



Installation Manual



SERIES 400 Panel PC
SERIES 500 Thin Clients
SERIES 600 KVM Systems
Device platform MANTA
ET-xx7 / MT-xx7



THE STRONGEST LINK.

HW-Rev. ET-4x7-*-BT:	01.03.03
HW-Rev. ET-5x7-*-BT:	01.03.03
HW-Rev. ET-5x7-*-P2:	01.03.04
HW-Rev. ET-6x7:	01.03.00
HW-Rev. MT-4x7-*-BT:	01.01.03
HW-Rev. MT-5x7-*-BT:	01.01.03
HW-Rev. MT-5x7-*-P2:	01.01.04
HW-Rev. MT-6x7:	01.01.00

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1 Intended use and location

The ET-/MT-xx7 devices, device platform MANTA (SERIES 400 / 500 / 600) have been developed specially for process automation and for GMP and cleanroom applications. Suitable for hazardous areas zone 1, 21, 2 and 22 (depending on type), these devices are ideal for a great number of applications.

2 Warning

2.1 Touch operation

Incorrect / phantom operation:

Incorrect operation of the touch screen may result in accidental functions and errors. The device will then be unable to execute functions, may execute them incorrectly or in a way not intended.

- Do not realise safety-relevant functions via the touch screen
- Avoid accidental multi-touches
- Do not touch the touch screen across a large area
- Use a touch pen only for the capacitive touch screen
- Before operating the device, thoroughly acquaint yourself with the multi-touch functions of the operating system and the application
- Switch off the device for cleaning and maintenance

Conductive liquids on the touch screen can result in incorrect or phantom operations. This applies in particular to salt water.

- Avoid contamination of the touch screen surface with salt water

Protect the device against rain, snow and splashes, since excessive amounts of standing or running water will disrupt operation and may cause erratic cursor movement.

This protection can be achieved by using a canopy or some other protective roof-type construction. Offshore, strong winds, saltwater and rain will have to also be taken into consideration.

Touch screen damage:

Only touch the touch screen with your finger or a suitable pen.

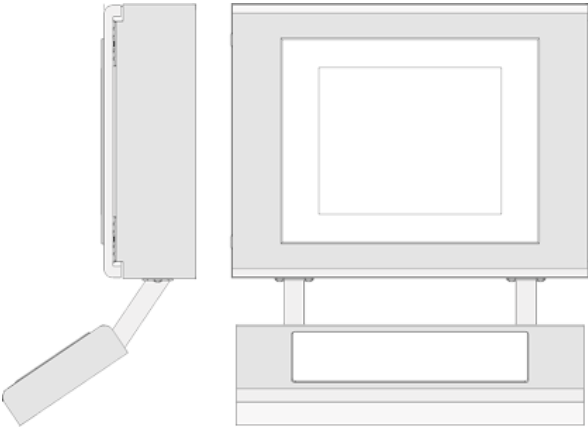
- Do not touch the screen with pointed or sharp instruments as this may damage the touch screen, substantially reduce its service life or result in total black-out

Foil membrane blistering / air-pockets:

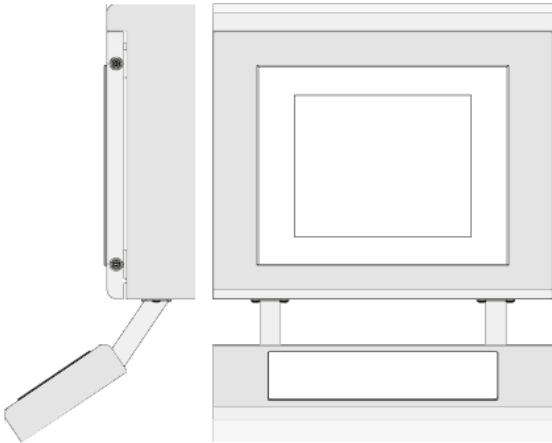
Extreme ambient conditions (high humidity, temperature) may, in rare cases, result in blistering or air-pockets underneath the foil touch screen. This does not impede functionality and is a purely optical phenomenon.

3 Enclosure types

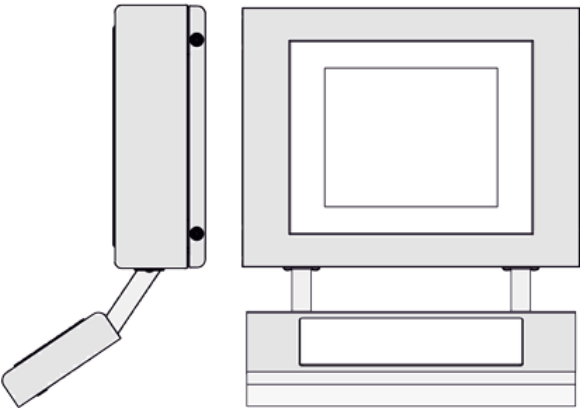
HSG-xx7-VxA-FR
with front door as standard



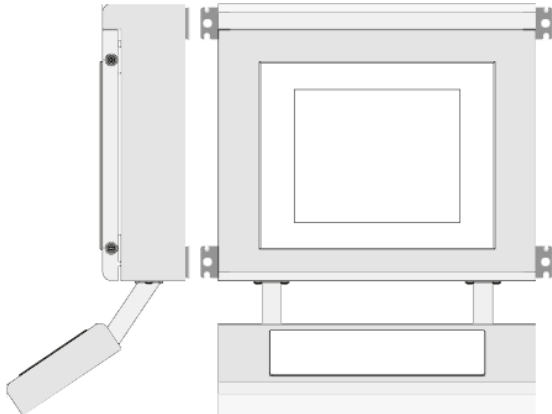
HSG-xx7-VxA-CFR
with front door for cleanroom



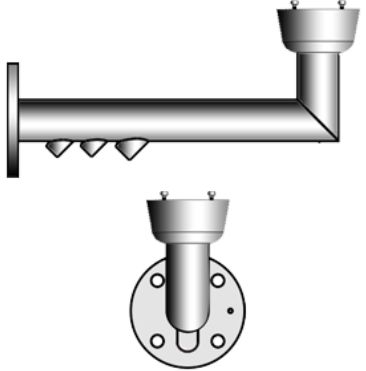
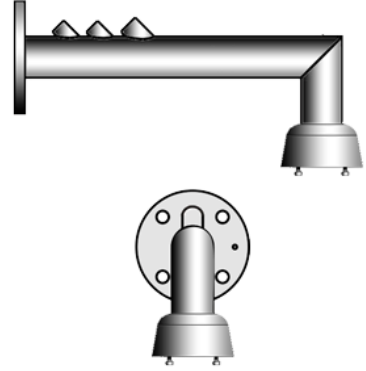
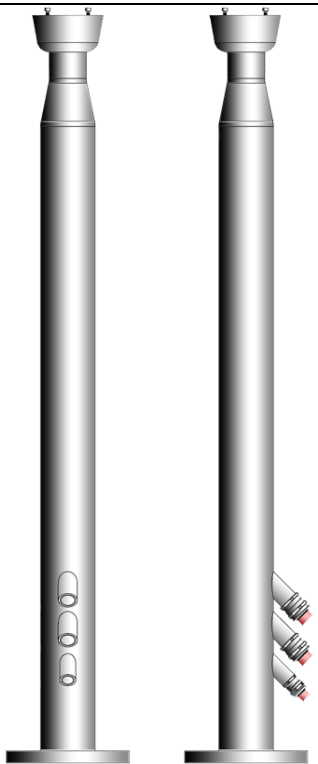
HSG-xx7-VxA-BD
with rear door (Backdoor)



HSG-xx7-VxA-FR / HSG-xx7-VxA-CFR
for wall mounting





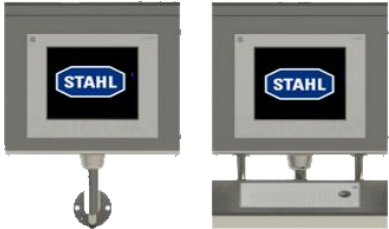

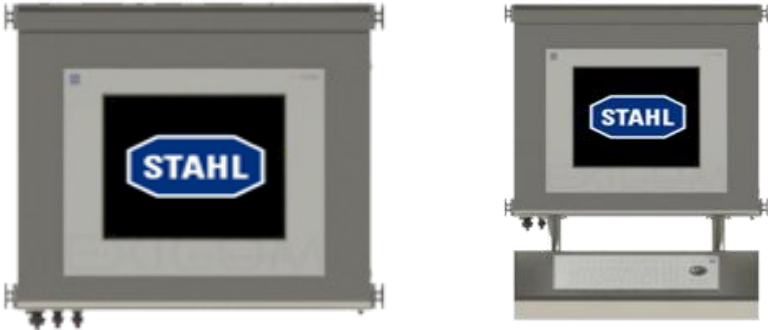
4 Versions mounted on stand or elbow

mounted upright on elbow	mounted hanging from elbow
	
MPFL stand	
	

5 Mounting

In regards of different applications and ambient conditions we recommend following installation types:











5.1 Mounting options

Mounted on stand	Ceiling mounting
	
Elbow upright mounting	Mounted hanging from elbow
	
Wall mounting	
	

5.2 Recommended mounting type

The following recommended mounting types are the result of trying out many different types over the years. Please follow these recommendations to ensure the optimum mounting type for your device.

Before deciding on how to mount the device you need to check the vibration and shock conditions. We cannot accept any responsibility if you select an unsuitable mounting type that results in damage or failure of the device.

Conditions present at the point of installation	Mounting / installation type		Recommendation
No vibration and no shocks		Mounting on MPFL stand, with / without external keyboard	No restriction
		Ceiling mounting with MPFL stand with / without external keyboard	No restriction
		Mounted on elbow standing with / without external keyboard	No restriction
		Mounted on elbow hanging with / without external keyboard	No restriction
		Wall mounting with / without external keyboard	No restriction
Vibration sinusoidal acc. to IEC 60068-2-6 5 ... 13.2 Hz: ±1 mm 13.2 ... 100 Hz: ±0.7 g Change cycle 1 oct/min X, Y, Z axes Dwell Test: 71.7 to 79.2 Hz: ±0.7 g 120 min. Change cycle 1 oct/min X axis 30 Hz: ±0.7 g 90 min. Change cycle 1 oct/min Y, Z axes		Mounting on stand with / without external keyboard	Not recommended
		Ceiling mounting with MPFL stand, with / without external keyboard	Not recommended
		Mounted on elbow standing with / without external keyboard	Not recommended
		Mounted on elbow hanging, with / without external keyboard	Not recommended
		Wall mounting with / without external keyboard	No restriction

5.3 Assembly notes

- The tightening torques for the cable glands depend on the cables and wires used. This means the user has to determine the required torques.
- The stand / wall bracket must be mounted with at least 4 fastening points. The type of wall fixing used must be suitable for the wall material.

6 Tools



- 1x side cutter
- 1x wire stripping knife
- 1x wire stripper
- 1x spanner AF 10
- 1x spanner AF 13
- 1x spanner AF 14
- 1x spanner AF 24
- 1x spanner AF 30
- 1x Phillips screwdriver size 1
- 1x Phillips screwdriver size 2
- 1x flat-bladed screwdriver 2.5 mm
- 1x Allen key 5 mm

! NOTE

Mounting the stand or wall-mounting will require additional tools not mentioned here.

7 Mechanical Installation

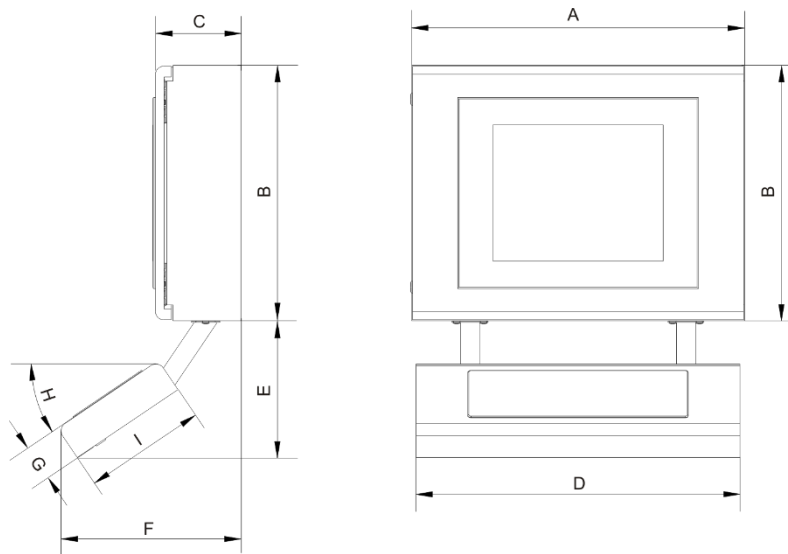


Mount the devices all the time with 2 persons together !

7.1 Dimensions

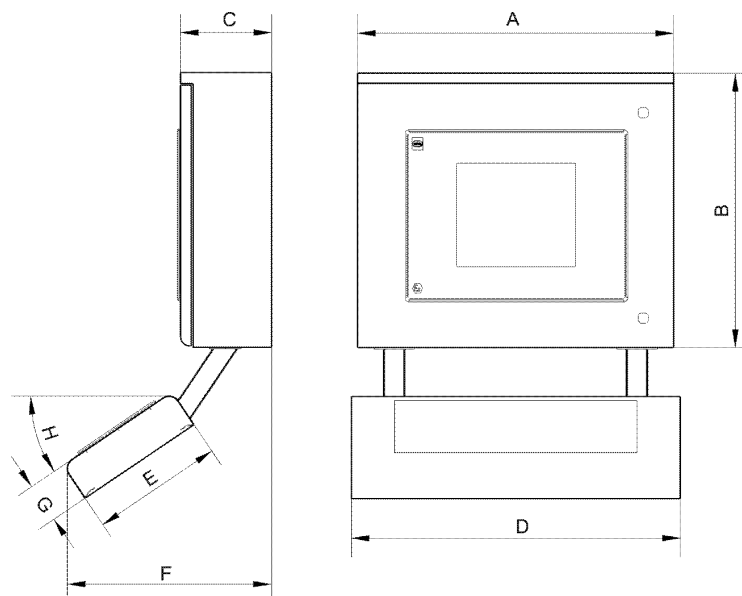
Dimensions in mm.

HSG-xx7-VxA-FR



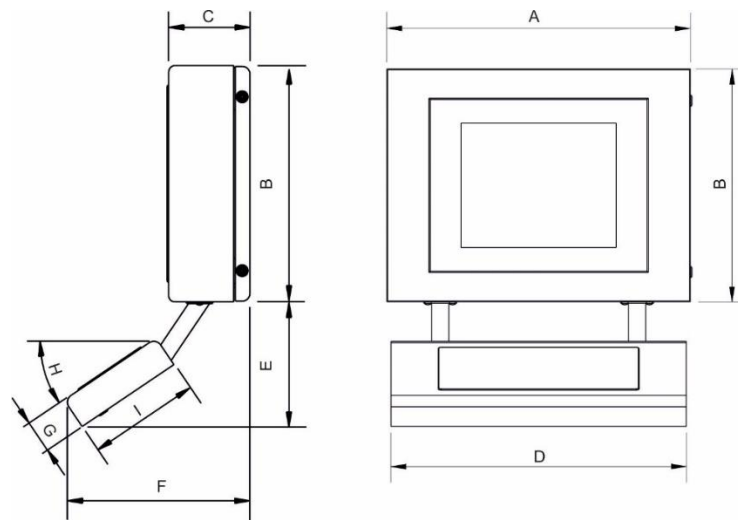
A	B	C	D	E	F	G	H	I
740	568	190	720	304	400	78	34°	270

HSG-xx7-VxA-CFR



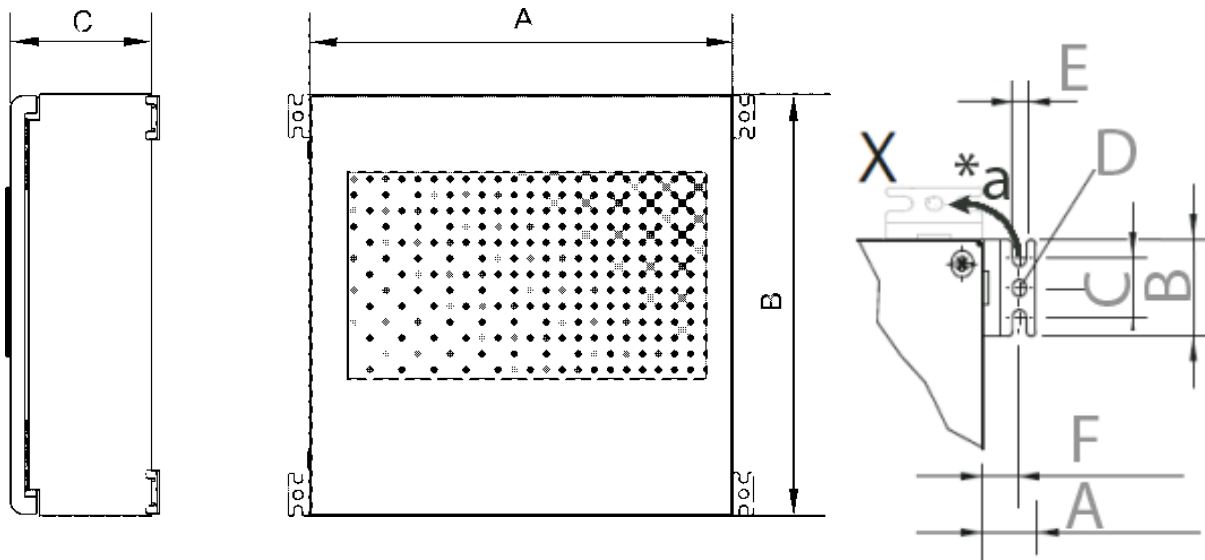
A	B	C	D	E	F	G	H	I
720	627	190	720	304	406	78	34°	270

HSG-xx7-VxA-BD




A	B	C	D	E	F	G	H	I
740	568	195	720	304	442	78	34°	270

HSG-xx7-VxA-*-W



X	Mounting tongues for wall mounting
*a	Alternative mounting position of the mounting tongues

 NOTICE	Enclosure types FR and CFR are used for wall mounting. The dimensions of these enclosures are listed in the above tables.
	Choose suitable mounting screws, rawplugs and bolts depending on the actual local requirements and possibilities.

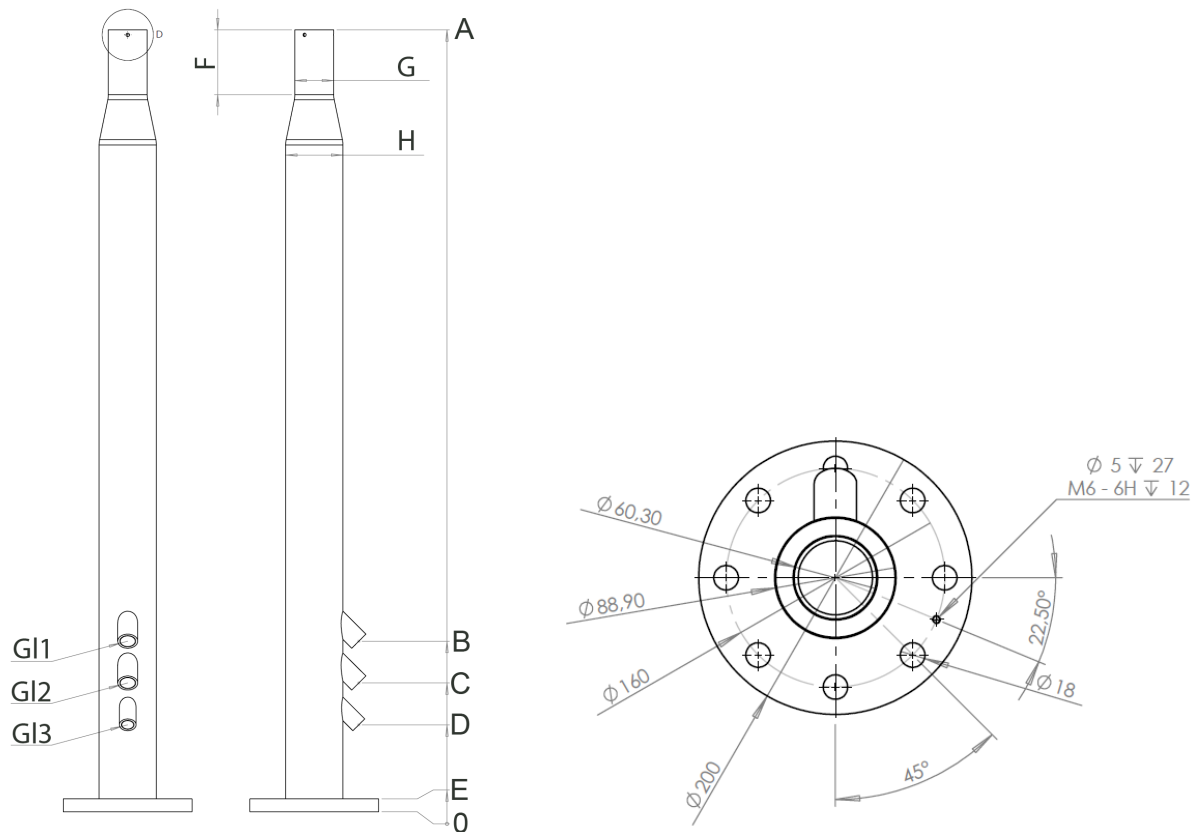
Dimensions mounting tongue	A	B	C	D	E	F
		30	55	35	10,5	10,5

7.2 Mounted on stand

7.2.1 View



7.2.2 MPFL Stand



All dimensions in mm.

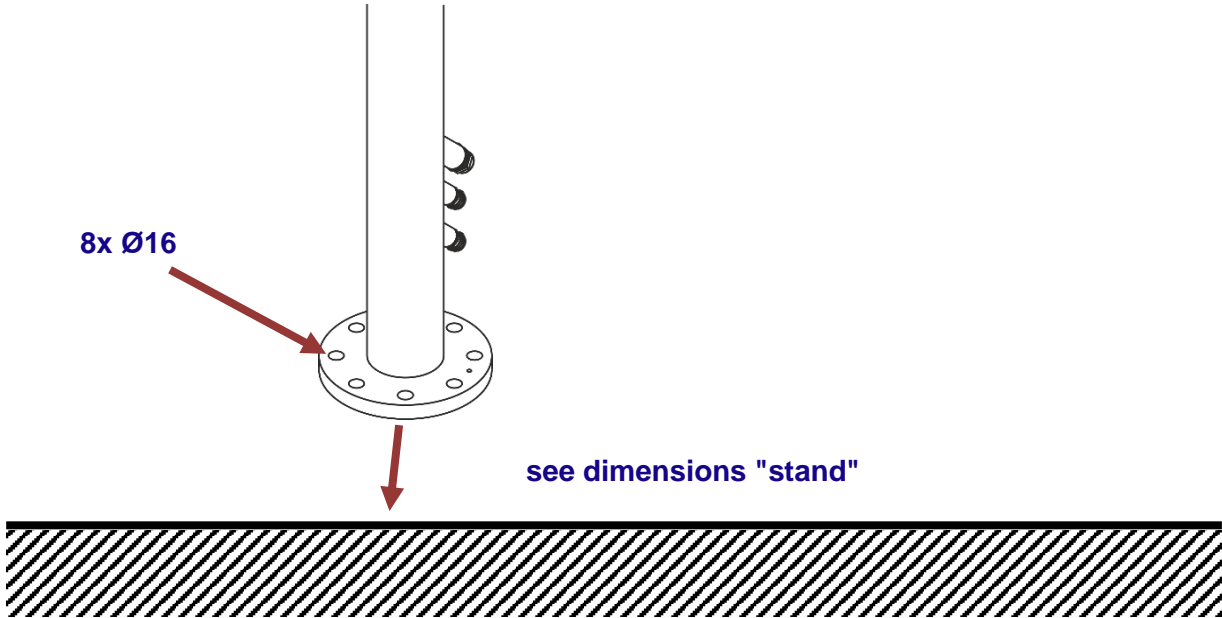
Stand							
A	B	C	D	E	F	G	H
1216	265	200	135	20	101	Ø 60.3	Ø 88.9

Cable glands		
G1	G2	G3
M25 x 1.5	M25 x 1.5	M20 x 1.5

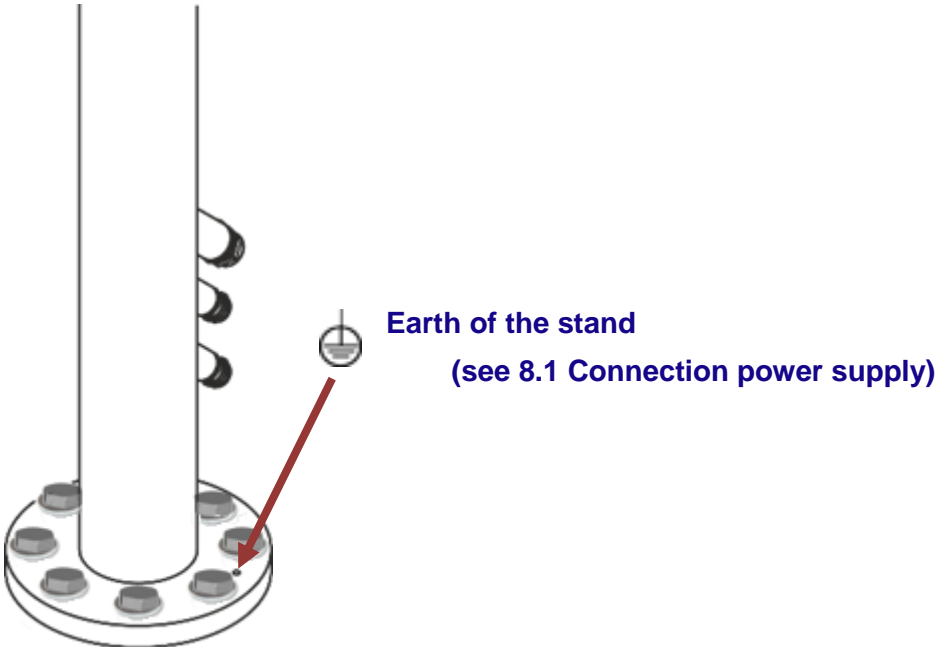
7.2.3 Mounting – Step by step

1

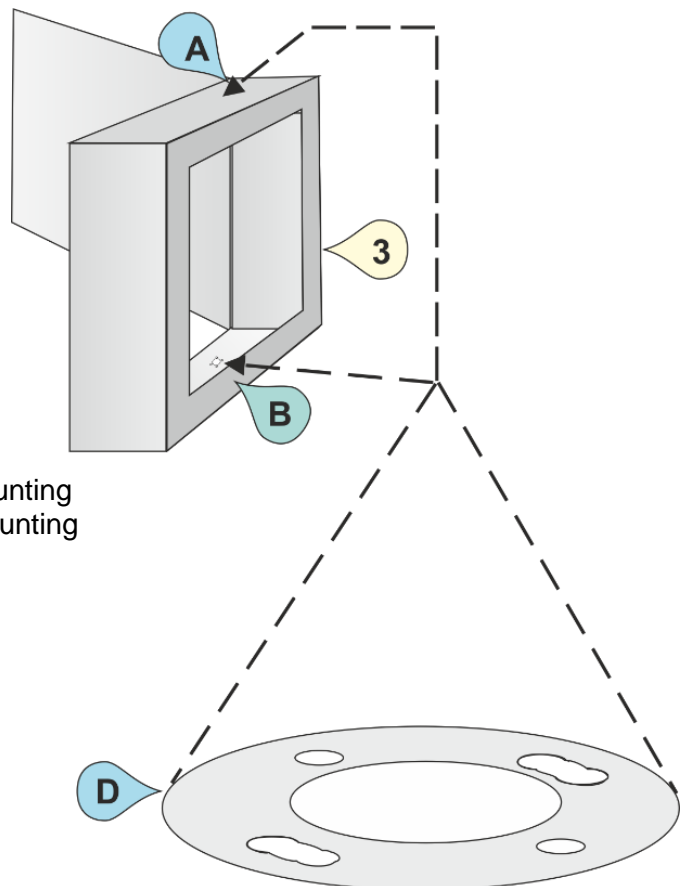
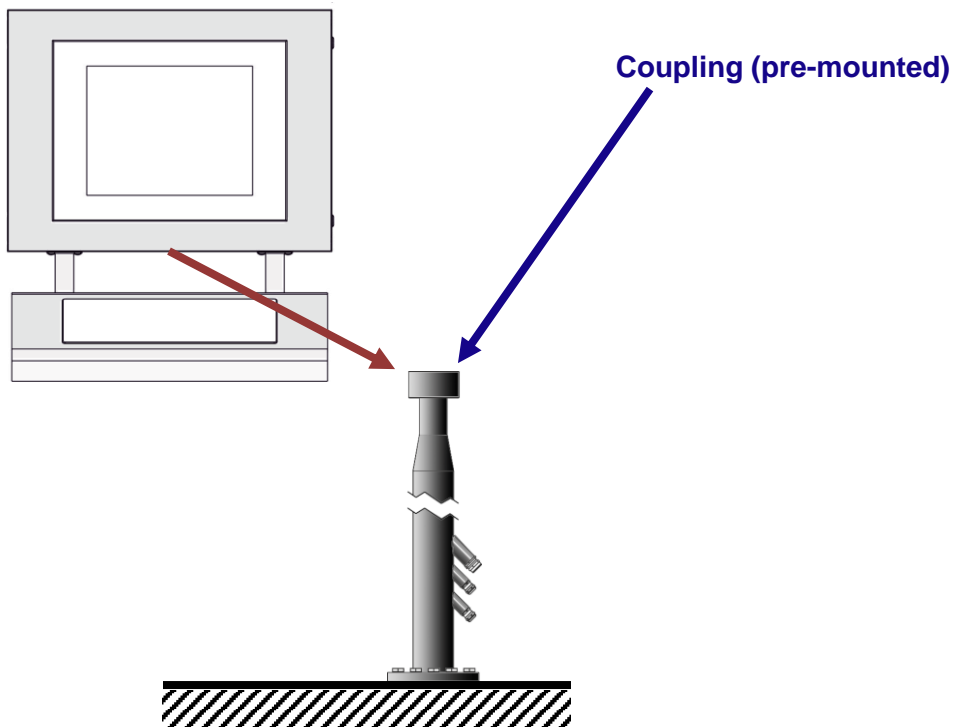
NOTE Choose suitable mounting screws, rawplugs and bolts depending on the actual local requirements and possibilities.



2



3

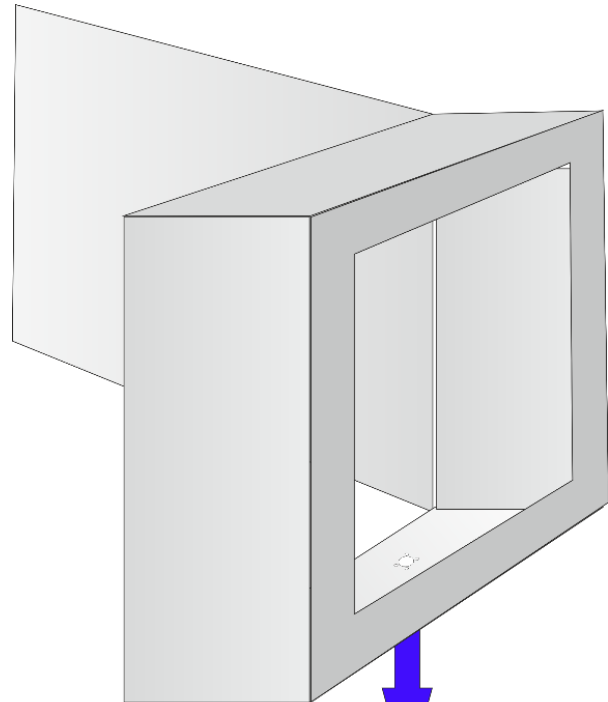
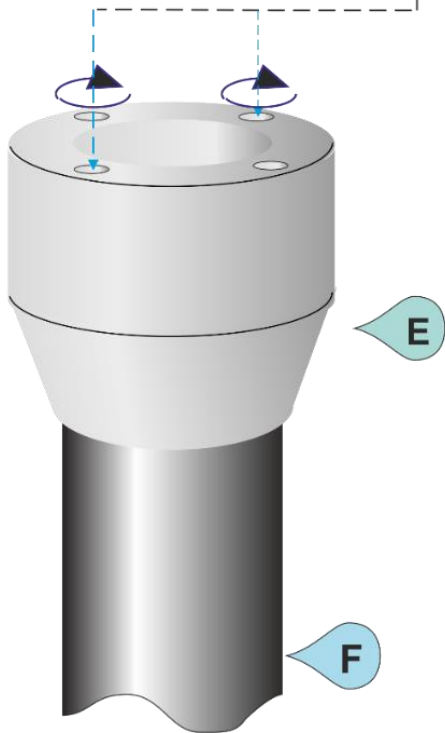
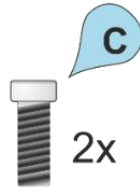


- A** mounting holes, hanging mounting
- B** mounting holes, standing mounting
- 3** Operator interface enclosure

D Mounting holes in the enclosure of the operator interface

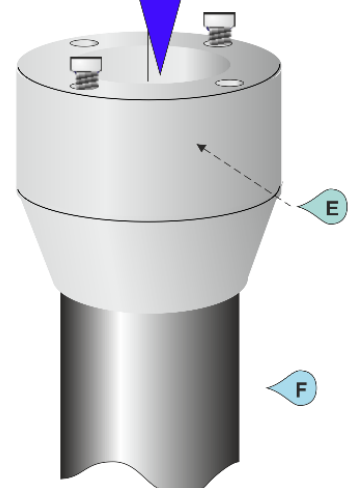
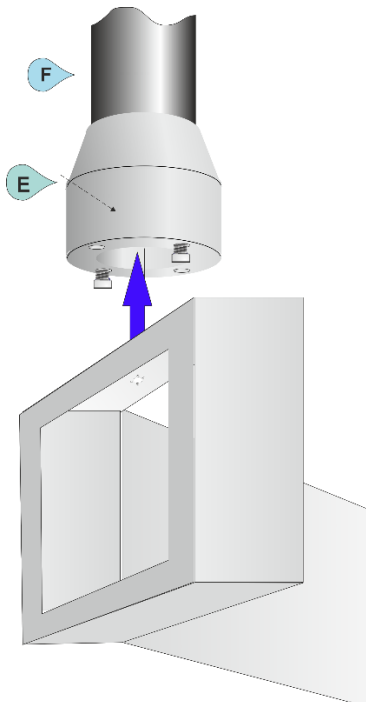
4

- C M6 allen screw
- E Mounting coupling
- F Stand / wall bracket

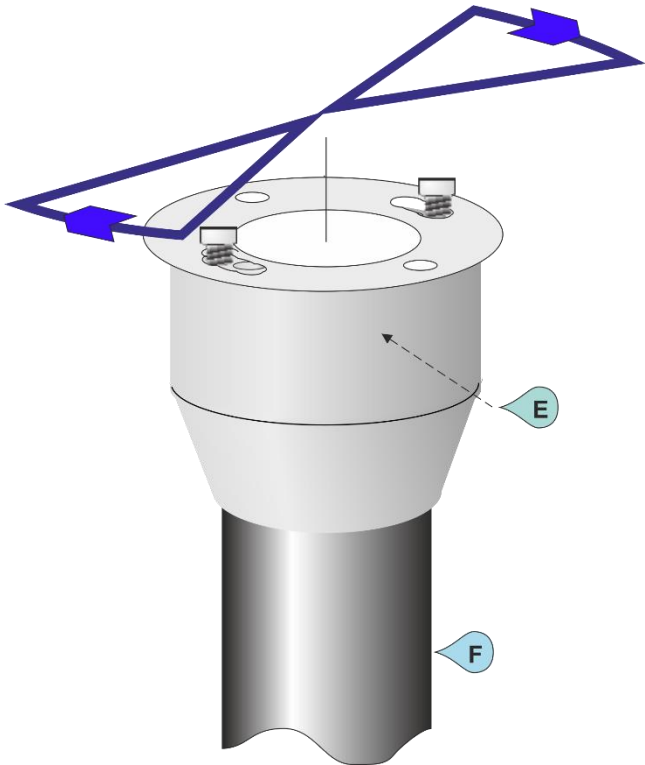


or

5

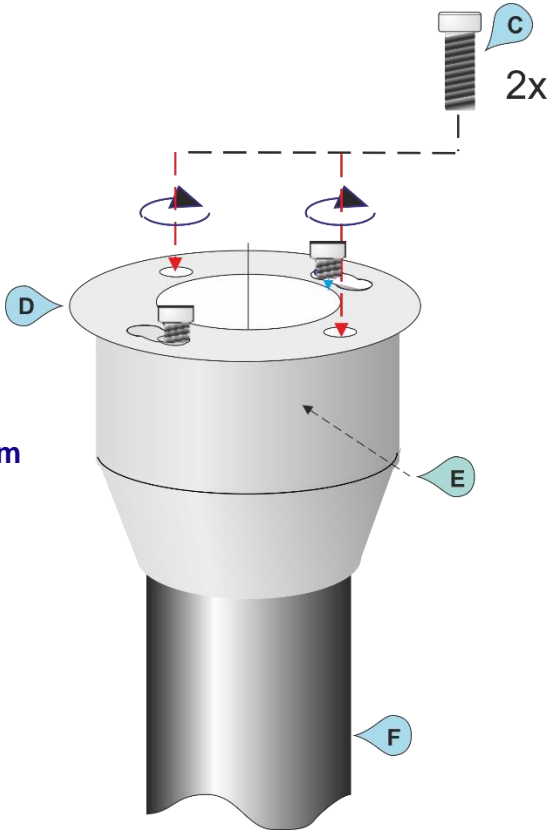


6

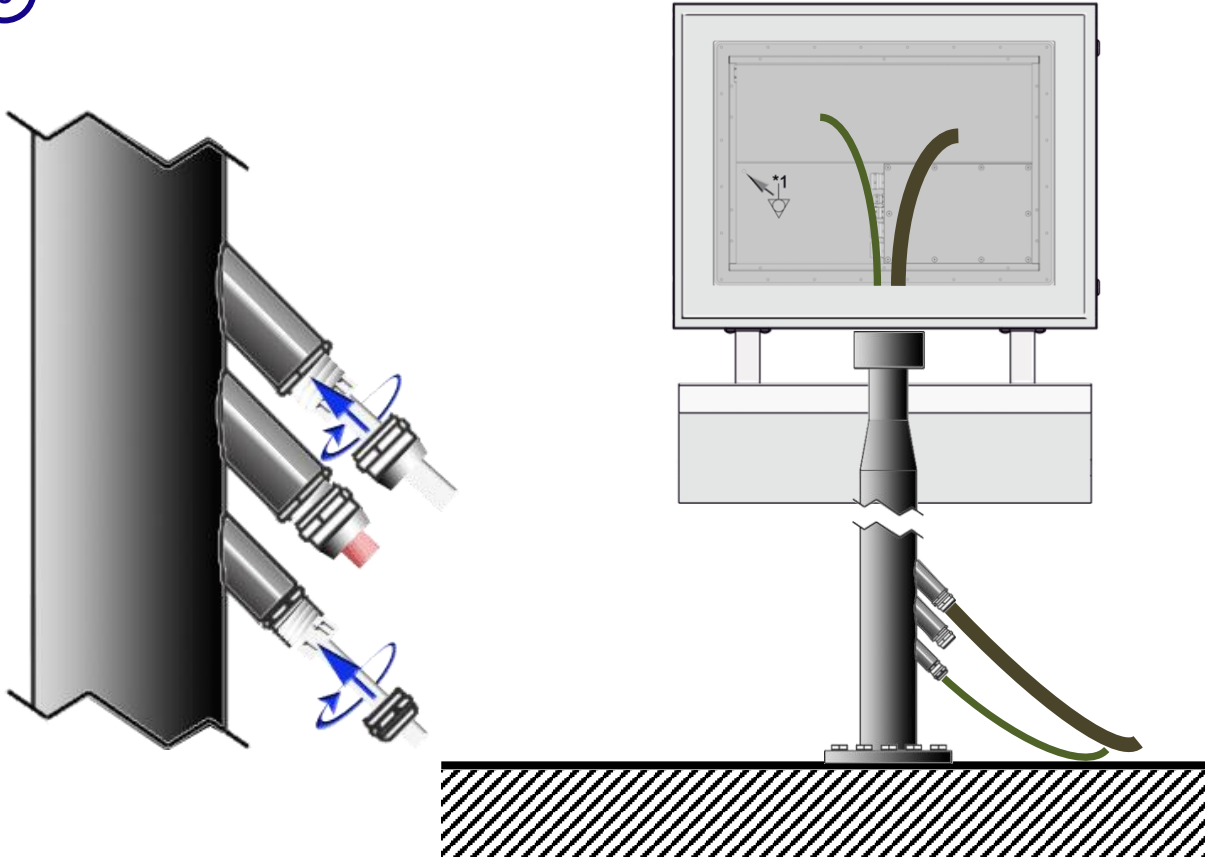


7

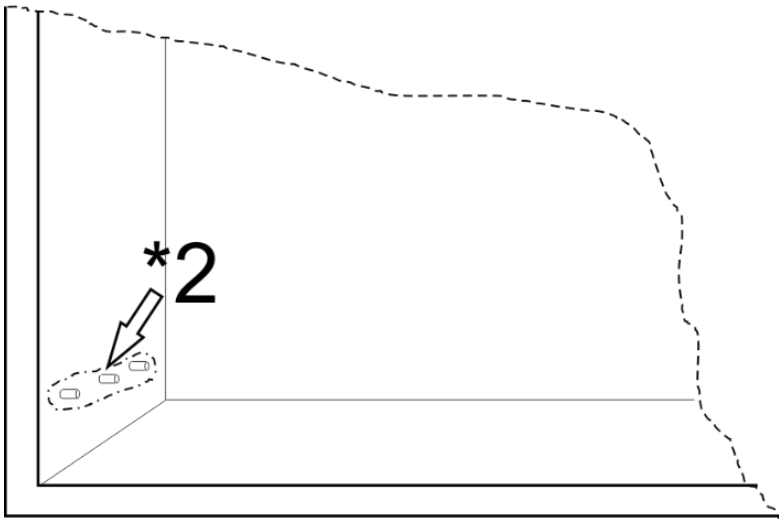
tighten all 4 screws with a torque of 10 Nm



8



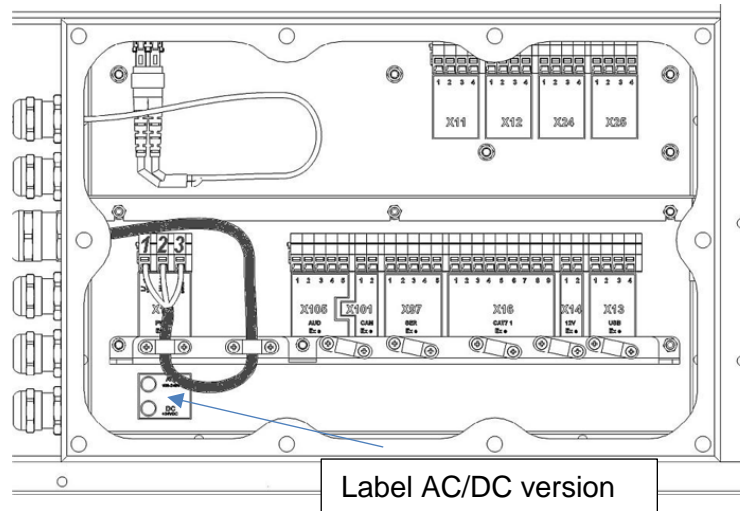
***1** Connection bolt for equipotential bonding. Already wired to the multiple connection (*2) in operator stations (OS).



8 Electrical Installation

8.1 Connection of the X10 power supply

9



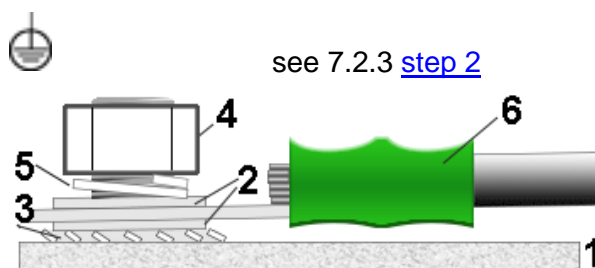
Version	Pin	Signal
DC	1	Power supply +24 VDC
	2	Power supply 0 VDC
	3	Equipotential bonding / enclosure
AC	1	Phase conductor (L) 100 - 240 VAC
	2	Neutral conductor (N) 100 - 240 VAC
	3	Protective conductor / enclosure

WARNING

Connect only AC devices (look at device label) to 100 - 240 VAC mains !

8.2 Earthing of stand

10

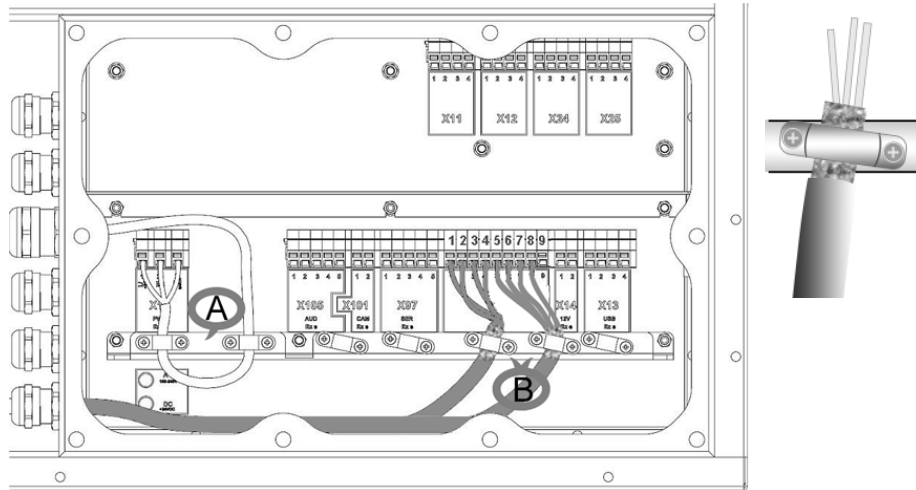






- 1 = Stand mounting plate
- 2 = Washer 2x
- 3 = Toothed washer
- 4 = Hexagon screw M6x16
- 5 = Split washer
- 6 = Cable lug with eyelet

8.3 Ethernet interface X16

8.3.1 TX or 2TX with SERIES 400 / 500

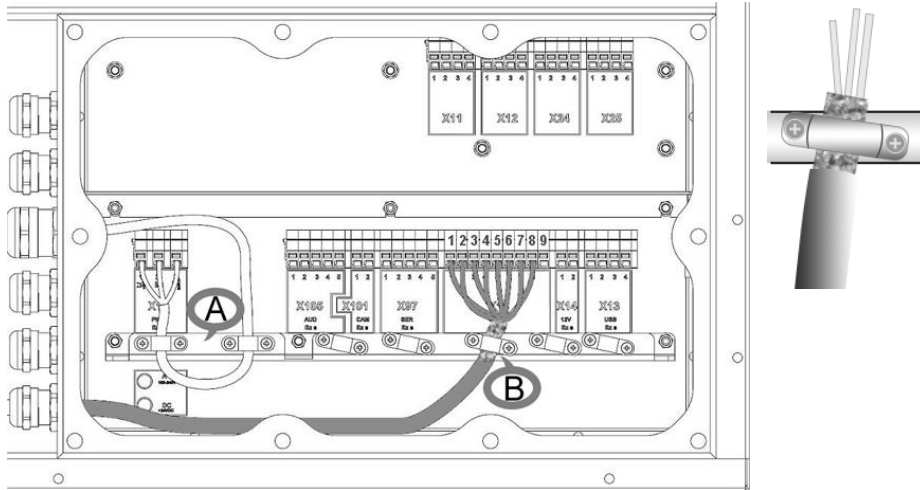
11







Pin	Signal	Colour	Note	Connection
1	TRD0+	White / Orange	twist 	100Base-TX interface
2	TRD0-	Orange		
3	TRD1+	White / Green		
4	TRD1-	Green		
5	TRD2+	White / Orange		2nd 100Base-TX interface (only for option 2TX)
6	TRD2-	Orange		
7	TRD3+	White / Green		
8	TDR3-	Green		
9	SHLD	Screen	Connect screen separately to the screen connection rail (see diagram)	

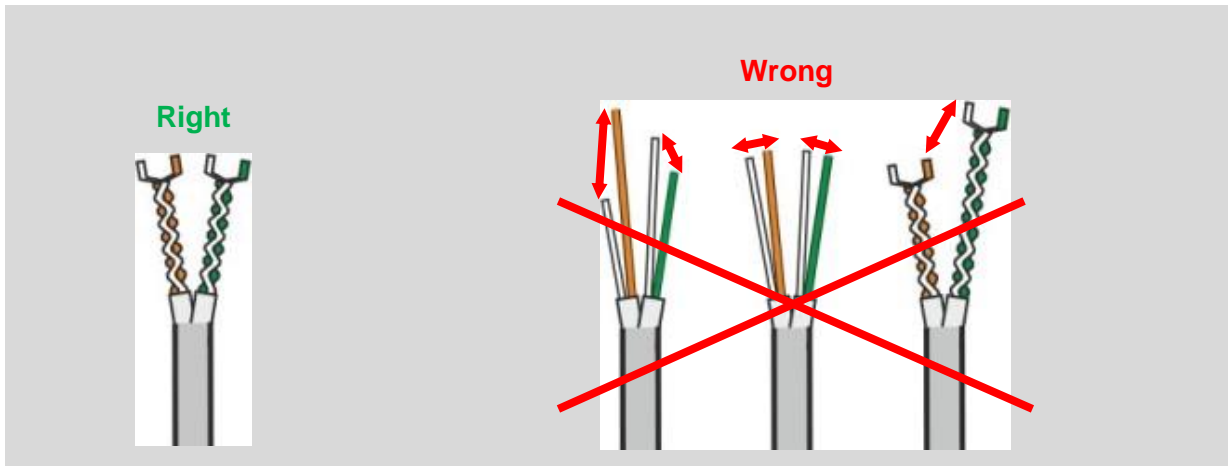
8.3.2 TX with SERIES 600

12



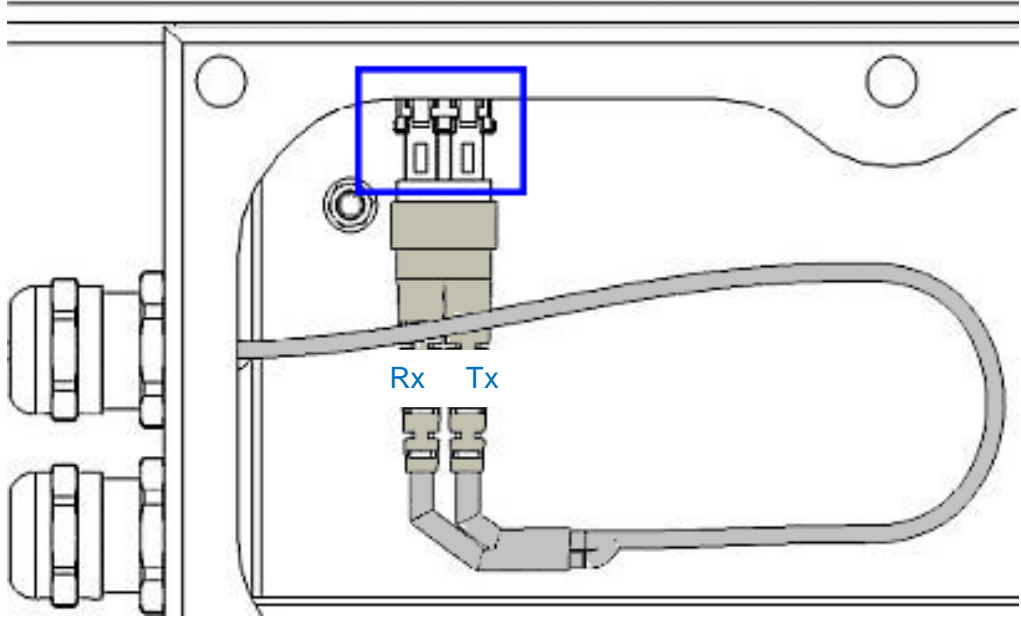
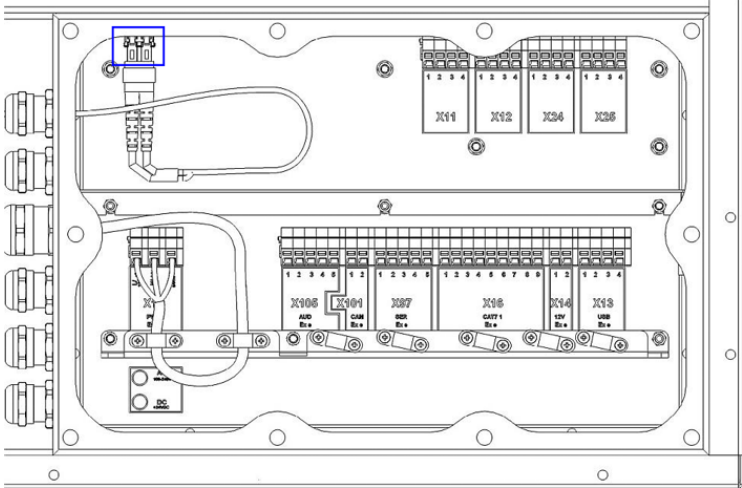
Pin	Signal	Colour	Note	Connection
1	TRD0+	White / Orange	twist 	Ethernet interface
2	TRD0-	Orange		
3	TRD1+	White / Green		
4	TRD1-	Green		
5	TRD2+	White / Blue		
6	TRD2-	Blue		
7	TRD3+	White / Brown		
8	TDR3-	Brown		
9	SHLD	Screen	Connect screen to the screen connection rail (see diagram)	

8.3.2.1 Cable adaptation



8.4 Ethernet optical fibre interface

13



9 Release notes

The chapter entitled "Release Notes" contains all the changes made in every version of the Instructions.

Version 01.00.00

- First edition

Version 01.00.01

- Correction of version number in section "Release Notes"
- Changing HW-Rev. at xT-4x7-*-BT and xT-5x7-*-BT at cover
- Changing picture at cover
- Correction data and content according to enclosure for wall mounting
- Text-, layout- and formal corrections

Version 01.00.02

- Changing HW-Rev. at xT-4x7-*-BT and xT-5x7-*-BT at cover
- Addition of HW-Rev. for xT-5x7-*-P2 devices at cover
- Correction pin colours 4 - 8 for "TX with SERIES 600"
- Formal changes

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