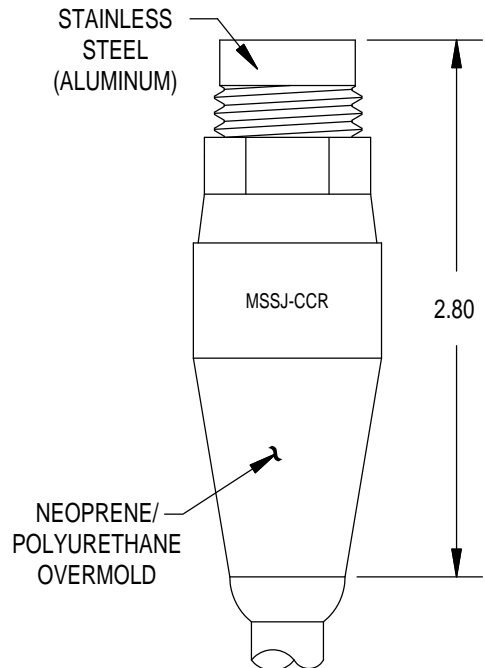
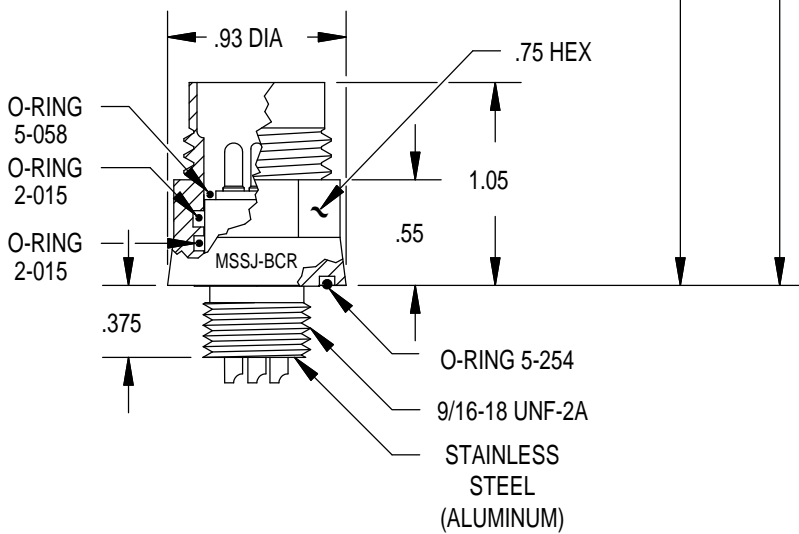
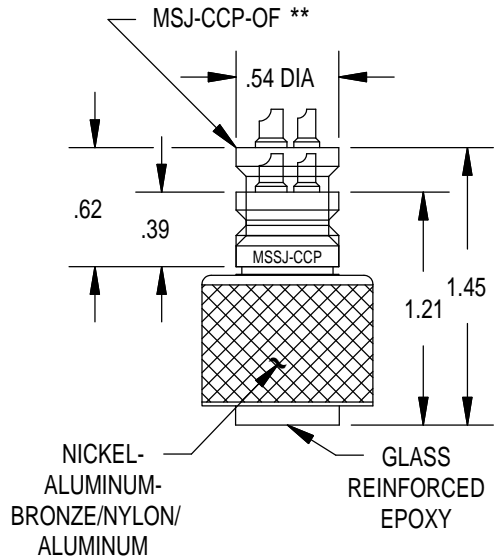
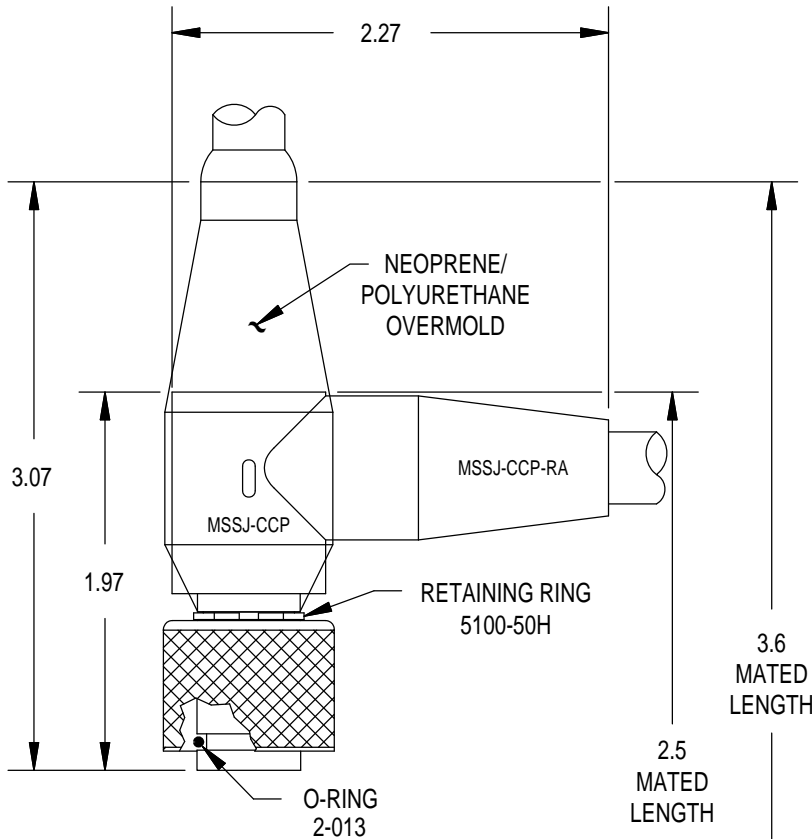


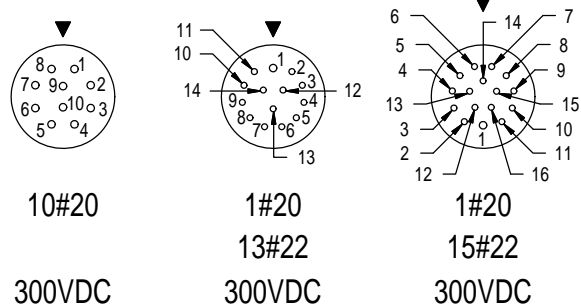
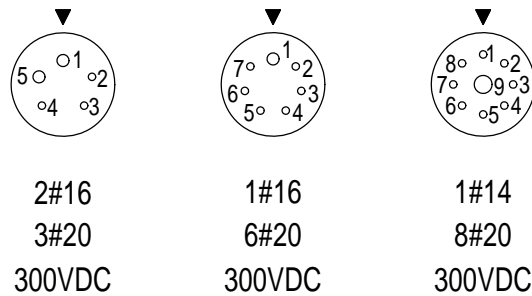
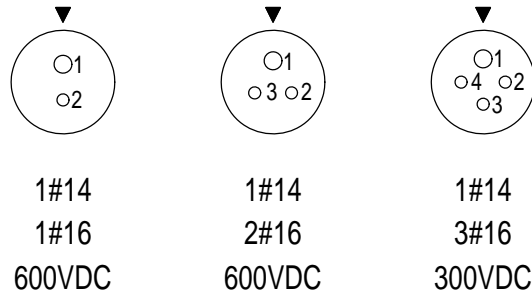
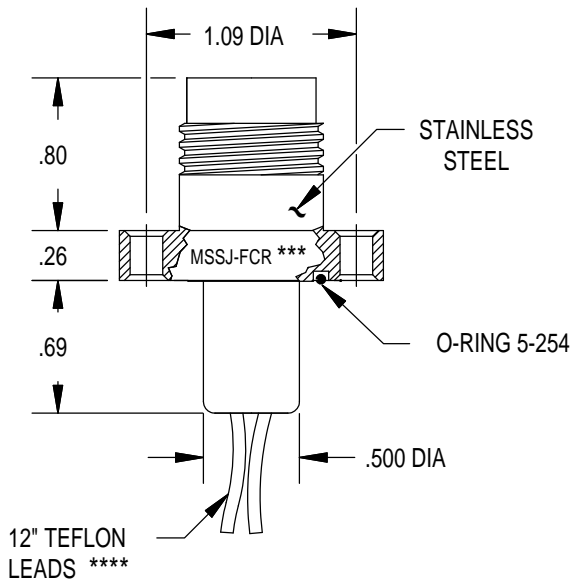
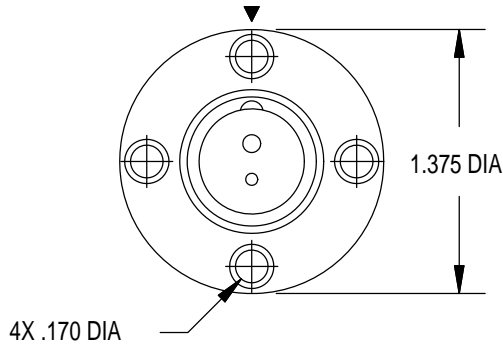
DESCRIPTION AND MATERIAL	<ul style="list-style-type: none"><li>• 316 stainless steel passivated per QQ-P-35 Type VI with naval bronze engaging nut.</li><li>• Optional material is (MSA) 6061-T6 Aluminum, hard anodized per MIL-A-8625, Type III, Class 2.</li><li>• Special alloys are available upon request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

# MSSJ/MSAJ

METAL SHELL STAINLESS  
STEEL / ALUMINUM SERIES



**CONTACT  
CONFIGURATION**  
(BCR FACE VIEWS)

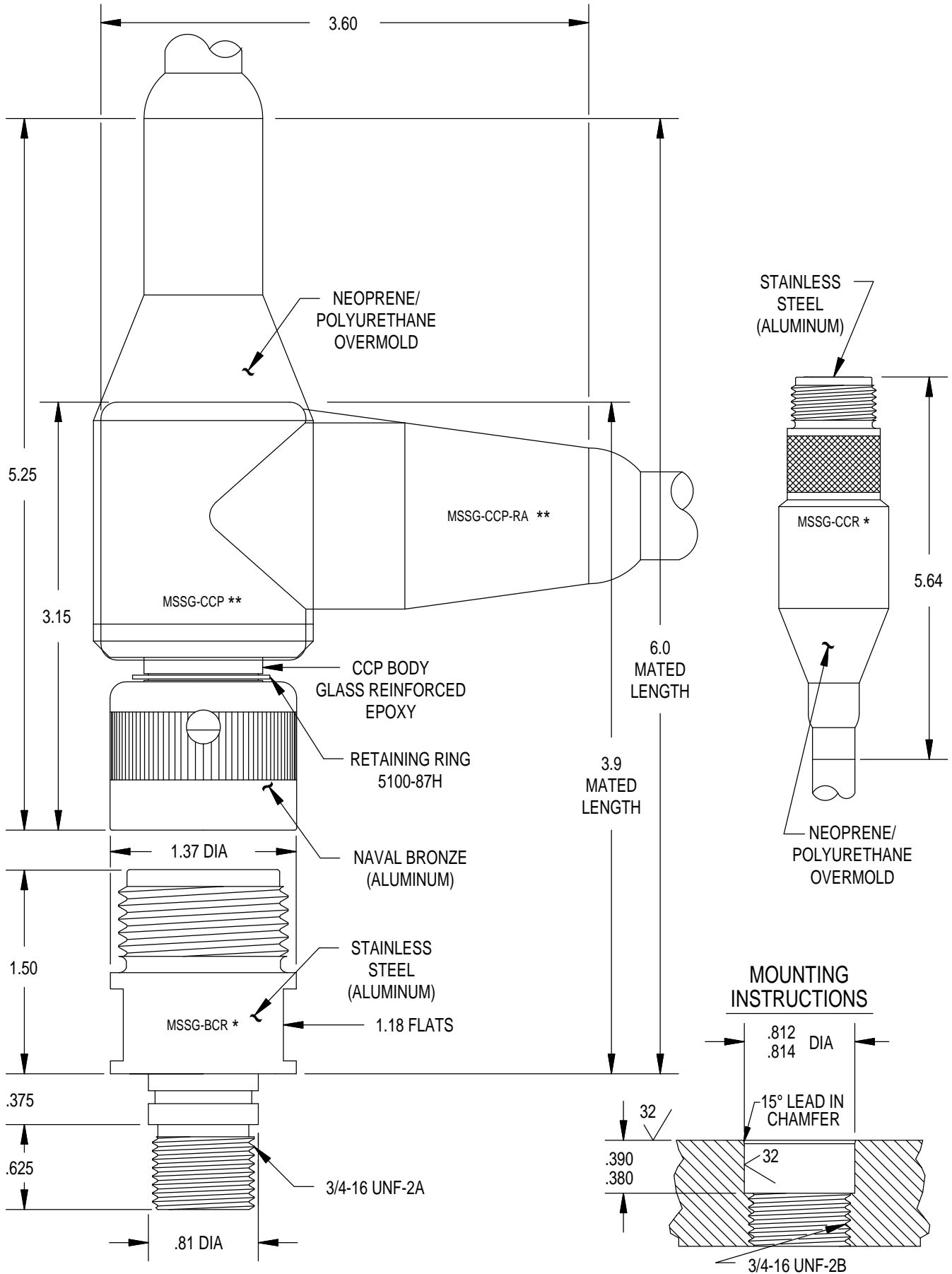


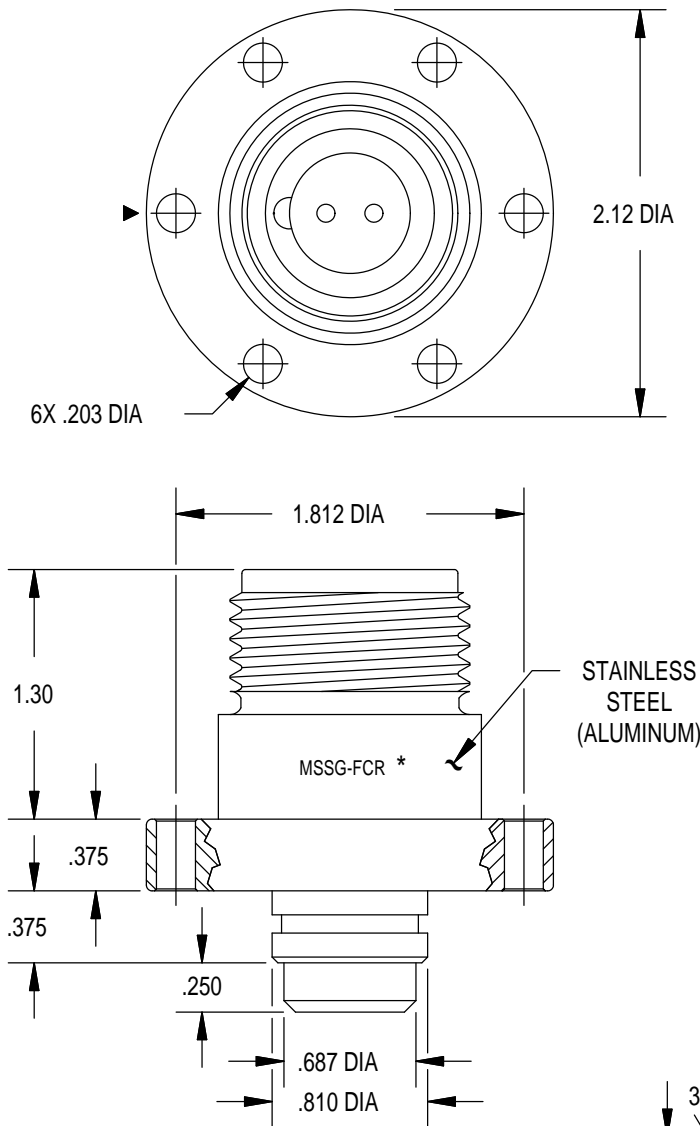
NOTE: Not available in OF.

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		

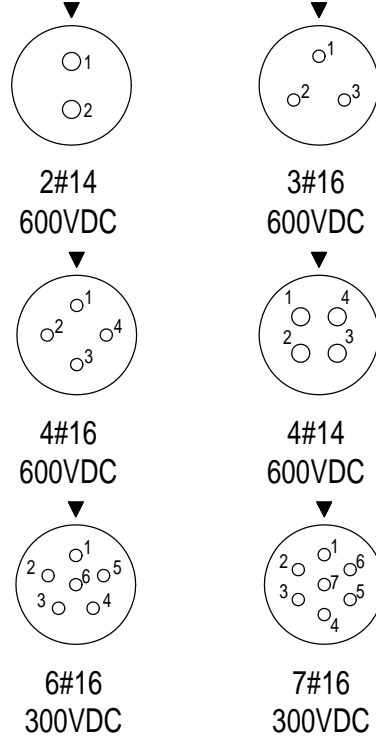
NOTE: CCP is not terminated to cable unless specified.

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

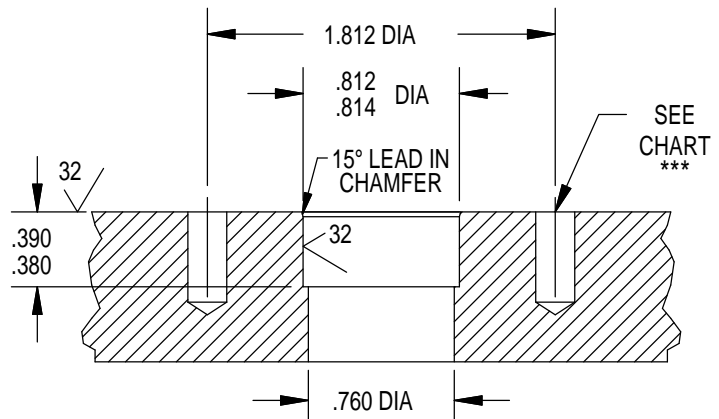




**CONTACT  
CONFIGURATION**  
(BCR FACE VIEWS)

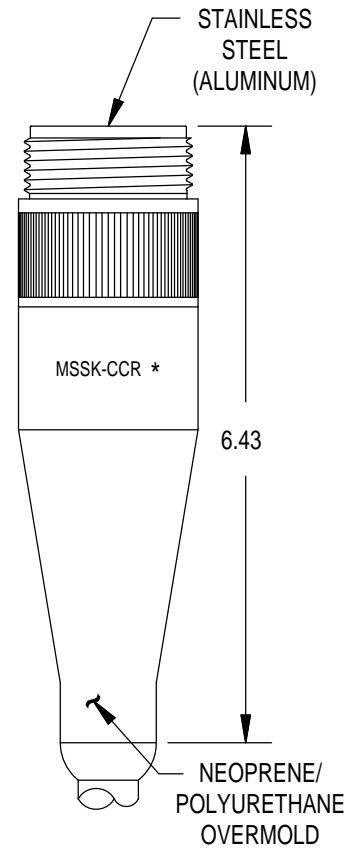
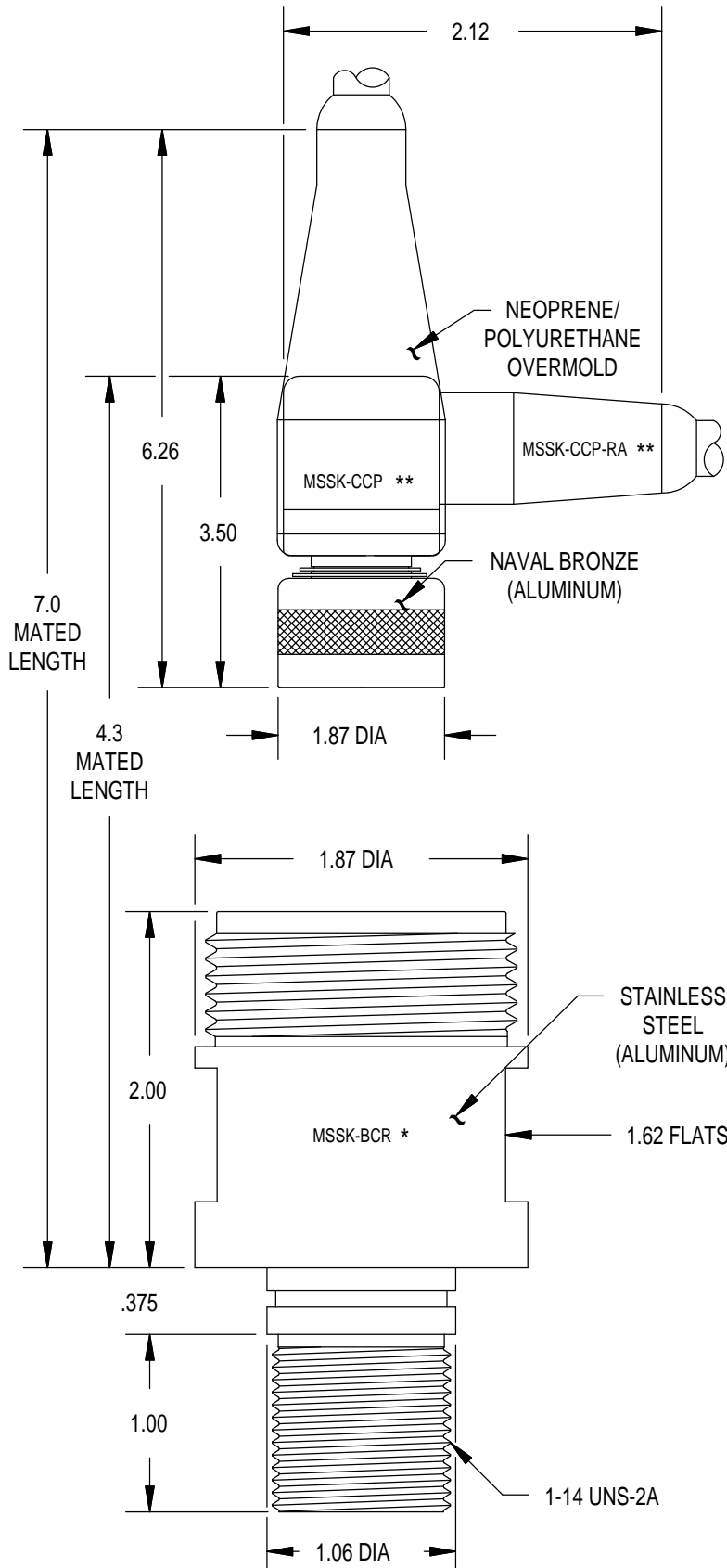


**MOUNTING INSTRUCTIONS**

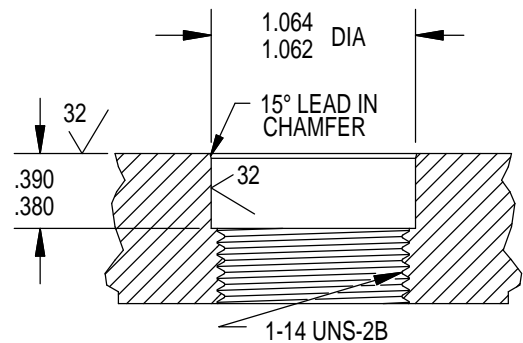


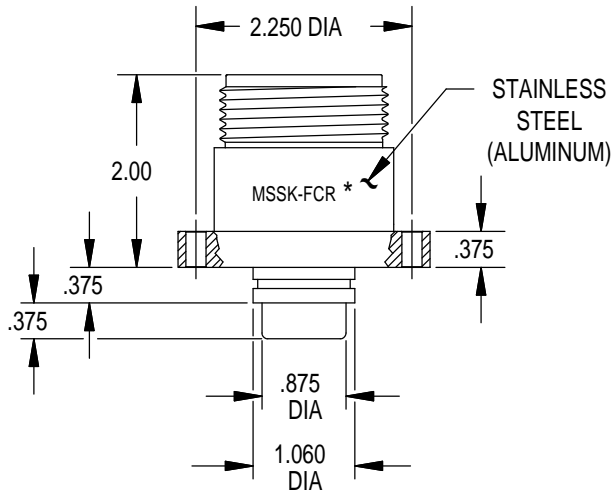
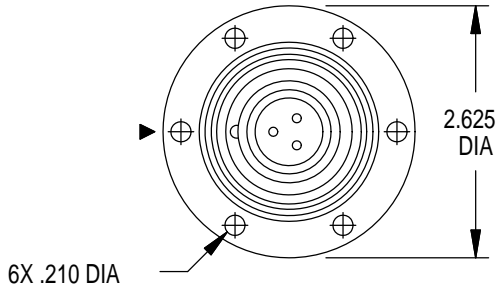
MOUNTING TORQUE FOR MSSG, MSAG-BCR	not to exceed 200 in lbs	MATED PRESSURE RATING (psi)	20,000
DUMMY PLUG FOR MSSG-BCR/FCR/CCR	MSSG-SCP	DUMMY PLUG FOR MSSG-CCP	MSSG-SCR
DUMMY PLUG FOR MSAG-BCR/FCR/CCR	MSAG-SCP	DUMMY PLUG FOR MSAG-CCP	MSAG-SCR

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.

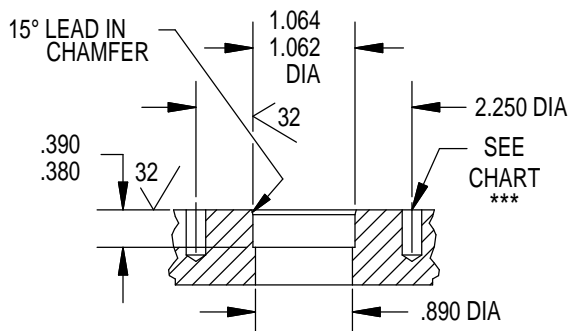


MOUNTING INSTRUCTIONS

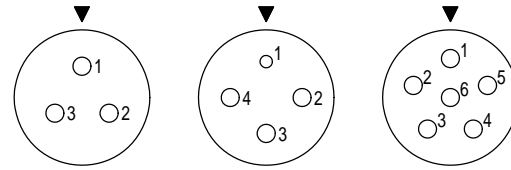




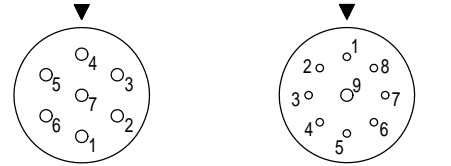
### MOUNTING INSTRUCTIONS



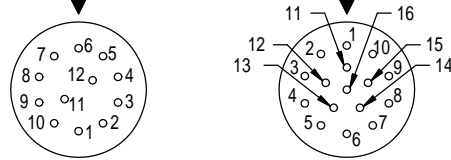
### CONTACT CONFIGURATION (BCR FACE VIEWS)



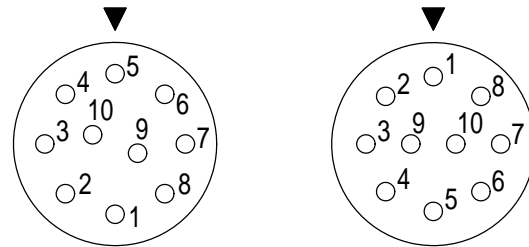
3#14 600VDC      1#16 600VDC      6#14 600VDC



7#16 600VDC      1#16 8#20 600VDC



12#20 600VDC      16#20 600VDC

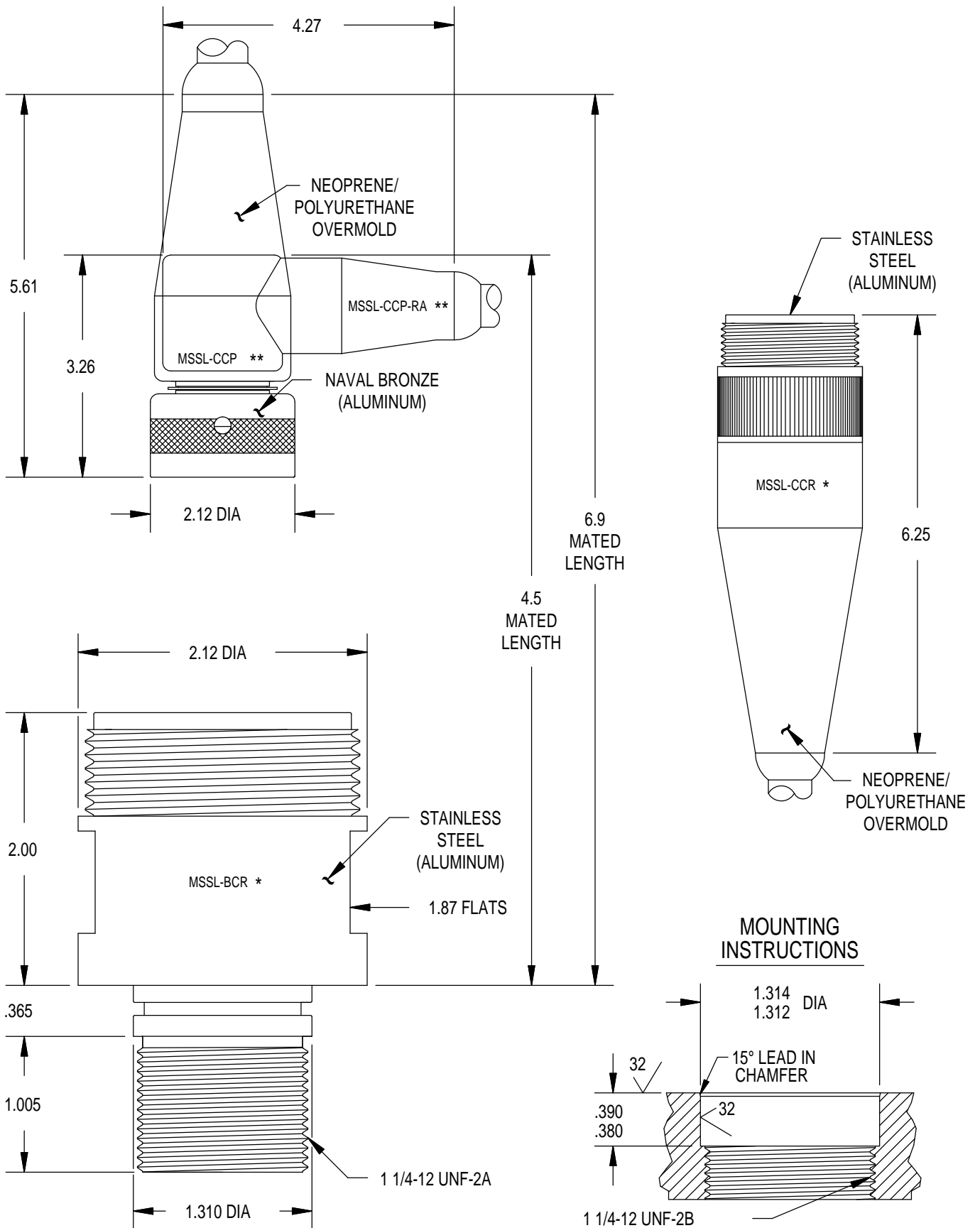


10#16 IE 600VDC      10#16 NAVY 600VDC

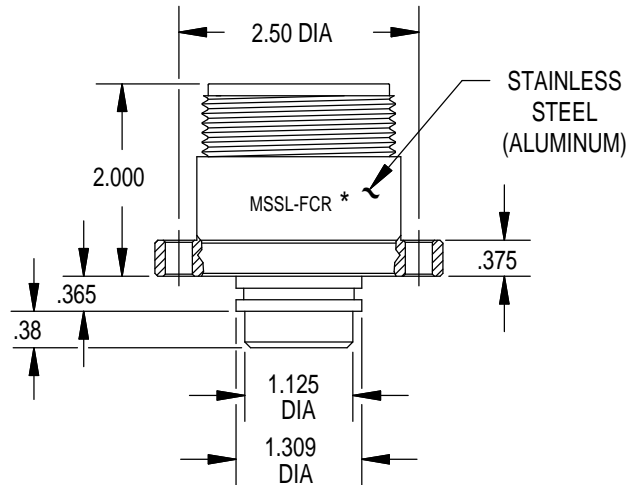
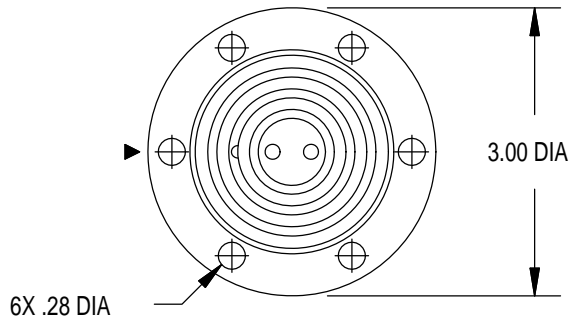
NOTE: Please specify Navy or IE pin configuration when ordering.

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

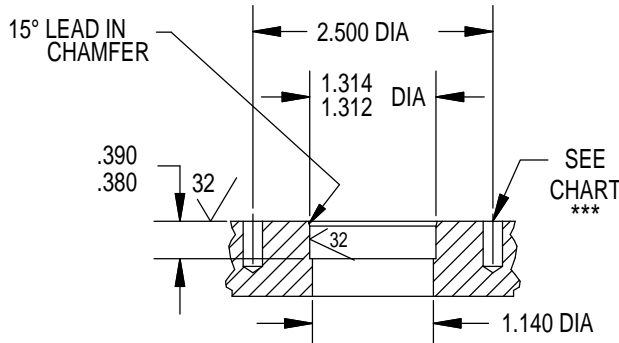
NOTE: Delrin protective caps available upon request.  
 \* See Technical Bulletin 45 71 for internal assembly and hardware specifications.  
 \*\* See Technical Bulletin 45 72 for internal assembly and hardware specifications.  
 \*\*\* Blind tapped hole not to penetrate bulkhead, minimum full thread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







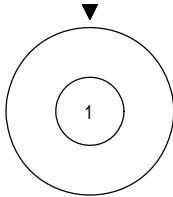
**MOUNTING INSTRUCTIONS**



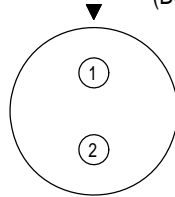
MOUNTING TORQUE FOR MSSL, MSAL-BCR	not to exceed 200 in lbs	MATED PRESSURE RATING (psi)	20,000
DUMMY PLUG FOR MSSL-BCR/FCR/CCR	MSSL-SCP	DUMMY PLUG FOR MSSL-CCP	MSSL-SCR
DUMMY PLUG FOR MSAL-BCR/FCR/CCR	MSAL-SCP	DUMMY PLUG FOR MSAL-CCP	MSAL-SCR

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.

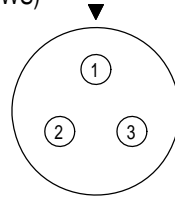
**CONTACT  
CONFIGURATION**  
(BCR FACE VIEWS)



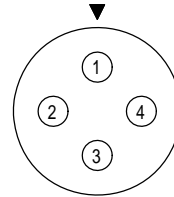
**1#1/0**  
**1000VDC**



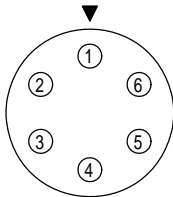
**2#8**  
**1000VDC**



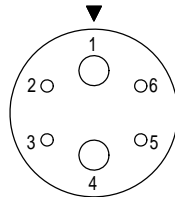
**3#8**  
**1000VDC**



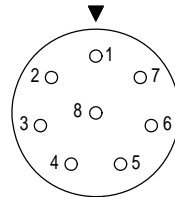
**4#8 \***  
**1000VDC**



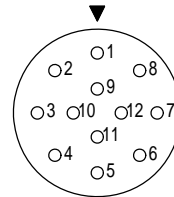
**6#10**  
**1000VDC**



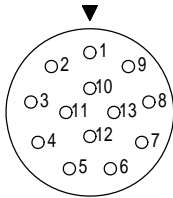
**2#8**  
**4#16**  
**1000VDC**



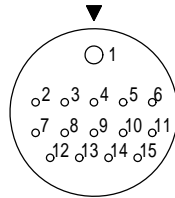
**8#16**  
**600VDC**



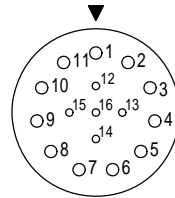
**12#16**  
**600VDC**



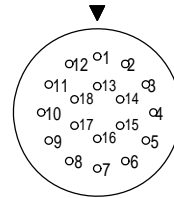
**13#16**  
**600VDC**



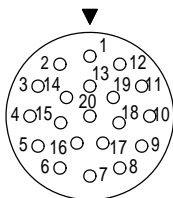
**1#16**  
**14#20**  
**600VDC**



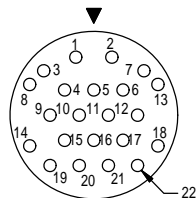
**5#20**  
**11#16**  
**600VDC**



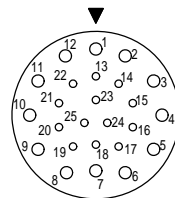
**18#20**  
**600VDC**



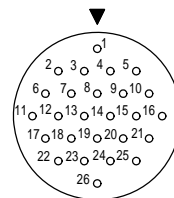
**20#16**  
**600VDC**



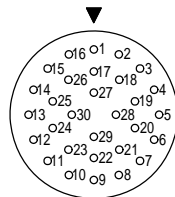
**22#16**  
**600VDC**



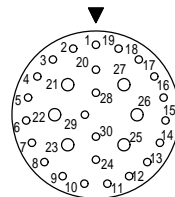
**12#16**  
**13#20**  
**600VDC**



**26#20**  
**600VDC**



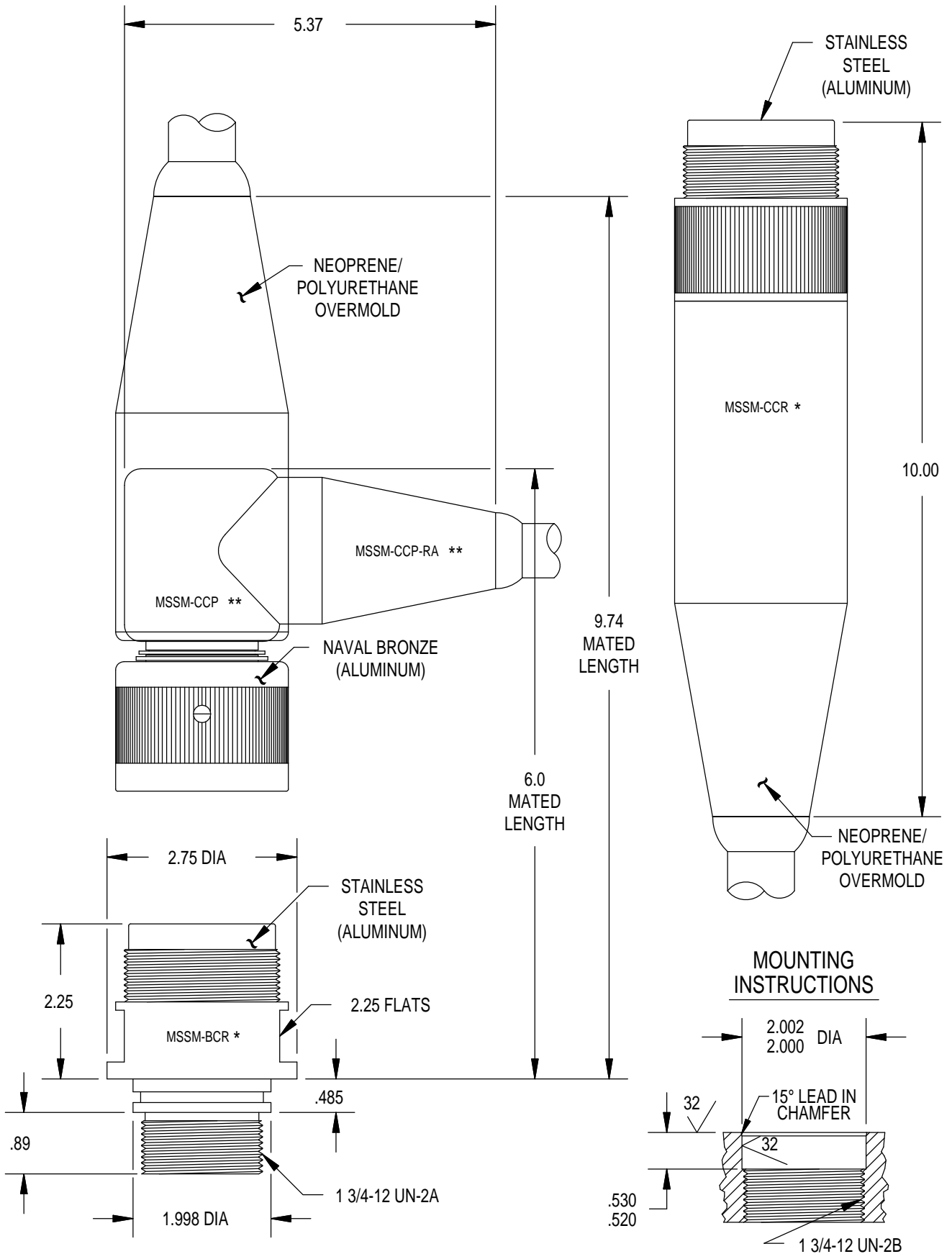
**30#20**  
**600VDC**

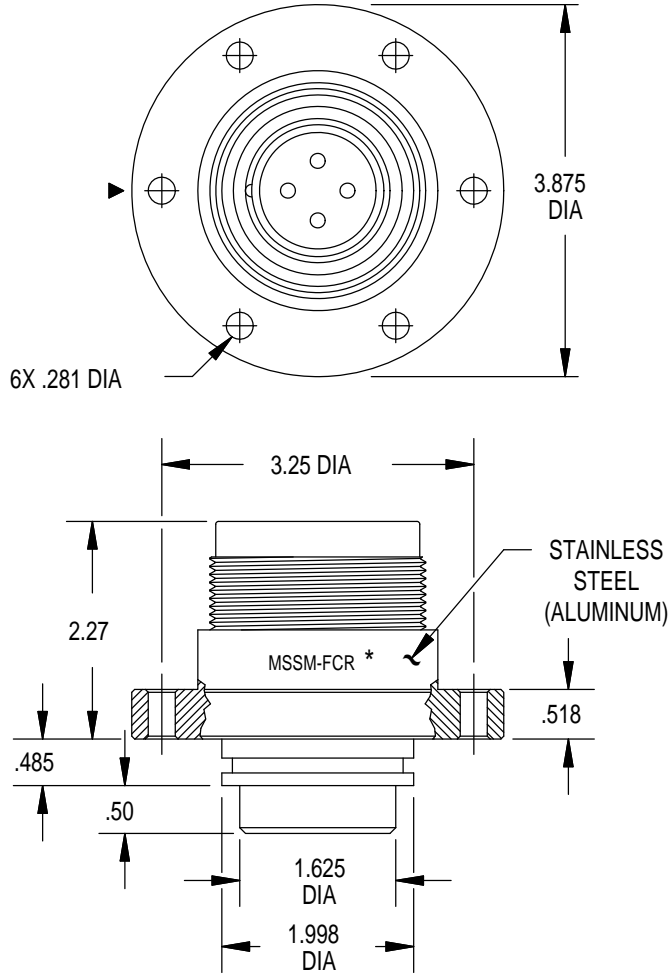


**6#16**  
**24#20**  
**600VDC**

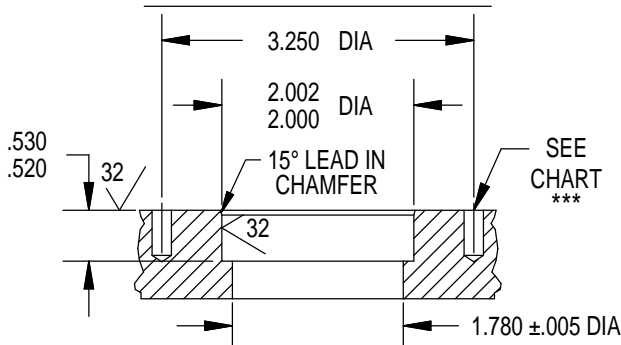
\* Also available in high voltage.  
(3000VDC)

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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

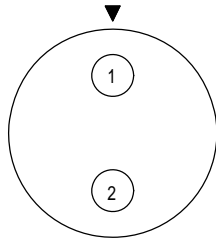
NOTE: Delrin protective caps available upon request.

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

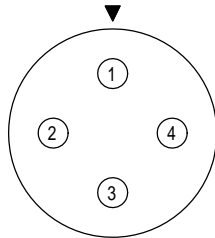
\*\* See Technical Bulletin 45 72 for internal assembly and hardware specifications.

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

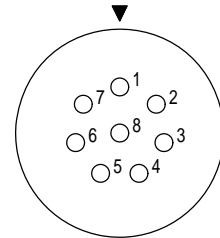
CONTACT  
CONFIGURATION  
(BCR FACE VIEWS)



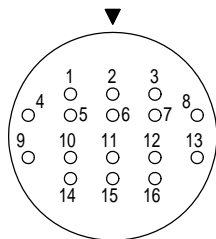
**2#6 \***  
**1500VDC**



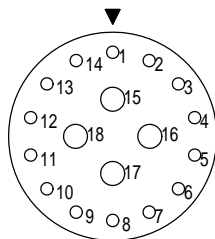
**4#8 \***  
**1500VDC**



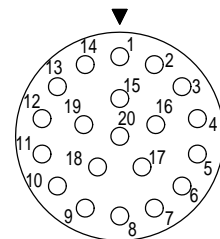
**8#14**  
**600VDC**



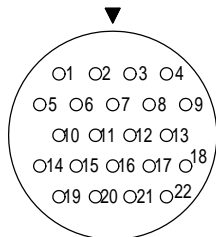
**16#16**  
**600VDC**



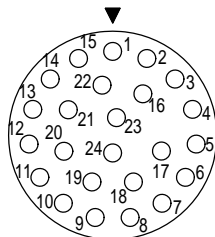
**4#10**  
**14#16**  
**600VDC**



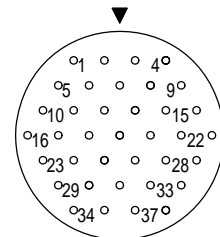
**20#14**  
**600VDC**



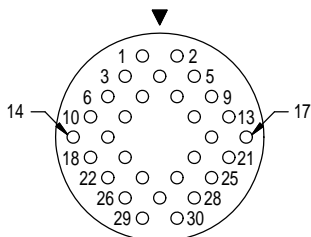
**22#16**  
**600VDC**



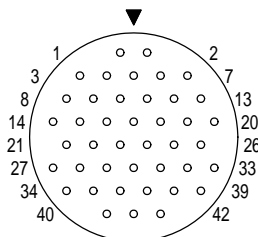
**24#14**  
**600VDC**



**37#20**  
**600VDC**



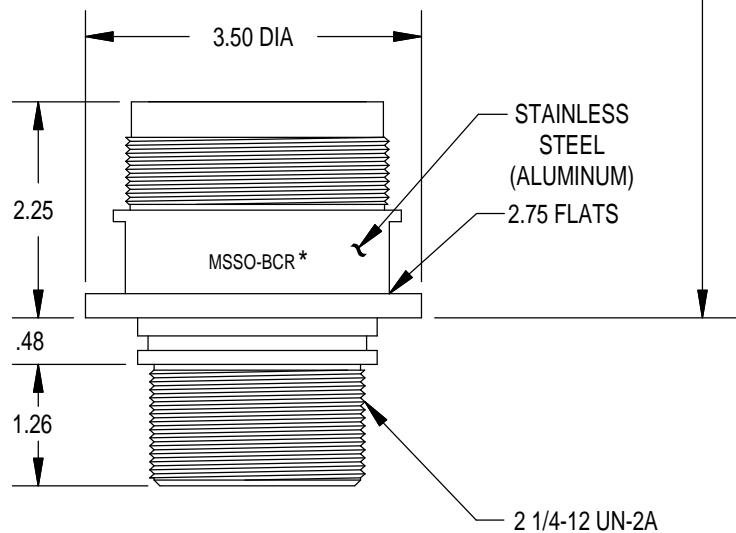
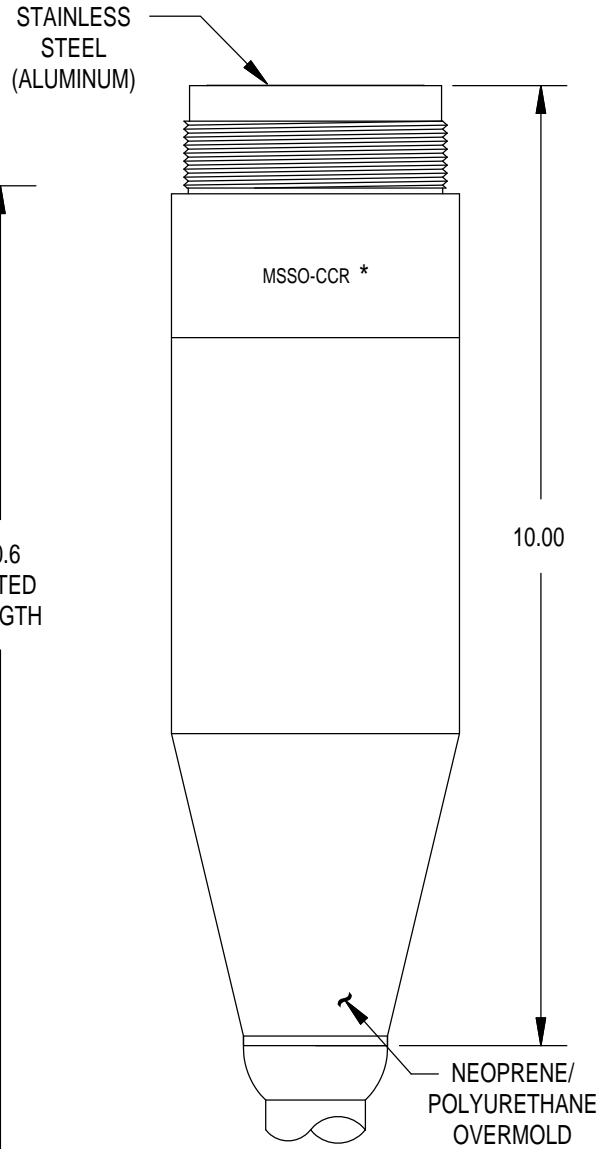
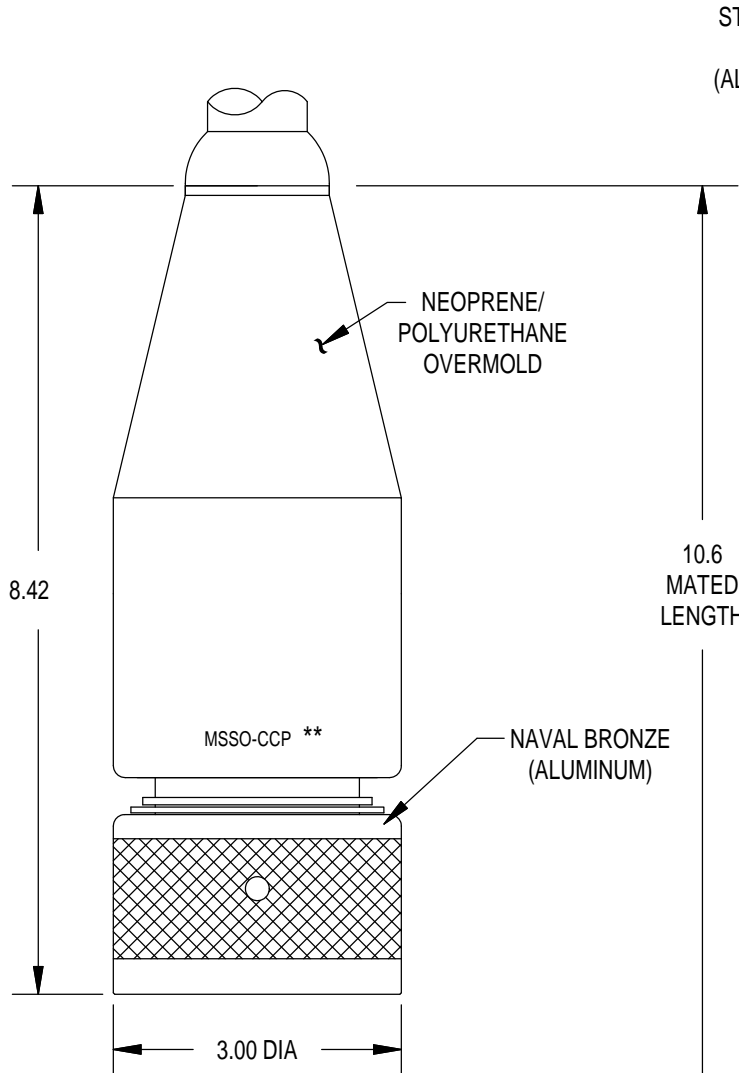
**30#16**  
**600VDC**



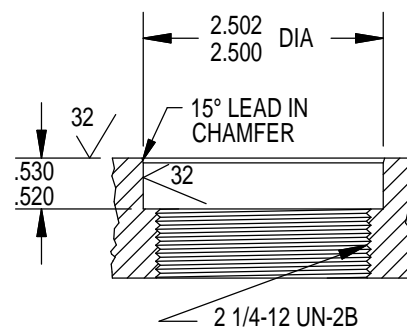
**42#20**  
**600VDC**

\* Also available in high voltage.  
(3000VDC)

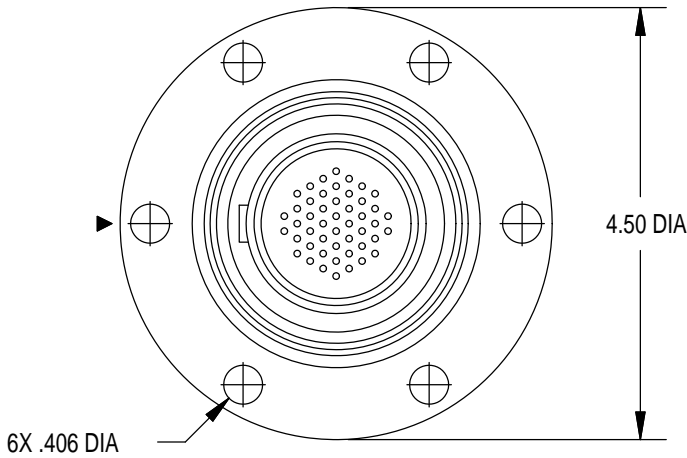
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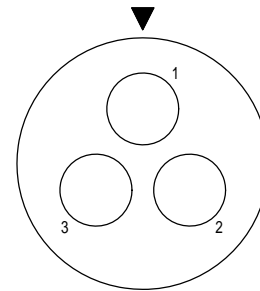
**MOUNTING INSTRUCTIONS**



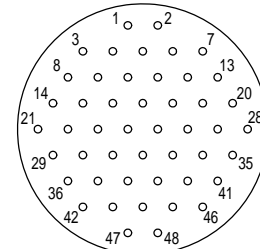




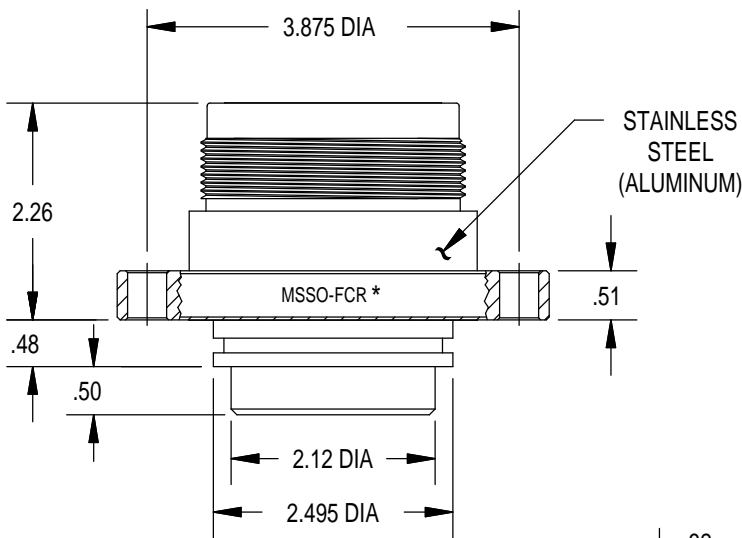
CONTACT CONFIGURATION  
(BCR FACE VIEWS)



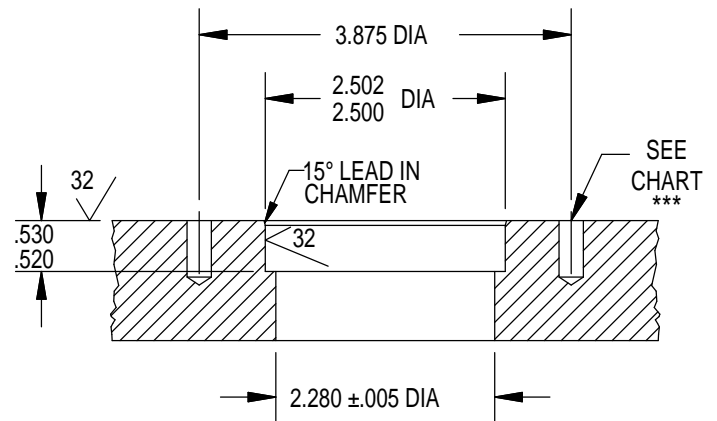
3#4  
600VDC



48#20  
600VDC



MOUNTING INSTRUCTIONS



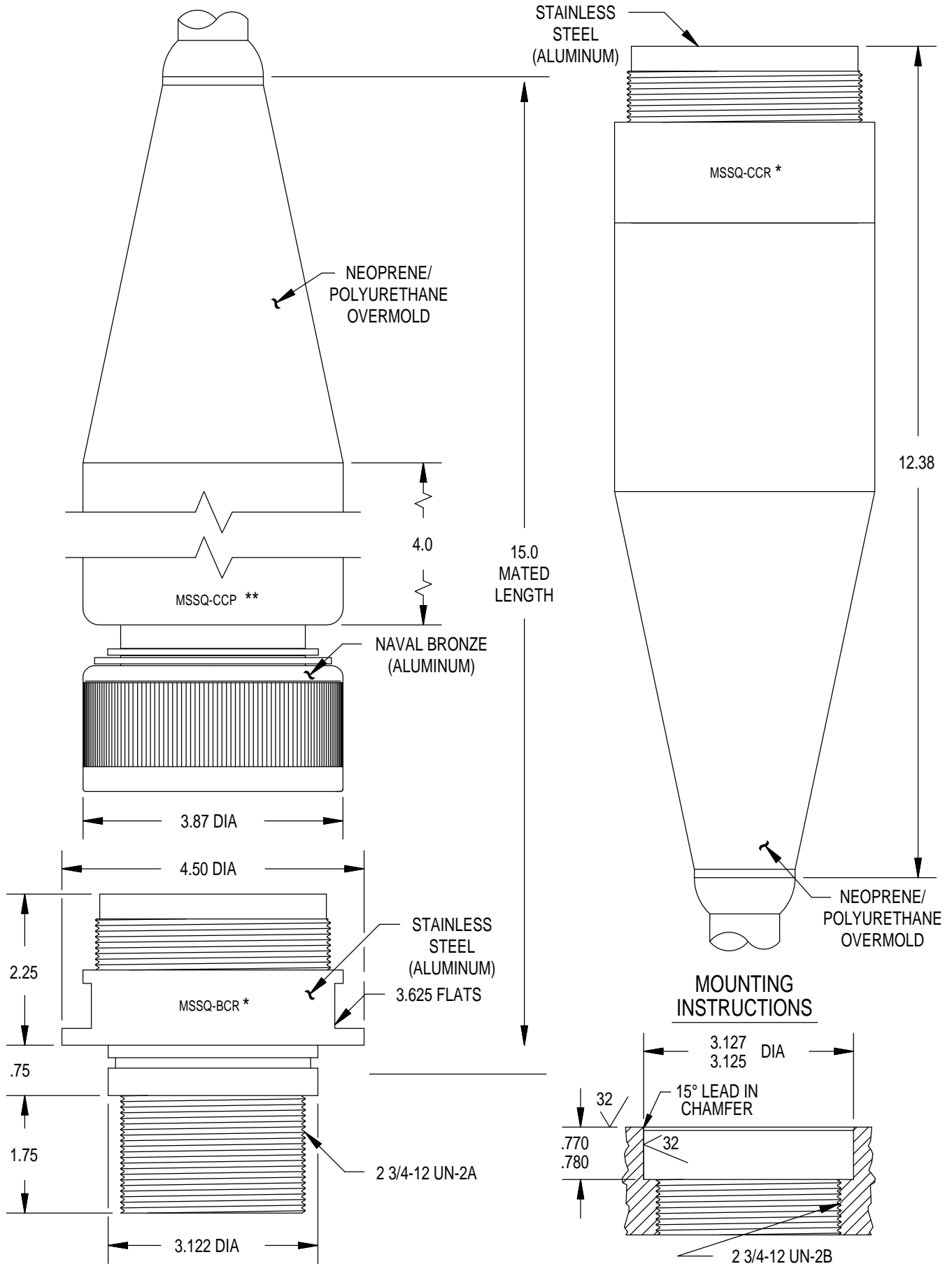
MOUNTING TORQUE FOR MSSO, MSAO-BCR	not to exceed 200 in lbs	MATED PRESSURE RATING (psi)	20,000
DUMMY PLUG FOR MSSO-BCR/FCR/CCR	MSSO-SCP	DUMMY PLUG FOR MSSO-CCP	MSSO-SCR
DUMMY PLUG FOR MSAO-BCR/FCR/CCR	MSAO-SCP	DUMMY PLUG FOR MSAO-CCP	MSAO-SCR

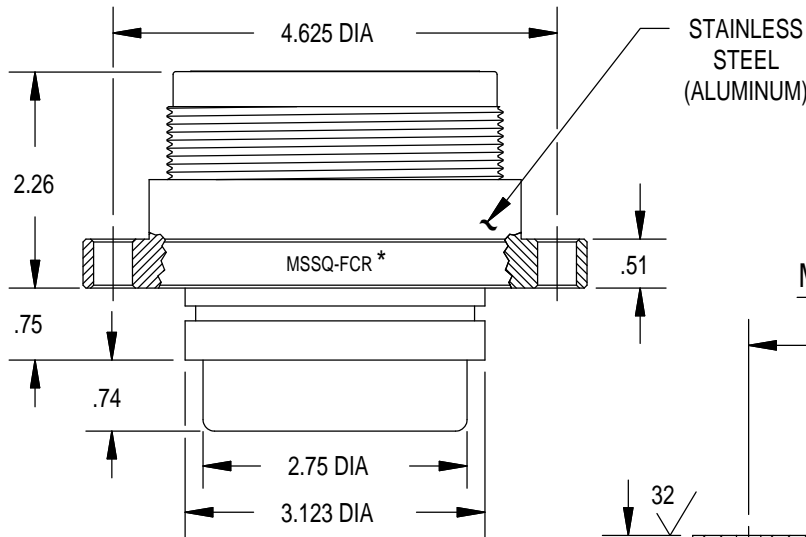
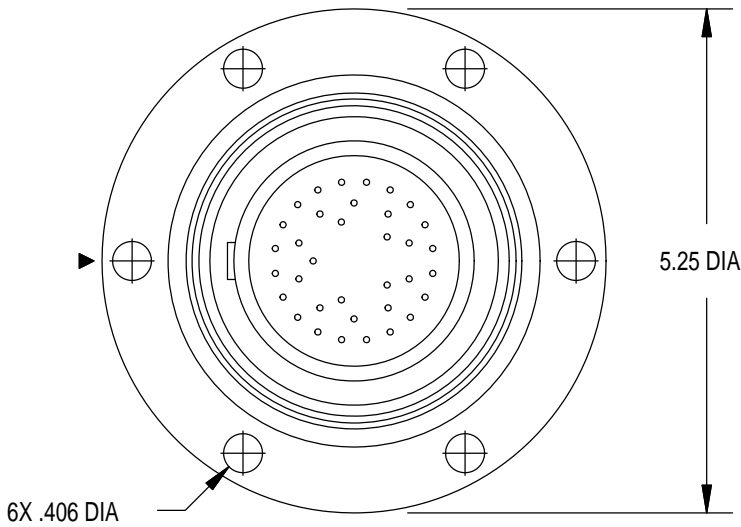
NOTE: Delrin protective caps available upon request.

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

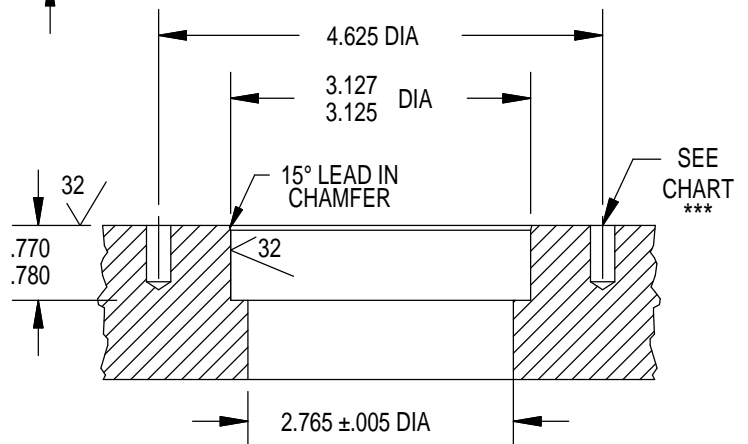
\*\* See Technical Bulletin 45 72 for internal assembly and hardware specifications.

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





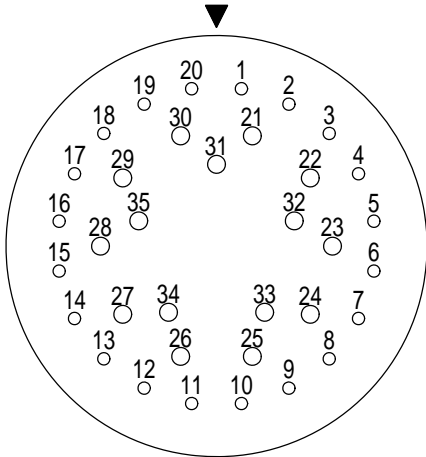
**MOUNTING INSTRUCTIONS**



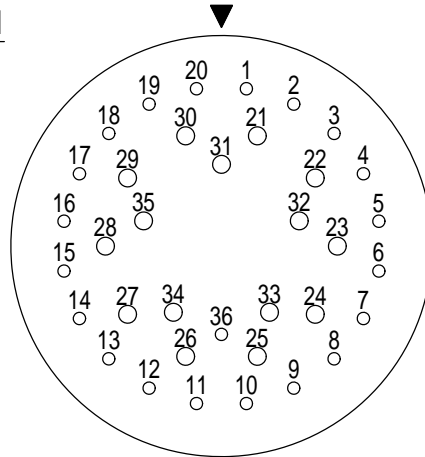
MOUNTING TORQUE FOR MSSQ, MSAQ-BCR	not to exceed 200 in lbs	MATED PRESSURE RATING (psi)	20,000
DUMMY PLUG FOR MSSQ-BCR/FCR/CCR	MSSQ-SCP	DUMMY PLUG FOR MSSQ-CCP	MSSQ-SCR
DUMMY PLUG FOR MSAQ-BCR/FCR/CCR	MSAQ-SCP	DUMMY PLUG FOR MSAQ-CCP	MSAQ-SCR

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.

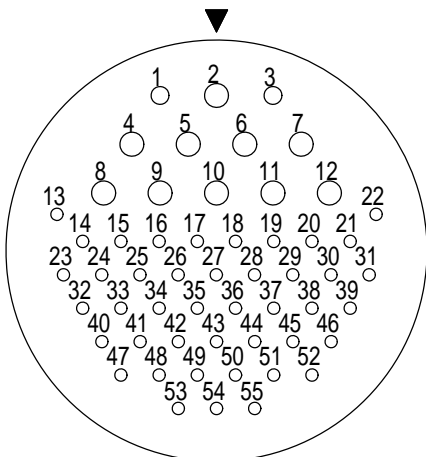
CONTACT  
CONFIGURATION  
(BCR FACE VIEWS)



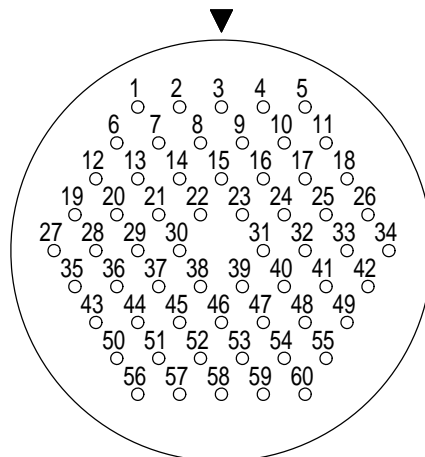
15#14  
20#16  
(High Voltage)  
2000VDC



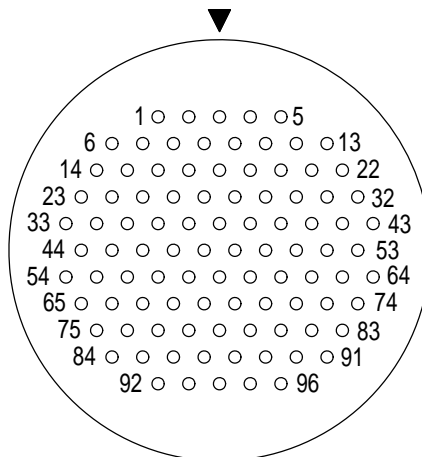
15#14  
21#16  
(High Voltage)  
2000VDC



10#10  
45#16  
600VDC

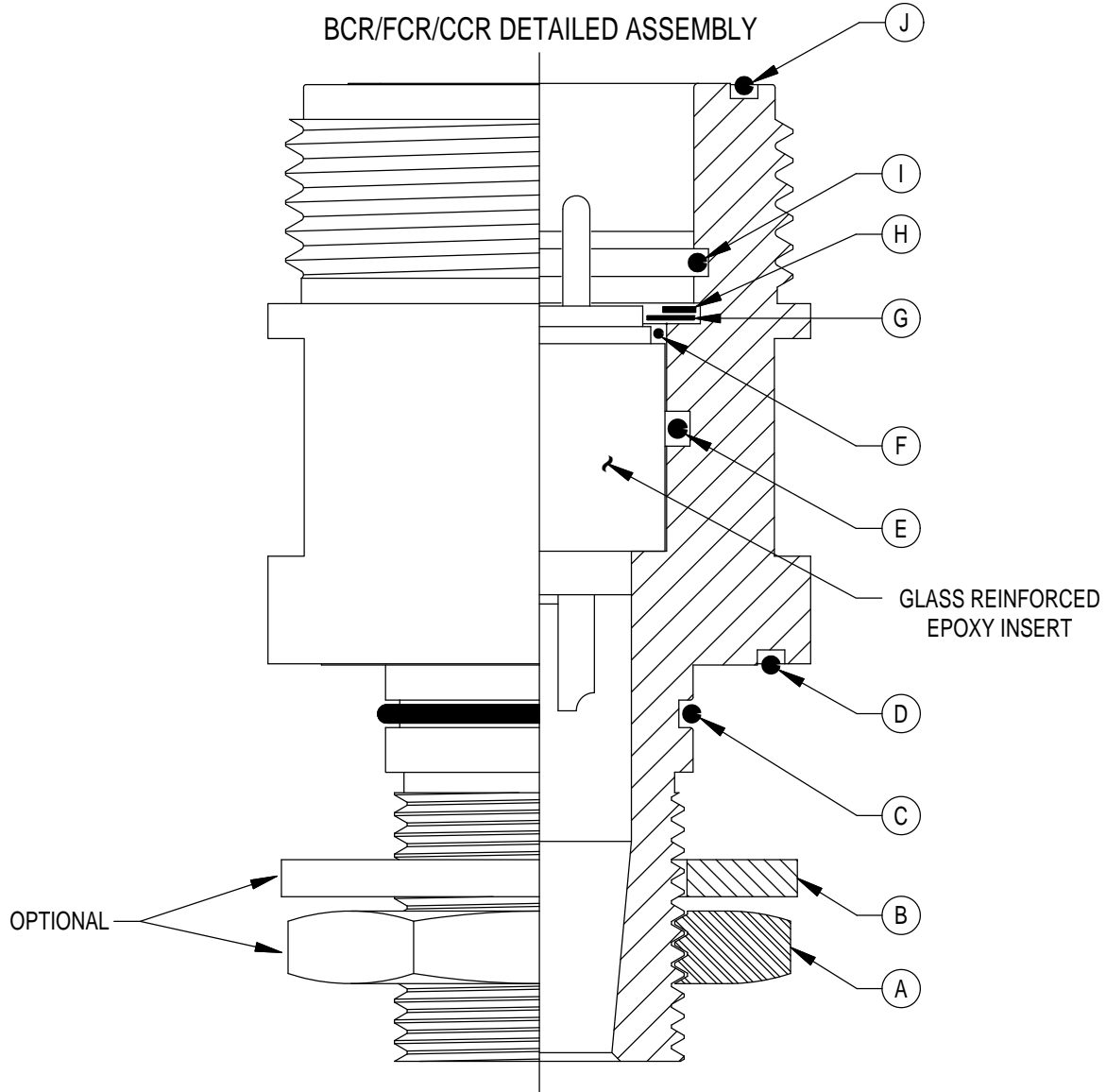


60#16  
600VDC



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

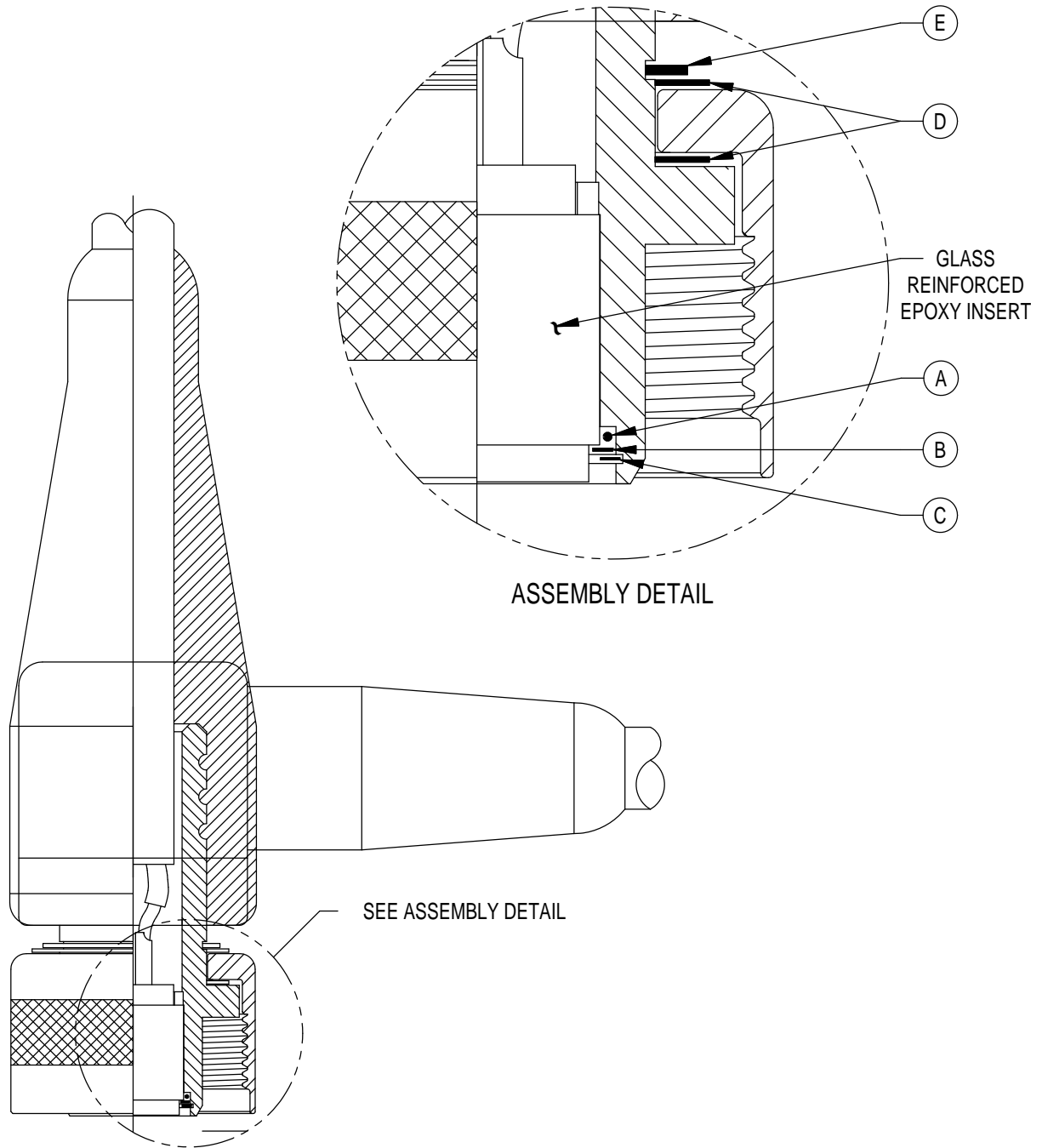
NOTE: See Technical Bulletin 45 10 for J size detailed assembly.

\* Not required with FCR or CCR assemblies.

\*\* Not required with CCR assembly.

\*\*\* FCR uses 2-240.

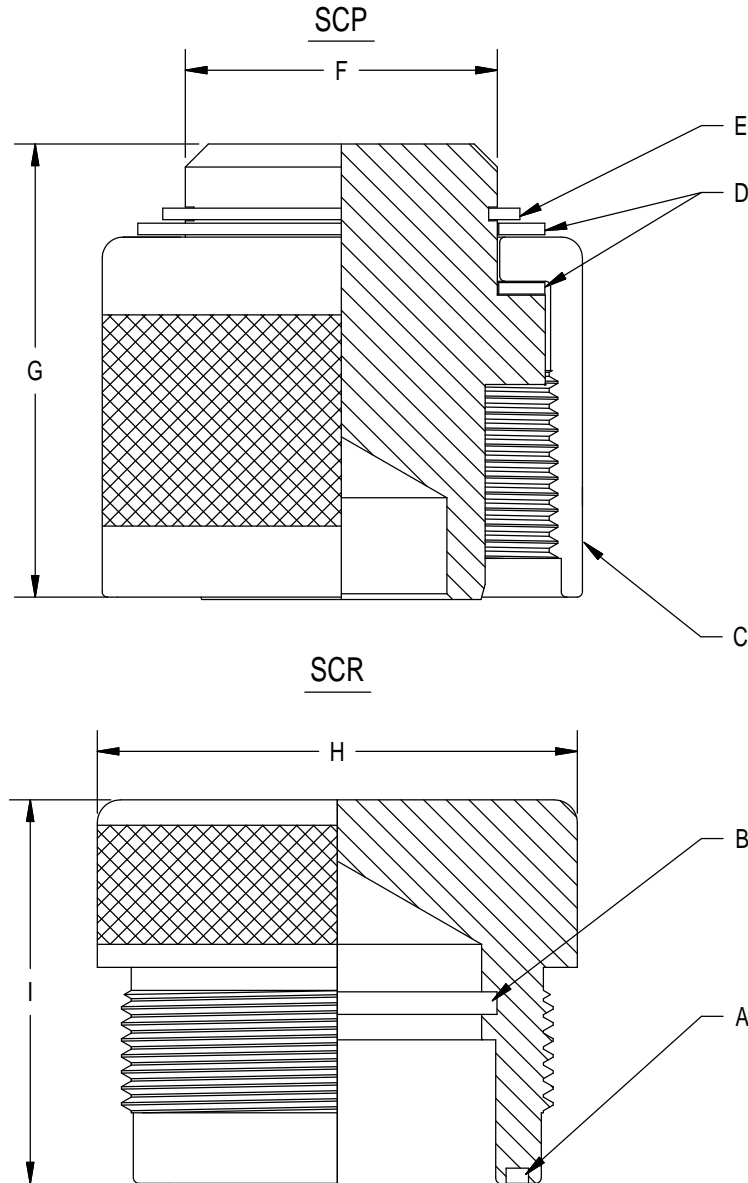
## CCP DETAILED ASSEMBLY



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