

Connectors for modern industrial applications need to be designed in such a way that they simplify processes and cope with faster data transmission. Telegärtner recommends the connectors of Variant 6 for generic cabling of factory automation machinery (Automation Island) acc. IEC 61918 and fieldbus installation acc. to IEC 61784-5 in a robust plastic design. The connectors of Variant 6 (Interbus

RTE) are standardized in the IEC 61076-3-106, designed to meet the demands of harsh industrial environments, guaranteeing protection class IP67 when mated. The locking clasps allow easy, tool-less opening as well as a secure locking with protection class IP67. The RJ45 plug and bulkhead inserts stand out due to high power reserves and offer transmission characteristics of Class E<sub>A</sub> acc. to ISO/IEC 11801.

	RJ45 Plug Set AWG24-27 Cat.6 <sub>A</sub>	Outlets RJ45 Cat.6 Class E <sub>A</sub>	Bulkhead Set AMJ Module K Cat.6 <sub>A</sub>	Bulkhead Set AMJ Coupler K Cat.6
<b>Standards</b>				
Generic cabling systems	ISO/IEC 11801; EN 50173-1; ISO/IEC 24702; IEC 61918			
Connectors	IEC 60603-7-51; IEC 61076-3-106			
Degrees of protection provided by enclosures (IP code)	IEC 60529	IEC 60529	IEC 60529	IEC 60529
<b>Mechanical Characteristics</b>				
Insertion force	≤ 100 N	≤ 100 N	≤ 100 N	≤ 100 N
Durability (mating cycles)	≥ 750	≥ 750	≥ 750	≥ 750
Material: housing	PA6 UL94 V0	PA6 UL94 V0	PA6 UL94 V0	PA6 UL94 V0
Material: protective cap	-	PA6 UL94 V0	PA6 UL94 V0	PA6 UL94 V0
Material: O-ring	HNBR	-	HNBR	HNBR
Material:	-	-	NBR	NBR
Material: jack housing	-	zinc diecast	zinc diecast	zinc diecast
Material: connector housing	PC UL94 V0	-	-	-
Material: contacts	phosphor bronze	CuSn	spring steel	spring steel
Material: contact (finish)	min. 0.8 μm Au on 2.54 μm Ni			
Material: shield	0.5 mm brass, 2 μm Ni	German silver	German silver	German silver
Cu-Conductor diameter: solid	0.40 - 0.51 mm AWG 26/1 - AWG 24/1	0.41 - 0.64 mm AWG 26/1 - AWG 22/1	0.40 - 0.65 mm AWG 26/1 - AWG 22/1	-
Cu-Conductor diameter: stranded	0.46 - 0.61 mm AWG 27/7 - AWG 24/7	0.48 mm AWG 26/7	0.46 - 0.61 mm AWG 27/7 - AWG 24/7	-
Core Diameter	0.85 - 1.05 mm	0.9 - 1.6 mm	0.9 - 1.6 mm	-
Cable diameter	5.0 - 7.3 mm	5.0 - 10.0 mm	5.0 - 10.0 mm	-
Reusable IDC for AWG 22/1; AWG 22/7	-	≤4 cycles	≤4 cycles	-
Reusable IDC für AWG 23/1 - AWG 26/1; AWG 24/7 - AWG 26/7	-	≤10 cycles	≤10 cycles	-
<b>Environmental Requirements</b>				
Protection against particulate ingress	IP6X	IP6X	IP6X	IP6X
Protection against water / immersion	IPX7	IPX7	IPX7	IPX7
Ambient temperature	-40° C to + 70° C			
Rapid change of temperature	-40° C to + 70° C / 25 cycles t=30 min.			
Climatic damp heat	+25° C / +65° C / 93% RH // -10° C / 21 cycles			
Flowing mixed gas	+25° C / 73% RH / 4 days, H <sub>2</sub> S / SO <sub>2</sub>			
<b>Electrical Characteristics</b>				
Current carrying capacity at 50°C	1 A	1 A	1 A	1 A
PoE according to IEEE802.3af	Adequate for Power over Ethernet+			
<b>Transmission Characteristics</b>				
Category 6 <sub>A</sub>	-	-	ISO/IEC 11801, DIN EN 50173-1	
10 Gigabit Ethernet acc. to IEEE 802.3an	fulfilled	fulfilled	fulfilled	fulfilled
Category 6 <sub>A</sub> (Component)	ISO/IEC 11801, DIN EN 50173-1		-	-
Class E <sub>A</sub> (Permanent Link)	ISO/IEC 11801, DIN EN 50173-1			
Class E <sub>A</sub> (Channel)	-	-	ISO/IEC 11801, DIN EN 50173-1	

## Components for Field Cabling - M12/RJ45/FO

### 3.7

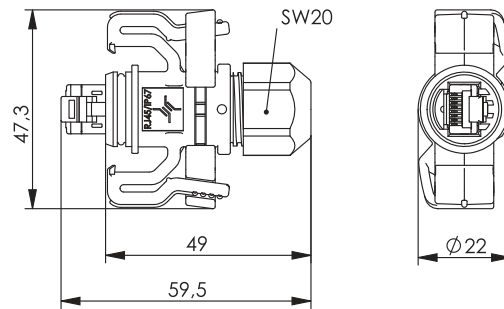
#### Variant 6

##### 3.7.1

##### RJ45 Plug Set Variant 6

#### Performance Characteristics

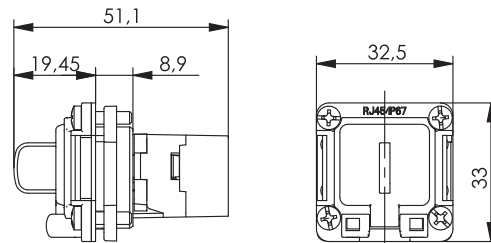
- Variant 6 acc. to IEC 61076-3-106
- connector for Automation Island acc. to IEC 61918
- 8-way contact for 10 Gigabit-Ethernet
- locking clasp to prevent accidental detachment
- 360° shield connection
- inner and outer conductor crimped in one single operation using the profi crimping tool N00001A0002
- fire rating UL94 V0
- protection class IP67



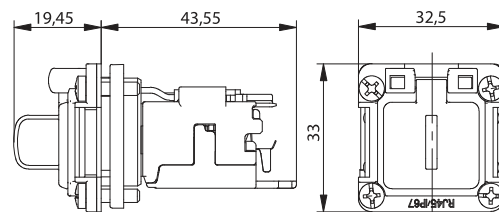
Order no.	Short name	Remarks
J00026A0150	STX V6 RJ45 plug set Cat.6A	AWG24-27

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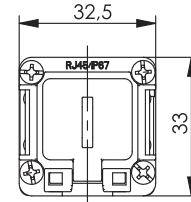
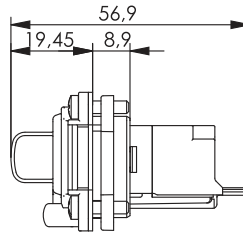
##### Bulkhead Sets Variant 6



Order no.	Short name	Remarks
J00020A0480	STX V6 bulkhead set with USB-Keystone Type A, f-f	with mounting set



Order no.	Short name	Remarks
J00020A0481	STX V6 Bulkhead with AMJ module K Cat.6A	with mounting set



Order no.	Short name	Remarks
J00020A0482	STX V6 Bulkhead with AMJ coupler K Cat.5e	with mounting set
J00020A0483	STX V6 Bulkhead with AMJ coupler K Cat.6, suitable for Class E <sub>A</sub> Channel	with mounting set

### Bulkheads IP67 Variant 6

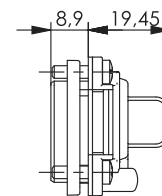
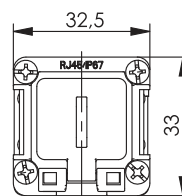
3.7.3

For direct connection to the exterior device housing, Telegärtner offers a bulkhead version with AMJ Modules Cat. 6<sub>A</sub> and AMJ Couplers Cat.6 and Cat.5e. They are optionally available with an installation set which offers professional, time-saving and simple bulkhead installation. The zinc die cast frame, equipped with M3 threaded holes is screwed to the opposite side of

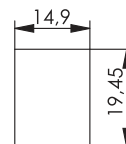
the installation flange on the installation surface (screws are included in the delivery). This creates a tight and secure fit, with protection class IP67. The device can be made operational by simply snapping in the modules required. No tooling is necessary.

### Performance Characteristics

- Variant 6 acc. to IEC 61076-3-106
- connector for Automation Island acc. to IEC 61918
- protection class IP67 when mated with STX V6 RJ45 plug
- non-detachable cover ensures protection class IP67 seal (unmated)
- simple and time-saving assembly with 4 screws
- tool-free mounting (snap-in) of the AMJ Modules and Couplers
- little space required for high packing density
- connection of commercially available RJ45 plugs is possible (IP20 protection)



Montageausschnitt  
faceplate cut



Order no.	Short name	Remarks	Mount. dim.
J00029A0040	STX V6 Bulkhead with mounting set	for AMJ modules/coupler	Z115

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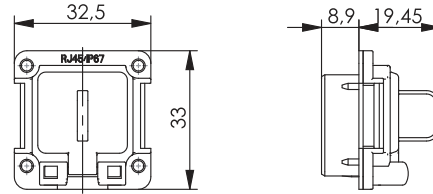
## Components for Field Cabling - M12/RJ45/FO

### 3.7

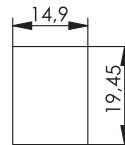
#### Variant 6

#### 3.7.3

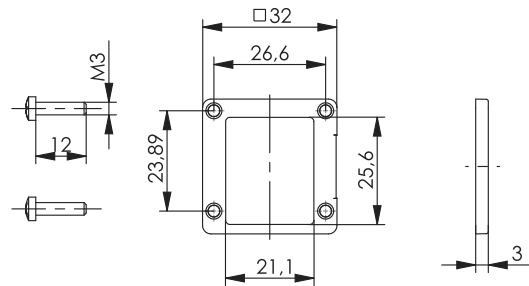
#### Bulkheads IP67 Variant 6



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Order no.	Short name	Remarks	Mount. dim.
J00029A0042	STX V6 Bulkhead without mounting set	for AMJ modules/coupler	Z115

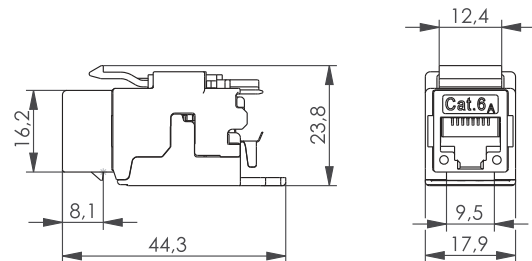


Order no.	Short name	Mount. dim.
J00029A0039	Mounting set for STX V6 Bulkhead (J00029A0042)	Z115

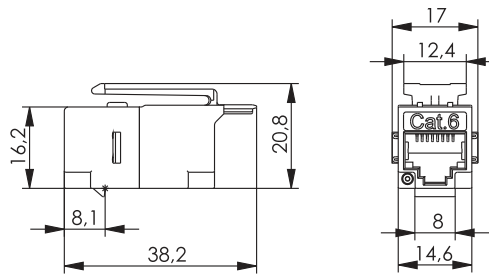
Cat.6<sub>A</sub>

AMJ

REAL-TIME  
RE-EMBEDDED



Order no.	Short name	Remarks	Mount. dim.
J00029K0036	AMJ Module K Cat.6 <sub>A</sub> T568A	tool-free connectivity, suitable for RJ45/11/12 plugs	Z121



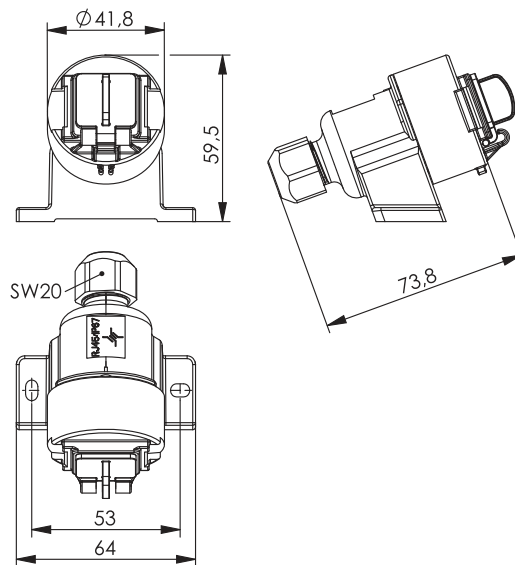
Order no.	Short name	Description	Remarks	Mount. dim.
J00029A0061	AMJ Coupler K Cat.6, f-f	suitable for Class E <sub>A</sub> Channel, 10 Gigabit Ethernet	suitable for RJ45/11/12 plugs	Z121
J00029K0051	AMJ Coupler K Cat.5e, f-f	suitable for Class E Channel, 1 Gigabit Ethernet	suitable for RJ45/11/12 plugs	Z121

## STX V6 Outlet Cat.6

3.7.4

### Performance Characteristics

- Variant 6 acc. to IEC 61076-3-106
- connector for Automation Island acc. to IEC 61918
- 8-way contact for 10 Gigabit-Ethernet
- large surface 360° screen connection
- non-detachable cover ensures protection class IP67 seal (unmated)
- easily opened, re-usable modules
- fire rating UL94 V0
- mating face mountable in two directions set at 90° to each other
- can be used together with standard RJ45 plugs (no IP protection)



Order no.	Short name	Remarks
J00020A0436	STX V6 surface mounting outlet Cat.6 <sub>A</sub>	Fire rating UL94 V0

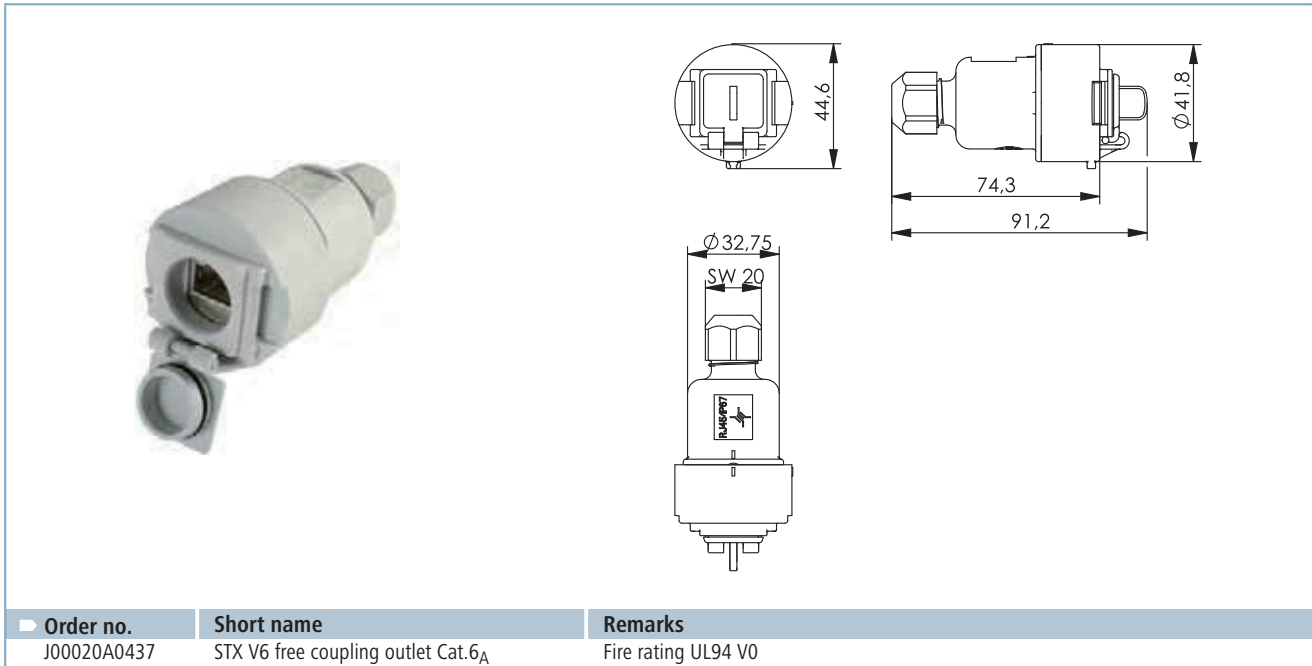
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## 3.7

## Variant 6

## 3.7.4

## STX V6 Outlet Cat.6



## 3.7.5

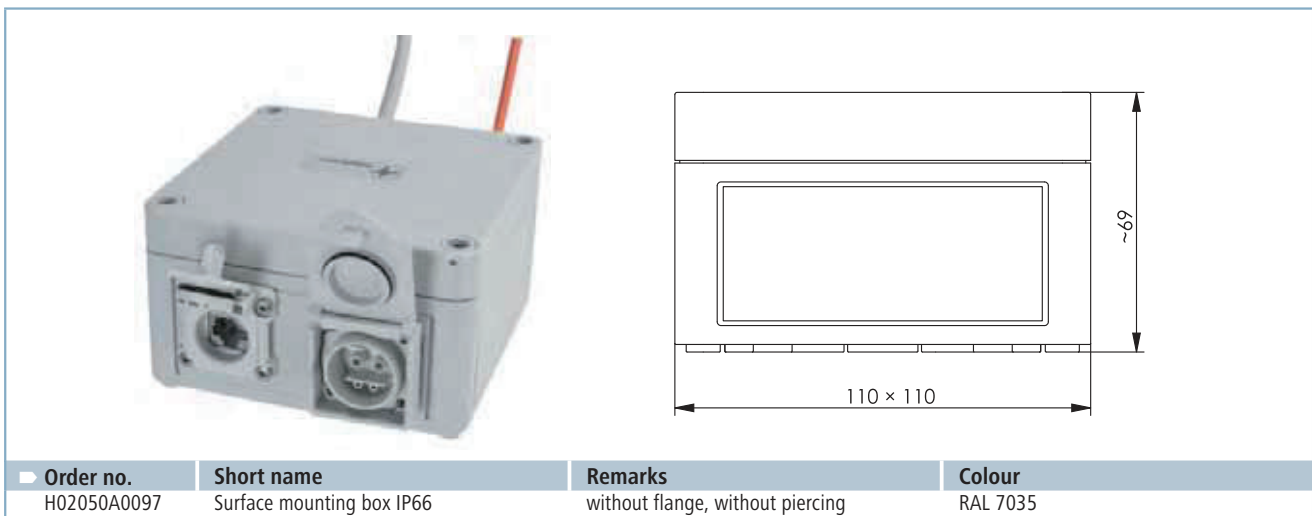
## RJ45 and FO Outlet IP66 Surface Mounting

The specification of a Telecommunications Outlet (TO) is based on ISO/IEC 24702, for installation of data outlets in areas subject to extreme ambient stresses due to temperature, dust, moisture or splashing water. The IP66 surface-mount housing from Telegärtner is used to connect devices or complete

automation islands; 2 FO or RJ45 outlets can be placed in the unbreakable housing (colour: RAL 7035, protection class IP66), allowing installation direct in manufacturing environments. Its compact size of 110x110x69 mm also permits space-saving installations.

### Performance Characteristics

- Degree of Protection IP66
- alternatively 1 or 2 connections with SC Duplex adaptors or RJ45 Modules/Adaptors
- M20 cable gland
- connection of 2x SC-Simplex or 1x SC-RJ connector resp. RJ45 IP67 or RJ45 IP20 plug
- Little space required for surface mounting, dimensions: 110x110x69 mm



To simplify enquiry and ordering procedures for IP66 surface-mount outlets, order specifications are available from Telegärtner as print masters or Excel tables. They can be used to produce any desired combination with RJ45 and/or FO inserts. These order specifications can be downloaded under the menu option „Downloads and Tools“ on our homepage [www.telegaertner.com](http://www.telegaertner.com).



Order no.	Description	Remarks
H01012A0050	cable gland M20 for cable dia. 7 - 13.5 mm	Polyamide PA6, grey

Order no.	Short name
U01010A0011	Punch hole and assembly for mounting flange RJ45 IP67 (without flange)