

10K PSI OPEN-FACE SeaKing[™] 700 Dry-Mate Underwater Connectors

10K PSI / 700 Bar / 7000m open-face or mated, dual O-ring equipped, high-density, high-voltage, fiber optic and hybrid electrical/optical subsea connectors

SeaKing is an innovative underwater connector series that eliminates a broad range of mechanical design weaknesses found in many of today's high-pressure subsea connector families. From its double O-ring seals and retractable engaging nut, to its multi-keyed mating interface, the SeaKing underwater connector represents a far more reliable approach to subsea power and signal connectivity.

Ideally suited for deep water offshore oil & gas, military/defense, oceanographic research, and other harsh-environment subsea applications, the dry-mate connector series is built for optimal durability and reliability. Tested to 15,000 PSI (open face and mated), and equipped with integrated dual O-ring seals, marine bronze coupling nuts, corrosion-resistant stainless steel shells and high-pressure contact inserts with gold-plated signal contacts, special RF and fiber optic solutions, the Series 700 SeaKing is today's most advanced high-density signal and standard-density power underwater connector.

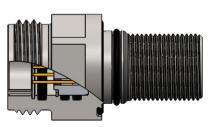
SeaKing

- High density, small formfactor connector
- Dual O-ring seals ensure high-pressure performance for every leak path
- Signal, power, RF and optical insert arrangements
- Stainless steel with anti-galling marine bronze engaging nut, or cathodic delaminationfree PEEK
- Full-mate inspection ports
- Easy O-ring replacement
- Key and keyway polarization

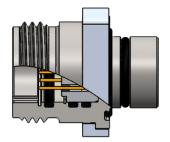
STANDARD CONFIGURATIONS



Cable Connector Plug (CCP)



Bulkhead Connector Receptacle (BCR)



Flange Connector Receptacle (FCR)

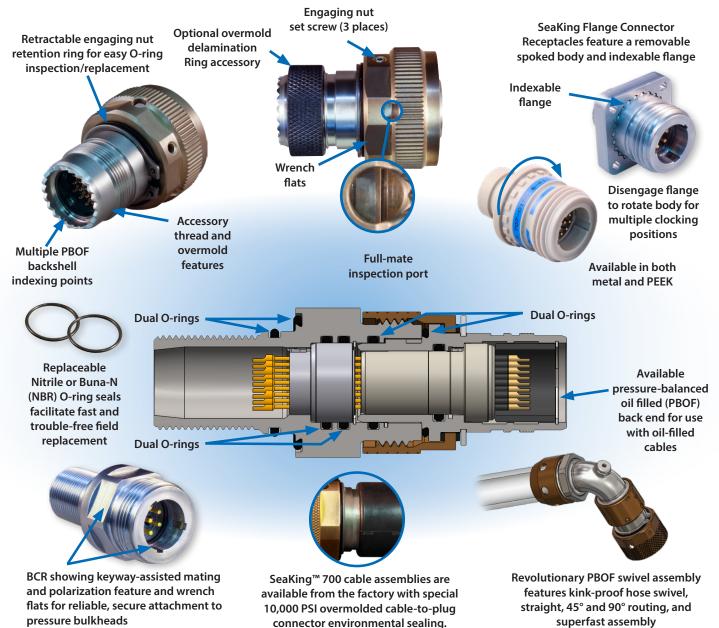
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Sealing: SeaKing 700 is the best-sealed subsea connector on the market. All critical interfaces, including bulkhead seals, glass-to-metal insert seals, mating interface bore seals, and face seals are fully redundant ensuring 10K PSI protection, even in the event of a single-seal failure.

Mating: SeaKing utilizes a modified UNC (coarse) mating interface with added clearance to reduce bio-fouling and facilitate rapid-advance mating. The marine bronze coupler on the plug is equipped with thread flats as well as knurling and is less susceptible to galling than standard steel engaging nuts. Polarized keys and keyways prevent both thread damage and mismating.

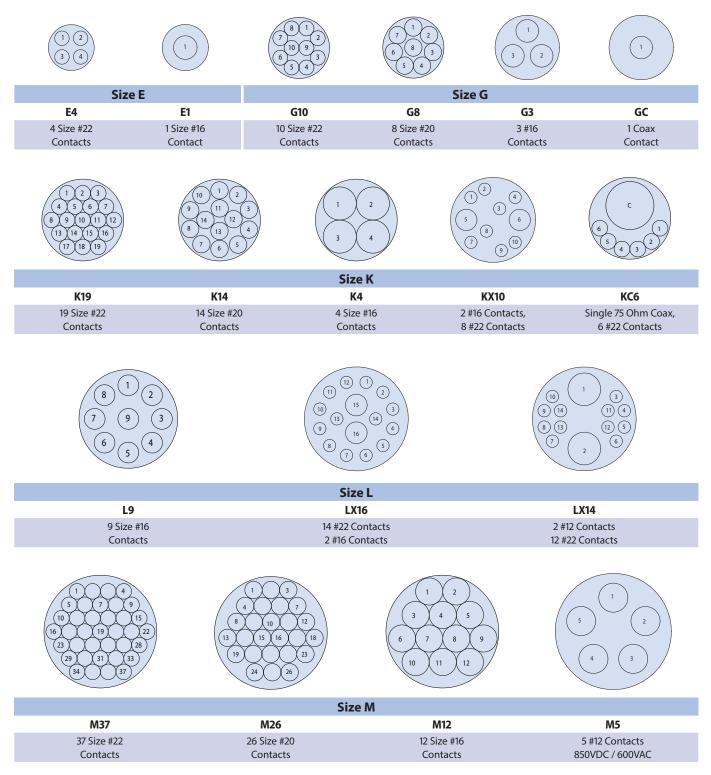
Ease-of-Use: Multiple PBOF backshell indexing points, indexable flange FCRs, full-mate inspection ports, retractable engaging nuts, and other features make SeaKing the most user-friendly subsea connector on the market.





Contact arrangements and specifications

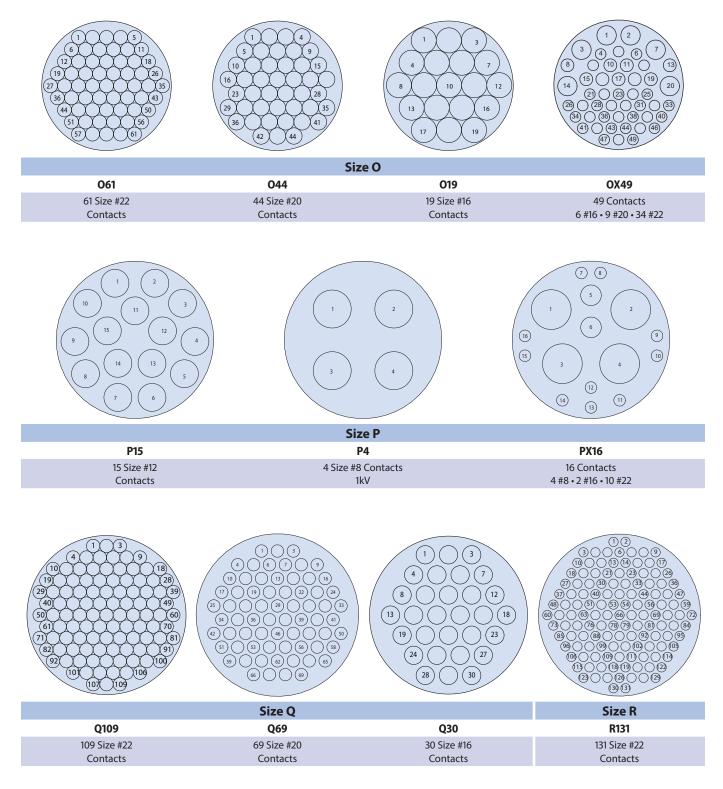
SEAKING[™] CONTACT ARRANGEMENTS Mating face view of pin insert (socket insert IDs are reversed)





Contact arrangements and specifications

Consult factory for custom insert arrangements including a wide range of shielded RF microwave and high frequency contact configurations

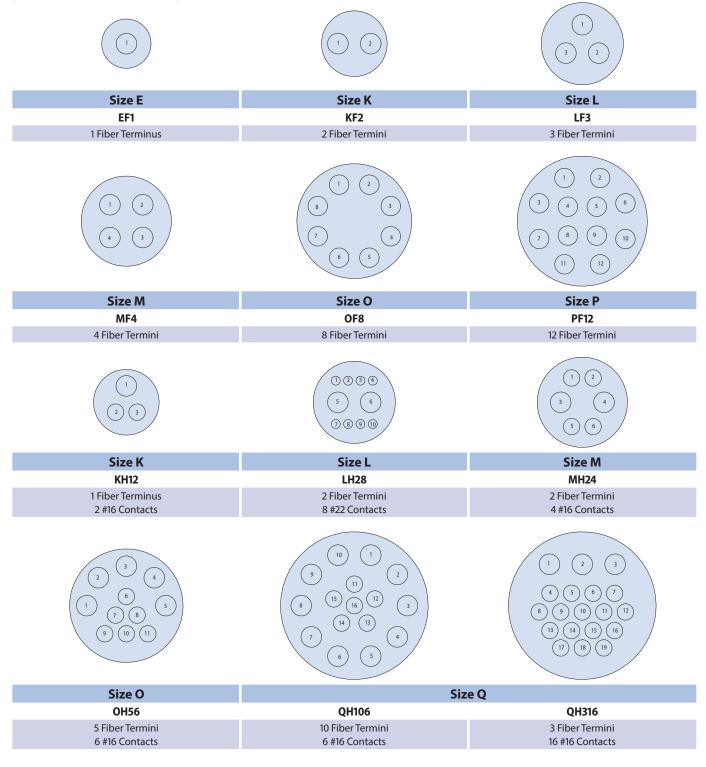


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Contact arrangements and specifications

SEAKING™ FIBER OPTIC AND HYBRID FIBER-ELECTRICAL ARRANGEMENTS Mating face view of pin insert (socket insert IDs are reversed)



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Contact arrangements and specifications

Consult factory for custom insert arrangements including a wide range of shielded RF microwave and high frequency contact configurations

All high-density signal and standarddensity power contact arrangements are available across the complete range of connector styles (CCP, FCR, and BCR). High-speed Ethernet inserts as well as Pressure Balanced Oil Filled (PBOF) configurations and a purpose-designed family of pressure caps, accessories and backshells are also available, please consult the factory.

SeaKing[™] bulkhead connector receptacles (BCR) and flange connector receptacles (FCR) are equipped with highpressure glass-to-metal sealed inserts with solder contact wire termination and 10K PSI open-face rating. Cable connector plugs (CCP) utilize environmental O-ring sealed inserts and are rated to 10K PSI in the mated condition.

	Contact Arrangement Table										
Shell		Contact Size									
Size	#22	#20	#16	#12	#8	Fiber Optic	Hybrid				
E	4		1			1					
G	10	8	3				1 Coax (only)				
к	19	14	4			2	1 Coax • 6 #22 8 #22 • 2 #16 1 F/O • 2 #16				
L			9			3	12 #22 • 2 #12 8 #22 • 2 #16 2 F/O • 8 #22				
М	37	26	12	5		4	2 F/O • 4 #16				
0	61	44	19			8	6 #16 • 9 #20 • 34 #22 5 F/O • 6 #16				
Р				15	4 (1kV)	12	4 #8 • 2 #16 • 10 #22				
Q	109	69	30				10 F/O • 6 #16 3 F/O • 16 #16				
R	131										

Current Rating (Amps)								
Contact Size	GRE Molded Inserts	Glass-to-Metal Sealed Inserts						
#22 5 Amps 3 Amps								
#20 7.5 Amps 5 Amps								
#16	13 Amps	10 Amps						
#12	23 Amps	17 Amps						
#8 50 Amps 35 Amps								
All contact arrangements are rated for 600 VDC / 400 VAC unless otherwise specified.								

Solder cups are sized to accept maximum wire gauge according to the contact size

	SeaKing [™] Performance Specifications								
Pressure Rating	Plug: 10,000 PSI, mated condition Receptacles: 10,000 PSI mated and open face	per ISO 13628-6							
Electrical	600 V typical 5 GOhm insulation resistance at 500 VDC	per MIL-STD-202, Method 301 per MIL-STD-202, Method 302							
Materials	Salt Spray (corrosion) Humidity (steady state) Thermal Cycle	MIL-STD-202, Method 101 MIL-STD-202, Method 103 ISO 13628-6							



Series 700 10K PSI / 700 BAR / 7000 M SeaKing™ High-Pressure Underwater Connectors, Cables, and PBOF Assemblies



700 Series connectors CCP, FCR and BCR



700-001 CABLE CONNECTOR PLUG (CCP) WITH SOLDER CUP TERMINATION



700-006 GLASS-TO-METAL SEAL OR 700-026 GLASS REINFORCED EPOXY, FLANGE CONNECTOR RECEPTACLE (FCR) WITH SOLDER CUP TERMINATION

	SeaKing - How To Order						
Sample Part Number		700	-001	-K19	-Z1	S	N
Product Series	700 = S	SeaKing™					
Shell Style		001 = cable connector plug (CCP)					
Shell Size-Insert Arrangement	(See pa	(See page 8 – 10)					
Shell Material		Z1 = 316 stainless steel TC = titanium					
Contact Style	S = socket						
Polarization	A, B, C, N = normal (see sales drawing for details)						

	SeaKing - How To Order						
Sample Part Nu	mber	700	-006	-019	- Z 1	Р	N
Product Series	700 =	SeaKing™					
Shell Style	conne (FCR) 026 =	026 = GRE flange connector receptacle					
Shell Size-Insert Arrangement	(See p	(See page 8 – 10)					
Shell Material	Z1 = 316 stainless steel TC = titanium						
Contact Style	P = Pin						
Polarization	A, B, C, N = normal (see sales drawing for details)						



700-007 GLASS-TO-METAL SEAL OR 700-027 GLASS REINFORCED EPOXY, BULKHEAD CONNECTOR RECEPTACLE (BCR) WITH SOLDER CUP TERMINATION

	SeaKing - How To Order						
Sample Part Number	700	-007	-K19	-Z1	Р	N	
Product Series	700 = SeaKing™						
Shell Style	connector rece (BCR) 027 = GRE bulk	007 = GTMS bulkhead connector receptacle (BCR) 027 = GRE bulkhead connector receptacle					
Shell Size-Insert Arrangement	(See page 8 – 1	(See page 8 – 10)					
Shell Material	Z1 = 316 stainless steel TC = titanium						
Contact Style	P = pin						
Polarization	A , B , C , N = nor	mal (see	e sales d	rawing f	or detai	ls)	

700-010 BULKHEAD CONNECTOR FEED-THRU (BCF), INCONEL INSERT, 10K PSI OPEN FACE RATED

	SeaKing - How To Order							
Sample Part Number	700-010	-M12	-Z1	Р	N	Ρ	N	-2
Product Series	700-010 = SeaKing [™] bulkhead connector feed-thru (BCF)							
Shell Size- Insert Arrangement	(See page 8 – 10))						
Shell Material	Z1 = 316 stainle TC = titanium	ss steel						
Side A, Contact Type	$\mathbf{P} = pin$ $\mathbf{S} = so$	ocket		-				
Side A, Polarization	A , B , C , N = norr (see polarizatior		ogs. 6-	7)				
Side B, Contact Type	P = pin S = socket							
Side B, Polarization	A , B , C , N = normal (see sales drawing for details)							
Bulkhead Thickness	1 = 1.00 - 1.50 4 = 2.50 - 3.00			-				_

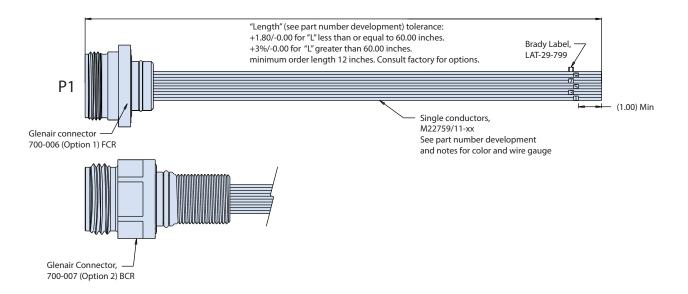




Single-ended connector receptacle pigtail assembly

7071-0012 FLANGE OR BULKHEAD CONNECTOR RECEPTACLE PIGTAIL ASSEMBLY

		SeaKing - How To	Order					
Sample Part Num	ıber	7071-0012	-1	M12	-Z1	-12	Α	N
Product Series	7071-0012 = SeaKing [™]							
Percente de Stule	1 = 700-006 (GTMS FCR)	2 = 700-007 (GTMS BCR)	-					
Receptacle Style	3 = 700-026 (GRE FCR)	3 = 700-026 (GRE FCR) 4 = 700-027 (GRE BCR)						
Insert Arrangement	(See page 8 – 10)							
Material/Finish	Z1 = 316 stainless steel TC =	titanium K = glass-reinforced	PEEK					
Cable Length In inches								
Wine Colonian	A = all white							
wire Coloring	Wire Coloring B = 10 color repeating; IAW MIL-STD-681							
Polarization	A, B, C, N = normal (see sales of	drawing for details)						-



Alternate Key Positions					
	Key Rotation				
Key Position	A°	B°			
Normal (N)	150°	210°			
A	75°	210°			
В	95°	230°			
с	140°	275°			

NOTES

- 100% electrically tested for shorts, dielectric withstanding voltage (500Vac 5 seconds max) and insulation resistance (conductor to conductor and conductor to shell at 500Vdc/200 megohms min. (IAW-STD-202, Method 302)
- 2. Quantity and gauge of conductors determined by insert arrangement. All cavities to be populated with largest gauge wire.
- 3. All solder cup cavities are isolated with M23053/8 heat shrink tubing.



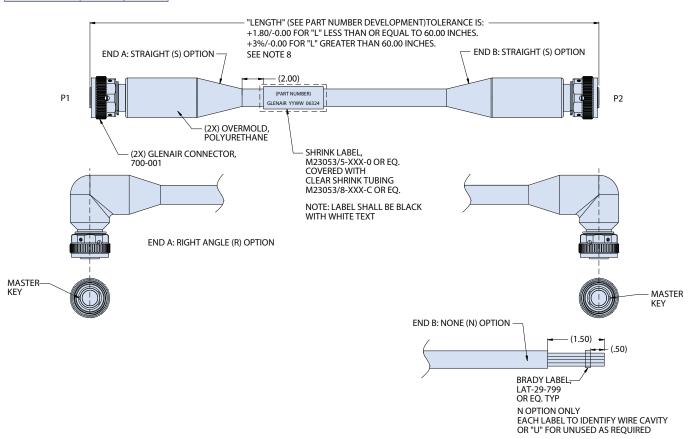


Single ended or back-to-back, overmolded cable

	SeaKi	ng - How To Ordei							
Sample Part Number		7071-0007	- S	R	Z1	-K19	N	-24	11
Series	7071-0007 = SeaKing [™] cable connector plug (CCP) assembly								
P1	R = right angle S = straight	R = right angle S = straight							
P2	R = right angle N =none S = straight	R = right angle N=none S = straight							
Shell Material/Finish	Z1 = 316 stainless steel TC = titanium	<pre>< = glass-reinforcec</pre>	I PEEK						
Insert Arrangement	(See page 8 – 10)					-			
Polarization A, B, C, N = normal (see sales drawing for details)									
Cable Length In inches									
Cap Options	Cap Options 10, 11, 20, 21; omit for none								

Alternate Key Positions					
	Key Rotation				
Key Position	A°	B°			
Normal (N)	150°	210°			
Α	75°	210°			
В	95°	230°			
С	140°	275°			

	Cap Options
Sym	Description
10	Protective cap, no lanyard
11	Protective cap, with lanyard
20	Pressure cap, no lanyard
21	Pressure cap, with lanyard





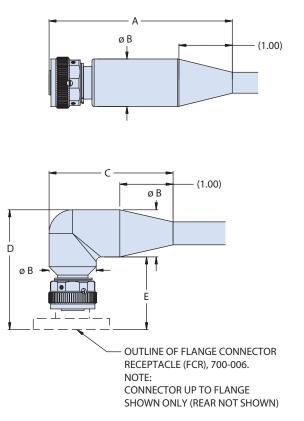


Single ended or back-to-back, overmolded cable

SIZE	Α	В	С	D	E
E	4.55	0.765	2.88	2.93	2.165
G	4.55	0.875	2.94	3.11	2.235
K	4.55	1.00	3.00	3.16	2.105
L	4.55	1.125	3.00	3.29	2.165
М	5.05	1.250	3.38	3.43	2.18
0	5.05	1.500	3.5	3.55	2.05
Р	5.05	1.625	3.68	3.75	2.125
Q	5.05	1.750	3.88	3.93	2.18
R	5.05	1.875	3.94	3.99	2.115

NOTES

- 100% electrically tested for shorts, dielectric withstanding voltage (at 500Vac 5 seconds max) and insulation resistance (conductor to conductor and conductor to shell) at 500Vdc/200 megohms min. IAW MIL-STD-202, Method 302).
- 2. Unit pack: 1 ea. In poly bag, heat-sealed. Include dust cap. Tag and bag per illustration.
- 3. Max pressure rating 10000 PSI.
- 4. For connector dimensions, materials, finishes, refer to drawing 700-001.
- For insert arrangements refer to drawing 709-099 contact manufacturer for builds with combo insert arrangements.
- 6. Double ended cordsets are wired one to one (ex. pin 1 to pin 1, 2 to 2 etc).
- 7. Quantity and gauge of conductos determined by insert arrangement. All cavities to be pupulated with largest gauge wire.
- Marker label, M23053/5 or equivalent. Covered with clear tubing M@3053/18 or equivalent tubing shall be white with black text.
- Single conductors shall be identified with cavity indentifier or "U" for unused marker label, M23053/ 5 or equivalent convered with clear tubing M23053/18 or equivalent tubing shall be white with text.
- 10. Minimum order length is 24.00 inches. Consult fatory for orders longer 1200 inches (100ft)
- 11. All configurations are wired one to one.
- 12. Pressure rated cable. Polyurethane jacket wire AWG shall be per contact size.

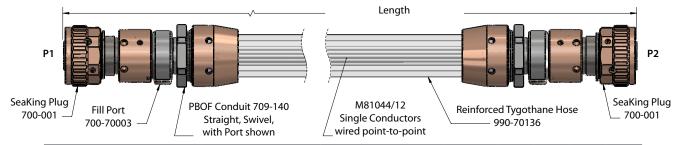




10K PSI OPEN-FACE SeaKing[™] PBOF

Wired and connectorized PBOF assemblies, fittings, and accessories

WIRED / CONNECTORIZED PBOF CONDUIT ASSEMBLIES



SeaKing PBOF Wired Assembly - How To Order									
Sample Part Number	7071-0348	-K19	-L1S	-L1S	-N	-xxx			
Base Part Number	7071-0348 = SeaKing™ P	7071-0348 = SeaKing [™] PBOF wired assembly							
Insert Arrangement P1 and P2		G10, G8, K19, K14, K4, KC6, L9, M37, M26, M12, O61, OX49, Q109, Q30, R131 (see catalog or dwg 709-099 f							
	Angle Option	Fill Port	Swivel/Fi	xed]				
End Configuration P1	$L = Straight$ $M = 45^{\circ}$ $N = 90^{\circ}$	1 = Yes 0 = No		S = Swivel F = Fixed					
	Angle Option Fill Port S		Sv	Swivel/Fixed					
End Configuration P2	$L = Straight$ $M = 45^{\circ}$ $N = 90^{\circ}$	$M = 45^{\circ}$ $0 = No$ $F = Fixed$							
	Key Position	A°		B°]		
	N	150°		210°]		
Key Orientation	Α	75°		210°					
	В	95°		230°					
	С	140°		275°			J		
Cable Length	in Inches								

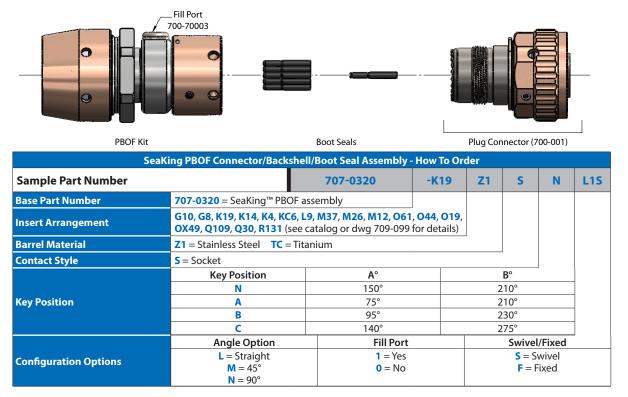


<u>SERIES 700 10K PSI / 700 BAR / 7000 M</u> SeaKing™ High-Pressure Underwater Glenair. **PBOF Assemblies, Fittings, and Accessories**

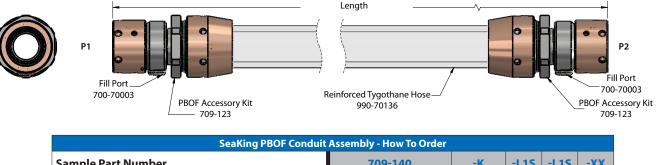


Boot seal assembly and unwired PBOF conduit

CONNECTOR / BACKSHELL / BOOT SEAL ASSEMBLY



UNWIRED PBOF CONDUIT ASSEMBLIES



	Jeaking PDOF Condu	Assembly - How TO OF	uei				
Sample Part Number	709-140		-К	-L1S	-L1S	-хх	
Base Part Number	OF conduit assembly						
Backshell and Tubing size							
	Angle Option	Fill Port		Swivel/Fixed S = Swivel			
Backshell Configuration P1	L = Straight	1 = Yes					
backshell configuration PT	$M = 45^{\circ}$	0 = No		F = Fixed			
	N = 90°					J	
	Angle Option	Fill Port		Swivel/Fixe		d	
Backshell Configuration P2	L = Straight	1 = Yes		S = Swive		el	
backshell configuration P2	$M = 45^{\circ}$	0 = No		F	F = Fixed		
	N = 90°						
Cable Length	in Inches						



SERIES 700 10K PSI / 700 BAR / 7000 M Glenair. SeaKing[™] High-Pressure Underwater **PBOF Assemblies, Fittings, and Accessories**

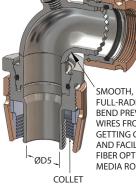
Assembly fittings and accessories

REVOLUTIONARY PBOF SWIVEL HOSE ATTACHMENT ACCESSORIES

Hose barb fittings for PBOF assemblies are the perennial weak link in subsea oil & gas applications. Kinked and twisted hoses, leaky fittings, corroded hose clamps, and other performance problems characterize most existing solutions. The Glenair PBOF swivel hose attachment for SeaKing[™] connectors solves these problems and more. Designed from the sea floor up to perform flawlessly and reliably, this revolutionary attachment puts an end to the long list of field maintenance problems associated with oil-filled cable applications.

- Straight, 45°, and 90° "full radius" angle and profile hose routing
- Hose angle adjustment feature eliminates risk of oil leakage
- Corrosion-resistant materials used throughout
- Threaded couplers with safety set-screws for fail-safe leak and decoupling protection—no special tools required for assembly
- Compact PBOF compression fitting with 340° swivel action hose for an extra degree freedom of routing in compact situations
- Support for the broad range of hose diameters and wall thicknesses

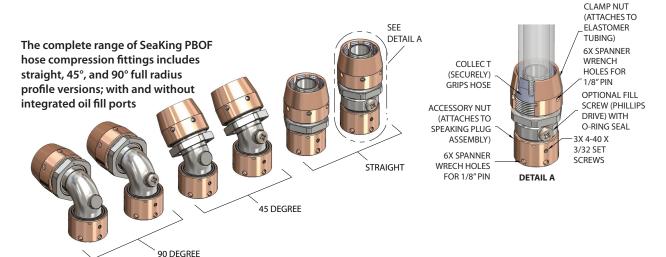
SeaKing PBOF Attachment Accessory Kits - How To Order									
Sample Part Number	709-123	к	-L	1	S				
Product Series	709-123 = SeaKi accessory								
Shell Size	E, G, K, L, M, O, P								
Angular Function	$L = Straight$ $M = 45^{\circ}$ $N = 90^{\circ}$								
Fill Port Option	0 = No fill port 1 = With fill port								
Swivel/Fixed Option	S = Swivel F = Fixed								



FULL-RADIUS BEND PREVENTS WIRES FROM GETTING CUT AND FACILITATES FIBER OPTIC MEDIA ROUTING

ACCESSORY TEETH MESH WITH TEETH ON BACK END OF PLUG ASSEMBLY. ALLOWING TUBING END OF PBOF TO BE CLOCKED IN DESIRED DIRECTION









Glenair SeaKing Series 700 with 30% glassfilled PEEK composite thermoplastic shells for use in anti-cathodic delamination applications

SeaKing 700 is an innovative underwater connector series that eliminates a broad range of mechanical design weaknesses found in many of today's high-pressure



subsea connector families. From its double O-ring seals and retractable engaging nut, to its multi-keyed mating interface, the SeaKing underwater connector represents a far more reliable approach to subsea power and signal connectivity. The series is available in stainless steel, titanium, and PEEK composite plastic shell materials designed for galvanic compatibility in mixed material applications, and superior corrosion resistance durability and immunity from cathodic delamination. The SeaKing PEEK series shares all the same insert arrangements, wire support, cabling, and PBOF capabilities as metal versions. Discrete connectors, overmolded cables, and PBOF assemblies available

even hundrei

- Superior corrosion resistance, durability, and immunity from cathodic delamination
- Same high-pressure performance as stainless steel
- Lighter weight with lower deployment costs
- Zero magnetic signature
- Galvanically compatible with all metal materials



SERIES 700 10K PSI / 700 BAR / 7000 M SeaKing™ PEEK Composite Thermoplastic 10K PSI Connectors



700 Series with non-metallic PEEK shells

700-201 CABLE CONNECTOR PLUG (CCP), PEEK



SeaKing PEEK - How To Order									
Sample Part Number		700	-201	-M12	-K	S	N		
Product Series	700 = SeaKing [™]								
Shell Style		201 = non-metallic PEEK cable connector plug (CCP)							
Shell Size-Insert Arrangement	(See page 8 – 10)	(See page 8 – 10)							
Shell Material	K = glass-reinforced	K = glass-reinforced PEEK							
Contact Style	S = socket	S = socket							
Polarization	A, B, C, N = normal (see sales drawing for details)								
INK PSI available in s	maller shell sizes. Cont	tact factory for detai	lc						

10K PSI available in smaller shell sizes. Contact factory for details.

700-206 GLASS REINFORCED EPOXY OR GLASS HERMETIC SEAL INSERT, FLANGE CONNECTOR RECEPTACLES (FCR), PEEK



SeaKing PEEK - How To Order									
Sample Part Number		700	-206	-E4	-K	Р	N		
Product Series	700 = SeaKing™								
Shell Style	206 = non-metallic PEEK FCR, Glass Hermetic Seal Insert (GTMS) 226 = non-metallic PEEK FCR, Glass Reinforced Epoxy Insert (GRE)								
Shell Size-Insert Arrangement	(See page 8 – 10)								
Shell Material	K = glass-reinforced PEEK								
Contact Style	P = pin					-			
Polarization	A , B , C , N = norma	al (see sales drawing	for detail	s)			-		

10K PSI available in smaller shell sizes. Contact factory for details.

700-207 GLASS REINFORCED EPOXY OR GLASS-TO-METAL SEAL INSERT, BULKHEAD CONNECTOR RECEPTACLE (BCR), PEEK

SeaKing PEEK - How To Order									
Sample Part Number		700	-207	-E4	-K	Р	N		
Product Series	700 = SeaKing™								
Shell Style	Glass Hermetic Se 227 = non-metall	207 = non-metallic PEEK BCR, Glass Hermetic Seal Insert (GTMS) 227 = non-metallic PEEK BCR, Glass Reinforced Epoxy Insert (GRE)							
Shell Size-Insert Arrangement	(See page 8 – 10)								
Shell Material	K = glass-reinforced PEEK								
Contact Style	P = pin								
Polarization	A , B , C , \mathbf{N} = normal (see sales drawing for details)								
10K PSI available in sma	llor chall cizoc Con	tact factory for dotail	c						

10K PSI available in smaller shell sizes. Contact factory for details.