

SEACON[®]

UNDERWATER ELECTRICAL AND FIBER OPTIC CONNECTORS



FIBER OPTICS

UNDERWATER FIBER OPTIC DRY-MATE CONNECTORS

UNDERWATER ELECTRICAL DRY-MATE CONNECTORS

INTRODUCTION

As organizations in the subsea industry develop more applications with fiber optic technology in mind, there has been a dramatic increase in the quantity and complexity of electro-optic connector configurations needed to fit these applications. In order to meet the changing requirements of customers, the SEA CON® Group has developed a comprehensive and extensive range of fiber optic products which are designed and manufactured to meet the specific and varied environmental conditions imposed on connectors today.

Our standard dry-mate optical products are based around three of SEA CON®'s connector ranges; the MSS (Metal Shell Series), MINI-CON and the latest OPTI-CON series which was developed in response to a need for a standard high quality electro-optic connector.

With over 13 years experience in underwater optical connectivity, SEA CON® can offer optical dry-mate, wet-mate, underwater mateable connectors, optical penetrators and optical fiber management systems.

AVAILABILITY

SEA CON®'s fiber optic connectors are available in a variety of shell sizes ranging from 1 to 48 contacts, single-mode or multi-mode with a wide range of shell materials including 316 Stainless Steel (as standard) although other materials are available including Titanium, Monel™, Inconel™ and Aluminum. Pressure rated to 20,000 psi with an insertion loss of <1.0dB, typically <0.5dB, these dry mate connectors are also available with Pressure Balance Oil Filled (PBOF) and glass sealed options.

APPLICATIONS

Since SEA CON® first started manufacturing fiber optics, the diversity of applications has increased and now includes sonar and surveillance systems, ROV's/AUV's, BOP monitoring equipment, neutrino detection, stress monitoring, subsea camera systems and downhole applications.

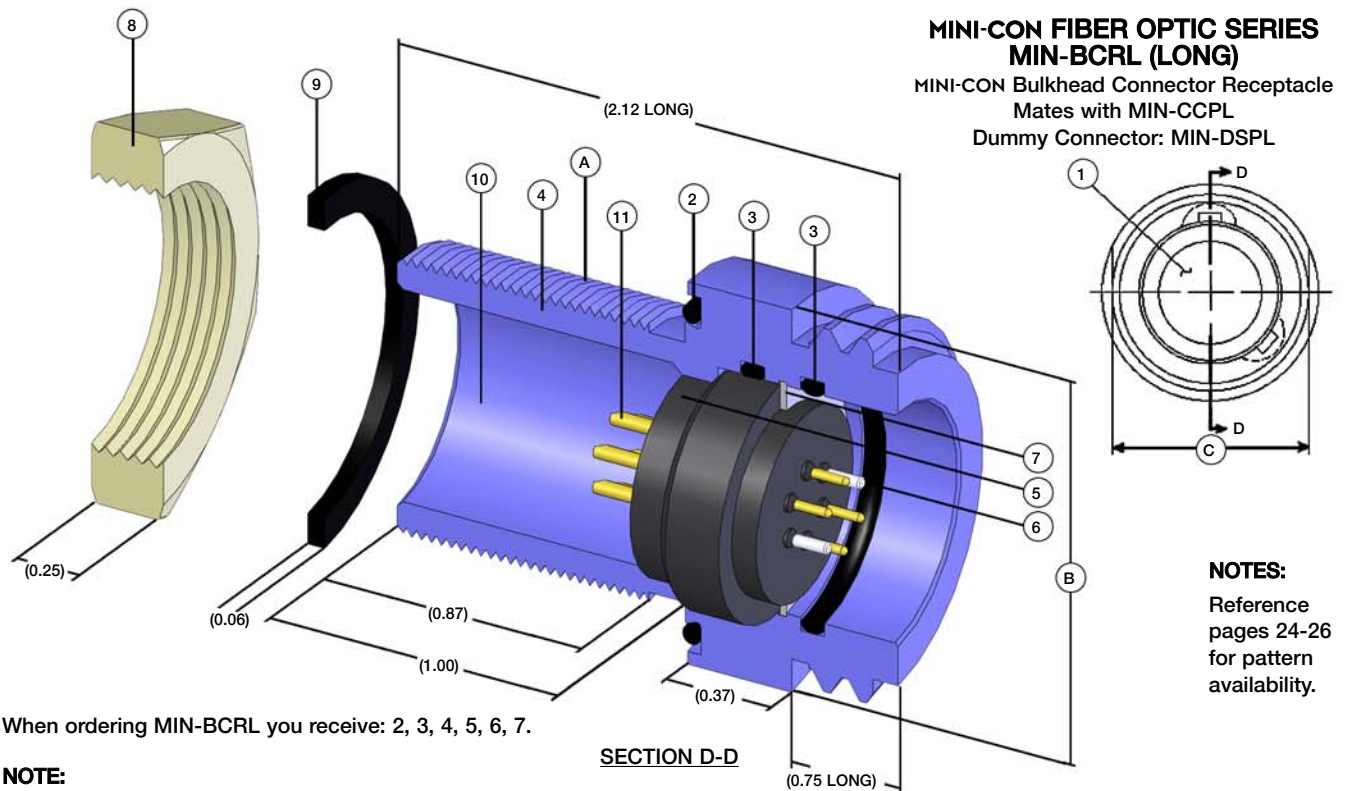
TESTING

All connectors are subjected to the following:

- Electrical Insulation.
- Continuity.
- Optical.

Please contact SEA CON® for full test specifications for individual connectors.

DIMENSION DETAILS

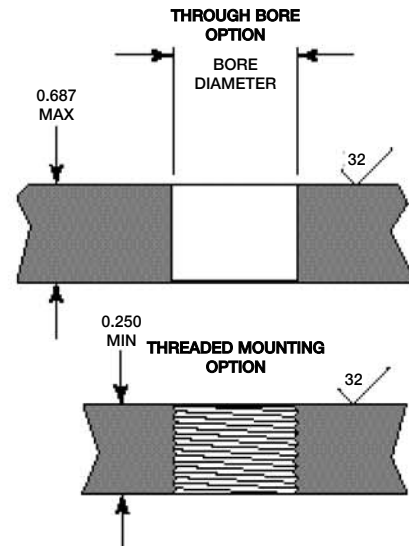


CONNECTOR	A - MOUNTING THREAD	B - DIAMETER (INCHES)	2 - O-RING	7 - SPIROLOX	3 - O-RING	C - WRENCH FLATS (INCHES)	8 - HEX NUT ACROSS FLATS (INCHES)	8 - HEX NUT ACROSS POINTS (INCHES)	9 - WASHER OD (INCHES)
MINM-BCRL	1-20 UNEF-2A	1.37	2-023	UR81	2-019	1.25	1.25	1.44	1.25
MINO-BCRL	1 1/8-16 UN-2A	1.62	2-026	UR106	2-023	1.50	1.50	1.75	1.50
MINP-BCRL	1 1/4-16 UN-2A	1.75	2-028	UR118	2-025	1.62	1.63	1.88	1.63
MINQ-BCRL	1 3/8-16 UN-2A	1.87	2-029	UR137	2-028	1.75	1.75	2.00	1.75
MINR-BCRL	1 1/2-16 UN-2A	2.00	2-029	UR150	2-029	1.87	1.88	2.16	1.88
MINT-BCRL	2-16 UN-2A	2.50	2-034	UR175	2-031	2.37	2.38	2.75	2.38
MINU-BCRL	2 1/4-16 UN-2A	2.75	2-036	UR200	2-033	2.62	2.63	3.03	2.63
MINX-BCRL	2 3/4-16 UN-2A	3.50	2-041	UR250	2-037	3.15	3.16	3.63	3.16

BCRL MOUNTING REQUIREMENTS

SIZE	BORE Ø +0.015 -0.000 (INCHES)	BCRL MOUNTING TORQUE* (INCH-POUNDS)
M	1.000	120-150
O	1.125	130-160
P	1.250	140-170
Q	1.375	150-180
R	1.500	170-220
T	2.000	210-250
U	2.250	220-260
X	2.750	240-280

* Torque specified is for dry metal threads.



NOTES:

1. Bore must be perpendicular to spot face.
2. Spotface diameter to be equal or greater than the connector diameter.
3. If threaded mount is used, lead thread chamfer is not to exceed diameter shown in bore column.

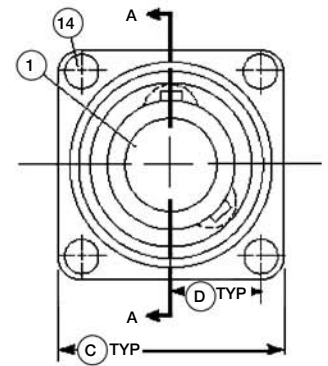
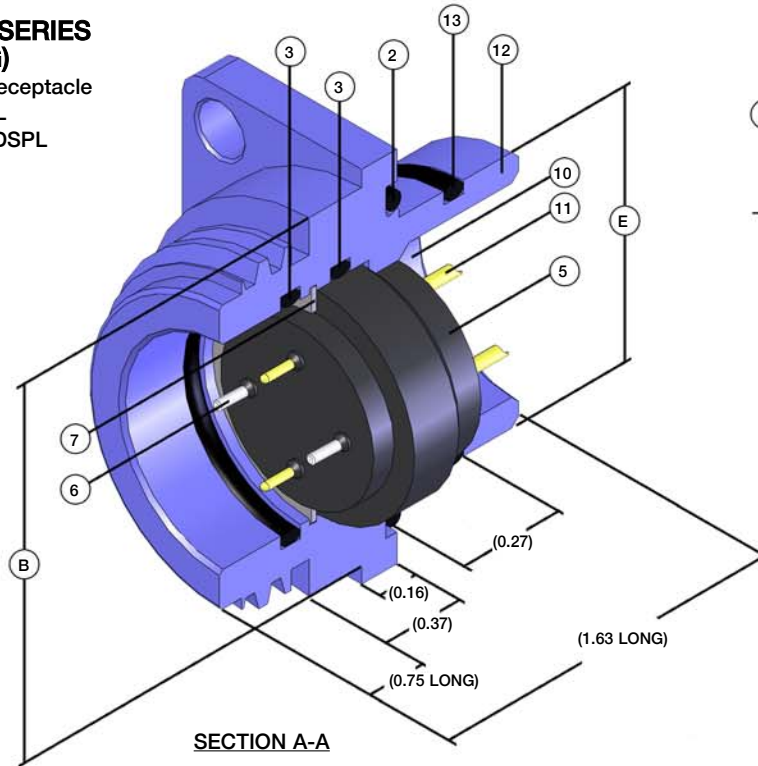
DIMENSION DETAILS

MINI-CON FIBER OPTIC SERIES MIN-FCRL (LONG)

MINI-CON Flange Connector Receptacle
Mates with MIN-CCPL
Dummy Connector: MIN-DSPL

NOTE:

Please refer to the MINI-CON master parts and materials list on page 23.



NOTES:

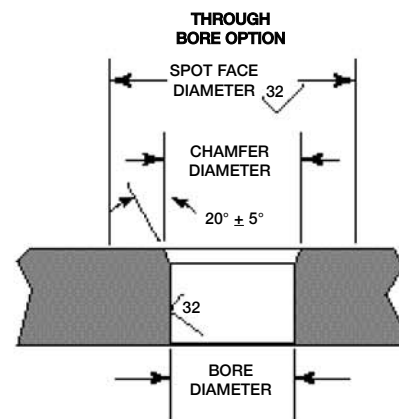
Reference pages 24-26 for pattern availability.

When ordering MIN-FCRL you receive: 2, 3, 5, 6, 7, 12, 13.

CONNECTOR	B - DIAMETER (INCHES)	C - SQUARE (INCHES)	D - MOUNTING HOLE LOCATION (INCHES)	E - DIAMETER (INCHES)	13 - O-RING	7 - SPIROLOX	2 - O-RING	SOCKET HEAD CAPSCREW	3 - O-RING
MINM-FCRL	1.37	1.50	0.593	0.998	2-020	UR81	2-023	8-32 UNC-2A	2-019
MINO-FCRL	1.62	1.75	0.723	1.123	2-022	UR106	2-026	8-32 UNC-2A	2-023
MINP-FCRL	1.75	1.87	0.777	1.248	2-024	UR118	2-028	8-32 UNC-2A	2-025
MINQ-FCRL	1.87	2.00	0.831	1.373	2-026	UR137	2-029	10-24 UNC-2A	2-028
MINR-FCRL	2.00	2.12	0.884	1.498	2-028	UR150	2-029	10-24 UNC-2A	2-029
MINT-FCRL	2.50	2.62	1.043	1.998	2-032	UR175	2-034	1/4-20 UNC-2A	2-031
MINU-FCRL	2.75	2.87	1.130	2.248	2-034	UR200	2-036	1/4-20 UNC-2A	2-033
MINX-FCRL	3.50	3.62	1.470	2.748	2-038	UR250	2-041	3/8-16 UNC-2A	2-037

FCRL MOUNTING REQUIREMENTS

SIZE	BORE Ø +0.002 -0.000 (INCHES)	CHAMFER Ø +0.010 (INCHES)	SPOTFACE Ø * +0.015 (INCHES)	SPOTFACE Ø ** +0.015 (INCHES)
M	1.000	1.040	1.31	2.12
O	1.125	1.175	1.50	2.44
P	1.250	1.290	1.62	2.62
Q	1.375	1.425	1.81	2.81
R	1.500	1.540	1.87	3.00
T	2.000	2.050	2.50	3.75
U	2.250	2.290	2.75	4.00
X	2.750	2.800	3.31	5.06

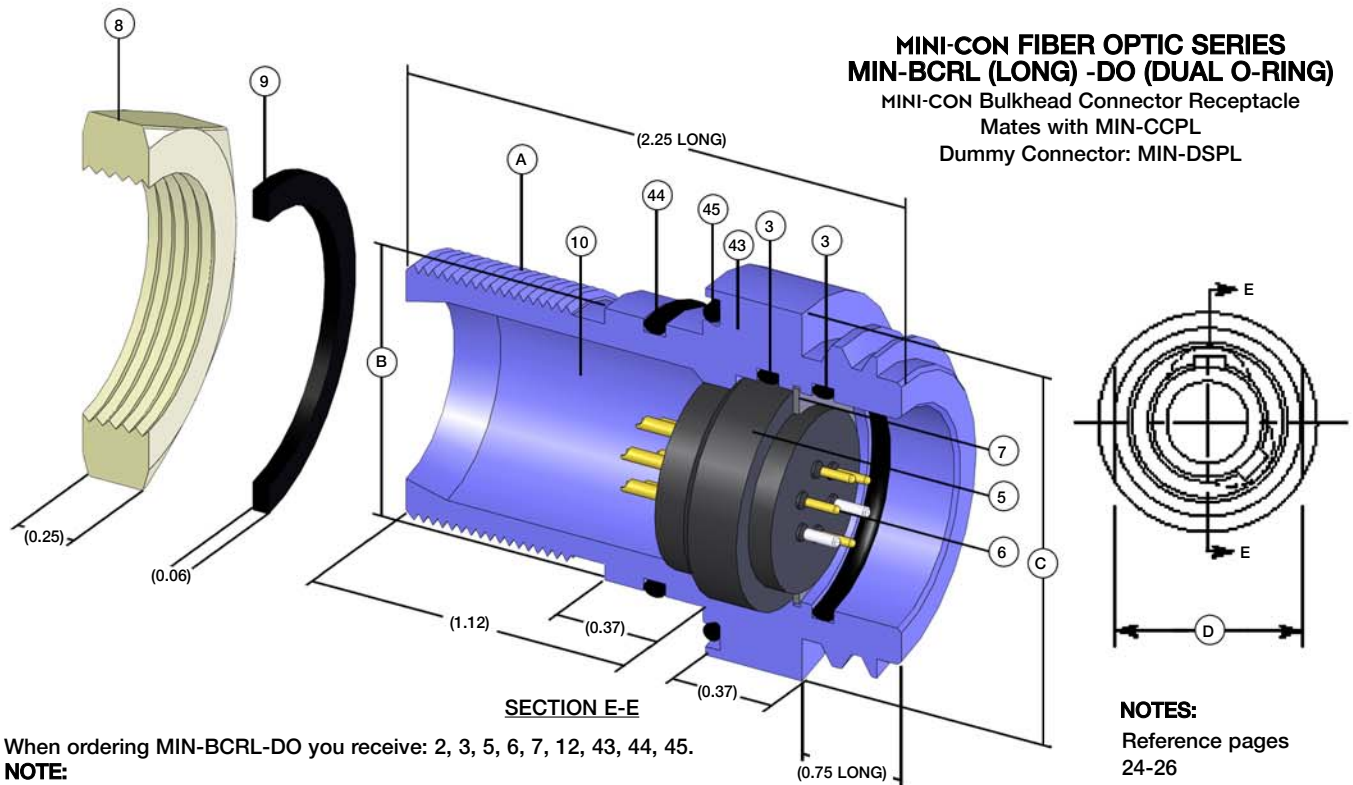


NOTES: CHAMFER IS TO BE 20° ± 5°

* This dimension is to be used if spotface is less than or equal to 0.001 inches deep.

** This dimension is to be used if spotface is greater than 0.001 inches deep.

DIMENSION DETAILS



When ordering MIN-BCRL-DO you receive: 2, 3, 5, 6, 7, 12, 43, 44, 45.

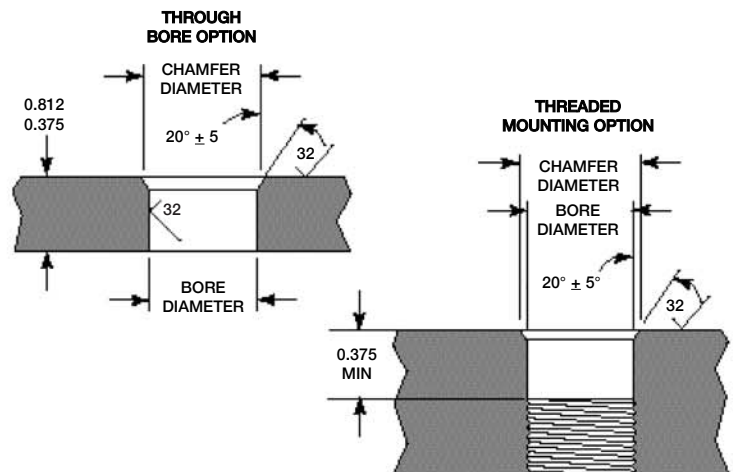
NOTE:

Please refer to the MINI-CON master parts and materials list on page 23.

CONNECTOR	A - MOUNTING THREAD	B - DIAMETER (INCHES)	C - SQUARE (INCHES)	D - MOUNTING HOLE LOCATION (INCHES)	44 - O-RING	45 - O-RING	3 - O-RING	7 - SPIROLOX	8 - HEX NUT ACROSS FLATS (INCHES)	8 - HEX NUT ACROSS POINTS (INCHES)	9 - WASHER OD (INCHES)
MINM-BCRL-DO	1-20 UNEF-2A	1.060	1.43	1.31	2-021	2-024	2-019	UR81	1.25	1.44	1.25
MINO-BCRL-DO	1 1/8-16 UN-2A	1.185	1.68	1.56	2-023	2-027	2-023	UR106	1.50	1.75	1.50
MINP-BCRL-DO	1 1/4-16 UN-2A	1.310	1.81	1.68	2-025	2-029	2-025	UR118	1.62	1.88	1.63
MINQ-BCRL-DO	1 3/8-16 UN-2A	1.435	1.93	1.81	2-027	2-030	2-028	UR137	1.75	2.00	1.75
MINR-BCRL-DO	1 1/2-16 UN-2A	1.623	2.06	1.93	2-029	2-031	2-029	UR150	1.87	2.16	1.88
MINT-BCRL-DO	2-16 UN-2A	2.123	2.62	2.43	2-033	2-035	2-031	UR175	2.37	2.75	2.38
MINU-BCRL-DO	2 1/4-16 UN-2A	2.373	3.00	2.68	2-035	2-037	2-033	UR200	2.75	3.03	2.63
MINX-BCRL-DO	2 3/4-16 UN-2A	2.873	3.62	3.22	2-039	2-041	2-037	UR250	3.25	3.63	3.16

BCRL-DO MOUNTING REQUIREMENTS

PART	BORE Ø + 0.002 -0.000 (INCHES)	CHAMFER 0 + 0.010 (INCHES)	BCRL MOUNTING TORQUE (INCH-POUNDS)
M	1.062	1.112	120-150
O	1.187	1.237	130-160
P	1.312	1.362	140-170
Q	1.437	1.487	150-180
R	1.625	1.675	170-220
T	2.125	2.175	210-250
U	2.375	2.425	220-260
X	2.875	2.925	240-280



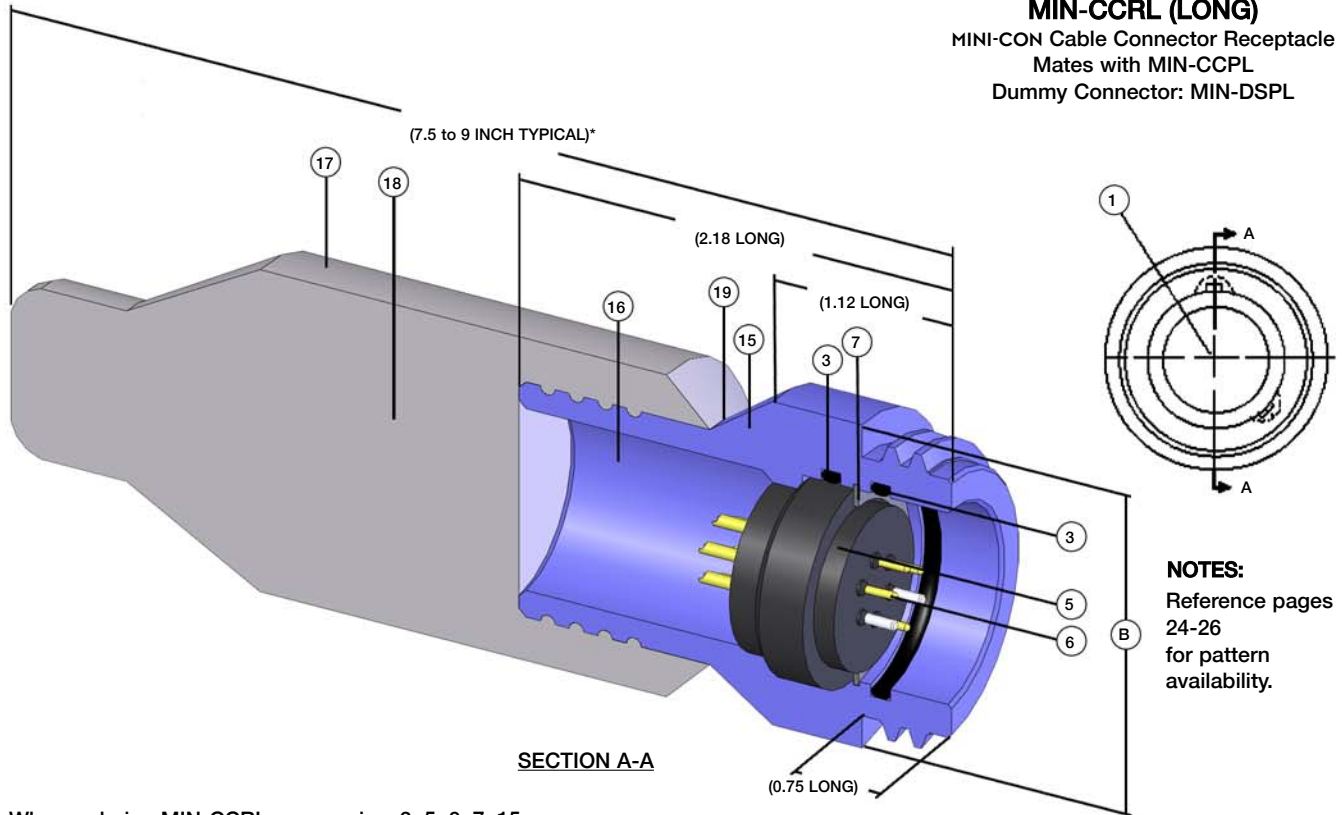
NOTES:

1. Bore must be perpendicular to spot face.
2. Spotface diameter to be equal to greater than the connector diameter.
3. If threaded mount is used, thread must be concentric with bore.

DIMENSION DETAILS

MINI-CON FIBER OPTIC SERIES MIN-CCRL (LONG)

MINI-CON Cable Connector Receptacle
Mates with MIN-CCPL
Dummy Connector: MIN-DSPL



When ordering MIN-CCRL you receive: 3, 5, 6, 7, 15.

NOTE:

Please contact SEA CON® for available tooling to suit your individual cable requirements.
Please refer to the MINI-CON master parts and materials list on page 23.

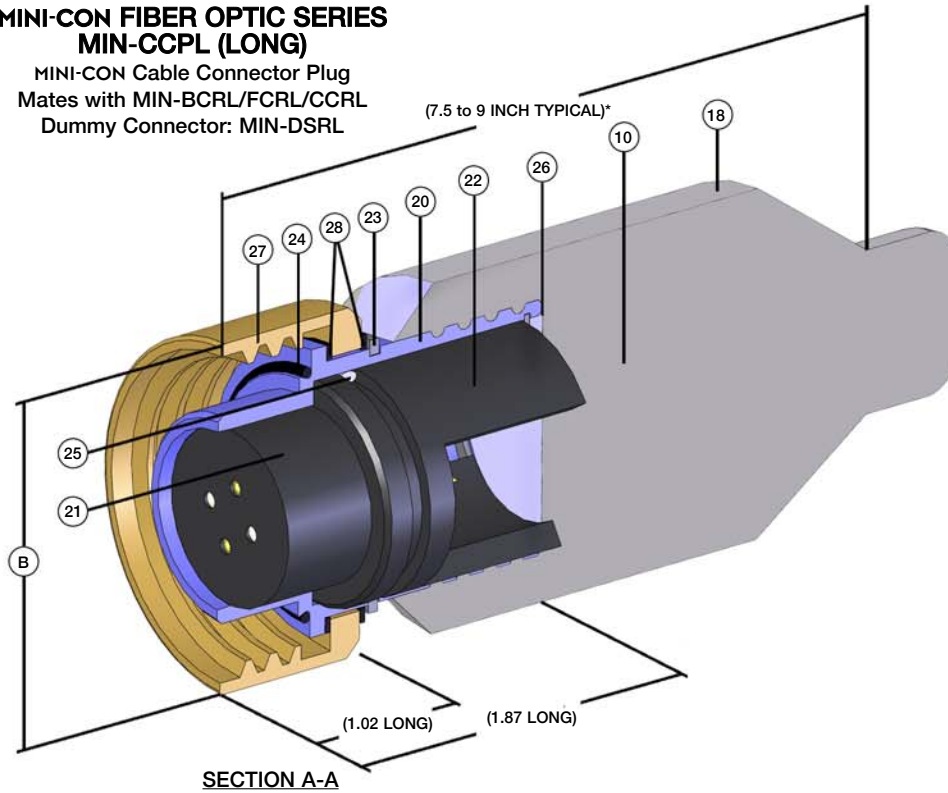
CONNECTOR	B - DIAMETER (INCHES)	7 - SPIROLOX	3 - O-RING	REAR SHELL OD (INCHES)
MINM-CCRL	1.37	UR81	2-019	T.B.A
MINO-CCRL	1.62	UR106	2-023	T.B.A
MINP-CCRL	1.75	UR118	2-025	T.B.A
MINQ-CCRL	1.87	UR137	2-028	T.B.A
MINR-CCRL	2.00	UR150	2-029	T.B.A
MINT-CCRL	2.50	UR175	2-031	T.B.A
MINU-CCRL	2.75	UR200	2-033	T.B.A
MINX-CCRL	3.50	UR250	2-037	T.B.A

* Will vary with cable size.

DIMENSION DETAILS

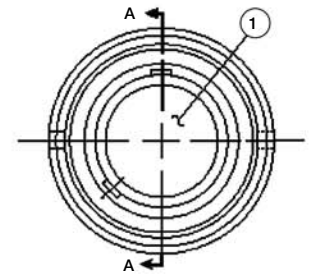
MINI-CON FIBER OPTIC SERIES MIN-CCPL (LONG)

MINI-CON Cable Connector Plug
Mates with MIN-BCRL/FCRL/CCRL
Dummy Connector: MIN-DSRL



NOTES:

Reference pages
24-26
for pattern availability.



When ordering MIN-CCPL you receive: 20, 21, 22, 23, 24, 25, 26, 27, 28.

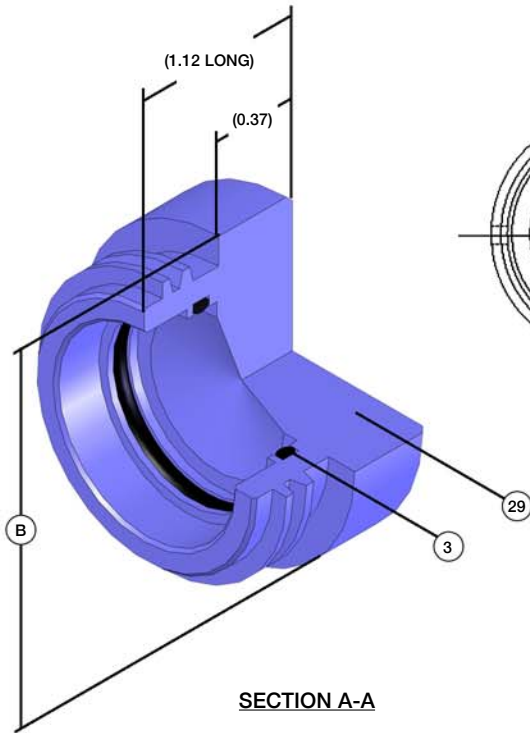
NOTE:

Please contact SEA CON® for available tooling to suit your individual cable requirements.
Please refer to the MINI-CON master parts and materials list on page 23.

CONNECTOR	B - DIAMETER (INCHES)	24 - O-RING	23 - RETAINING RING	25 - O-RING	26 - SPIROLOX	R/A HEIGHT (INCHES)	REAR SHELL OD (INCHES)
MINM-CCPL	1.37	2-020	5100-100	2-018	UR87	T.B.A	T.B.A
MINO-CCPL	1.62	2-024	5100-118	2-020	UR100	T.B.A	T.B.A
MINP-CCPL	1.75	2-027	5100-131	2-022	UR112	T.B.A	T.B.A
MINQ-CCPL	1.87	2-028	5100-150	2-025	UR131	T.B.A	T.B.A
MINR-CCPL	2.00	2-029	5100-156	2-026	UR137	T.B.A	T.B.A
MINT-CCPL	2.50	2-032	5100-187	2-029	UR162	T.B.A	T.B.A
MINU-CCPL	2.75	2-033	5100-206	2-031	UR187	T.B.A	T.B.A
MINX-CCPL	3.50	2-038	5100-268	2-033	UR212	T.B.A	T.B.A

* Will vary with cable size.

DIMENSION DETAILS



**MINI-CON SERIES
MIN-DSRL (LONG)**
MINI-CON Dummy Sealing Receptacle
Mates with MIN-CCPL

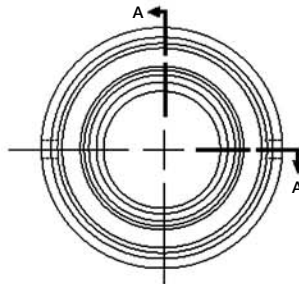
DUMMY CONNECTOR	B - DIAMETER (INCHES)	3 - O-RING
MINM-DSRL	1.37	2-019
MINO-DSRL	1.62	2-023
MINP-DSRL	1.75	2-025
MINQ-DSRL	1.87	2-028
MINR-DSRL	2.00	2-029
MINT-DSRL	2.50	2-031
MINU-DSRL	2.75	2-033
MINX-DSRL	3.50	2-037

When ordering MIN-DSRL you receive: 3, 29.

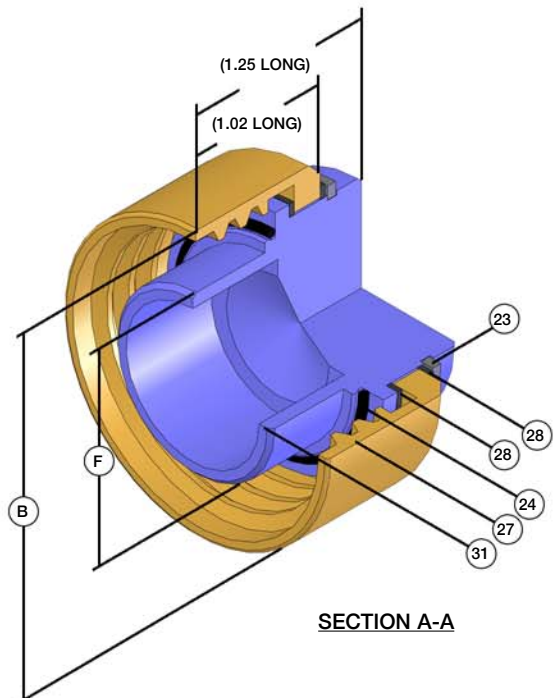
NOTE:

Please refer to the MINI-CON master parts and materials list on page 23.

**MINI-CON SERIES
MIN-DSPL (LONG)**
MINI-CON Dummy Sealing Plug
Mates with MIN-BCRL/FCRL/CCRL



DUMMY CONNECTOR	B - DIAMETER (INCHES)	24 - O-RING	23 - RETAINING RING
MINM-DSPL	1.37	2-020	5100-100
MINO-DSPL	1.62	2-024	5100-118
MINP-DSPL	1.75	2-027	5100-131
MINQ-DSPL	1.87	2-028	5100-150
MINR-DSPL	2.00	2-029	5100-156
MINT-DSPL	2.50	2-032	5100-187
MINU-DSPL	2.75	2-033	5100-206
MINX-DSPL	3.50	2-038	5100-268

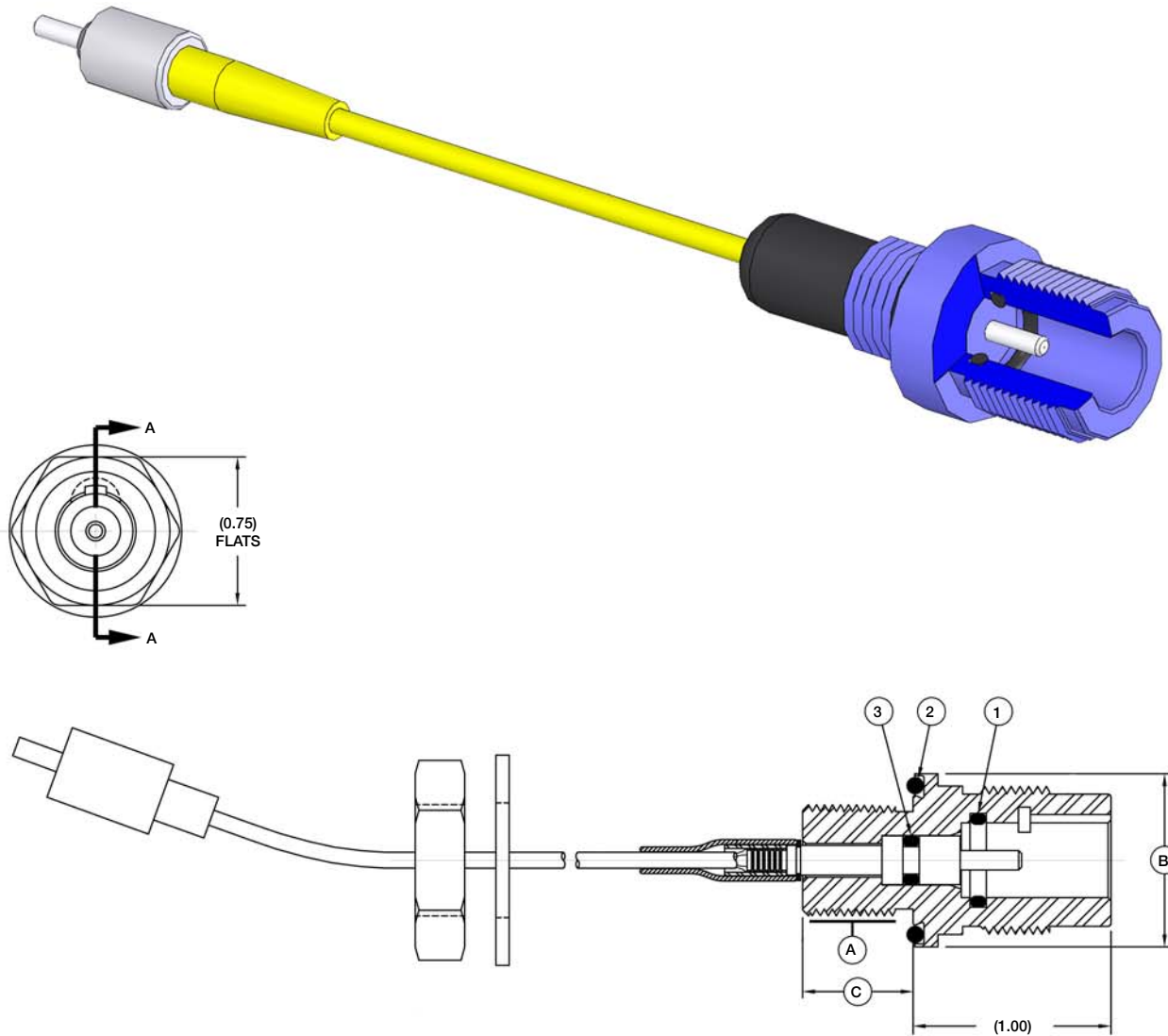


When ordering MING-DSPL you receive: 23, 24, 27, 28, 31.

DIMENSION DETAILS

MINI-CON FIBER OPTIC SERIES MINF-BCR-1FO

MINI-CON Fiber Optic Bulkhead Connector Receptacle



CONNECTOR	A - MOUNTING THREAD	B - DIAMETER (INCHES)	C - LENGTH (INCHES)	1 - O-RING	2 - O-RING	3 - O-RING
MINF-1FO-BCR	9/16-18 UNF-2A	0.87	0.56	2-012	2-016	2-006
MINF-1FO-BCR 1 INCH	9/16-18 UNF-2A	0.95	1.00	2-012	2-017	2-006
MINF-1FO-BCR 2 1/4 INCH	9/16-18 UNF-2A	0.95	2.25	2-012	2-017	2-006

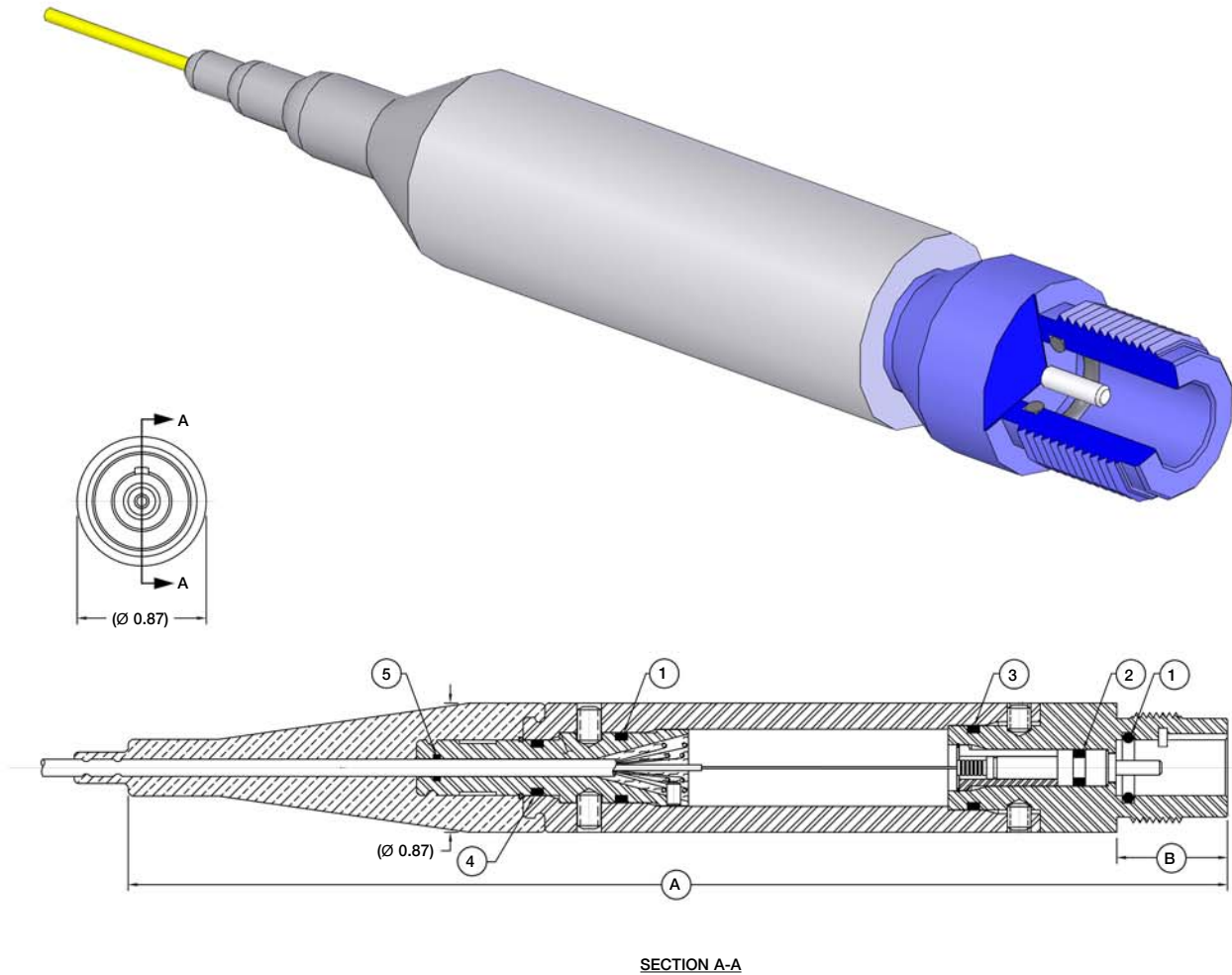
NOTE:

- Please specify fiber optic cable type (Single-Mode, Multi-Mode) at time of ordering.
- Hex Nut and Washer is optional.

DIMENSION DETAILS

MINI-CON FIBER OPTIC SERIES MINF-CCR-1FO

MINI-CON Fiber Optic Cable Connector Receptacle



CONNECTOR	A - LENGTH (INCHES)	B - THREAD LENGTH (INCHES)	1 - O-RING	2 - O-RING	3 - O-RING	4 - O-RING	5 - O-RING
MINF-1FO-CCR	7.45	0.750	2-012	2-006	2-013	5-632	2-010

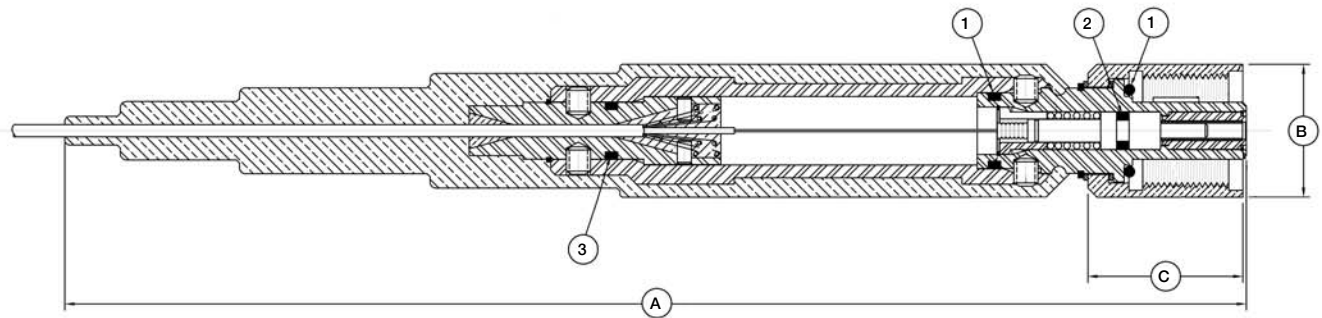
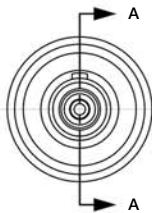
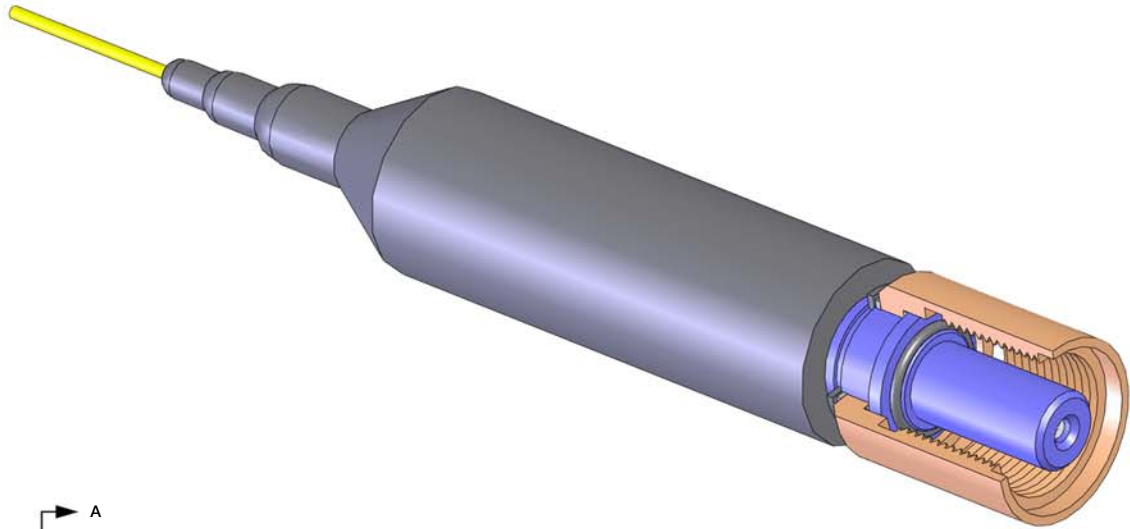
NOTE:

- Other variations are available to suit different cable types. Please contact SEA CON® for further information.
- Please specify fiber optic cable type (Single-Mode, Multi-Mode) at time of ordering.

DIMENSION DETAILS

MINI-CON FIBER OPTIC SERIES MINF-CCP-1FO

MINI-CON Fiber Optic Cable Connector Plug



SECTION A-A

CONNECTOR	A - LENGTH (INCHES)	B - DIAMETER	C - THREAD LENGTH (INCHES)	1 - O-RING	2 - O-RING	3 - O-RING
MINF-1FO-CCR	7.50/8.00	0.87	1.02	2-012	2-006	2-010

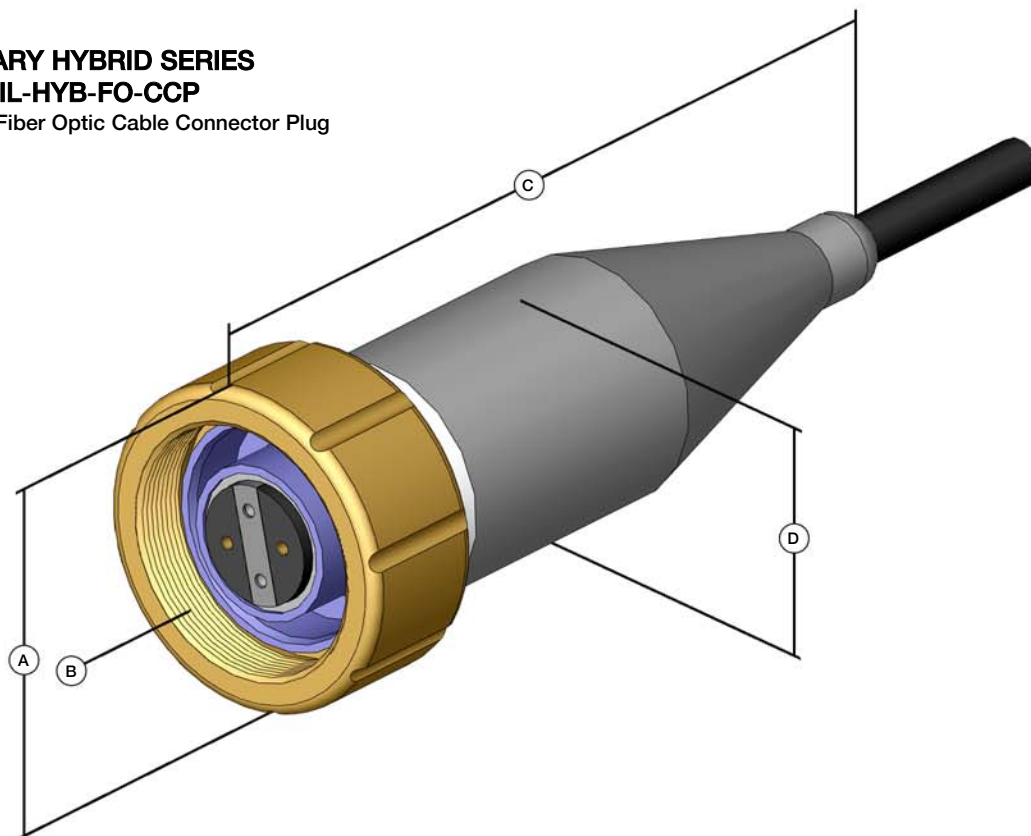
NOTE:

- Other variations are available to suit different cable types. Please contact SEA CON® for further information.
- Please specify fiber optic cable type (Single-Mode, Multi-Mode) at time of ordering.

DIMENSION DETAILS

MILITARY HYBRID SERIES MIL-HYB-FO-CCP

Military Hybrid Fiber Optic Cable Connector Plug

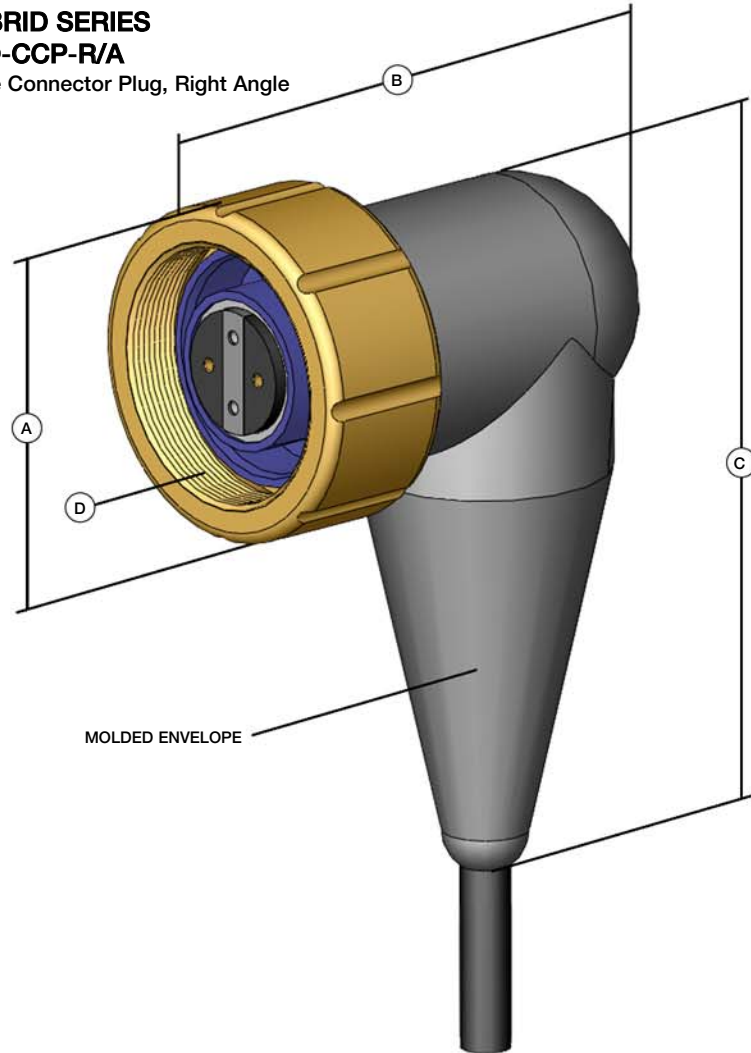


QTY OF FIBERS	ELECTRICAL CONTACTS	PPD P/N	MATING CONNECTOR	A - DIAMETER (INCHES)	B - THREAD	C - LENGTH (INCHES)	D - DIAMETER (INCHES)
2	6 EA. 16 AWG	802-6337554.8.8.1-15	802-6337554.8.7.1-3 / CR2294-3	2.00	1.688-12UN-2B	5.36	1.49
2	6 EA. 16 AWG	802-6337554.8.8.2-10	802-6337554.8.7.2-2 / CR2295-2	2.50	2.000-12UN-2B	5.93	1.88
4	N/A	802-6337554.8.8.1-10	802-6337554.8.7.1-1 / CR2294-1	2.00	1.688-12UN-2B	5.36	1.49
8	N/A	802-6337554.8.8.1-5	802-6337554.8.7.1-2 / CR2294-2	2.00	1.688-12UN-2B	5.36	1.49
15	N/A	802-6337554.8.8.2-5	802-6337554.8.7.2-1 / CR2295-1	2.50	2.000-12UN-2B	5.93	1.88

DIMENSION DETAILS

MILITARY HYBRID SERIES MIL-HYB-FO-CCP-R/A

Military Hybrid Fiber Optic Cable Connector Plug, Right Angle

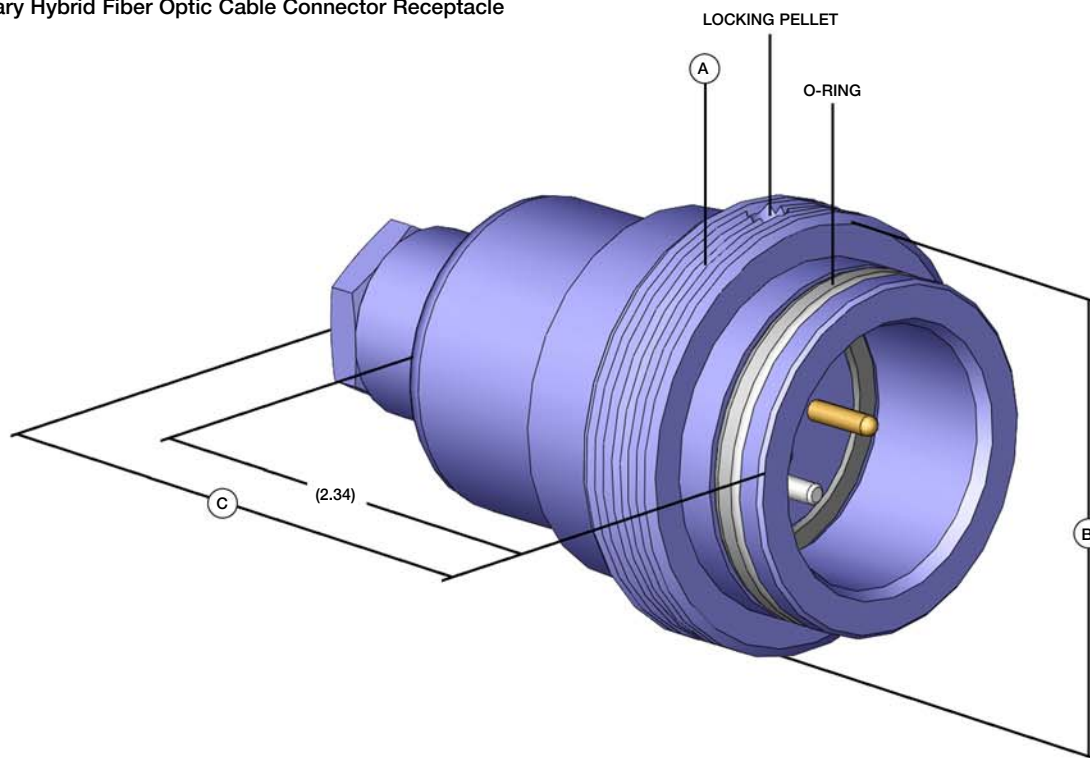


QTY OF FIBERS	ELECTRICAL CONTACTS	KEY ANGLE	PPD P/N	MATING CONNECTOR	A - DIAMETER (INCHES)	B - LENGTH (INCHES)	C - R/A HEIGHT (INCHES)	D - THREAD
2	6 EA. 16 AWG	0	802-6337554.8.8.1-11	802-6337554.8.7.1-3 / CR2294-3	2.00	3.78	4.34	1.688-12UN-2A
2	6 EA. 16 AWG	90	802-6337554.8.8.1-12	802-6337554.8.7.1-3 / CR2294-3	2.00	3.78	4.34	1.688-12UN-2A
2	6 EA. 16 AWG	180	802-6337554.8.8.1-13	802-6337554.8.7.1-3 / CR2294-3	2.00	3.78	4.34	1.688-12UN-2A
2	6 EA. 16 AWG	270	802-6337554.8.8.1-14	802-6337554.8.7.1-3 / CR2294-3	2.00	3.78	4.34	1.688-12UN-2A
2	6 EA. 16 AWG	0	802-6337554.8.8.2-6	802-6337554.8.7.2-2 / CR2295-2	2.50	4.06	4.77	2.000-12UN-2A
2	6 EA. 16 AWG	90	802-6337554.8.8.2-7	802-6337554.8.7.2-2 / CR2295-2	2.50	4.06	4.77	2.000-12UN-2A
2	6 EA. 16 AWG	180	802-6337554.8.8.2-8	802-6337554.8.7.2-2 / CR2295-2	2.50	4.06	4.77	2.000-12UN-2A
2	6 EA. 16 AWG	270	802-6337554.8.8.2-9	802-6337554.8.7.2-2 / CR2295-2	2.50	4.06	4.77	2.000-12UN-2A
4	N/A	0	802-6337554.8.8.1-1	802-6337554.8.7.1-1 / CR2294-1	2.00	3.78	4.35	688-12UN-2A
4	N/A	90	802-6337554.8.8.1-2	802-6337554.8.7.1-1 / CR2294-1	2.00	3.78	4.35	688-12UN-2A
4	N/A	180	802-6337554.8.8.1-3	802-6337554.8.7.1-1 / CR2294-1	2.00	3.78	4.35	688-12UN-2A
4	N/A	270	802-6337554.8.8.1-4	802-6337554.8.7.1-1 / CR2294-1	2.00	3.78	4.35	688-12UN-2A
8	N/A	0	802-6337554.8.8.1-6	802-6337554.8.7.1-2 / CR2294-2	2.00	3.78	4.35	688-12UN-2A
8	N/A	90	802-6337554.8.8.1-7	802-6337554.8.7.1-2 / CR2294-2	2.00	3.78	4.35	688-12UN-2A
8	N/A	180	802-6337554.8.8.1-8	802-6337554.8.7.1-2 / CR2294-2	2.00	3.78	4.35	688-12UN-2A
8	N/A	270	802-6337554.8.8.1-9	802-6337554.8.7.1-2 / CR2294-2	2.00	3.78	4.35	688-12UN-2A
15	N/A	0	802-6337554.8.8.2-1	802-6337554.8.7.2-1 / CR2295-1	2.50	4.06	4.77	2.000-12UN-2A
15	N/A	90	802-6337554.8.8.2-2	802-6337554.8.7.2-1 / CR2295-1	2.50	4.06	4.77	2.000-12UN-2A
15	N/A	180	802-6337554.8.8.2-3	802-6337554.8.7.2-1 / CR2295-1	2.50	4.06	4.77	2.000-12UN-2A
15	N/A	270	802-6337554.8.8.2-4	802-6337554.8.7.2-1 / CR2295-1	2.50	4.06	4.77	2.000-12UN-2A

DIMENSION DETAILS

MILITARY HYBRID SERIES MIL-HYB-FO-CCR

Military Hybrid Fiber Optic Cable Connector Receptacle

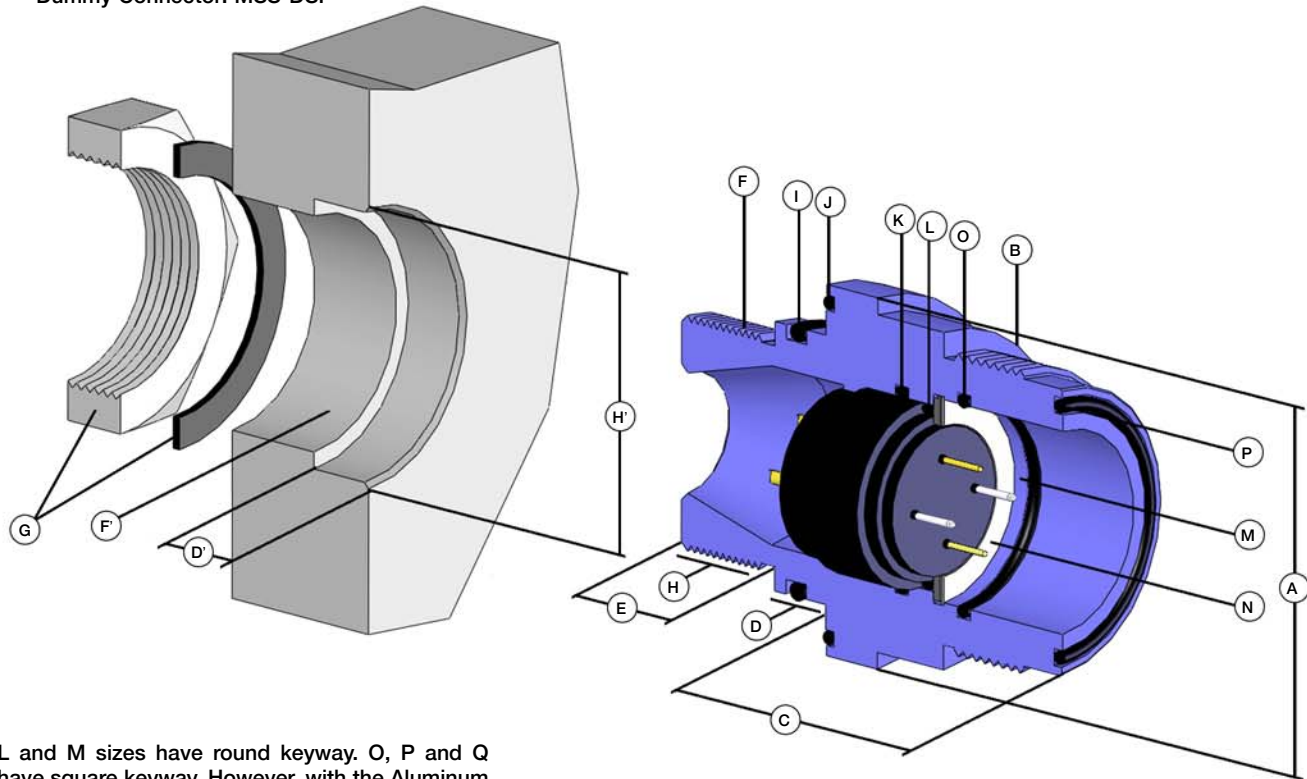


QTY OF FIBERS	ELECTRICAL CONTACTS	O-RING TYPE	LOCKING PELLET	PPD P/N	MATING CONNECTOR	A - THREAD	B - DIAMETER (INCHES)	C - LENGTH (INCHES)
2	6 EA. 16 AWG	MS28775-215	M24231/5-077	802-6337554.8.7.1-3	CP2296 / CP2299-1 CP2299-2 / CP2299-3 / CP2299-4	1.688-12UN-2A	1.688	3.20
2	6 EA. 16 AWG	MS28775-220	M24231/5-077	802-6337554.8.7.2-2	CP2304 / CP2300-1 CP2300-2 / CP2300-3 / CP2300-4	2.000-12UN-2A	2.00	3.13
4	N/A	MS28775-215	M24231/5-077	802-6337554.8.7.1-1	CP2298 / CP2301-1 CP2301-2 / CP2301-3 / CP2301-4	1.688-12UN-2A	1.688	3.10
8	N/A	MS28775-215	M24231/5-077	802-6337554.8.7.1-2	CP2297 / CP2302-1 CP2302-2 / CP2302-3 / CP2302-4	1.688-12UN-2A	1.688	3.10
15	N/A	MS28775-220	M24231/5-077	802-6337554.8.7.2-1	CP2303 / CP2305-1 CP2305-2 / CP2305-3 / CP2305-4	2.000-12UN-2A	2.00	3.13

DIMENSION DETAILS

METAL SHELL SERIES (MSS) MSS-BCR

MSS Bulkhead Connector Receptacle
Mates with MSS-CCP
Dummy Connector: MSS-DSP



L and M sizes have round keyway. O, P and Q have square keyway. However, with the Aluminum option all sizes have a square keyway. Refer to pages 27-29 for contact configurations. L and M Aluminum connectors will not mate with Stainless Steel connectors.

PART DESCRIPTION	CONNECTOR SIZE					S
	L	M	O	P	Q	
A - DIAMETER (INCHES)	2.12	2.75	3.50	3.75	4.50	For MSS-S connector details please contact SEA CON®.
B - WRENCH FLATS	1.88	2.25	2.75	3.00	3.62	
C - HEIGHT	2.00	2.25	2.25	2.25	2.25	
D - SHOULDER	0.37	0.50	0.50	0.75	0.75	
E - THREAD LENGTH	1.00	0.87	1.25	1.50	1.75	
F - THREAD SIZE	1 1/2 - 2UN - 2A	1 3/4 - 12UN - 2A	2 1/4 - 12UN - 2A	2 1/2 - 12UN - 2A	2 3/4 - 12UN - 2B	
G - HEX NUT (ACROSS FLATS INCHES)	1.75 X 0.25	2.25 X 0.50	3.00 X 0.50	3.25 X 0.50	3.75 X 0.50	
H - DIAMETER	1.310 max	1.997 max	2.497 max	2.747 max	3.122 max	
I - O-RING	2 - 122	2 - 224	2 - 228	2 - 230	2 - 233	
J - O-RING	2 - 131	2 - 142	2 - 234	2 - 236	2 - 241	
K - O-RING	2 - 122	2 - 126	2 - 225	2 - 227	2 - 230	
L - O-RING	2 - 022	2 - 123	2 - 131	2 - 135	2 - 141	
M - WASHER	77 - 1 - 374	77 - 1 - 474	77 - 1 - 574	77 - 1 - 674	77 - 1 - 774	
N - SPIROLOX RING	UR - 131	UR - 150	UR - 187	UR - 212	UR - 250	
O - O-RING	2 - 027	2 - 128	2 - 225	2 - 227	2 - 230	
P - O-RING	5 - 320	2 - 132	2 - 140	2 - 144	2 - 151	

MOUNTING DIMENSIONS

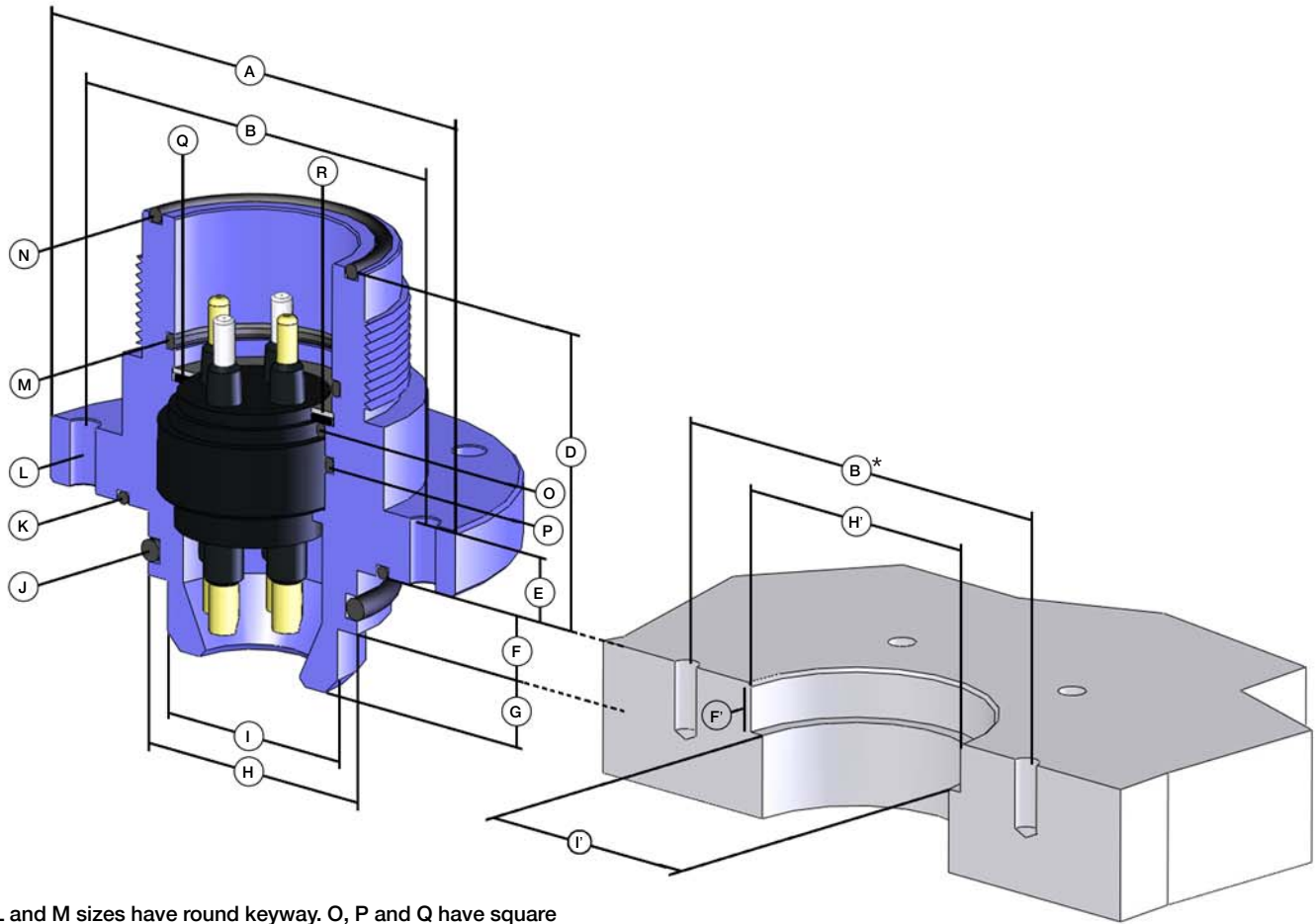
DIMENSIONS IN INCHES

D' - BORE DEPTH	0.380/min	0.520/min	0.520/min	0.520/min	0.770/min	For MSS-S connector details please contact SEA CON®.
F' - BORED	1.250/min	1.750/min	2.250/min	2.500/min	2.750/min	
THREADED	1 1/4 - 12UN - 2B	1 3/4 - 12UN - 2B	2 1/4 - 12UN - 2B	2 1/2 - 12UN - 2B	2 3/4 - 12UN - 2B	
H' - BORE DIAMETER	1.312/1.314	2.000/2.002	2.500/2.502	2.750/2.752	3.125/3.127	

DIMENSION DETAILS

METAL SHELL SERIES (MSS) MSS-FCR

MSS Flange Connector Receptacle
Mates with CCP
Dummy Connector: MSS-DSP



L and M sizes have round keyway. O, P and Q have square keyway. However, with the Aluminum option all sizes have a square keyway. Refer to pages 27-29 for contact configurations. L and M Aluminum connectors will not mate with Stainless Steel connectors.

NOTE:

* 6 holes equally spaced.

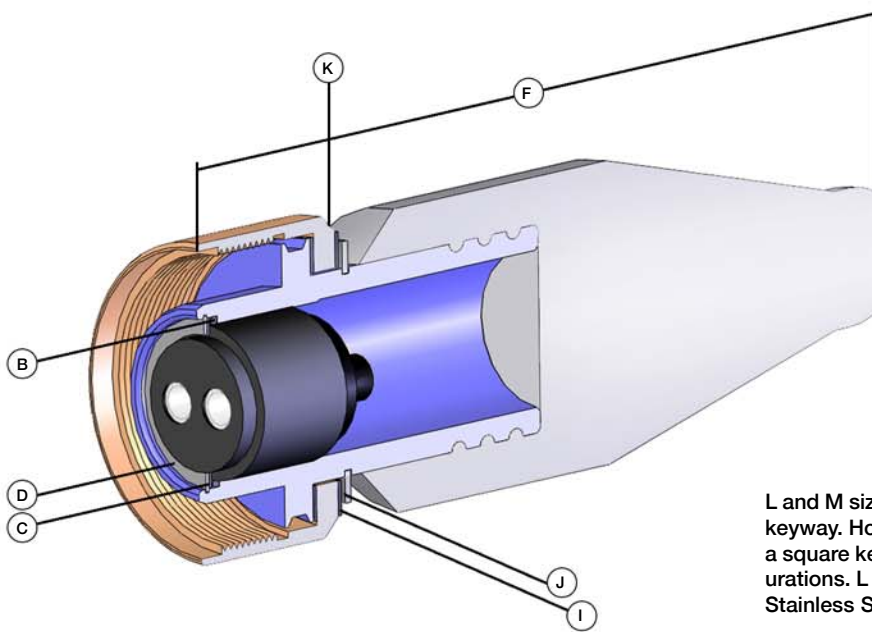
PART DESCRIPTION	CONNECTOR SIZE					
	L	M	O	P	Q	S
A - DIAMETER	3.00	3.87	4.50	4.75	5.25	For MSS-S connector details please contact SEA CON®.
B - HOLE CIRCLE	2.500	3.250	3.875	4.125	4.625	
D - HEIGHT	2.00	2.26	2.26	2.26	2.26	
E - HEIGHT	0.38	0.51	0.51	0.51	0.51	
F - HEIGHT	0.37	0.48	0.48	0.48	0.75	
G - HEIGHT	0.38	0.50	0.50	0.50	0.74	
H - DIAMETER	1.310 max	1.997 max	2.497 max	2.747 max	3.122 max	
I - DIAMETER	1.12	1.62	2.12	2.37	2.75	
J - O-RING	2 - 122	2 - 224	2 - 228	2 - 230	2 - 233	
K - O-RING	2 - 131	2 - 142	2 - 234	2 - 236	2 - 240	
L - BOLT SIZE	1 / 4"	1 / 4"	3 / 8"	3 / 8"	3 / 8"	
M - O-RING	2 - 027	2 - 128	2 - 225	2 - 227	2 - 230	
N - O-RING	5 - 320	2 - 132	2 - 140	2 - 144	2 - 151	
O - O-RING	2 - 022	2 - 123	2 - 131	2 - 135	2 - 141	
P - O-RING	2 - 122	2 - 126	2 - 225	2 - 227	2 - 230	
Q - WASHER	77 - 1 - 374	77 - 1 - 474	77 - 1 - 574	77 - 1 - 674	77 - 1 - 774	
R - SPIROLOX RING	UR - 131	UR - 150	UR - 187	UR - 212	UR - 250	

MOUNTING DIMENSIONS

DIMENSIONS IN INCHES

F' - BORE DEPTH MIN	0.385/min	0.520/min	0.520/min	0.520/min	0.770/min	For MSS-S connector details please contact SEA CON®.
H' - BORE DIAMETER	1.312/1.314	2.000/2.002	2.500/2.502	2.750/2.752	3.125/3.127	
I' - BORE MIN	1.140/min	1.780/min	2.140/min	2.406/min	2.765/min	

DIMENSION DETAILS



METAL SHELL SERIES (MSS) MSS-CCP

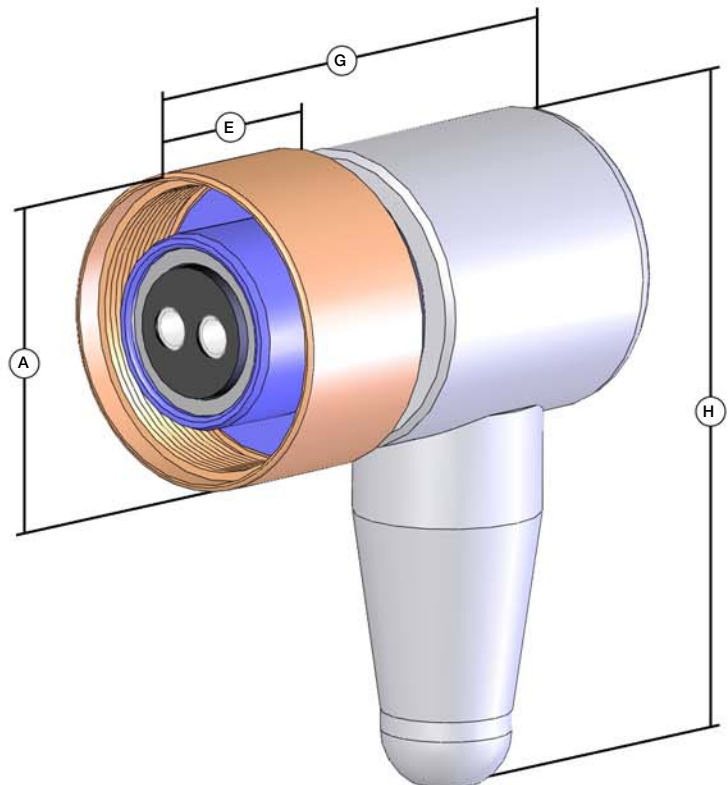
MSS Cable Connector Plug, Straight
Mates with MSS-BCR/CCR/FCR
Dummy Connector: MSS-DSR

L and M sizes have round keyway. O, P and Q have square keyway. However, with the Aluminum option all sizes have a square keyway. Refer to pages 27-29 for contact configurations. L and M Aluminum connectors will not mate with Stainless Steel connectors.

PART DESCRIPTION	CONNECTOR SIZE					
	L	M	O	P	Q	S
A - DIAMETER	2.12	2.50	3.00	3.25	3.87	For MSS-S connector details please contact SEA CON®.
B - O-RING	2 - 021	2 - 024	2-127	2 - 131	2 - 137	
C - WASHER	77 - 1 - 373	77 - 1 - 473	77 - 1 - 573	77 - 1 - 673	14 - 979	
D - SPIROLOX	UR - 112	UR - 137	UR - 162	UR - 187	UR - 225	
E - ENGAGING NUT	1.22	1.87	1.87	1.87	1.87	
F - LENGTH	12-26 INCHES TYPICAL FOR ALL SIZES					
G - HEIGHT	T.B.A	T.B.A	T.B.A	T.B.A	T.B.A	
H - LENGTH	4.50	6.7	7.8	7.8	9.6	
I - ENGAGING NUT	77 - 1 - 348	77 - 1 - 448	77 - 1 - 548	77 - 1 - 648	77 - 1 - 748	
J - RETAINING RING	5100 - 137	5100 - 162	5100 - 212	5100 - 237	5100 - 275	
K - DIAMETER	1.37	1.62	2.12	2.37	2.75	

METAL SHELL SERIES (MSS) MSS-CCP-R/A

MSS Cable Connector Plug, Right Angle
Mates with MSS-BCR/CCR/FCR
Dummy Connector: MSS-DSR



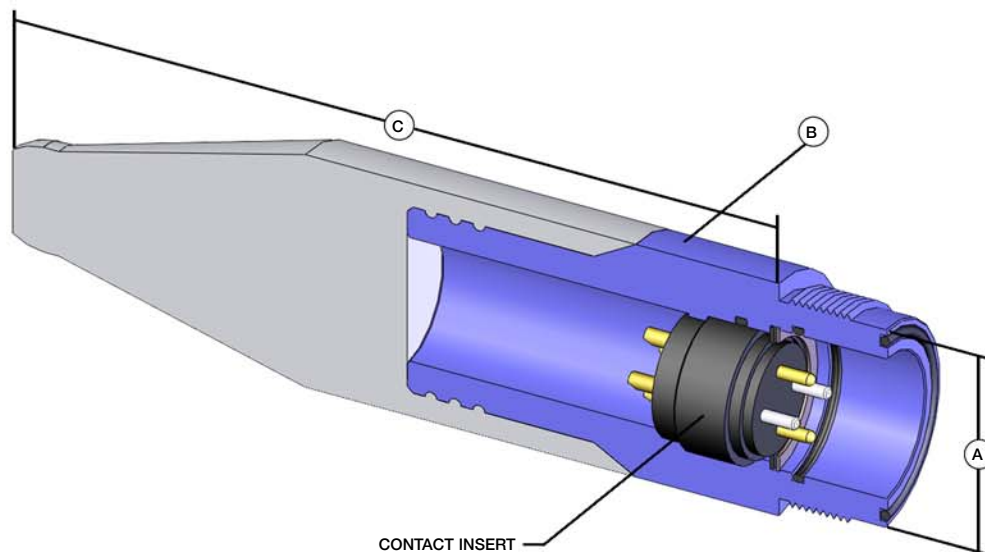
NOTE:

Dimensions in inches.
Refer to pages 27-29 for contact configurations.

DIMENSION DETAILS

METAL SHELL SERIES (MSS) MSS-CCR

MSS Cable Connector Receptacle
Mates with MSS-CCP
Dummy Connector: MSS-DSP



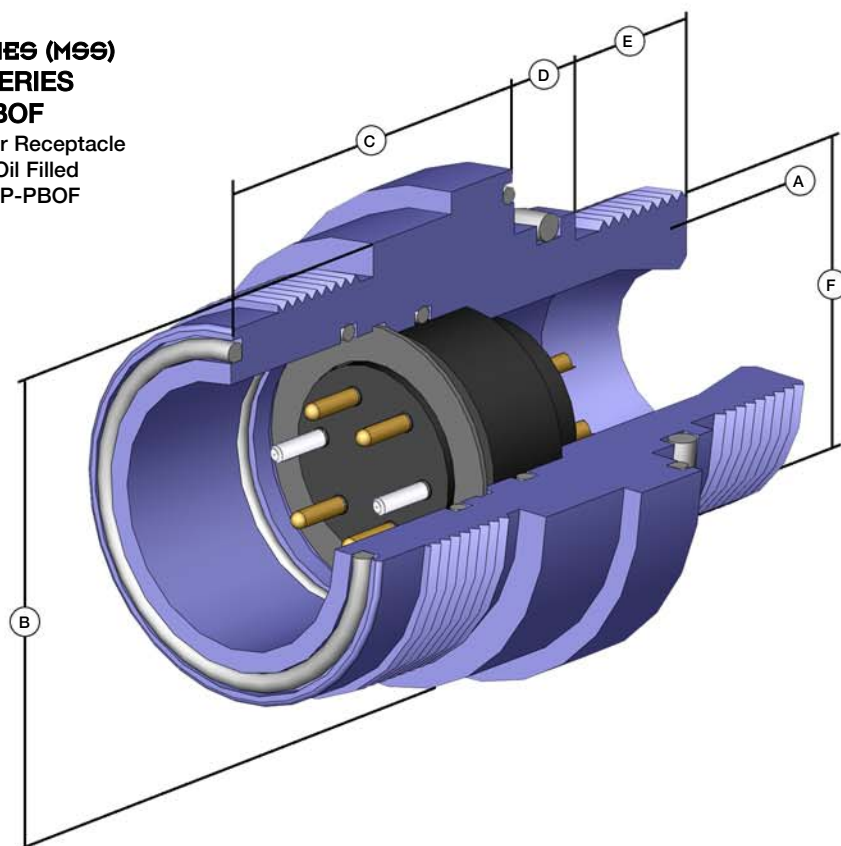
L and M sizes have round keyway. O, P and Q have square keyway. However, with the Aluminum option all sizes have a square keyway. Refer to pages 27-29 for contact configurations. L and M Aluminum connectors will not mate with Stainless Steel connectors.

PART DESCRIPTION	CONNECTOR SIZE					
	L	M	O	P	Q	S
A - DIAMETER	2.12	2.50	3.00	3.25	3.87	For MSS-S connector details please contact SEA CON®.
B - WRENCH FLAT	1.87	2.25	2.75	3.00	3.62	
C - LENGTH	12-26 INCHES TYPICAL FOR ALL SIZES					

DIMENSION DETAILS

METAL SHELL SERIES (MSS) FIBER OPTIC SERIES MSS-BCR-PBOF

MSS Bulkhead Connector Receptacle
Pressure Balanced Oil Filled
Mates with MSS-CCP-PBOF



NOTES:

The short pin in the CCP contact insert opens the check valve in the CCP assembly when mated, thus accomplishing complete pressure balancing, completely eliminating the pistoning effect of conductors during pressurization.

Tubing stems are designed to fit standard tubing sizes.

Pressure Balanced Oil Filled Series

The unique valve assembly allows oil into the connector interface area when mated and seals when unmated.

CONNECTOR	A - THREAD	B - DIAMETER (INCHES)	C - LENGTH (INCHES)	D - LENGTH (INCHES)	E - LENGTH (INCHES)	F - DIAMETER (INCHES)
MSSL-BCR-PBOF	1-1/4-12 UN-2A	2.12	2.0	0.375	1.00	1.310
MSSM-BCR-PBOF	1-3/4-12 UN-2A	2.75	2.25	0.500	0.870	1.997
MSSO-BCR-PBOF	2-1/4-12 UN-2A	3.50	2.25	0.500	1.250	2.497
MSSP-BCR-PBOF	2-1/2-12 UN-2A	3.75	2.25	0.500	1.500	2.747
MSSQ-BCR-PBOF	2-3/4-12 UN-2A	4.50	2.25	0.750	1.750	3.122

These parts may require set-up charges and have longer deliveries.
Refer to pages 27-29 for available contact configurations.

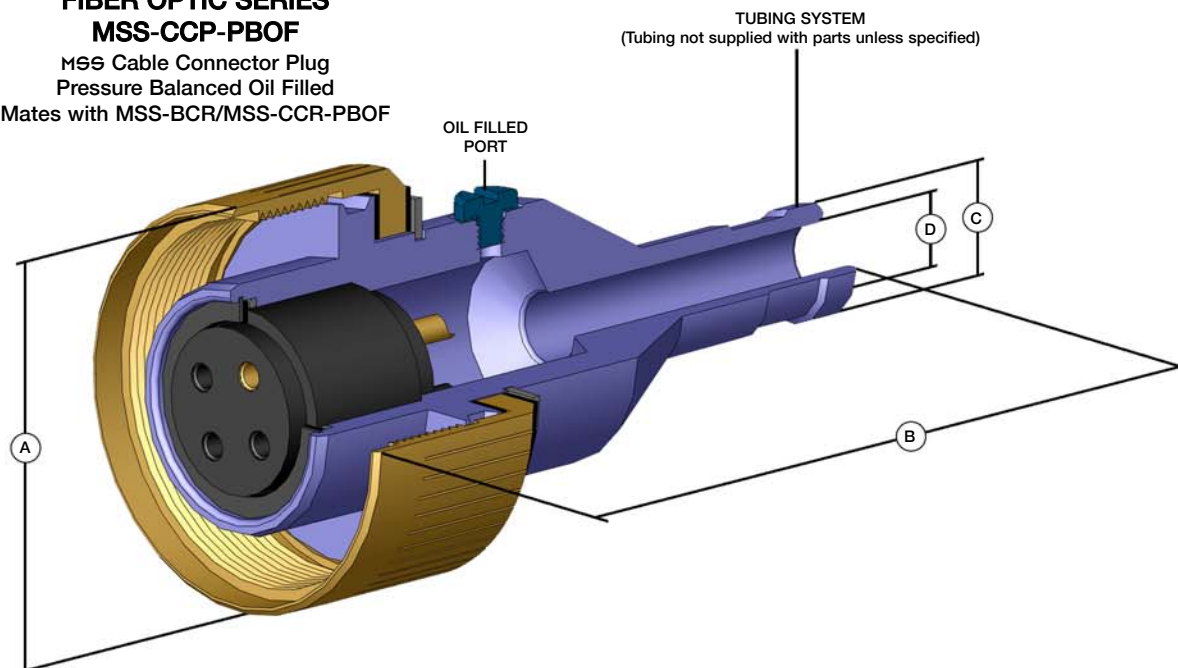
SPECIFICATION:

- BODY MATERIAL: 316 Stainless Steel.
- INSERT: Glass Reinforced Epoxy.
- CONTACTS: Brass, gold plated.
- PRESSURE RATING: 2,500 psi.

DIMENSION DETAILS

METAL SHELL SERIES (MSS) FIBER OPTIC SERIES MSS-CCP-PBOF

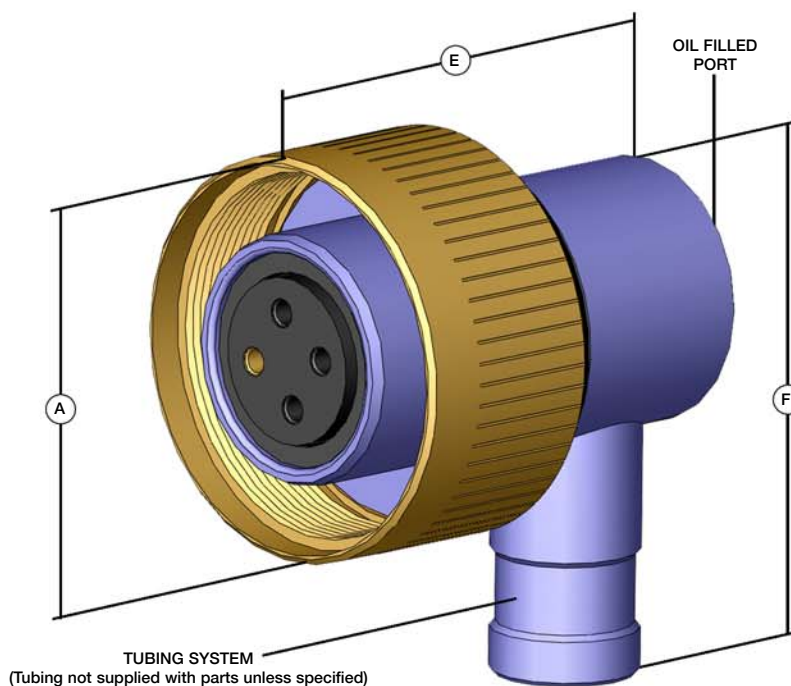
MSS Cable Connector Plug
Pressure Balanced Oil Filled
Mates with MSS-BCR/MSS-CCR-PBOF



CONNECTOR	A - DIAMETER (INCHES)	B - LENGTH (INCHES)	C - DIAMETER (INCHES)	D - DIAMETER (INCHES)	E - LENGTH (INCHES)	F - R/A HEIGHT (INCHES)
MSSL-CCP-PBOF	2.12	3.75	0.844	0.62	T.B.A	T.B.A
MSSM-CCP-PBOF	2.50	5.00	0.844	0.62	T.B.A	T.B.A
MSSO-CCP-PBOF	3.00	5.81	1.000	0.62	T.B.A	T.B.A
MSSP-CCP-PBOF	3.25	6.62	1.000	0.82	T.B.A	T.B.A
MSSQ-CCP-PBOF	3.87	7.00	1.250	1.06	T.B.A	T.B.A

METAL SHELL SERIES (MSS) FIBER OPTIC SERIES MSS-CCP-PBOF-R/A

MSS Cable Connector Plug
Pressure Balanced Oil Filled
Mates with MSS-BCR/MSS-CCR-PBOF



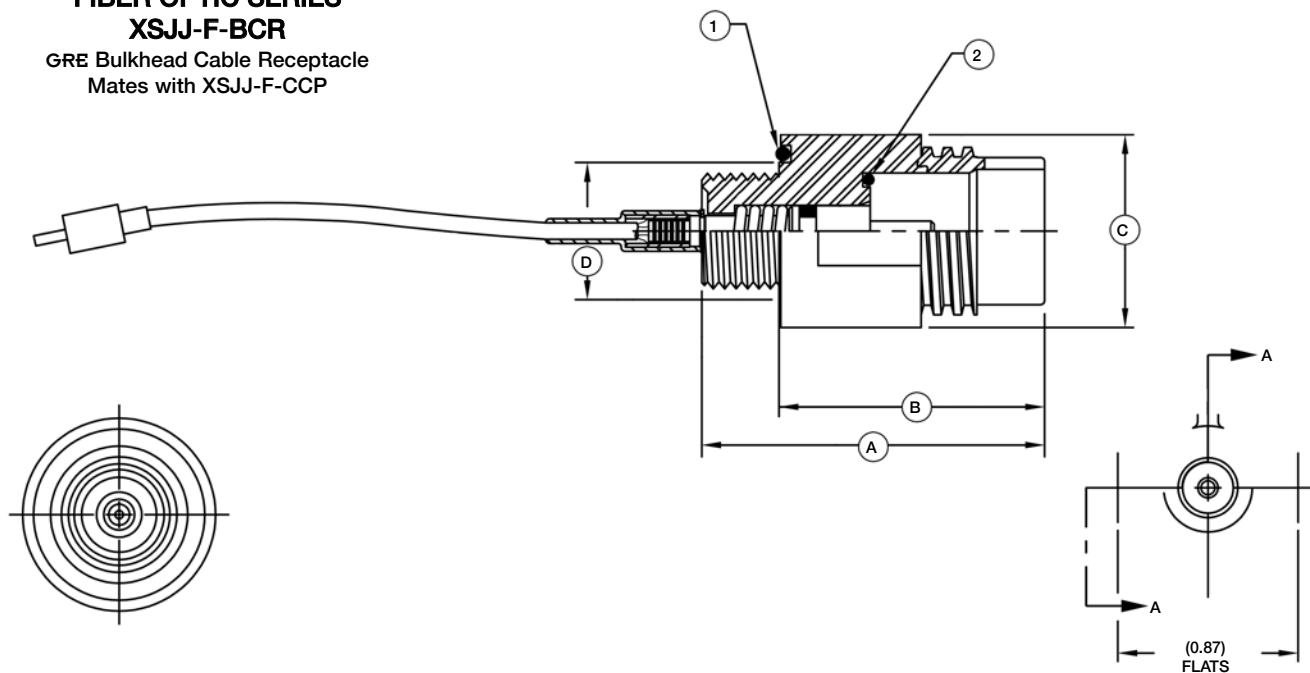
SPECIFICATION:

- BODY MATERIAL: 316 Stainless Steel.
- NUT: Bronze.
- INSERT: Glass Reinforced Epoxy.
- CONTACTS: Brass, gold plated.
- PRESSURE RATING: T.B.A.

DIMENSION DETAILS

GLASS REINFORCED EPOXY (GRE) FIBER OPTIC SERIES XSJJ-F-BCR

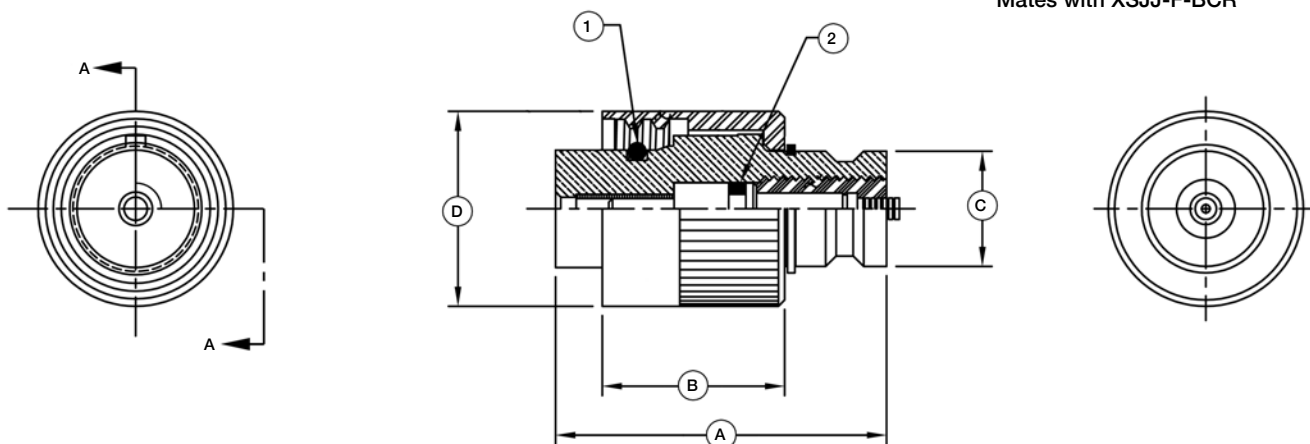
GRE Bulkhead Cable Receptacle
Mates with XSJJ-F-CCP



CONNECTOR	A - LENGTH (INCHES)	B - LENGTH (INCHES)	C - DIAMETER (INCHES)	D - DIAMETER (INCHES)	1 - O-RING	2 - O-RING
XSJJ-F-BCR	1.66	1.29	0.94	0.666	5-254	5-058
XSJJ-F-CCP	1.58	0.87	0.93	0.55	2-013	2-006

GLASS REINFORCED EPOXY (GRE) FIBER OPTIC SERIES XSJJ-F-CCP

GRE Cable Connector Plug
Mates with XSJJ-F-BCR

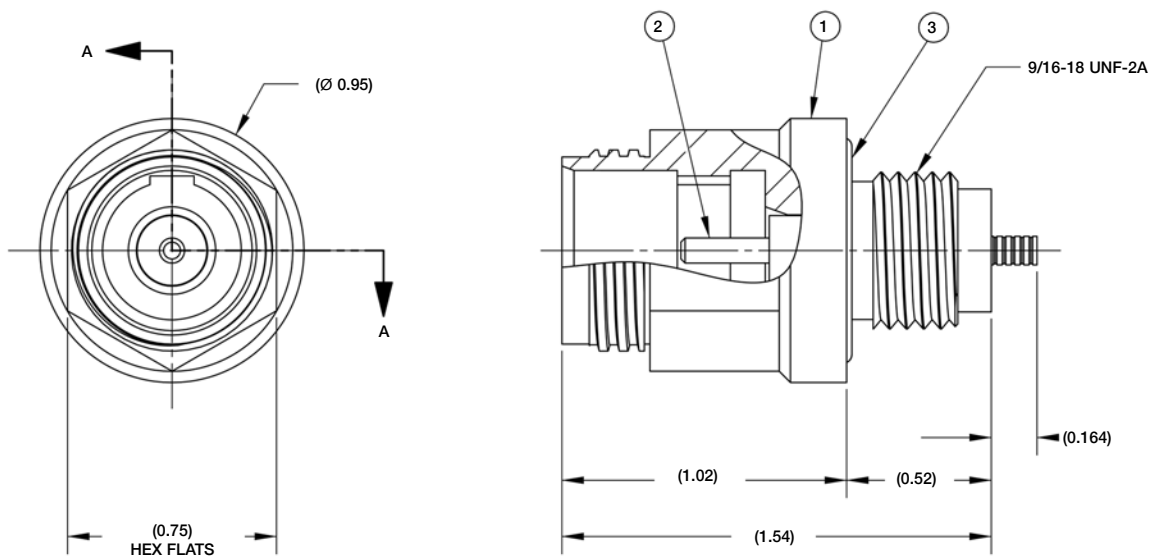
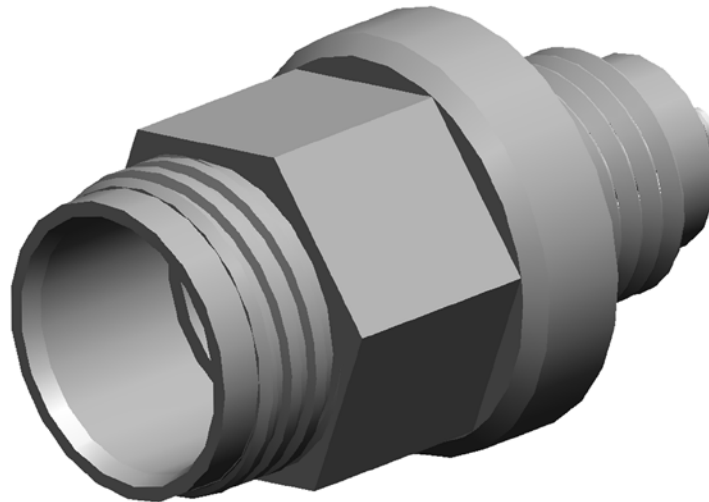


DIMENSION DETAILS

CS-MS FIBER OPTIC SERIES

CS-MS-1FO-BCR

CS-MS Bulkhead Connector
Mates with CS-MS-1FO-CCP



NOTES:

- 1 - CS-MS-BCR SHELL: Aluminum 6061-T6 or 6061-T651. Hard Anodized.
- 2 - FIBER OPTIC CONTACT ASSEMBLY: HOUSING; 316 Stainless Steel. CONTACT; Zirconia Ceramic.
- 3 - O-RING: Nitrile (formerly known as Buna N).

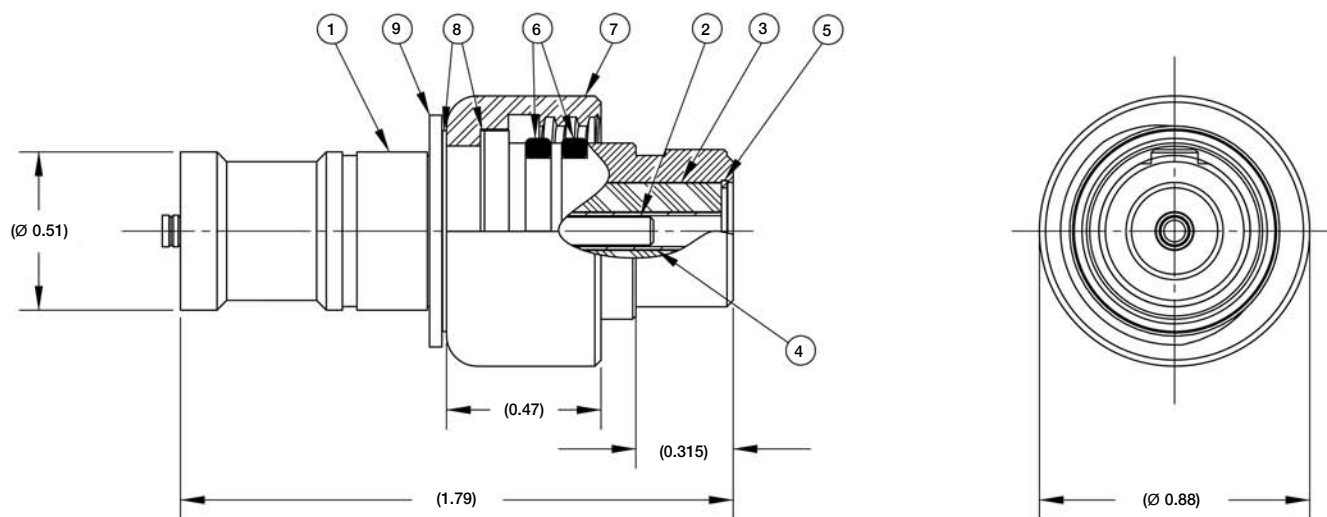
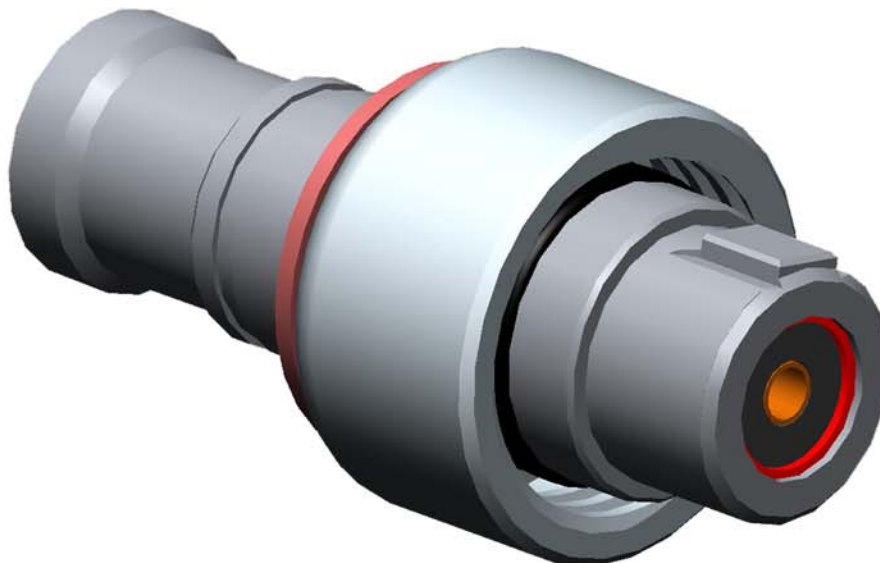
Typical insertion loss <0.3dB.

For further information please refer to the CS-MS brochure.

DIMENSION DETAILS

CS-MS FIBER OPTIC SERIES CS-MS-1FO-CCP

CS-MS Cable Connector Plug
Mates with CS-MS-1FO-BCR



NOTES:

- 1 - CS-MS-CCP SHELL: Aluminum 6061-T6 or 6061-T6511. Hard Anodized.
- 2 - FIBER OPTIC CONTACT ASSEMBLY: HOUSING; 316 Stainless Steel. CONTACT; Zirconia Ceramic.
- 3 - ALIGNMENT SLEEVE ADAPTER: Delrin® (DuPont trademark for Acetal Resin).
- 4 - ALIGNMENT SLEEVE: Zirconia Ceramic.
- 5 - INTERNAL RETAINING RING: 316 Stainless Steel.
- 6 - O-RING: Nitrile (formerly known as Buna N).
- 7 - ENGAGING NUT: Aluminum 6061-T6 or 6061-T6511. Hard Anodized.
- 8 - WASHER: Delrin® (DuPont trademark for Acetal Resin).
- 9 - RETAINING RING: (P/N: 11-40393-1); 420 Stainless Steel.

Typical insertion loss <0.3dB.

Pressure Balanced Oil Filled (PBOF) version only.

For further information please refer to the CS-MS brochure.

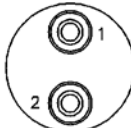
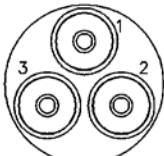
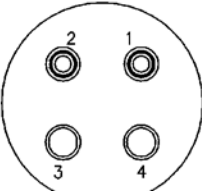
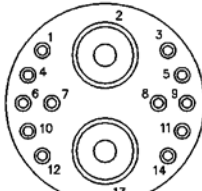
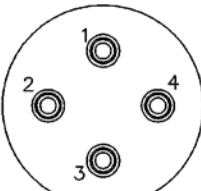
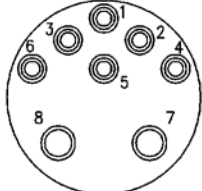
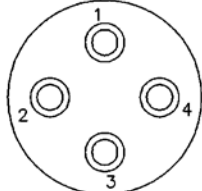
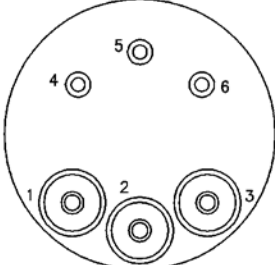
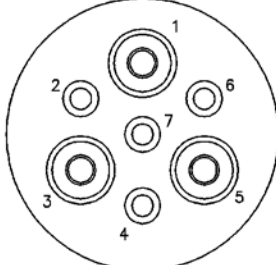
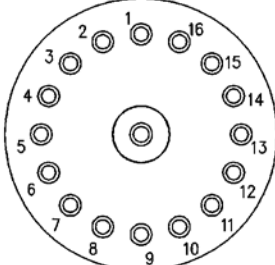
MINI-CON MASTER PARTS AND MATERIALS LIST

ITEM	QTY	PART/DESCRIPTION	NOTES	
1	-	INSERT FACE PATTERN	* 11	
2	1	O-RING	* 6	* 13
3	AR	O-RING	* 6	
4	1	MIN-BCR	* 1	* 13
5	1	MIN-CIR	* 2	
6	AR	CONTACT PINS	* 3	* 11
7	1	SPIROLOX	* 5	
8	1	BULKHEAD HEX NUT (OPTIONAL)	* 5	
9	1	BULKHEAD WASHER (OPTIONAL)	* 5	
10	AR	EPOXY (OPTIONAL)	* 7	
11	AR	HOOK-UP WIRE (OPTIONAL PIGTAILS)	* 8	
12	1	MIN-FCR	* 1	* 13
13	1	O-RING	* 6	
14	4	SOCKET CAP HEX SCREW (OPTIONAL)	* 5	
15	1	MIN-CCR	* 1	
16	AR	FILL COMPOUND REQUIRED	* 14	
17	1	MIN-CCP/CCR FI BOOT (OPTIONAL)	* 4	* 12
18	AR	OVERMOLD (OPTIONAL)	* 4	* 12
19	2	NYLON CABLE TIE (OPTIONAL)	* 12	
20	1	MIN-CCP	* 1	* 13
21	1	MIN-CIP	* 2	
22	AR	CONTACT SOCKETS	* 3	* 11
23	1	RETAINING RING	* 5	
24	1	O-RING	* 6	* 13
25	1	O-RING	* 6	
26	1	SPIROLOX	* 5	
27	1	ENGAGING NUT	* 10	
28	2	ENGAGING NUT WASHER	* 9	
29	1	MIN-DSR/MIN-DSRL	* 1	
31	1	MIN-DSP/MIN-DSPL	* 1	
33	1	MIN-PSR/MIN-PSRL	* 9	
35	1	MIN-PSP/MIN-PSPL	* 9	
37	1	MIN-CCP-PBOF-FWD END	* 1	
38	1	MIN-CCP-PBOF-AFT END	* 1	
39	1	MIN-CCP-PBOF-R/A AFT END	* 1	
40	1	O-RING	* 6	
41	3	8-32 UNC-2A HEX SOCKET SET SCREW/CUP POINT	* 5	
42	1	10-24 UNC-2A SLOTTED PAN HEAD SCREW WITH O-RING	* 5	
43	1	MIN-BCR DUAL O-RING	* 1	* 13
44	1	O-RING	* 6	
45	1	O-RING	* 6	* 13
46	1	MIN-CCR-PBOF	* 1	

NOTES:

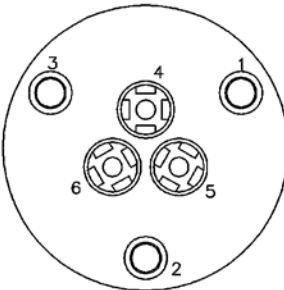
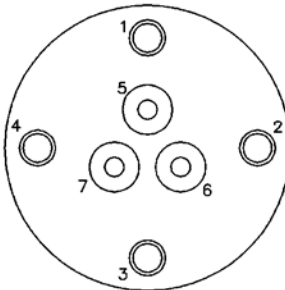
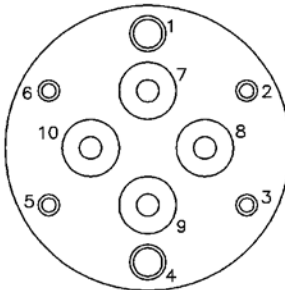
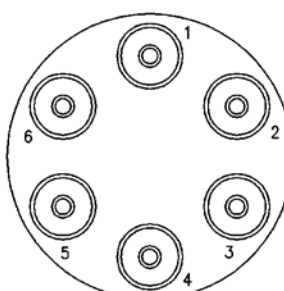
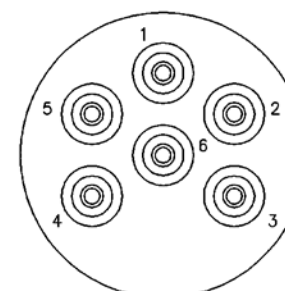
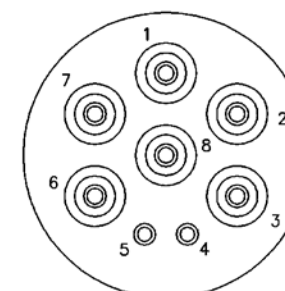
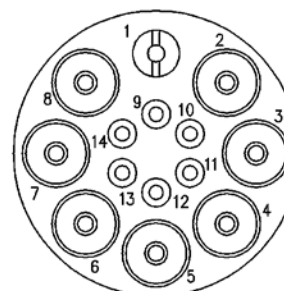
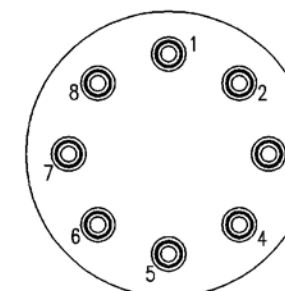
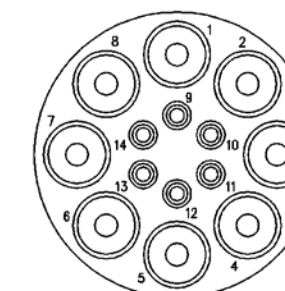
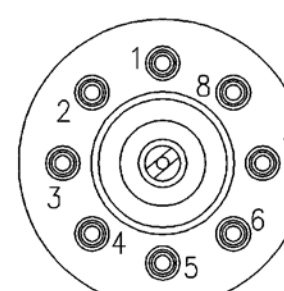
- * 1 MATERIAL: 316 STAINLESS STEEL PER ASTM A 484.
- * 2 MATERIAL: GLASS REINFORCED EPOXY, SEA CON® XS-2748.
- * 3 MATERIAL: COPPER ALLOY & GOLD PLATE PER ASTM B 488.
- * 4 MATERIAL: NEOPRENE MOLDING PER SEA CON® X-5727.
- * 5 MATERIAL: HIGH GRADE STAINLESS STEEL.
- * 6 MATERIAL: NITRILE (FORMERLY KNOWN AS BUNA N).
- * 7 MATERIAL: EPON 828/CIBA 840.
- * 8 MATERIAL: TEFLON® (REGISTERED TRADEMARK FOR DUPONT) TYPE E.
- * 9 MATERIAL: ACETAL PER ASTM D 4181, BLACK.
- * 10 MATERIAL: COPPER ALLOY 630 PER ASTM B 150.
- * 11 REFERENCE FACE CONFIGURATIONS FOR SIZE OF CONTACTS AND LOCATIONS.
- * 12 AN OVERMOLD OR FIELD INSTALLABLE BOOT IS OPTIONAL ON BOTH THE CCP AND THE CCR.
- * 13 DOVETAIL GROOVE TO PREVENT LOSS OF O-RING.
- * 14 NOT SUPPLIED.

CONTACT CONFIGURATIONS

SIZE		MINI-CON SERIES FIBER OPTIC CONTACT CONFIGURATIONS AVAILABLE	
F	 1FO	Micro MINI-CON FIBER OPTIC FACE PATTERN	
		 MMG-1FO	
M	 2FO  3FO		
O	 2FO/2#16  2FO/12#20  4FO		
P	 2FO/6#16  4FO		
Q	 3FO/3#16  3FO/4#16  1FO/16#16		

NOTES:
Please contact SEA CON® for further information.

CONTACT CONFIGURATIONS

SIZE	MINI-CON SERIES FIBER OPTIC CONTACT CONFIGURATIONS AVAILABLE		
R	 3FO/3#10	 3FO/4#14 3FO/4#16	 4FO/2#10/4#16
	 6FO	 6FO	 6FO/2#16
	 7FO/6#16-PBOF	 8FO	 8FO/6#16
	 8FO-PBOF		

NOTES:

Please contact SEA CON® for further information.

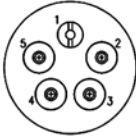
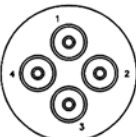
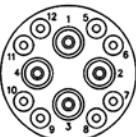
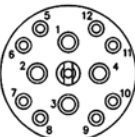
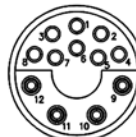
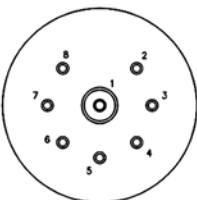
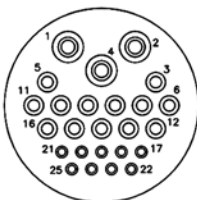
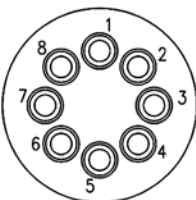
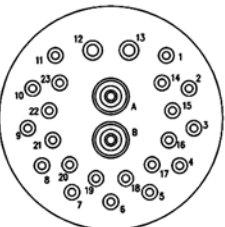
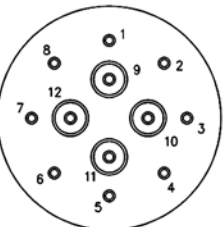
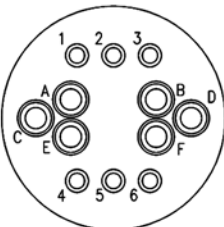
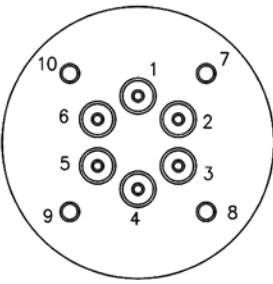
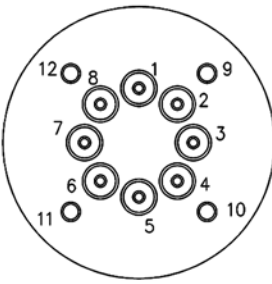
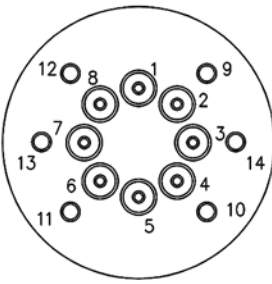
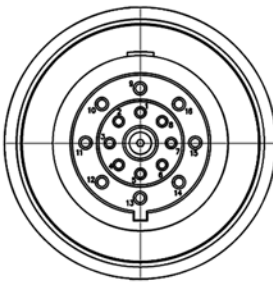
CONTACT CONFIGURATIONS

SIZE	MINI-CON SERIES FIBER OPTIC CONTACT CONFIGURATIONS AVAILABLE
T	4FO/9#16/2#14 4FO/5#16
U	4FO/2#10/12#16 6FO/20#20
X	4FO/4#10/28#20

NOTES:

Please contact SEA CON® for further information.

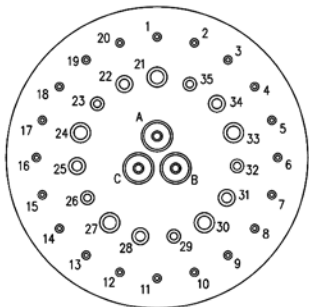
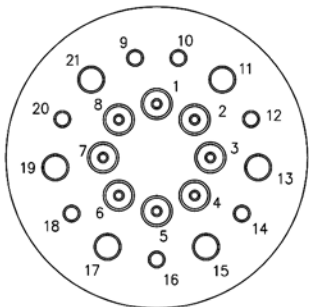
DIMENSION DETAILS

SIZE	M99 FIBER OPTIC SERIES CONTACT CONFIGURATIONS AVAILABLE
L	 4FO-PBOF
M	    4FO 4FO/8#16 4FO/8#16-PBOF 4FO/8#16
O	   1FO/7#16 3FO/13#14/9#16 8FO
P	   2FO/2#14/21#16 4FO/8#16 6FO/6#10
Q	    6FO/4#10 8FO/4#10 8FO/6#10 8FO/8#10

NOTES:

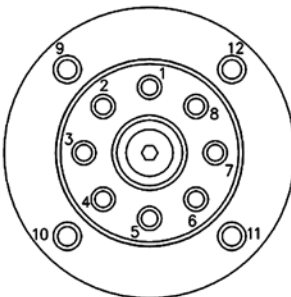
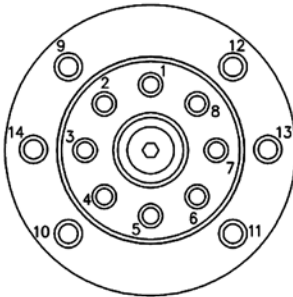
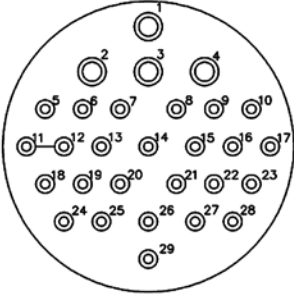
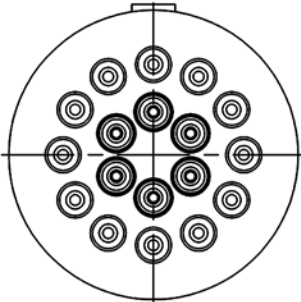
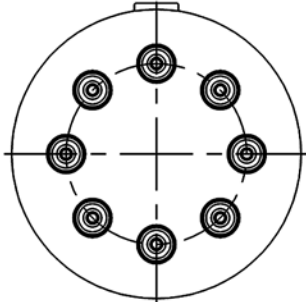
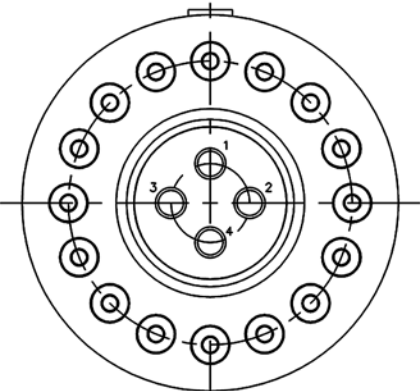
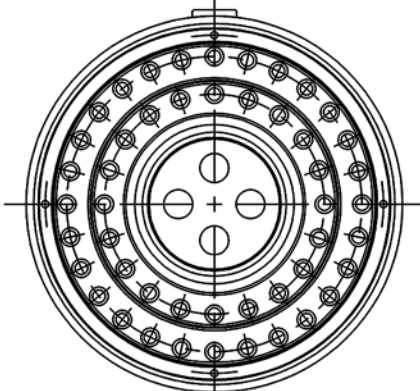
Please contact SEA CON® for further information.

D I M E N S I O N D E T A I L S

SIZE	M99 FIBER OPTIC SERIES CONTACT CONFIGURATIONS AVAILABLE
S	 3FO/5#10/5#14/5#16/20#20  8FO/6#6/7#10

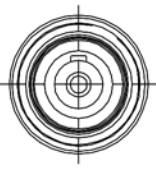
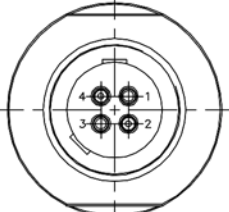
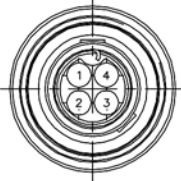
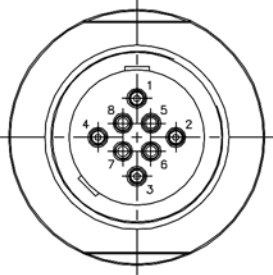
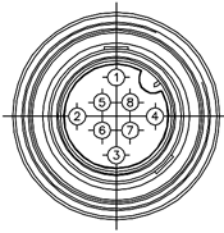
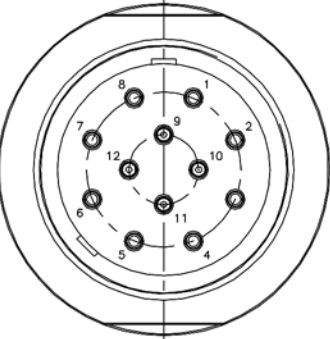
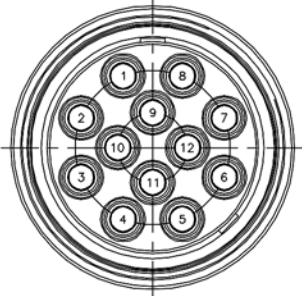
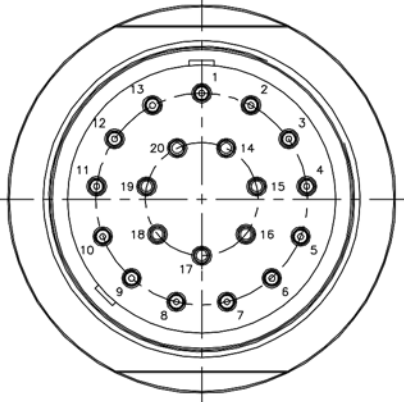
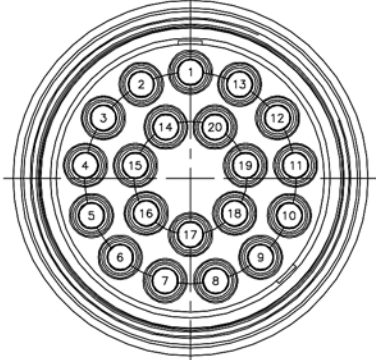
NOTES:
Please contact SEA CON® for further information.

D I M E N S I O N D E T A I L S

SIZE	M99 SERIES 'SPECIALS' AVAILABLE TO ORDER ONLY	
Q	 8FO/4#10	 8FO/6#10
	 25#16/4#10	
S	 6FO/12#12	 8FO
	 16FO/4#8  48FO/4#8	

NOTES:
Please contact SEA CON® for further information.

DIMENSION DETAILS

SIZE	OPTI-CON FIBER OPTIC SERIES CONTACT CONFIGURATIONS AVAILABLE	
F	 1-BCR	 1-CCP
G	 4-BCR	 4-CCP
M	 8-BCR	 8-CCP
Q	 12-BCR	 12-CCP
T	 20-BCR	 20-CCP

NOTES:

Please refer to the **OPTI-CON** brochure for further details on this series.

CUSTOMER CHECKLIST

SPECIFY THE FIBER:

- ☐ Single-Mode or Multi-Mode. Quantity of each type.
- ☐ Fiber size, 9/125 or 50/125 or 62.5/125
- ☐ Wavelength:
 - 850 and 1300 nanometers, multimode fibers
 - 1310 and 1550 nanometers, singlemode fibers
- ☐ Acceptable optical insertion loss in decibels, SEA CON® standard is -1.0dB per mated channel.
- ☐ Return loss requirement for single mode? SEA CON® standard - 35dB or better.

CONNECTORS & CABLES IN GENERAL:

- ☐ Cable Customer furnished or SEA CON® furnished?
 - CF cable must be accompanied with a cross sectional drawing detailing all diameters and materials, including the optical fiber components.
- ☐ Is the connector to be overmolded or field installable?
- ☐ What pressure will be used as a design maximum amount? (How deep will it go?)
- ☐ Is open face pressure rating required for receptacle side? To what pressure?
- ☐ Required temperature ratings, for use and extremes of storage.
- ☐ What materials to be used? Stainless Steel typical for most shells.
- ☐ Any electrical requirements? Number and size of contacts, voltage and amperage?
- ☐ A general idea of environment for the connector to be used in, such as, ocean, mud, ice, downhole, hydrothermal, aircraft. Whatever, especially if it's not the ordinary.

ARMORED CABLES:

- ☐ Does the cable include an armor component? (Steel or Kevlar?)
- ☐ Does the armor need to be terminated in the connector or away from connector?
 - To what axial load? If a remote strength termination, SEA CON® or customer to provide?
- ☐ What is the tensile strength of the cable (breaking and working)?
- ☐ Is a bend limiter desired at the cable entry to back end of CCP? For what application?

PRESSURE BALANCED OIL FILLED (PBOF):

- ☐ Bulkhead mounted on PBOF system?
- ☐ Type of oil/fluid used to pressure balance cable and system.
- ☐ Customer or SEA CON® specified PBOF tubing? Size and type.

GENERAL:

- ☐ Quantity of each type of connector required.
- ☐ Program or project name.
- ☐ Special tests required, e.g. hydrostatic pressure test.

* This checklist is for general purpose and may not address all requirements. Please contact SEA CON® for additional assistance.

HANDLING PROCEDURES AND SPECIAL CAPABILITIES

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E-Mail: gulfcoastsales@seaconworldwide.com
Website: www.seaconworldwide.com

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Website: www.seaconworldwide.com

SEA CON® SEA CON FLORIDA SALES OFFICE
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TEL #2: +55 (21) 3594-0920
CELL: +55 (21) 8849-3336
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TEL: +44 (0) 1493-652733
FAX: +44 (0) 1493-652840
E-Mail: sales@seaconeurope.com
Website: www.seaconeurope.com

SEA CON global **SEA CON GLOBAL PRODUCTION**
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TEL: +52 (664) 626-2726
FAX: +52 (664) 686-8922
E-Mail: sales@seaconglobal.com
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Dial from U.S.A. TEL: +1 (619) 308-7901
TOLL FREE: (888) 562-7072
FAX: +1 (619) 308-7900

SEA CON phoenix **SEA CON PHOENIX, LLC.**
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Hopkinton Industrial Park,
Ashaway, RI 02804, USA.
TEL: +1 (401) 637-4952
FAX: +1 (401) 637-4953
E-Mail: sales@seaconphoenixllc.com
Website: www.seaconphoenixllc.com

Even though these procedures appear simple, only qualified technicians should perform the installation and maintenance.

INSTALLATION PROCEDURES

Torque values referenced assume installation into dry metal threads. Bulkhead connector receptacle (BCR) o-ring should be lubricated with an appropriate silicone grease before installing. This lubricant should be applied to form an adequate film. Excessive lubrication is detrimental to the operation of the connector. Care must be taken to ensure no grease or dirt is present on the face of the fiber optic contact. Cleaning of the contact is recommended using only suitable products. CCP o-ring should be greased as above with the same care being taken.

CARE AND MAINTENANCE

Once mated the connector requires no maintenance. When stored all fiber contacts should be protected with suitable dust caps.

CABLE AND CONTINUITY PRESERVATION

Avoid sharp bends in both the hose assembly and the tail ends of the BCR so that breakage of the fiber does not occur.

SPECIAL ASSEMBLIES

SEA CON® maintains all facilities necessary to furnish complete underwater and environmental electrical connector/cable systems, including Research and Development, Engineering, Manufacturing, Quality Control and Pressure Testing. As well as supplying our standard 'off-the-shelf' items, we have the capability to design and manufacture SPECIAL CUSTOMIZED CONNECTORS AND CABLE ASSEMBLIES to suit your individual needs.

All reasonable efforts have been taken to ensure that the information contained herein is accurate at the date of publication, but no representation or warranty as to the accuracy or completeness of such information is intended or to be implied by its inclusion herein. Any and all representations and warranties pertaining to the information and products referred to herein shall be set forth in SEA CON® standard sales order form. In addition, SEA CON® reserves the right to make changes to the contents hereof without notice, therefore it is suggested that at the time of inquiry, the appropriate sales office or factory be contacted directly for verification of published specifications and products availability.

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