

SEACON®

UNDERWATER ELECTRICAL AND FIBER OPTIC CONNECTORS



PENETRATORS

UNDERWATER ELECTRICAL AND OPTICAL PENETRATORS

INTRODUCTION

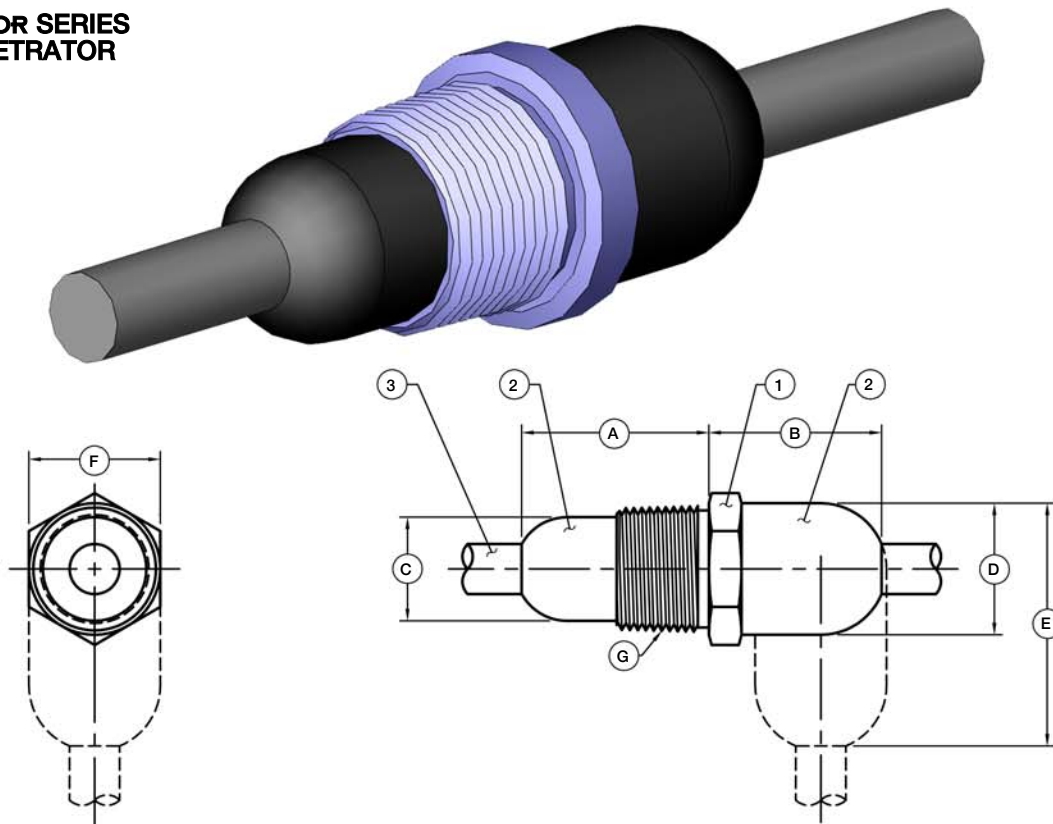
Penetrators are used in applications in which a waterproof seal needs to be made between a cable and a pressure vessel. This is often accomplished using a connector set, but if there is no requirement to separate the cable from the equipment, a penetrator may be used. A penetrator generally has fewer seals and may be physically smaller than a connector pair but hard wiring the cable to the equipment may make it less flexible in use than a connector.

We have designed and sold many penetrator products over the years. Those shown on these pages are the current standards. We may be able to provide earlier designs if necessary, but please consider those shown here.

In addition to those shown, we make many custom penetrators based on parameters supplied to us by our customers. If you do not find something that fits your requirements, please contact SEA CON® and we can assist you by recommending an existing design or developing a new one.

DIMENSION DETAILS

PENETRATOR SERIES NPT PENETRATOR



ITEM:

- 1 - NPT PENETRATOR - 316 Stainless Steel.
- 2 - NEOPRENE MOLDING (POLYURETHANE OPTIONAL).
- 3 - CABLE.

PENETRATOR SIZE	A - (INCHES)	B - (INCHES)	C - Ø (INCHES)	D - Ø (INCHES)	E - (INCHES)	F - HEX (INCHES)	G - NPT
1" NPT	1.95	1.80	1.08	1.37	2.8	1.37	1-11 1/2
3/4" NPT	1.70	1.80	0.87	0.93	2.5	1.06	3/4-14
1/2" NPT	1.50	1.80	0.62	0.82	2.0	0.87	1/2-14

NOTES:

- Tin plated contact leads per MIL-T-10727, Type 1, and Fused.
- Hermetic Seal must withstand 10,000 psi test Hydrostatic Pressure.
- Test voltage 800 VAC for 3 seconds minimum without breakdown.
- Maximum contact configuration: 8 PIN.

DIMENSION DETAILS

NOTES:

1. MATERIAL: 316 SST PER MSBA-002.
2. MATERIAL: NITRILE PER MSBA-028.
3. MATERIAL: GRE PER MSBA-034
4. MATERIAL: 15-7 PH PER MSBA-007.
5. MATERIAL: NEOPRENE PER MSBA-027.
6. MATERIAL: WHITE EPOXY PER MSBA-033.
7. MATERIAL: COPPER & ALLOY PER MSBA-080.
8. REFERENCE TABLE FOR CONTACT CONFIGURATIONS.
9. TORQUE RATING: 125 IN LBS.
10. (DELETED).

DATE: 16AUG06
APPROVED: A NGUYEN
REVISED: 060921
BY: KMN

ZONE	REV	ECD NO.	DESCRIPTION	DATE	APPROVED
A	17563		REV NOTES & ADDED NOTE 10.	16AUG06	A NGUYEN
B	17638		REV TABLE	060921	KMN
C	17653		ADD MORE INFORMATION TO TABLE		

SECTION A-A

AR	DESCRIPTION	MAXIMUM HYDROSTATIC TEST PRESSURE	MAXIMUM NITROGEN TEST PRESSURE
11	NEOPRENE CABLE TYPE AND LENGTH TO BE SPECIFIED BY CUSTOMER		
10	OVERMOLD		
9	RETAINING RING, INVERTED EXTERNAL SERIES; TRUARC		
8	ANTI-CATHODIC DELAMINATION RING		
7	O-RING		
6	O-RING		
5	1-14 PENETRATOR INSERT		
4	O-RING		
3	1-14 PENETRATOR SHELL		
2	EPOXY POTTING		
1	CABLE TYPE AND LENGTH TO BE SPECIFIED BY CUSTOMER		

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ITEM	QTY	PSM NO.	PART OR IDENTIFYING NO.	MATERIAL SPECIFICATION
11	AR			
10	AR			
9	1	79136	5108-106-H	
8	1	15789	7331-400	
7	1	02697	2-024	
6	1	02697	2-020	
5	1	15789	7331-275	
4	1	02697	2-123	
3	1	15789	7331-234	
2	AR			
1	AR			

PARTS LIST		SEACON	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	FRAC TIONS SHALL BE IN 16ths	DATE	970829
TOLERANCES ARE:	±.010	DRAWN	JEB/AF
±.015	±.005	ENGR	K.M.N
±.020	±.000	DESIGN	970902
±.030	±.000	BY	
±.040	±.000	CHK	
±.050	±.000	APP	
±.060	±.000	CON	
±.070	±.000	FIN	
±.080	±.000	FIN	

DESCRIPTION	PART NO.
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ORIGINAL JOB NO.	7093-112
DATE	970829
DRAWN	JEB/AF
ENGR	K.M.N
DESIGN	970902
BY	
CHK	
APP	
CON	
FIN	
FIN	

DO NOT SCALE DRAWING	SCALE 1/1
THIRD ANGLE PROJECTION	

SEACON	BRANTNER & ASSOCIATES, INC.
15789	1-14 PENETRATOR & ASSY
7093-112	
15789	

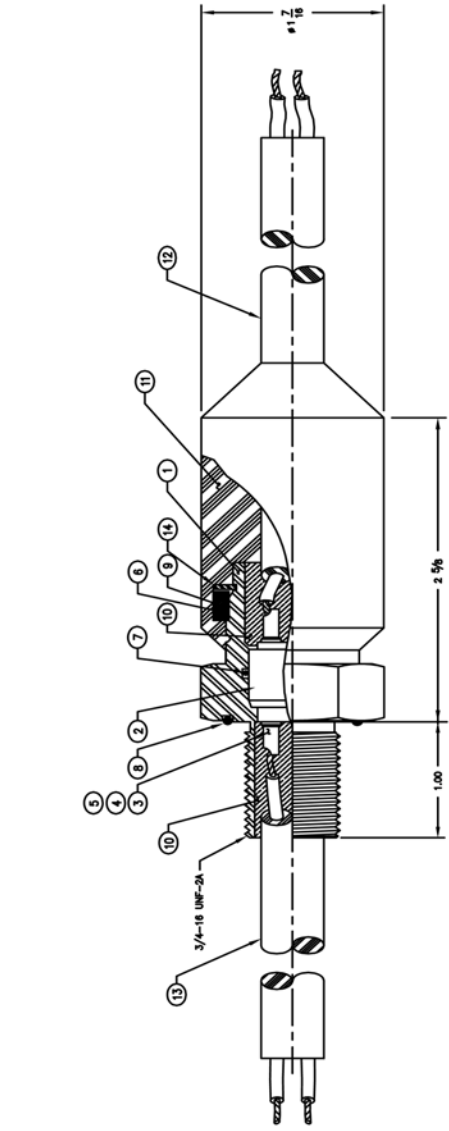
SHEET 1 OF 1

DIMENSION DETAILS

1 3 4 5 6 7 8

ZONE	REV.	REV. NO.	DESCRIPTION	DATE	APPROVED
A	10230	REV DWG, NOTES & PARTS LIST		970822	KUAN
B-3	B	10383	REV PARTS LIST		

NOTES:
 ▲ MATERIAL: 316 STAINLESS STEEL PER QQ-S-783.
 ▲ MATERIAL: GLASS REINFORCED EPOXY PER B/A XS-2746.
 ▲ MATERIAL: COPPER ALLOY AND GOLD PLATED PER ML-C-45204.
 ▲ MATERIAL: BUNA-N-70 DURO.
 ▲ DELETED.
 ▲ WHITE EPOXY PER B/A 6373.
 ▲ NEOPRENE PER B/A X-8727.
 ▲ REFERENCE TABLE FOR CONTACT CONFIGURATIONS.
 ▲ MATERIAL: PH 15-7 MO. OR EQUIVALENT STAINLESS STEEL.



SECTION A-A

PART NO.	NO. OF CONTACTS	CONTACT GAUGE
7093-108-2	2	14 AWG
7093-108-3	3	14 AWG
7093-108-6	6	16 AWG
7093-108-8	8	20 AWG
7093-108-10	10	20 AWG

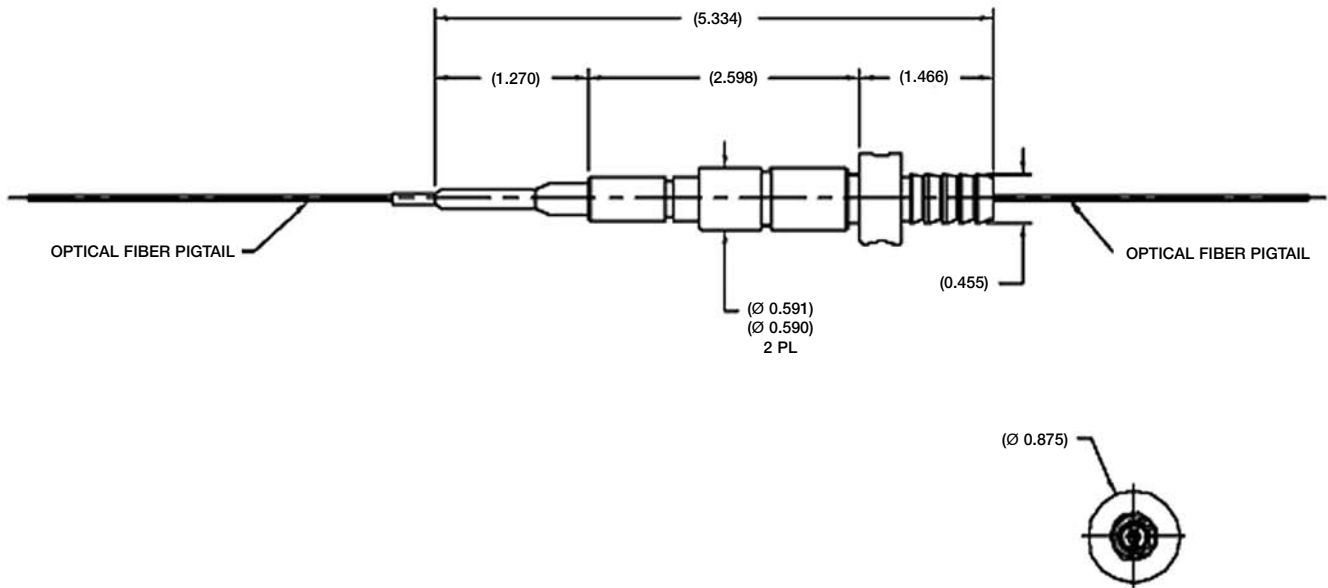
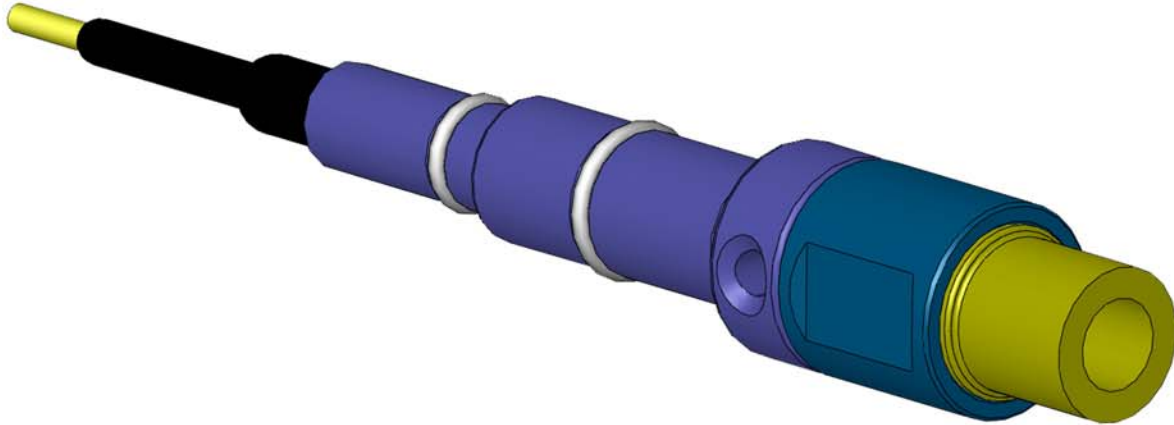
ITEM NO.	QTY	UNIT	DESCRIPTION	REVISION
14	1		5108-03H RETAINING RING	▲
13	AR		CABLE TYPE AND LENGTH TO BE SPECIFIED BY CUSTOMER	▲
12	AR		NEOPRENE CABLE TYPE AND LENGTH TO BE SPECIFIED BY CUSTOMER	▲
11	AR		NEOPRENE MOLING	▲
10	AR		EPOXY POTTING	▲
9	1		2-022 O-RING	▲
8	1		2-021 O-RING	▲
7	1		2-017 O-RING	▲
6	1		7093-600 ANTI-CATHODIC DELAMINATION RING	▲
5			DELETED	▲
4			DELETED	▲
3			DELETED	▲
2	1		15798 7093-275 3/4-16 PENETRATOR INSERT	▲
1	1		15798 7093-254 3/4-16 PENETRATOR SHELL	▲

SEACON CONTRACT NO.		CONTRACT NO.	
BRANTNER & ASSOCIATES, INC. MAIN PLANT 1240 MERRON WAY EL CAJON, CALIF. 92020		BRANTNER & ASSOCIATES, INC. MAIN PLANT 1240 MERRON WAY EL CAJON, CALIF. 92020	
APPROVALS T. TRAN CHECKED: K. NORTHUP DRAWN: T. TRAN DATE: 9-40-119		APPROVALS DATE: 9-40-119	
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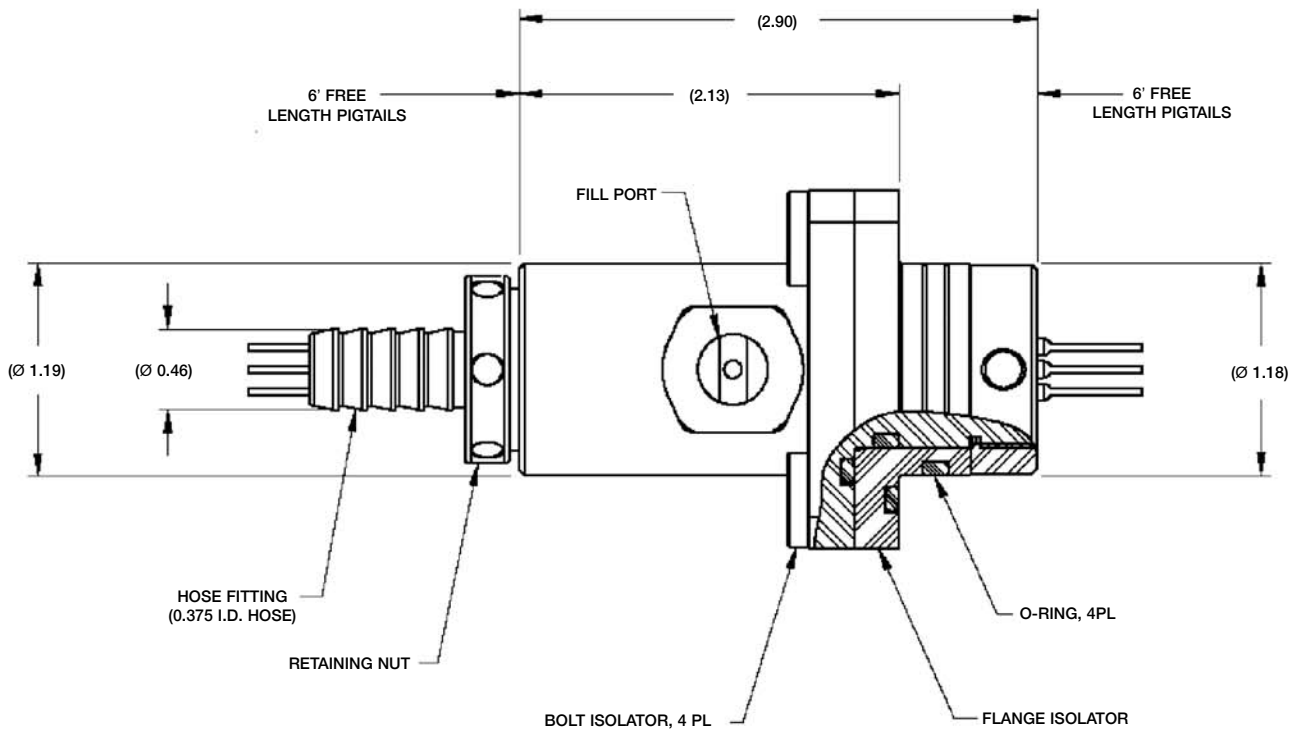
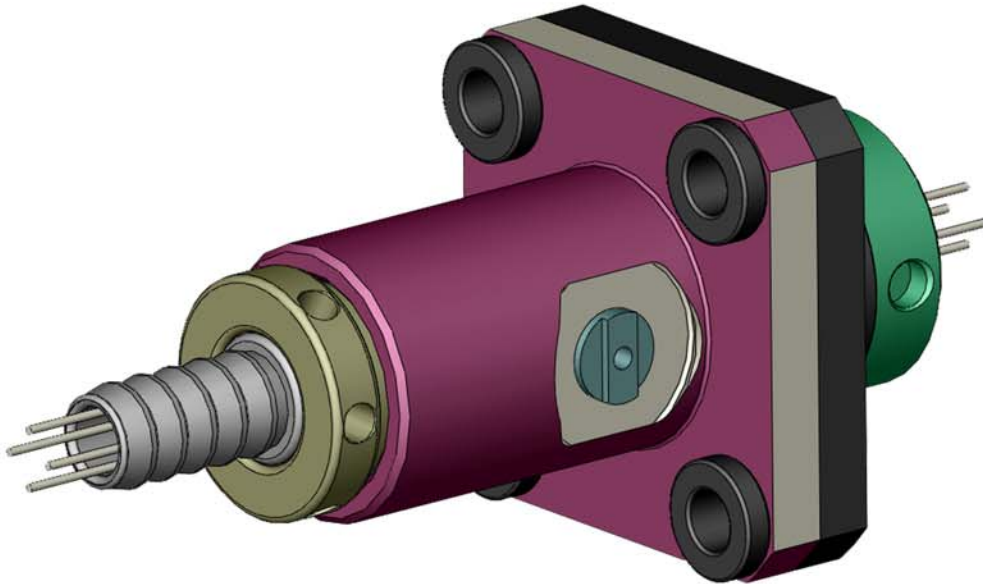
DIMENSION DETAILS

PENETRATOR SERIES FIBER OPTIC SINGLE PENETRATOR



DIMENSION DETAILS

PENETRATOR SERIES FIBER OPTIC FOUR CHANNEL PENETRATOR



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SPECIAL ASSEMBLIES

SEA CON® maintains all facilities necessary to furnish complete under-water 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 CUSTOMISED CONNECTORS AND CABLE ASSEMBLIES** to suit your individual needs.

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