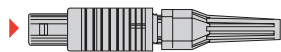


E SERIES (Outdoor, Stepped insert)



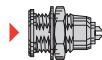
E SERIES Metal housing models

Straight plugs

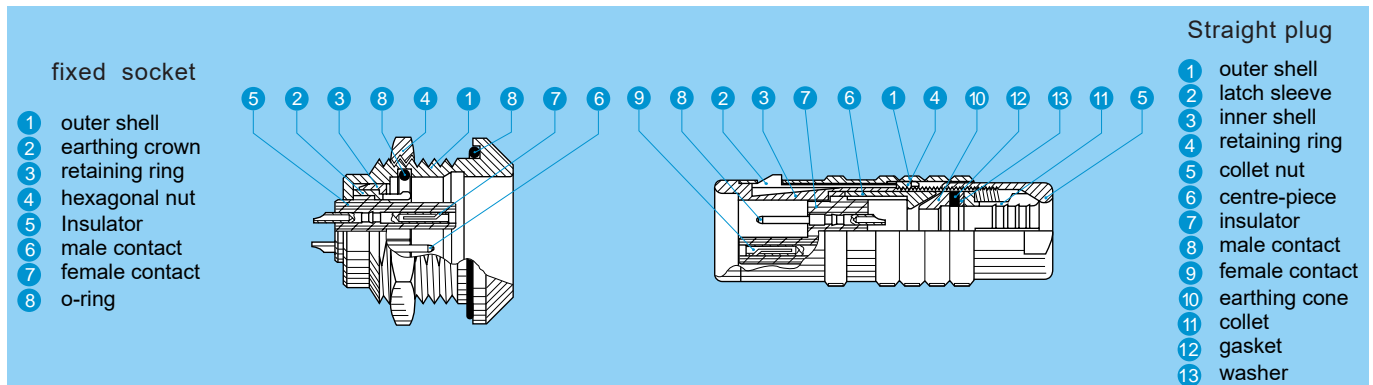


TFA

Fixed sockets



ZRA



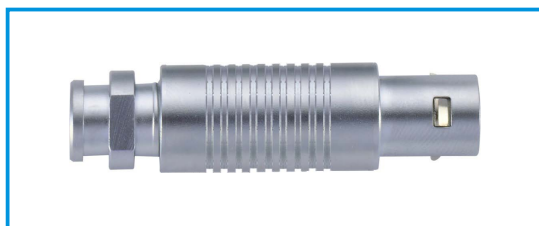
E series connectors have been specifically designed for outdoor applications.

They include an inner sleeve and two seals to prevent penetration of solids or liquids into the housing formed by the plug, fixed socket. All models of these series are watertight when mated and give a protection index of IP 68 (in mated condition) when correctly assembled to an appropriate cable (IP 66 other wise).

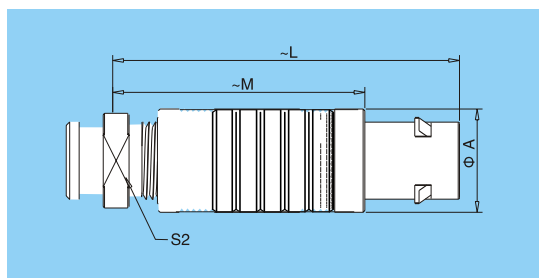
- security of the Push-Pull self-latching system
- multipole types 2 to 6 contacts
- solder contacts
- high packing density for space savings
- polarisation by stepped insert (half-moon) fitted with male and female contacts
- 360° screening for full EMC shielding.
- watertight connection (IP 68/IP 66)

E Series Connectors Technical Characteristics:

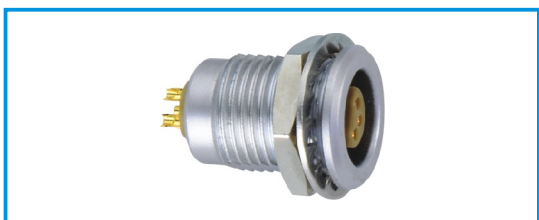
- Endurance: > 5000 cycles
- Humidity: up to 95% at 60° C
- Temperature range: - 45° C, + 125° C
- Resistance to vibrations: 10-2000 Hz, 15g
- Shock resistance: 100 g, 6 ms
- Salt spray corrosion test: > 48h
- Protection index (mated): IP 68/IP 66



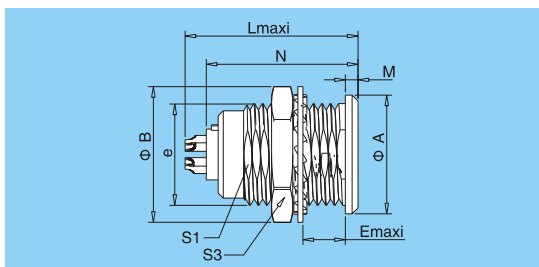
TFA Straight plug, cable collet and nut for fitting a bend relief



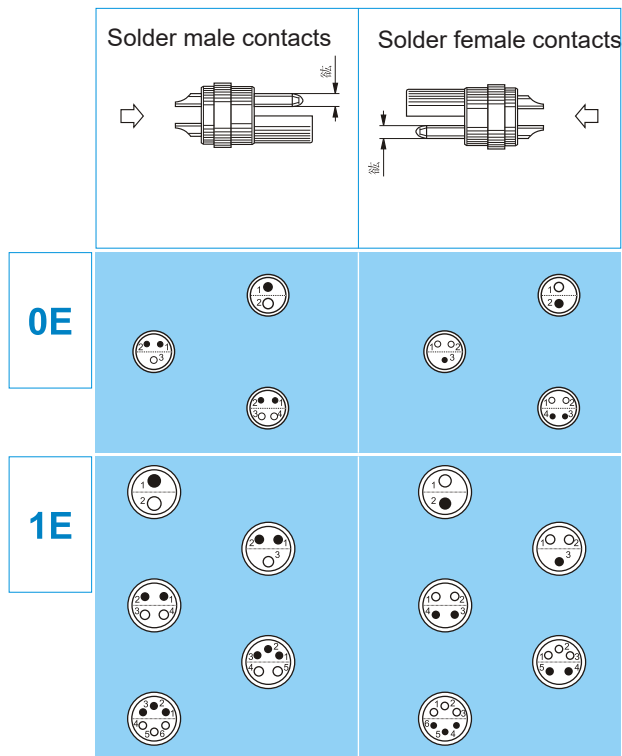
Reference		Dimensions (mm)			
Series	Model	A	L	M	S2
1E	TFA	13	42	28.0	9



ZRA Fixed socket, nut fixing



Reference		Dimensions (mm)							
Series	Model	A	B	e	E	L	M	S1	S3
1E	ERA	20	21.5	M16x1.0	9.0	24.0	4.5	14.5	19



Reference	Series		Multipole(contacts)	Φ A (mm)	Contact Type			Test voltage (kV rms)	Test voltage (kV dc)	Rated current (A)
	Standard	Watertight			solder	Print (straight)	Print (elbow)			
302	0S	0E	2	0.9	●	●	●	1.5	2.1	10
303	0S	0E	3	0.7	●	●	●	1.0	1.5	7
304	0S	0E	4	0.7	●	●	●	1.0	1.5	7
302	1S	1E	2	1.3	●	●	●	1.2	1.8	15
303	1S	1E	3	0.9	●	●	●	1.2	1.8	10
304	1S	1E	4	0.9	●	●	●	1.2	1.8	10
305	1S	1E	2 3	0.9 0.7	●	●	●	1.5 1.5	2.1 2.1	10 7
306	1S	1E	6	0.7	●	●	●	1.5	2.1	7

- First choice alternative
- Special order alternative

Note : 1) rated current = 6A for socket with elbow (90°) contact for printed circuit.
 2) rated current = 12A for socket with elbow (90°) contact for printed circuit.
 3) available only for connectors fitted with male contacts.



Ref.	Outer shell and collet nut		Latch sleeve + earthing crown		Other metallic components		Note
	Material	Surf. treatment	Material	Surf. treatment	Material	Surf. treatment	
C	Brass	chrome	brass/bronze	nickel	Brass	nickel	
N	Brass	chrome	brass/bronze	nickel	Brass	nickel	
H	Brass	black chrome	brass/bronze	nickel	Brass	nickel	
S	Stainless steel 304	anodized	brass/bronze	-	Brass	nickel	
L	Stainless steel 316L	anodized	Stainless steel 316L	-	Stainless steel 316L	-	
T	Brass	satin nickel	brass/bronze	nickel	Brass	nickel	
G	Brass	brown and black	brass/bronze	nickel	Brass	nickel	
F	Brass	High phosphorus chemical nickel	brass/bronze	nickel	Brass	nickel	
Z	Aluminium alloy	High phosphorus chemical nickel	brass/bronze	nickel	Brass	nickel	
Y	Brass	golden yellow	brass/bronze	nickel	Brass	nickel	

Note:

Brass

Connectors are mostly brass case, which can meet most military or civil application requirements. The white surface of brass shell has nickel-chromium protective layer, which has remarkable effect in resisting industrial waste, salt spray and most corrosives.

In addition, we also have nickel plating, nickel-gold plating, nickel-black chromium plating and other options for application in specific environments of the anti-corrosion coatings.

Aluminium alloy

In the aviation, aerospace industry, portable mobile devices and so on. It is suitable for the connector with aluminium alloy shell.

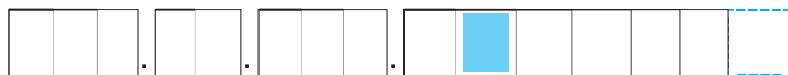
In addition to its high mechanical lightness and excellent corrosion resistance, the surface of aluminium alloys can be protected by anodic plating, with a variety of colors to choose from.

Stainless steel

For the use of harsh environment, the surface coating is easy to be damaged. We recommend the use of stainless steel materials. AISI304 stainless steel and AISI316L stainless steel are usually used.

AISI304 stainless steel is recommended for special fields such as nuclear industry. It can resist radiation and nitric acid corrosion.

AISI316L stainless steel is recommended for medical and shipping industries. It has no surface treatment and strong corrosion resistance.



Ref.	Material	Contact type	Note
T	Teflon	Solder or print	
L	PPS	Solder or print	

>>> Contacts (E series)



Soldering characteristics

- no need to order specific tools, a simple soldering iron is sufficient
- ideal for very small and fragile conductors
- contacts with solder cups to allow the solder to flow

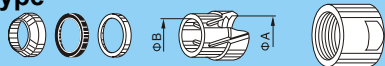
Contacts reference for plugs, free or fixed sockets

Contact type	Reference		Contact			Conductor					
	Male	Female	Φ A (mm)	Φ C (mm)	Form per fig.	Solid		Stranded			
						AWG min.	Section max. (mm ²)	AWG		Section (mm ²)	
							min.	max.	min.	max.	
<p>Solder</p>	A	L	0.5	0.40	-	28	0.09	-	30	-	0.05
			0.5	0.45	-	28	0.09	-	28	-	0.09
			0.7	0.60	-	24	0.25	-	26	-	0.14
			0.7	0.80	-	22	0.34	-	22	-	0.34
			0.9	0.80	-	22	0.34	-	22	-	0.34
			1.3	1.00	-	20	0.50	-	20	-	0.50
			1.6	1.40	-	16	1.00	-	18	-	1.00
			2.0	1.80	-	14	1.50	-	16	-	1.50
			3.0	2.70	-	10	4.00	-	12	-	4.00
			4.0	3.70	-	10	6.00	-	10	-	6.00



C, K type collets for E series

C type



K type



oversize cable collet

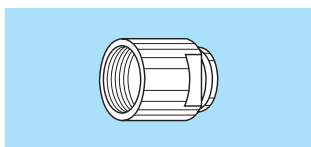
1E

Reference		Collet ø		Cable ø	
Type	Code	Ø A	Ø B	max.	min.
C	15	1.6	-	1.5	1.3
C	20	2.2	-	2.0	1.6
C	25	3.2	-	2.5	2.1
C	30	3.2	-	3.0	2.6
C	35	4.2	-	3.5	3.1
C	40	4.2	-	4.0	3.6
C	45	5.2	-	4.5	4.1
C	50	5.2	-	5.0	4.6
C	55	6.2	6.2	5.5	5.1
C	60	6.2	6.2	6.0	5.6
C	65	7.2	6.7	6.5	6.1
K	70	7.2	-	7.0	6.6
K	75	8.2	8.2	7.5	7.1
K	80	8.2	8.2	8.0	7.6
K	85	9.2	8.6	8.5	8.1

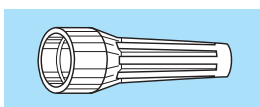
>>> Variant (E series)



Bend relief for E series models with collet



Need to be ordered



Ref.	Collet		Need to be ordered separately (see page)
	Type	Code	
1E	C	15 to 65	GMA.1B....
	K	70 to 85	GMA.2B....

Note: all dimensions are in millimetres.

E Series

series	D1		
	ØA	B	L
1E	16.1	14.6	22.5

Cut-out types

Model	Type
ZRA	D1

Mounting nut torque

series	Torque (Nm)
1E	7

1 N = 0.102 kg