BEST CONTACTS FOR YOUR SUCCESS

Telegärtner
KARL GÄRTNER GMBH

NETWORKING COMPONENTS
COAXIAL CONNECTORS
CABLE ASSEMBLIES
PRECISION TURNED PARTS
PLASTIC INJECTION MOULD PARTS
INDUSTRIAL ELECTRONICS

# Inside TOP.
# Outside TOC.



## DataVoice

# TOC - Series RJ45 and FO

## 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.$6_A$ and FO LC Duplex and MPO/MTP®

connectors. Compliance with the specifications of protection class IP68 and due to its excellent material properties, the TOC series can be installed even in harsh conditions within 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 field-assembly RJ45 plug MFP8 Cat.$6_A$ and RJ45 keystone AMJ-S Module Cat.$6_A$ 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 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 802.3an
- suitable for PoE+ acc. to IEEE 802.3at
- 360° shielding
- temperature range: -40° C to +85° C*
- protection class IP68 acc. to IEC 60529
- protection cap with protection class IP68

### TOC bulkhead set IP68 / TOC bulkhead outlet IP68

- RJ45 AMJ-S Module Cat.$6_A$ acc. to IEC 60603-7-51 (500 MHz)
- Cu-conductor:
  solid: 0.41-0.64 mm (AWG26/1 – AWG22/1)
  stranded: 0.46-0.76 mm (AWG27/7 – AWG22/7)
- insulation diameter: 0.9-1.6 mm
- RJ45 AMJ-S Module Cat.$6_A$ UL listet (E244889)

### TOC plug set IP68 MFP8 T568B Cat.$6_A$

- RJ45 plug MFP8 Cat.$6_A$ acc. to IEC 60603-7-51 (500 MHz)
- RJ45 plug MFP8 Cat.$6_A$ 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: 1.0-1.6 mm
- cable outer diameter: 4.0 - 9.5 mm

### TOC coupler IP68 AMJ Coupler K

- RJ45 AMJ Coupler K acc. to IEC 60603-7-5 (500 MHz)
- RJ45 jack to RJ45 jack
- suitable for TOC plug set RJ45 IP68
- mounting on DIN rail TH35 by means of adaptors (H06000A0056)

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

## TOC Series LC Duplex / MPO/MTP®

The TOC Series with LC Duplex resp. MPO/MTP® captivates due to its flexibility and ease of installation. Customer can work with pre-terminated cables feed into TOC plug.
By means of the elongated release latch the plugs can be mated & unmated into SFP transceivers or adaptors effortlessly even in confined installation environments. In addition, the several installation positions of SFP transceivers no longer form a problem. For line extensions, the TOC Coupler IP68 is your first choice. It can be easily integrated with no effective effects on performance of the connection.

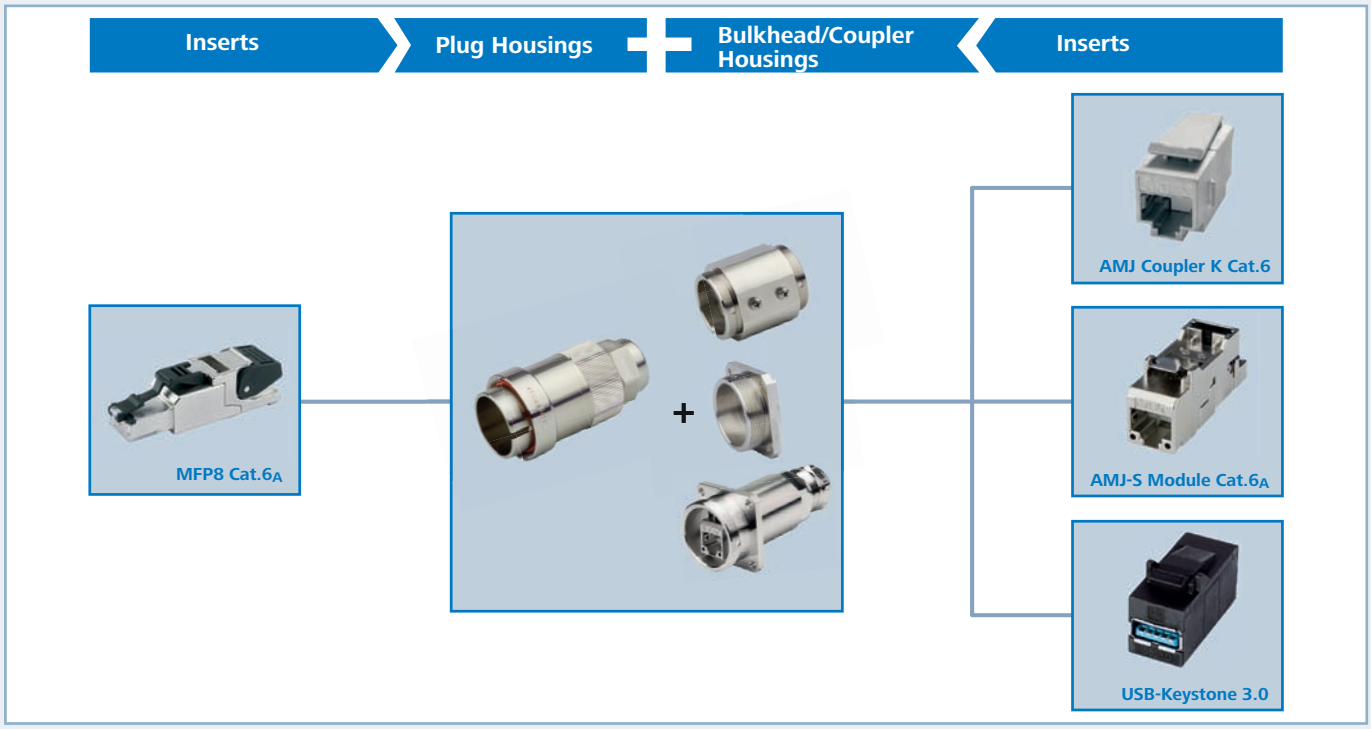
### Performance Characteristics TOC Series LC Duplex

- 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° C to +85° C*
- plug set LC Duplex: single cable diameter: 2.0 mm
  cable outer diameter: 4.0-9.5 mm
- protection class IP68 acc. to IEC 60529
- protection cap with protection class IP68

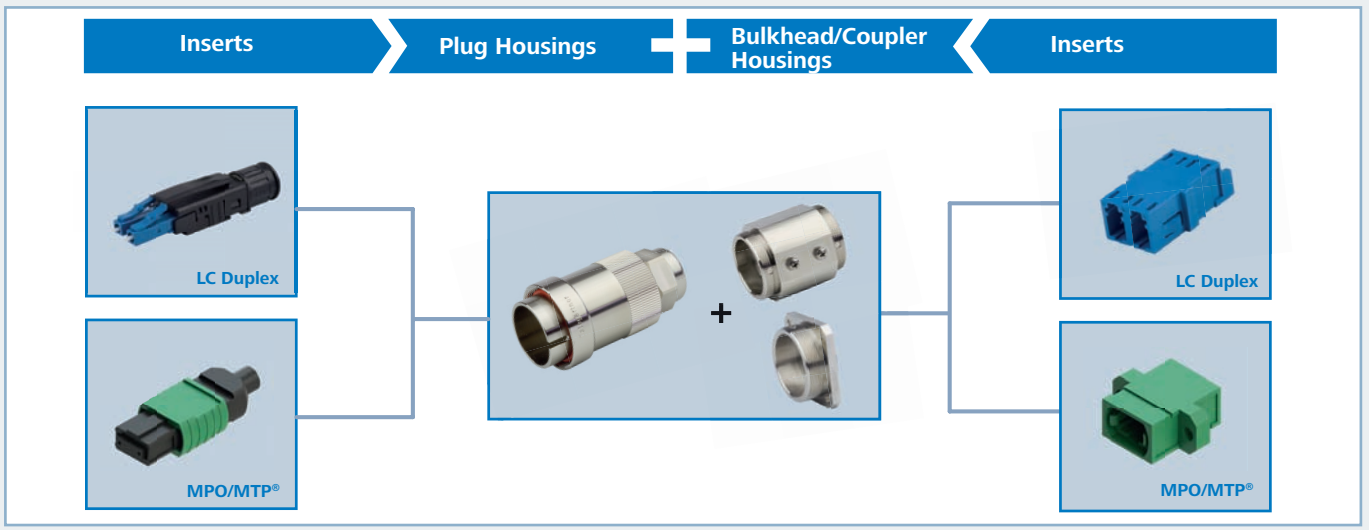
### Performance Characteristics TOC Series MPO/MTP®

- plug & adaptor acc. to IEC 61755-3-1
- Multimode (PC) & Singlemode (APC) types
- Insertion Loss:
  plug: Multimode max. 0.5 dB (typ. 0.2)
  Singlemode APC max. 0.7 dB (typ. 0.25)
- Return Loss:
  plug: Multimode min. 30 dB, Singlemode APC min. 60 dB
- temperature range: -40° C to +85° C*
- plug set MPO/MTP®: single cable diameter: 3.0 mm
  cable outer diameter: 4.0 - 9.5 mm
- protection class IP68 acc. to IEC 60529
- protection cap with protection class IP68

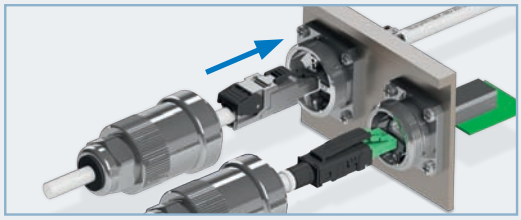
# Overview TOC Series RJ45

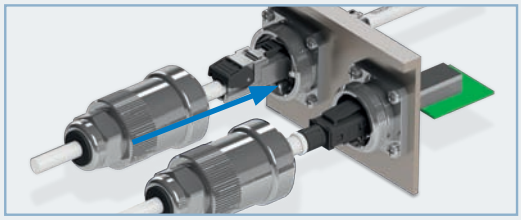


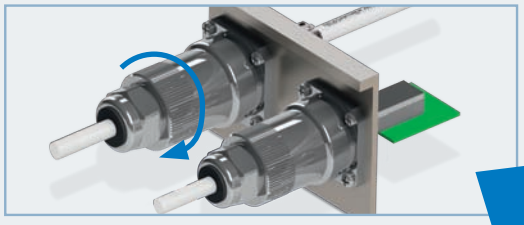

# Overview TOC Series FO




# 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**

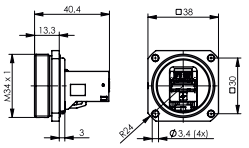
Push the plug housing over the plug insert.

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

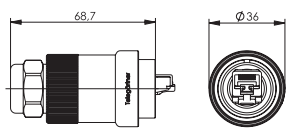
Screw the plug to the bulkhead - interface is locked, sealed and relieved of strain by one turning movement.

## TOC Series RJ45

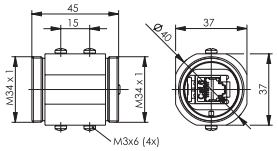
| Order No. | Short name | Description |
|---|---|---|
| J60020A0000 | TOC bulkhead set IP68 | AMJ-S Module T568B Cat.$6_A$ |
| J60020A0002 | TOC bulkhead set IP68 | AMJ Coupler K Cat.6 Class $E_A$ |
| J60020A0004 | TOC bulkhead set IP68 | USB-Keystone 3.0 (f-f) Type A |
| J60026A0000 | TOC plug set IP68 | MFP8 T568B Cat.$6_A$ AWG22-27 |
| J60029A0000 | TOC coupler IP68 | AMJ Coupler K Cat.6 Class $E_A$ |
| J60023A0000 | TOC bulkhead outlet IP68 | AMJ-S Module T568B Cat.$6_A$ |
| H06000A0074 | TOC bracket | gauge 38 mm and TH35 |



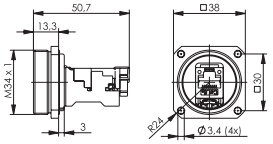
TOC bulkhead set USB-Keystone



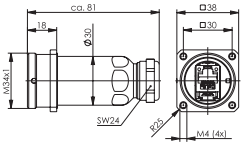
TOC plug set



TOC coupler



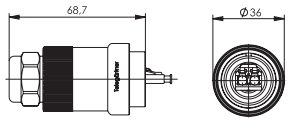
TOC bulkhead set AMJ-S Module



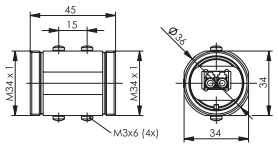
TOC bulkhead outlet

## TOC Series LC Duplex

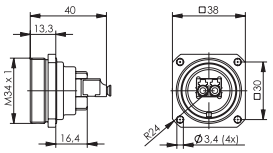
| Order No. | Short name | Description |
|---|---|---|
| J68071A0000 | TOC bulkhead set IP68 | LC Duplex adaptor multimode |
| J68071A0001 | TOC bulkhead set IP68 | LC Duplex adaptor APC singlemode |
| J68070A0000 | TOC plug set IP68 | LC Duplex multimode |
| J68070A0001 | TOC plug set IP68 | LC Duplex /APC singlemode |
| J68071A0004 | TOC coupler IP68 | LC Duplex adaptor singlemode / multimode |



TOC plug set



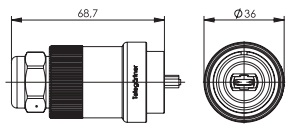
TOC coupler



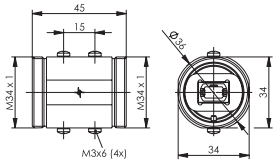
TOC bulkhead set

## TOC Series MPO/MTP®

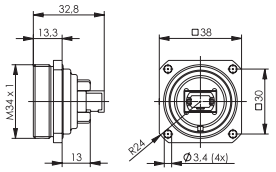
| Order No. | Short name | Description |
|---|---|---|
| J68071A0006 | TOC bulkhead set IP68 | MPO/MTP® adaptor singlemode |
| J68070A0004 | TOC plug set IP68 | MPO/MTP® male, multimode |
| J68070A0005 | TOC plug set IP68 | MPO/MTP® male, APC singlemode |
| J68070A0006 | TOC plug set IP68 | MPO/MTP® female, multimode |
| J68070A0007 | TOC plug set IP68 | MPO/MTP® female, APC singlemode |
| J68071A0007 | TOC coupler IP68 | MPO/MTP® adaptor singlemode / multimode |



TOC plug set



TOC coupler



TOC bulkhead set

| Order No. | Short name | Description |
|---|---|---|
| H60030A0000 | TOC bulkhead protection cap IP68 | nickel-plated brass, with chain |
| H60030A0001 | TOC plug protection cap IP68 | nickel-plated brass, with chain |


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