SCP/SCR information. | | | |
| <p>NOTE: CCP is not terminated to cable unless specified.</p> <p>* Please specify number of contacts.</p> <p>** Internal assembly same as MKS(W)-9 * -BCR (facing page).</p> <p>*** Blind tapped hole not to penetrate bulkhead, minimum full thread depth 2 times bolt diameter.</p> <p>**** Modified M8 socket head cap bolts are available.</p> | | | |



| CONNECTOR SIZE | MKS-200 | MKS-300 | MKS-400 | MKS-500 | MKS-700 | MKS-900 |
|---|---------|---------|---------|----------|----------|----------|
| A O-RING | 5-712 | 5-682 | 2-018 | 2-022 | 2-028 | 2-032 |
| B ENGAGING NUT | 452110 | 453115 | 462525 | 472527 | 482623 | 483107 |
| C O-RING | 5-057 | 5-682 | 5-003 | 2-023 | 2-028 | 2-033 |
| D DELRIN WASHER(2X) | 452101 | 453001 | 462530 | 472501 | 482618 | 483101 |
| E RETAINING RING | 5100-37 | 5100-43 | 5100-75 | 5100-102 | 5100-125 | 5100-187 |
| F DIA | .37 | .44 | .76 | 1.00 | 1.29 | 1.87 |
| G | .65 | .75 | 1.15 | 1.50 | 1.87 | 2.00 |
| H DIA | .60 | .71 | 1.20 | 1.67 | 2.00 | 2.67 |
| I | .58 | .75 | 1.10 | 1.50 | 1.60 | 2.10 |
| SCR MATED PRESSURE RATING(psi) | 10,000 | 10,000 | 10,000 | 2,000 | 2,000 | 1,000 |
| SCP MATED PRESSURE RATING(psi) | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 |
| * Metal shell SCP/SCR are not wet pluggable | | | | | | |
| ** 10,000 psi rated wet pluggable dummies available upon request. | | | | | | |
| *** MKS-300-SCP LP (50 psi) available upon request. | | | | | | |
| **** MKS(W)-3L10 uses wet pluggable dummies only. | | | | | | |

CONNECTOR TERMINOLOGY

CONNECTOR TERMINOLOGY

| | | | |
|---------------|---|----------------|--|
| BC | Bulkhead connector, no locking sleeve | FS | Female socket, neoprene standard has sockets, inverted has pins |
| BCL | Bulkhead connector locking, glass reinforced epoxy, with locking sleeve thread | FSD HP | Female socket, dummy, high pressure (>4000PSI), neoprene |
| BCP | Bulkhead connector plug, glass reinforced epoxy, mates with CCR | FSD LP | Female socket, dummy, low pressure (<4000PSI), neoprene |
| BCR | Bulkhead connector receptacle, glass reinforced epoxy or metal shell, mates with CCP | *-FLS-P | Female locking sleeve, nylon, for RM* or VM* connectors. * defines size of locking sleeve |
| BH | Bulkhead receptacle, wet pluggable series, neoprene with brass or stainless steel body | *-FLS-S | Female locking sleeve, stainless steel for RM* or VM* connectors. * defines size of locking sleeve |
| CCP | Cable connector plug, glass reinforced epoxy or metal shell, can be terminated to cable with neoprene or polyurethane overmold, mates with BCR, FCR, CCR | HD | Heavy duty or high density, depending on connector series |
| CCR | Cable connector receptacle, glass reinforced epoxy or metal shell, can be terminated to cable with neoprene or polyurethane overmold, mates with BCP, CCP | HP | High pressure |
| CIP | Contact insert plug, glass reinforced epoxy insert, used in metal shell BCP, CCP | HV | High voltage |
| CIR | Contact insert receptacle, glass reinforced epoxy insert, used in metal shell BCR, CCR, FCR | IE | Underwater pluggable series |
| DC | Dummy connector, neoprene, wet pluggable series | IE55 | Rubber molded metal shell series |
| DLS*/F | Delrin locking sleeve, female, wet pluggable series. * defines size of locking sleeve | IE55V | Inverted rubber molded metal shell series |
| DLS*/M | Delrin locking sleeve, male, wet pluggable series. * defines size of locking sleeve | IE55W | Wet pluggable IE55 subminiature series |
| DSP | Dummy sealing plug, glass reinforced epoxy, stainless steel or aluminum, dummies off BCR, FCR, CCR | IERD | Underwater pluggable right angle bulkhead connector, neoprene, 1 pin/socket, 2 contacts |
| DSR | Dummy sealing receptacle, glass reinforced epoxy, stainless steel or aluminum, dummies off BCP, CCP | IESQ | Underwater pluggable connector, neoprene, 2 pins/sockets, 2 or 4 contacts |
| FCR | Flange connector receptacle, metal shell, mates with CCP | IL | Inline, neoprene, wet pluggable series |
| FIB | Field installable boot, neoprene, special type of RM* or VM* connector | LP | Low pressure |
| | | LPBH | Low profile bulkhead connector, neoprene, wet pluggable series |
| | | LPDC | Low profile dummy connector, neoprene, wet pluggable series |
| | | LPIL | Low profile inline connector, neoprene, wet pluggable series |
| | | LPMBH | Low profile mini bulkhead connector, neoprene, wet pluggable series |
| | | LPMDC | Low profile mini dummy connector, neoprene, wet pluggable series |

CONNECTOR TERMINOLOGY

| | | | |
|------------------|---|----------------|--|
| LPMIL | Low profile mini inline connector, neoprene, wet puggable series | MPD LP | Male plug dummy, low pressure, (<4000PSI), neoprene |
| MBH | Mini bulkhead connector, neoprene, wet puggable series | MSA* | Metal shell aluminum, * defines shell size |
| MCBH | Micro mini bulkhead connector, neoprene, wet puggable series | MSS* | Metal shell stainless steel, * defines shell size |
| MCBH (WB) | Micro mini bulkhead connector, waterblocked, neoprene, wet puggable series | OF | Oil filled, CCP with stainless steel shell and adapter or glass reinforced epoxy with extended body |
| MCDC | Micro mini dummy connector, neoprene, wet puggable series | OM | Overmold, neoprene, field installable version of wet puggable series |
| MCDLS/* | Micro mini Delrin locking sleeve, wet puggable series, * designates male (M) or female (F) | P | Plastic, nylon |
| MCIL | Micro mini inline connector, neoprene, wet puggable series | PBC | Pigtail bulkhead connector, glass reinforced epoxy, no locking sleeve available, inboard leads |
| MDC | Mini dummy connector, neoprene, wet puggable series | PBCL | Pigtail bulkhead connector locking, glass reinforced epoxy, locking sleeve available, inboard leads |
| MHD* | Miniature high density metal shell connector. * defines size of connector | PBCLM | Pigtail bulkhead connector, locking mounting, glass reinforced epoxy, face seal, locking sleeve available, inboard leads |
| MIL | Mini inline connector, neoprene, wet pluggable series | PBH/PIL | Bulkhead receptacle, wet pluggable series, polyurethane with brass or stainless steel body |
| MKA | Metal key Titan connector, aluminum | PBOF | Pressure balanced oil filled |
| MKA(W) | Metal key Titan connector, aluminum wet pluggable | PC | Protective Cap |
| MKS | Metal key Titan connector, stainless steel | PIL | Inline, polyurethane, wet pluggable series |
| MKS(W) | Metal key Titan connector, stainless steel, wet pluggable | PNA | Penetrator, aluminum or stainless steel body, neoprene or polyurethane overmold, water blocked using glass reinforced epoxy insert |
| *-MLS-P | Male locking sleeve, nylon, for RM* or VM* connectors, * defines size of locking sleeve | RA | Right angle |
| *-MLS-S | Male locking sleeve, stainless steel, for RM* or VM* connectors, * defines size of locking sleeve | RM* | Rubber molded connector, * defines size of connector |
| MOM | Mini overmold connector, neoprene, field installable version of wet pluggable series | RM*-BCL | Stainless steel bulkhead connector, mates with RM*-FS connector, * defines size of connector |
| MP | Male plug, neoprene, standard has pins, inverted has sockets | RMH | Rubber molded hermaphrodite, 1 pin + 1 socket |
| MPD HP | Male plug dummy, high pressure, (>4000PSI), neoprene | S OR SS | Stainless steel |

CONNECTOR TERMINOLOGY

SCP Sealing cap plug, glass reinforced epoxy, stainless steel or aluminum, dummies off BCR, FCR and CCR

SCR Sealing cap receptacle, glass reinforced epoxy, stainless steel or aluminum, dummies off BCP, CCP

SL Rubber molded slip on connector, RMA and VMA only

UT Unterminated

VM* Inverted rubber molded connector, * defines size of connector

VM*-BCL Inverted stainless steel bulkhead connector, mates with VM*-FS connector, * defines size of connector

VS* Inverted glass reinforced epoxy connector, mates with VM*-FS connector, * defines size of connector

XP Extended plastic locking sleeve

XS* Glass reinforced epoxy connector, * defines size of connector

CONNECTOR INDEX

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|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|
| PREPARED BY | CHECKED BY | ENGINEERING | PRODUCTION | QUALITY | SALES | GENERAL MANAGER |
| Binh Le | Kathy Ring | Jennifer Swaner | Mark Sturhann | Gary Zing | Andy Gardner | Jeff Hecker |
| Date:10/30/2018 | Date:10/31/2018 | Date:11/01/2018 | Date:11/02/2018 | Date:11/01/2018 | Date:11/01/2018 | Date: 11/05/2018 |

| REVISION HISTORY | | | |
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| AUTHORITY | REV | DATE | DESCRIPTION |
| 151009-01 | 2015-A | 10/09/15 | UPDATED SOLIDWORKS & RELEASED TECHNICAL MANUAL |
| 160128-02 | 2016-A | 02/08/16 | UPDATED GENERAL INFORMATION SECTION |
| 160427-02 | 2016-B | 04/27/16 | UPDATED GENERAL INFORMATION SECTION: PAGE D3 |
| 160523-02 | 2016-C | 05/23/16 | UPDATED GENERAL INFORMATION SECTION: PAGE D3 ADDED PAGE D-4 AND BLANK |
| 160823-01 | 2016-D | 08/23/16 | - 65 111 & 65121: ADD BOOT MCOM-2/3/4/5/6/8 - 85 32 & 85 33: ADD NEW PAGE FOR MHDXL - 87 13, 83 14, 87 15: ADD NEW PAGE FOR NET(L) - PAGE 95 03: 5/16-24 UNF-2A WAS 5/16-24 UNEF-2A - PAGE XIII: ADD MHDXL - PAGE XIV: ADD NET(L) |
| 160923-01 | 2016-E | 10/28/16 | - 87 13: ADD DIMENSION & THREAD CALLOUT - 87 14: CORRECT NUMBER FOR BCR FACE VIEW |
| 180124-01 | 2018-A | 01/24/18 | - 95 06: CORRECT DIMENSIONS: 1.7 WAS 1.80 AND .71 DIA WAS .70 DIA. - 95 42: CORRECT DIMENSIONS: 1.7 WAS 1.80 AND .71 DIA WAS .70 DIA. |
| 180618-01 | 2018-B | 06/18/18 | - 95:43: ADD MKS(W)-3L10-CCP-RA. CHANGE DIMENSON TO ϕ .79 WAS ϕ .78. |
| 181030-01 | 2018-C | 10/30/18 | 1. PAGE D-1: CHANGE USA-HEADQUATERS TO USA. CHANGE EUROPEAN HEADQUATERS TO EUROPE. REMOVE TELEDYNE OIL & GAS AND AL/FL/GA/LA/MS/TX. 2. PAGE D-2: MOVE USA (CONTINUED) TO PAGE D-1. REMOVE MALAYSIA, SOUTH KOREA, CHINA. 3. PAGE D-3: REMOVE LATIN AMERICA (BRAZIL, MEXICO, CHILE). ADD DASCO TO CANADA. 4. CHANGE PAGE E: REMOVE CURRENT PAGE AND REPLACE WITH FOLLOWING STATEMENT: TELEDYNE IMPULSE TERMS AND CONDITIONS OF SALES CAN BE FOUND ON OUR WEB SITE. WWW.TELEDYNEIMPULSE.COM DELETED: BLANK PAGE AFTER PAGE D-4, PAGE F, PAGE G, PAGE H. |
| ANDY G. | 2024-A | 07/22/24 | UPDATED PAGE D-1 & DELETED PAGE D-2, D-3. |
| ANDY G. | 2024-B | 11/15/24 | PAGE 70 04 & 70 06: ADDED MATING TORQUE CCP TO BCR/CCR/FCR. |