

SEACON

SEA-MATE

UNDERWATER ELECTRICAL WET-MATE CONNECTORS



TE
connectivity

UNDERWATER ELECTRICAL WET-MATE CONNECTORS

INTRODUCTION

SEACON (europe) Ltd has re-developed its well known U-MATE range of underwater electrical wet-mate connectors, making it easier to manufacture and incorporating existing proven technology.

The **SEA-MATE** series has many features including fully interchangeable inserts which offers greater flexibility to the customer with full PBOF capability and increased contact configurations. In addition, this connector range has many of the original features as those of the U-MATE series including, positive keying and proven underwater mating technology and a robust design for harsh subsea environments.

The manufacture and assembly of all parts in house ensures that each **SEA-MATE** connector is supplied to the highest of standards. This connector range is manufactured from 316L Stainless Steel as standard, however other materials are available upon request.

AVAILABILITY

The **SEA-MATE** range is available in 4 shell sizes from 2 to 37 contact configurations. With oil filled and moulded versions available and the ability to incorporate FITA technology, this connector series is extremely adaptable. Pressure rated to 7,500 psi (5,200m water depth), this latest series offers the next evolution of our highly successful connector range.

APPLICATIONS

The **SEA-MATE** is suitable for applications such as underwater cameras, diver communications, lights, pan and tilts or any application where underwater mateability is required.

TESTING

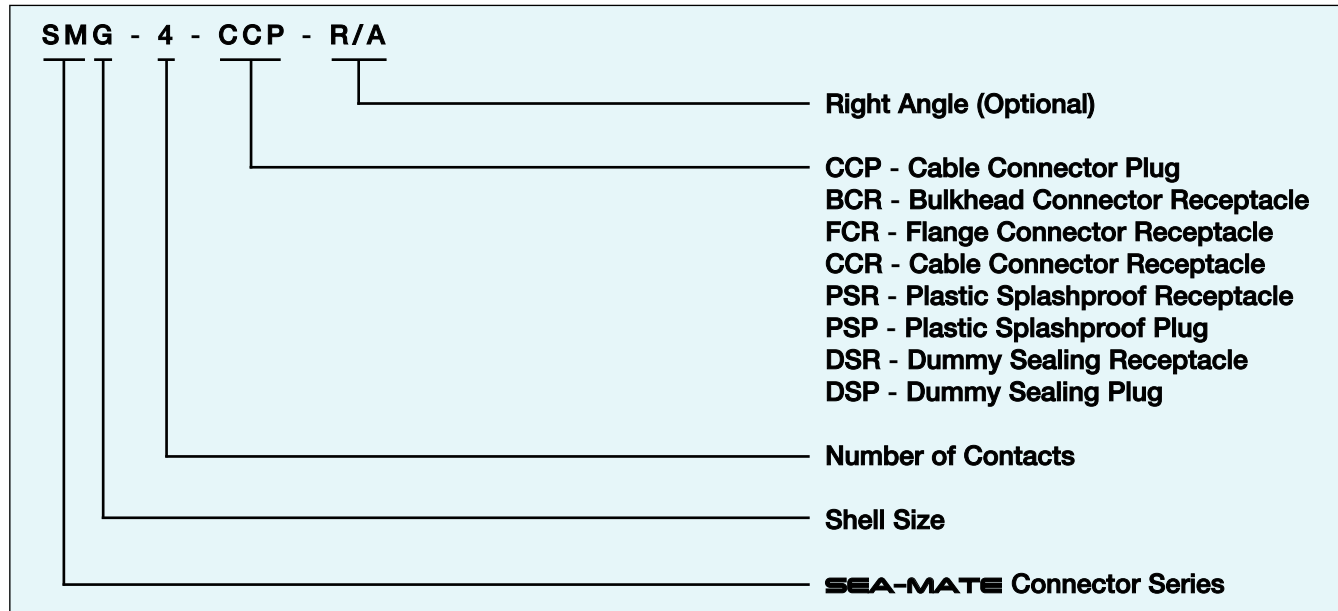
These connectors have gone through full in-house qualification testing, including but not limited to, the following:

- Dielectric breakdown.
- Dry mate-demate lifecycle.
- Wet mate-demate lifecycle.
- Mated and open face Hydrostatic pressure testing upto 10,000 psi.

For further information please contact SEACON.

PART NUMBER SYSTEM

EXAMPLE:



GENERAL INFORMATION

COMPONENT	MATERIAL
BULKHEAD BODY (BCR/FCR)	316L SS
CCP BODY	316L SS c/w Aluminium Bronze NES 833 engaging nut
ELECTRICAL CONTACTS	Brass CZ124 gold plated as per MIL-G-45204
O-RING (BULKHEAD/FCR)	Nitrile

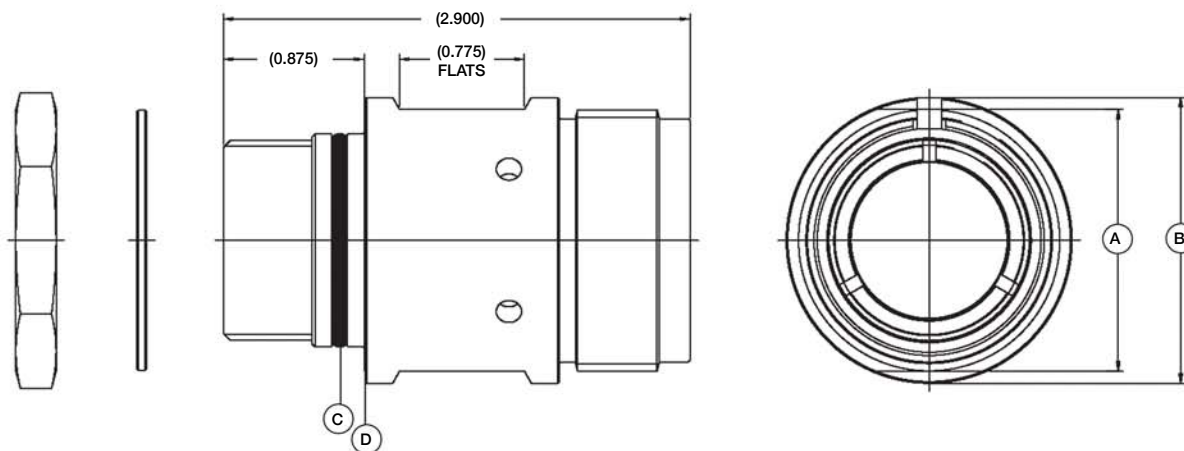
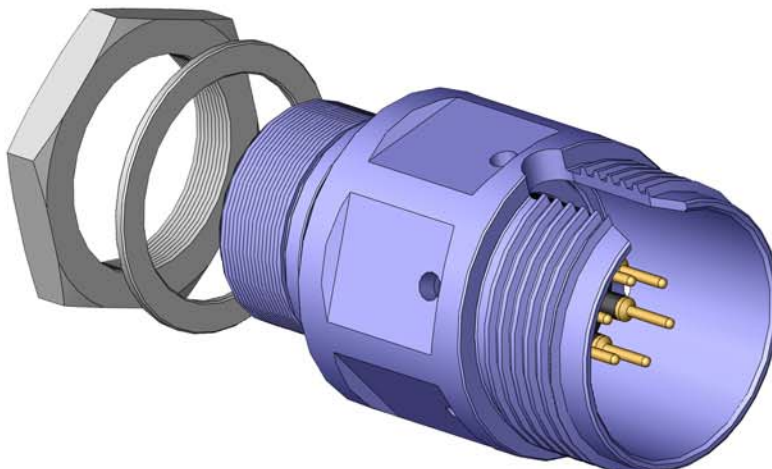
CATEGORY	VALUE
MATED PRESSURE	Up to 7,500 psi (5,200m water depth)
OPEN FACE PRESSURE	Up to 7,500 psi (5,200m water depth)
VOLTAGE RATING	600 VDC/440 VAC
CURRENT RATING	Up to 10 amps Up to 50 amps new high power version Dependent on cable conductor size

NOTE:

Connectors are designed for installation on one atmosphere vessels. For all other applications please contact SEACON.

SEA-MATE SERIES SM-BCR

SEA-MATE Bulkhead Connector Receptacle
Mates with SM-CCP
Dummy Connector: SM-DSP



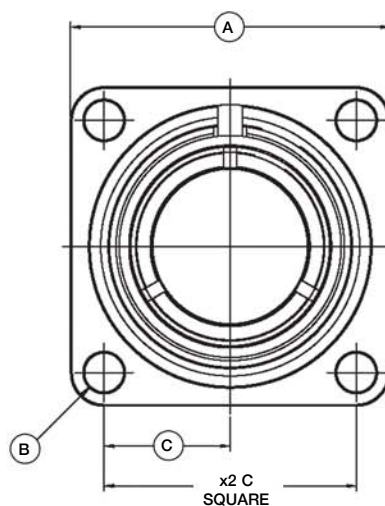
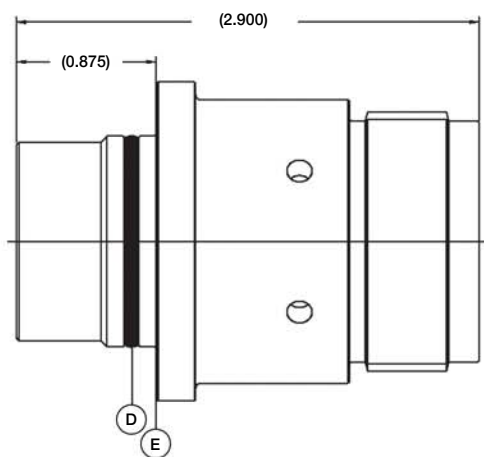
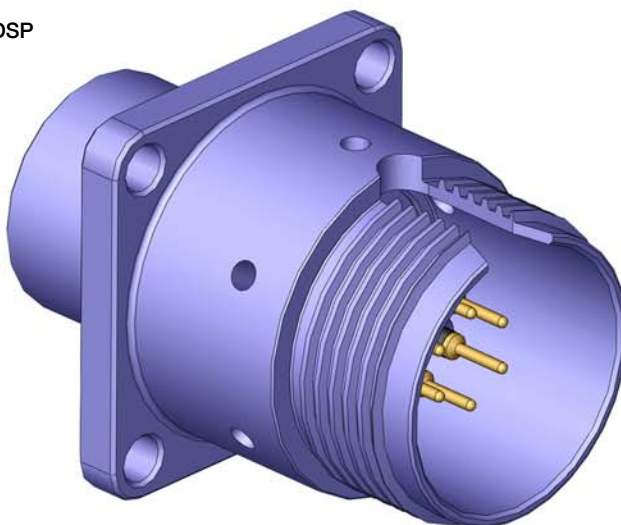
CONNECTOR	A - Ø (INCHES)	B - Ø (INCHES)	C - O-RING	D - O-RING
SMG-BCR	1.25	1.400	BS1806-019	BS1806-024
SMK-BCR	1.625	1.775	BS1806-025	BS1806-029
SML-BCR	2.00	2.150	BS1806-519	BS1806-032
SMM-BCR	2.375	2.525	BS1806-134	BS1806-035

NOTE:

Nut and washer available at additional cost.

SEA-MATE SERIES SM-FCR

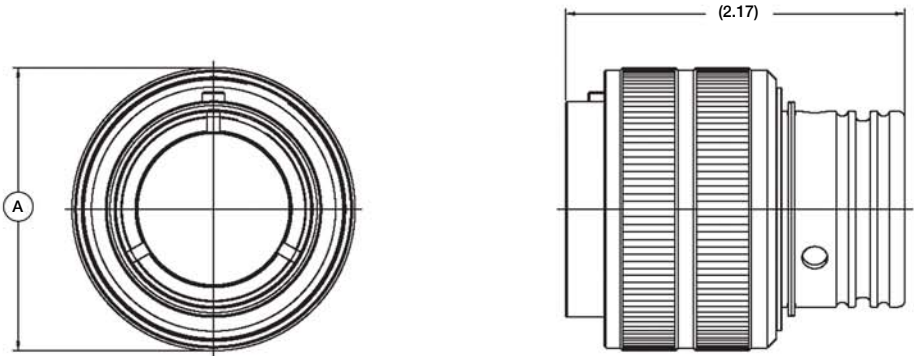
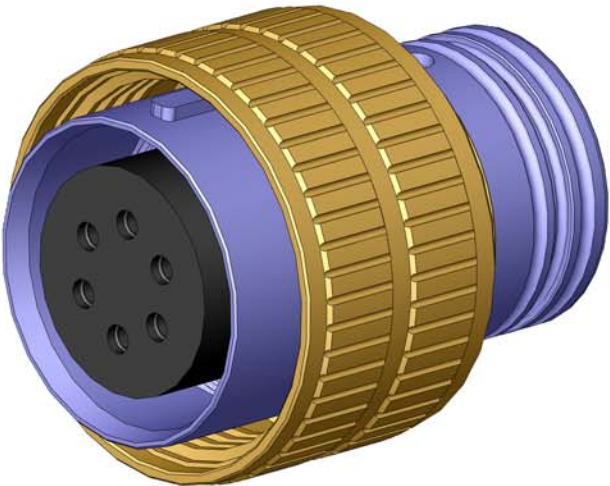
SEA-MATE Flange Connector Receptacle
Mates with SM-CCP
Dummy Connector: SM-DSP



CONNECTOR	A - SQUARE (INCHES)	B - Ø (INCHES)	C - (INCHES)	D - O-RING	E - O-RING
SMG-FCR	1.625	0.206	0.635	BS1806-019	BS1806-024
SMK-FCR	2.000	0.245	0.790	BS1806-025	BS1806-029
SML-FCR	2.375	0.245	0.975	BS1806-519	BS1806-032
SMM-FCR	2.750	0.325	1.100	BS1806-134	BS1806-035

SEA-MATE SERIES
SM-CCP-ATTACHABLE

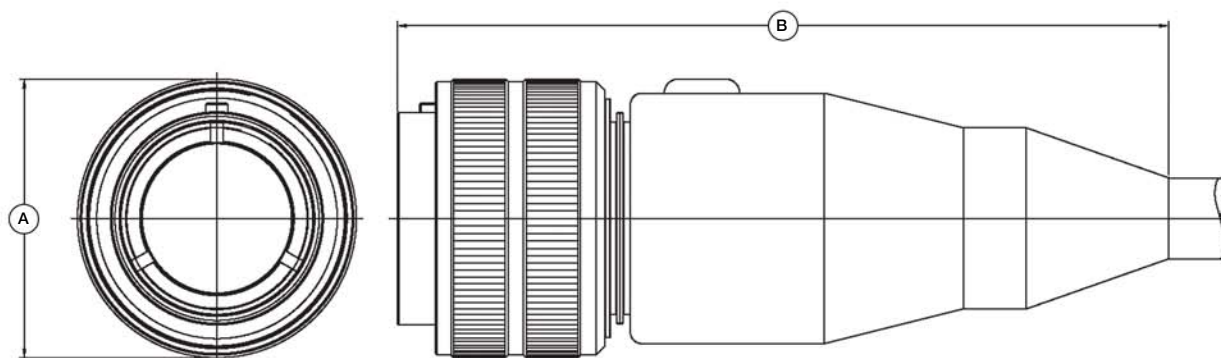
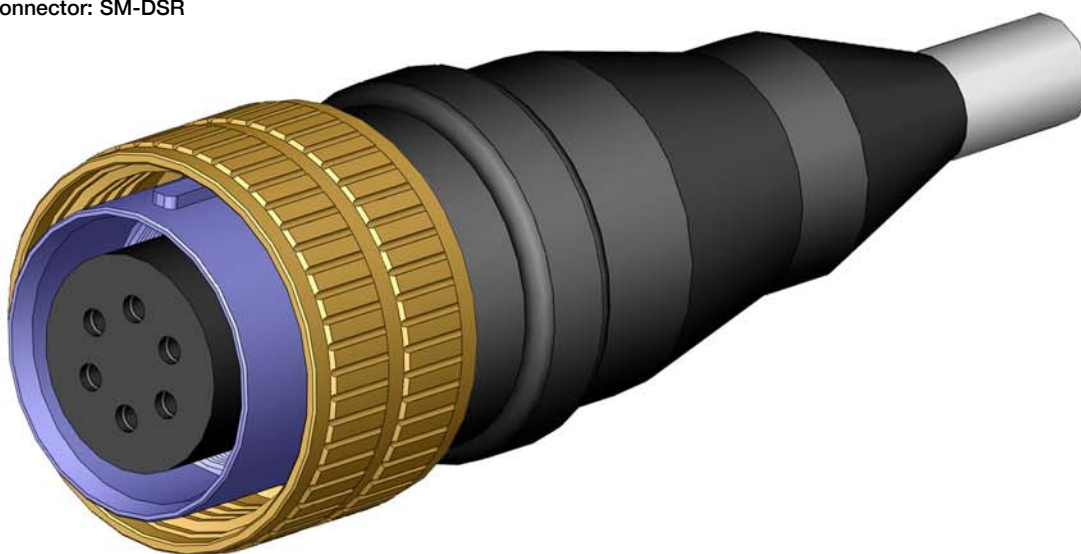
SEA-MATE Cable Connector Plug
Mates with SM-BCR/FCR/CCR
Dummy Connector: SM-DSR



CONNECTOR	A - Ø (INCHES)
SMG-CCP-ATTACHABLE	1.435
SMK-CCP-ATTACHABLE	1.810
SML-CCP-ATTACHABLE	2.185
SMM-CCP-ATTACHABLE	2.560

SEA-MATE SERIES SM-CCP-CABLE

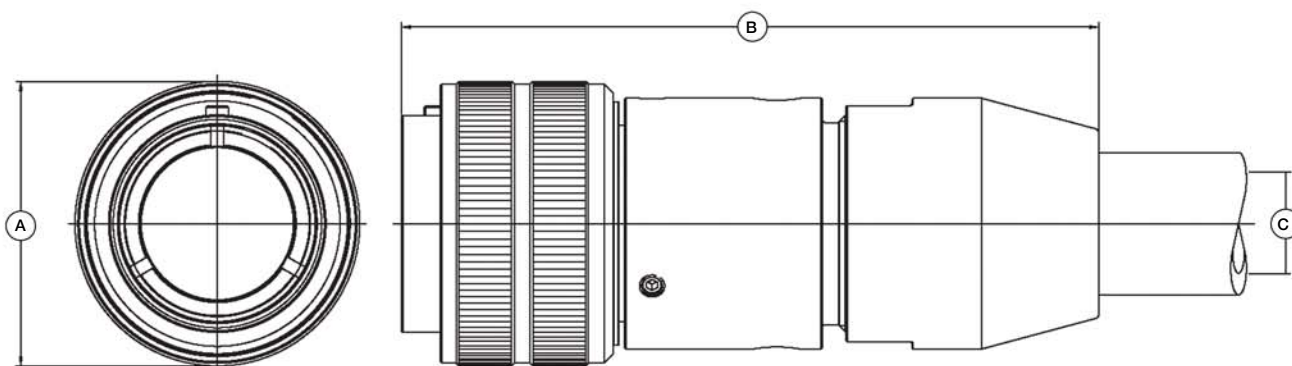
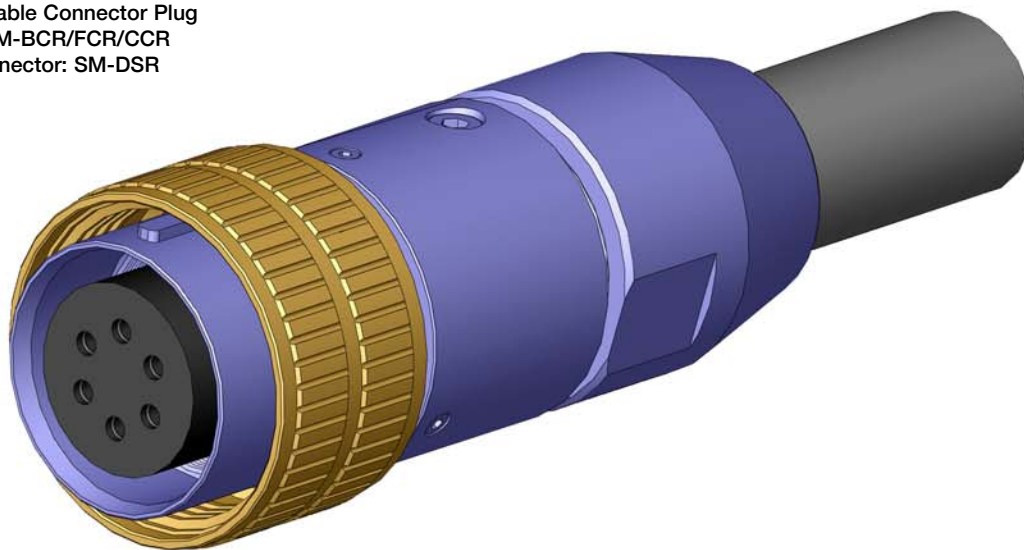
SEA-MATE Cable Connector Plug
Mates with SM-BCR/FCR/CCR
Dummy Connector: SM-DSR



CONNECTOR	A - Ø (INCHES)	B - LENGTH (INCHES)
SMG-CCP	1.435	4.65
SMK-CCP	1.810	5.00
SML-CCP	2.185	5.00
SMM-CCP	2.560	5.00

SEA-MATE SERIES SM-CCP-HOSE

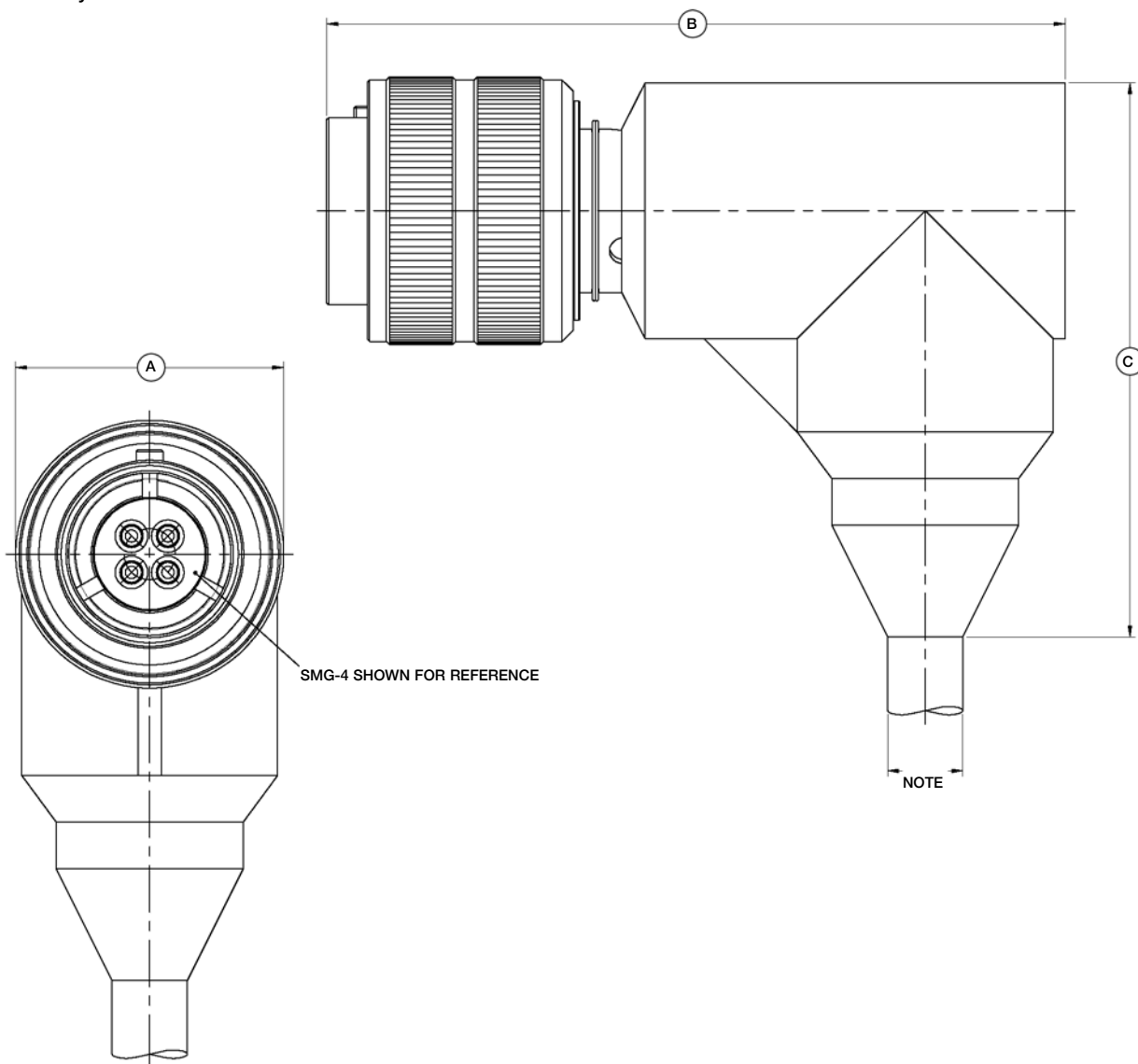
SEA-MATE Cable Connector Plug
Mates with SM-BCR/FCR/CCR
Dummy Connector: SM-DSR



CONNECTOR	A - Ø (INCHES)	B - LENGTH (INCHES)	C - I.D. (INCHES)
SMG-CCP-HOSE	1.435	4.12	3/8
SMK-CCP-HOSE	1.810	4.44	5/8
SML-CCP-HOSE	2.185	4.42	3/4
SMM-CCP-HOSE	2.560	4.66	1

SEA-MATE SERIES SM-CCP-R/A

SEA-MATE Cable Connector Plug Right Angle
Mates with SM-BCR/FCR/CCR
Dummy Connector: SM-DSR



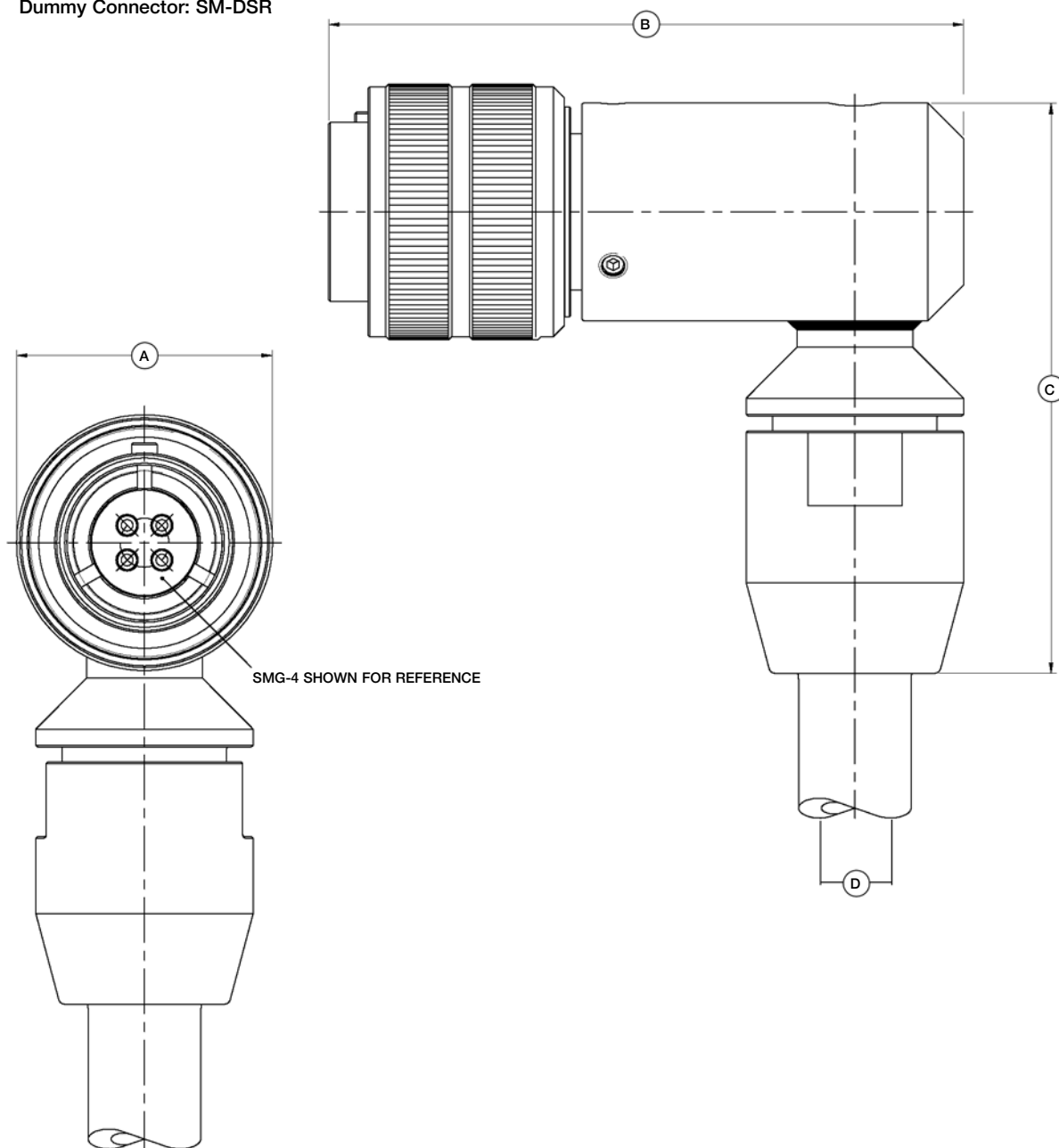
CONNECTOR	A - Ø (INCHES)	B - LENGTH (INCHES)	C - LENGTH (INCHES)
SMG-CCP-R/A	1.435	3.95	2.97
SMK-CCP-R/A	1.810	4.47	3.17
SML-CCP-R/A	2.185	4.59	3.99
SMM-CCP-R/A	2.560	4.72	4.87

NOTE:

Anixter cable as standard unless otherwise specified.

SEA-MATE SERIES SM-CCP-R/A-HOSE

SEA-MATE Cable Connector Plug Right Angle
Mates with SM-BCR/FCR/CCR
Dummy Connector: SM-DSR



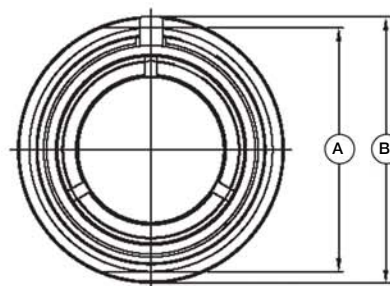
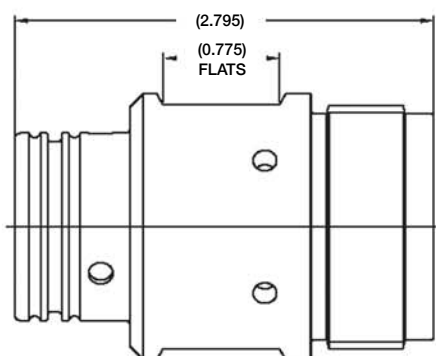
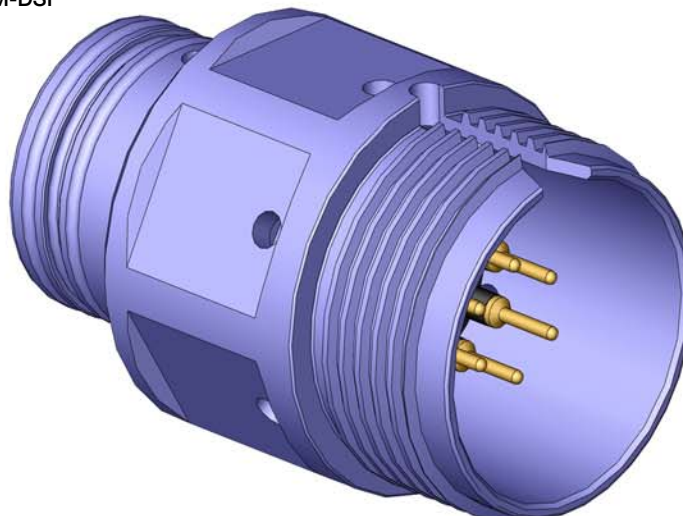
CONNECTOR	A - Ø (INCHES)	B - LENGTH (INCHES)	C - LENGTH (INCHES)	D - I.D. (INCHES)
SMG-CCP-R/A-HOSE	1.435	3.56	3.20	3/8
SMK-CCP-R/A-HOSE	1.810	3.85	3.98	5/8
SML-CCP-R/A-HOSE	2.185	4.04	4.39	3/4
SMM-CCP-R/A-HOSE	2.560	4.29	4.84	1

SEA-MATE SERIES SM-CCR-ATTACHABLE

SEA-MATE Cable Connector Receptacle

Mates with SM-CCP

Dummy Connector: SM-DSP



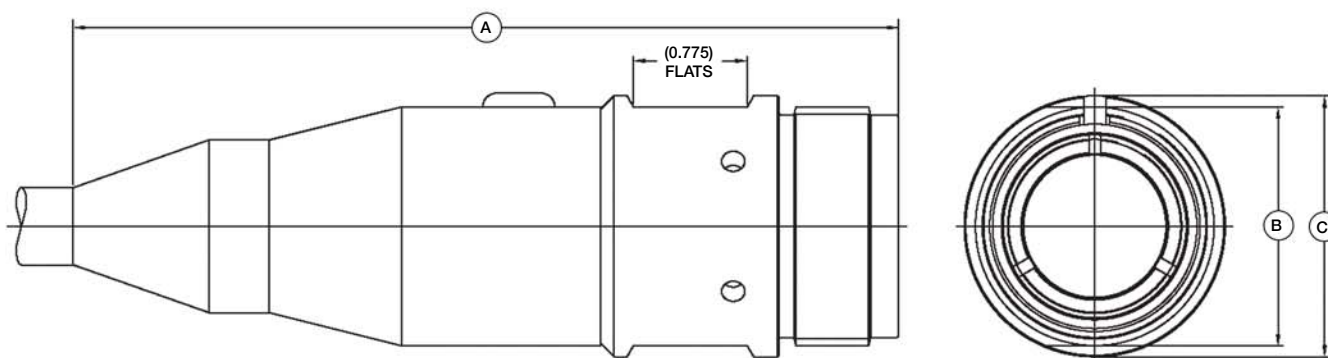
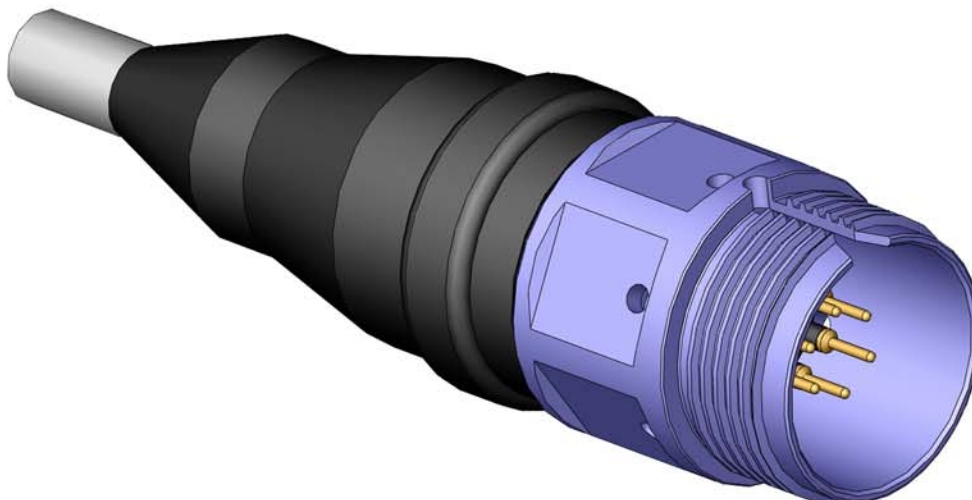
CONNECTOR	A - Ø (INCHES)	B - Ø (INCHES)
SMG-CCR-ATTACHABLE	1.25	1.400
SMK-CCR-ATTACHABLE	1.625	1.775
SML-CCR-ATTACHABLE	2.00	2.150
SMM-CCR-ATTACHABLE	2.375	2.525

SEA-MATE SERIES SM-CCR-CABLE

SEA-MATE Cable Connector Receptacle

Mates with SM-CCP

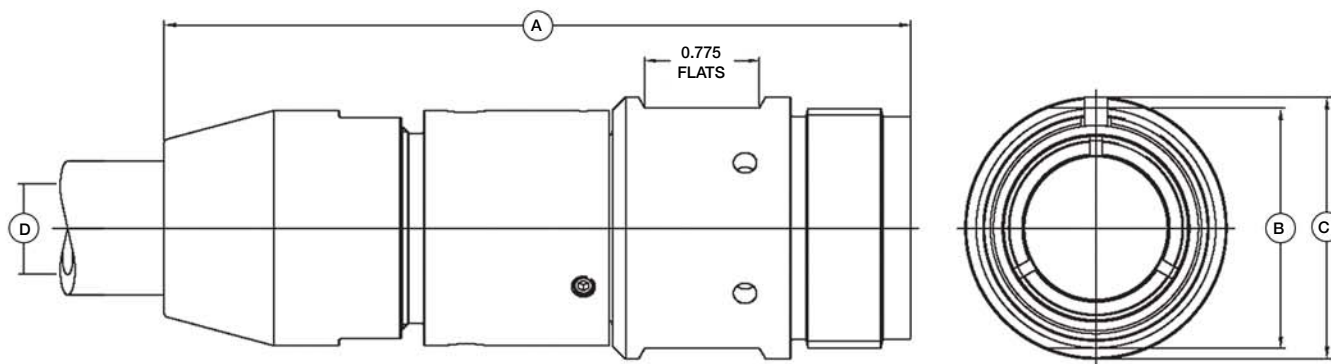
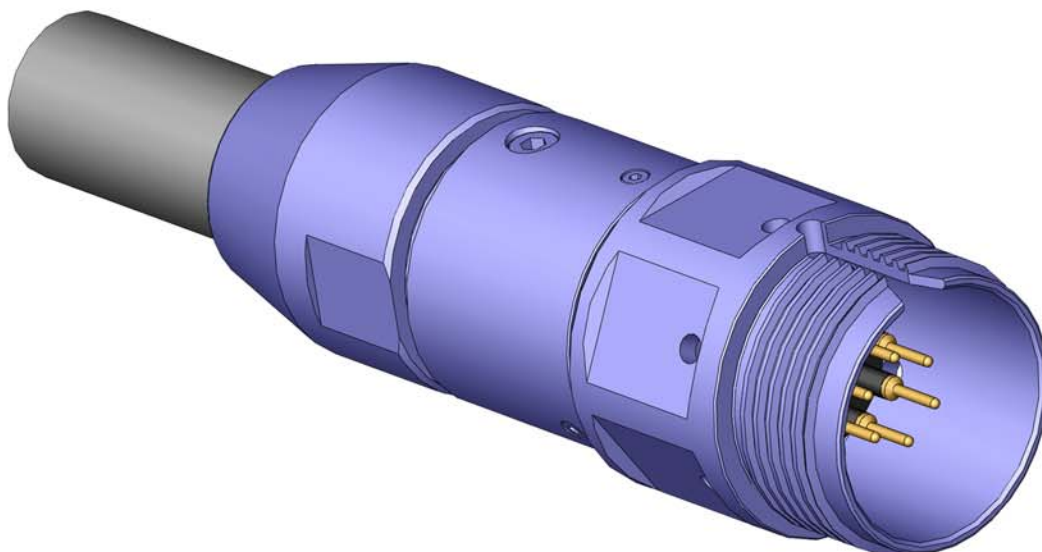
Dummy Connector: SM-DSP



CONNECTOR	A - LENGTH (INCHES)	B - Ø (INCHES)	C - Ø (INCHES)
SMG-CCR	5.15	1.25	1.400
SMK-CCR	5.61	1.625	1.775
SML-CCR	5.50	2.00	2.150
SMM-CCR	5.51	2.375	2.525

SEA-MATE SERIES SM-CCR-HOSE

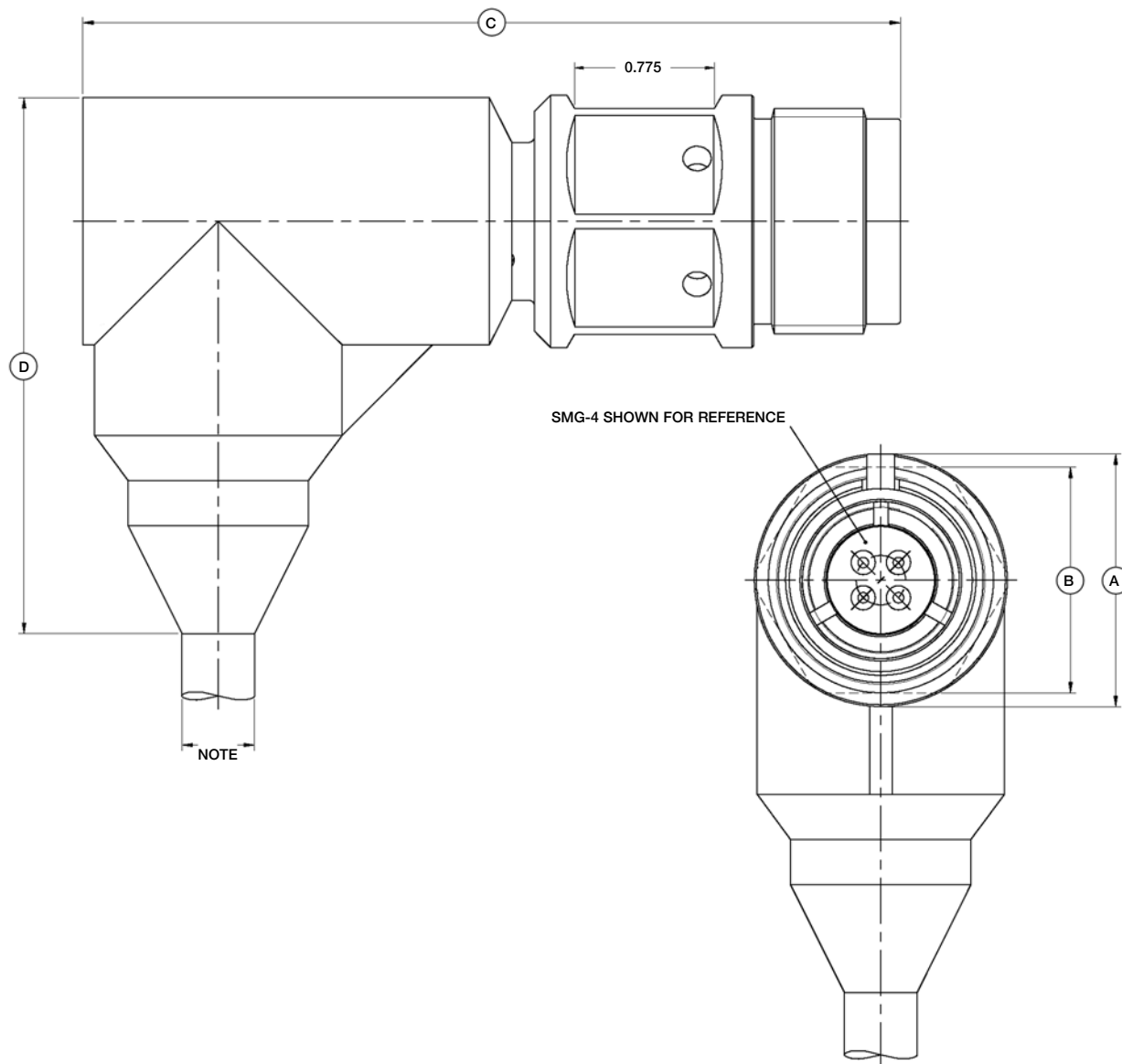
SEA-MATE Cable Connector Receptacle
Mates with SM-CCP
Dummy Connector: SM-DSP



CONNECTOR	A - LENGTH (INCHES)	B - Ø (INCHES)	C - Ø (INCHES)	D - I.D. (INCHES)
SMG-CCR-HOSE	4.75	1.25	1.400	3/8
SMK-CCR-HOSE	5.06	1.625	1.775	5/8
SML-CCR-HOSE	5.05	2.00	2.150	3/4
SMM-CCR-HOSE	5.29	2.375	2.525	1

SEA-MATE SERIES SM-CCR-R/A

SEA-MATE Cable Connector Receptacle Right Angle
Mates with SM-CCP
Dummy Connector: SM-DSP



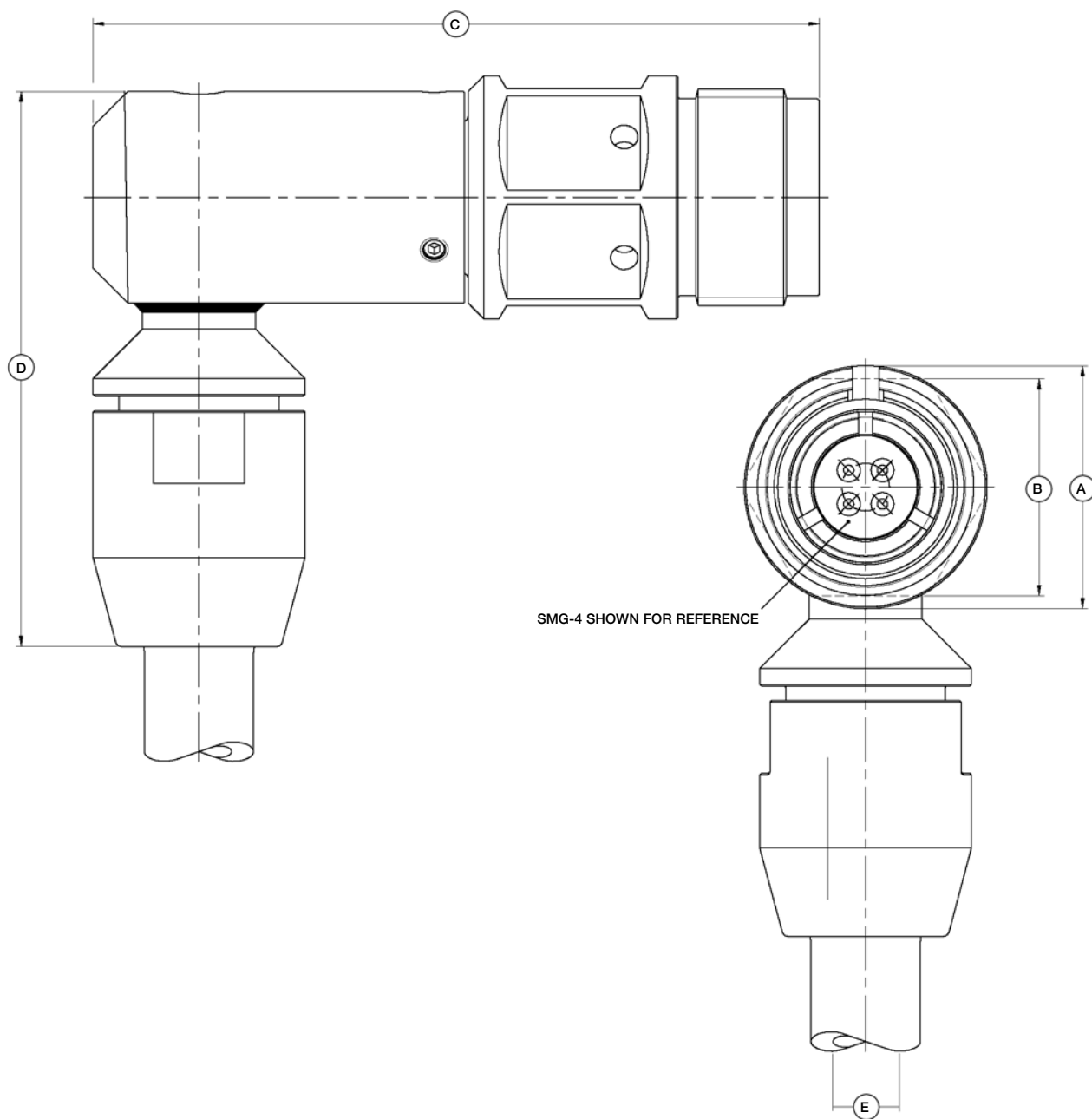
CONNECTOR	A - Ø (INCHES)	B - Ø (INCHES)	C - LENGTH (INCHES)	D - LENGTH (INCHES)
SMG-CCR-R/A	1.400	1.250	4.53	2.97
SMK-CCR-R/A	1.775	1.625	5.03	3.17
SML-CCR-R/A	2.150	2.000	5.15	3.99
SMM-CCR-R/A	2.525	2.375	5.28	4.87

NOTE:

Anixter cable as standard unless otherwise specified.

SEA-MATE SERIES SM-CCR-R/A-HOSE

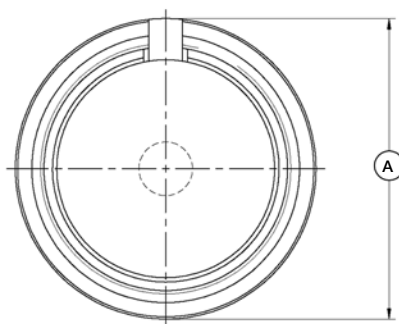
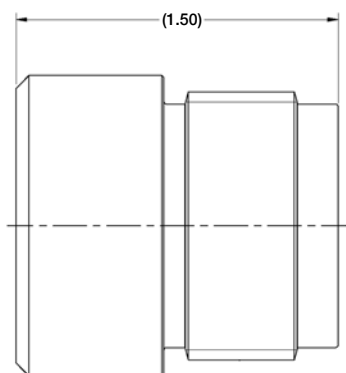
SEA-MATE Cable Connector Receptacle Right Angle
Mates with SM-CCP
Dummy Connector: SM-DSP



CONNECTOR	A - Ø (INCHES)	B - Ø (INCHES)	C - LENGTH (INCHES)	D - LENGTH (INCHES)	E - I.D. (INCHES)
SMG-CCR-R/A-HOSE	1.400	1.250	4.19	3.20	3/8
SMK-CCR-R/A-HOSE	1.775	1.625	4.48	3.98	5/8
SML-CCR-R/A-HOSE	2.150	2.000	4.67	4.39	3/4
SMM-CCR-R/A-HOSE	2.525	2.375	4.91	4.84	1

SEA-MATE SERIES SM-PSR

SEA-MATE Plastic Splashproof Receptacle
Mates with SM-CCP

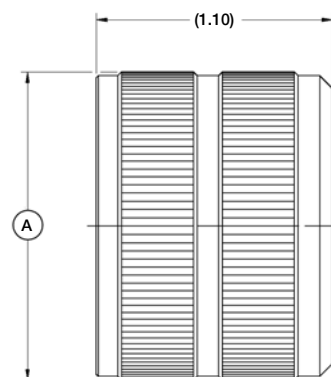
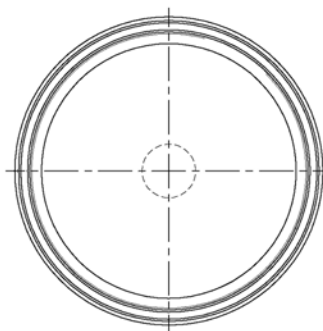


CONNECTOR	A - Ø
SMG-PSR	1.400
SMK-PSR	1.775
SML-PSR	2.150
SMM-PSR	2.525

SEA-MATE SERIES SM-PSP

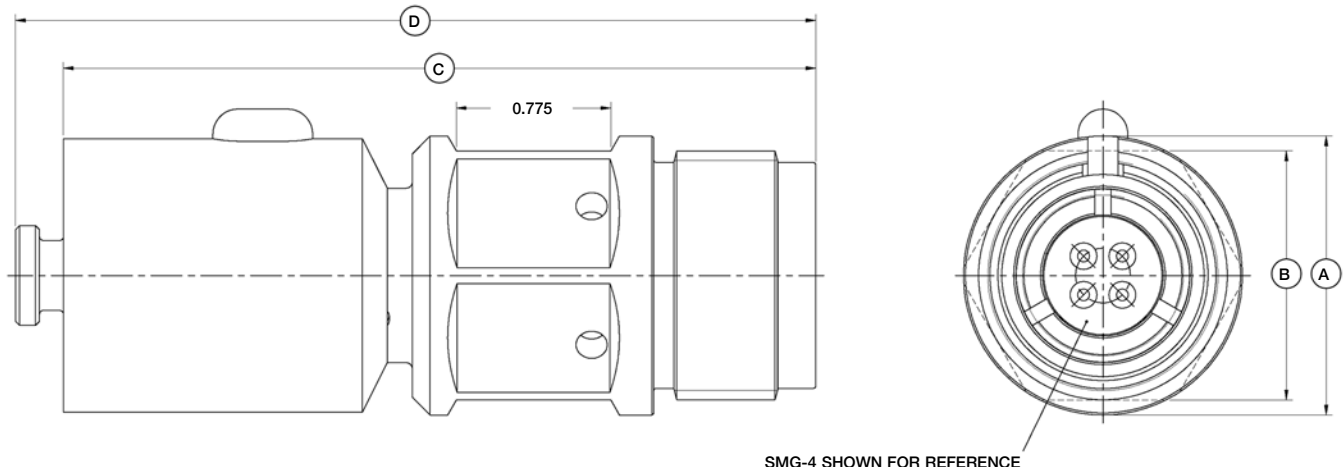
SEA-MATE Plastic Splashproof Plug
Mates with SM-BCR/FCR/CCR

CONNECTOR	A - Ø
SMG-PSP	1.435
SMK-PSP	1.810
SML-PSP	2.185
SMM-PSP	2.560



SEA-MATE SERIES SM-DSR

SEA-MATE Dummy Sealing Receptacle
Mates with SM-CCP

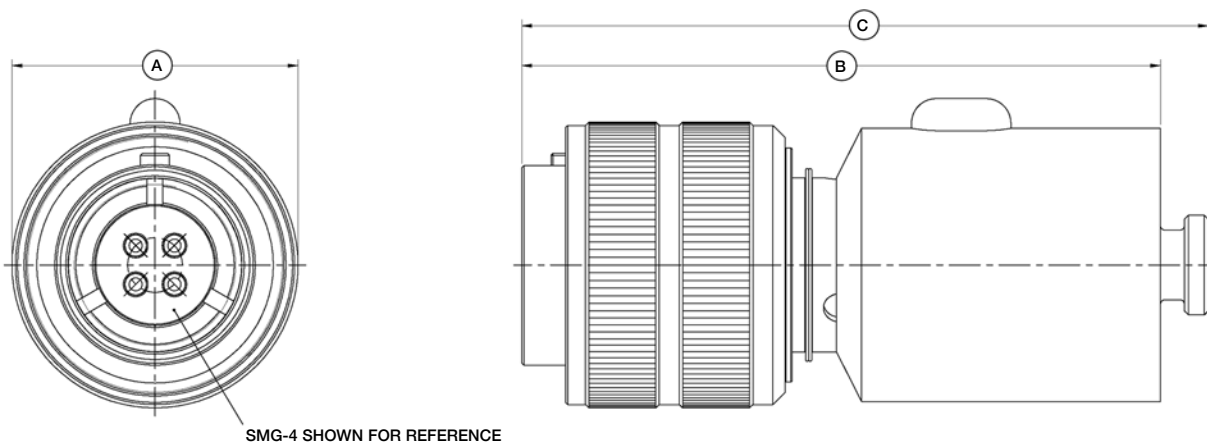


SMG-4 SHOWN FOR REFERENCE

CONNECTOR	A - Ø	B - LENGTH (INCHES)	C - LENGTH (INCHES)	D - LENGTH (INCHES)
SMG-DSR	1.400	1.25	3.78	4.02
SMK-DSR	1.775	1.625	3.78	4.02
SML-DSR	2.150	2.00	4.28	4.52
SMM-DSR	2.525	2.375	4.28	4.52

SEA-MATE SERIES SM-DSP

SEA-MATE Dummy Sealing Plug
Mates with SM-BCR/FCR/CCR

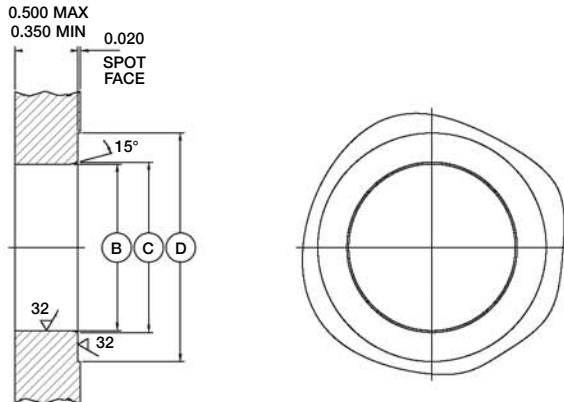


SMG-4 SHOWN FOR REFERENCE

CONNECTOR	A - Ø	B - LENGTH (INCHES)	C - LENGTH (INCHES)
SMG-DSP	1.435	3.20	3.44
SMK-DSP	1.810	3.22	3.46
SML-DSP	2.185	3.72	3.96
SMM-DSP	2.560	3.72	3.96

SEA-MATE SERIES SM-BCR

SEA-MATE Bulkhead Connector Receptacle
THROUGH BORE OPTION UTILIZING BACK NUT AND WASHER



BCR INTERFACE THROUGH BORE MOUNTING INFORMATION

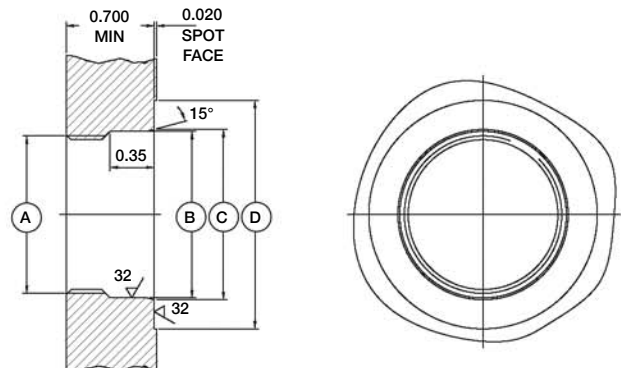
CONNECTOR	B - Ø	C - Ø	D - SPOTFACE Ø
SMG-BCR	0.947 0.949	0.978	1.440
SMK-BCR	1.322 1.324	1.353	1.815
SML-BCR	1.697 1.699	1.728	2.190
SMM-BCR	2.072 2.074	2.107	2.565

SEA-MATE SERIES SM-BCR

SEA-MATE Bulkhead Connector Receptacle
THREAD MOUNTING OPTION

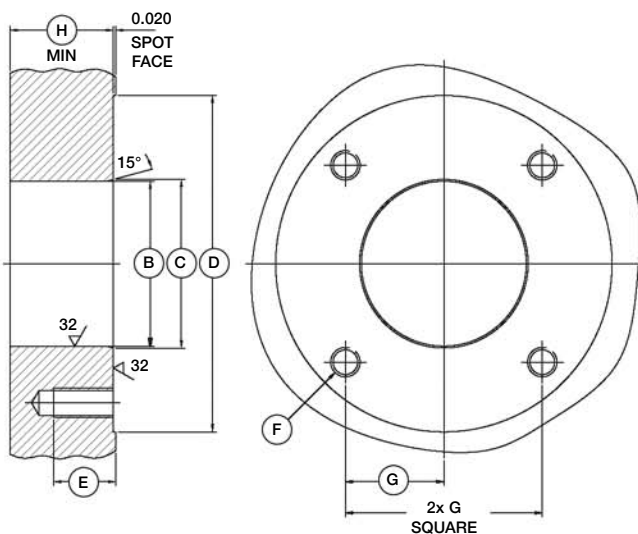
BCR INTERFACE THREAD MOUNTING INFORMATION

CONNECTOR	A - THREAD	B - Ø	C - Ø	D - Ø SPOT FACE
SMG-BCR	7/8-16 UN 2B	0.947 0.949	0.978	1.440
SMK-BCR	1 1/4-16 UN 2B	1.322 1.324	1.353	1.815
SML-BCR	1 5/8-16 UN 2B	1.697 1.699	1.728	2.190
SMM-BCR	2-16 UN 2B	2.072 2.074	2.107	2.565






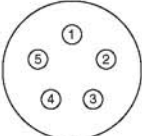
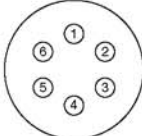
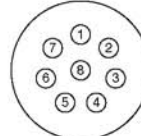
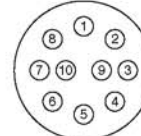
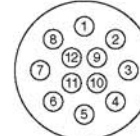
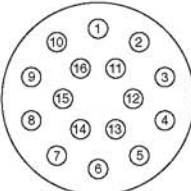
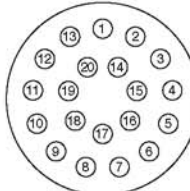
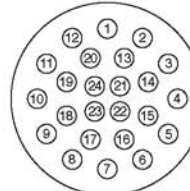
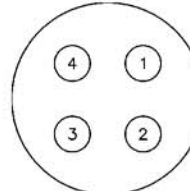
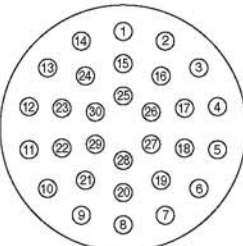
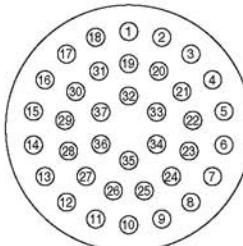
SEA-MATE SERIES SM-FCR

SEA-MATE Flange Connector Receptacle
THROUGH BORE OPTION



FCR INTERFACE MOUNTING INFORMATION

CONNECTOR	B - Ø	C - Ø	D - Ø SPOT FACE	E	F - THREAD	G	H
SMG-FCR	0.947 0.949	0.978	2.20	0.30	M5x0.8p	0.635	0.630
SMK-FCR	1.322 1.324	1.353	2.70	0.48	M6x1.0p	0.790	0.830
SML-FCR	1.697 1.699	1.728	3.25	0.48	M6x1.0p	0.975	0.830
SMM-FCR	2.072 2.074	2.107	3.71	0.64	M8x1.25p	1.100	0.990

SIZE	SEA-MATE SERIES CONTACT CONFIGURATIONS AVAILABLE (FEMALE FACE VIEW ONLY)*
G	   <p>SMG-2 SMG-3 SMG-4</p>
K	     <p>SMK-5 SMK-6 SMK-8 SMK-10 SMK-12</p>
L	    <p>SML-16 SML-20 SML-24 SML-4#8-HP**</p>
M	  <p>SMM-30 SMM-37</p>

* For male face view contact configurations available please contact SEACON.

** New high power version.

HANDLING PROCEDURES AND SPECIAL CAPABILITIES

SEACON (europe) LTD

Seacon House, Hewett Road, Gapton Hall Industrial Estate,
Great Yarmouth, Norfolk, NR31 0RB, UK.

TEL: +44 (0) 1493-652733

FAX: +44 (0) 1493-652840

E-Mail: sales@seaconeurope.com

Website: www.seaconeurope.com

SEACON

1700 Gillespie Way,
El Cajon, California 92020, USA.

TEL: +1 (619) 562-7071

FAX: +1 (619) 562-9706

E-Mail: seacon@seaconworldwide.com

Website: www.seaconworldwide.com

SEACON US GULF AREA SALES OFFICE

14511 Old Katy Road, Suite 300,
Houston, Texas 77079, USA.

TEL: +1 (281) 599-3509

FAX: +1 (281) 599-3517

E-Mail: gulfcoastsales@seaconworldwide.com

Website: www.seaconworldwide.com

SEACON ADVANCED PRODUCTS, LLC

1321 Nelius Road, P.O. Box 767,
Bellville, Texas 77418, USA.

TEL: +1 (979) 865-8846

FAX: +1 (979) 865-8859

E-Mail: sales@seacon-ap.com

Website: www.seacon-ap.com

SEACON BRAZIL

Rua Conde de Bonfim 120 sala 212, Tijuca,
Rio de Janeiro, Brazil, CEP: 20520-053.

TEL: +55 (11) 2103-6262

CELL: +55 (21) 9-7626-6062

E-mail: adalberto.bromberg@te.com

Website: www.seaconworldwide.com

SEACON GLOBAL PRODUCTION

Callejon Terrazos #8, Local 2-C, Las Brisas 1ra. Seccion,
Tijuana, B.C., Mexico C.P. 22610.

TEL: +52 (664) 626-2726

FAX: +52 (664) 686-8922

E-Mail: sales@seaconglobal.com

Website: www.seaconglobal.com

Dial from U.S.A. TEL: +1 (619) 308-7901

TOLL FREE: (888) 562-7072

FAX: +1 (619) 308-7900

SEACON PHOENIX

15 Gray Lane, Suite 108, Hopkinton Industrial Park,
Ashaway, Rhode Island 02804, USA.

TEL: +1 (401) 637-4952

FAX: +1 (401) 637-4953

E-Mail: sales@seaconphoenixllc.com

Website: www.seaconphoenix.com

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

INSTALLATION PROCEDURES

- Ensure the bulkhead interface is machined in accordance with the manufacturer's recommendations and free from contaminants prior to fitting of the connector.
- Ensure the plug and receptacle connectors are free from contaminants prior to fitting.
- Apply a thin film of silicone compound (e.g. DC-4) to the bulkhead receptacle connector 'o' seal prior to fitting.
- Apply a thin film of silicone compound (e.g. DC-4) to the plug front face seal prior to assembly with the receptacle connector

CARE AND MAINTENANCE

Once mated, the SEA-MATE connector requires no maintenance. When stored, the connector should be protected with suitable dust caps.

CABLE AND CONTINUITY PRESERVATION

Avoid sharp bends in cables. Cables subjected to vibration or exposed to seawater drag should be adequately clamped to prevent conductor fatigue infringing cable minimum bend radius and ultimate failure.

SPECIAL ASSEMBLIES

SEACON (europe) Ltd maintains all facilities necessary to furnish complete underwater and environmental electrical connector/cable systems, including Research & 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 CUSTOMISED 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 SEACON standard sales order form. In addition, SEACON 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.

© 2014 SEACON
ALL RIGHTS RESERVED

