

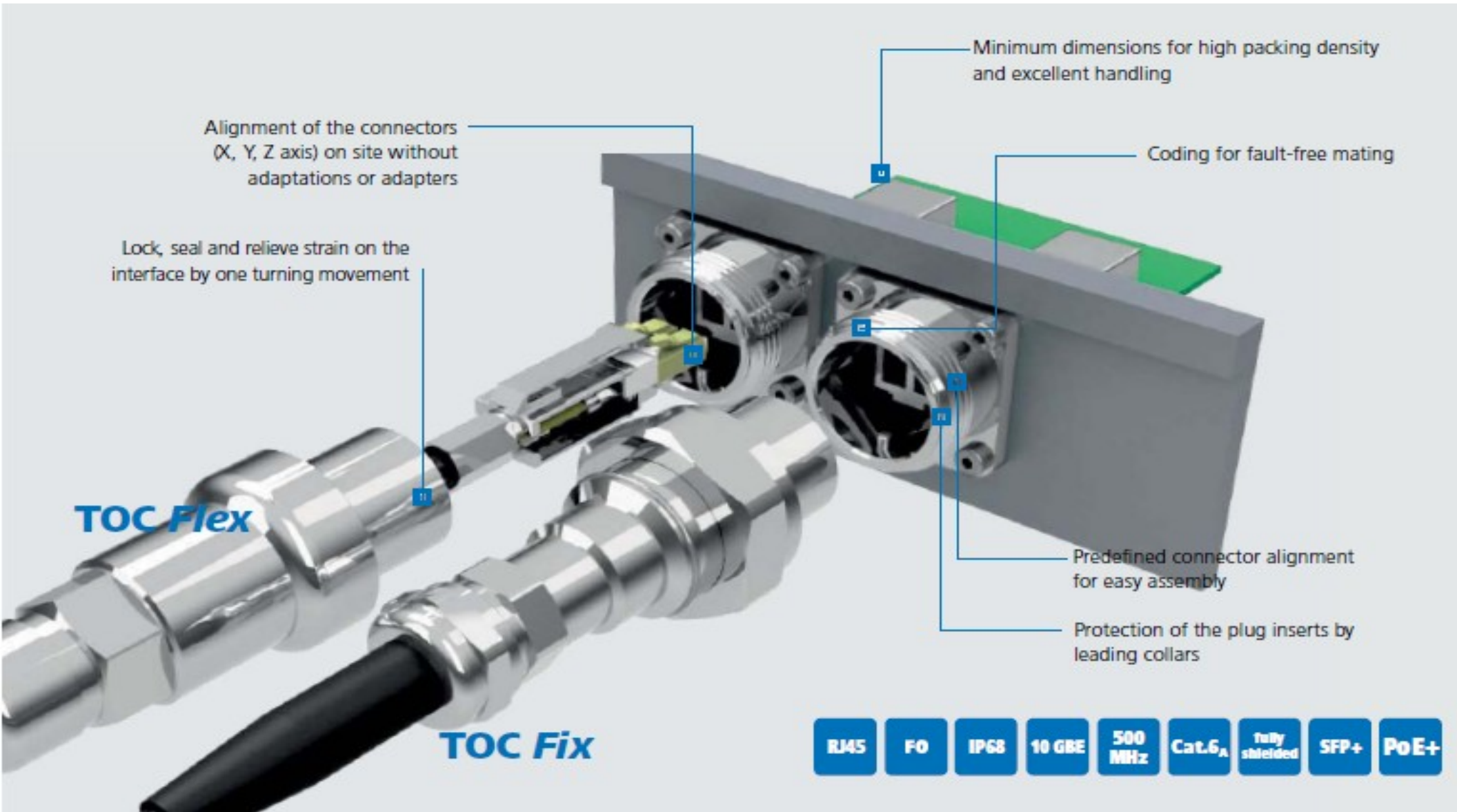
New TOC – RJ45 & fiber optic outdoor connectors



TOC connectors at a glance (1)

- TOC – Telecommunications Outdoor Connectors
- Offer reliability and flexibility for outdoor applications
- Used for data and telecommunications in mobile radio, process, utility and traffic automation
- Also in harsh environment applications of machine and plant engineering
- Are suitable for integration into any electronic SFP+ interface or as stand alone interface (IP68 outlets)
- All TOC connectors are compliant with IP68 protection class specifications
- Can be used from -40°C to +85°C temperature range
- Apart from standard range also stainless steel or plastic are available on request

TOC connectors at a glance (2)



Applications of TOC connectors



Machine and plant engineering



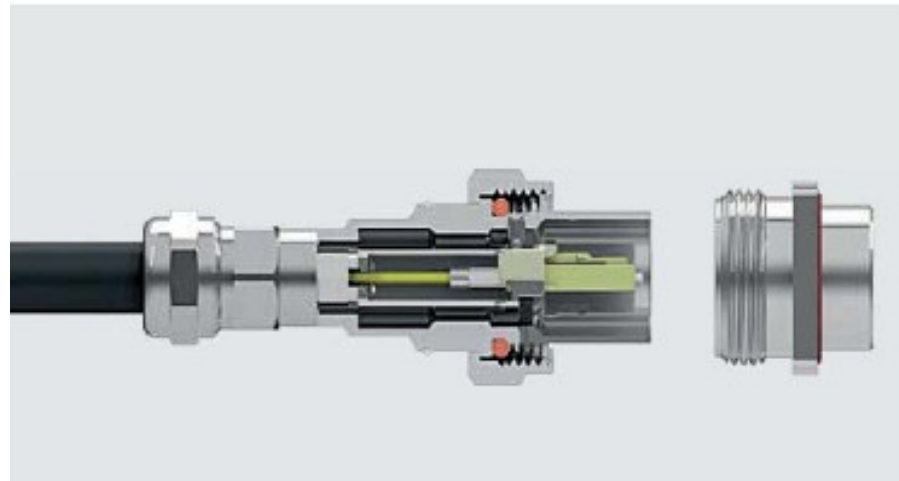
Telecommunications in mobile radio



Traffic automation

TOC fix

- Adjusted connector alignment for RJ45 or FO inserts
- Can be equipped with different inserts such as RJ45, Cat.6A, SC or LC
- The plug and bulkhead inserts have a fixed position in the plug housing and are adjusted to each other



The plug insert and the plug housing are screwed to the bulkhead in one motion during installation

TOC Fix assembly steps



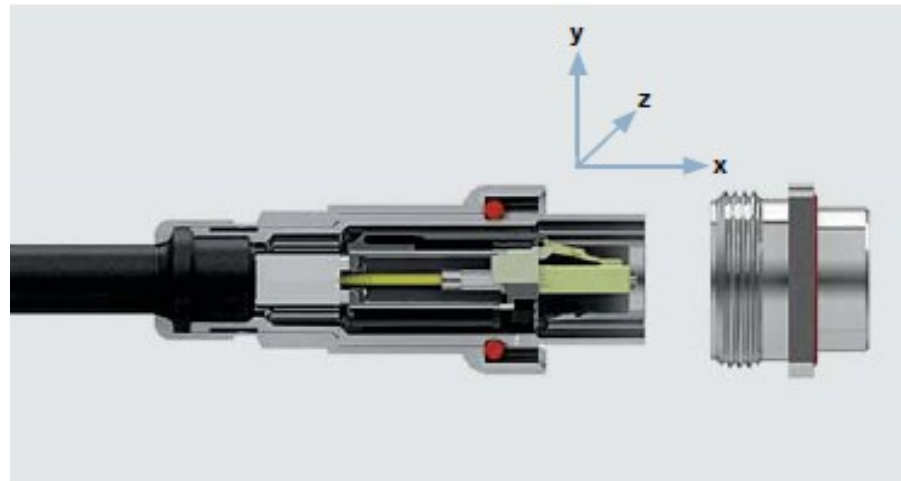
Insert the plug into the bulkhead – connector alignment is predefined



Screw the plug to the bulkhead

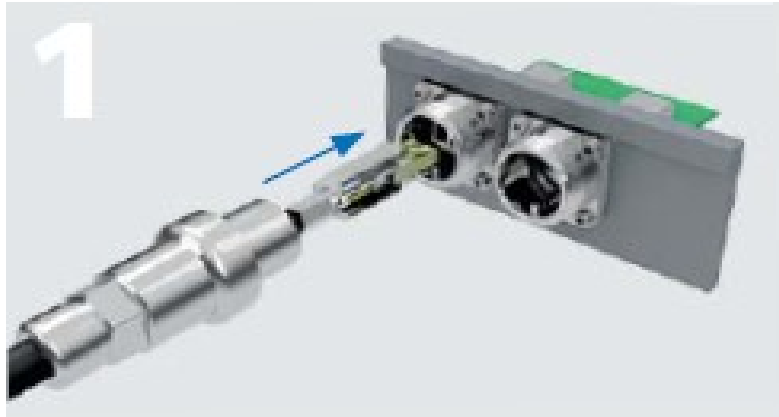
TOC Flex

- Has been developed especially for adaptation to different connector alignments between the plug and bulkhead inserts
- Can be equipped with different inserts such as RJ45, Cat.6A, SC or LC
- Offers freedom of combination, transmission reliability, more flexibility in the network design
- Suitable for applications in which the plug axis can be optimally adjusted on site (x,y,z axis) by the choice of different bulkhead inserts (SFP+ transceiver)
- Therefore, it simplifies the printed circuit board integration in electronic equipment.

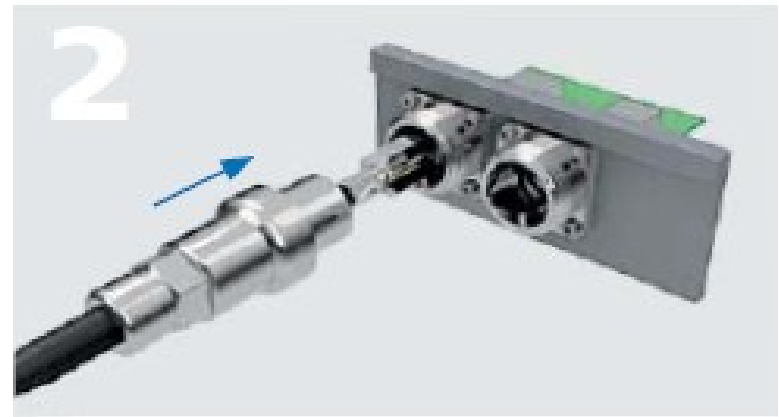


The respective pluggable transceiver (RJ45, SC or LC), can be installed in and removed from the bulkhead from the front during installation. The plug insert and the plug housing are attached to the flange insert one after another whereby special attention has been paid to easy handling.

TOC Flex assembly steps



Plug the plug insert into the insert inside of the bulkhead regardless of the connector alignment



Push the plug housing over the plug insert



Screw the plug to the bulkhead – interface is locked, sealed and relieved of strain by one turning movement

Technical data

RJ45 plug and bulkhead inserts	
RJ45	IEC 60603-7-51 (500 MHz)
Cat.6A	ISO/IEC 11801:2010
IEEE 802.3an	10 Gigabit Ethernet
PoE+ 802.3at	adequate for PoE+
Mating cycles	< 750
RJ45 jack cu-conductor	AWG26/7-AWG22/7 / AWG26/1-AWG22/1
RJ45 jack core diameter	0.85 - 1.6 mm
RJ45 plug AWG24-27 cu-conductor	AWG27/7-AWG24/7 / AWG26/1-AWG24/1
RJ45 plug AWG24-27 core diameter	0.85 - 1.05 mm
RJ45 plug AWG22-26 cu-conductor	AWG26/7-AWG22/7 / AWG26/1-AWG22/1
RJ45 plug AWG22-26 core diameter	0.85 - 1.6 mm

FO plug and bulkhead inserts	
SC	IEC 61754-4
LC	IEC 61754-20
Mating cycles	< 500
Buffered optical fiber diameter	0,9 mm
Subcable diameter	up to 2,8 mm
Insertion loss	SM max. 0,5 dB, MM max. 0,4 dB, SM APC max. 0,5 dB
Return loss	min. 40 dB, min. 65 dB (APC)
Polish type	PC or APC 8°
suitable for SM, MM, PCF or POF (SC) fibers	

FO plug and bulkhead housings	
Housing material	nickel-plated brass, stainless steel or plastics; others on request
Locking mechanism	screw type, coupling torque 25-35 Nm
Mounting	round cutout 24 mm, 4 screws
Mating cycles	> 500
Operating temperature	-40 °C - +85 °C
Protection class	IP68 acc. to IEC 60529
Cable diameter	5 ... 9 mm
RoHS	compliant

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