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INDUSTRIAL ELECTRONICS

**Inside TOP.  
Outside TOC.**



DataVoice

**TOC Series RJ45 and LC Duplex**

Telecommunications Outdoor Connectors IP68

# A new dimension in outdoor cabling components

TOC stands for Telecommunications Outdoor Connectors and offers cabling professionals the reliability and flexibility they need for toughest applications. The handy, easy to install TOC connectors are used for data- and telecommunications in mobile radio, process-, utility- and traffic automation, or security applications but also in the harsh environment of machine and plant engineering. The TOC series is available in nickel-plated brass for RJ45 Cat.6<sub>A</sub> and FO LC Duplex connectors. Compliance with the specifica-

tions of protection class IP68 and due to its excellent material properties, the TOC series can be installed even in harsh conditions with in a temperature range from -40 °C to 85 °C. To lock, relief of strain and seal the connection, one turning movement is necessary and no further procedures are required. Customers benefit: fast, error free and easy installation, high transmission reliability and resilience and more flexibility in the network design.

## TOC Series RJ45

The TOC series RJ45 coming with the newly available field-assembly RJ45 plug MFP8 Cat.6<sub>A</sub> and RJ45 keystone AMJ-S Module Cat.6<sub>A</sub> is available as a set. They can be attached to solid and stranded conductor cables with cable outer diameter max. 9.5 mm on site without the need for any special tools. For line extensions, the TOC Coupler IP68 is your first choice. It can be easily integrated with no negative effects on performance of the connection.

### Performance Characteristics TOC Series RJ45

- suitable for 10 Gigabit Ethernet acc. to IEEE 802.3 an
- suitable for PoE+ acc. to IEEE 802.3 at
- 360° shielding
- temperature range: -40° to +85°C\*
- protection class IP68 acc. to IEC 60529
- protection cap with protection class IP68

### TOC bulkhead set IP68 AMJ-S Module T568B Cat.6<sub>A</sub>

- RJ45 AMJ-S Module Cat.6<sub>A</sub> acc. to IEC 60603-7-51 (500 MHz)
- Cu-conductor:
  - solid: 0.4-0.64 mm (AWG26/1 – AWG22/1)
  - stranded: 0.46-0.76 mm (AWG27/7 – AWG22/7)
- insulation diameter: 0.9-1.6 mm
- 4-hole mounting, mounting cut out Ø 30.5 mm

### TOC plug set IP68 MFP8 T568B Cat.6<sub>A</sub>

- RJ45 plug MFP8 Cat.6<sub>A</sub> acc. to IEC 60603-7-51 (500 MHz)
- RJ45 plug MFP8 Cat.6<sub>A</sub> UL listed (E244889)
- Cu-conductor:
  - solid: 0.51-0.64 mm (AWG24/1 – AWG22/1)
  - stranded: 0.46-0.76 mm (AWG27/7 – AWG22/7)
- insulation diameter: 0.85-1.6 mm
- cable outer diameter: 6.5-9.5 mm

### TOC coupler IP68 AMJ Coupler K

- RJ45 AMJ Coupler K acc. to IEC 60603-7-51 (500 MHz)
- RJ45 jack to RJ45 jack
- suitable for TOC plug set RJ45 IP68
- mounting on DIN rail TH35 by means of adaptors (H06000A0056)

## TOC Series LC Duplex

The TOC series with LC Duplex plugs captivates due to its flexibility and ease of installation. Customers can choose whether they work with pre-terminated cables feed into TOC plug housing from the backside or they terminate the LC plugs themselves on site. The enclosed LC holding frame with elongated release latch accepts the LC plugs firmly and offers an additional tool free strain relief. By means of the elongated release latch the LC plugs can be mated & unmated into SFP+ transceivers or LC Duplex adaptors effortlessly even in confined installation environments. In addition, the several installation positions of SFP+ transceivers no longer form a problem as the holding frame incorporating the LC plugs easily adjusts to them. For line extensions, the TOC Coupler IP68 LC Duplex is your first choice. It can be easily integrated with no effective effects on performance of the connection.

### Performance Characteristics TOC Series LC Duplex

- plug & adaptor acc. to IEC 61754-20 (circonia ceramics)
- Multimode (PC) & Singlemode (APC) types
- Insertion Loss:
  - plug: Multimode max. 0.4 dB, Singlemode APC max. 0.5 dB
  - adaptor: Multimode max. 0.2 dB, Singlemode APC max. 0.5 dB
- Return Loss:
  - plug: Multimode min. 30 dB, Singlemode APC min. 60 dB
- temperature range: -40° to +85°C\*
- protection class IP68 acc. to IEC 60529
- protection cap with protection class IP68

### TOC bulkhead set IP68 LC Duplex

- 4-hole mounting, mounting cut out Ø 30.5 mm
- optional for SFP+ Transceiver

### TOC plug set IP68 LC Duplex

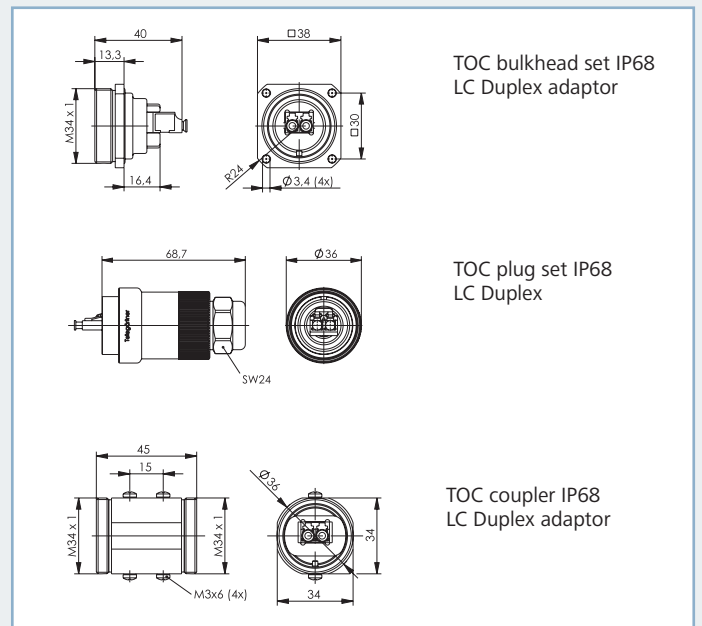
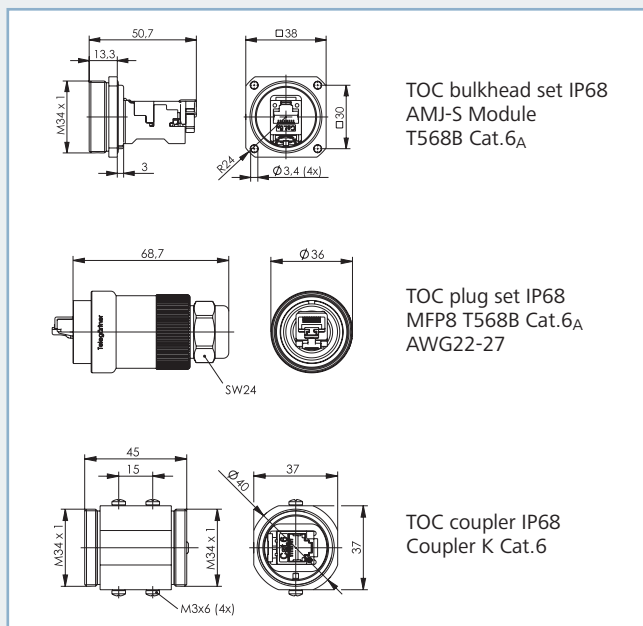
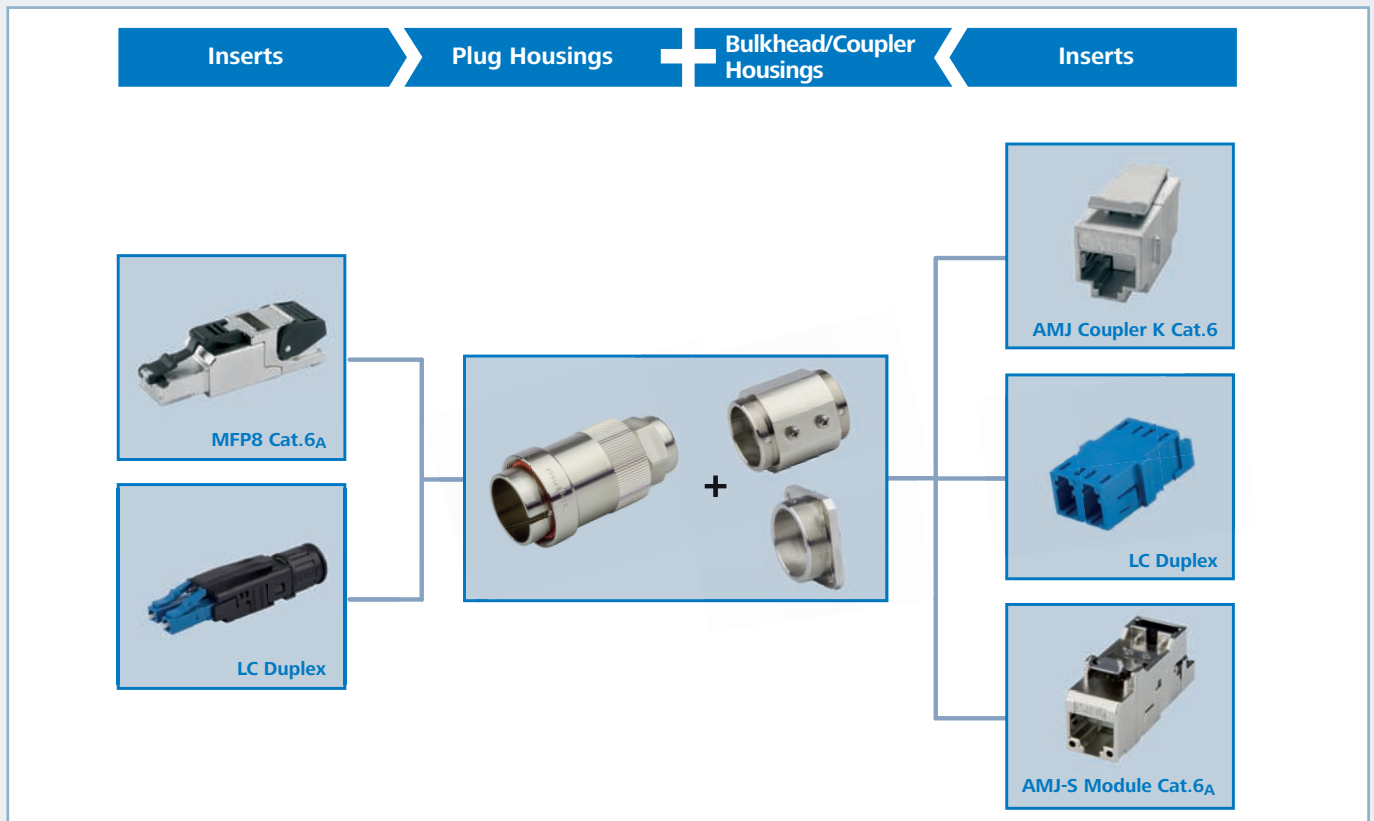
- single cable diameter: 2.0 mm
- outer cable diameter: 6.5-9.5 mm
- LC holding frame with elongated release latch and strain relief

### TOC Coupler IP68 LC Duplex

- suitable for TOC plug set IP68 LC Duplex
- mounting on DIN rail TH35 by means of adaptors (H06000A0056)

\*Operating temperature depending on choice of cable and wire/fiber design

# Overview TOC Series RJ45 and LC Duplex



## Order informations TOC Series RJ45

Order no.	Short name	Description
J60020A0000	TOC bulkhead set IP68	AMJ-S Module T568B Cat.6A
J60020A0002	TOC bulkhead set IP68	AMJ Coupler K Cat.6
J60026A0000	TOC plug set IP68	MFP8 T568B Cat.6A AWG22-27
J60029A0000	TOC coupler IP68	AMJ Coupler K Cat.6

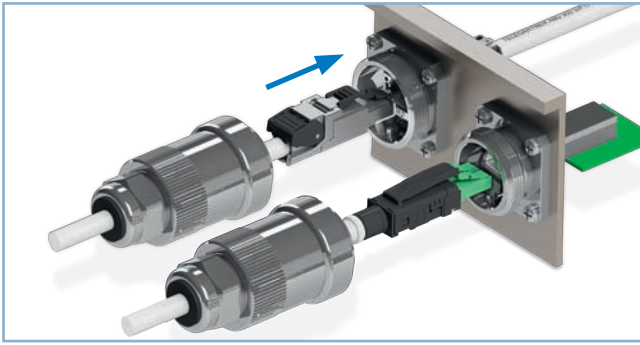
## Order informations TOC Series LC Duplex

Order no.	Short name	Description
J68071A0000	TOC bulkhead set IP68	LC Duplex adaptor Multimode
J68071A0001	TOC bulkhead set IP68	LC Duplex adaptor APC Singlemode
J68070A0000	TOC plug set IP68	LC Duplex Multimode
J68070A0001	TOC plug set IP68	LC Duplex /APC Singlemode
J68071A0004	TOC coupler IP68	LC Duplex adaptor Singlemode / Multimode

## Order informations protection caps

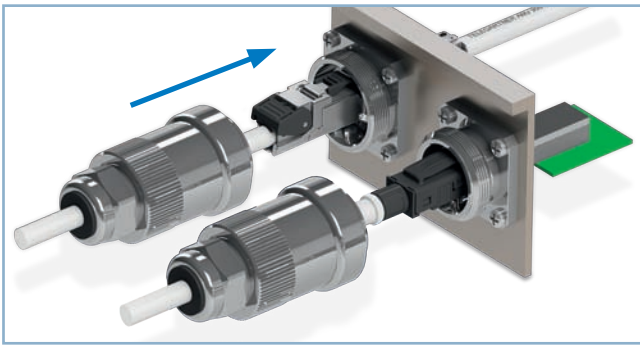
Order no.	Short name	Description
H60030A0000	TOC bulkhead protection cap	nickel-plated brass, w. chain
H60030A0001	TOC plug protection cap	nickel-plated brass, w. chain

# Assembly Steps



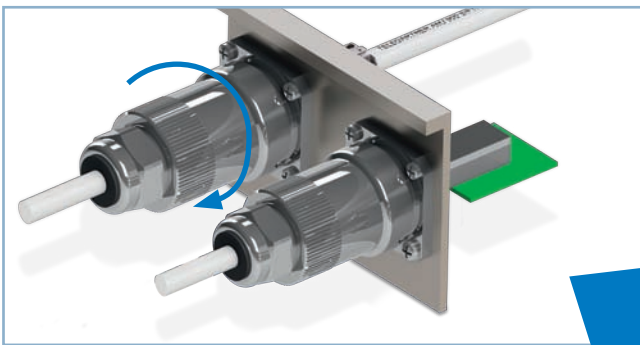
## Step 1: Slide plug into bulkhead

Slide plug into bulkhead insert regardless of the connector alignment.



## Step 2: Push housing over plug insert

Push the plug housing over the plug insert.



## Step 3: Lock - Seal - Relief of strain

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

**TOC FLEX**  
LOCK, SEAL AND RELIEF OF STRAIN  
BY ONE TURNING MOVEMENT

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