



SWIM Series – Shallow Water Immersion

The SWIM Series has been created to answer the most demanding needs for marine use down to 300 meters/1,000 feet depth.

- Reliable in shallow water** ■ Perfect watertightness even at low pressure
Sealing security thanks to 2 O-rings at coupling interface
Overmolded cable termination
- High performance** ■ High value PEEK thermoplastic
Down to 300 meters
No cathodic delamination and corrosion
Light weight materials
- Cost effective** ■ The cost effective and reliable solution for shallow water immersion
- Versatile** ■ Removable inserts
Interchangeable inserts



Technical features

Materials

- **Housing:**
Thermoplastic (Peek®)
- **Insulator:**
Nylatron® (PA 6/6 + MoS2)
- **Contacts:**
Gold over Nickel plated brass solder cup contacts

Environmental

- **Operating temperature range:**
From -20°C to +70°C
- **Watertightness:**
30 bar mated or unmated (430PSI)

Electrical

Voltage category	SOURIAU recommended service voltage (Vrms 50Hz)	Dielectric withstanding voltage (Vrms 50Hz)
Service 0	350	1,000
Service 1	600	1,500
Service 2	1,000	2,300

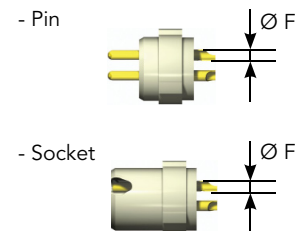
- **Insulation resistance:**
 - Unmated connectors: $\geq 10^4$ M Ω
 - Mated connectors: $\geq 5 \times 10^3$ M Ω at 500Vcc

- **Current rating and contact resistance:**

Shell size	Contacts size	Current rating per contact(A)	Contact Resistance (m Ω)
10PL 14PL	20	7	≤ 4
	16	14	≤ 3
	14	20	≤ 2.5
	12	26	≤ 2
10PL	Coaxial 50 Ω	20	≤ 2.5
	Coaxial 75 Ω	7	≤ 4

- **Contact dimensions:**

Contacts size	\varnothing F (mm) Contact termination OD	AWG	Conductor Section (mm ²)
20	0.9	26 to 22	0,14 to 0,38
16	1.4	22 to 18	0,38 to 0,93
14	1.87	18 to 16	0,93 to 1,34
12	2.3	16 to 14	1,34 to 1,91



Connector part numbers

Shell type: FED: Straight plug RER: Jam-nut receptacle	FED	M	14PL	N	0720	SA	Y
Type of contact: M: Pin contacts F: Socket contacts							
Shell size: 10PL or 14PL							
Insert Material: N: PA66+MoS2 (Nylatron®)							
Contact layouts: See contact layout designation p.5							
Cable clamp set: SA: Overmolded cable termination (Only for FED plugs)							
Mandatory suffix: Y							

Examples:

- Size 14 receptacle with 19 male contacts #20 ➔ RERM14PLN1920Y
- Size 10 plug with 4 female contacts #16 ➔ FEDF10PLN0416SAY

Pressure sealing caps part numbers

Cap type: BER: Cap for receptacles BEF: Cap for plugs	BER	C	10PL	Y
Cord set: C: With cord -: Without cord (no mention)				
Shell size: 10PL or 14PL				
Mandatory suffix: Y				

Insert sub assemblies part numbers (mounted contacts)

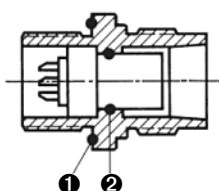
Insert + contact	BIS	14PL	N	04 12	M
Shell size: 10PL or 14PL					
Insert material: N: Nylatron®					
Contact layouts: See contact layout designation p.5					
Type of contact: M: Pin contacts F: Socket contacts					

Shell sub assemblies part numbers

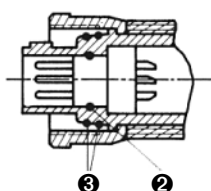
Shell type: CFE: Plug CRER: Receptacle	CFE	14PL	SA	Y
Shell size: 10PL or 14PL				
Cable termination: SA: Overmolded cable termination (Only for FED plugs)				
Mandatory suffix: Y				

O-rings part numbers

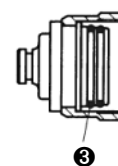
O-ring type	10PL	14PL
❶ Panel O-ring (for REC-RER)	10-01 (Ø1.78 x 18.77)	14-01 (Ø2.5 x 26)
❷ Insulator/shell O-ring	10-02 (Ø1.78 x 8.73)	14-02 (Ø1.9 x 16)
❸ Taper seat O-rings	10-03 (Ø1.78 x 12.42)	14-03 (Ø1.78 x 20.35)



RER receptacle



FED plug

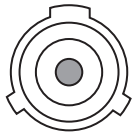


BER cap

Contacts layouts

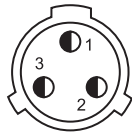
Size 10PL

1C75
1C50
1C50SMA



1C#75 or 1C#50
or 1C#50SMA
Service 1

0314



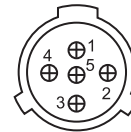
3#14
Service 2

0416



4#16
Service 1

0516



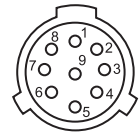
5#16
Service 1

0720



7#20
Service 1

0920



9#20
Service 0

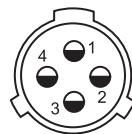
Size 14PL

1C75
1C50



1C#75 or 1C#50
Service 2

0412



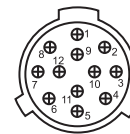
4#12
Service 2

0714



7#14
Service 2

1216



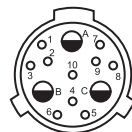
12#16
Service 2

1920



19#20
Service 1

03121020



3#12 & 10#20
Service 1

Layout caption

Layout ID for part number

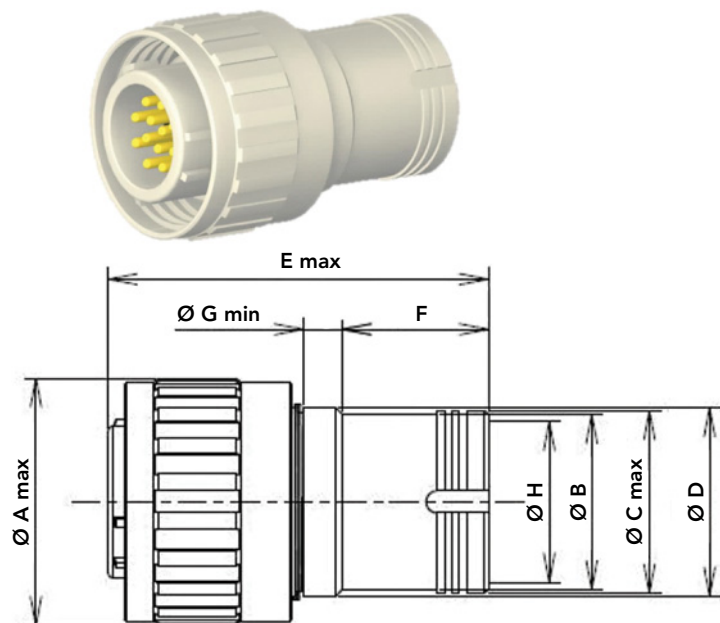


Number of contact & Size

Voltage service rating

Dimensions

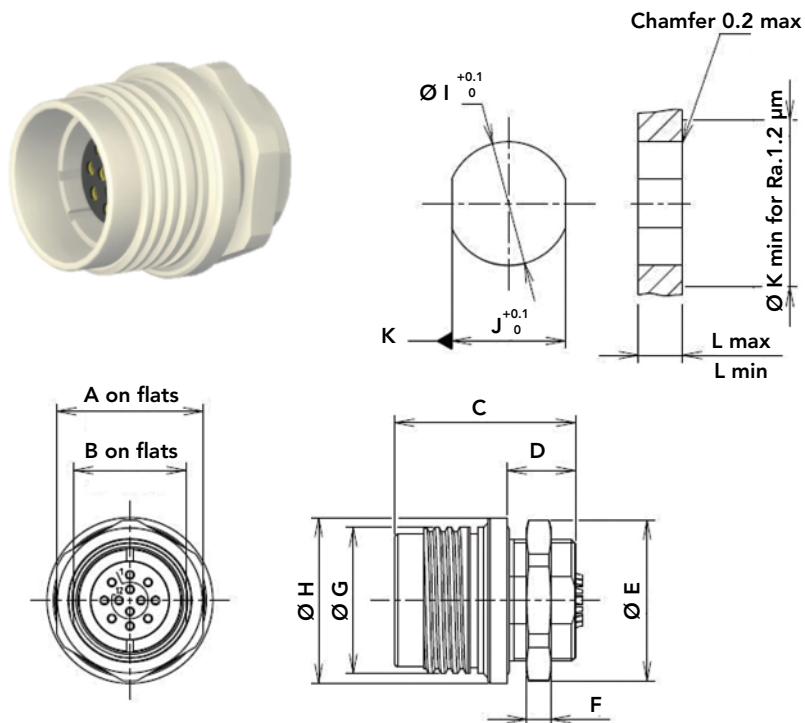
FED – Straight plug



Shell size	10PL	14PL
Ø A max	25.9	34
Ø B	17.8	24
Ø C max	18.75	25
Ø D	18.75	25.75
E max	52.5	52.5
F	20	20
G min	5	5
Ø H	15	22

Maximum outer cable diameter = ØH (depending on the fluidity of the compound)

RER – Jam-nut receptacle

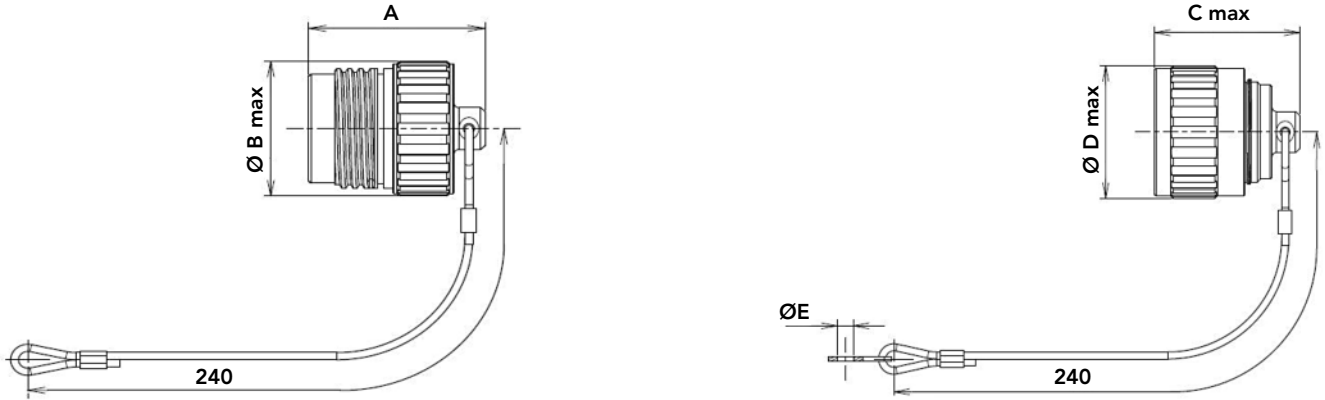


Shell size	10PL	14PL
A	22	30
B	16	23
C	37	37
D	14	14
Ø E	24	33
F	4	5
Ø G (ACME)	M22 x 2.54	M30 x 2.54
Ø H	26	34
Ø I	18.2	25.5
J	16.2	23.2
Ø K min	25	34
L min	4	4
L max	9	9

10PL: Jam-nut recommended torque: 3.5 N.m
14PL: Jam-nut recommended torque: 5.5 N.m

Dimensions

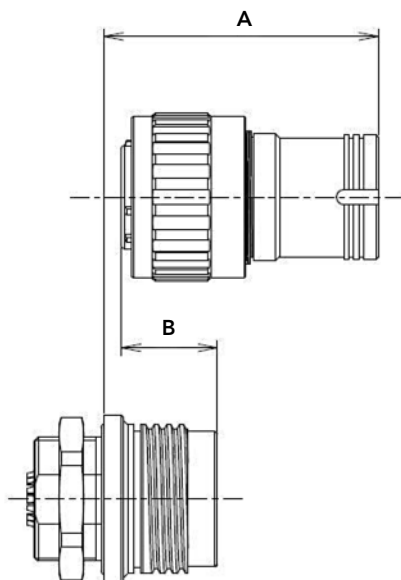
BEF/BER – Pressure sealing caps



Shell size	10PL	14PL
A	40	40
Ø B max	25.9	34
C max	37.5	37.5
Ø D max	25.9	34
Ø E	4.2	4.2



Mated/Unmated connectors



Shell size	10PL	14PL
A	55.5	55.5
B	19.5	19.5

Note: All dimensions are in millimeters.

Other Subsea Series



TP Series

- Nickel plated brass connector
- Shallow water
- Temporary immersion



U Series

- Stainless steel connector
- High depth
- Long immersion



M Series

- Marine Bronze connector
- High depth
- Long immersion



8810 Series

- Marine Bronze connector
- High depth
- Long immersion
- Underwater mateable

For further information contact us at technical-emear-ect@esterline.com
or visit our web site esterline-connection-technologies.com