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Christian and Jochen Metz in the local Blumberg

# We are continuing where history left off and will still rely on optimal connections in the future!

## Dear business partners, dear customers,

The family-owned company METZ CONNECT has stood for precision, reliability and ingenuity for more than four decades. Virtues that we put into practice every day at all of our worldwide production and distribution sites.

As pioneers in the communication between people and equipment, it goes without saying that we also pass on our experience and knowledge across generations. And grow steadily in the process!

The METZ CONNECT range is divided into three core areas and offers a wide range of solutions for the most demanding needs:

P|Cabling Copper and glass fiber components as well as

automated infrastructure management

for structured network cabling

U|Contact PCB connection technology for the connection

of devices and controls in building and

industrial automation

C|Logline Intelligent system and switch cabinet components

for building and process automation.

You will encounter products from METZ CONNECT several times a day, often without seeing them: whether PCB components or connection terminals in control elements, copper and fiber optic components for network cabling or intelligent I/O components in the control cabinet for building automation. Many areas of everyday life, including complex industrial supply and production chains, require the intelligent networking of the involved devices and components. For all these application situations, METZ CONNECT offers full service, from the printed circuit board to the Internet.

As a partner of numerous international companies, we offer expertise resulting from 40 years of experience in standardised and, above all, customer-specific system solutions for a variety of applications in connection technology. We see ourselves as a problem solver and do not settle for the second-best solution. The search for perfection may seem expensive, but it is worth it.

Join us in mutual projects concerning equipment and plant construction as well as the structured cabling of buildings and industrial sites. We are looking forward to working with you!

Best regards

Jochen Metz

Christian Metz Managing Partner

L.l. metz

and the entire team from METZ CONNECT.

# Innovation and consistency – from the printed circuit board to the end device.

Our high-quality, user-friendly and internationally standardised components and systems are divided into three clear ranges:



### P Cabling

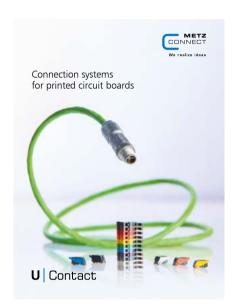
## Copper and Fiber Optics solutions for networks

Highly specialised, internationally standardised and high-performance network solutions in copper and fiber optic technology are impressive due to their comfortable installation, maximum quality and highest system capability across all relevant performance classes. They are used in structured building and industrial cabling as well as in data centres.



The increasing demand for data transmission volumes requires the ever greater performance and consistency of the data networks. IT technologies can be found in many applications in buildings, data centres and industrial plants.

Introduction and overview P|Cabling from page 9



#### **U** Contact

## Connection systems for printed circuit boards

Innovative products, solutions and systems for the connection technology of printed circuit boards and devices. Products that are compatible with market standards as well as customised product solutions, including for industrial control and building automation, reflect our core competence in this area.







Connectors



Board-to-board



### **C** | Logline

## Intelligent components for systems and switch cabinets

Intelligent system components for highly communicative and decentralised control in the areas of building and process control, relay technology and telecommunications



Bus modules



Inteface modules



Timer-, process- and monitoring relays



Notes



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Matching accessories for GC400 SL23 Cat.6 U/UTP LSHF

Jokari dismantle tool



#### GC400 SL23 Cat.6 U/UTP LSHF

- 1 GBit installation cable, simplex
- unshielded installation cable Cat.6 class E AWG 23 U/UTP
- 4 pairs with separator (spline)
- outer diameter 5.3 mm
- coupling attenuation not less than 40 dB
- applicable standards: EN 50173-1:2011-09; ISO/IEC 11801 Ed.2.2:2011-06; EN 50288-6-1, IEC 61156-5, EIA/TIA 568B
- cable jacket: LSHF (LSOH)
- flame-retardant to IEC 60332-1; IEC 60754-2 and IEC 61034
- fire behaviour: Class  $\rm E_{ca}$  (classification acc. to EN 13501-6)

Shipping Units:

 1000 ft (305 m)
 in a box

 1640 ft (500 m)
 on drum

 3280 ft (1000 m)
 on drum

#### Principle diagram



P/N	Color	Feature 1	Feature 2
1308406032140	blue	305 m (1000 ft)	box
1308406032141	blue	500 m (1640 ft)	drum
1308406032142	blue	1000 m (3280 ft)	drum





#### E-DAT modul coupler 180° is matching accessories for

Keystone 19 inch module frame 0.5RU 24 port black 22 unequipped

Keystone module frame 3RU, 7HP 6 port stainless steel / unequipped

#### E-DAT modul coupler 90° is matching accessories for Page

Keystone 19 inch module frame 0.5RU 24 port black unequipped



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#### E-DAT modul coupler 180°

- RJ45 cable coupler Cat.6 class E<sub>A</sub>
   compliance with class E<sub>A</sub> to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- fully shielded 180° coupler made of refined zinc die-casting
- · especially suitable for consolidation points and crossconnect cabling
- 2 mounting versions in a coupler; fits in module or keystone applications

Suitable applications for module design

- module wall outlets
- module face plates
- 19 inch module frame
- surface mounted housing
- Subway

Module

cut-out

- E-DATmodul REG
- Modul REG IP20
- Industry built in flange EBM

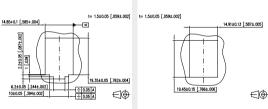
for keystone design

- keystone wall outlets - keystone face plates
- 19 inch keystone frame
- Keystone REG IP20

#### - Subway Keystone

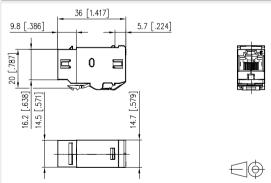
- Industry built in flange EBK

### Keystone module



cut-out

## **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
1309A0-I		8(8) coupler	180°





#### E-DAT modul coupler 90°

- RJ45 cable coupler Cat.6 class E
- compliance with class E<sub>a</sub> to ISO/ÎEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- fully shielded 90° coupler made of refined zinc die-casting
- especially suitable for consolidation points and crossconnect cabling
- 2 mounting versions in a coupler; fits in module or keystone applications

Suitable applications for module design

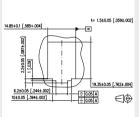
- module wall outlets - module face plates
- Modul REG IP20
- Industry built in flange EBM

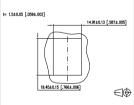
for keystone design

- keystone wall outlets
- keystone face plates - Keystone REG IP20
- Industry built in flange EBK

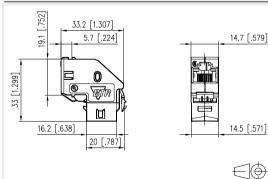
#### Module cut-out

#### Keystone module cut-out





 $\in \mathbb{A}$ 



P/N	Color	Feature 1	Feature 2
1309A1-I		8(8) coupler	90°





UTP module Cat.6 | keystone | pearl white is matching accessories for

Keystone 19 inch module frame 0.5RU 24 port black unequipped

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UTP module Cat.6 | keystone | black is matching accessories for

Keystone 19 inch module frame 0.5RU 24 port black unequipped



#### UTP module Cat.6 | keystone | pearl white

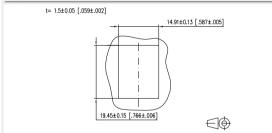
- unshielded Cat.6 class E UTP module
- · for Gigabit Ethernet
- compliance with class E to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for Power over Ethernet (PoE, PoE plus and UPoE)
- easy to install connection of 2 to 4-pair data lines AWG 24/1 - 22/1 and stranded wires with 7 copper conductors AWG 26/7 to BTR 8-fold insulation displacement connectors (IDC)
- · optional strain relief with cable tie at UTP module
- installation shape: Keystone



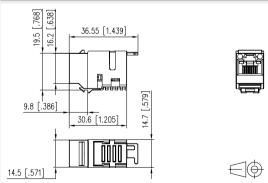
#### UTP module Cat.6 | keystone | black

- unshielded Cat.6 class E UTP module
- for Gigabit Ethernet
- compliance with class E to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for Power over Ethernet (PoE, PoE plus and UPoE)
- easy to install connection of 2 to 4-pair data lines AWG 24/1 - 22/1 and stranded wires with 7 copper conductors AWG 26/7 to BTR 8-fold insulation displacement connectors (IDC)
- optional strain relief with cable tie at UTP module
- installation shape: Keystone

#### Keystone module cut-out

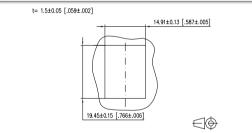


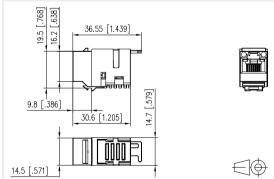
#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
130A10-I-B1	pearl white	Cat.6 T568B	Keystone module cut-out

#### Keystone module cut-out





P/N	Color	Feature 1	Feature 2
130A10-29-I-B1	black	Cat.6 T568B	Keystone module cut-out





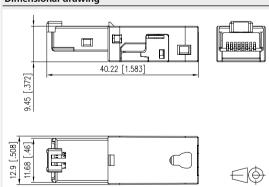




## E-DAT Industry RJ45 field plug insert Cat.6 Class $\mathbf{E}_{\mathtt{A}}$

- Cat.6 class  $\rm E_{\lambda}$  plug to be assembled in the field and mounted in IP67 plug housings of variants 1, 4, 5 and 14
- compliance with class E<sub>A</sub> to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- 8-wire RJ45 plug for AWG 22 to be assembled in the field
- connection of AWG 26/7 22/7; AWG 26/1 22/1 possible
- solid copper wire diameter from 0.4 to 0.64 mm
- stranded copper wire diameter from 0.48 to 0.76 mm
- conductor diameter up to 1.6 mm
- cable jacket from 5.5 to 8.5 mm
- consists of only 2 parts
- easy assembly connection without special tools
- zinc die-cast housing for industrial use
- can be used as test plug at IP67 end of variants 1, 4, 5, 6 and 14
- variants: T568A, T568B, Industry

Gehäuse siehe Seite 60



P/N	Color	Feature 1	Feature 2
1401400810-I		8(8) field plug	for plugs





Matching accessories for 19 inch Module frame 1RU aluminium unequipped for UTP Keystone

Dust protection covers for Modul patch panels / subway / REG yellow

Dust protection covers for Modul patch panels / subway / REG blue 4<sup>7</sup>

Dust protection covers for Modul patch panels / subway / REG green

Dust protection covers for Modul patch panels / subway / REG red



## 19 inch Module frame 1RU aluminum unequipped for UTP Keystone

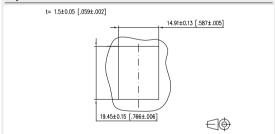
- 19 inch 1RU module frame for 24 individual modules; Keystone design
- module frame front made of black anodized aluminum
- plastic module support with dust protection covers (other colors available as accessory); detachable to the front
- integrated cable support with optional strain relief
- label window for enclosed identification labels
- label sheet 210 x 297 mm see accessory
- grounding bolt M6 x 10 with nut and lock washer



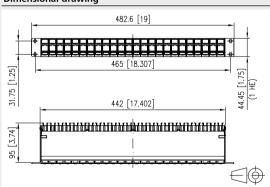
#### UTP 24 port 1RU LSA Cat.6 patch panel

- 19 inch 1RU Cat.6 patch panel with 24 RJ45 ports 8(8)
- 19 inch module frame made of black sheet steel
- 4 individual 6 port connection blocks, unshielded
- connection of the unshielded data cables to LSA insulation displacement connectors (AWG 22 to 26)
- wire connection possible according to T568A and T568B
- with 4 clip-in plastic cable brackets
- · punch down patch panel

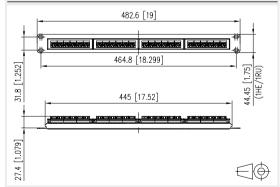
#### Keystone module cut-out



#### Dimensional drawing



P/N	Color	Feature 1	Feature 2
130A20-BK-E	black	24 Port w/o modules	Keystone module cut-out
130A20-00-E	light grey	24 Port w/o modules	Keystone module cut-out



P/N	Color	Feature 1	Feature 2
130A10-AP29-E	black	24 Port	





#### Application neutral connection cable

- High quality ready made application neutral connection cable for structured building cabling
- Very wide range of possible combinations thanks to various copper cable types, jacks and plugs possible
- Online cable configurator can be found on our homepage http://www.metz-connect.com/en/configurator-copper-andfiber-optique-cables





Example 1: Application neutral connection cable









Application neutral connection cable GC1000plus AWG 23/1 Cat.7 LSHF S/FTP, 1-1 (T568A), E-DAT modul, E-DAT modul, Length 1 m

#### Example 2: Application neutral connection cable









Application neutral connection cable PK AWG 26/7 Cat.6<sub>A</sub> LSHF S/FTP, 1-1 (T568B), C6<sub>A</sub>modul 180°, RJ45 field plug pro, Length 6 m

\*\* Only possible in combination

with GC1300 and GC1500

#### Part number key for further versions

 $\mathbf{D} = \mathsf{GC600} \mathsf{AWG} \mathsf{23/1} \mathsf{Cat.6}_{\mathsf{A}} \mathsf{LSHF} \mathsf{U/FTP}$ 

F = GC1000 plus AWG 23/1 Cat.7 LSHF S/FTP

**G** = GC1000 plus 2xAWG 23/1 Cat.7 LSHF S/FTP

 $\mathbf{H} = \text{GC}1300 \text{ pro AWG } 22/1 \text{ Cat.7}_{\Delta} \text{ LSHF-FR S/FTP}$ 

M = GC1300 pro 2xAWG 22/1 Cat.7A LSHF-FR S/FTP

 $\mathbf{L} = \mathsf{GC1500} \; \mathsf{pro} \; \mathsf{AWG} \; \mathsf{22/1} \; \mathsf{Cat.7}_{\Delta} \; \mathsf{LSHF-FR} \; \mathsf{S/FTP}$ 

 $T = PK AWG 26/7 Cat.6_{A} LSHF S/FTP$ 

1 = RJ45 plug

2 = RJ45 field plug black

M = RJ45 field plug pro

**P** = RJ45 field plug pro 360° \*

#### Jacks

**7** = E-DAT modul

K = E-DAT modul K

 $8 = C6_{\Lambda} \text{modul } 180^{\circ}$ 

 $9 = C6_{\Delta} \text{modul K } 180^{\circ}$ 

 $\mathbf{B} = C6_{\Delta} \text{modul } 270^{\circ}$ 

 $\mathbf{D} = C6_A \text{modul K } 270^\circ$ 

**U** = 25Gmodul \*\*

05 = 0.5 m10 = 1.0 m

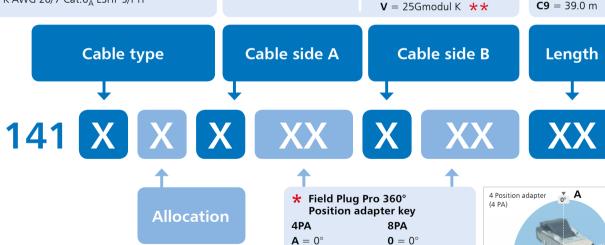
**95** = 9.5 m

A0 = 10.0 m

A9 = 19.0 mB0 = 20.0 m

B5 = 25.0 m

C9 = 39.0 m



#### 2 = Crossover 4 = 1-1 T568A

**1** = 1-1 T568B

 $\mathbf{A} = 0^{\circ}$ 

 $B = 90^{\circ}$ 

 $C = 180^{\circ}$ 

 $D = 270^{\circ}$ 

 $2 = 90^{\circ}$  $3 = 135^{\circ}$ 

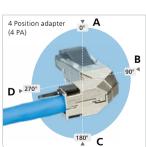
 $4 = 180^{\circ}$ 

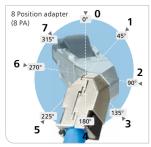
 $1 = 45^{\circ}$ 

 $5 = 225^{\circ}$ 

 $6 = 270^{\circ}$ 

 $7 = 315^{\circ}$ 





These cables will be manufactured according to your specifications. They can therefore neither be exchanged nor returned.



Matching accessories for GC600 F1 23 Cat.6<sub>A</sub> U/FTP 4P LSFH

Jokari dismantle tool

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#### MC GC500 Z2F23 Cat.6 $_{\rm A}$ U/UTP 4P LSHF 1640 ft

- 10 GBit installation cable, simplex
- unshielded installation cable Cat.6, Class E, AWG 23 U/UTP
- 4 pairs with separator (spline)
- foils wrapped diagonally with gaps as separating layers in the cable jacket
- outer cable diameter: 8.2 mm
- color of the cable jacket: blue
- · coupling attenuation not less than 40 dB
- applicable standards: EN 50173-1:2011-09; ISO/IEC 11801 Ed.2.2:2011-06; EN 50288-11-1, IEC 61156-5, EIA/TIA 568-C.2
- · cable jacket LSHF (LSOH)
- flame retardant to IEC 60332-1; IEC 60754-2 and IEC 61034
- fire behaviour: Class E (classification acc. to EN 13501-6)

**Delivery units:** 500 m on drum





#### GC600 F1 23 Cat.6 $_{\rm A}$ U/FTP 4P LSFH

- 10 GBit installation cable, simplex
- installation cable cat. 6A AWG 23 U/FTP with wires shielded in pairs
- 4 pairs (PiMF)
- pair shield: plastic foil with aluminum coating
- outer diameter 7.0 mm
- color of the cabel jacket: blue
- coupling attenuation not less than 55 dB
- applicable standards: EN 50173-1:2011-09; ISO/IEC 11801 Ed.2.2:2011-06; EN 50288-5-1, IEC 61156-5 und EIA/TIA
- cable jacket: LSHF (LSOH)
- flame-retardant to IEC 60332-1; IEC 60754-2 and IEC 61034
- fire behaviour: Class E<sub>ca</sub> (classification acc. to EN 13501-6)

**Shipping Units:** 

on drum sold by meter 1640 ft (500 m) on drum 3280 ft (1000 m) on drum

#### Principle diagram



P/N	Color	Feature 1	Feature 2
1308406A32141	blue	500 m (1640 ft)	drum

#### Principle diagram



P/N	Color	Feature 1	Feature 2
1308436A32141	blue	500 m (1640 ft)	drum
1308436A32142	blue	1000 m (3280 ft)	drum





UTP modul 8(8) Cat.6<sub>A</sub> keystone pearl white is matching accessories for

Page

Keystone 19 inch module frame 0.5RU 24 port black unequipped

22

## UTP modul 8(8) Cat.6<sub>A</sub> keystone black is matching accessories for

Page

22

Keystone 19 inch module frame 0.5RU 24 port black unequipped



#### UTP modul 8(8) Cat.6<sub>A</sub> keystone pearl white

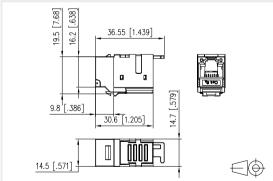
- unshielded modular termination unit Cat.6., RJ45
- component testing for Cat.6, to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, TIA/EIA-568-C.2 (2009-08) and IEC 60603-7-41 Ed.1 (12/2008), certified by GHMT
- component testing for Cat.6  $_{\rm A}$  to TIA/EIA-568-C.2 and IEC 60512-27-100, certified by GHMT
- compliance with class E<sub>A</sub> to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, certified by GHMT
- tested: component up to 600 MHz, link up to 800 MHz
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- easy to install connection of 2 to 4 pair data cables AWG 26/1 to 22/1 (solid wire) and stranded wires with 7 Cu strands AWG 26/7 to 22/7 (stranded wire) to insulation displacement connectors (IDC)
- marking of conductor assignment T568A and T568B
- easy and rapid insertion of the wire pairs into the UTP stuffer cap
- · plastic module housing
- · mounting without special tool
- strain relief possible with cable ties at the module
- mounting of colored dust protection covers to the module possible
- design: Keystone
- cable feed 180°
- · variants: white and black



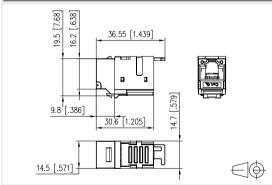
#### UTP modul 8(8) Cat.6, keystone black

- unshielded modular termination unit Cat.6<sub>A</sub>, RJ45
- component testing for Cat.6, to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, TIÂ/EIA-568-C.2 (2009-08) and IEC 60603-7-41 Ed.1 (12/2008), certified by GHMT
- component testing for Cat.6  $_{\! A}$  to TIA/EIA-568-C.2 and IEC 60512-27-100, certified by GHMT
- compliance with class  $\rm E_A$  to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, certified by GHMT
- tested: component up to 600 MHz, link up to 800 MHz
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- easy to install connection of 2 to 4 pair data cables AWG 26/1 to 22/1 (solid wire) and stranded wires with 7 Cu strands AWG 26/7 to 22/7 (stranded wire) to insulation displacement connectors (IDC)
- marking of conductor assignment T568A and T568B
- easy and rapid insertion of the wire pairs into the UTP stuffer cap
- plastic module housing
- mounting without special tool
- strain relief possible with cable ties at the module
- mounting of colored dust protection covers to the module possible
- design: Keystone
- cable feed 180°
- · variants: white and black

#### **Dimensional drawing**



		ı	74
P/N	Color	Feature 1	Feature 2
130A11KI		180°	Keystone module cut-out



		ı	74
P/N	Color	Feature 1	Feature 2
130A11-29KI		270°	Keystone module cut-out





#### Matching accessories for E-DAT modul Cat.6<sub>A</sub> K jack - Keystone style

	ra
Dust protection cover for C6 <sub>A</sub> modul black	40
Dust protection cover for C6 <sub>A</sub> modul pure white	40
Dust protection cover for C6 <sub>A</sub> modul light gray	40
Dust protection cover for C6 <sub>A</sub> modul yellow	40
Dust protection cover for C6 <sub>A</sub> modul blue	40
Dust protection cover for C6, modul green	40

#### Matching accessories for C6<sub>A</sub> modul K 180°

40

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**Dust protection cover for** 

C6, modul red

Dust protection cover for C6, modul black	40
Dust protection cover for C6 <sub>A</sub> modul pure white	40
Dust protection cover for C6 <sub>A</sub> modul light gray	40
Dust protection cover for C6 <sub>A</sub> modul yellow	40
Dust protection cover for C6 <sub>A</sub> modul blue	40
Dust protection cover for C6 <sub>A</sub> modul green	40
Dust protection cover for C6, modul red	40

#### C6A modul K 180° is matching accessories for

Keystone 19 inch module frame 0.5RU 24 port black unequipped

Keystone module frame 3RU, 25 7HP 6 port stainless steel / unequipped

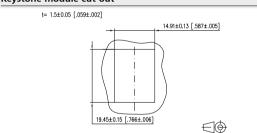




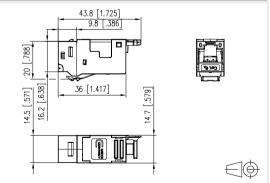
#### E-DAT modul Cat. $6_A$ K jack - Keystone style

- modular termination unit Cat.6<sub>A</sub>, RJ45
   component testing for Cat.6<sub>A</sub> to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, TIA/EIA-568-C.2 (2009-08) and IEC 60603-7-51 Ed.1 (12/2008), certified to GHMT
- compliance with class E<sub>A</sub> to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- tested: component up to 600 MHz, link up to 800 MHz
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- easy to install connection of 2 to 4 pair data cables AWG 26/1 to 22/1 (solid wire) and stranded wires with 7 copper conductors AWG 26/7 to 22/7 to insulation displacement connectors (IDC)
- marking of conductor assignment to T568A and T568B
- easy and fast insertion of wire pairs in E-DAT modul stuffer cap
- module housing made of refined zinc die-casting
- · mounting without special tools
- strain relief with cable tie at the module
- · mounting version: Keystone
- cable feed 180°

#### Keystone module cut-out



#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
130910KI		180°	Keystone module cut-out



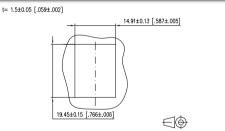


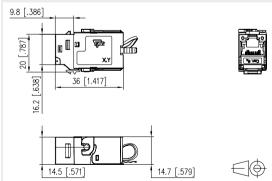


C6, modul K 180°

- modular Cat.6, termination unit RJ45
- mounting version: Keystone, 180° cable feed
- solid, one-piece and reusable module housing refined with zinc die-casting
- mounting without special tools; strain relief directly snapped on to stuffer cap
- easy to install connection of data lines AWG 26/1 to 22/1 (solid wire) and AWG 26/7 to 22/7 (stranded wire) to insulation displacement connectors (IDC)
- intelligent cable management in stuffer cap also suitable for heavily twisted cables
- conductor assignment to T568A and T568B is directly printed on the stuffer cap
- certified to GHMT Cat.6, re-embedded PVP
- component testing for Cat.6, to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, TIA/EIA-568-C.2 (2009-08) and IEC 60603-7-51 Ed.1 (12/2008), certified to GHMT
- compliance with class  $\rm E_{\rm A}$  up to 500 MHz to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- tested: component up to 600 MHz, link up to 800 MHz
- for 10 GBit Ethernet (IEEE 802.3an)
- suitable for Power over Ethernet (PoE, PoE plus and UPoE)

#### Keystone module cut-out





P/N	Color	Feature 1	Feature 2
130B21-E		180°	Keystone module cut-out





#### Matching accessories for C6<sub>A</sub> modul K 270°

	Pag
Oust protection cover for C6 <sub>a</sub> modul black	40
Oust protection cover for C6 <sub>A</sub> modul pure white	40
Oust protection cover for C6 <sub>a</sub> modul light gray	40
Oust protection cover for C6 <sub>a</sub> modul yellow	40
Oust protection cover for C6 <sub>a</sub> modul blue	40
Oust protection cover for CG <sub>a</sub> modul green	40
Oust protection cover for C6, modul red	40

#### C6<sub>A</sub> modul K 270° is matching accessories for Page

22

Keystone 19 inch module frame 0.5RU 24 port black unequipped



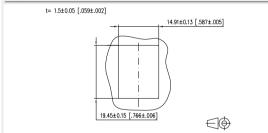
#### C6<sub>a</sub>modul K 270°

**Cat.6**<sub>△</sub> | Modules

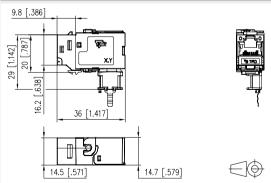
- modular Cat.6, termination unit RJ45
- mounting version: Keystone, 270° cable feed
- · solid, one-piece and reusable module housing refined with zinc die-casting
- mounting without special tools; strain relief directly snapped on to stuffer cap
- easy to install connection of data lines AWG 26/1 to 22/1 (solid wire) and AWG 26/7 to 22/7 (stranded wire) to insulation displacement connectors (IDC)
- intelligent cable management in stuffer cap also suitable for heavily twisted cables
- conductor assignment to T568A and T568B is directly printed on the stuffer cap
- certified to GHMT Cat.6, re-embedded PVP
   component testing for Cat.6, to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, TIA/EIA-568-C.2 (2009-08) and
- IEC 60603-7-51 Ed.1 (12/2008), certified to GHMT

   compliance with class E<sub>A</sub> up to 500 MHz to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- tested: component up to 600 MHz, link up to 800 MHz
- for 10 GBit Ethernet (IEEE 802.3an)
- suitable for Power over Ethernet (PoE, PoE plus and UPoE)

#### Keystone module cut-out



#### **Dimensional drawing**



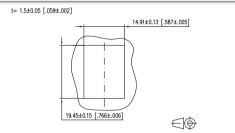
P/N	Color	Feature 1	Feature 2
130B22-E		270°	Keystone module cut-out

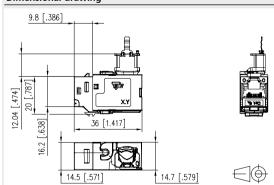


#### C6 modul K 90° - Keystone

- modular Cat.6, termination unit RJ45
- mounting version: Keystone, 90° cable feed
- solid, one-piece and reusable module housing refined with zinc die-casting
- mounting without special tools; strain relief directly snapped on to stuffer cap
- easy to install connection of data lines AWG 26/1 to 22/1 (solid wire) and AWG 26/7 to 22/7 (stranded wire) to insulation displacement connectors (IDC)
- intelligent cable management in stuffer cap also suitable for heavily twisted cables
- conductor assignment to T568A and T568B is directly printed on the stuffer cap
- certified to GHMT Cat.6, re-embedded PVP component testing for Cat.6, to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, TIA/EIA-568-C.2 (2009-08) and
- IEC 60603-7-51 Ed.1 (12/2008), certified to GHMT compliance with class E<sub>A</sub> up to 500 MHz to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- tested: component up to 600 MHz, link up to 800 MHz
- for 10 GBit Ethernet (IEEE 802.3an)
- suitable for Power over Ethernet (PoE, PoE plus and UPoE)

#### Keystone module cut-out





P/N	Color	Feature 1	Feature 2
130B23-E		90°	Keystone module cut-out





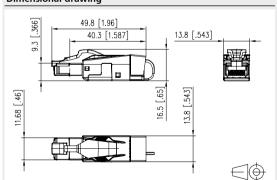
#### C6<sub>A</sub> RJ45 field plug pro

- Cat.6<sub>Δ</sub> class E<sub>Δ</sub> RJ45 plug to be assembled in the field
- fully shielded and multi-port capable
- straight (180°) cable feed
- easy assembly connection without special tools
- wire connection: stranded wire AWG 27/7 to 22/7, wire diameter from 0.46 to 0.76 mm
- wire connection: solid wire AWG 26/1 to 22/1, wire diameter from 0.4 to 0.64 mm
- transmission characteristics  $Cat.6_A$  per ISO/IEC 11801 Ed.2.2:2011-06
- compliance with class E<sub>A</sub> to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- 10 GBit suitable according to IEEE 802.3an
- suitable for Power over Ethernet (PoE, PoE plus and UPoE)
- degree of protection IP20
- for cable jacket diameter from 5.5 to 10.5 mm
- zinc die-cast housing for industrial use consists of only 2 parts
- · strain relief by latching clip directly on the stuffer cap
- · protected locking hook
- reconnectable

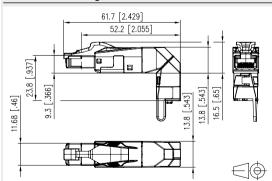
## C6<sub>A</sub> RJ45 field plug pro 360

- Cat.6<sub>Δ</sub> class E<sub>Δ</sub> RJ45 plug to be assembled in the field
- fully shielded and multi-port capable
- variable (360°) cable feed, freely selectable
- easy assembly connection without special tools
- wire connection: stranded wire AWG 27/7 to 22/7, wire diameter from 0.46 to 0.76 mm
- wire connection: solid wire AWG 26/1 to 22/1, wire diameter from 0.4 to 0.64 mm
- transmission characteristics Cat.6<sub>A</sub> per ISO/IEC 11801 Ed.2.2:2011-06
- compliance with class E<sub>A</sub> to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- 10 GBit suitable according to IEEE 802.3an
- suitable for Power over Ethernet (PoE, PoE plus and UPoE)
- degree of protection IP20
- for cable jacket from 5.5 to 10.5 mm
- zinc die-cast housing for industrial use
- strain relief by latching clip directly on the stuffer cap
- · protected locking hook
- reconnectable

#### Dimensional drawing



P/N	Color	Feature 1	Feature 2
130E405032-E	black	8(8) field plug	



P/N	Color	Feature 1	Feature 2
130E405042-E	black	8(8) field plug	







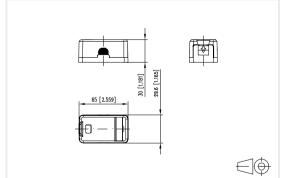
#### **Extension box APL**

- for connection of the termination point line network (APL), equipped with C6, modul K 180°
- suitable for mounting on support rail in counter panel of general power supply below cover in room for additional applications to VDE-AR-N 4101:2011-08
- failsafe contact with integrated dust protector slide
- for connection of an MUC communication module
- certified to GHMT Cat.6, re-embedded PVP
- component testing for Cat.6, to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, TIA/EIA-568-C.2 (2009-08) and IEC 60603-7-51 Ed.1 (12/2008), certified to GHMT
- compliance with class E<sub>A</sub> up to 500 MHz to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- tested: components up to 600 MHz, link up to 800 MHz
- for 10 GBit Ethernet (IEEE 802.3an)
- suitable for Power over Ethernet (PoE, PoE plus and UPoE)
- connection of data lines AWG 26/1 to 22/1 (solid wire) and AWG 26/7 to 22/7 (stranded wire) to insulation displacement connectors (IDC)
- plug direction of module inclined at 90° to top hat rail
- · strain relief snapped on to stuffer cap
- with label window for enclosed identification labels
- cover parts in pure white RAL 9010, glossy surface
- variants: APL, APL with red patch cord (0.5 m)

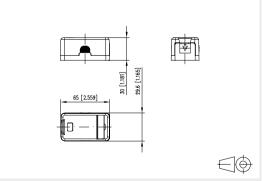
### Extension box APL E-DAT modul keystone

- for connection of the termination point line network (APL), equipped with E-DAT modul K
- suitable for mounting on support rail in counter panel of general power supply below cover in room for additional applications to VDE-AR-N 4101:2011-08
- failsafe contact with integrated dust protector slide
- for connection of an MUC communication module
- component testing for Cat.6A to ISO/IEC 11801
   Ed.2.2:2011-06, DIN EN 50173-1:2011-09, TIA/EIA-568-C.2
   (2009-08) and IEC 60603-7-51 Ed.1 (12/2008), certified to GHMT
- compliance with class E<sub>A</sub> up to 500 MHz to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- tested: components up to 600 MHz, link up to 800 MHz
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- connection of data lines AWG 26/1 to 22/1 (solid wire) and AWG 26/7 to 22/7 (stranded wire) to insulation displacement connectors (IDC)
- plug direction of module inclined at 90° to top hat rail
- strain relief snapped on to stuffer cap
- with label window for enclosed identification labels
- cover parts in pure white RAL 9010, glossy surface

#### **Dimensional drawing**



_			
P/N	Color	Feature 1	Feature 2
130B21D1APL-E	pure white	AP 1 Port	
130B21D1APLP-E	pure white	AP 1 Port	with patch cord



P/N	Color	Feature 1	Feature 2
130910D1APLKE	pure white		



#### Matching accessories for Keystone 19 inch module frame 0.5RU 24 port black unequipped

	Pag
E-DAT modul Coupler 8(8) 180° Cat.6	11
E-DAT modul Coupler 8(8) 90° Cat.6	11
UTP modul 8(8) Cat.6 pearl white	12
UTP modul 8(8) Cat.6 black	12
UTP modul 8(8) Cat.6 <sub>A</sub> keystone pearl white	17
UTP modul 8(8) Cat.6 <sub>A</sub> keystone black	17
C6 <sub>A</sub> modul K 180° jack - Keystone style	18
C6 <sub>a</sub> modul K 270° jack - Keystone style	19
C6 modul K 90° jack - keystone	



Keystone 19 inch module frame 0.5RU

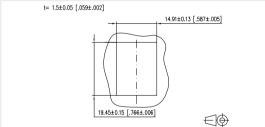
- 24 port black unequipped • 19 inch module frame 0.5RU 24 port unequipped, black
- for 24 individual modules in Keystone design
- additional strain relief on patch panel possible by cable ties, cable ties included in delivery
- suitable modules: E-DAT modul K, UTP modul Cat.6, UTP modul Cat.6, UTP modul Cat.5e
- · design: Keystone



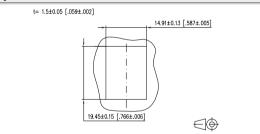
#### 19 inch module frame 1RU aluminium unequipped for shielded Keystone

- 19 inch 1RU module frame for 24 individual modules; Keystone design
- module frame front made of black anodized aluminum
- plastic module support with dust protection covers (other colors available as accessories); detachable to the front
- integrated cable support with optional strain relief
- label window for identification labels
- label sheet 210 x 297 mm see accessories
- grounding bolt M6 x 10 with nut and lock washer
- incl. 30 cm grounding cable
- all fully shielded modules connected by means of grounding

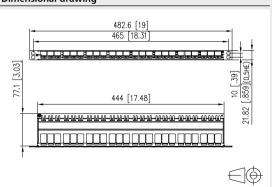
#### Keystone module cut-out



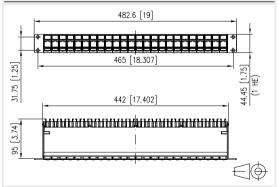
#### Keystone module cut-out



#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
130925-BKKE	black	24 port unequipped	Keystone module cut-out



P/N	Color	Feature 1	Feature 2
130920-BKKE	black	24 port unequipped	Keystone module cut-out
130920-00KE	grey	24 port unequipped	Keystone module cut-out







## Keystone module frame 1RU, 24 port black unequipped

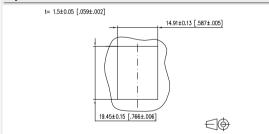
- Keystone 19 inch module frame 1RU 24 port unequipped, shielded
- for 24 individual modules, Keystone design
- module frame front made powder-coated steel
- · module supports made of galvanized sheet steel
- additional strain relief possible on module support by cable ties
- · grounding skrew with lock washer
- incl. 40 cm grounding cable
- all fully shielded modules are interconnected through the module support
- · variants: black or gray

## Keystone module frame 1RU, 24 port angeled black unequipped

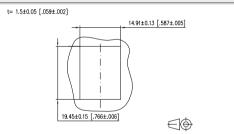
- Keystone 19 inch module frame 1RU 24 port angled, unequipped, shielded
- for 24 individual modules, Keystone design
- module frame front made of powder-coated steel
- angled port openings, ports 1 to 12 angled by about 30° to the right, ports 13 to 24 angled by about 30° to the left
   module support made of galvanized sheet steel
- additional strain relief possible by cable ties on module support
- grounding screw with lock washer
- 40 cm grounding cable included
- all fully shielded modules are interconnected through the module support

variants: black or gray

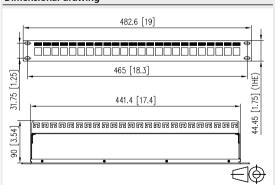
#### Keystone module cut-out



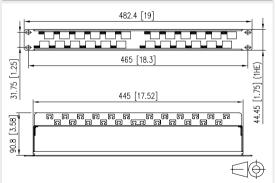
#### Keystone module cut-out



#### Dimensional drawing



			·
P/N	Color	Feature 1	Feature 2
130926-0029KE	black	24 port unequipped	Keystone module cut-out



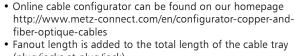
P/N	Color	Feature 1	Feature 2
130926A0029KE	black	24 port unequipped	Keystone module cut-out



#### **RJ45** | Configurator

#### Trunk- and consolidation point link cable

- High quality assembled CP link / trunk cable
- Various copper cable types possible
- Umwicking of up to 12 cables with grading fanout of the modules/connectors ready for assembly
- Very wide range of possible combinations through different jacks and plugs possible



(plug/jacks at plug/jack)







S/FTP, 2-fold, 2 x E-DAT modul 50 cm, 2 x E-DAT modul 30 cm, Length 10 m



#### Example 2: CP link cable



CP link / trunk cable GC1500pro AWG 21/1, Cat.7<sub>A</sub> LSHF-FR S/FTP, 6-fold, 6 x C6<sub>A</sub>modul 70 cm, 6 x C6<sub>A</sub>modul 50 cm, Length 15 m

> ★ Only possible in combination with GC1300 and GC 1500

#### Part number key for further versions

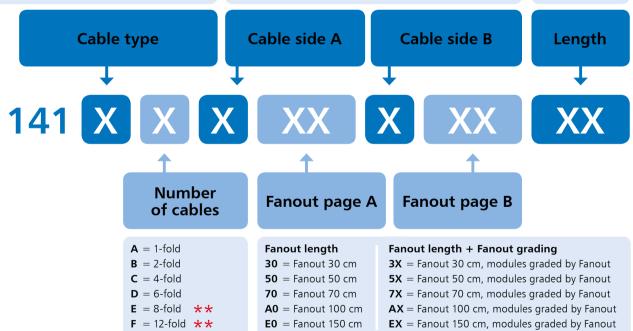
- $\mathbf{D} = \mathsf{GC600} \; \mathsf{AWG} \; \mathsf{23/1} \; \mathsf{Cat.6}_{\mathsf{A}} \; \mathsf{LSHF} \; \mathsf{U/FTP}$
- F = GC1000 plus AWG 23/1 Cat.7 LSHF S/FTP
- G = GC1000 plus 2xAWG 23/1 Cat.7 LSHF S/FTP
- $\mathbf{H} = \text{GC}1300 \text{ pro AWG } 22/1 \text{ Cat.7}_{\Delta} \text{ LSHF-FR S/FTP}$
- $\mathbf{M} = \mathsf{GC1300} \; \mathsf{pro} \; \mathsf{2xAWG} \; \mathsf{22/1} \; \mathsf{Cat.7}_{\Delta} \; \mathsf{LSHF-FR} \; \mathsf{S/FTP}$
- $\mathbf{L} = \text{GC1500 pro AWG 22/1 Cat.7}_{A} \text{ LSHF-FR S/FTP}$
- $T = PK AWG 26/7 Cat.6_A LSHF S/FTP$

#### Plua

- 1 = RJ45 plug
- 2 = RJ45 field plug black
- M = RJ45 field plug pro

#### **Jacks**

- **7** = E-DAT modul
- **K** = E-DAT modul K
- $8 = C6_{\Delta} modul 180^{\circ}$
- $9 = C6_{\wedge} \text{modul K } 180^{\circ}$
- **U** = 25Gmodul ★
- V = 25Gmodul K 🖈
- 05 = 0.5 m
- **10** = 1.0 m
- **95** = 9.5 m
- A0 = 10.0 m
- B0 = 20.0 m
- B5 = 25.0 m
- D9 = 49.0 m

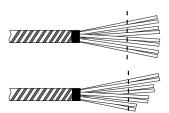


\*\* Only possible in combination with PK AWG 26/7 Cat.6<sub>A</sub>

#### Please note:

These cables will be manufactured according to your specifications. They can therefore neither be exchanged nor returned.





Fanout of equal length Length in cm: 30 / 50 / 70

Modules graded by Fanout

**Copper Solutions** 



OpDAT REGpro24 housing w/o splice tray	117
OpDAT REGpro housing w/o splice tray	117
OpDAT REGpro housing with splice tray	117

splice tray

Page



#### 19 inch module frame 1RU stainless steel unequipped for Keystone

- 19 inch 1RU stainless steel module frame for 24 individual modules; Keystone design
- optional strain relief on patch panel using cable ties
- grounding bolt M6 x 10 with nut and lock washer
  - incl. 30 cm grounding cable

Cat.6<sub>4</sub> | Panels

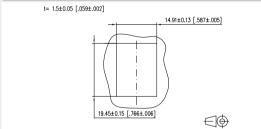
• all fully shielded Keystone modules are connected by means of the stainless steel module frame



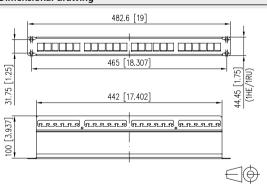
#### Module frame 6 port 3RU 7HP unequipped for Keystone

- stainless steel module frame for 6 individual modules in Keystone design
- strain relief at the module
- 3RU 7HP module frame with very short dimensions
- mounts in OpDAT REGpro, OpDAT REGpro24, OpDAT CM or 3HP module frame
- additional strain relief possible by cable tie
- · grounding possible by flat plug

#### Keystone module cut-out

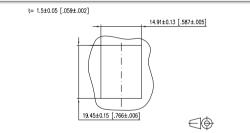


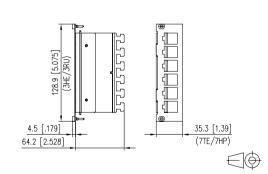
#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
130A21-00-E	stainless steel	24 port unequipped	Keystone module cut-out

#### Keystone module cut-out





P/N	Color	Feature 1	Feature 2
130B20E2E-E	stainless steel	6 port empty	Keystone module cut-out



#### **Patch cords**

- · fespecially suitable for shielded and unshielded class E<sub>A</sub> systems
- fully shielded Cat.6<sub>A</sub> patch cable AWG 26/7
- two shielded RJ45 connectors; 1:1 assignment
- cable type: S/FTP 4x2xAWG 26/7 PIMF
- · cable sheath: LSHF(LSOH), halogen free
- Cat.6<sub>A</sub> to ISO/IEC 11801 Ed.2.2 (2011-06) and IEC 61935-2 Ed. 3.0 (2010-07), certified to GHMT
- class E<sub>A</sub> Link up to 500 MHz to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for 10 GBit Ethernet (IEEE 802.3an) and Remote Powering (PoE, PoE plus and UPoE) and HDBaseT

- snagless boot with integrated lever protection
- colors may differ slightly due to different protection
- standard length: 0,5; 1; 1,5; 2; 3; 4; 5; 6; 7; 8; 10; 15 and 20 m
- · special lengths available on demand



#### Example

130845 05 77

#### Part number key for further versions

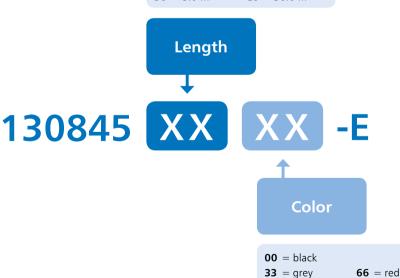


**44** = blue

**55** = green

**77** = yellow

**88** = white



Page



Matching accessories for GC1000 pro23 Cat.7 S/FTP 4P LSHF-FR

Page Jokari dismantle tool 46

Matching accessories for GC1000 plus23 Cat.7 S/FTP 4P LSHF

Jokari dismantle tool 46



#### GC1000 pro23 Cat.7 S/FTP 4P LSHF-FR

- · 10 GBit installation cable, simplex
- installation cable Cat.7 AWG 23 S/FTP with wires shielded in pairs
- 4 pairs (PiMF)
- · pair shield: plastic foil with aluminum coating
- · overall shield: tinned copper braid
- · outer diameter 7.5 mm
- · color of the cabel jacket: blue
- coupling attenuation 85 dB
- applicable standards: EN 50173-1:2011-09; ISO/IEC 11801 Ed.2.2:2011-06; EN 50288-4-1 and IEC 61156-5
- cable jacket: LSHF-FR (LSOH-FR)
- flame-retardant to IEC 60332-1; IEC 60332-3-24; IEC 60754-2 and IEC 61034
- fire behaviour: Class D s2 d1 a1 acc. to EN 50399 (classification acc. to EN 13501-6)

**Shipping Units:** 

sold by meter on drum 1640 ft (500 m) on drum 3280 ft (1000 m) on drum





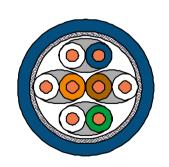
#### GC1000 plus23 Cat.7 S/FTP 4P LSHF

- 10 GBit installation cable, simplex
- installation cable Cat.7 AWG 23 S/FTP with wires shielded in pairs
- 4 pairs (PiMF)
- pair shield: plastic foil with aluminum coating
- overall shield: tinned copper braid
- outer diameter 7.3 mm
- color of the cabel jacket: blue
- coupling attenuation 75 dB
- applicable standards: EN 50173-1:2011-09; ISO/IEC 11801 Ed.2.2:2011-06; EN 50288-4-1 and IEC 61156-5
- cable jacket: LSHF (LSOH)
- flame-retardant to IEC 60332-1; IEC 60754-2 and IEC 61034
- fire behaviour: Class E<sub>ca</sub> (classification acc. to EN 13501-6)

**Shipping Units:** 

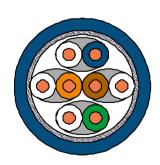
sold by meter on drum 1640 ft (500 m) on drum 3280 ft (1000 m) on drum

#### Principle diagram



P/N	Color	Feature 1	Feature 2
1308427034141	blue	500 m (1640 ft)	drum
1308427034142	blue	1000 m (3280 ft)	drum

#### Principle diagram



P/N	Color	Feature 1	Feature 2
1308427032141	blue	500 m (1640 ft)	drum
1308427032142	blue	1000 m (3280 ft)	drum





Matching accessories for GC1300 pro22 Cat.7<sub>A</sub> S/FTP 4P LSHF-FR

Page
Jokari dismantle tool 46

Matching accessories for GC1500 pro22 Cat.7<sub>A</sub> S/FTP 4P LSHF-FR

Jokari dismantle tool

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#### MC GC1300 pro22 Cat.7<sub>A</sub> S/FTP 4P LSHF-FR

- 25 GBit / 10 GBit Installationskabel, simplex
- paargeschirmtes Installationskabel Cat.7, AWG 22 S/FTP
- 4 Paare (PiMF)
- Paarschirm: Kunststoff-Verbundfolie, Aluminium beschichtet
- Gesamtschirm: Cu-Geflecht verzinnt
- Kabelaußendurchmesser 7,5 mm
- Kabelmantelfarbe: blau
- Kopplungsdämpfung größer gleich 85 dB
- elektrische Daten getestet bis 1500 MHz
- Geltende Normen: EN 50173-1; ISO/IEC 11801; EN 50288-9-1 und IEC 61156-5
- Kabelmantel LSHF-FR (LSOH-FR)
- Flammwidrigkeit: IEC 60332-1; IEC 60332-3-24; IEC 60754-2 und IEC 61034
- Brandverhalten: Klasse D<sub>cs</sub> s2 d2 a1 nach EN 50399 (Klassifizierung nach EN 13501-6)

Liefereinheiten:

als Meterware auf Trommel 500 m auf Trommel 1000 m auf Trommel



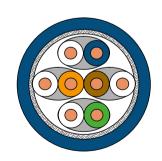
#### GC1500 pro22 Cat.7<sub>A</sub> S/FTP 4P LSHF-FR

- 10 GBit installation cable, simplex
- • installation cable Cat.7 $_{\rm A}$  AWG 22 S/FTP with wires shielded in pairs
- 4 pairs (PiMF)
- pair shield: plastic foil with aluminum coating
- overall shield: tinned copper braid
- outer diameter 8.5 mm
- · color of the cabel jacket: blue
- coupling attenuation not less than 85 dB
- applicable standards: EN 50173-1:2011-09; ISO/IEC 11801 Ed.2.2:2011-06; EN50288-9-1; IEC61156-5 and IEC61156-7
- cable jacket: LSHF-FR (LSOH-FR)
- flame-retardant to IEC 60332-1; IEC 60332-3-24; IEC 60754-2 and IEC 61034
- fire behaviour: Class D<sub>ca</sub> s2 d1 a1 acc. to EN 50399 (classification acc. to EN 13501-6)

**Shipping Units:** 

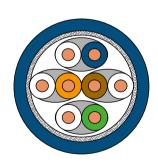
sold by meter on drum 3280 ft (1000 m) on drum

#### Prinzipbild



ArtNr.	Farbe	Merkmal 1	Merkmal 2
1308427B34141	blau	500 m (1640 ft)	simplex
1308427B34142	blau	1000 m (3280 ft)	simplex

#### Principle diagram



P/N	Color	Feature 1	Feature 2
1308427A34142	blue	1000 m (3280 ft)	drum







#### Keystone wall outlet EU style

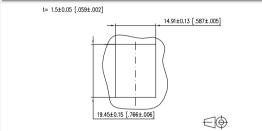
- flush-mounted termination unit for two individual Keystone modules
- EU style 86 x 86mm
- · straight plug direction
- strain relief with cable tie at the module
- label window for identification labels (labels included in the delivery)
- · integrated dust protection shutter
- cover parts in color similar to pure white RAL 9010, glossy surface



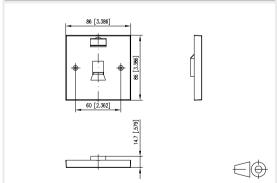
#### Keystone wall outlet EU style

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- straight plug direction
- strain relief with cable tie at the module
- label window for identification labels (labels included in the delivery)
- integrated dust protection shutter
- cover parts in color similar to pure white RAL 9010, glossy surface

#### Keystone module cut-out

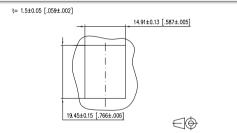


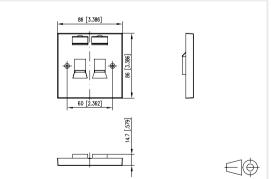
#### Dimensional drawing



P/N	Color	Feature 1	Feature 2
1309142502KE	white	1 Port w/o modules	Keystone module cut-out

#### Keystone module cut-out





P/N	Color	Feature 1	Feature 2
1309152502KE	white	2 Port empty	Keystone module cut-out



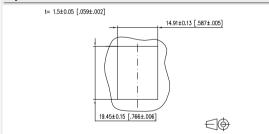




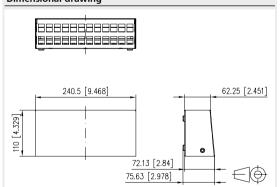
## Keystone surface mount housing 24 port pure white

- surface-mounted, unequipped module housing for individual modules, Keystone design
- · solid steel sheet housing
- upper part of the housing powder-coated in RAL 9010
- upper part of the housing can be put on and removed easily because no screws are used for fastening
- equipotential bonding possible by means of contact pin
- additional strain relief on lower part of housing using cable ties
- suitable for direct wall mounting, as desktop device and for DIN-rail mounting using the DIN rail adapter mini FS
- bottom of the 3-port and 4-port housing can be removed Additional fastening by means of 60 mm fastening clearance
- optionally available and fits in all housings: FO extension set for module and keystone surface mount housing: 130861-MSK-E
- optionally available 2 x 12 housing: Strain relief for patch cords 130861-24ZE-E
- variants: 3, 4, 6, 8, 12, 16 and 2 x 12 ports

#### Keystone module cut-out



#### Dimensional drawing



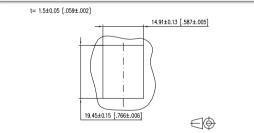
P/N	Color	Feature 1	Feature 2
130861-0302KE	pure white	3 Port	for Keystone
130861-0402KE	pure white	4 Port	for Keystone
130861-0602KE	pure white	6 Port	for Keystone
130861-0802KE	pure white	8 Port	for Keystone
130861-1202KE	pure white	12 Port	for Keystone
130861-1602KE	pure white	16 Port	for Keystone
130861-2402KE	pure white	24 Port	for Keystone

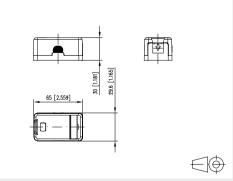


## Keystone wall outlet AP | surface mounting

- very compact 1-port surface-mounted termination unit for one individual Keystone module
- module plug direction 90° downwards
- · strain relief with cable tie at the module
- label window for identification labels (labels included in the delivery)
- · integrated dust protection shutter
- cover parts in color similar to pure white RAL 9010, glossy surface
- not suitable for 180° couplers (anti-bend sleeves for patch cables usually too long)
- variants: 1 port, 2 ports

#### Keystone module cut-out





P/N	Color	Feature 1	Feature 2
1309140002KE	white	1 Port w/o modules	Keystone module cut-out
1309150002KE	white	2 Port empty	Keystone module cut-out



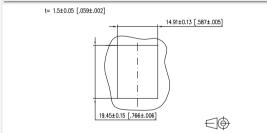


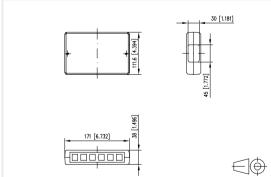


## Keystone wall outlet 6/12 port surface mounting

- very compact 6/12-port surface-mounted termination unit for six/twelve individual Keystone modules
- module plug direction 90° downwards
- strain relief with cable tie at the module
- cover parts in color similar to pure white RAL 9010, glossy surface
- with shielded modules suitable for 6 modules

#### Keystone module cut-out





P/N	Color	Feature 1	Feature 2
1309190002KE	white	6 Port w/o modules	Keystone module cut-out





#### **Matching accessories** for Frame for LJ6C

LJ6C Blind cover

Page 33

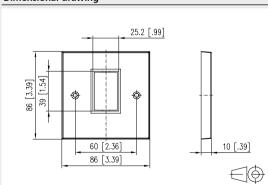
#### Frame for LJ6C is matching accessories for

Keystone termination unit 1 port LJ6C angled, unequipped 33



#### Frame for LJ6C

- flush mount frame 86 x 86mm
- to mount terminal units with 25 x 38 mm (LJ6C style)
- color of the cover parts similar to pure white RAL 9010, glossy surface
- attention: not compatible to "design" central units of leading switch lines
- variants: 1 port, 2 ports



P/N	Color	Feature 1	Feature 2
130B20F1LJ6C-E	pure white	1 port unequipped	⊔6С
130B20F2LJ6C-E	pure white	2 port unequipped	⊔6С





#### Matching accessories for Keystone termination unit LJ6C unequipped

Frame 86 x 86 mm for 1 x LJ6C white

Frame 86 x 86 mm for 2 x LJ6C white

#### Blind cover for LJ6C is matching accessories for Page

Frame 86 x 86 mm for 1 x LJ6C white 32

Frame 86 x 86 mm for 2 x LJ6C white 32



## Keystone termination unit LJ6C unequipped

- 1 port termination unit 25 x 38 mm (LJ6C format) for one individual Keystone module
- module plug direction approx 45° downwards
- strain relief with cable tie at the module
- label window for identification label (labels included in the delivery)
- · integrated dust protection shutter
- cover parts in color similar to pure white RAL 9010, glossy surface



#### Blind cover for LJ6C

- blind cover 1 piece 25 x 38 mm (LI6C format)
- color similar to pure white RAL 9010, glossy surface

P/N	Color	Feature 1	Feature 2
130B20A1⊔6C-E	pure white	angled	⊔6С

P/N	Color	Feature 1	Feature 2
130B20B1⊔6C-E	pure white	Blind cover	⊔6С





Matching accessories for Frame for 50 mm, pure white

2 x 12.5 x 50 mm Blind cover 36 25 x 50 mm Blind cover 36

Frame for 50 mm, pure white is matching accessories for

Page

Keystone termination unit 1 port 25 x 50 mm unequipped 35



#### Frame for 50 mm, pure white

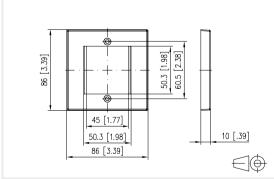
- flush mount frame with a height of 86 mm
- to mount terminal units with 25 x 50 mm
- color of the cover parts similar to pure white RAL 9010, glossy surface
- attention: not compatible to "design" central units of leading switch lines
- variants: 2 ports (width 86 mm), 4 ports (width 146 mm)



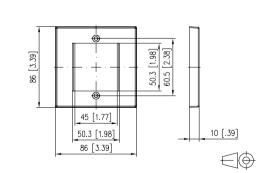
#### Frame for 50 mm, chrome

- flush mount frame with a height of 86 mm
- to mount terminal units with 25 x 50 mm
- color of the cover parts chrome, high glossy surface
- attention: not compatible to "design" central units of leading switch lines
- variants: 2 ports (width 86 mm), 4 ports (width 146 mm)

#### Dimensional drawing



P/N	Color	Feature 1	Feature 2
130B20F125-E	pure white	2 port unequipped	25 x 50 mm
130B20F225-E	pure white	4 port unequipped	25 x 50 mm



			· ·
P/N	Color	Feature 1	Feature 2
130B20F125CE	chrome	2 port unequipped	25 x 50 mm
130B20F225CE	chrome	4 port unequipped	25 x 50 mm





#### Matching accessories for Keystone termination unit 25 x 50 mm unequipped

	Pag
Frame 86 x 86 mm for 2 x 25 x	
50 mm white	34
Frame 146 x 86 mm for 4 x 25	
x 50 mm white	34

#### Matching accessories for Keystone termination unit 25 x 50 mm unequipped

Frame 86 x 86 mm for 2 x 25 x			
50 mm white	34		
Frame 146 x 86 mm for 4 x 25			
x 50 mm white	34		



## Keystone termination unit 25 x 50 mm unequipped

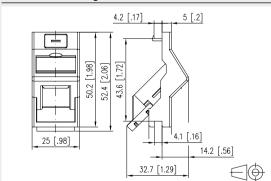
- 1 port termination unit 25 x 50 mm for one individual Keystone module
- · plug direction angled
- strain relief with cable tie at the module
- label window for identification label (labels included in the delivery)
- integrated dust protection shutter
- cover parts in color similar to pure white RAL 9010, glossy surface
- · variant: plug direction straight



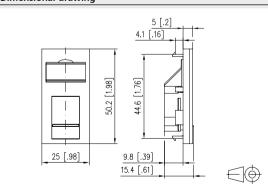
## Keystone termination unit 25 x 50 mm unequipped

- 1 port termination unit 25 x 50 mm for one individual Keystone module
- · plug direction straight
- strain relief with cable tie at the module
- label window for identification label (labels included in the delivery)
- · integrated dust protection shutter
- cover parts in color similar to pure white RAL 9010, glossy surface
- variant: plug direction angled

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
130B20A125-E	pure white	angled	Keystone module cut-out



P/N	Color	Feature 1	Feature 2
130B20S125-E	pure white	straight	Keystone module cut-out





## Blind cover for 50 mm is matching accessories for

Frame 86 x 86 mm for 2 x 25 x 50 mm white 34

Frame 146 x 86 mm for 4 x 25 x 50 mm white 34

### Blind cover for 50 mm is matching accessories for

Frame 86 x 86 mm for 2 x 25 x 50 mm white 34 Frame 146 x 86 mm for 4 x 25

x 50 mm white



#### Blind cover for 50 mm

**Accessories** | Cat.6<sub>A</sub>

- blind cover 50 mm frame
- color similar to pure white RAL 9010, glossy surface
- variant: 2 x 12.5 x 50 mm



#### Blind cover for 50 mm

- blind cover 50 mm frame
- color similar to pure white RAL 9010, glossy surface
- variant: 1 x 25 x 50 mm

P/N	Color	Feature 1	Feature 2
130B20B0525-E	pure white	Blind cover	2 x 12 x 50 mm

P/N	Color	Feature 1	Feature 2
130B20B125-E	pure white	Blind cover	25 x 50 mm









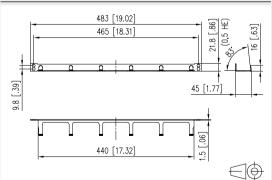
#### Cable manager 19 inch 0.5RU 56 mm RAL 9005 black

- 19 inch 0.5RU distribution panel for horizontal organization of the patch cables
- cable brackets approx. 42 mm
- 5 open cable brackets
- steel powder-coated, black RAL9005

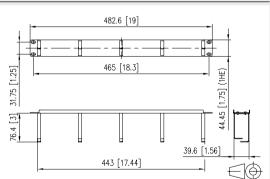
# Cable manager 19 inch 1RU 75 mm RAL 9005 black

- 19 inch 1 RU distribution panel for horizontal organization of the patch cables
- cable brackets approx. 75 mm
- 5 cable brackets
- steel powder-coated
- variants: black or gray

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
130894-05-29-E	black	56 mm	



P/N	Color	Feature 1	Feature 2
130894-03-29-E	black	75 mm	





#### Matching accessories for Cable manager 1RU 56 mm and 100 mm

Label strip for cable manager
19 inch 1RU RAL 9005
38

# Label strip for cable manager 1RU is matching accessories for

decessories for	Page
Cable manager 19 inch 1RU 56 mm RAL 9005 black	38
Cable manager 19 inch 1RU 100 mm RAL 9005 black	38
Cable manager 19 inch 1RU 56 mm RAL 7035 gray	38
Cable manager 19 inch 1RU	

38

100 mm RAL 7035 gray



#### Cable manager 1RU 56 mm and 100 mm

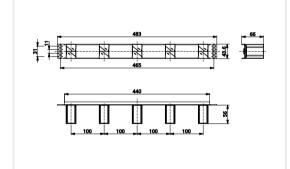
- 19 inch 1RU distribution panel for horizontal organization of the patch cables
- 56 and 100 mm cable bracket
- · especially suitable for fiber optic patch cables
- 5 black plastic cable brackets with large contact surfaces
- easy mounting of the cable brackets by twisting
- Available as option: plug-mounted nomenclature strip
- variants: steel powder-coated grey or black, aluminum silver anodized, stainless steel



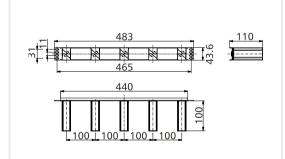
#### Label strip for cable manager 1RU

- $\bullet\;$  black clip-on label strip for 19 inch 1RU distribution panel
- for large labeling
- included in the delivery: label strip, 2 fastening clips, paper strips and transparent foil

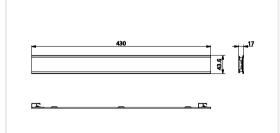
#### Dimensional drawing (56 mm)



#### Dimensional drawing (100 mm)



P/N	Color	Feature 1	Feature 2
130894-01-29-E	black	56 mm	
130894-02-29-E	black	100 mm	
130894-01-03-E	grey	56 mm	
130894-02-03-E	grey	100 mm	



P/N	Color	Feature 1	Feature 2
130894-BS-29-E	black	slip-on	









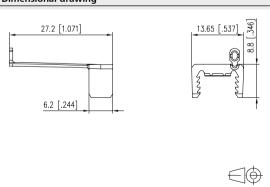
#### Industry color coding field plug

- colored, easy to actuate strain relief for E-DAT Industry IP20 RJ45 field plug
- can be mounted after assembling the plug
- variants: white, light gray, orange, blue, yellow, green

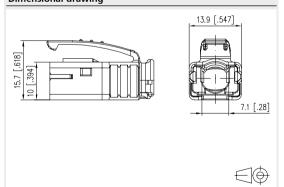
#### IP20 plug bend protection

- molded snagless anti-bend sleeve for E-DAT Industry IP20 RJ45 plug
- trumpet-shaped bending protection of the connection cable
- retrofitting possible
- effective grip contours
- variants: white, light gray, blue, yellow, green, black, orange

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
1401009101-I	orange	plastics	
1401009103-I	light gray	plastics	
1401009104-I	white	plastics	
1401009105-I	yellow	plastics	
1401009106-I	blue	plastics	
1401009107-I	green	plastics	



P/N	Color	Feature 1	Feature 2	_
1401008201-E	orange	plastics		
1401008202-E	black	plastics		
1401008203-E	light gray	plastics		
1401008204-E	white	plastics		
1401008205-E	yellow	plastics		
1401008206-E	blue	plastics		
1401008207-E	green	plastics		
				_





#### Protection covers C6<sub>A</sub>modul is matching accessories for

F DAT	
E-DAT modul Cat.6 <sub>A</sub> K jack - Keystone style	18
C6 <sub>A</sub> modul K 180° jack - Keystone style	18
C6 <sub>A</sub> modul K 270° jack - Keystone style	19
C6 <sub>a</sub> modul K 90° jack - keystone	e 10



#### Protection covers C6<sub>A</sub>modul

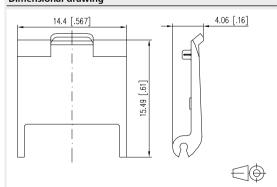
- optional dust cover for individual C6<sub>A</sub>modul modules in Modul and Keystone design
- suitable for modules mounted in applications without separate dust protection devices
- variants: black, pure white, light gray, yellow, blue, green, red



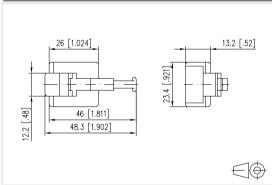
#### **Dust protection plug RJ45**

- manually released locking to close unoccupied RJ45 jacks and protect them from dust
- with grip

#### Dimensional drawing



P/N	Color	Feature 1	Feature 2
820032-0129-I	black	1 port	
820032-0102-I	pure white	1 port	
820032-0103-I	light gray	1 port	
820032-0105-I	yellow	1 port	
820032-0106-I	blue	1 port	
820032-0107-I	green	1 port	
820032-0108-I	red	1 port	



P/N	Color	Feature 1	Feature 2
816719-01-2-I	black	RJ45	
		L	L







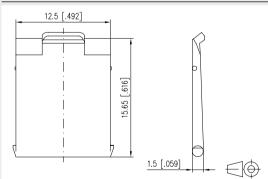
#### **Dust protection covers for wall outlets**

- for color service coding of wall outlets
- suitable for wall outlets: C6 modul, E-DAT C6, E-DAT modul, E-DAT C6 wall outlets and E-DAT design
- variants: yellow, blue, green, red

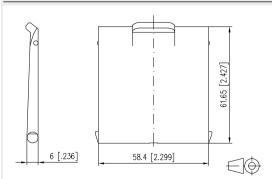
# Dust protection covers for Modul patch panels / subway / REG

- for color service coding of patch fields, subway underfloor units and E-DAT modul REG
- suitable for: C6<sub>A</sub>modul patch fields, E-DAT modul patch field 24x8, subway underfloor units, module wall outlet 2 port APFL as well as E-DAT modul REG and Modul REGplus
- · variants: yellow, blue, green, red

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
820394-0105-I	yellow	1 port	
820394-0106-I	blue	1 port	
820394-0107-I	green	1 port	
820394-0108-I	red	1 port	



P/N	Color	Feature 1	Feature 2
816979-0105-I	yellow	1 port	
816979-0106-I	blue	1 port	
816979-0107-I	green	1 port	
816979-0108-I	red	1 port	



#### **Accessories** | Cable connectors



#### Cable connector class F<sub>A</sub>

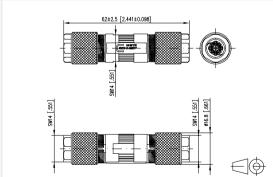
- cable connector for field assembly Class  $F_{\Delta}$  for 8 wire cables
- to connect / extend / repair / relocate copper data cables up to  ${\sf Cat.7}_{{}_{\rm A}}$
- compliance to Class F<sub>A</sub> up to 1000 MHz according to ISO/IEC 11801 Ed.2.2:2011-06 in connection with Cat.7<sub>A</sub> copper cables \*1
- GHMT certified to ISO/IEC 11801 Ed.2.2:2011-06 and IEC 61156-5 Ed.2.1:2012-12
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- compact design: diameter 16.8 mm x length 64 mm
- IP67 protected housing in combination with IP67 appropriate cables \*2
- refined zinc die-cast housing
- · easy and fast assembly without special tools
- · shield connection and strain relief integrated
- easy connection of data cables AWG 26/1 to 22/1 (solid wire) and AWG 26/7 to 22/7 (stranded wire) to insulation displacement connectors (IDC)
- solid copper wire diameter 0.4 to 0.64 mm
- stranded copper wire diameter 0.48 to 0.76 mm
- · conductor diameter up to 1.6 mm
- suitable for cables with an overall diameter of 5.0 to 9.7 mm \*2
- fully shielded version according to DIN EN 50173-1



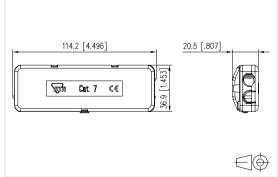
#### Cat.7 cable connector

- for connecting/extending data cables up to Cat.7
- class E to ISO/IEC 11801 Ed.2.2:2011-06 is complied with in combination with Cat.6, Cat.6<sub>A</sub>, Cat.7 and Cat.7<sub>A</sub> cables and Cat.6 connectors
- connection of data lines AWG 26/1 to 22/1 (solid wire)
- cable feed from one or two sides
- cable sharing, i.e. splitting one 8-wire cable into two 4-wire cables (one cable tie required each on input and output side)
- · fully shielded metal housing
- strain relief and separate captive 360° shield connection
- 2 bore holes for wall mounting

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
130863-02-E		4x2 IP	



P/N	Color	Feature 1	Feature 2
130863-E		4x2	







#### **Keystone Modul IP44SG surface** mounting housing unequipped

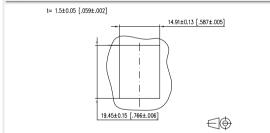
- lockable flush-mounted IP44 outlet, keyed alike with two keys (identical locks and keys)
- cover closes completely, even when patch cables are plugged in
- for two individual modules in Keystone design (not suitable for OpDAT modules)
- ball-impact resistant according to DIN 18032
- can be operated with standard patch cables
- · clearly visible label window
- bottom section of housing can be turned 180°, with cable feed possible from top and bottom
- · with space to install the required spare cable lengths
- grey



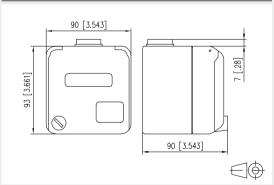
#### Cable Sharing Adapter pnp1

- cable sharing adapter for simultaneous operation of two 4-wire services, for example: 2 phones (ISDN), via 8-wire installation line
- use in pairs: one adapter on wall outlet, one adapter on distributor
- shielded adapter with class E transmission characteristics in Link acc. to IEC 11801 Ed.2.2:2011-06 and DIN EN 50173-1:2011-09
- slim shape allows plugging next to each other
- short, flexible connection
- · delivered as set of two pieces

#### Keystone module cut-out

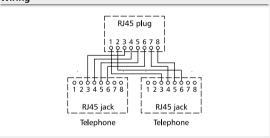


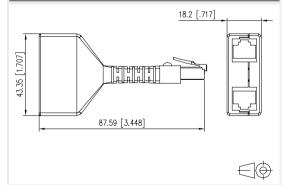
#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
1309460003KI	grey	AP 2 port emtpy	Keystone module cut-out

#### Wiring





P/N	Color	Feature 1	Feature 2
130548-01-E	silver	teltel.	









#### Cable Sharing Adapter pnp2

- cable sharing adapter for simultaneous operation of two 4-wire services, here: 1 x Ethernet and 1 x telephone (ISDN), via an 8-wire installation wire
- use in pairs: one adapter on wall outlet, one adapter on distributor
- shielded adapter with class E transmission characteristics in Link acc. to IEC 11801 Ed.2.2:2011-06 and DIN EN 50173-1:2011-09
- 1 x Ethernet up to 100 MBit E / Fast Ethernet
- · slim shape allows plugging next to each other
- · short, flexible connection

Accessories

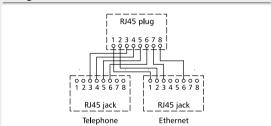
· delivered as set of two pieces



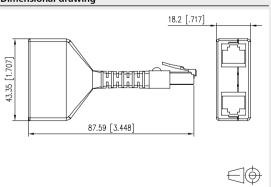
#### Cable Sharing Adapter pnp3

- · cable sharing adapter for simultaneous operation of two 4-wire services, here: 2 x Ethernet, via an 8-wire installation line
- use in pairs: one adapter on wall outlet, one adapter on distributor
- shielded adapter with class E transmission characteristics in Link acc. to IEC 11801 Ed.2.2:2011-06 and DIN EN 50173-1:2011-09
- 2 x Ethernet up to 100 MBit E / Fast Ethernet
- · slim shape allows plugging next to each other
- · short, flexible connection
- · delivered as set of two pieces

#### Wiring

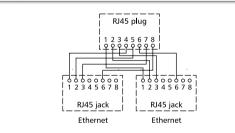


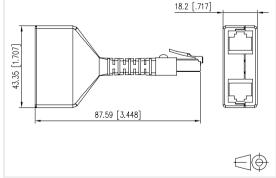
#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
130548-02-E	silver	teleth.	

#### Wiring





P/N	Color	Feature 1	Feature 2
130548-03-E	silver	etheth.	





**Tools** 



#### Parallel jaw pliers 1 3/8 inch

- adjustable parallel-jaw wrench to compress C6<sub>A</sub>modul, E-DAT modul, E-DAT Industry field jack and E-DAT Industry field plug
- very easy handling



#### Crimp tool LSA plus

 the crimp tool S (S for sensor) pushes a cable wire in a defined position into the LSA-PLUS® insulation displacement connector and cuts the wire to length in the same step

P/N	Color	Feature 1	Feature 2
140301-E		Parallel-jaw	

P/N	Color	Feature 1	Feature 2
130818-E	light grey	with sensor	





**Tools** 

#### Jokari dismantle tool is matching accessories for

3	Pag
MC GC400 SL23 Cat.6 U/UTP LSHF 1000 ft	10
MC GC400 SL23 Cat.6 U/UTP LSHF 1640 ft	10
MC GC400 SL23 Cat.6 U/UTP LSHF 3280 ft	10
MC GC600 F1 23 Cat.6 <sub>A</sub> U/FTP 4P LSHF 1640 ft	16
MC GC600 F1 23 Cat.6 <sub>A</sub> U/FTP 4P LSHF 3280 ft	16
MC GC1000 pro23 Cat.7 S/FTP 4P LSHF-FR 1640 ft	27
MC GC1000 pro23 Cat.7 S/FTP 4P LSHF-FR 3280 ft	27
MC GC1000 plus23 Cat.7 S/FTP 4P LSHF 1640 ft	27
MC GC1000 plus23 Cat.7 S/FTP 4P LSHF 3280 ft	27
MC GC1200 pro22 Cat.7 <sub>A</sub> S/FTP 4P LSHF-FR 1640 ft	28
MC GC1200 pro22 Cat.7 <sub>A</sub> S/FTP 4P LSHF-FR 3280 ft	28
MC GC1500 pro22 Cat.7 <sub>A</sub> S/FTP 4P LSHF-FR 1640 ft	28

MC GC1500 pro22 Cat.7<sub>A</sub> S/FTP 4P LSHF-FR 3280 ft 28



#### Jokari dismantle tool

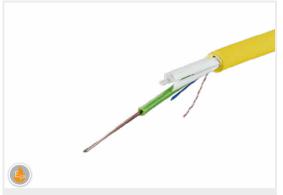
- for fast and precise stripping of data cableswith adjustable stop

P/N	Color	Feature 1	Feature 2
140302-01-E	white	dismantle tool	



	Fiber Optic Solutions	
1	Installation cables	
	Single mode/multi mode	48
2	Adapter	50
3	Pigtails   Single mode/multi mode	52
4	Pigtails   Configurator	53
5	Patch panels fixed installation	
	Single mode/multi mode	54
6	Patch panels for fixed installation	
	Configurators	55
7	Patch panels withdrawable	
	Single mode/multi mode	56
8	Patch panels withdrawable	
	Configurators	57
9	Patch cords   Single mode/multi mode	58
10	Patch cords   Configurator	59
11	OM5   The future of multimode fiber	60





#### OpDAT universal cable SM

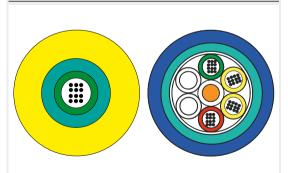
- installation cable U-DQ(ZN)BH
- universal fiber optic cable for indoors/outdoors with central loose tube
- · bending resistant fiber
- UV-resistant, metal-free, longitudinally waterproof, tensile strength, rodent-protected
- · cable jacket: LSHF
- · cable structure: filled loose tube
- with more loose tubes: loose tubes arranged around Ø 2.5 mm bar made of fiber glass reinforced plastic
- loose tubes Ø 2.8 mm with 2-12 fibers per loose tube
- loose tubes Ø 3.5 mm with 18-24 fibers per loose tube
- strain relief: longitudinally waterproof lapping, glass roving elements
- · for indoor cabling
- for laying in tubes or directly in the ground in suitable layer of sand
- applicable standards: EN 50173-1, ISO 11801 2nd edition, IEC 60794-1, EN 187000
- fire behaviour: Class E<sub>ca</sub> (classification acc. to EN 13501-6)

#### variants:

number of OS2 fibers 1x4, 1x8, 1x12, 1x24, 4x12

Others on request

#### Principle diagram



P/N	Color	Feature 1	Feature 2
150U049000000M	yellow	4 fibers	9/125 (OS2)
150U089000000M	yellow	8 fibers	9/125 (OS2)
150U129000000M	yellow	12 fibers	9/125 (OS2)
150U249000000M	yellow	24 fibers	9/125 (OS2)
150U489000000M	blue or yellow	48 fibers	9/125 (OS2)



#### OpDAT universal cable MM

- installation cable U-DQ(ZN)BH
- universal fiber optic cable for indoors/outdoors with central loose tube
- laser-optimized, bending-resistant fiber
- · bending resistant fiber
- UV-resistant, metal-free, longitudinally waterproof, tensile strength, rodent-protected
- · cable jacket: LSHF
- · cable structure: filled loose tube
- with more loose tubes: loose tubes arranged around Ø 2.5 mm bar made of fiber glass reinforced plastic
- loose tubes Ø 2.8 mm with 2-12 fibers per loose tube
- loose tubes Ø 3.5 mm with 18-24 fibers per loose tube
- strain relief: longitudinally waterproof lapping, glass roving elements
- for indoor cabling
- for laying in tubes or directly in the ground in suitable layer of sand
- applicable standards: EN 50173-1, ISO 11801 2nd edition, IEC 60794-1, EN 187000
- fire behaviour: Class E<sub>ca</sub> (classification acc. to EN 13501-6)

#### variants:

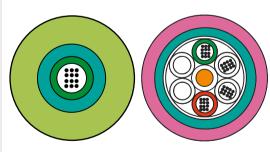
 number of OM5 fibers
 1x4, 1x8, 1x12, 1x24

 number of OM4 fibers
 1x4, 1x8, 1x12, 1x24, 4x12

 number of OM3 fibers
 1x4, 1x8, 1x12, 1x24, 4x12

Others on request

#### Principle diagram



P/N	Color	Feature 1	Feature 2
150U048000000M	lime green	4 fibers	50/125 (OM5)
150U088000000M	lime green	8 fibers	50/125 (OM5)
150U128000000M	lime green	12 fibers	50/125 (OM5)
150U248000000M	lime green	24 fibers	50/125 (OM5)
150U047000000M	violet	4 fibers	50/125 (OM4)
150U087000000M	violet	8 fibers	50/125 (OM4)
150U127000000M	violet	12 fibers	50/125 (OM4)
150U247000000M	violet	24 fibers	50/125 (OM4)
150U487000000M	blue or violet	48 fibers	50/125 (OM4)
150U045000000M	aqua	4 fibers	50/125 (OM3)
150U085000000M	aqua	8 fibers	50/125 (OM3)
150U125000000M	aqua	12 fibers	50/125 (OM3)
150U245000000M	aqua	24 fibers	50/125 (OM3)
150U485000000M	blue or aqua	48 fibers	50/125 (OM3)







#### OpDAT mini breakout cable

- installation cable mini-breakout (MBO) for universal cabling systems
- laser-optimized, bending-resistant fiber
- UV-resistant, metal-free, waterproof and moisture-resistant
- longitudinally water blocked and suitable for operation down to -40  $^{\circ}\text{C}$
- cable sheath: LSHF-FR (low smoke halogen free flame redardent)
- cable structure: 4, 12 or 24 tight buffered cables (Ø 0,9 mm)
- strain relief: Glasroving elements
- to be laid in tubes and cable ducts indoors and outdoors
- applicable standards: EN 50173-1, ISO 11801 2nd edition, IEC 60794-2, IEC 60794-2-20, EN 187000
- fire behaviour: Class D<sub>ca</sub> s1 d0 a1 acc. to EN 50399 (classification acc. to EN 13501-6)

#### Variants:

number of OS2 fibers 4, 12 or 24 number of OM5 fibers 4, or 12 number of OM4 fibers 4, 12 or 24 number of OM3 fibers 4, 12 or 24

Others on request

#### Principle diagram



P/N	Color	Feature 1	Feature 2
150M049000000M	yellow	4 fibers	9/125 (OS2)
150M129000000M	yellow	12 fibers	9/125 (OS2)
150M249000000M	yellow	24 fibers	9/125 (OS2)
150M048000000M	lime green	4 fibers	50/125 (OM5)
150M128000000M	lime green	12 fibers	50/125 (OM5)
150M047000000M	violet	4 fibers	50/125 (OM4)
150M127000000M	violet	12 fibers	50/125 (OM4)
150M247000000M	violet	24 fibers	50/125 (OM4)
150M045000000M	aqua	4 fibers	50/125 (OM3)
150M125000000M	aqua	12 fibers	50/125 (OM3)
150M245000000M	aqua	24 fibers	50/125 (OM3)



#### OpDAT breakout cable

- connection cable I-V(ZN)HH
- breakout cable for direct connector termination for indoors and outdoors
- laser optimized fiber
- bend insensitive fiber
- cable jacket: LSHF-FR
- UV resistant, metal-free, longitudinally watertight
- cable structure: several separately strain relieved cables in one outer jacket
- · strain relief: Aramid
- applicable standards: EN 50173-1, ISO 11801 2nd edition, IEC 60794-2, IEC 60794-2-10, EN 187000
- fire behaviour: class D<sub>ca</sub> s1 d1 a1 acc. to EN 50399 (classification acc. to EN 13501-6)

#### Variants:

 Number of OS2 fibers
 4x1, 8x1, 12x1, 24x1

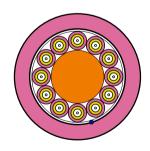
 Number of OM5 fibers
 4x1, 8x1, 12x1

 Number of OM4 fibers
 4x1, 8x1, 12x1, 24x1

 Number of OM3 fibers
 4x1, 8x1, 12x1, 24x1

Others on request

#### Principle diagram



P/N	Color	Feature 1	Feature 2
150B049000000M	yellow	4 fibers	9/125 (OS2)
150B089000000M	yellow	8 fibers	9/125 (OS2)
150B129000000M	yellow	12 fibers	9/125 (OS2)
150B249000000M	yellow	24 fibers	9/125 (OS2)
150B048000000M	lime green	4 fibers	50/125 (OM5)
150B088000000M	lime green	8 fibers	50/125 (OM5)
150B128000000M	lime green	12 fibers	50/125 (OM5)
150B047000000M	violet	4 fibers	50/125 (OM4)
150B087000000M	violet	8 fibers	50/125 (OM4)
150B127000000M	violet	12 fibers	50/125 (OM4)
150B247000000M	violet	24 fibers	50/125 (OM4)
150B045000000M	aqua	4 fibers	50/125 (OM3)
150B085000000M	aqua	8 fibers	50/125 (OM3)
150B125000000M	aqua	12 fibers	50/125 (OM3)
150B245000000M	aqua	24 fibers	50/125 (OM3)



### ONNECT Adapter



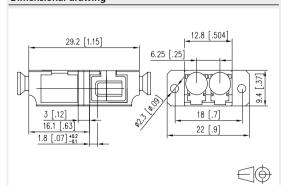
#### LC-D adapter

- LC duplex plastic adapter, SC simplex design with metal clip
- slotted ceramic guide sleeves for single mode and multimode applications
- with transparent dust protection caps for a better visibility during red light test
- high material stability, surface quality and durability
- durability min. 1000 mating cycles with a ceramic guide sleeve
- · screws and nuts included
- variants: blue (OS2), green (OS2 APC), lime green (OM5), violet (OM4), aqua (OM3), each variant available in packing units of 1 piece or 50 pieces

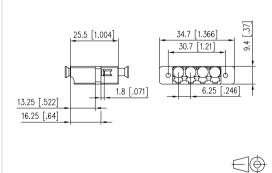
#### LC-Q adapter

- LC Quad plastic adapter, SC duplex design with metal clip
- slotted ceramic guide sleeves for single mode and multimode applications
- with transparent dust protection caps for a better visibility during red light test
- high material stability, surface quality and durability
- durability min. 1000 mating cycles with a ceramic guide sleeve
- screws and nuts included
- variants: blue (OS2), green (OS2 APC), lime green (OM5), violet (OM4), aqua (OM3), each variant available in packing units of 1 piece or 30 pieces

#### Dimensional drawing



P/N	Color	Feature 1	Feature 2
15090076-I	green	LC-D APC (SM)	1 pieces
15090076-50	green	LC-D APC (SM)	50 pieces
15090074-I	blue	LC-D (SM)	1 pieces
15090074-50	blue	LC-D (SM)	50 pieces
1509007M-I	lime green	LC-D (MM)	1 pieces
1509007M-50	lime green	LC-D (MM)	50 pieces
15090075-I	violet	LC-D (MM)	1 pieces
15090075-50	violet	LC-D (MM)	50 pieces
15090077-I	aqua	LC-D (MM)	1 pieces
15090077-50	aqua	LC-D (MM)	50 pieces



P/N	Color	Feature 1	Feature 2
1509007A-I	green	LC-Q APC (SM)	1 pieces
1509007A-30	green	LC-Q APC (SM)	30 pieces
15090071-I	blue	LC-Q (SM)	1 pieces
15090071-30	blue	LC-Q (SM)	30 pieces
1509007L-I	lime green	LC-Q (MM)	1 pieces
1509007L-30	lime green	LC-Q (MM)	30 pieces
15090079-I	violet	LC-Q (MM)	1 pieces
15090079-30	violet	LC-Q (MM)	30 pieces
15090078-I	aqua	LC-Q (MM)	1 pieces
15090078-30	aqua	LC-Q (MM)	30 pieces







#### **SC-D** adapter

**Adapter** 

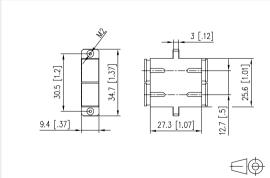
- SC duplex plastic adapter with metal clip
- slotted ceramic guide sleeves for single mode and multimode applications
- · with transparent dust protection caps for a better visibility during red light test
- · high material stability, surface quality and durability
- durability min. 1000 mating cycles
- · screws and nuts included
- variants: blue (OS2), green (OS2 APC), lime green (OM5), violet (OM4), aqua (OM3), each variant available in packing units of 1 piece or 30 pieces



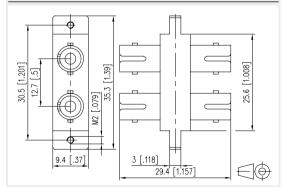
#### ST-D adapter

- ST duplex adapter made of zinc die-cast
  - slotted ceramic guide sleeves for single mode and multimode applications
- high material stability, surface quality and durability
- durability min. 1000 mating cycles
- screws included
- variants: packing units of 1 piece or 30 pieces

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
150900F2-I	green	SC-D APC (SM)	1 pieces
150900F2-30	green	SC-D APC (SM)	30 pieces
150900E2-I	blue	SC-D (SM)	1 pieces
150900E2-30	blue	SC-D (SM)	30 pieces
150900BM-I	lime green	SC-D (MM)	1 pieces
150900BM-30	lime green	SC-D (MM)	30 pieces
150900BB-I	violet	SC-D (MM)	1 pieces
150900BB-30	violet	SC-D (MM)	30 pieces
150900BA-I	aqua	SC-D (MM)	1 pieces
150900BA-30	aqua	SC-D (MM)	30 pieces



P/N	Color	Feature 1	Feature 2
150900D1-I	metallike	ST-D (SM + MM)	1 pieces
150900D1-30	metallike	ST-D (SM + MM)	30 pieces







#### Pigtails, 12 colors

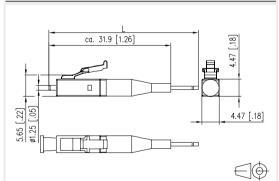
- Pigtails with all variations of connector types LC, SC and ST
- Fiber types: OM3, OM4, OM5, OS2. All fibers are bend insensitive
- Single mode fiber OS2, E9/125  $\mu$ m, bend insensitive cording to IEC 60793-2-50 type B6\_a and B6\_b and G.657.A2 and B2, compatible to G.652.D or Multi mode fiber G50/125  $\mu$ m, bend insensitive according to IEC 60793-2-10 type A1a.2 (OM3) / A1a.3 (OM4) / A1a.4 (OM5)
- Compact loose tube fiber with dia. 0.9 mm, length 2.0 m
- Color sequence in sets according to IEC 60304: red, green, blue, yellow, white, gray, brown, violet, turquois, black, orange, pink. Secondary and primary coating same color
- · Plug connector mounted on one side
- $\bullet$  With test report, insertion loss and return loss tested at 100 %
- all available variants can be created with the cable configurator



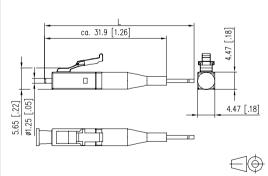
#### Pigtails, single color

- Pigtails with all variations of connector types LC, SC and ST
- Fiber types: OM3, OM4, OM5, OS2. All fibers are bend insensitive
- Single mode fiber OS2, E9/125  $\mu$ m, bend insensitive according to IEC 60793-2-50 type B6\_a and B6\_b and G.657.A2 and B2, compatible to G.652.D or Multi mode fiber G50/125  $\mu$ m, bend insensitive according to IEC 60793-2-10 type A1a.2 (OM3) / A1a.3 (OM4) / A1a.4 (OM5)
- Compact loose tube fiber with dia. 0.9 mm, length 2.0 m
- · Secondary and primary coating same color
- Plug connector mounted on one side
- $\bullet$  With test report, insertion loss and return loss tested at 100 %
- all available variants can be created with the cable configurator

#### Dimensional drawing



P/N	Color	Feature 1	Feature 2
150Q1JO0020E	blue	2.0 m	LC-SM (OS2)
150Q1JA0020E	green	2.0 m	LC-SM APC (OS2)
150Q1CO0020E	blue	2.0 m	SC-SM (OS2)
150Q1CA0020E	green	2.0 m	SC-SM APC (OS2)
150Q1AO0020E	metallike	2.0 m	ST-SM (OS2)
150R1JO0020E	beige	2.0 m	LC-MM (OM5)
150R1CO0020E	beige	2.0 m	SC-MM (OM5)
150N1JO0020E	violet	2.0 m	LC-MM (OM4)
150N1CO0020E	violet	2.0 m	SC-MM (OM4)
150N1AO0020E	metallike	2.0 m	ST-MM (OM4)
150M1JO0020E	aqua	2.0 m	LC-MM (OM3)
150M1CO0020E	aqua	2.0 m	SC-MM (OM3)
150M1AO0020E	metallike	2.0 m	ST-MM (OM3)



P/N	Color	Feature 1	Feature 2
150Q1J00020S	blue	2.0 m	LC-SM APC (OS2)
150Q1JA0020S	green	2.0 m	LC-SM (OS2)
150Q1CO0020S	blue	2.0 m	SC-SM APC (OS2)
150Q1CA0020S	green	2.0 m	SC-SM (OS2)
150Q1AO0020S	metallike	2.0 m	ST-SM (OS2)
150R1JO0020S	lime green	2.0 m	LC-MM (OM5)
150R1CO0020S	lime green	2.0 m	SC-MM (OM5)
150R1AO0020S	lime green	2.0 m	ST-MM (OM5)
150N1JO0020S	violet	2.0 m	LC-MM (OM4)
150N1CO0020S	violet	2.0 m	SC-MM (OM4)
150N1AO0020S	metallike	2.0 m	ST-MM (OM4)
150M1JO0020S	aqua	2.0 m	LC-MM (OM3)
150M1CO0020S	aqua	2.0 m	SC-MM (OM3)
150M1AO0020S	metallike	2.0 m	ST-MM (OM3)





#### **Pigtail**

- · Pigtails with all variations of plug types LC, SC and ST
- Fiber types: OM3, OM4, OM5, OS2. All fibers are bend
- Semi-tight buffered fiber 0.9 mm, length 2 m. Primary and secondary coating in the same color. Tight buffered fiber available on demand.
- Available as individual pigtail or in a set of 12
- Safe transport and safe storage of the set of 12 in a specially designed blister packaging
- Single mode pigtails are tested by 100 % on insertion loss and return loss at 1310 and 1550 nm. An interferometer measurement is done in addition. Multi mode pigtails are tested by 100 % on insertion loss at 850 and 1300 nm. The measuring protocol is supplied with the pigtails. The measurement is followed by a final visual control of the connectors according to IEC 61300-3-35.
- · All pigtails have a serial number

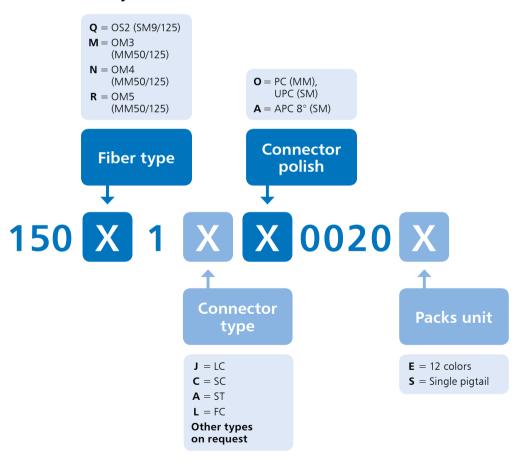


#### Example

150 B 1 A O 0020 E

ST (OM2) pigtail, length 2 m, orange

#### Part number key for further versions



#### Please note:

These cables will be manufactured according to your specifications. They can therefore neither be exchanged nor returned.









#### OpDAT fix LC-D splice

- 19 inch 1RU fiber optic patch panel for fixed installation
- equipped with LC-D adapters and LC pigtails
- pigtails with semi-tight buffered fiber dia. 0.9 mm,
   12 colors, secondary and primary coating in the same color, length 2.0 m
- pigtails inserted and stripped in standard splice trays with crimp splice holders
- pigtails are cleaned and plugged in adapters
- light aluminum construction with steel sheet front plate painted (gray or black)
- unused cutouts are closed by blank connectors
- · removable front plate for easy adapter mounting
- · screwed on cover for easy access during service work
- several possibilities for cable entry on the back (fastening with PG13.5, PG16 and PG21 or M20 and M25)
- supplied with one PG16 cable gland
- Variants: equipped with 6, 12 or 24 LC-D adapters and pigtails, all blue (OS2), lime green (OM5), violet (OM4), aqua (OM3) or 6, 12 or 24 LC-D APC adapters and pigtails, all green (OS2)

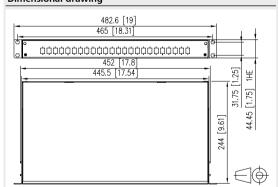
#### **OpDAT fix LC-D VIK**

- 19 inch 1RU fiber optic patch panel for fixed installation
- light aluminum construction with steel sheet front plate painted in RAL 9005
- · equipped with LC-D adapter
- unoccupied recesses are closed with blind connectors
- removable front plate for easy adapter mounting
- screwed on cover for easy access during service work
- installation depth 240 mm (without cable gland and adapter)
- several possibilities for cable entry on the back (fastening with PG13.5, PG16 and PG21 or M20 and M25)
- toolless fastening of pre-assembled installation cables (OpDAT VIK) in a U-shaped cutout
- Variants: equipped with 6, 12 or 24 LC-D adapters, all blue (OS2), violet (OM4) or aqua (OM3)

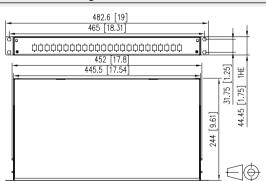
#### Notes:

On pages 149-153 you will find further information about VIK cable.

#### Dimensional drawing



P/N	Color	Feature 1	Feature 2
1502597612-J	green	12xLCD APC	9/125 (OS)
1502597624-J	green	24xLCD APC	9/125 (OS)
1502597412-J	blue	12xLC-D	9/125 (OS)
1502597424-J	blue	24xLC-D	9/125 (OS)
1502587M12-J	lime green	12xLC-D	50/125 (OM5)
1502587M24-J	lime green	24xLC-D	50/125 (OM5)
1502577512-J	violet	12xLC-D	50/125 (OM4)
1502577524-J	violet	24xLC-D	50/125 (OM4)
1502577712-J	aqua	12xLC-D	50/125 (OM3)
1502577724-J	aqua	24xLC-D	50/125 (OM3)



	1	1	
P/N	Color	Feature 1	Feature 2
1502507612-B	green	12xLC-D APC	VIK
1502507624-B	green	24xLC-D APC	VIK
1502507412-B	blue	12xLC-D	VIK
1502507424-B	blue	24xLC-D	VIK
1502507M12-B	lime green	12xLC-D	VIK
1502507M24-B	lime green	24xLC-D	VIK
1502507512-B	violet	12xLC-D	VIK
1502507524-B	violet	24xLC-D	VIK
1502507712-B	aqua	12xLC-D	VIK
1502507724-B	aqua	24xLC-D	VIK





#### OpDAT fix

- Service-friendly mounting by removable cover or an extendible drawer
- Light construction with steel sheet front plate
- Front plates available in gray (RAL 7035) or black (RAL 9005)
- All front plates are available with 12 or 24 adapter cutouts. Unused cutouts in the front plate are covered by blank plugs
- · Available with the following adapters: LC, SC, E2000 and ST in duplex version. All adapters with ceramic sleeves. Other types available on demand.

• Fiber optic patch panels for 19-inch systems, 1 rack unit (RU • Pigtails are available with fiber types OM3, OM4, OM5 and OS2. All pigtails are inspected and cleaned before inserted into the adapters according to IEC 61300-3-35



#### Example

15025



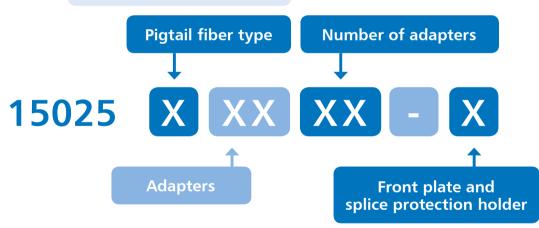




OpDAT fix patch panel equipped with 24 LC-D (SM) adapter, 48 pigtails (OS2) inserted and stripped in four splice trays with shrink splice holders

#### Part number key for further versions

- 0 = variant "VIK" (without pigtails)
- 9 = OS2 (SM9/125)
- 5 = OM3 (MM50/125)
- 7 = OM4 (MM50/125)
- 8 = OM5 (MM50/125)



74 = LC-D, duplex, SM, blue, ceramic sleeves

76 = LC-D APC, duplex, SM, green, ceramic sleeves

**75** = LC-D, duplex, OM4, violet, ceramic sleeves

77 = LC-D, duplex, OM3, aqua, ceramic sleeves

**E2** = SC-D, duplex, SM, blue, ceramic sleeves

**F2** = SC-D APC, duplex, SM, green, ceramic sleeves

**BB** = SC-D, duplex, OM4, violet, ceramic sleeves

BA = SC-D, duplex, OM3, aqua, ceramic sleeves

**D1** = ST-D, duplex, SM, metal, ceramic sleeves

#### For variant "VIK" and variant "splice" with holder for crimp splice protection

**E** = gray front plate for max. 24 adapters

**F** = gray front plate for max. 12 adapters

**B** = black front plate for max. 24 adapters

C = black front plate for max. 12 adapters

#### For variant "splice" with holder for shrink splice protections

**S** = gray front plate for max. 24 adapters

**H** = gray front plate for max. 12 adapters

**J** = black front plate for max. 24 adapters

**K** = black front plate for max. 12 adapters











#### **OpDAT slide LC-D splice**

- 19 inch 1RU fiber optic patch panel with pull-out splice tray / front cover (gray or black)
- equipped with LC-D adapters and LC pigtails
- pigtails with semi-tight buffered fiber dia. 0.9 mm, 12 colors, secondary and primary coating in the same color, length 2.0 m
- pigtails inserted and stripped in standard splice trays with crimp splice holders
- pigtails are cleaned and plugged in adapters
- splice tray can be tilted and completely removed to facilitate fitting (end stop)
- · unused cutouts are closed by blank plugs
- installation depth 240 mm (without cable gland and adapters)
- several possibilities for cable entry on the back (fastening with PG13.5, PG16 and PG21 or M20 and M25)
- a PG16 mounting kit is included in delivery
- variants: equipped with 6, 12 or 24 LC-D adapters and pigtails, all blue (OS2), lime green (OM5), heather violet (OM4), aqua (OM3) or 6, 12 or 24 LC-D APC adapters and pigtails, all green (OS2)

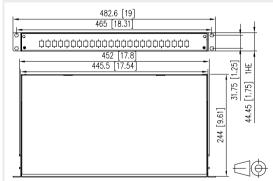
#### **OpDAT slide LC-D VIK**

- 19 inch 1RU fiber optic patch panel with pull-out splice tray / front cover in black (RAL 9005)
- splice tray can be tilted and removed completely for better mounting (end stop)
- equipped with LC-D couplers
- · unused cutouts are closed by blank plugs
- installation depth 240 mm
- (without cable gland and coupler)
- several possibilities for cable entry on the back (fastening with PG13.5, PG16 and PG21 or M20 and M25)
- variants: equipped with 6, 12 or 24 LC-D adapters, all blue (OS2), lime green (OM5), heather violet (OM4) or aqua (OM3) or with 6, 12 or 24 SC-D APC adapters, all green (OS2)

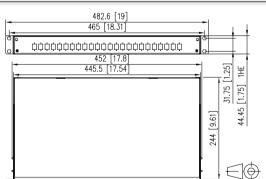
#### Notes:

On pages 149-153 you will find further information about VIK cable.

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
1502697612-J	green	12xLC-D APC	9/125 (OS2)
1502697624-J	green	24xLC-D APC	9/125 (OS2)
1502697412-J	blue	12xLC-D	9/125 (OS2)
1502697424-J	blue	24xLC-D	9/125 (OS2)
1502687M12-J	lime green	12xLC-D	50/125 (OM5)
1502687M24-J	lime green	24xLC-D	50/125 (OM5)
1502677512-J	violet	12xLC-D	50/125 (OM4)
1502677524-J	violet	24xLC-D	50/125 (OM4)
1502657712-J	aqua	12xLC-D	50/125 (OM3)
1502657724-J	aqua	24xLC-D	50/125 (OM3)



P/N	Color	Feature 1	Feature 2
1502607612-B	green	12xLC-D APC	VIK
1502607624-B	green	24xLC-D APC	VIK
1502607412-B	blue	12xLC-D	VIK
1502607424-B	blue	24xLC-D	VIK
1502607M12-B	lime green	12xLC-D	VIK
1502607M24-B	lime green	24xLC-D	VIK
1502607512-B	violet	12xLC-D	VIK
1502607524-B	violet	24xLC-D	VIK
1502607712-B	aqua	12xLC-D	VIK
1502607724-B	aqua	24xLC-D	VIK





#### OpDAT slide

- Service-friendly mounting by removable cover or an extendible drawer
- Light construction with steel sheet front plate
- Front plates available in gray (RAL 7035) or black (RAL 9005)
- All front plates are available with 12 or 24 adapter cutouts. Unused cutouts in the front plate are covered by blank plugs
- Available with the following adapters: LC, SC, E2000 and ST in duplex version. All adapters with ceramic sleeves. Other types available on demand.

• Fiber optic patch panels for 19-inch systems, 1 rack unit (RU • Pigtails are available with fiber types OM3, OM4, OM5 and OS2. All pigtails are inspected and cleaned before inserted into the adapters according to IEC 61300-3-35



#### Example

15026







OpDAT slide patch panel equipped with 24 LC-D (SM) adapter, 48 pigtails (OS2) inserted and stripped in a splice tray with shrink splice holders

#### Part number key for further versions

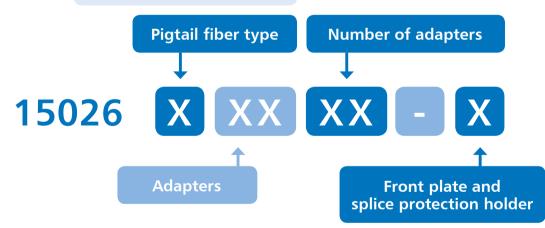
0 = variant "VIK" (without pigtails)

9 = OS2 (SM9/125)

5 = OM3 (MM50/125)

7 = OM4 (MM50/125)

8 = OM5 (MM50/125)



74 = LC-D, duplex, SM, blue, ceramic sleeves

**76** = LC-D APC, duplex, SM, green, ceramic sleeves

**75** = LC-D, duplex, OM4, violet, ceramic sleeves

**77** = LC-D, duplex, OM3, aqua, ceramic sleeves

**E2** = SC-D, duplex, SM, blue, ceramic sleeves

**F2** = SC-D APC, duplex, SM, green, ceramic sleeves

**BB** = SC-D, duplex, OM4, violet, ceramic sleeves

BA = SC-D, duplex, OM3, aqua, ceramic sleeves

**D1** = ST-D, duplex, SM, metal, ceramic sleeves

#### For variant "VIK" and variant "splice" with holder for crimp splice protection

**E** = gray front plate for max. 24 adapters

**F** = gray front plate for max. 12 adapters

**B** = black front plate for max. 24 adapters

C = black front plate for max. 12 adapters

#### For variant "splice" with holder for shrink splice protections

**S** = gray front plate for max. 24 adapters

**H** = gray front plate for max. 12 adapters

**J** = black front plate for max. 24 adapters

**K** = black front plate for max. 12 adapters









#### Fiber optic patch cord SM

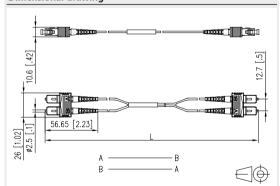
- single mode patch cord I-V(ZN)H
- outer diameter 2.0 x 4.2 mm
- halogen-free LSHF-FR sheath with low smoke development
- duplex cord as zipcord (figure 8) with two tight buffered cables and aramide strain relief
- automatic end face polish
- 100 % tested
- · colors may differ due to delivery
- maximum length: 20 m
- patch cord available with all versions of connector types LC- D, SC-D and ST as well as APC; other connector types on request
- available in various lengths replace xx in article number by desired length Acc. to diagram: 10 = 1.0 m; 20 = 2.0 m; 50 = 5.0 m; A0 = 10 m; B0 = 20 m



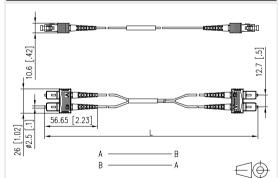
#### Fiber optic patch cord MM

- multi mode patch cord I-V(ZN)H
- laser-optimized Multi mode fiber, G50/125  $\mu m$  according to IEC 60793-2-10 type A1a.3 and A1a.2
- outer diameter 2.0 x 4.2 mm
- halogen-free LSHF-FR sheath with low smoke development
- duplex cord as zipcord (figure 8) with two tight buffered cables and aramide strain relief
- automatic end face polish
- 100 % tested
- · colors may differ due to delivery
- maximum length: 20 m
- patch cord available with all versions of connector types LC-D, SC-D and ST; other connector types on request
- available in various lengths replace xx in article number by desired length Acc. to diagram: 10 = 1.0 m; 20 = 2.0 m; 50 = 5.0 m; A0 = 10 m; B0 = 20 m

#### Dimensional drawing



P/N	Color	Feature 1	Feature 2
151P1EOEOXXE	yellow	SC-D	9/125 (OS2)
151P1EOJOXXE	yellow	LC-D/SC-D	9/125 (OS2)
151P1EOAOXXE	yellow	SC-D/ST	9/125 (OS2)
151P1JOJOXXE	yellow	LC-D	9/125 (OS2)
151P1JOAOXXE	yellow	LC-D/ST	9/125 (OS2)
151P1AOAOXXE	yellow	ST	9/125 (OS2)
151P1EAEAXXE	yellow	SC-D APC/SC-D APC	9/125 (OS2)
151P1JAJAXXE	yellow	LC-D APC/LC-D APC	9/125 (OS2)
151P1EAJAXXE	yellow	SC-D APC/LC-D APC	9/125 (OS2)



P/N	Color	Feature 1	Feature 2
151R1EOEOXXE	lime green	SC-D/SC-D	50/125 (OM5)
151R1EOJOXXE	lime green	SC-D/LC-D	50/125 (OM5)
151R1JOJOXXE	lime green	LC-D/LC-D	50/125 (OM5)
151S1EOEOXXE	violet	SC-D	50/125 (OM4)
151S1EOJOXXE	violet	LC-D/SC-D	50/125 (OM4)
151S1EOAOXXE	violet	SC-D/ST	50/125 (OM4)
151S1JOJOXXE	violet	LC-D	50/125 (OM4)
151S1AOAOXXE	violet	ST	50/125 (OM4)
151J1EOEOXXE	aqua	SC-D	50/125 (OM3)
151J1EOJOXXE	aqua	LC-D/SC-D	50/125 (OM3)
151J1EOAOXXE	aqua	SC-D/ST	50/125 (OM3)
151J1JOJOXXE	aqua	LC-D	50/125 (OM3)
151J1AOAOXXE	aqua	ST	50/125 (OM3)





#### **Patch cords**

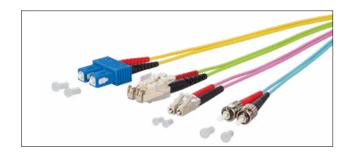
- Fiber types: OM3, OM4, OM5, OS2. All fibers are bend insensitive.
- · Cable types:
  - Duplex patch cords ("figure 8") with two tight buffers and Aramid as strain relief
  - Duplex connection cable ("figure 0") with two tight buffers in an additional outer jacket and Aramid as strain
  - Simplex patch cords (only for SM) with one tight buffer and Aramid as strain relief
- Duplex patch cords are logically crossed as a standard (A->B, B->A), logically uncrossed patch cords available on request.
- SC and LC connectors of duplex patch cords are always connected by duplex clips, ST are supplied without clips.

- Patch cords with all variants of connector types LC, SC and ST. Available in lengths between 0.5 to 20 m. The use of duplex connection cables is recommended for lengths of more than 20 m because of the higher mechanical strength.
  - Low smoke, halogen free, flame retardant cable jacket (LSHF-FR)
  - Single mode patch cords are tested by 100 % on insertion loss and return loss at 1310 and 1550 nm. An interferometer measurement is done in addition.
  - Multi mode patch cords are tested by 100 % on insertion loss at 850 and 1300 nm.
  - The measurement is followed by a final visual control of the connectors according to IEC 61300-3-35.
  - All patch cords are provided with a serial number and a bar code. This allows traceability and measured values can be made available at any time.

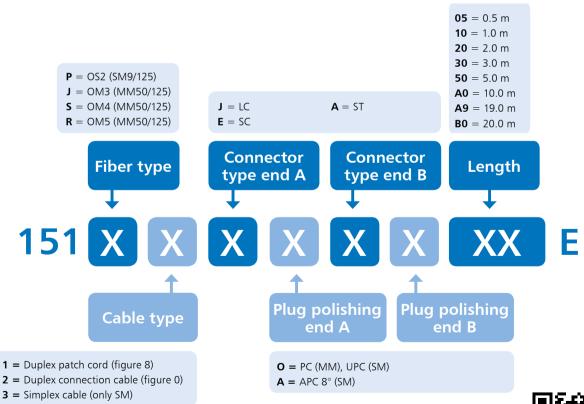


151

Duplex patch cable 50/125 OM4 with SC-D and ST Standard PC, respectively, length 16 m



#### Part number key for further versions



#### Please note:

These cables will be manufactured according to your specifications. They can therefore neither be exchanged nor returned.



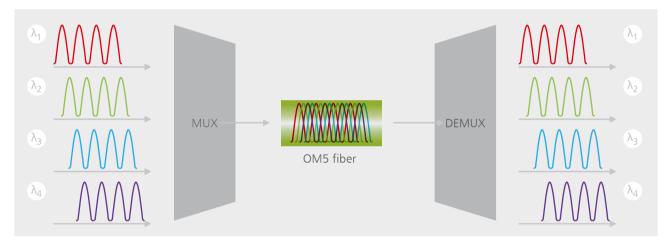




### OM5 – future-proof multimode fiber for computing centres

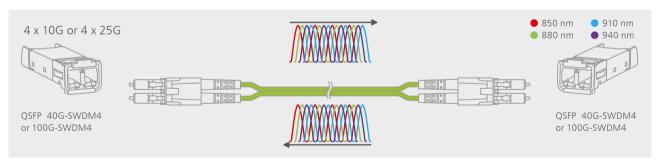
Previously, multimode fibers were only operated with a narrow band at 850 or 1300 nm. In order to meet the rapidly increasing demand for more and more bandwidth, the new OM5 fibre type with very positive transmission properties has been developed in a band of

100 nm: in the range of 850 to 950 nm, four wavelengths can be transmitted simultaneously by means of so-called wavelength division multiplexing.



Thekeywordsareshortwavewavelengthdivisionmultiplexing (SWDM), a process that allows four times the previous transmission power. It can transmit 40 GBit/s with 4 wavelengths at 10 GBit/s via a trans-

mitting and receiving fiber. Or even 100 GBit/s through 4 times 25 GBit/s



 $\,$  OM5 fibres in conjunction with SWDM transceivers thus increase capacities without having to do without the proven LC duplex connectors.

The cabling of buildings or data centres with OM5 supports all previous applications as well as OM4 or OM3. Both plug and cable are fully compatible. However, the OM5 fiber in combination with corresponding transceivers offers a longer range.

WideCap-OM5 also has very positive macro bending properties. The fibre meets or exceeds the following international specifications:

- > IEC 60793-2-10: Type A1a.4
- > ITU-T G.651.1
- > TIA/EIA-492 AAAE
- > ISO/IEC 11801 Category OM5 (in progress)

In February 2017, the TIA (Telecommunications Industry Association) defined the colour "lime green" for identifying the OM5 fiber in the USA. The respective European standards are being worked on.





#### With the new OM5 multimode fiber...

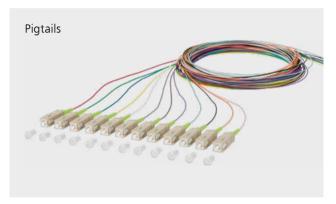
- > you have 4-times more capacity than with OM4
- > you can reduce the number of fibres 4 fold
- > the bandwidth is specified for the optical window of 850 to 950nm (OM4 is only specified for 850nm)

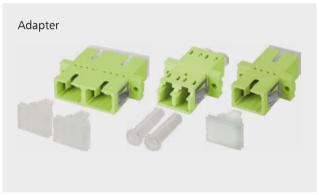
#### OM5 multimode fibers support...

- > new WDM technologies in order to meet the capacity requirements of the next ten years
- > Cable solutions for 40, 100 and 200G WDM systems with only 2 fibers
- > in the future, 400 and 800G over 4 fiber pairs (MPO)

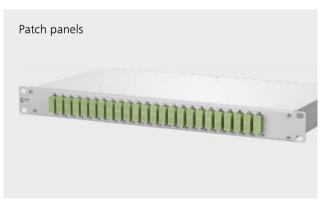














Just use our configurators, which you can find on our homepage www.metz-connect.com/en/configurators. In it you will find all available variants.





### **Data Center Solutions**

1	RJ45   Cat.6 <sub>A</sub>	64
2	RJ45   Configurator	66
3	Fiber optic   Single mode/multi mode	67
4	Accessories	70
5	25G System   The RJ45 building cabling	
	with future	7



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#### Matching accessories for DCCS2 MTC1

DCCS2 BGT 19 inch 1RU subrack black 70

#### Matching accessories for DCCS2 MTC6

DCCS2 BGT 19 inch 1RU 70 subrack black





#### DCCS2 MTC1

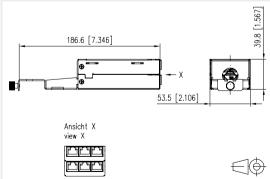
**RJ45** | Cat.6,

- 6 port RJ45 subassembly to mount one 24-pair installation cable AWG26 or AWG23
- component testing for  ${\sf Cat.6}_{\sf A}$  to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, TIA/EIA-568-C.2 (2009-08) and IEC 60603-7-51 Ed.1 (12/2008), certified by GHMT
- compliance with class E, up to 500 MHz to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, certified by
- tested: components up to 600 MHz, link up to 800 MHz
- suitable for Power over Ethernet (PoE, PoE plus and UPoE)
- · Alien Next optimized, shielded jacks
- the locking levers of patch cords connected to DCCS2 subassemblies show upwards and are easy to handle at any
- connection of one data cable AWG 26/1 to 22/1 (solid wire) to LSA IDC terminal blocks
- · marking of conductor assignment to T568A
- · solid and refined assembly housing
- shield tap for installation cable separate from strain relief
- · mounting version: DCCS2

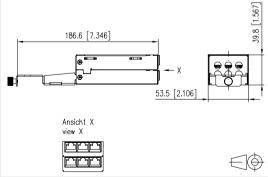
#### DCCS2 MTC6

- 6 port RJ45 subassembly to connect 6 individual installation cables
- component testing for  $Cat.6_A$  to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, TIA/EIA-568-C.2 (2009-08) and IEC 60603-7-51 Ed.1 (12/2008), certified by GHMT
- compliance with class E, up to 500 MHz to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, certified by
- tested: components up to 600 MHz, link up to 800 MHz
- suitable for Power over Ethernet (PoE, PoE plus and UPoE)
- Alien Next optimized, shielded jacks
- the locking levers of patch cords connected to DCCS2 subassemblies show upwards and are easy to handle at any
- connection of one data cable AWG 26/1 to 22/1 (solid wire) to LSA IDC terminal blocks
- marking of conductor assignment to T568A
- solid and refined assembly housing
- shield tap for installation cable separate from strain relief
- mounting version: DCCS2

#### **Dimensional drawing**



			7
P/N	Color	Feature 1	Feature 2
130D2CM1-E		6 x RJ45	for 1x24 pairs



			74
P/N	Color	Feature 1	Feature 2
130D2CM6-E		6 x RJ45	for 6x4 pairs



## Matching accessories for DCCS2 PL26 Link

DCCS2 BGT 19 inch 1RU subrack black 70

## Matching accessories for DCCS2 PL23 Link

DCCS2 BGT 19 inch 1RU subrack black Page

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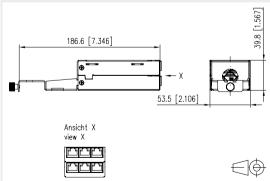
#### DCCS2 PL26 Link

- DCCS2 class E<sub>x</sub> Permanent Link consisting of two 6-port RJ45 subassemblies connected to a 24-pair installation cable AWG26/1
- component testing for Cat.6<sub>A</sub> to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, TIA/EIA-568-C.2 (2009-08) and IEC 60603-7-51 Ed.1 (12/2008), certified by GHMT
- compliance with class E<sub>A</sub> up to 500 MHz to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, certified by GHMT
- · tested: components up to 600 MHz, link up to 800 MHz
- for 10 GBit Ethernet (IEEE 802.3an)
- suitable for Power over Ethernet (PoE, PoE plus and UPoE) with reduced temperature range
- · Alien Next optimized, shielded jacks
- the locking levers of patch cords connected to DCCS2 subassemblies show upwards and are easy to handle at any time
- solid and refined assembly housing
- shield tap for installation cable separate from strain relief
- · cable diameter less than 14 mm
- short links with less then 5 m are also available
- delivery with serial number and 6 Permanent Link measurement reports
- mounting version: DCCS2
- available in prefabricated, customer specific lengths replace the xxx in the part number by the length examples: 050 = 5.0 m; 100 = 10.0 m; 200 = 20.0 m; 500 = 50.0 m
- maximum length 50 m
- configuration tool in Microsoft® Excel available on request

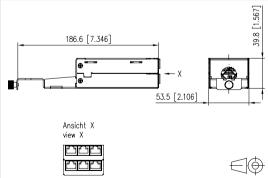
#### DCCS2 PL23 Link

- DCCS2 class E<sub>A</sub> Permanent Link consisting of two 6-port RJ45 subassemblies connected to a 24-pair installation cable AWG23/1
- component testing for Cat.6 $_{\rm A}$  to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, TIA/EIA-568-C.2 (2009-08) and IEC 60603-7-51 Ed.1 (12/2008), certified by GHMT
- compliance with class E<sub>A</sub> up to 500 MHz to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, certified by GHMT
- tested: components up to 600 MHz, link up to 800 MHz
- for 10 GBit Ethernet (IEEE 802.3an)
- suitable for Power over Ethernet (PoE, PoE plus and UPoE)
- · Alien Next optimized, shielded jacks
- the locking levers of patch cords connected to DCCS2 subassemblies show upwards and are easy to handle at any time
- · solid and refined assembly housing
- shield tap for installation cable separate from strain relief
- cable diameter less then 19 mm
- short links with less then 5 m are also available
- delivery with serial number and 6 Permanent Link measurement reports
- mounting version: DCCS2
- available in prefabricated, customer specific lengths replace the xxx in the part number by the length – examples: 050 = 5.0 m; 100 = 10.0 m; 200 = 20.0 m; 800 = 80.0 m
- maximum length 80 m
- configuration tool in Microsoft® Excel available on request

#### Dimensional drawing



_	,		74
P/N	Color	Feature 1	Feature 2
130D2CL1XXXE		AWG 26	



			- 1
P/N	Color	Feature 1	Feature 2
130D2CL2XXXE		AWG 23	



**Data Center Solutions** 



#### DCCS2 RJ45-Link

- Class E<sub>A</sub> Permanent Link consisting of 2 subassemblies 6 ports RJ45 mounted to a 24-pair installation cable
- Cat.6, component testing as per ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, TIA/EIA-568-C.2 (2009-08) and IEC 60603-7-51 Ed.1 (12/2008), GHMT certified
- $\bullet$  Class E<sub>A</sub> up to 500 MHz as per ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, GHMT certified
- Component testing: up to 600 MHz, link up to 800 MHz
- For up to 10 GBit Ethernet (IEEE 802.3an)
- Suitable for Power over Ethernet (PoE, PoE plus and UPoE)
- · Solid, refined subassembly housing
- Shield tap for installation cable separate from strain relief
- Delivery with serial number and 6 Permanent Link measuring reports
- Installation shape: DCCS2
- Also short links with less than 5 m possible
- Configuration tool in Microsoft® Excel upon request

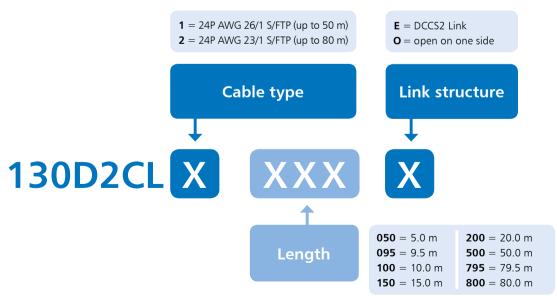


#### Example

130D2CL 2 660

DCCS2 RJ45 link to 24-pair AWG23/1 S/FTP cable length 66.0 m

#### Part number key for further versions



These cables will be manufactured according to your specifications. They can therefore neither be exchanged nor returned.





#### Matching accessories for DCCS2 6 x LC-D Link

DCCS2 BGT 19 inch 1RU subrack black 70

#### Matching accessories for DCCS2 6 x LC-D VIK Link Page

DCCS2 BGT 19 inch 1RU

70 subrack black



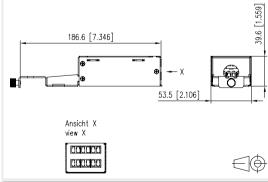


#### DCCS2 6 x LC-D Link

- prefabricated fiber optic link consisting of 2 subassemblies DCCS2 with 6 LC-D adapter mounted to a 12 fiber mini breakout cable
- port numbering of the DCCS2 19" subassembly frame remains in place when installing the FO subassemblies
- for 10 GBit Ethernet (IEEE 802.3an)
- the locking levers of patch cords connected to DCCS2 subassemblies show upwards and are easy to handle at any
- · solid and refined assembly housing
- cable diameter less then 6.5 mm
- · delivery with serial number and 12 attenuation measurement reports
- mounting version: DCCS2
- available in prefabricated, customer specific lengths replace xxxx in the part number by the length - examples: 0050 = 5.0 m; 0100 = 10.0 m; 0995 = 99.5 m; 2000 = 200.0 m
- · maximum length: 500 m
- · configuration tool in Microsoft® Excel available on request
- variants: SM (OS2), SM (OS2 APC), MM (OM5), MM (OM4), MM (OM3)

#### DCCS2 6 x LC-D VIK Link

- prefabricated fiber optic cable divider link consisting on one side of one subassembly DCCS 2 with 6 LC-D adapter mounted to a 12 fiber mini breakout cable. The other side is configured with 12 LC plugs with a dismantle measure of about 30 cm, in installation tube about 35 cm and a diameter of about 47 mm
- especially suited to be combined with DCCS2 subassemblies 6xLC-D
- port numbering of the DCCS2 19" subassembly frame remains in place when installing the FO subassemblies
- for 10 GBit Ethernet (IEEE 802.3an)
- the locking levers of patch cords connected to DCCS2 subassemblies show upwards and are easy to handle at any time
- solid and refined assembly housing
- cable diameter less then 6.5 mm
- delivery with serial number and 12 attenuation measurement reports
- mounting version: DCCS2
- available in prefabricated, customer specific lengths replace xxxx in the part number by the length – examples: 0050 = 5.0 m; 0100 = 10.0 m; 0995 = 99.5 m; 2000 = 200.0 m
- · maximum length: 500 m
- configuration tool in Microsoft® Excel available on request
- variants: SM (OS2), SM (OS2 APC), MM (OM5), MM (OM4), MM (OM3)



P/N	Color	Feature 1	Feature 2
130D2F572XXXXE	aqua	6 x LC-D	50/125 (OM3)
130D2F772XXXXE	violet	6 x LC-D	50/125 (OM4)
130D2F87MXXXXE	lime green	6 x LC-D	50/125 (OM5)
130D2F971XXXXE	blue	6 x LC-D	9/125 (OS2)
130D2F976XXXXE	green	6 x LC-D APC	9/125 (OS2)

P/N	Color	Feature 1	Feature 2
130D2F572XXXXZ	aqua	6 x LC-D EVZ	cable divider
130D2F772XXXXZ	violet	6 x LC-D EVZ	50/125 (OM4)
130D2F87MXXXXZ	lime green	6 x LC-D EVZ	50/125 (OM5)
130D2F971XXXXZ	blue	6 x LC-D EVZ	9/125 (OS2)
130D2F976XXXXZ	green	6 x LC-D APC EVZ	9/125 (OS2)





Page

## Matching accessories for DCCS2 6 x LC-D

DCCS2 BGT 19 inch 1RU subrack black 70

#### Matching accessories for DCCS2 6 x LC-D / 1 x MPO

Page
DCCS2 BGT 19 inch 1RU
subrack black 70



### DCCS2 6 x LC-D

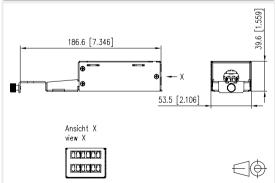
- DCCS2 fiber optic subassembly mounted with 6 LC-D adapter
- port numbering of the DCCS2 19" subassembly frame remains in place when installing the FO subassembly
- the locking levers of patch cords connected to DCCS2 subassemblies show upwards and are easy to handle at any time
- for prefabricated mini breakout cables in customer specific lengths
- · solid and refined assembly housing
- mounting version: DCCS2
- variants: blue (SM), green (SM APC), lime gree (OM5), violet (OM4), aqua (OM3)



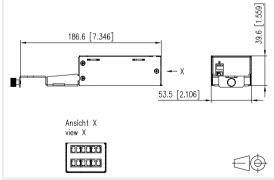
#### DCCS2 6 x LC-D / 1 x MPO

- DCCS2 fiber optic subassembly MPO with 6 mounted LC-D adapter
- port numbering of the DCCS2 19" subassembly frame remains in place when the fiber optic subassembly is installed
- all locking levers of patch cords connected to DCCS2 subassemblies show upwards and are easy to handle at any time
- on the back 1 x MPO coupler (exterior: key up) polarity, Method A
- · solid and refined subassembly housing
- mounting version: DCCS2
- variants: SM (OS2), SM (OS2 APC), MM (OM4), MM (OM3)

#### Dimensional drawing



P/N	Color	Feature 1	Feature 2
130D2FB51-E	aqua	6 x LC-D	MM (ceramic)
130D2FB71-E	violet	6 x LC-D	MM (ceramic)
130D2FB81-E	lime green	6 x LC-D	MM (ceramic)
130D2FB91-E	blue	6 x LC-D	SM
130D2FBA1-E	green	6 x LC-D APC	SM



P/N	Color	Feature 1	Feature 2
130D2FM51A-E	aqua	6 x LC-D	50/125 (OM3)
130D2FM71A-E	violet	6 x LC-D	50/125 (OM4)
130D2FM91A-E	blue	6 x LC-D	9/125 (OS2)
130D2FMA1A-E	green	6 x LC-D APC	9/125 (OS2)







#### DCCS2 6 x MPO

- 6 port MPO subassembly for 10 / 40 / 100 MBit/s
- 6x MPO adapters Key up / Key down
- with optional strain relief
- fastening in a 19-inch subrack by a knurled screw
- easy mounting/dismounting to/from 19-inch subracks in 19-inch cabinets (plug and play)
- design: DCCS2

variants: OM3: aqua; OM4: violet; OS2 APC: green

P/N	Color	Feature 1	Feature 2
130D2FBM5A-E	aqua	6xMPO	MM
130D2FBM7A-E	violet	6xMPO	MM
130D2FBMAA-E	green	6xMPO	SM APC



#### DCCS2 subassembly frame black is matching accessories for

METZ

CONNECT

accessories for	
	Pag
DCCS2 subassembly C6 <sub>A</sub> MTC1	64
DCCS2 subassembly C6 <sub>A</sub> MTC6	64
DCCS2 C6 <sub>A</sub> PL26	65
DCCS2 C6 <sub>A</sub> PL23	65
DCCS2 OM3 6xLC-D link	67
DCCS2 OM4 6xLC-D link	67
DCCS2 OS2 6xLC-D link	67
DCCS2 OS2 6xLC-D APC link	67
DCCS2 OM3 6xLC-D cable divider link	67
DCCS2 OM4 6xLC-D cable divider link	67
DCCS2 OS2 6xLC-D cable divider link	67
DCCS2 OS2 6xLC-D APC cable divider link	67
DCCS2 subassembly 6xLC-D MM aqua	68
DCCS2 subassembly 6xLC-D MM violet	68
DCCS2 subassembly 6xLC-D SM blue	68
DCCS2 subassembly 6xLC-D SM APC green	68
DCCS2 subassembly OM3 MPO 6xLC-D	68
DCCS2 subassembly OM4 MPO 6xLC-D	68
DCCS2 subassembly OS2 MPO 6xLC-D	68
DCCS2 subassembly OS2 MPO 6xLC-D APC	68



#### DCCS2 subassembly frame black

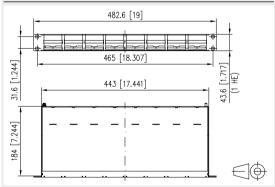
- 19 inch 1UH subassembly frame to mount up to eight DCCS2 subassemblies
- very high packaging density: up to 48 RJ45 ports or 48 fiber optic duplex adapter (96 fibers)
- black, powder coated steel sheet frame
- port numbering from 1 to 48
- port numbering remains in place when DCCS2 Twisted Pair and DCCS2 FO subassemblies are mounted
- · enclosed grounding kit
- downward compatible to DCCS with low mounting effort
- mounting version: DCCS2, DCCS and double DCCS



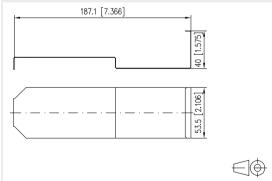
#### DCCS blind cover

- dummy cover for closing unused recesses in DCCS and DCCS2 assembly frame
- mounting material enclosed
- black, powder-coated steel sheet
- mounting version: DCCS

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
130D2B1B-E	black	unequipped	



P/N	Color	Feature 1	Feature 2
130DBL1-E	black	Blind module	





### 25G System – The RJ45 building cabling with future



# Intelligent system solution for the highest-performing, future-oriented, structured cabling

The need today for high data transfer rates is enormous. On 12 September 2017, the Internet node in Frankfurt reported a new record of 5.88 terabits per second. By mid-March 2018, just under 6.4 terabits per second had already been measured. Five years ago, it was not even 2 terabits per second.

A forward-looking, intelligent building cabling for a wide variety of uses has a high priority among investors as basic home and building control. Investments are secured over the years, construction and maintenance costs are minimized.

#### System components

25GBit high-speed data transmission requires the performance of all the components. In addition to the connection components, this also includes the installation and patch cords. With products from METZ CONNECT, you have the right components to provide you with a complete and end-to-end solution from the server to the end device.

#### 25Gmodul

- RJ45 pursuant to 60603-7-1
- 25GBASE-T pursuant to DTR-11801-9905 in channel link with 30 m (50 m in progres)
- Completely backward compatible through compliance with Class  $E_A$  pursuant to ISO/IEC 11801-1 and DIN EN 50173-1 (in permanent link up to 90 m; in channel link to 100 m)
- without special tools migratable from C6<sub>A</sub>modul of 25Gmodul by swapping the metal case

Variants 25modul K (mounting cut-out construction keystone)



25Gmodul K - P/N Individual module package 130B21-25-E 12 Unit module package 130B21-25-Z

#### GC1300 pro22 and GC1500 pro22 (P/N please refer Page 24)

- 25/10 GBit Installation cable
- Reaction to fire: Class D<sub>ca</sub> after EN 50399
- pair shielded Cat.7<sub>△</sub> AWG 22 S/FTP
- overall shield: Cu tinned braid, coupling loss ≥ 85 dB

#### Patch cable 25G AWG 26 (P/N 13084G20xx-E)

- pair shielded 25G patch cable AWG 26/7, halogen-free
- for 25 GBit/s (IEEE 802.3bq); 10 GBit/s (IEEE 802.3an)
- two shielded RJ45 plugs, wiring, 1 1
- 2 m (no further standard lengths for 25 GBit possible)





### **High performance**

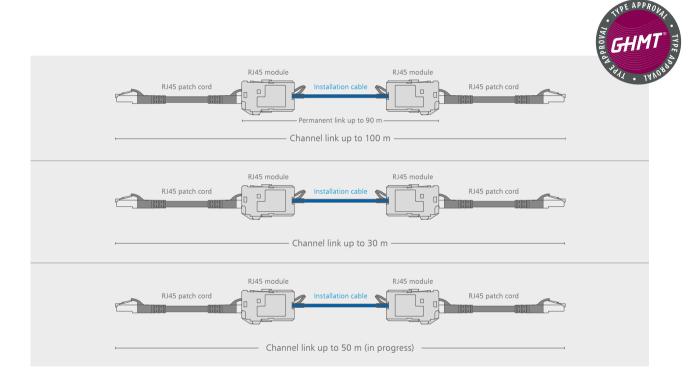
The 25G system offers high performance by fulfilling the DTR-11801-9905 for 25GBASE-T pursuant to IEEE 802.3bq (in the channel link up to 30 m) for the highest performance applications up to 1250 MHz bandwidthand 25 GBit Ethernet as well as ISO/IEC 11801- 1 Class EA in permanent and channel link up to link lengths of 100 m for demanding applications in the range up to 500 MHz bandwidth and 10 GBit Ethernet pursuant to IEEE 802.3an. The high-quality product quality is further enhanced by a robust die-cast zinc housing.

### Independent certification

The connection system meets international requirements for future-oriented copper-based data highways.

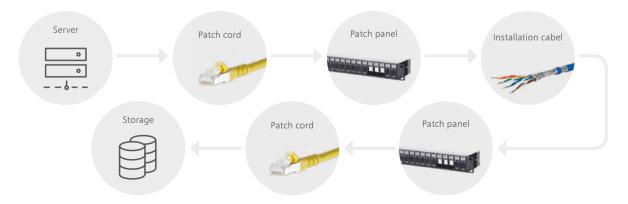
- RJ45 pursuant to 60603-7-1
- GHMT certified pursuant to DTR-11801-9905 for 25GBaseT in channel link with 30 m (50 m in progress).
- $-\,$  GHMT certified pursuant to Class  $\rm E_A$  in permanent link up to 90 m pursuant to ISO/IEC 11801-1 and DIN EN 50173-1

The requirements of Class  $E_A$  are also complied with in channel link pursuant to the above-mentioned standard.



### The highest compatibility for efficient use

Our new 25G System is consistent and compatible – a prerequisite for the transparent, efficient and individual use of future-oriented network and cabling systems. Build today the network infrastructure of tomorrow. The minimum additional monetary cost provides you with 2.5 times the transmission speed.







	Industrial Connectors				
1	IP PC   Performance specifications	74	28	Modular wall outlets   Flush mount	
2	IP PC   RJ45 plug inserts (for IP67 housings	s) 76		built-in outlet	105
3	IP PC   Fiber Optic inserts (for IP67 housing	js) 76	29	Standard rail   Standard rail REG	
4	IP PC   RJ45 jack & coupler inserts	79		for RJ45 jacks & adapter	107
5	IP PC   Fiber Optic adapter inserts	80	30	Standard rail   Dust protection covers &	
6	IP PC   USB adapter inserts	81		Standard rail REG for fiber optic E2000	108
7	IP PC   Variant 1 plug/flange housing	82	31	Standard rail   E-DAT Industry	
8	IP PC   Var. 1 wall outlet & coupler housing	g 84		terminal rail TS35 RJ45	109
9	IP PC   Variant 4 plug/flange housing	85	32	Standard rail   E-DAT Industry	
10	IP PC   Var. 4 wall outlet & coupler housing	g 86		terminal rail TS35 fiber optic	110
11	IP PC   Variant 5 plug/flange housing	87	33	Standard rail   E-DAT Industry	
12	IP PC   Variant 14 plug/flange housing	88		terminal rail TS35 fiber optic & USB	111
13	IP PC   Var. 14 fiber optic flange housing s	et 89	34	Standard rail   DIN rail adapter &	
14	IP PC   Variant 6 plug & cable	90		suitable 6 Port module frame	112
15	IP PC   Variant 6 cable & flange housing	91	35	Standard rail   DIN rail adapter	113
16	IP PC   Var. 6 wall outlet & coupler housing	92	36	Standard rail   Fiber optic	114
17	IP PC   Var. 6 locking clamp / IP67 metal outl	et 93	37	Standard rail   Fiber optic	
18	IP PC   Protective caps for IP67 housings	94		standard rail accessories	116
19	IP PC   Universal test jack housing		38	Standard rail   Fiber optic front cover	117
	for Steadytec inserts	96	39	Standard rail   OpDAT REG Splice	
20	RJ45 Plug   Field plug pro	97		Distributor for fiber optic & RJ45	119
21	RJ45 Plug   Field plug pro 360	98	40	Industrial Ethernet	
22	RJ45 Plug   E-DAT Industry IP20			Overview M12 products	120
	RJ45 field plug	99	41	Ethernet M12   D- & X-coded jacks	122
23	RJ45 Plug   Color coding for E-DAT		42	Ethernet M12   M12 connectors	
	Industry IP20 RJ45 field plug	100		for field assembly	128
24	RJ45 Plug   E-DAT Industry IP20 RJ45		43	Ethernet M12   Panel feed through	
	plug & color coding	101		adapters M12 X-coded to RJ45	131
25	Cable connector   Cable connector	102	44	Ethernet M12   Cable and connection line	132
26	Mod. wall outlets   TH35 rail & wall outlet	103	45	Ethernet Device   Industry switche	143
27	Modular wall outlets   Modular wall				
	outlets 104 +	106			

#### **IP protected connectors** | Performance specifications

#### Industry cables/IP protected connectors

- High-quality pre-assembled patch or connection cables
- Different copper cable types possible
- Very large range of combination options thanks to the **STEADYTEC**® Fit-for-All principle
- IP20 up to IP67 solutions
- IP67 variants will be supplied with plug protection caps
- Online cable configurator can be found on our homepage http://www.metz-connect.com/en/configurator-copper-and-fiber-optique-cables

### Ordering Information for other versions

#### Example

141 B 1 3 1K 5 3U B3

RJ45 Industrial cable 1-1 (T568B) IC1000 PUR 23/1 Cat.7 S/FTP 23 m RJ45 field plug insert V1 plug housing – E-DAT Industry

field jack insert V1 flange housing AP

B = IC1000 4P AWG 23/1 Cat.7 PUR S/FTP

Cat.6<sub>△</sub> PUR S/FTP

N = PK AWG 26/7

1 = RJ45 plug IP20/ IP67 for AWG 27/7-24/7 and AWG 26/1-24/1 3 = RJ45 field plug insert 4 = RJ45 plug insert IP67 for AWG 27/7-24/7 and AWG 26/1-24/1 0 = RJ45 field plug insert PROFINET

Inserts for IP67 plug housing

RJ45 plug without plug housing

0 = open

1 = RJ45 plug for AWG 27/7-24/7 and AWG 26/1-24/1

R = RJ45 plug

for AWG < 24/1 2 = RJ45 field plug black  $M = C6_A$  field plug pro

T = RJ45 ultra short plug for AWG 27/7-24/7 and AWG 26/1-24/1

W = RJ45 ultra short plug for AWG < 24/1

Inserts for IP67 flange housing

5 = E-DAT field jack insert

6 = E-DAT field jack insert

PROFINET
7 = E-DAT modul

RJ45 without flange housing

 $8 = C6_{A} \text{modul } 180^{\circ}$ 

 $9 = C6_{A} \text{modul K } 180^{\circ}$ 

 $A = C6_A \text{modul } 90^\circ$  $B = C6_A \text{modul } 270^\circ$ 

 $C = C6_A \text{modul K } 90^\circ$ 

D = C6<sub>4</sub>modul K 270°

K = E-DAT modul K

B0 = 20.0 m E0 = 50.0 m10 = 90.0 m

05 = 0.5 m

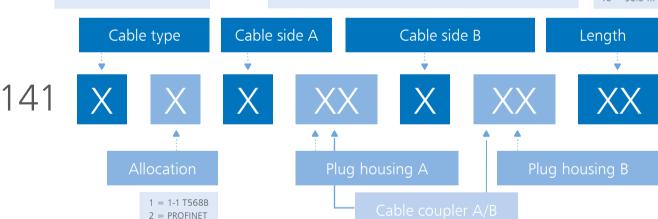
10 = 1.0 m

95 = 9.5 m

A0 = 10.0 m

A5 = 15.0 m

A9 = 19.0 m



Use our cable configurator, which you can find on our homepage can be found at www.metz-connect.com/kabelkonfigurator.
There you will find all available variants.

4 = 1-1 T568A

Please note that these cables are custom made to your liking are manufactured. Exchanges or returns are therefore excluded.

#### IP67 Cable coupler/wall outlet

for E-DAT insert field jack/PROFINET

3Q = V1 Cable coupler 3R = V4 Cable coupler

3U = V1 Flange housing

3V = V4 Flange housing

for E-DAT modul jack

3T = V6 Cable coupler

3W = V6 Flange housing

without plug housing
00 = without plug housing

1M = V1 metal plug housing

protected

2K = V1 plug housing bend

 $protected \\ 3K = V6 \quad plug \ housing$ 

5K = V4 plug housing bend

protected

6M = V5 metal plug housing

8M = V14 metal plug housing

1K = V1 plug housing

4K = V4 plug housing

2M = V1 metal plug housing bend





The technology brand **STEADYTEC**® stands for pioneering connection technology in the field of data, energy and signal transmission. Created by the industry's top three companies, it provides the foundation for reliable, user-oriented and standard-compliant solutions, both in the office as well as in the harsh environment of industry.

Pursuant to the fit-for-all principle, you simply select the required housing and the desired material! You can choose between plastic and metal. Same colour point = possible combination

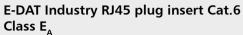












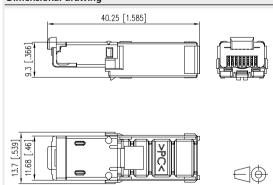
- Cat.6 class  $\mathbf{E}_{_{\! A}}$  plug to be mounted in IP67 plug housings of variants 1, 4, 5 and 14
- compliance with class E<sub>x</sub> to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for 10 GBit Ethernet(IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- connection of AWG 27/7 24/7 and AWG 24/1 possible • solid copper wire diameter from 0.36 to 0.51 mm
- solid copper wire diameter from 0.46 to 0.61 mm
- conductor diameter 0.85 mm to 1.05 mm
- · cable jacket up to 7.3 mm
- · without lock lever
- · connection of crimp contacts and shield in one step using crimping tool
- · color may differ from figure



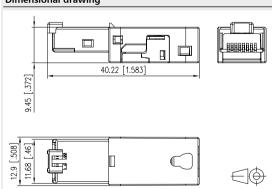
#### E-DAT Industry RJ45 field plug insert **Cat.5 Class D PROFINET**

- Cat.5 plug to be assembled in the field and mounted in IP67 plug housings of variants 1, 4, 5 and 14
- 100 MBit suitable according to IEEE 802.3
- suitable for Remote Powering (PoE, PoE plus and UPoE)
- 4-wire RJ45 plug for AWG 22 to be assembled in the field
- connection of AWG 26/7 22/7; AWG 26/1 22/1 possible
- solid copper wire diameter from 0.4 to 0.64 mm
- stranded copper wire diameter from 0.48 to 0.76 mm
- conductor diameter up to 1.6 mm
- cable jacket from 5.5 to 8.5 mm
- consists of only 2 parts
- easy assembly connection without special tools
- · zinc die-cast housing for industrial use
- protected locking hook
- can be used as test plug at IP67 end of variants 1, 4, 5, 6

#### **Dimensional drawing**



7						
P/N	Color	Feature 1	Feature 2			
1401500810-I		8(8) plug				



P/N	Color	Feature 1	Feature 2		
1401400810PI	green	8(8) field plug	for Profinet plugs		



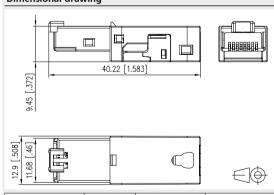






## E-DAT Industry RJ45 field plug insert Cat.6 Class $\mathbf{E}_{\Delta}$

- Cat.6 class E<sub>A</sub> plug to be assembled in the field and mounted in IP67 plug housings of variants 1, 4, 5 and 14
- compliance with class E<sub>A</sub> to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- $\bullet\,$  8-wire RJ45 plug for AWG 22 to be assembled in the field
- connection of AWG 26/7 22/7; AWG 26/1 22/1 possible
- solid copper wire diameter from 0.4 to 0.64 mm
- stranded copper wire diameter from 0.48 to 0.76 mm
- conductor diameter up to 1.6 mm
- cable jacket from 5.5 to 8.5 mm
- consists of only 2 parts
- easy assembly connection without special tools
- zinc die-cast housing for industrial use
- can be used as test plug at IP67 end of variants 1, 4, 5, 6
   and 14
- variants: T568A, T568B, Industry



	Feature 1	Feature 2
metallike	8(8) field plug	for plugs
	metallike	metallike 8(8) field plug









#### **OpDAT Industry 2SC MM plug insert**

- SC-RJ/2SC plug for mounting in IP67 plug housing of variants 1, 4 and 14
- variants 1, 4 and 14 compliance with EN 50173-1:2011-09 and ISO/IEC 24702 with regard to limit values for insertion and return loss
- · convex pre-polished pin made of zirconium oxide ceramics
- · plastic plug body
- nickel-plated zinc die-cast plug receptacle
- · fiber fastened by means of adhering
- cable fastened by means of crimping to pin body and/or to plug receptacle for breakout and mini breakout cables
- suitable for connection to cables acc. to PROFINET specification
- min. scope for tension relief 100 N
- anti-bend sleeve and dust protection cover made of flameretardant, halogen-free elastomer
- · Service life: min. 500 plug-in cycles
- operating temperature -40 °C...+65 °C
- variants: SC-RJ/2SC (SM), SC-RJ/2SC (MM), SC-RJ/2SC (POF)

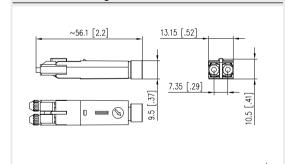


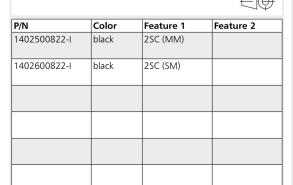


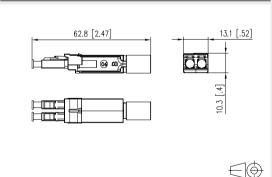
#### **OpDAT Industry 2LC MM plug insert**

- 2LC plug for mounting in IP67 plug housing of variants 1, 4 and 14
- compliance with EN 50173-1:2011-09 and ISO/IEC 24702 with regard to limit values for insertion and return loss
- convex pre-polished pin made of zirconium oxide ceramics
- flame-retardant and halogen-free plastic pin body
- nickel-plated zinc die-cast plug receptacle
- · fiber fastened by means of adhering
- cable fastened by means of crimping to pin body and/or to plug receptacle for breakout and mini breakout cables
- min. scope for tension relief 100 N
- anti-bend sleeve made of flame-retardant, halogen-free elastomer
- Service life: min. 500 plug-in cycles
- operating temperature -40 °C to +70 °C
- variants: 2LC (SM), 2LC (MM)

#### Dimensional drawing







			7 4
P/N	Color	Feature 1	Feature 2
1402800820-I	beige	2LC (MM)	
1402900820-I	blue	2LC (SM)	









#### E-DAT Industry RJ45 coupler insert Cat.6 Class E

- Cat.6 class E RJ45 jack for mounting in IP67 flange housings of variants 1, 4, 5 and 14
- use for ingress protection IP65 in combination with Universal test jack
- compliance with class E to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- very compact design
- symmetrical structure; can be mounted in any position
- FS 2.8 grounding connection for equipotential bonding at both front ends
- increased resistance to vibrations and shocks due to 4 springs on the shield plates
- solid zinc die-cast housing

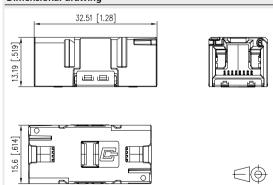




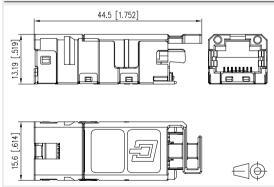
### E-DAT Industry RJ45 field jack insert Cat.6 Class $E_{\Delta}$ , T568

- RJ45 jack Cat.6 class E<sub>A</sub> to be assembled in the field and mounted in IP67 flange housings of variants 1, 4, 5 and 14
- use for ingress protection IP65 in combination with Universal test iack
- compliance with class  $\rm E_{\rm A}$  to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- no special tools required
- AWG 26/7 22/7; AWG 26/1 22/1 possible
- · no protruding contours
- 2 x FS 2.8 mm grounding connection for equipotential bonding at cable end
- increased resistance to vibrations and shocks due to 4 springs on the shield plates
- · consists of only 2 parts; easy to assemble
- · solid zinc die-cast housing
- · can be reconnected easily
- variants: pin assignment to T568A, T568B or PROFINET

#### Dimensional drawing



P/N	Color	Feature 1	Feature 2		
1401200810MI	metallike	8(8) coupler			



P/N	Color	Feature 1	Feature 2				
1401100810MI	metallike	8(8) T568A					
1401800810MI	metallike	8(8) T568B					









### OpDAT Industry SC-RJ/2SC MM adapter insert

- SC-RJ/2SC adapter
- slotted ceramics sleeve for single mode applications
- slotted metal sleeve (Ph-Br) for multi mode applications
- conformity with relevant IEC framework specifications with regard to testing conditions and connector compatibility unilaterally to connector version SC to IEC 61754-4, IEC 60874-14 and SC-RJ to IEC 61745-24, EN 50377-6-1
- compliance with EN 50173-1:2011-09 and ISO/IEC 24702 with regard to limit values for insertion loss
- flame-retardant and halogen-free plastic housing
- · flame-retardant and halogen-free dust cover
- in flange or wall outlet of var. 1 and 4 suitable for integration
- variant 14 only available in sets
- · Service life: min. 500 plug-in cycles
- operating temperature -40°C to +70°C
- variants: blue (SM), beige (MM)

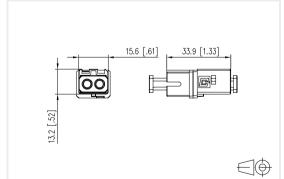




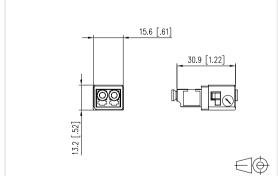
#### **OpDAT Industry LC-D MM adapter insert**

- LC-D adapter
- slotted ceramics sleeve for single mode applications
- slotted metal sleeve (Ph-Br) for multi mode applications
- conformity with relevant IEC framework specifications with regard to testing conditions and connector compatibility to connector version LC to IEC 61754-20
- compliance with EN 50173-1:2011-09 and ISO/IEC 24702 with regard to limit values for insertion loss
- flame-retardant and halogen-free plastic housing
- flame-retardant and halogen-free dust cover
- in flange or wall outlet of var. 1 and 4 suitable for integration
- · variant 14 only available in sets
- · Service life: min. 500 plug-in cycles
- operating temperature -40 °C to +70 °C
- variants: blue (SM), beige (MM)

#### Dimensional drawing



P/N	Color	Feature 1	Feature 2
1402100820MI	beige	SC-RJ/2SC (MM)	
1402K00820MI	blue	SC-RJ/2SC (SM)	



P/N	Color	Feature 1	Feature 2
1402300820MI	beige	LC-D (MM)	
1402L00820MI	blue	LC-D (ceramic)	SM









#### E-DAT Industry USB A 3.0 adapter insert

- USB 3.0 coupler for converting USB connections or to connect two USB cables with USB-A connectors
- use for ingress protection IP67 in combination with flange var. 1, 4, 5 and 14
- use for ingress protection IP65 in combination with Universal test jack
- · for service and test jacks complying with IP67
- · jack A to jack A
- note: no IP67 connector available

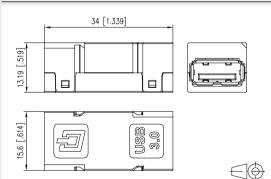




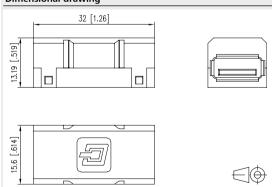
#### E-DAT Industry USB A 2.0 adapter insert

- USB 2.0 coupler for converting USB connections or to connect two USB cables with USB-A connectors
- use for ingress protection IP67 in combination with flange var. 1, 4, 5 and 14
- use for ingress protection IP65 in combination with Universal test jack
- for service and test jacks complying with IP67
- jack A to jack A
- note: no IP67 connector available

#### **Dimensional drawing**



D/AI	C-1	F44	F4 2
P/N	Color	Feature 1	Feature 2
1401U10812KI	black	USB A coupler	USB 3.0



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P/N	Color	Feature 1	Feature 2		
1401U00812KI	black	USB A coupler	USB 2.0		









#### Industry IP67 V1 metal plug housing

- plug housing with bayonet lock acc. to ISO/IEC 24702 and IEC 61076-3-106 var. 1
- IP67 protected housing to hold Industry plug inserts
- increased diameter range of 10 mm for connection of cable jackets
- · resistant to welding sputter
- · industry-compatible metal housing with improved durability
- flammability class as per UL 94V-0
- · improved resistance to chemical substances
- · labeling on plug housing
- · snap-on clip for color coding after assembly
- cable can be pushed through preassembled plug housing
- matching plug inserts: E-DAT Industry RJ45 field plug insert, E-DAT Industry RJ45 plug insert, OpDAT Industry 2LC plug insert, OpDAT Industry 2SC plug insert
- · variants: plug housing, bend-protected plug housing

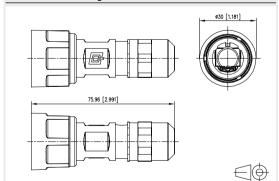




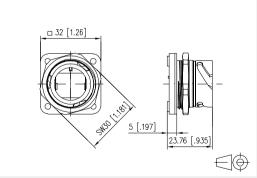
#### Industry IP67 V1 metal bulkhead

- flange with bayonet lock acc. to ISO/IEC 24702 and IEC 61076-3-106 var. 1
- easy to mount due to round wall recesses made with inserts for commercially available punch pliers
- mounting type, central screwing
- alternative mounting with 4 screws (M3), not included in scope of delivery
- mounting on front and back side
- industry-compatible metal housing with improved durability
- flammability class as per UL 94V-0
- improved resistance to chemical substances
- grounding possible on RJ45 insert using 2.8 mm contact pins
- one version for all flanges
- matching inserts: E-DAT Industry RJ45 field jack insert (T568A, T568B or Profinet), E-DAT Industry RJ45 coupler insert, E-DAT Industry USB coupler insert, OpDAT Industry SC-RJ/2SC coupler insert or OpDAT Industry LC-D coupler insert

#### Dimensional drawing



			7 7
P/N	Color	Feature 1	Feature 2
1401015000ME	metallike	unequipped	
1401025000ME	metallike	unequipped	bend protection



			· ·
P/N	Color	Feature 1	Feature 2
1401013300ME	metallike	unequipped	metal









#### Industry IP67 V1 plug housing

- plug housing with bayonet lock acc. to ISO/IEC 24702 and IEC 61076-3-106 var. 1
- IP67 protected housing to hold Industry plug inserts
- increased diameter range of 10 mm for connection of cable jackets
- · resistant to welding sputter
- industry-compatible plastic housing with improved durability
- flammability class as per UL 94V-0
- improved resistance to chemical substances
- labeling on plug housing
- · snap-on clip for color coding after assembly
- · cable can be pushed through preassembled plug housing
- matching plug inserts: E-DAT Industry RJ45 field plug insert, E-DAT Industry RJ45 plug insert, OpDAT Industry 2LC plug insert, OpDAT Industry 2SC plug insert
- · variants: plug housing, bend-protected plug housing

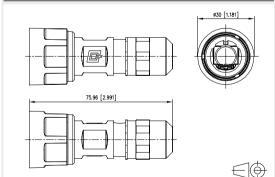




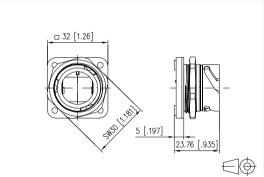
#### Industry IP67 V1 bulkhead

- flange with bayonet lock acc. to ISO/IEC 24702 and IEC 61076-3-106 var. 1
- easy to mount due to round wall recesses made with inserts for commercially available punch pliers
- mounting type, central screwing
- alternative mounting with 4 screws (M3), not included in scope of delivery
- mounting on front and back side
- industry-compatible plastic housing with improved durability
- flammability class as per UL 94V-0
- · improved resistance to chemical substances
- grounding possible on RJ45 insert using 2.8 mm contact pins
- one version for all flanges
- matching inserts: E-DAT Industry RJ45 field jack insert (T568A, T568B or Profinet), E-DAT Industry RJ45 coupler insert, E-DAT Industry USB coupler insert, OpDAT Industry SC-RJ/2SC adapter insert or OpDAT Industry LC-D adapter insert

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
1401015002KE	black	unequipped	
1401025002KE	black	unequipped	bend protection



			,
P/N	Color	Feature 1	Feature 2
1401013302KE	black	unequipped	plastics







# E-DAT Industry IP67 V1 wall outlet, surface mounting + RJ45 field jack insert Cat.6 Class $\mathbf{E}_{\Delta}$

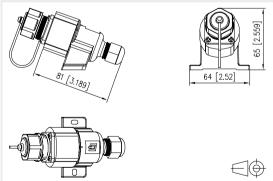
- RJ45 termination unit in flange housing with bayonet lock acc. to ISO/IEC 24702 and IEC 61076-3-106 standards, var. 1
- compliance with class E<sub>A</sub> to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- IP67 protected housing
- AWG 26/7 22/7; AWG 26/1 22/1 possible
- increased resistance to vibrations and shocks due to 4 springs on the shield plates
- no special tools required
- · possible surface-mounting in series
- connection of RJ45 plugs available on the market (no IP protection)
- · easy, time-saving mounting
- · variants: pin assignment to T568A or T568B



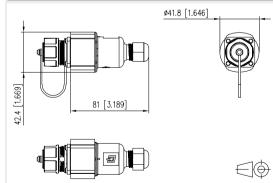
## E-DAT Industry IP67 V1 cable coupler + RJ45 field jack insert Cat.6 Class E<sub>A</sub>, T568A

- RJ45 termination unit in flange housing with bayonet lock acc. to ISO/IEC 24702 and IEC 61076-3-106 standards, var. 1
- compliance with class E<sub>A</sub> to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- IP67 protected housing
- AWG 26/7 22/7; AWG 26/1 22/1 possible
- increased resistance to vibrations and shocks due to 4 springs on the shield plates
- no special tools required
- · can be used as cable coupler
- connection of RJ45 plugs available on the market (no IP protection)
- · easy, time-saving mounting

#### **Dimensional drawing**



4	_)		74
P/N	Color	Feature 1	Feature 2
1401110012KE	black	8(8) field jack T568A	surface-mount
1401810012KE	black	8(8) field jack T568B	surface-mount



	_		· ·
P/N	Color	Feature 1	Feature 2
1401115512KE	black	8(8) field jack T568A	cable coupler









#### **Industry IP67 V4 plug housing**

- plug housing with push-pull-lock acc. to ISO/IEC 24702 and IEC 61076-3-106 var. 4
- IP67 protected housing to hold Industry plug inserts
- increased diameter range of 10 mm for connection of cable jackets
- · resistant to welding sputter
- industry-compatible plastic housing with improved durability
- flammability class as per UL 94V-0
- improved resistance to chemical substances
- · labeling on plug housing
- snap-on clip for color coding after assembly
- cable can be pushed through preassembled plug housing
- matching plug inserts: E-DAT Industry RJ45 field plug insert, E-DAT Industry RJ45 plug insert, OpDAT Industry 2LC plug insert, OpDAT Industry 2SC plug insert
- · variants: plug housing, bend-protected plug housing

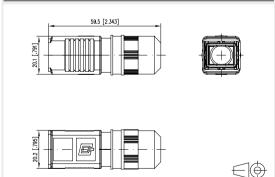




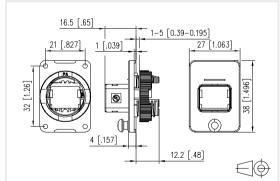
#### Industry IP67 V4 bulkhead

- flange with push-pull-lock acc. to ISO/IEC 24702 and IEC 61076-3-106 var. 4 and acc. to EN 50173-1:2011-09 as well as EN 50173-3:2011-09 standards
- easy to mount due to round wall recesses made with inserts for commercially available punch pliers
- mounting type, central screwing
- alternative mounting with 4 screws (M3), not included in scope of delivery
- mounting on front and back side
- industry-compatible housing with improved durability
- flammability class as per UL 94V-0
- improved resistance to chemical substances
- grounding possible on RJ45 insert using 2.8 mm contact pins
- one version for all flanges
- matching inserts: E-DAT Industry RJ45 field jack insert (T568A, T568B or Profinet), E-DAT Industry RJ45 coupler insert, E-DAT Industry USB coupler insert, OpDAT Industry SC-RJ/2SC coupler insert or OpDAT Industry LC-D coupler insert

#### **Dimensional drawing**



			- 1
P/N	Color	Feature 1	Feature 2
1401045002KE	metallike	unequipped	
1401055002KE	metallike	unequipped	bend protection



P/N	Color	Feature 1	Feature 2
1401043302KE	black	unequipped	







## E-DAT Industry IP67 V4 AP + RJ45 field jack insert Cat.6 Class E<sub>A</sub>, T568A

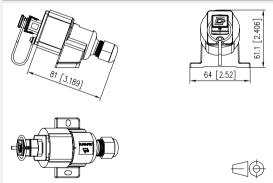
- RJ45 termination unit in flange housing with push-pull-lock acc. to ISO/IEC 24702 and IEC 61076-3-106 standards, var. 4
- • compliance with class  $\mathbf{E}_{\mathrm{A}}$  to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- · IP67 protected housing
- AWG 26/7 22/7; AWG 26/1 22/1 possible
- increased resistance to vibrations and shocks due to 4 springs on the shield plates
- · no special tools required
- possible surface-mounting in series
- connection of RJ45 plugs available on the market (no IP protection)
- · easy, time-saving mounting



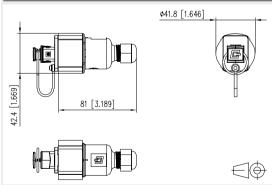
#### E-DAT Industry IP67 V4 cable coupler + RJ45 field jack insert Cat.6 Class E<sub>A</sub>, T568A

- RJ45 termination unit in flange housing with push-pull-lock acc. to ISO/IEC 24702 and IEC 61076-3-106 standards, var. 4
- compliance with class E<sub>A</sub> to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- IP67 protected housing
- AWG 26/7 22/7; AWG 26/1 22/1 possible
- increased resistance to vibrations and shocks due to 4 springs on the shield plates
- no special tools required
- can be used as cable coupler
- connection of RJ45 plugs available on the market (no IP protection)
- · easy, time-saving mounting
- variants: marking of conductor assignment to T568A or T568R

#### Dimensional drawing



Color	Feature 1	Feature 2
black	8(8) field jack T568A	surface-mount
		black 8(8) field jack



P/N	Color	Feature 1	Feature 2
1401145512KE	black	8(8) field jack T568A	cable coupler
1401845512KE	black	8(8) field jack T568B	cable coupler
1401045512KE	black	unequipped	cable coupler









#### Industry IP67 V5 metal plug housing

- plug housing with clamp lock acc. to ISO/IEC 24702 and IEC 61076-3-106 var. 5
- IP67 protected housing to hold Industry plug inserts
- increased diameter range of 10 mm for connection of cable jackets
- · resistant to welding sputter
- · industry-compatible metal housing with improved durability
- flammability class as per UL 94V-0
- improved resistance to chemical substances
- · snap-on clip for color coding after assembly
- cable can be pushed through preassembled plug housing
- matching plug inserts: E-DAT Industry RJ45 field plug insert, E-DAT Industry RJ45 plug insert

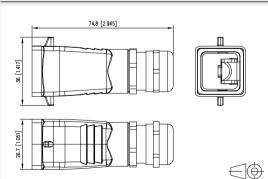




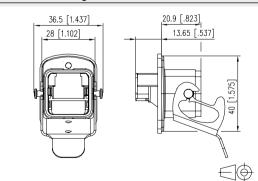
#### Industry IP67 V5 metal bulkhead

- flange with clamp lock acc. to IEC 61076-3-106 Var. 5
- IP67 protected housing for receiving E-DAT Industry flange inserts
- easy to mount due to standard fastening by means of two screws (M3), not included in scope of delivery
- industry-compatible housing with improved durability
- flammability class as per UL 94V-0
- improved resistance to chemical substances
- grounding possible on RJ45 insert using 2.8 mm contact pins
- matching inserts: E-DAT Industry RJ45 field jack insert (T568A, T568B or Profinet), E-DAT Industry RJ45 coupler insert or E-DAT Industry USB coupler insert

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
1401065000ME	gray	unequipped	



P/N	Color	Feature 1	Feature 2
1401063300ME	gray	unequipped	











#### E-DAT Industry IP67 V14 plug housing for RJ45 unequipped

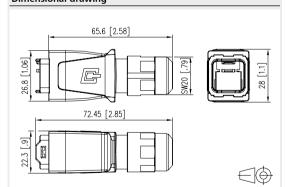
- plug housing with push-pull-lock acc. to ISO/IEC 24702 and IEC 61076-3-117 var. 14
- IP67 protected housing to hold E-DAT Industry plug inserts
- increased diameter range of 10 mm for connection of cable
- resistant to welding sputter
- · industry-compatible metal housing with improved durability
- flammability class as per UL 94V-0
- improved resistance to chemical substances
- · snap-on clip for color coding after assembly
- · cable can be pushed through preassembled plug housing
- · matching plug inserts E-DAT Industry RJ45 field plug insert, E-DAT Industry RJ45 plug insert
- · variants: plug housing, bend-protected plug housing



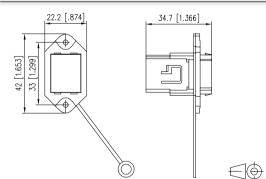
#### E-DAT Industry IP67 V14 plug housing for RJ45 unequipped

- flange with push-pull-lock acc. to ISO/IEC 24702 and IEC 61076-3-117 var. 14
- IP67 protected housing for receiving E-DAT Industry flange
- easy to mount due to standard fastening by means of two screws (M3), not included in scope of delivery
- mounting from the front
- industry-compatible metal housing with improved durability
- flammability class as per UL 94V-0
- improved resistance to chemical substances
- grounding possible on RJ45 insert using 2.8 mm contact
- matching inserts: E-DAT Industry RJ45 field jack insert (T568A, T568B or Profinet), E-DAT Industry RJ45 coupler insert or E-DAT Industry USB coupler insert

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
14010850C0ME	metallike	unequipped for RJ45	
14010850F0ME	metallike	unequipped for FO	



P/N	Color	Feature 1	Feature 2
14010833C0MN	metallike	unequipped for RJ45	







## OpDAT Industry IP67 V14 bulkhead normative mounting + LC-D SM adapter insert

- flange with push-pull-lock acc. to ISO/IEC 24702 and IEC 61076-3-117 var. 14
- fiber optic cable adapter made of plastic
- slotted zirconium oxide ceramics sleeve (ZrO2) for single mode applications
- slotted metal sleeve (Ph-Br) for multi mode applications
- compliance with EN 50173-1:2011-09 and ISO/IEC 24702 with regard to limit values for insertion loss
- flame-retardant and halogen-free plastic housing and adapter dust covers
- easy to mount due to standard fastening by means of two screws (M3)
- · mounting from the front
- industry-compatible metal housing with improved durability
- flammability class as per UL 94V-0
- · improved resistance to chemical substances

· variants:

LC-D blue (SM), beige (MM) SC-RJ/2SC blue (SM), beige (MM)



## OpDAT Industry IP67 V14 bulkhead central screw mounting + LC-D SM adapter insert

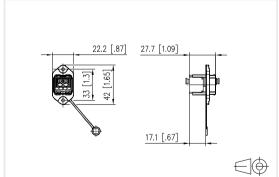
- flange with push-pull-lock acc. to ISO/IEC 24702 and IEC 61076-3-117 var. 14
- fiber optic cable adapter made of plastic
- slotted zirconium oxide ceramics sleeve (ZrO2) for single mode applications
- slotted metal sleeve (Ph-Br) for multi mode applications
- compliance with EN 50173-1:2011-09 and ISO/IEC 24702 with regard to limit values for insertion loss
- flame-retardant and halogen-free plastic housing and adapter dust covers
- easy to mount due to round wall recesses made with inserts for commercially available punch pliers
- · mounting from the front
- industry-compatible metal housing with improved durability
- flammability class as per UL 94V-0
- improved resistance to chemical substances

variants:

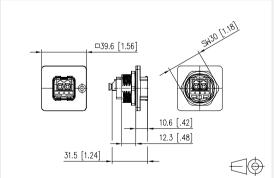
E

LC-D blue (SM), beige (MM) SC-RJ/2SC blue (SM), beige (MM)

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
1402L93320ME	metallike	LC-D (ceramic) SM	
1402K93320ME	metallike	2SC (SM)	
1402393320ME	metallike	LC-D (MM)	
1402193320ME	metallike	2SC (MM)	



P/N	Color	Feature 1	Feature 2
1402L83320ME	metallike	LC-D (ceramic) SM	
1402K83320ME	metallike	2SC (SM)	
1402383320ME	metallike	LC-D (MM)	
1402183320ME	metallike	2SC (MM)	









#### E-DAT Industry IP67 V6 plug

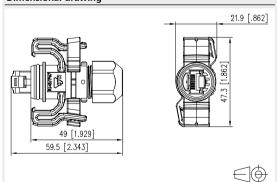
- Cat.6 class E<sub>A</sub> connector in connector housing to IEC 61076-3-106 var. 6
- compliance with class E<sub>A</sub> to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for 10 GBit Ethernet(IEEE 802.3an) and Remote Powering(PoE, PoE plus and UPoE) and HDBaseT
- complies with ingress protection IP67 when plugged in
- AWG 27/7 24/7 and AWG 24/1 connection possible
- solid copper wire diameter from 0.36 to 0.51 mm
- stranded copper wire diameter from 0.46 to 0.61 mm
- conductor diameter from 0.85 to 1.05 mm
- · cable jacket up to 7.3 mm can be connected
- large 360° shield contact
- locking clip can also be upgraded in its installed state
- protected against unintentional opening by means of locking clip (also colored)
- crimping of the internal and external conductors with professional crimp pliers in one process
- professional crimping tool available in the tools section



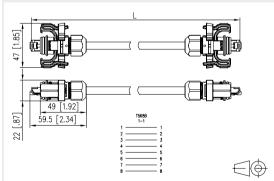
#### E-DAT Industry patch cord V6 IP67 - IP67

- fully shielded Cat.6 patch cable AWG 26/7 S/FTP with PUR cable sheath
- RJ45-IP67-V6 connector shielded on both ends
- 1:1 assignment
- compliance with class E to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- yellow cable, gray connector
- · cable colors may differ
- other lengths available
- variants: 1, 2, 5, 10, 15 and 20 m

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
130906-03-E	light gray	8(8)	



P/N	Color	Feature 1	Feature 2
141N113K13K10	yellow	1.0 m	IP67-IP67
141N113K13K20	yellow	2.0 m	IP67-IP67
141N113K13K50	yellow	5.0 m	IP67-IP67
141N113K13KA0	yellow	10.0 m	IP67-IP67
141N113K13KA5	yellow	15.0 m	IP67-IP67
141N113K13KB0	yellow	20.0 m	IP67-IP67







#### E-DAT Industry patch cord V6 IP67 - RJ45

- fully shielded Cat.6 patch cable AWG 26/7 S/FTP with PUR cable sheath
- 1 x RJ45 and 1 x RJ45-IP67-V6 connector, shielded
- 1:1 assignment
- compliance with class E to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- yellow cable, gray connector
- · cable colors may differ
- other lengths available
- variants: 1, 2, 3, 5, 10, 15 and 20 m

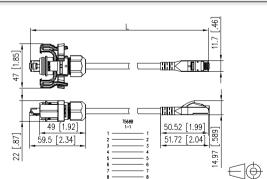




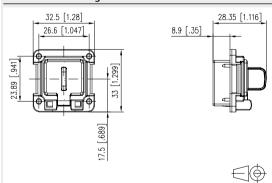
#### **E-DAT Industry IP67 V6 EbM**

- for mounting individual modules in Modul design
- IP67 plug face pursuant to IEC 61076-3-106 (Variant 6)
- connection of RJ45 plugs available on the market (no IP protection)
- · easy mounting
- versions with and without solid counterplate made of zinc die-cast (also available as accessory)
- color: RAL 7035 (light gray)
- 13094130-E: mounting set consisting of solid counterplate with 4 screws
- · not suited to E-DAT industry modules and adapter
- · variants: with and without mounting set

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
141N113K10010	yellow	1.0 m	IP67-RJ45
141N113K10020	yellow	2.0 m	IP67-RJ45
141N113K10050	yellow	5.0 m	IP67-RJ45
141N113K100A0	yellow	10.0 m	IP67-RJ45
141N113K100A5	yellow	15.0 m	IP67-RJ45
141N113K100B0	yellow	20.0 m	IP67-RJ45



P/N	Color	Feature 1	Feature 2
1309413003-E	lightgray	w/o mounting set	Module cut-out
1309413203-E	lightgray	with mounting set	Module cut-out













#### E-DAT Industry IP67 V6 AP, 1 port Cat.6<sub>A</sub> -C6<sub>x</sub>modul

- RJ45 termination unit C6, modul in flange housing to ISO/ IEC 24702 and IEC 61076-3-106 variant 6
- certified to GHMT Cat.6, re-embedded PVP
- component testing for Cat.6, to ISO/IEC 11801 Ed. 2.2: 2011-06, DIN EN 50173-1:2011-09, TIA/EIA-568-C.2 (2009-08) and IEC 60603-7-51 Ed.1 (12/2008), certified to GHMT
- compliance with class E, to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- tested: component up to 600 MHz, link up to 800 MHz
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- easy to install connection of data lines AWG 24/1 to 22/1 (solid wire) and AWG 26/7 to 22/7 (stranded wire) to insulation displacement connectors (IDC)
- intelligent cable management in stuffer cap also suitable for heavily twisted cables
- · conductor assignment to T568A and T568B is directly printed on the stuffer cap
- · complies with ingress protection IP67 when plugged in
- plug face according to IEC 61076-3-106 (variant 6)
- large 360° shield contact
- connection of RJ45 plugs available on the market (no IP protection)
- mounting without special tools; strain relief directly snapped on to stuffer cap
- · color: light gray RAL 7035

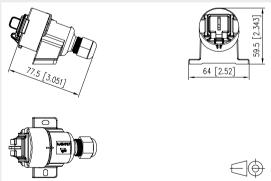




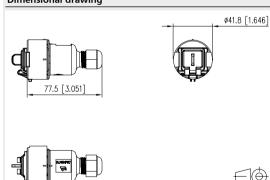
#### E-DAT Industry IP67 V6 cable coupler, 1 port Cat.6<sub>A</sub> - C6<sub>A</sub>modul

- RJ45 termination unit  $C6_{A}$  modul in flange housing to ISO/ IEC 24702 and IEC 61076-3-106 variant 6
- certified to GHMT Cat.6, re-embedded PVP
- component testing for Cat.6<sub>A</sub> to ISO/IEC 11801 Ed. 2.2: 2011-06, DIN EN 50173-1:2011-09, TIA/EIA-568-C.2 (2009-08) and IEC 60603-7-51 Ed.1 (12/2008), certified to GHMT
- compliance with class E, to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- tested: component up to 600 MHz, link up to 800 MHz
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- easy to install connection of data lines AWG 24/1 to 22/1 (solid wire) and AWG 26/7 to 22/7 (stranded wire) to insulation displacement connectors (IDC)
- intelligent cable management in stuffer cap also suitable for heavily twisted cables
- conductor assignment to T568A and T568B is directly printed on the stuffer cap
- complies with ingress protection IP67 when plugged in
- plug face according to IEC 61076-3-106 (variant 6)
- large 360° shield contact
- can be used as cable coupler (KK) in variable applications
- connection of RJ45 plugs available on the market (no IP
- mounting without special tools; strain relief directly snapped on to stuffer cap
- color: light gray RAL 7035

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
1309510003-E		8(8) modul T568A	surface-mount



\_ <b> </b>			79
P/N	Color	Feature 1	Feature 2
1309515003-E		8(8) modul T568A	cable-coupler







#### Locking clamp for IP67 V6 plug

- · protection against unintentional opening
- locking clip can also be upgraded in its installed state
- variants: light gray, yellow, blue, green, red

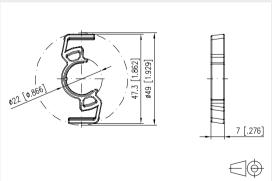




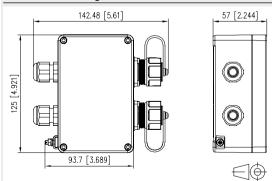
#### E-DAT Industry IP67 V1 2 port metal outlet

- IP67 wall outlets for flexible connection of networks in industrial areas
- 2 complete ports with flange covers and cable glands
- with the output directions pointing straight downwards (with cable feed from above) or output direction to right (with cable feed from above)
- metal flange with bayonet to ISO/IEC 24702 and IEC 61076-3-106 standards, var. 1
- unequipped, without inserts
- for wall and floor mounting
- aluminum housing made of AL-Si 12
- solid powder coating in RAL 7001
- dimensions, 2 ports: 124 x 78 x 57 mm (without flanges and cable glands)
- matching inserts: E-DAT Industry RJ45 field jack insert (T568A, T568B or Profinet), E-DAT Industry RJ45 coupler insert, E-DAT Industry USB coupler insert, OpDAT Industry SC-RJ/2SC coupler insert or OpDAT Industry LC-D coupler insert

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
130906-V3-I	light gray	plastics	
130906-V5-I	yellow	plastics	
130906-V6-I	blue	plastics	
130906-V7-I	green	plastics	
130906-V8-I	red	plastics	



P/N	Color	Feature 1	Feature 2
1401010620ME	gray	2 port straight	unequipped
1401040620ME	gray	2 port straight	unequipped
1401060320ME	gray	2 port straight	unequipped







#### Industry IP67 V1 plug protective cap

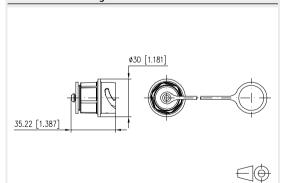
- good ingress protection also if not plugged in due to tight IP67 protective cap
- flammability class as per UL 94V-0
- improved resistance to chemical substances
- captive, attached protective cap
- variants: protective cap for plug or flange



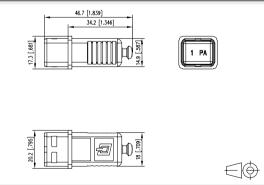
#### **Industry IP67 V4 plug protective cap**

- good ingress protection also if not plugged in due to tight IP67 protective cap
- flammability class as per UL 94V-0
- improved resistance to chemical substances
- captive, attached protective cap
- grip to remove it
- variants: protective cap for plug or flange

#### Dimensional drawing



P/N	Color	Feature 1	Feature 2
1401018002KI	black	plastic	for plugs
1401018102KI	black	plastic	for flange



			·
P/N	Color	Feature 1	Feature 2
1401048002KI	black	plastic	for plugs
1401048102KI	black	plastic	for flange







#### Industry IP67 V5 metal plug protective cap

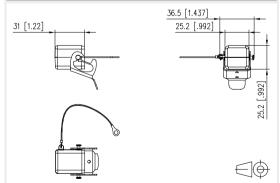
- good ingress protection also if not plugged in due to tight IP67 protective cap
- flammability class as per UL 94V-0
- improved resistance to chemical substances
- captive, attached protective cap
- variants: protective cap for plug or flange



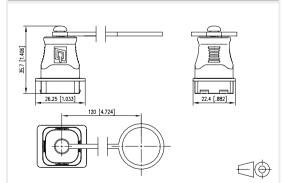
### E-DAT Industry IP67 V14 plug protection cap

- good ingress protection also if not plugged in due to tight IP67 protective cap
- flammability class as per UL 94V-0
- high resistance to chemical substances
- captive, attached protective cap
- grip to remove it
- variants: protective cap for plug or flange

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
1401068000MI	gray	metal	for plugs
1401068100MI	gray	metal	for flange

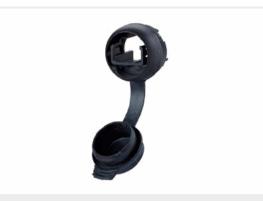


P/N	Color	Feature 1	Feature 2
1401088002KI	black	plastic	for plugs
1401088102KI	black	plastic	for flange



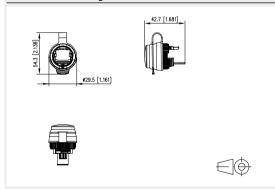
**Industrial Connectors** 





### E-DAT Industry universal test jack IP65, unequipped

- for programming and setting parameters of an installation, a computer is accessed via standardized interfaces, such as RJ45 and USB. For industrial PCs (IPC), however, these interfaces are located in the interior of the switch cabinet.
- practical service interface for safe and flexible access to the interior of the switch cabinet
- faster, easier and more targeted start-up, service work, monitoring and system expansions
- suitable for switch cabinet walls, distributor panels and switchboards
- mounting with central screw joint in standard round hole of just 22 mm
- ingress protection IP65
- captive sealing plug
- · very easy handling
- unequipped without inserts
- matching inserts: E-DAT Industry RJ45 field jack insert (T568A, T568B or Profinet), E-DAT Industry RJ45 coupler insert or E-DAT Industry USB coupler insert



P/N	Color	Feature 1	Feature 2
140UPB-E	black	unequipped	











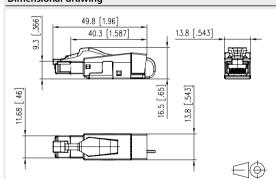
#### C6, RJ45 field plug pro

- Cat.6, class E, RJ45 plug to be assembled in the field
- fully shielded and multi-port capable
- straight (180°) cable feed
- · easy assembly connection without special tools
- wire connection: stranded wire AWG 27/7 to 22/7, wire diameter from 0.46 to 0.76 mm
- wire connection: solid wire AWG 26/1 to 22/1. wire diameter from 0.4 to 0.64 mm
- transmission characteristics Cat.6, per ISO/IEC 11801 Ed.2.2:2011-06
- compliance with class E, to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus, UPoE and 4PPoE) and HDBaseT
- · degree of protection IP20
- for cable jacket diameter from 5.5 to 10.5 mm
- · zinc die-cast housing for industrial use consists of only
- · strain relief by latching clip directly on the stuffer cap
- · protected locking hook
- reconnectable

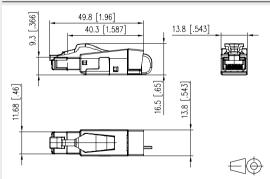
#### C5 RJ45 field plug pro 2P PROFINET

- Cat.5 class D RJ45 plug, 2 pairs, to be assembled in the field
- fully shielded and multi-port capable
- straight (180°) cable feed
- easy assembly connection without special tools
- wire connection: stranded wire AWG 27/7 to 22/7, wire diameter from 0.46 to 0.76 mm
- wire connection: solid wire AWG 26/1 to 22/1. wire diameter from 0.4 to 0.64 mm
- transmission characteristics Cat.5 per ISO/IEC 11801 Ed.2.2:2011-06
- compliance with class D to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- 100 MBit suitable according to IEEE 802.3
- suitable for Remote Powering (PoE and PoE plus) and HDBaseT
- degree of protection IP20
- for cable jacket diameter from 5.5 to 10.5 mm
- zinc die-cast housing for industrial use consists of only 2 parts
- strain relief by latching clip directly on the stuffer cap
- protected locking hook
  - reconnectable

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
130E405032-E	black	8(8) field plug	180°



P/N	Color	Feature 1	Feature 2
130E405032PE	green	Profinet	180°







#### C6, RJ45 field plug pro 360

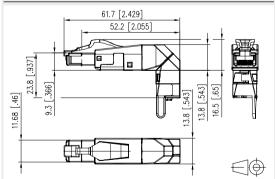
- Cat.6, class E, RJ45 plug to be assembled in the field
- fully shielded and multi-port capable
- variable (360°) cable feed, freely selectable
- easy assembly connection without special tools
- wire connection: stranded wire AWG 27/7 to 22/7, wire diameter from 0.46 to 0.76 mm
- wire connection: solid wire AWG 26/1 to 22/1, wire diameter from 0.4 to 0.64 mm
- transmission characteristics Cat.6<sub>A</sub> per ISO/IEC 11801 Ed.2.2:2011-06
- compliance with class E<sub>x</sub> to ISO/IEC 11801
- Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus, UPoE and 4PPoE) and HDBaseT
- degree of protection IP20
- for cable jacket from 5.5 to 10.5 mm
- · zinc die-cast housing for industrial use
- · strain relief by latching clip directly on the stuffer cap
- · protected locking hook
- reconnectable



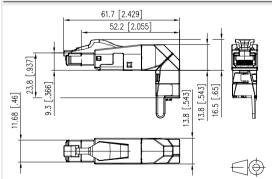
#### C5 RJ45 field plug pro 2P 360 PROFINET

- Cat.5 class D RJ45 plug, 2 pairs, to be assembled in the field
- fully shielded and multi-port capable
- variable (360°) cable feed, freely selectable
- easy assembly connection without special tools
- wire connection: stranded wire AWG 27/7 to 22/7, wire diameter from 0.46 to 0.76 mm
- wire connection: solid wire AWG 26/1 to 22/1, wire diameter from 0.4 to 0.64 mm
- transmission characteristics Cat.5 per ISO/IEC 11801 Ed.2.2:2011-06
- · compliance with class D to ISO/IEC 11801
- Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- 100 MBit suitable according to IEEE 802.3
- suitable for Remote Powering (PoE and PoE plus) and HDBaseT
- degree of protection IP20
- for cable jacket from 5.5 to 10.5 mm
- · zinc die-cast housing for industrial use
- · strain relief by latching clip directly on the stuffer cap
- · protected locking hook
- reconnectable

#### **Dimensional drawing**



5.01		I=	I=
P/N	Color	Feature 1	Feature 2
130E405042-E	black	8(8) field plug	360°



P/N	Color	Feature 1	Feature 2
130E405042PE	green	Profinet	360°









#### E-DAT Industry IP20 RJ45 field plug black

- multi-port Cat.6 class E, plug to be assembled in the field
- compliance with class E<sub>n</sub> to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- 8-wire RJ45 plug for AWG 22 to be assembled in the field
- connection of AWG 26/7 22/7; AWG 26/1 22/1 possible
- solid copper wire diameter from 0.4 to 0.64 mm
- stranded copper wire diameter from 0.48 to 0.76 mm
- conductor diameter up to 1.6 mm
- cable jacket from 5.5 to 8.5 mm
- · consists of only 2 parts
- · easy assembly connection without special tools
- during mounting, the cable is mechanically fastened to the stuffer cap
- · easy to actuate strain relief
- strain relief can be snapped on after assembly as color coding
- zinc die-cast housing for industrial use
- · protected locking hook
- can be used as test plug on IP67 protected jacks of variants 1, 4, 5, 6 and 14
- · variants: T568A, T568B, Industry

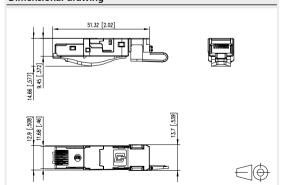




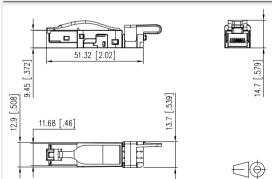
#### E-DAT Industry RJ45 field plug Profinet

- multi-port Cat.5 plug to be assembled in the field
- 100 MBit suitable according to IEEE 802.3an
- suitable for Remote Powering (PoE and PoE plus) and HDBaseT
- 4-wire RJ45 plug for AWG 22 to be assembled in the field
- connection of AWG 26/7 22/7; AWG 26/1 22/1 possible
- solid copper wire diameter from 0.4 to 0.64 mm
- stranded copper wire diameter from 0.48 to 0.76 mm
- conductor diameter up to 1.6 mm
- cable jacket from 5.5 to 8.5 mm
- consists of only 2 parts
- easy assembly connection without special tools
- during mounting, the cable is mechanically fastened to the stuffer cap
- easy to actuate strain relief
- strain relief can be snapped on after assembly as color coding
- zinc die-cast housing for industrial use
- · protected locking hook
- can be used as test plug on IP67 protected jacks of variants 1, 4, 5, 6 and 14

#### Dimensional drawing



P/N	Color	Feature 1	Feature 2
1401405012-I	black	8(8) field plug	two parts



P/N	Color	Feature 1	Feature 2
1401405012PI	green	8(4) field plug	Profinet

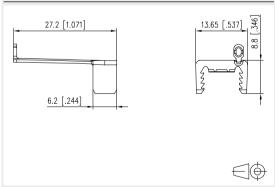






#### Industry color coding field plug

- colored, easy to actuate strain relief for E-DAT Industry IP20 RJ45 field plug
- can be mounted after assembling the plug
- variants: white, light gray, orange, blue, yellow, green



P/N	Color	Feature 1	Feature 2
1401009101-I	orange	plastics	
1401009103-I	light gray	plastics	
1401009104-I	white	plastics	
1401009105-I	yellow	plastics	
1401009106-I	blue	plastics	
1401009107-I	green	plastics	









#### E-DAT Industry IP20 RJ45 plug

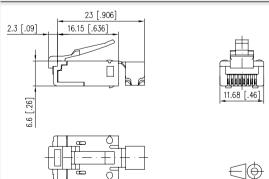
- multi-port Cat.6 class E plug
- compliance with class E<sub>n</sub> to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- AWG 27/7 24/7 and AWG 26/1 24/1 connection possible
- solid copper wire diameter from 0.36 to 0.51 mm
- stranded copper wire diameter from 0.46 to 0.61 mm
- conductor diameter from 0.85 to 1.05 mm
- cable jacket up to 7.3 mm can be connected
- connection of crimp contacts and shield in one step using crimping tool
- variants with and without bend protection
- colored bend protection optionally available
- trumpet-shaped bending protection of the connection cable
- can be used as test plug on IP67 protected jacks of variants 1, 4, 5, 6 and 14
- · not supplied in partial quantities
- variants: with bend protection / PU: 10 pcs, without bend protection / PU: 100 pcs



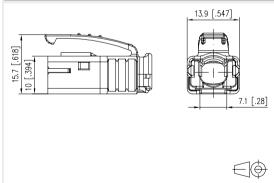
#### IP20 plug bend protection

- molded snagless anti-bend sleeve for E-DAT Industry IP20 RJ45 plug
- trumpet-shaped bending protection of the connection cable
- retrofitting possible
- effective grip contours
- variants: white, light gray, blue, yellow, green, black, orange

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
1401505010-E	metallike	8(8) plug	w/o bend protection
1401505012-E	black	8(8) plug	with bend protection



P/N	Color	Feature 1	Feature 2
1401008201-E	orange	plastics	
1401008202-E	black	plastics	
1401008203-E	light gray	plastics	
1401008204-E	white	plastics	
1401008205-E	yellow	plastics	
1401008206-E	blue	plastics	
1401008207-E	green	plastics	







#### Cable connector class F

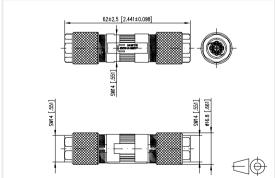
- cable connector for field assembly Class  $F_{\Delta}$  for 8 wire cables
- to connect / extend / repair / relocate copper data cables up to Cat.7  $_{\!\scriptscriptstyle \Delta}$
- compliance to Class F<sub>A</sub> up to 1000 MHz according to ISO/IEC 11801 Ed.2.2:2011-06 in connection with Cat.7<sub>A</sub> copper cables \*1
- GHMT certified to ISO/IEC 11801 Ed.2.2:2011-06 and IEC 61156-5 Ed.2.1:2012-12
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- · compact design: diameter 16.8 mm x length 64 mm
- IP67 protected housing in combination with IP67 appropriate cables \*2
- refined zinc die-cast housing
- · easy and fast assembly without special tools
- · shield connection and strain relief integrated
- easy connection of data cables AWG 26/1 to 22/1 (solid wire) and AWG 26/7 to 22/7 (stranded wire) to insulation displacement connectors (IDC)
- solid copper wire diameter 0.4 to 0.64 mm
- stranded copper wire diameter 0.48 to 0.76 mm
- · conductor diameter up to 1.6 mm
- suitable for cables with an overall diameter of 5.0 to 9.7 mm \*2
- fully shielded version according to DIN EN 50173-1



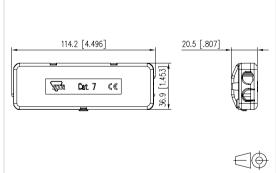
#### Cat.7 cable connector

- for connecting/extending data cables up to Cat.7
- class E to ISO/IEC 11801 Ed.2.2:2011-06 is complied with in combination with Cat.6, Cat.6<sub>A</sub>, Cat.7 and Cat.7<sub>A</sub> cables and Cat.6 connectors
- connection of data lines AWG 26/1 to 22/1 (solid wire)
- cable feed from one or two sides
- cable sharing, i.e. splitting one 8-wire cable into two 4-wire cables (one cable tie required each on input and output side)
- · fully shielded metal housing
- strain relief and separate captive 360° shield connection
- 2 bore holes for wall mounting

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
130863-02-E	metallike	shielded	metal



P/N	Color	Feature 1	Feature 2
130863-E	metallike	4x2	
130863-01-E	metallike	4x2 IP	IP67







#### **Extension box APL Keystone**

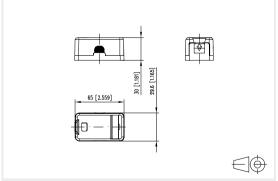
- for connection of the termination point line network (APL), equipped with C6 modul K 180°
- suitable for mounting on support rail in counter panel of general power supply below cover in room for additional applications to VDE-AR-N 4101:2011-08
- failsafe contact with integrated dust protector slide
- for connection of an MUC communication module
- certified to GHMT Cat.6, re-embedded PVP
- component testing for Cat. 6<sub>A</sub> to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, TIA/EIA-568-C.2 (2009-08) and IEC 60603-7-51 Ed.1 (12/2008), certified to GHMT
- compliance with class E<sub>A</sub> up to 500 MHz to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- tested: components up to 600 MHz, link up to 800 MHz
- for 10 GBit Ethernet (IEEE 802.3an)
- suitable for Power over Ethernet (PoE, PoE plus and UPoE)
- connection of data lines AWG 26/1 to 22/1 (solid wire) and AWG 26/7 to 22/7 (stranded wire) to insulation displacement connectors (IDC)
- plug direction of module inclined at  $90^{\circ}$  to top hat rail
- · strain relief snapped on to stuffer cap
- with label window for enclosed identification labels
- cover parts in pure white RAL 9010, glossy surface
- variants: APL, APL with red patch cord (0.5 m)



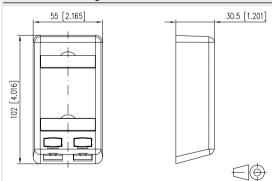
### Modul wall outlet APFL 2 port pure white unequipped

- flat surface-mounted housing for two individual modules in Modul design (E-DAT modul, C6 modul)
- label window for identification labels (labels included in the delivery)
- mounting in underfloor false floors
- colored coding of the ports (red/blue)
- ideal for implementing consolidation points

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
130B21D1APL-E	pure white	AP 1 Port equipped	C6 <sub>A</sub> modul Keystone
130B21D1APLP-E	pure white	AP 1 Port equipped	with patch cord C6 <sub>A</sub> modul Key.
130910D1APLKE	pure white	equipped	E-DAT modul Keystone



P/N	Color	Feature 1	Feature 2
1309150102-E	pure white	AP 2 Port	Module
		unequipped	cut-out







### Modul IP44SG surface mounting housing unequipped

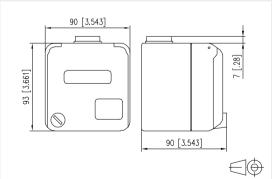
- lockable flush-mounted IP44 outlet, keyed alike with two keys (identical locks and keys)
- cover closes completely, even when patch cables are plugged in
- for two individual modules in Modul design (not suitable for OpDAT modules)
- ball-impact resistant according to DIN 18032
- can be operated with standard patch cables
- · clearly visible label window
- bottom section of housing can be turned 180°, with cable feed possible from top and bottom
- · with space to install the required spare cable lengths
- gray



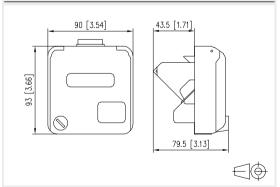
### E-DAT modul IP44SG UP housing pure white unequipped

- lockable IP44 outlet, with two keys with lock with instantaneous locking action (identical locks and keys)
- cover closes completely, even when patch cables are plugged in
- UP housing for sill duct installation, or in conjunction with the flush-mounted UP installation outlet
- for two individual modules in Modul design
- ball-throw proof according to DIN 18032
- can be operated with standard patch cables
- · clearly visible nomenclature panel
- variants: pure white, gray

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
1309460003-I	gray	AP 2 port unequipped	Module cut-out
1309460003KI	gray	AP 2 port unequipped	Keystone module cut-out



P/N	Color	Feature 1	Feature 2
1309461002-l	pure white	UP 2 Port unequipped	Module cut-out
1200461002			
1309461003-I	pure white	UP 2 Port unequipped	Module cut-out







### Flush mount built-in outlet gray

UP installation outlet for flush mounting of the IP44SG UP housing

P/N	Color	Feature 1	Feature 2
1309441903-I	gray		





#### E-DAT modul IP20 AP Housing

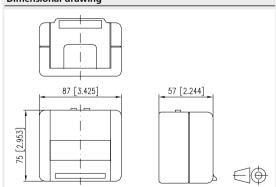
- IP20 surface-mounted housing for two individual modules in Modul design
- identical to E-DAT modul IP44 AP but, due to the opening in the housing cover, it remains closed when patch cables are plugged in
- cable feed for one or two cables from the top
- break-proof
- gray color



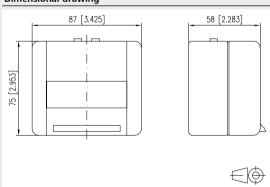
### IP44 surface mounting housing unequipped

- IP44 flat surface-mounted housing for two individual modules in Modul design
- IP44 protection only when closed (without plugged in patch cable)
- cable feed for one or two cables from the top
- break-proof
- gray color

#### Dimensional drawing



P/N	Color	Feature 1	Feature 2
1309450003-E	gray	AP 2 Port	Module
		unequipped	cut-out



P/N	Color	Feature 1	Feature 2	
1309430003-E	gray	AP 2 port	Module	
		unequipped	cut-out	
1309430003KE	gray	AP 2 port unequipped	Keystone module cut-out	





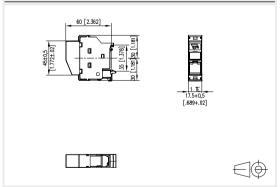




#### REGplus IP20 C6 modul

- termination unit for mounting on TH35 rails to DIN EN 60715 in electrical distribution panels for home and industrial installations
- equipped with C6<sub>A</sub>modul 180° RJ45 individual module
- cable feed 45° from the top, plug direction 45° downwards
- certified to GHMT Cat.6, re-embedded PVP
- component testing for Cat.6, to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, TIA/EIA-568-C.2 (2009-08) and IEC 60603-7-51 Ed.1 (12/2008), certified to GHMT
- compliance with class E<sub>A</sub> up to 500 MHz to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- · tested: component up to 600 MHz, link up to 800 MHz
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus, UPoE and 4PPoE) and HDBaseT
- easy to install connection of data lines AWG 26/1 to 22/1 (solid wire) and AWG 26/7 to 22/7 (stranded wire) to insulation displacement connectors (IDC)
- conductor assignment to T568A and T568B is directly printed on the stuffer cap
- migration to 25G-systems without special tools
- width of 1HP allows mounting up to 12 REG plus in standard electrical distribution panels
- · when mounted as a device of protection class I, the equipotential bonding is realized directly over the top hat rail by means of an integrated equipotential plate. This has to be connected to the equipotential bonding of the building by means of a bonding terminal
- a cover protects the module against direct contact. If mounted in distributor panels with protective insulation, protection class II is guaranteed. In this case, it is necessary to remove the equipotential bonding spring
- integrated dust protection cover (also colored)

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
130B117003-E	light gray	1 port equipped	C6 <sub>A</sub> modul 180°
130B127003-E	light gray	1 port equipped	C6 <sub>A</sub> modul 270°
1309107003-E	light gray	1 port equipped	E-DAT modul
1309A17003-E	light gray	1 port equipped	Coupler 90°
1309A07003-E	light gray	1 port equipped	Coupler 180°
1309427103-E	light gray	1 port unequipped	Module cut-out
1309428103-E	light gray	1 port unequipped	Key. module cut-out



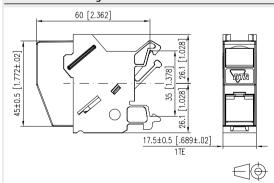






#### E-DAT modul REG 1 Port IP20 light gray

- · termination unit for mounting on TH35 rails to DIN EN 60715 in electrical distribution panels for home and industrial installations
- equipped with individual E-DAT modul RJ45 module
- cable feed 45° from the top, plug direction 45° downwards
- compliance with class EA to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- tested: Link up to 500 MHz
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- easy to install connection of 2 to 4 pair data lines
- AWG 26/1 22/1 and stranded wires with 7 copper conductors AWG 26/7 to BTR 8-fold insulation displacement connectors (IDC)
- marking of conductor assignment to T568A or T568B
- easy and fast insertion of wire pairs in E-DAT modul stuffer
- width of 1HP allows mounting up to 12 REG in standard electrical distribution panels
- when mounted as a device of protection class I, the equipotential bonding is realized directly over the top hat rail by means of an integrated equipotential plate. This has to be connected to the equipotential bonding of the building by means of a bonding terminal
- a cover protects the module against direct contact. If mounted in distributor panels with protective insulation, protection class II is guaranteed. In this case, it is necessary to remove the equipotential bonding spring.
- integrated dust protection cover (also colored)



P/N	Color	Feature 1	Feature 2
1309426003-E	light gray	1 port equipped	
1309426103-E	light gray	1 port	Module
		unequipped	cut-out







### Dust protection covers for Modul patch panels / subway / REG

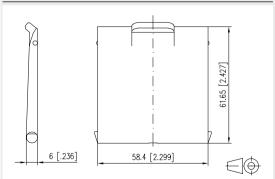
- for color service coding of patch fields, subway underfloor units and E-DAT modul REG
- suitable for: C6<sub>A</sub>modul patch fields, E-DAT modul patch field 24x8, subway underfloor units, module wall outlet 2 port APFL as well as E-DAT modul REG and Modul REGplus
- · variants: yellow, blue, green, red



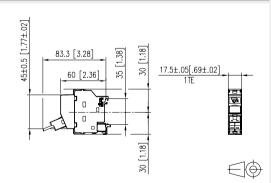
#### REGplus IP20 E2000 DC H&S

- termination with an E2000 DC adapter for mounting on TH35 rail to DIN EN 60715
- slotted zirconium oxide ceramics sleeve (ZrO2)
- high material stability and surface quality and long service life
- service life: min. 1000 plug cycles
- cable feed 45° from the top, plug direction 45° downwards
- width of 1HP allows mounting up to 12 REG in standard electrical distribution panels
- to install the adapter, the existing dust protection cover must be removed
- variants: blue (SM), green (SM APC), beige (MM)

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
816979-0105-I	yellow	1 port	
816979-0106-I	blue	1 port	
816979-0107-I	green	1 port	
816979-0108-I	red	1 port	



P/N	Color	Feature 1	Feature 2	
130F5B7003-E	light gray	E2000 DC	SM	
130F5C7003-E	light gray	E2000 DC	SM APC	
130F5A7003-E	light gray	E2000 DC	ММ	







# E-DAT Industry terminal rail TS35 field jack insert

- termination unit for mounting on TH35 rails to DIN EN 60715 in electrical distribution panels for home and industrial installations
- equipped with E-DAT Industry RJ45 field jack insert
- · vertical plugging direction, 90° to rail
- compliance with class E<sub>A</sub> to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- easy to install connection of 2 to 4 pair data lines AWG 24/1
   22/1 and stranded wires with 7 copper conductors AWG 26/7 to BTR 8-fold insulation displacement connectors (IDC)
- width of 1HP allows mounting up to 12 units in a standard electrical distribution panel
- when mounted as a device of protection class I, the equipotential bonding is realized directly over the top hat rail by means of a switchable integrated equipotential spring. This has to be connected to the equipotential bonding of the building by means of a bonding terminal
- variants: pin assignment to T568A, T568B or PROFINET

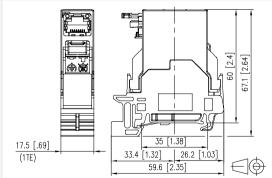




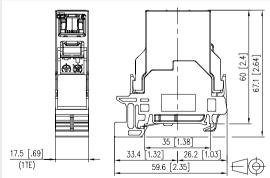
### E-DAT Industry terminal rail TS35 coupler insert

- termination unit for mounting on TH35 rails to DIN EN 60715 in electrical distribution panels for home and industrial installations
  - equipped with E-DAT Industry RJ45 coupler insert
- vertical plugging direction, 90° to rail
- compliance with class E to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- increased resistance to vibrations and shocks due to 4 springs on the shield plates
- width of 1HP allows mounting up to 12 units in a standard electrical distribution panel
- when mounted as a device of protection class I, the equipotential bonding is realized directly over the top hat rail by means of a switchable integrated equipotential spring. This has to be connected to the equipotential bonding of the building by means of a bonding terminal

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
1401106113KE	light gray	8(8) T568A	
1401806113KE	light gray	8(8) T568B	
1401906113KE	light gray	Profinet	



P/N	Color	Feature 1	Feature 2
1401206113KE	light gray	8(8) coupler	







### OpDAT Industry terminal rail TS35 fiber LC-D

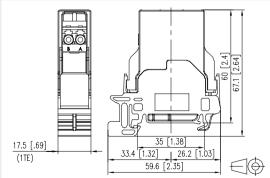
- termination unit with LC-D adapter on TH35 rail to DIN EN 60715
- slotted zirconium oxide ceramics sleeve (ZrO2) for single mode applications
- slotted metal sleeve (Ph-Br) for multi mode applications
- width of 1HP allows mounting up to 12 units in a standard electrical distribution panel
- · vertical plugging direction, 90° to rail
- variants: SM, MM



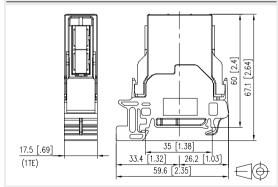
### OpDAT Industry terminal rail TS35 fiber SC-D

- termination unit with SC-D adapter on TH35 rail to DIN EN 60715
- slotted zirconium oxide ceramics sleeve (ZrO2) for single mode applications
- slotted metal sleeve (Ph-Br) for multi mode applications
- width of 1HP allows mounting up to 12 units in a standard electrical distribution panel
- vertical plugging direction, 90° to rail
- · variants: SM, MM

### Dimensional drawing



			' ' ' '
P/N	Color	Feature 1	Feature 2
1402L06113KE	light gray	LC-D (ceramic)	SM
1402306113KE	light gray	LC-D (Ph-BR)	ММ



P/N	Color	Feature 1	Feature 2
1402Q06113KE	light gray	SC-D (ceramic)	SM
1402P06113KE	light gray	SC-D (PH-BR)	ММ







# OpDAT Industry terminal rail TS35 fiber SC-RJ/2SC

- termination unit with SC-RJ/2SC adapter on TH35 rail to DIN EN 60715
- slotted zirconium oxide ceramics sleeve (ZrO2) for single mode applications
- slotted metal sleeve (Ph-Br) for multi mode applications
- width of 1HP allows mounting up to 12 units in a standard electrical distribution panel
- vertical plugging direction, 90° to rail
- · variants: SM, MM

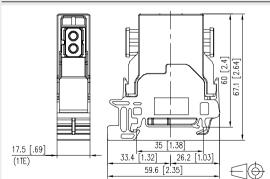




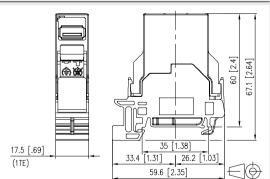
### **E-DAT Industry terminal rail TS35 USB**

- termination unit for mounting on TH35 rails to DIN EN 60715 in electrical distribution panels for home and industrial installations
- equipped with USB-A coupler
- USB 2.0
  - vertical plugging direction, 90° to rail
- width of 1HP allows mounting up to 12 units in a standard electrical distribution panel

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
1402K06113KE	light gray	SC-RJ/2SC	SM
1402106113KE	light gray	SC-RJ/2SC	ММ



P/N	Color	Feature 1	Feature 2
1401U06113KE	light gray	USB A coupler	USB 2.0
1401U16113KE	light gray	USB A coupler	USB 3.0







### DIN rail adapter

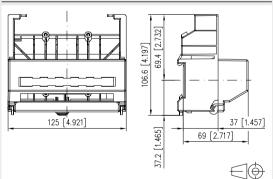
- top hat rail adapter for mounting 6-fold 1RU distributor modules in different distributor systems with top hat rail (TH35)
- matching 6-fold modules: C6<sub>A</sub>modul 6 port, E-DAT C6<sub>A</sub>
   6 port, E-DAT module 6 port, E-DAT C6 6 port, OpDAT 6M



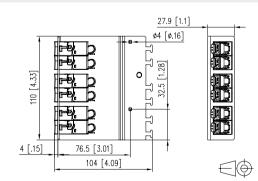
### C6 modul 6 port 180°M 1RU

- module frame with 6 individual  ${\rm C6_{A}}$  modul 180°
- certified to GHMT Cat.6, re-embedded PVP
- component testing for Cât.6<sub>A</sub> to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09, TIA/EIA-568-C.2 (2009-08) and IEC 60603-7-51 Ed.1 (12/2008), certified to GHMT
- compliance with class E<sub>A</sub> up to 500 MHz to ISO/IEC 11801 Ed.2.2:2011-06, DIN EN 50173-1:2011-09
- tested: component up to 600 MHz, link up to 800 MHz
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus, UPoE and 4PPoE) and HDBaseT
- connection of data lines AWG 26/1 to 22/1 (solid wire) and AWG 26/7 to 22/7 (stranded wire) to insulation displacement connectors (IDC)
- migration to 25G-systems without special tools
- strain relief directly snapped on to stuffer cap of C6, modul
- for mounting in surface-mounted housing, top hat rail adapter or 1RU module frame
- · optional strain relief using cable ties
- grounding bolt M6 x 10 with nut and lock washer

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
1308990110-E	light gray	for 6 port modules	unequipped



P/N	Color	Feature 1	Feature 2
130B11P2-E	stainless steel	6 port equipped	C6 <sub>A</sub> modul
130922-03-E	stainless steel	6 port equipped	E-DAT modul
130922-00-E	stainless steel	6 port unequipped	Module cut-out







### DIN rail adapter mini

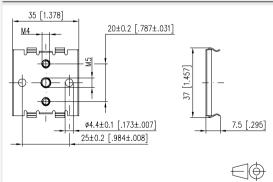
- to fasten heavy devices on a top hat rail (TH35)fastening screws are not included in the delivery



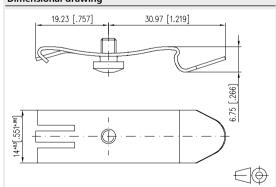
### DIN rail adapter mini FS

- to fasten light devices, such as wall outlets, on a top hat rail
- packing unit: adapter and screw (M4x6) two top hat rail adapters mini FS are required for fastening one wall outlet

### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
1308990111-I	metallike	metal	



P/N	Color	Feature 1	Feature 2
1308990112-I	metallike	metal	







# OpDAT REGplus 2xSC-D MM (ceramic), 1xM20, with crimp splice holder

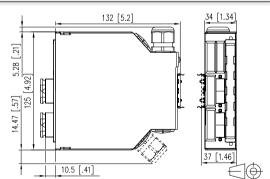
- splice distributor for TH35 rail
- equipped with SC-D (MM) adapters made of zinc die-casting
- · slotted ceramic sleeve for multi mode applications
- · with fiber reservoir
- · custom-labeled identification strips
- various mounting versions on rail
- splice tray with crimp splice holder
- · front plate can be completely removed
- cable feed from top or bottom, straight or inclined, with M20 cable gland (up to 2 possible)
- · feed of preassembled cables is possible
- one cable gland M20 with strain relief included in the delivery
- · housing cover fastening by means of just one captive screw
- unoccupied adapter recesses are closed with special blind plugs
- variants: equipped with 2, 3, 4 or 6 SC-D adapters



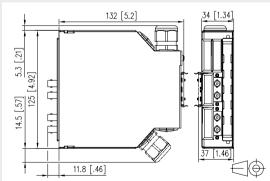
# OpDAT REGplus 2xSC/ST-D MM (ceramic), 1xM20, with crimp splice holder

- splice distributor for TH35 rail
- equipped with SC-D/ST-D (MM) adapters made of zinc die-casting
- · slotted ceramic sleeve for multi mode applications
- · with fiber reservoir
- custom-labeled identification strips
- · various mounting versions on rail
- splice tray with crimp splice holder
- front plate can be completely removed
- cable feed from top or bottom, straight or inclined, with
- M20 cable gland (up to 2 possible)
- feed of preassembled cables is possible
- one cable gland M20 with strain relief included in the delivery
- housing cover fastening by means of just one captive screw
- unoccupied adapter recesses are closed with special blind plugs
- variants: equipped with 2, 3, 4 or 6 SC-D/ST-D adapters (SC-D interior, ST-D exterior)
- please note: if you use preassembled cables with ST plugs, use the unequipped version of the OpDAT REG plus. The ST-D adapters required in this case are available as accessory. Before mounting the adapters in the housing, plug the preassembled ST plugs in the adapters for reasons of space.

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
150240C20210E	metallike	2xSC-D (ceramic)	MM
150240C20310E	metallike	2xSC-D (ceramic)	MM
150240C20410E	metallike	2xSC-D (ceramic)	MM
150240C20610E	metallike	2xSC-D (ceramic)	MM



P/N	Color	Feature 1	Feature 2
150240C30210E	metallike	2xSC/ST-D (Ph-Br)	ММ
150240C30310E	metallike	2xSC/ST-D (Ph-Br)	MM
150240C30410E	metallike	2xSC/ST-D (Ph-Br)	MM
150240C30610E	metallike	2xSC/ST-D (Ph-Br)	ММ







### **OpDAT REGpro24 splice distributor**

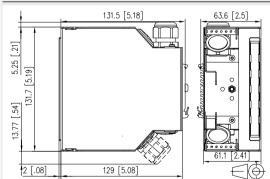
- splice distributor for TH35 rail without front cover
- to mount pigtails or pre-assembled installation cables
- · gray housing
- with crimp splice holder for up to 24 splices
- installation of two shrink splice holders on splice tray is possible
- with fiber reservoir
- · custom-labeled identification strips
- fastening on top hat rail by means of very sturdy top hat rail holder
- · various mounting versions on rail
- for different front plates 3RU/7HP
- cable feed from top or bottom, straight or inclined, with M20 cable gland (up to 2 possible)
- width: 61 mm, height: 128 mm, depth: 132.5 mm (from rail, without adapter)
- one cable gland M20 with strain relief included in the delivery
- housing cover fastening by just one screw



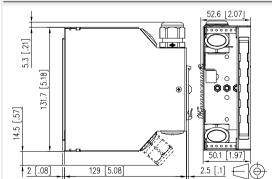
### **OpDAT REGpro splice distributor**

- splice distributor for TH35 rail without front cover
- gray housing
- with or without splice tray with crimp splice holder for up to 12 splices
- installation of two shrink splice holders on splice tray is possible
- with fiber reservoir
- custom-labeled identification strips
- fastening on top hat rail by means of very sturdy top hat rail holder
- various mounting versions on rail
- for different front plates 3RU/7HP
- cable feed from top or bottom, straight or inclined, with PG11 cable gland (up to 2 possible)
- width: 50 mm, height: 128 mm, depth: 132.5 mm (from rail, without adapter)
- · feed of preassembled cables is possible
- one cable gland PG11 with strain relief included in the delivery
- · housing cover fastening by means of just one screw
- variants: with and without splice tray
- Please note: not all front plates 3RU/7HP available on the market can be used for OpDAT REGpro. If preassembled cables are used, we recommend the version without splice tray.

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
15024A10-24-E	gray	unequipped	w/o splice tray



P/N	Color	Feature 1	Feature 2
15024A10-E	gray	unequipped	w/o splice tray
15024A10S-E	gray	unequipped	with splice tray









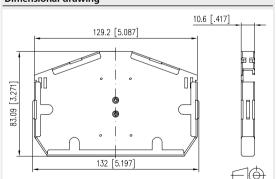
### **OpDAT REGpro splice tray with shrink** splice holder

- splice tray for OpDAT REGpro with shrink splice holder for up to 12 splices

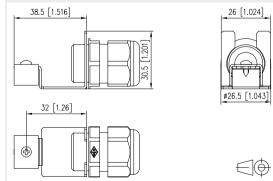
### **OpDAT REG strain relief M20**

- additional tension relief for OpDAT REGplus and/or OpDAT REGpro splice distributor
- M20 screw connection
- with tension relief for Kevlar
- additional strain relief for each splice distributor possible

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
15024ASK-S	gray	Splice tray	for shrink splice



P/N	Color	Feature 1	Feature 2
150240M20Z-E	gray		







### Front cover OpDAT REGpro LC-Q

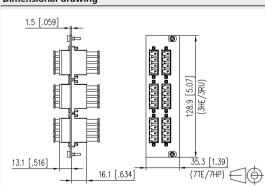
- front plate 3RU/7HP LC-Q adapter
- slotted zirconium oxide ceramics sleeve (ZrO2) for single mode applications
- slotted metal sleeve (Ph-Br) for multi mode applications
- suitable for mounting in OpDAT REGpro and OpDAT REGpro24
- gray, powder-coated steel sheet
- variants: 6xLC-Q (blue), 3xLC-Q (violet), 6xLC-Q (violet), 6xLC-Q (aqua), 3xLC-Q (beige), 6xLC-Q (beige)



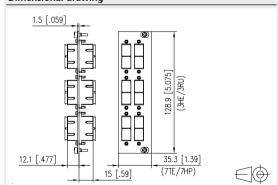
### Front cover OpDAT REGpro 6xSC-D

- front plate 3RU/7HP with 6 SC-D adapter
- slotted zirconium oxide ceramics sleeve (ZrO2) for single mode applications
- slotted metal sleeve (Ph-Br) for multi mode applications
- suitable for mounting in OpDAT REGpro and OpDAT REGpro24
- gray, powder-coated steel sheet

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
15024A7106-E	blue	6xLC-Q (ceramic)	9/125 (OS2)
15024A7903-E	violet	3xLC-Q (ceramic)	50/125 (OM4)
15024A7906-E	violet	6xLC-Q (ceramic)	50/125 (OM4)
15024A7806-E	aqua	6xLC-Q (ceramic)	50/125 (OM3)
15024A7203-E	beige	3xLC-Q (Ph-Br)	9/125 (OS2) APC
15024A7206-E	beige	6xLC-Q (Ph-Br)	9/125 (OS2) APC



P/N	Color	Feature 1	Feature 2
15024AD206-E	metallike	6xSC-D (ceramic)	SM + MM







### Front cover OpDAT REGpro 12xST

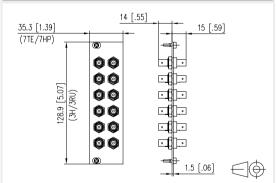
- front plate 3RU/7HP with 12 ST adapter
- slotted zirconium oxide ceramics sleeve (ZrO2) for single mode applications
- slotted metal sleeve (Ph-Br) for multi mode applications
- suitable for mounting in OpDAT REGpro and OpDAT REGpro24
- gray, powder-coated steel sheet
- variants: SM, MM



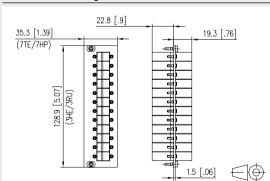
#### Front cover OpDAT REGpro 12xE2000

- front plate 3RU/7HP with 12 E2000 adapters
- slotted ceramics sleeve for single mode applications
- suitable for mounting in OpDAT REG pro and OpDAT REG S
- gray, powder-coated steel sheet
- variants: equipped with 12 E2000 adapters, each in blue (OS2) or E2000 APC adapters, each in green (OS2)

### Dimensional drawing



P/N	Color	Feature 1	Feature 2
15024A0112-E	gray	12xST (ceramic)	SM + MM



P/N	Color	Feature 1	Feature 2
15024A5812-E	blue	12xE2000 SM (ceramic)	9/125 (OS2)
15024A5912-E	green	12xE2000 SM APC (ceramic)	9/125 (OS2) APC







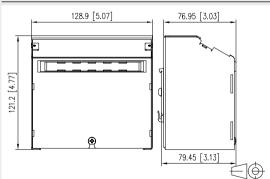
## OpDAT REG Splice Distributor for pre-terminated cables

- Very compact splice distributor for TH35 rail
- Flat design with an inclined outlet (connections facing downward) and a large cabling space
- Great ease of use even with high cable channels in the immediate surroundings
- To mount pigtails or pre-terminated installation cables (VIKs)
- Modular design: housing, equipped front plate and splice tray are to be ordered separately
- · Visible area with label strip
- The rail bracket can be mounted in different positions to the housing to allow for several mounting variants.
- Cable feed from top or bottom with a strain relief M20 (available as an option).
- Front plate (3RU/7HP) with LC-Quad, SC-Duplex, ST or E2000 adapters. Other types available on demand.
- 3 variants available:
- OpDAT REG S V = for pre-terminated cables
- OpDAT REG S Splice C = for 12 splices with crimp splice holders
- OpDAT REG S Splice S = for 12 splices with shrink splice holders
- · Particularly solid rail bracket
- · With one captive screw of the cover
- Suitable for mixed equipment with fiber optic and copper based technology
- With a mounted blind plate it can be used on the rail as splice box only or also as a transit splice box with up to 12 (24) fibers

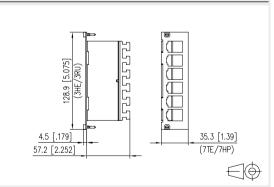
# Modul module frame 3RU, 7HP 6 port stainless steel unequipped

- stainless steel module frame for 6 individual modules in Modul design
- strain relief at the module
- 3RU 7HP module frame with very short dimensions
- mounts in OpDAT REGpro, OpDAT REGpro24, OpDAT CM, OpDAT REG S or 3HP module frame
- additional strain relief possible by cable tie
- grounding possible by flat plug

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
15024B10-E	gray	unequipped	VIK
15024B10S-S	gray	unequipped	for shrink splice holder
15024B10S-E	gray	unequipped	for crimp splice holder



P/N	Color	Feature 1	Feature 2
130B10E2E-E	stainless steel	6 port unequipped	Module cut-out
130B20E2E-E	stainless steel	6 port unequipped	Keystone module cut-out





### Industrial Ethernet | Overview M12 products

### **PCB Jacks**

4-pole, D-coded



Jack M12

angled 90°, solderable, rear wall mount

P/N: MMT471A115 1.5-2.5 mm wall thickness P/N: MMT471A115-0001 2.5-4.0 mm wall thickness P/N: MMT471A115-0002 4.0-5.0 mm wall thickness



Jack M12 solderable, rear wall mount P/N: MMW370A1A1



solderable, front mount P/N: MMW360A1A1

8-pole, X-coded



Jack M12 in a set solderable, rear wall mount P/N: MMT371A3B5-0001



Jack M12 solderable, front mount P/N: MMT361A315



Jack M12 in a set solderable, front mount P/N: MMT361A315-0001



Jack insert for PC boards M12 solderable P/N: MMT060A315 (green) P/N: MMT060A315-0001 (black)



Jack M12 solderable, rear wall mount P/N: MMT371A3B5



Jack M12, angled 90°, solderable, rear wall mount P/N: MMT471A315 1.5-2.5 mm

wall thickness P/N: MMT471A315-0001 2.5-4.0 mm wall thickness

P/N: MMT471A315-0002 4.0-5.0 mm wall thickness



Jack insert for PC boards angled 90°, solderable, rear wall mount P/N: MMTA70A315



Jack M12, angled 90°, solderable, rear wall mount P/N: MMT471A315 1.5-2.5 mm wall thickness P/N: MMT471A315-0001

2.5-4.0 mm wall thickness P/N: MMT471A315-0002 4.0-5.0 mm wall thickness



8-pole, X-coded

IP67



solderable, front mount, potted P/N: MMT361A315-0009 IP67 in unmated form



solderable, rear wall mount, potted P/N: MMT371A3B5-0009 IP67 in unmated form

### Jacks & plugs for field assembly / Feed-through adapters M12 X-coded



M12 jack 8-pole, X-coded, IP67 for field assembly P/N: MMF881A315



M12 jack 8-pole, X-coded, IP67 for field assembly, with flange P/N: MMF881A315-0001



M12 plug 8-pole, X-coded, IP67 for field assembly, straight P/N: MNF881A315-0001



M12 plug 4-pole, D-coded, IP67, for field assembly P/N: MNF881A115



Feed-through adapter M12 8-pole, X-coded to RJ45 straight P/N: MWN811A415



Feed-through adapter M12 8-pole, X-coded to RJ45 angled P/N: MWN911A415

### Complementary products



C6<sub>A</sub> RJ45 field plug pro P/N: 130E405032-E



C6<sub>A</sub> RJ45 field plug pro 360 P/N: 130E405042-E



C5 RJ45 field plug pro 2P P/N: 130E405032PE



C5 RJ45 field plug pro 2P 360 P/N: 130E405042PE



Cable connector Classe FA P/N: 130863-02-E



### Cables

#### 4-pole, D-coded



Connection cable M12 P/N: 142M1D10xxx



Connection line M12 P/N: 142M1D11xxx



Connection line M12/RJ45 P/N: 142M4D15xxx



Connection cable M12 angled P/N: 142M1D90xxx



Connection line M12 angled-M12 straight P/N: 142M1D19xxx



Connection line M12/RJ45 P/N: 142M4D25xxx





Connection line M12/RJ45 P/N: 142M4D95xxx



8-pole, X-coded



Connection cable M12 P/N: 142M2X10xxx



Connection line M12 P/N: 142M2X11xxx



Connection line M12/RJ45 P/N: 142M2X15xxx



Connection cable M12 P/N: 142M2X90xxx P/N: 142M2XA0xxx P/N: 142M2XB0xxx P/N: 142M2XC0xxx



Connection line M12 angled/M12 staight P/N: 142M2X19xxx P/N: 142M2X1Axxx P/N: 142M2X1Bxxx P/N: 142M2X1Cxxx



Connection line M12 angled/RJ45 P/N: 142M2X95xxx P/N: 142M2XA5xxx P/N: 142M2XB5xxx

P/N: 142M2XC5xxx



Connection cable M12 jack P/N: 142M2X20xxx



Connection line M12-RJ45 P/N: 142M2X25xxx



Connection line M12 plug/jack P/N: 142M2X12xxx



Connection line for drag chain connector M12 jack P/N: 142M6X10xxx



Connection line for drag chain connector M12 plug/plug P/N: 142M6X11xxx



Connection line for drag chain connector M12 jack P/N: 142M6X20xxx



Connection line for drag chain connector M12 jack/plug P/N: 142M6X21xxx



Connection line for torsion connector M12-plug P/N: 142M7X10xxx



Connection line for torsion connector M12 plug/plug P/N: 142M7X11xxx



Connection line for torsion connector M12 jack P/N: 142M7X20xxx



Connection line for torsion connector M12 jack/plug P/N: 142M7X21xxx

### **LEGEND**



xxx = 010 (1.0 m)xxx = 050 (5.0 m) xxx = 100 (10.0 m)xxx = 020 (2.0 m)

Other cable lengths on request.



Position of coding at X-coded P/N with:

 $A = 45^{\circ}$  $B = 135^{\circ}$ 

C = 225°







# Jack M12 solderable 90° 4-pole D-coded IP67 <2.5 mm wall thickness

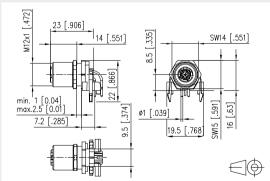
- Ethernet M12 jack for PC boards
- 4-pole, D-coded as per IEC 61076-02-101
- angled 90°
- solderable THR
- side entry
- protection degree IP67 in mated condition
- · suitable for applications in the railway industry
- Variants: suitable for a wall thickness up to 2.5 mm, up to 4 mm, up to 5 mm



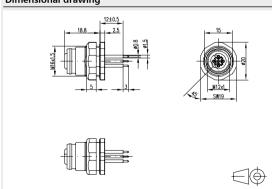
# Jack M12 solderable through hole mounting 4-pole D-coded

- Ethernet M12 female connector for PC boards
- 4-pole, D-coded as per IEC 61076-02-101
- solderable
- through hole mounting
- green PC board insert for THR
- suitable for applications in the railway industry

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
MMT471A115	metallike	D-coded 90°	<2.5 mm
MMT471A115- 0001	metallike	D-coded 90°	<4 mm
MMT471A115- 0002	metallike	D-coded 90°	<5 mm



P/N	Color	Feature 1	Feature 2
MMW370A1A1	metallike	D-coded	









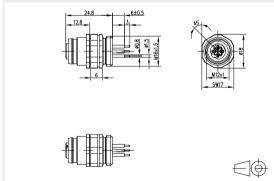
### Jack M12 solderable front mounting 4-pole D-coded

- Ethernet M12 female connector for PC boards
- 4-pole, D-coded as per IEC 61076-02-101
- solderable
- front mounting
- green PC board insert for THR
  suitable for applications in the railway industry

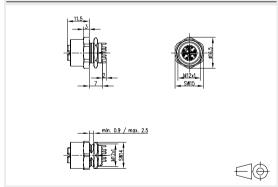
### Jack M12 solderable 8-pole X-coded IP67, potted

- Ethernet M12 jack  $Cat.6_A$  for PC boards
  - 8-pole, X-coded as per IEC 61076-02-109
- for 10 GBit Ethernet (IEEE 802.3an)
- wave solderable
- top entry
- green PC board insert
- protection degree IP67 in unmated condition
- suitable for applications in the railway industry

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
MMW360A1A1	metallike	D-coded	



			,
P/N	Color	Feature 1	Feature 2
MMT361A315- 0009	metallike	X-coded	potted







# Jack M12 solderable 8-pole X-coded IP67, rear wall mounting, potted

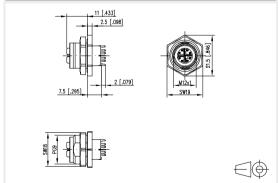
- Ethernet M12 jack  $Cat.6_A$  for PC boards
- 8-pole, X-coded as per IEC 61076-02-109
- rear wall mounting
- for 10 GBit Ethernet (IEEE 802.3an)
- · wave solderable
- top entry
- protection degree IP67 in unmated condition



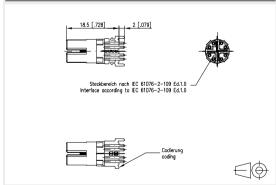
# Jack M12 solderable 8-pole X-coded IP67, rear wall mounting, in individual parts

- Ethernet M12 jack  $Cat.6_A$  for PC boards
- 8-pole, X-coded as per IEC 61076-02-109
- rear wall mounting
- for 10 GBit Ethernet (IEEE 802.3an)
- solderable, THR
- top entry
- protection degree IP67 in mated condition
- in individual parts

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
MMT371A3B5- 0009	metallike	X-coded	potted



			·
P/N	Color	Feature 1	Feature 2
MMT371A3B5-	metallike	X-coded	in individual
0001			parts







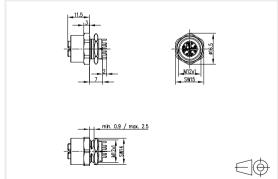
### Jack M12 solderable 8-pole X-coded IP67

- Ethernet M12 jack Cat.6<sub>A</sub> for PC boards
- 8-pole, X-coded as per IEC 61076-02-109
- for 10 GBit Ethernet (IEEE 802.3an)
- solderable, THR
- · top entry
- green PC board insert
- suitable for applications in the railway industry

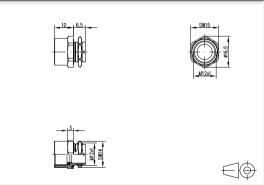
# Jack M12 solderable 8-pole X-coded IP67, in individual parts

- Ethernet M12 jack  $Cat.6_A$  for PC boards
  - 8-pole, X-coded as per IEC 61076-02-109
  - for 10 GBit Ethernet (IEEE 802.3an)
- solderable, THR
- top entry
- green PC board insert
- in individual parts
- suitable for applications in the railway industry

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
MMT361A315	metallike	X-coded	



P/N	Color	Feature 1	Feature 2
MMT361A315- 0001	metallike	X-coded	in individual parts









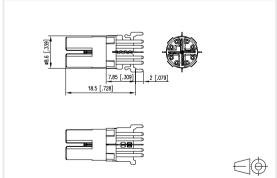
# PC board insert M12 solderable 8-pole X-coded, green

- Ethernet M12 jack insert for PC boards
- 8-pole, X-coded as per IEC 61076-02-109
- for 10 GBit Ethernet (IEEE 802.3an)
- solderable (THR)
- plug-in direction vertical
- variants: green or black contact carrier

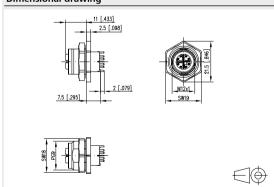
# Jack M12 solderable 8-pole X-coded IP67, rear wall mounting

- Ethernet M12 jack  $Cat.6_A$  for PC boards
- 8-pole, X-coded as per IEC 61076-02-109
- rear wall mounting
- for 10 GBit Ethernet (IEEE 802.3an)
- solderable, THR
- top entry
- protection degree IP67 in mated condition

### Dimensional drawing



P/N	Color	Feature 1	Feature 2
MMT060A315	metallike	X-coded	
MMT060A315- 0001	metallike	X-coded	



			- 1
P/N	Color	Feature 1	Feature 2
MMT371A3B5	metallike	X-coded	







# Jack M12 solderable 90° 8-pole X-coded IP67 < 2.5 mm wall thickness

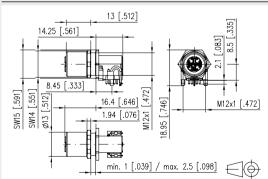
- Ethernet M12 jack Cat.6, for PC boards
- 8-pole, X-coded as per IEC 61076-02-109
- angled 90°
- for 10 GBit Ethernet (IEEE 802.3an)
- solderable THR
- side entry
- protection degree IP67 in mated condition
- suitable for applications in the railway industry
- variants: suitable for a wall thickness up to 2.5 mm, up to 4 mm, up to 5 mm



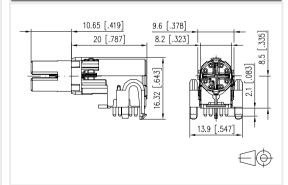
# PC board insert M12 solderable 90° 8-pole X-coded, green

- Ethernet M12 jack insert for PC boards  $90^{\circ}$
- 8-pole, X-coded as per IEC 61076-02-109
- for 10 GBit Ethernet (IEEE 802.3an)
- solderable (THR)
- side entry
- green PC board insert

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
MMT471A315	metallike	X-coded 90°	< 2.5 mm
MMT060A315- 0001	metallike	X-coded 90°	< 4 mm
MMT060A315- 0002	metallike	X-coded 90°	< 5 mm



P/N	Color	Feature 1	Feature 2
MMTA70A315	metallike	X-coded	90°







### Jack M12 solderable 90° 8-pole X-coded IP67 wall thickness, in individual parts

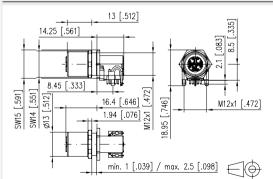
- Ethernet M12 jack Cat.6, for PC boards
- 8-pole, X-coded as per IEC 61076-02-109
- angled 90°
- for 10 GBit Ethernet (IEEE 802.3an)
- · solderable THR
- side entry
- protection degree IP67 in mated condition
- in individual parts
- suitable for applications in the railway industry
- · variants: suitable for a wall thickness up to 2.5 mm, up to 4 mm, up to 5 mm



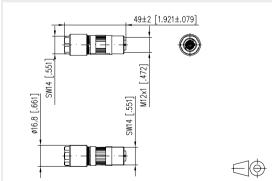
### M12 Jack X-coded IP67, field assembly

- 8-pole M12 jack for field assembly Cat.6, per IEC/PAS 61076-2-109
- suitable for 10 GBit as per IEEE 802.3an
- AWG 26/1-22/1, AWG 26/7-22/7 can be connected
- solid copper wire diameter 0.4 to 0.64 mm
- stranded copper wire diameter 0.48 to 0.76 mm
- wire diameter with isolation up to 1.6 mm overall cable diameter from 5.0 to 9.7 mm
- jack consists of only two parts easy assembly without special tools
- industry-compatible zinc die-cast housing
- · suitable for applications in the railway industry

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
MMT471A315- 0003	metallike	X-coded 90°	< 2.5 mm, in individual parts
MMT471A315- 0004	metallike	X-coded 90°	< 4 mm, in individual parts
MMT471A315- 0005	metallike	X-coded 90°	< 5 mm, in individual parts



P/N	Color	Feature 1	Feature 2
MMF881A315		X-coded	







# M12 Jack X-coded IP67, field assembly with flange

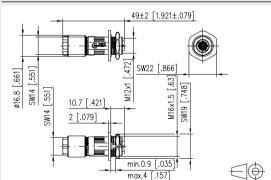
- 8-pole M12 jack for field assembly Cat.6
- per IEC/PAS 61076-2-109 with flange
- suitable for 10 GBit as per IEEE 802.3an
- AWG 26/1 to 22/1, AWG 26/7 to 22/7 can be connected
- solid copper wire diameter 0.4 to 0.64 mm
- stranded copper wire diameter 0.48 to 0.76 mm
- wire diameter with isolation up to 1.6 mm
- overall cable diameter from 5.0 to 9.7 mm
- · jack consists of only two parts
- · easy assembly without special tools
- · industry-compatible zinc die-cast housing
- suitable for applications in the railway industry



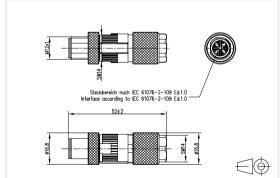
### M12 field plug X-coded, straight

- M12 Cat.6 $_{\rm A}$  X-coded plug based on IEC PAS 61076-2-109 and suitable for field assembly
- suitable for 10 GBit Ethernet (IEEE 802.3an), Remote Powering (PoE, PoE plus and UPoE) and HDBaseT
- for a 8-wire M12 plug for AWG 22
- connection of AWG 26/1 22/1; AWG 26/7 22/7 possible
- solid copper wire diameter from 0.4 to 0.64 mm
- stranded copper wire diameter from 0.48 to 0.76 mm
- core diameter up to 1.6 mm
- cable jacket from 5.0 to 9.7 mm
- consists of only 2 parts
- easy assembly connection without special tools
- zinc die-cast housing for industrial use
- suitable for applications in the railway industry

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
MMF881A315- 0001		X-coded	



P/N	Color	Feature 1	Feature 2
MNF881A315- 0001		X-coded	

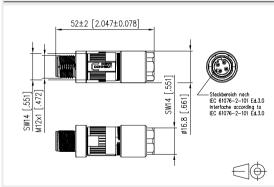






### M12 field plug D-coded, straight

- M12 Cat.5 D-coded plug based on IEC PAS 61076-2-101 and suitable for field packaging
- M12 field plug for AWG 22
- for a 4 wire cable connection
- 4-wire M12 plug for AWG 22 to be assembled in the field
- connection of AWG 26/7 22/7; AWG 24/1 22/1 possible
- solid copper wire diameter from 0.4 to 0.64 mm
- stranded copper wire diameter from 0.48 to 0.76 mm
- conductor diameter up to 1.6 mm
- cable jacket from 5.0 to 9.7 mm
- consists of only 2 parts
- easy assembly connection without special tools
- · zinc die-cast housing for industrial use
- suitable for applications in the railway industry



P/N	Color	Feature 1	Feature 2
MNF881A115		D-coded	







# Panel feed through adapters M12 X-coded to RJ45 for electrical cabinets - straight

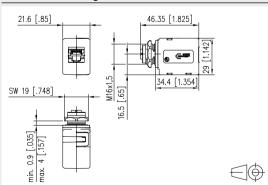
- panel feed-through adapter M12 to RJ45 for control cabinets
- M12 jack x-coded, IP67, per IEC/PS 61076-2-109
- RJ45 jack, IP20, per IEC 60603-7-51
- suitable for 10 GBit per IEEE802.3an
- Cat.6<sub>A</sub>
- plug-in direction: straight
- · solid refined zinc die-cast housing
- suitable for applications in the railway industry



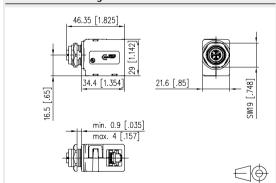
# Panel feed through adapters M12 X-coded to RJ45 for electrical cabinets - angled

- Panel feed-through adapter M12 to RJ45 for control cabinets
- M12 connector x-coded, IP67, per IEC/PS 61076-2-109
- RJ45 jack, IP20, per IEC 60603-7-51
- suitable for 10 GBit per IEEE802.3an
- Cat.6
- angled
- solid housing refined with zinc die-casting
- suitable for applications in the railway industry

#### **Dimensional drawing**



2.2			
P/N	Color	Feature 1	Feature 2
MWN811A415	metallike	X-coded	180°



P/N	Color	Feature 1	Feature 2
MWN911A415	metallike	X-coded	90°







# Connection line M12 plug straight - M12 plug straight 4-pole, D-coded

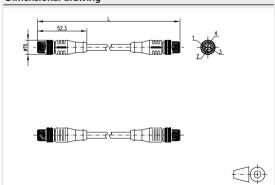
- shielded M12 Ethernet connection line
- Cat.5e, 4-pole, D-coded to IEC 61076-2-101
- side 1: M12-plug, straight
- side 2: M12-plug, straight
- · extrusion-coated cable on M12 connectors
- 2x2xAWG22/7, tinned with plastic foil
- inner sheath FRNC, aluminum-coated plastic foil
- overall shield: tinned copper braid, approx. 85% covered
- Profinet (WS-GE-BL-OR) wiring
- green cable, PUR
- standard variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lenghts on request



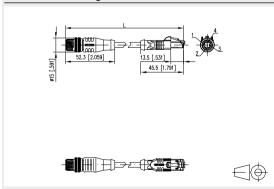
# Connection line M12 plug straight - RJ45 plug straight AWG 26 4-pole, D-coded

- shielded M12 to RJ45 Ethernet connection line
- Cat.5e, 4-pole, D-coded (IEC 61076-2-101)
- side 1: M12 plug, straight
- side 2: RJ45 plug, straight
- extrusion-coated cable on M12 and RJ45 connector
- stranded wires 4x1xAWG26/19
- overall shield tinned copper braid
- pin assignment per Profinet
- green cable, PUR
- standard variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- · other cable lengths on request

#### **Dimensional drawing**



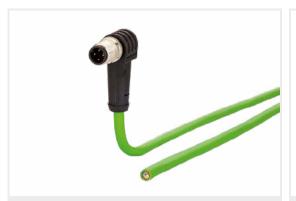
P/N	Color	Feature 1	Feature 2
142M1D11010	green	1 m	
142M1D11020	green	2 m	
142M1D11050	green	5 m	
142M1D11100	green	10 m	



			- 1
P/N	Color	Feature 1	Feature 2
142M4D15010	green	1 m	
142M4D15020	green	2 m	
142M4D15050	green	5 m	
142M4D15100	green	10 m	







## Connection cable M12 plug angled - free line end 4-pole, D-coded

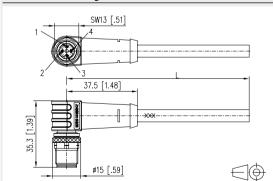
- shielded M12 Ethernet connection cable
- Cat.5e, 4-pole, D-coded (IEC 61076-2-101)
- side 1: M12-plug, angled
- side 2: free line end
- extrusion-coated cable on M12 connector
- 2x2xAWG22/7, tinned with plastic foil
- inner sheath FRNC, aluminum-coated plastic foil
- overall shield: tinned copper braid, approx. 85% covered
- Profinet (WS-GE-BL-OR) wiring
- green cable, PUR
- variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lengths on request



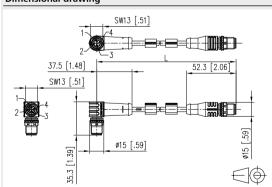
# Connection line M12 plug straight - M12 plug angled 4-pole, D-coded

- shielded M12 Ethernet connection line
- Cat.5e, 4-pole, D-coded (IEC 61076-2-101)
- side 1: M12-plug, straight
- side 2: M12-plug, angled
  - extrusion-coated cable on M12 connectors
- 2x2xAWG22/7, tinned with plastic foil
- inner sheath FRNC, aluminum-coated plastic foil
- overall shield: tinned copper braid, approx. 85% covered
- Profinet (WS-GE-BL-OR) wiring
- green cable, PUR
- standard variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lenghts on request

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
142M1D90010	green	1 m	
142M1D90020	green	2 m	
142M1D90050	green	5 m	
142M1D90100	green	10 m	



P/N	Color	Feature 1	Feature 2
142M1D19010	green	1 m	
142M1D19020	green	2 m	
142M1D19050	green	5 m	
142M1D19100	green	10 m	







# Connection line M12 jack straight - RJ45 plug straight 4-pole, D-coded

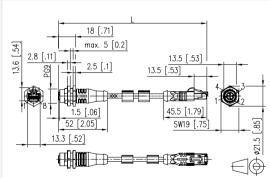
- shielded M12-jack to RJ45-plug Ethernet connection line
- Cat.5e, 4-pole, D-coded (IEC 61076-2-101)
- side 1: M12 jack, straight
- side 2: RJ45 plug, straight
- · extrusion-coated cable on connectors
- stranded wires 1x4xAWG26/19
- overall shield tinned copper braid
- pin assignment per Profinet
- green cable, PUR
- standard variants: 1.0 m, 2.0 m, 3.0 m, 5.0 m, 10.0 m
- other cable lenghts on request



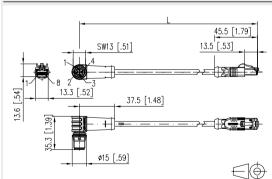
# Connection line M12 plug angled - RJ45 plug straight 4-pole, D-coded

- shielded M12 to RJ45 Ethernet connection line
- Cat.5e, 4-pole, D-coded (IEC 61076-2-101)
- side 1: M12 plug, angled
- side 2: RJ45 plug, straight
- · extrusion-coated cable on connectors
- stranded wires 4x1xAWG26/19
- overall shield: tinned copper braid
- pin assignment per Profinet
- green cable, PUR
- variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lengths on request

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
142M4D25010	green	1 m	
142M4D25020	green	2 m	
142M4D25050	green	5 m	
142M4D25100	green	10 m	



P/N	Color	Feature 1	Feature 2
142M4D95010	green	1 m	
142M4D95020	green	2 m	
142M4D95050	green	5 m	
142M4D95100	green	10 m	







# Connection cable M12 plug straight - free line end 4-pole, D-coded

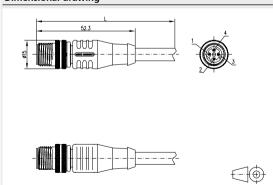
- shielded M12 Ethernet connection cable
- Cat.5e, 4-pole, D-coded (IEC 61076-2-101)
- side 1: M12-plug, straight
- side 2: free line end
- extrusion-coated cable on M12 connector
- 2x2xAWG22/7, tinned with plastic foil
- inner sheath FRNC, aluminum-coated plastic foil
- overall shield: tinned copper braid, approx. 85% covered
- Profinet (WS-GE-BL-OR) wiring
- green cable, PUR
- variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lengths on request



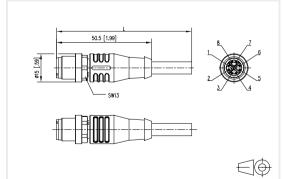
# Connection cable M12 plug straight - free line end 8-pole, X-coded

- shielded M12 Ethernet connection cable
  - Cat.6<sub>4</sub>, x-coded, 8-pole
- side 1: M12 connector, straight
- side 2: free line end
  - M12 connector over molded
- stranded wires 4x2xAWG26/7
- overall shield tinned copper braid
- green cable, PUR
- standard variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lengths on request

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
142M1D10010	green	1 m	
142M1D10020	green	2 m	
142M1D10050	green	5 m	
142M1D10100	green	10 m	



P/N	Color	Feature 1	Feature 2
142M2X10010	green	1 m	
142M2X10020	green	2 m	
142M2X10050	green	5 m	
142M2X10100	green	10 m	







# Connection line M12 plug straight - RJ45 plug straight AWG 26 4-pole, D-coded

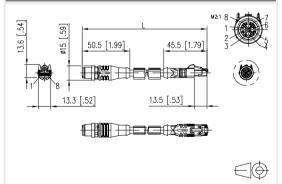
- shielded M12-plug to RJ45-plug connection line
- Cat.6<sub>A</sub>, 8-pole, X-coded
- side 1: M12-plug, straight
- side 2: RJ45-plug, straight
- connectors over molded
- stranded wires 4x2xAWG26/7 PiMF
- pin assignment per T568B
- overall shield tinned copper braid
- green cable, PUR
- standard variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lengths on request



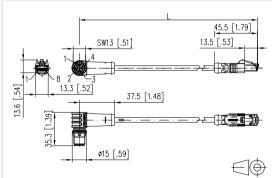
# Connection cable M12 X-coded, M12 plug angled - free line end 8-pole

- shielded M12 to RJ45 Ethernet connection line
- Cat.5e, 4-pole, D-coded (IEC 61076-2-101)
- side 1: M12 plug, angled
- side 2: RJ45 plug, straight
- · extrusion-coated cable on connectors
- stranded wires 4x1xAWG26/19
- overall shield: tinned copper braid
- pin assignment per Profinet
- green cable, PUR
- variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lengths on request

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
142M2X15010	green	1 m	
142M2X15020	green	2 m	
142M2X15050	green	5 m	
142M2X15100	green	10 m	



P/N	Color	Feature 1	Feature 2
142M2X90010	green	1 m	Position of coding 315°
142M2X90020	green	2 m	Position of coding 315°
142M2X90050	green	5 m	Position of coding 315°
142M2X90100	green	10 m	Position of coding 315°
142M2XA0010	green	1 m	Position of coding 45°
142M2XA0020	green	2 m	Position of coding 45°
142M2XA0050	green	5 m	Position of coding 45°
142M2XA0100	green	10 m	Position of coding 45°
142M2XB0010	green	1 m	Position of coding 135°
142M2XB0020	green	2 m	Position of coding 135°
142M2XB0050	green	5 m	Position of coding 135°
142M2XB0100	green	10 m	Position of coding 135°
142M2XC0010	green	1 m	Position of coding 225°
142M2XC0020	green	2 m	Position of coding 225°
142M2XC0050	green	5 m	Position of coding 225°
142M2XC0100	areen	10 m	Position of coding 225°







# Connection line M12 plug angled - RJ45 plug straight 8-pole, X-coded

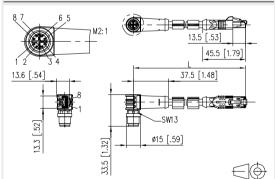
- shielded M12X to RJ45 Ethernet connection line
- Cat.6<sub>4</sub>, 8-pole
- side 1: M12 connector, angled, position of coding 315°
- side 2: RJ45 plug, straight
- · connectors over molded
- stranded wires 4x2xAWG26/7 PiMF
- overall shield tinned copper braid
- pin assignment per T568B
- green cable, PUR
- standard variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lenghts on request



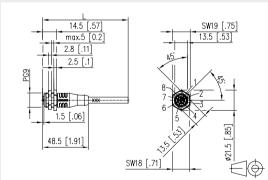
# Connection cable M12 jack straight - free line end 8-pole, X-coded

- shielded M12 Ethernet connection cable
  - Cat.6<sub>4</sub>, x-coded, 8-pole
- side 1: M12-jack, straight
- side 2: free line end
  - M12-jack over molded
- stranded wires 4x2xAWG26/7
- overall shield tinned copper braid
- green cable, PUR
- protective cap included in the delivery
- standard variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lengths on request

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
142M2X95010	green	1 m	Position of coding 315°
142M2X95020	green	2 m	Position of coding 315°
142M2X95050	green	5 m	Position of coding 315°
142M2X95100	green	10 m	Position of coding 315°
142M2XA5010	green	1 m	Position of coding 45°
142M2XA5020	green	2 m	Position of coding 45°
142M2XA5050	green	5 m	Position of coding 45°
142M2XA5100	green	10 m	Position of coding 45°
142M2XB5010	green	1 m	Position of coding 135°
142M2XB5020	green	2 m	Position of coding 135°
142M2XB5050	green	5 m	Position of coding 135°
142M2XB5100	green	10 m	Position of coding 135°
142M2XC5010	green	1 m	Position of coding 225°
142M2XC5020	green	2 m	Position of coding 225°
142M2XC5050	green	5 m	Position of coding 225°
142M2XC5100	green	10 m	Position of coding 225°



P/N	Color	Feature 1	Feature 2
142M2X20010	green	1 m	
142M2X20020	green	2 m	
142M2X20050	green	5 m	
142M2X20100	green	10 m	







# Connection line M12 jack straight - RJ45 plug straight 4-pole, D-coded

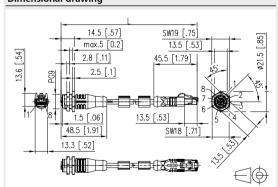
- shielded M12-jack to RJ45-plug connection line
- Cat.6<sub>A</sub>, 8-pole, x-coded
- side 1: M12-jack, straight
- side 2: RJ45-plug, straight
- · connectors over molded
- stranded wires 4x2xAWG26/7 PiMF
- overall shield tinned copper braid
- pin assignment per T568B
- green cable, PUR
- standard variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lengths on request



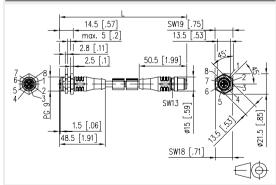
# Connection line M12 plug straight - M12 jack straight 8-pole, X-coded

- shielded M12 Ethernet connection line
- Cat.6<sub>Δ</sub>, 8 pole, X-coded
- side 1: M12-plug, straight
- side 2: M12-jack, straight
- extrusion-coated cable on M12 connectors
- stranded wires 4x2xAWG26/7 PiMF
- overall shield tinned copper braid
- 1:1 pin assignment
- green cable, PUR
- a protective cap is included in scope of delivery
- variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lengths on request

### Dimensional drawing



P/N	Color	Feature 1	Feature 2
142M2X25010	green	1 m	
142M2X25020	green	2 m	
142M2X25050	green	5 m	
142M2X25100	green	10 m	



P/N	Color	Feature 1	Feature 2
142M2X12010	green	1 m	
142M2X12020	green	2 m	
142M2X12050	green	5 m	
142M2X12100	green	10 m	







# Connection cable M12 plug straight - free line end drag chain suitable, 8-pole, X-coded

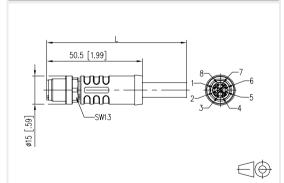
- shielded M12 Ethernet connection cable
- · drag chain suitable
- Cat.6<sub>A</sub>, 8 pole, X-coded
- side 1: M12-plug, straight
- side 2: free line end
- extrusion-coated cable on M12 connector
- stranded wires 4x2xAWG26/19
- overall shield tinned copper braid
- 1:1 pin assignment
- green cable, PUR
- variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lengths on request



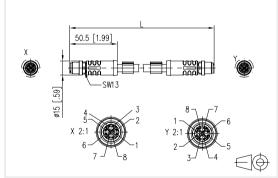
# Connection line M12 plug straight - M12 plug straight 4-pole, D-coded

- shielded M12 Ethernet connection cable
- drag chain suitable
- Cat.6, 8 pole, X-coded
- side 1: M12-plug, straight
- side 2: M12-plug, straight
- extrusion-coated cable on M12 connectors
- stranded wires 4x2xAWG26/19
- overall shield tinned copper braid
- 1:1 pin assignment
- green cable, PUR
- variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lengths on request

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
142M6X10010	green	1 m	drag chain suitable
142M6X10020	green	2 m	drag chain suitable
142M6X10050	green	5 m	drag chain suitable
142M6X10100	green	10 m	drag chain suitable



P/N	Color	Feature 1	Feature 2
142M6X11010	green	1 m	
142M6X11020	green	2 m	
142M6X11050	green	5 m	
142M6X11100	green	10 m	







# Connection cable M12 jack straight - free line end drag chain suitable, 8-pole, X-coded

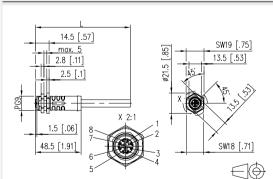
- shielded M12 Ethernet connection cable
- · drag chain suitable
- Cat.6,, 8 pole, X-coded
- side 1: M12-jack, straight
- side 2: free line end
- extrusion-coated cable on M12 connector
- stranded wires 4x2xAWG26/19
- · overall shield tinned copper braid
- 1:1 pin assignment
- green cable, PUR
- variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lengths on request



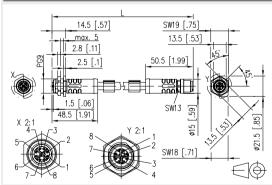
# Connection line M12 plug straight - M12 jack straight drag chain suitable, 8-pole, X-coded

- shielded M12 Ethernet connection cable
- · drag chain suitable
- Cat.6<sub>A</sub>, 8 pole, X-coded
- side 1: M12-plug, straight
- side 2: M12-jack, straight
- extrusion-coated cable on M12 connectors
- stranded wires 4x2xAWG26/19
- · overall shield tinned copper braid
- 1:1 pin assignment
- green cable, PUR
- variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lengths on request

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
142M6X20010	green	1 m	drag chain suitable
142M6X20020	green	2 m	drag chain suitable
142M6X20050	green	5 m	drag chain suitable
142M6X20100	green	10 m	drag chain suitable



P/N	Color	Feature 1	Feature 2
142M6X21010	green	1 m	drag chain suitable
142M6X21020	green	2 m	drag chain suitable
142M6X21050	green	5 m	drag chain suitable
142M6X21100	green	10 m	drag chain suitable







# Connection cable M12 plug straight - free line end 8-pole, X-coded

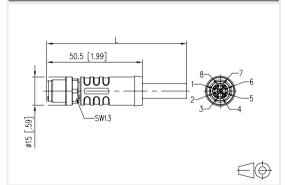
- shielded M12 Ethernet connection cable
- · torsion resistant
- Cat.6<sub>A</sub>, 8 pole, X-coded
- side 1: M12 plug, straight
- side 2: free line end
- extrusion-coated cable on M12 connector
- stranded wires 4x2xAWG24/7
- overall shield tinned copper braid
- 1:1 pin assignment
- green cable, PUR
- variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lengths on request



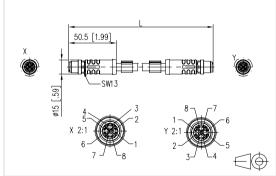
# Connection line M12 plug straight - M12 plug straight 4-pole, D-coded

- shielded M12 Ethernet connection line
- torsion resistant
- Cat.6, 8 pole, X-coded
- side 1: M12 jack, straight
  - side 2: M12 jack, straight
- extrusion-coated cable on M12 connectors
- jacks with vibration-resistance
- stranded wires 4x2xAWG26/7
- overall shield tinned copper braid
- 1:1 pin assignment
- green cable, PUR
- variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lengths on request

#### **Dimensional drawing**



P/N	Color	Feature 1	Feature 2
142M7X10005	green	0,5 m	
142M7X10010	green	1 m	
142M7X10020	green	2 m	
142M7X10050	green	5 m	
142M7X10100	green	10 m	



P/N	Color	Feature 1	Feature 2
142M7X11005	green	0,5 m	
142M7X11010	green	1 m	
142M7X11020	green	2 m	
142M7X11050	green	5 m	
142M7X11100	green	10 m	







# Connection cable M12 jack straight - free line end 8-pole, X-coded

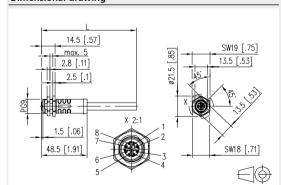
- shielded M12 Ethernet connection cable
- · torsion resistant
- · Cat.7, 8 pole, X-coded
- side 1: M12-jack, straight
- side 2: free line end
- extrusion-coated cable on M12 connector
- stranded wires 4x2xAWG24/7
- overall shield tinned copper braid
- 1:1 pin assignment
- green cable, PUR
- variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lengths on request



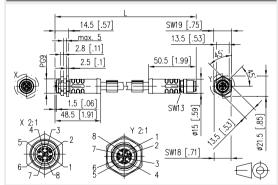
# Connection line M12 plug straight - M12 jack straight drag chain suitable, 8-pole, X-coded

- shielded M12 Ethernet connection line
- · torsion resistant
- Cat.6<sub>4</sub>, 8 pole, X-coded
- side 1: M12-plug, straight
- side 1: M12-jack, straight
- extrusion-coated cable on M12 connectors
- connectors with vibration-resistance
- stranded wires 4x2xAWG26/7
- overall shield tinned copper braid
- 1:1 pin assignment
- green cable, PUR
- variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m
- other cable lengths on request

### Dimensional drawing



P/N	Color	Feature 1	Feature 2
142M7X20005	green	0,5 m	
142M7X20010	green	1 m	
142M7X20020	green	2 m	
142M7X20050	green	5 m	
142M7X20100	green	10 m	



P/N	Color	Feature 1	Feature 2
142M7X21010	green	1 m	drag chain suitable
142M7X21020	green	2 m	drag chain suitable
142M7X21050	green	5 m	drag chain suitable
142M7X21100	green	10 m	drag chain suitable







### **MOXA EtherDevice Switch 5 port**

The industrial Ethernet switch EDS205 is an entry-level switch supporting IEEE 802.3/802.3u/802.3x with 10/100M, full/half duplex, MDI/MDIX auto-sensing. Switches of the EDS205 series can be easily and conveniently mounted on and dismounted from a standard top hat rail.

- 5 ports with 10/100BaseT(X) RJ45
- Supports IEEE 802.3/802.3u/802.3x
- $\bullet\,$  Power supply: DC 12 to 48 V, AC 18 to 30 V
- Mounting on standard top hat rail
- Powerful network switch technology
- Protected against broadcast storm
- · Store and forward switching mode

Dimensions W x H x D  $25 \times 109 \times 88 \text{ mm}$ Operating temperature range  $-10 \,^{\circ}\text{C}$  to  $+60 \,^{\circ}\text{C}$ Storage temperature range  $-40 \,^{\circ}\text{C}$  to  $+70 \,^{\circ}\text{C}$ Ingress protection IP30



### **MOXA EtherDevice Switch 8 port**

The industrial Ethernet switch EDS208 is an entry-level switch supporting IEEE 802.3/802.3u/802.3x with 10/100M, full/half duplex, MDI/MDIX auto-sensing. Switches of the EDS208 series can be easily and conveniently mounted on and dismounted from a standard top hat rail.

#### Variants:

EDS208: 8 x 10/100BaseT(X) RJ45 EDS208-M-SC: 7 x 10/100BaseT(X) RJ45, 1 x 100BaseFX Multi-mode SC-connector

- 8 ports with 10/100BaseT(X) RJ45 or 7 ports with 10/100BaseT(X) RJ45 and 1 port100BaseFX multi-mode SC
- Supports IEEE 802.3/802.3u/802.3x
  Powerful network switch technology
  Protected against broadcast storm
- Store and forward switching mode

Operating voltage DC 12 to 48 V

(P/N 110196, 11019601)

Operating voltage AC 18 to 30 V (P/N 11019601)

Dimensions W x H x D 40 x 109 x 95 mm

Operating temperature range  $-10 \,^{\circ}\text{C}$  to  $+60 \,^{\circ}\text{C}$  Storage temperature range  $-40 \,^{\circ}\text{C}$  to  $+70 \,^{\circ}\text{C}$  Ingress protection IP30

P/N	Color	Feature 1	Feature 2
110195	gray	5 port RJ45	

P/N	Color	Feature 1	Feature 2
110196	gray	8 port RJ45	
11019601	gray	7 port RJ45	1 port SC MM









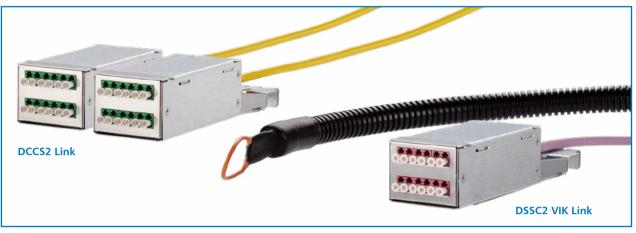
		Pre-Terminated Assemblies	
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#### Fiber optic | Configurators

#### DCCS2 fiber optic link

- Pre-assembled fiber optic link consisting of 1 or 2 subassemblies Delivery with serial number and 12 attenuation terminated to a 12-fiber mini-breakout cable
- Port numbering remains in place when DCCS2 fiber optic subassemblies are mounted
- For up to 10 GBit Ethernet (IEEE 802.3an)
- All locking levers of patch cords connected to DCCS2 subassemblies show upwards and are easy to handle at any time
- Solid, refined subassembly housing
- Cable diameter less than 6.5 mm

- measuring reports
- Maximum length 500 m
- Configuration tool in Microsoft ® Excel upon request

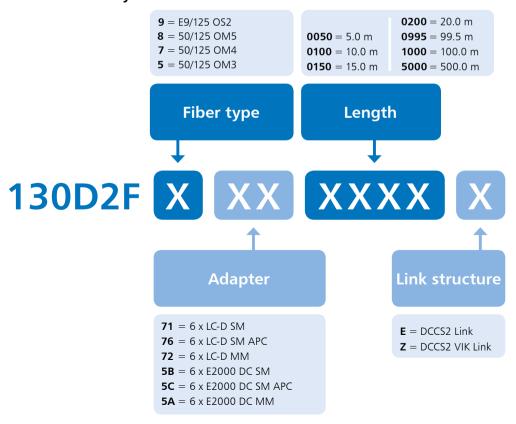


#### Example

130D2F 7 5A 0855 E

DCCS2 fiber optic link 50/125 OM4 with 6 x E2000 DC adapter on each side at DCCS2 subassembly housing, length 85.5 m

#### Part number key for further versions



These cables will be manufactured according to your specifications. They can therefore neither be exchanged nor returned.



#### DCCS2 fiber optic MPO link

- Pre-assembled fiber optic link consisting of one MPO plug on each side and a 12-fiber connection cable (ribbon style)
- Polarity A or C particularly suitable for DCCS2 modules 6LC-D/MPO
- For up to 10 GBit Ethernet (IEEE 802.3an) when combined with DCCS2 subassemblies MPO 6xLC-D
- Delivery with serial number and attenuation measuring reports
- Maximum length 500 m

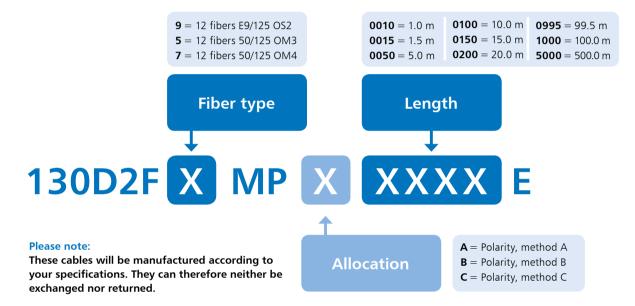
#### Example

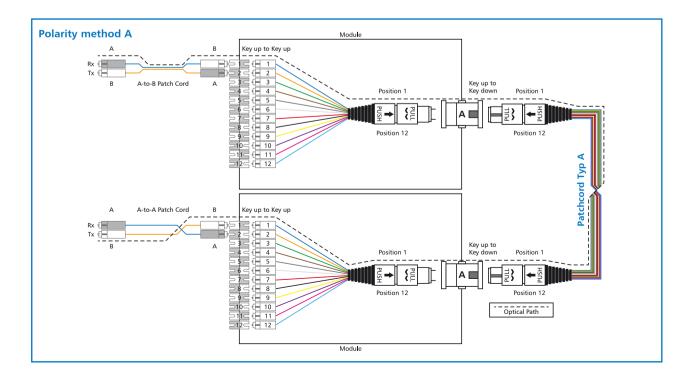
130D2F 5 MP A 0200 E

MPO Link at a 12-fiber OM3 cable, length 20 m

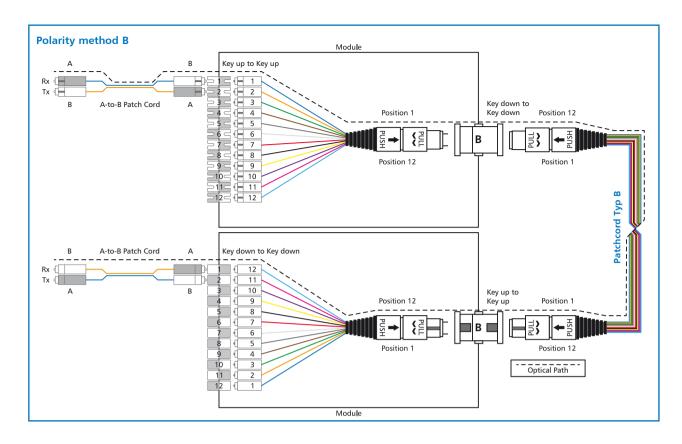
#### Part number key for further versions

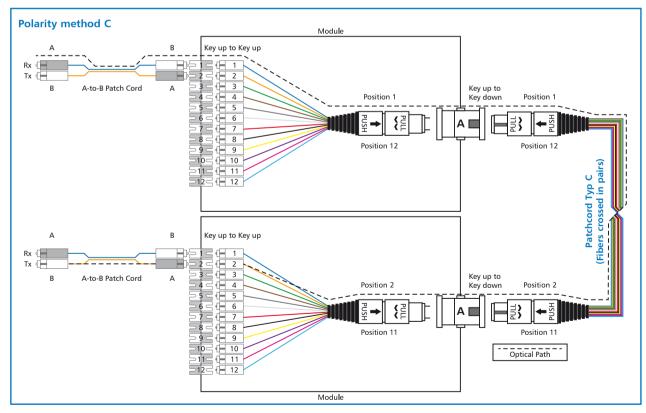












These cables will be manufactured according to your specifications. They can therefore neither be exchanged nor returned.





# Specifications OpDAT VIK with universal cable

			up to 12 f	ibers	up to 24 fibers	up to 48 fibers
				No.		
Cable divider	Size		S		M	L
	Length		65 mm		65 mm	80 mm
	Max. outer diameter		23 mm		29 mm	36 mm
	Type of fixation		slot or PG11		slot or PG21	slot or PG21
	Drilling for fixation		19 ± 0.2 mm		28.8 ± 0.2 mm	28.8 ± 0.2 mm
Cable	Cable type		U-DQ(ZN)BH			
	Cable structure (loose tube x number of fibers)		1x4, 1x8, 1x12		1x24	4x12
	Outer diameter		7.5 mm		8.0 mm	11.0 mm
	Cable weight		55 kg/km		60 kg/km	130 kg/km
	Min. bending radius		60 mm		60 mm	150 mm
	Fire behavior		Flame retardant according to IEC 60332-1-2 Halogene-free according to IEC 60754-1 Smoke density according to IEC 61034-2			
Fanout	Individual cables		2.1 mm, loose tube			
	Length if graded (with pull-in aid)	L <sub>Fmax</sub> [mm]	4F: 680 8F: 920	6F: 800 12F: 1160	24F: 1040 mm 16F: 920 mm	48F: 1280 mm 36F: 1100 mm
		L <sub>Fmin [mm]</sub>	500 mm		500 mm	500 mm
	Length if not graded (with bubble wrap or protection net)		1000 mm			
	Marking		Numbered, $\bigcirc$ = L <sub>Fmax</sub>			
	Material and color of the loose tube		I-V(ZN)H, FRNC OS2 = yellow, OM4= violet, OM3= aqua, OM5= lime green			
Pull-in aid	Max. outer diameter	IP50 IP67	29.5 mm 31.5 mm		37 mm 39 mm	44 mm 46 mm
	Max. tensile strength	IP50 IP67	500 N 700 N		500 N 650 N	500 N 700 N
Delivery	Length L <sub>G</sub>	2 to 100 m 101 to 1000 m	Cable coil Drum dia. 600 mm		Cable coil Drum dia. 600 mm	-
	Length L <sub>G</sub>	2 to 50 m 51 to 150 m 151 to 500 m	-		-	Cable coil Drum dia. 600 mm Drum dia. 710 mm





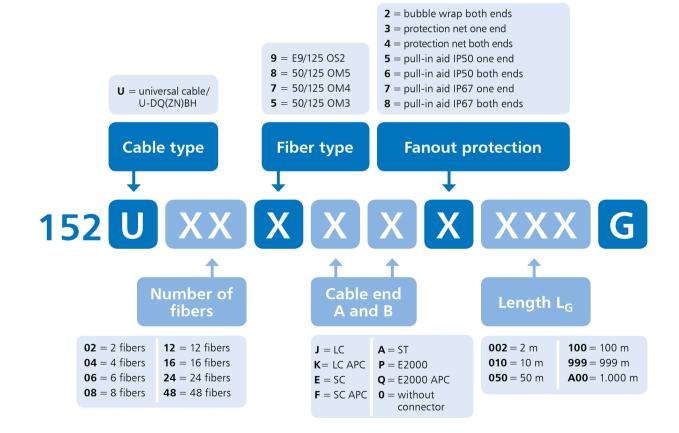
## Order information OpDAT VIK with universal cable



### **Product description**

Pre-terminated installation cables (VIK) are fiber optic cables with connectors on one or both ends that are made in manual singleitem production at METZ CONNECT in Blumberg by respecting highest quality demands. Combined with universal cables they are suitable for mechanically demanding indoor or outdoor use.

VIKs are often used together with OpDAT patch panels. They allow a rapid and easy to install point-to-point connection of passive and active network components. Thus, installation time and cost are considerably reduced compared to an installation requiring splicing and pigtails or a cabling with different patch cords.



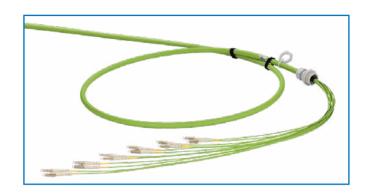
#### Please note:







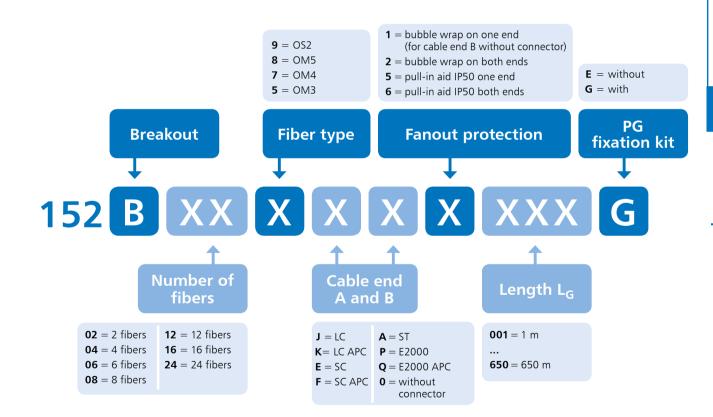
## Order information OpDAT VIK with breakout cable



#### **Product description**

Pre-terminated installation cables (VIK) are fiber optic cables with connectors on one or both ends that are made in manual singleitem production at METZ CONNECT in Blumberg by respecting highest quality demands. Combined with breakout cables (BO) they are suitable for indoor and outdoor use.

VIKs are often used together with OpDAT patch panels (types PF, PA, fix, slide). They allow a rapid and easy to install point-to-point connection. Thus, installation time and cost are considerably reduced compared to an installation requiring splicing and pigtails or a cabling with different patch cords.



#### Please note:







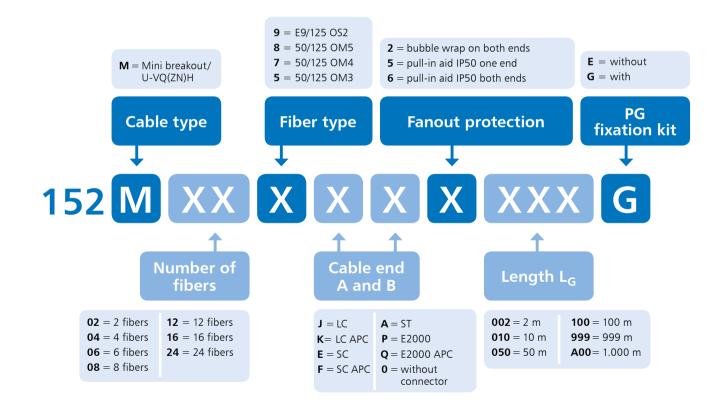
## Order information OpDAT VIK with mini breakout cable



#### **Product description**

Pre-terminated installation cables (VIK) are fiber optic cables with connectors on one or both ends that are made in manual singleitem production at METZ CONNECT in Blumberg by respecting highest quality demands. Combined with mini breakout cables (MBO) they are suitable for indoor and outdoor use.

VIKs are often used together with OpDAT patch panels (types PF, PA, fix, slide). They allow a rapid and easy to install point-to-point connection of passive and active network components. Thus, installation time and cost are considerably reduced compared to an installation requiring splicing and pigtails or a cabling with different patch cords.



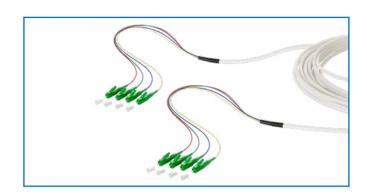
#### Please note:







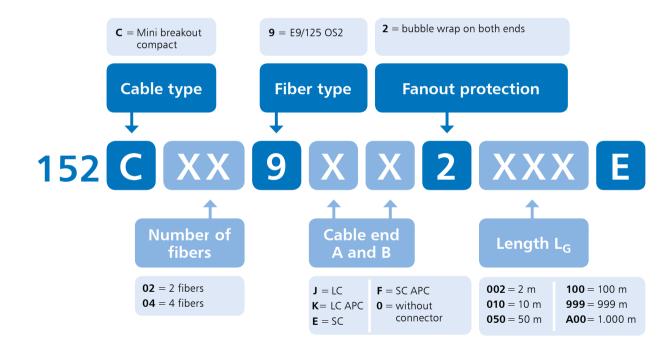
# Order information OpDAT VIK with mini breakout cable compact



#### **Product description**

Pre-terminated installation cables (VIK) are fiber optic cables with connectors on one or both ends that are made in manual singleitem production by respecting highest quality demands. Combined with Mini Breakout Cables Compact (MBO C) they are suitable for indoor use, especially for Fiber-in-the-Home applications.

VIKs are often used together with OpDAT wall outlets. They allow a rapid and easy to install point-to-point connection for example from the appartment to the equipment room.



#### Please note:





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