Wireless ✕

User Manual

BARTEC

CONTENTS

TERMS AND CONDITIONS

GENERAL TERMS AND CONDITIONS

Please find the general terms and conditions at:
https://www.bartec.de/en/terms/TERMS_BARTEC_Group.pdf

WARRANTY SERVICE OPTIONS

Before contacting BARTEC PIXAVI, please try the following options:

1. Access https://www.pixavi.com/support-forum/ and our FAQ page for troubleshooting advice and directions on running hardware diagnostics.

2. Consult the user manual which is included in your order. If you need additional assistance, please use one of the following support options to contact BARTEC or our authorized BARTEC Sales offices.

3. Online, chat and other forms of remote support may be available. Contact information is available at https://www.pixavi.com/support-forum/

4. Telephone support requests: Please contact your local BARTEC Sales Office.

INTRO

The Wireless X is nothing short of a revolution within wireless equipment in hazardous areas. Based on 15 years of experience within wireless equipment and hazardous areas, BARTEC PIXAVI has re-designed the bulky enclosure completely. We designed the smallest, lightest and highest performing solution for wireless equipment ever created for hazardous areas. Based on both clever engineering, material science and state of the art wireless infrastructure, we are now eliminating the need for bulky and heavy enclosures and antennas. The Wireless X is designed to meet the requirements for the harsh environments of the open seas and is also ideal for onshore Petrochemical and Marine applications as well for all kind of industry where an explosive atmosphere may be present.

PRODUCT OVERVIEW

Ex e gasket

Ex e enclosure

Termination interface *

Bracket for earthing and locking

Input/output Ex d bushing *

Input/output Ex d bushing *

Input/output glands

Ex d enclosure

Wireless device

Power supply *

Media converter *

RF transparent dome
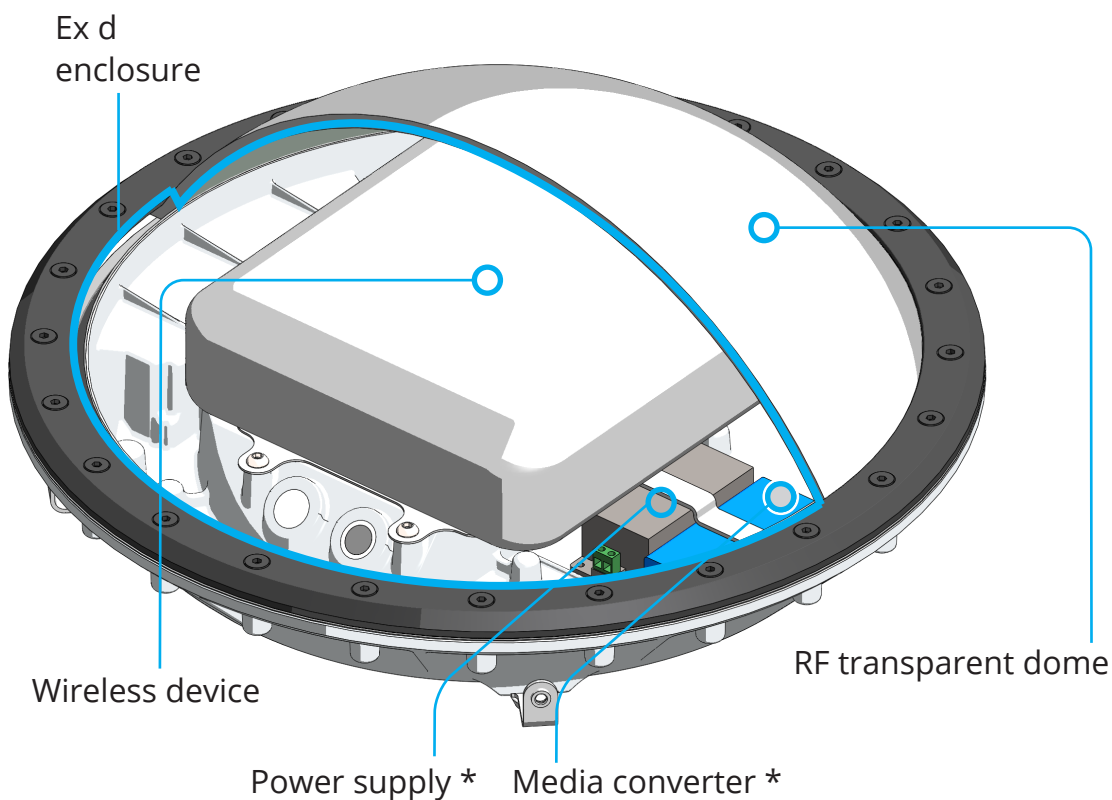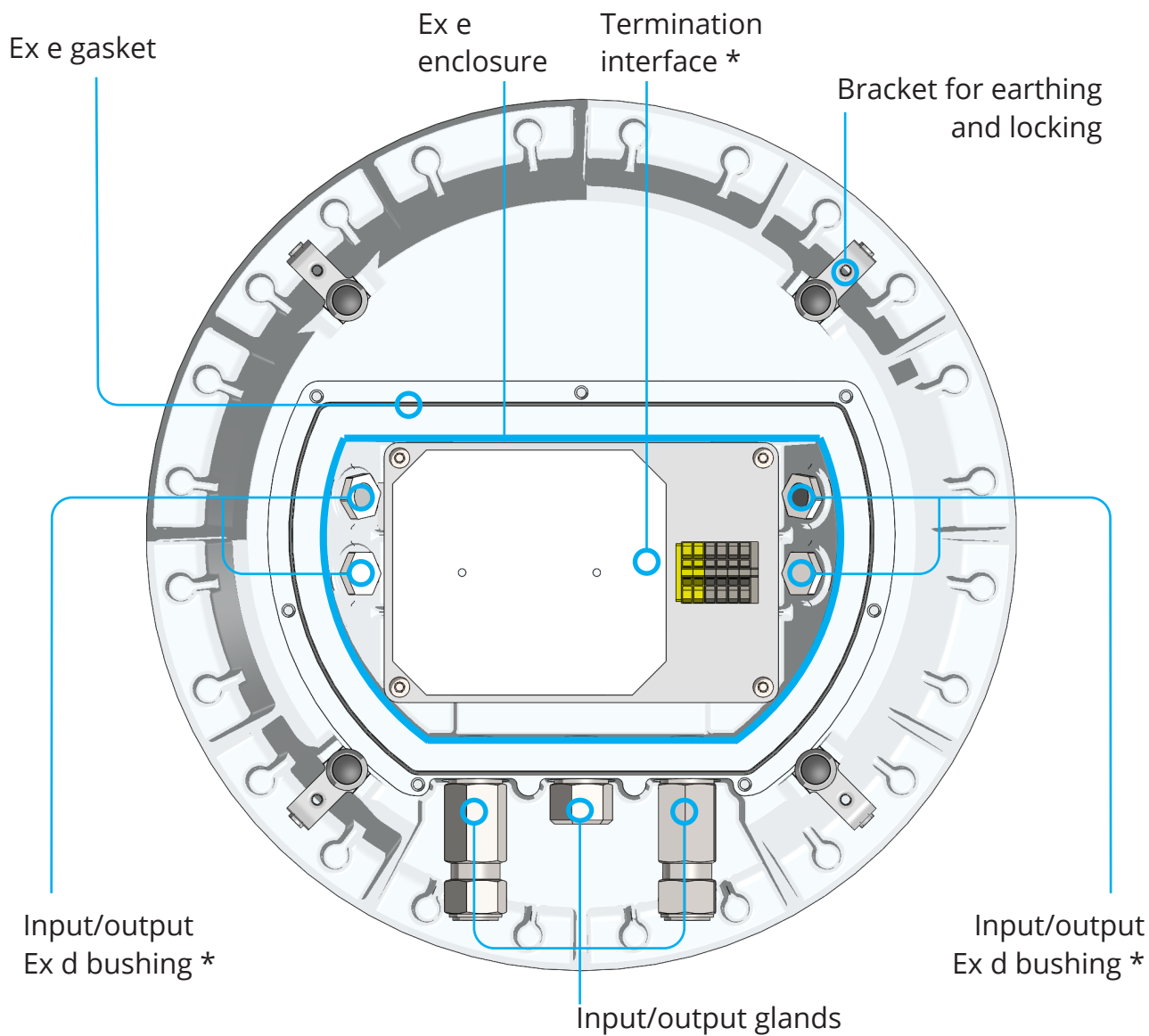
* Configuration dependent

SPECIFICATIONS AND MARKING

Specifications:

Size	Ø x H = 452.5 x 188
Weight	10 kg for Aluminum version (AL) * 25 kg for Stainless steel version (SS) *
Main materials	• Marine grade aluminum and stainless steel (AL) • Marine grade stainless steel (SS) • Dome: RF transparent composite with gelcoat
Ambient temperature	-20 °C ≤ Tamb ≤ 60 °C (AL) -20 °C ≤ Tamb ≤ 56 °C (SS)
Type of protection	Ex d, e
Power Spec	85 - 264 VAC (47-63 Hz), 120 - 370 VDC, Max.10 A (*)

* Depending on configuration and access point inside
(AL) Aluminum version
(SS) Stainless steel version

Marking:
Marking label
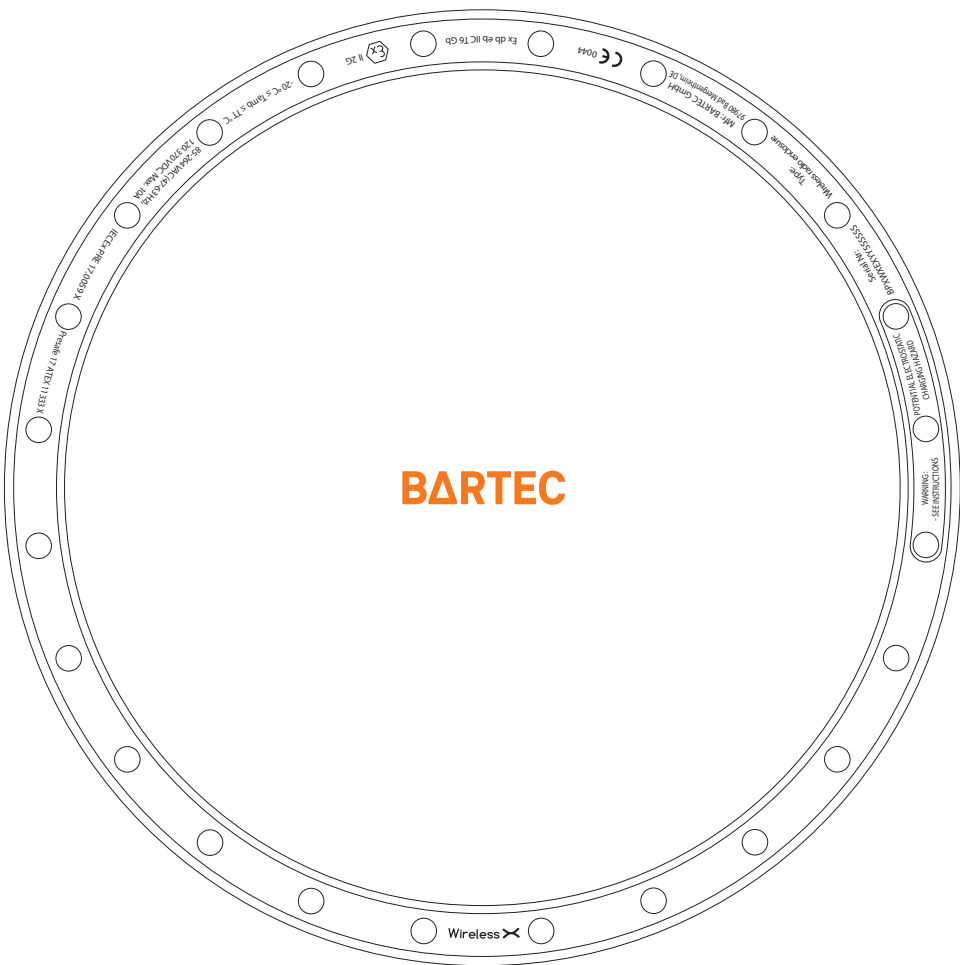
Markings Explained

Wireless radio enclosure	Product type
Ex db eb IIC T6 Gb	Ex = Denotes explosive atmosphere db = Protection concept eb = Protection concept IIC = Sub group T6 = Temperature group Gb = Equipment protection level
-20 °C ≤ Tamb ≤ 56/60 °C	Ambient temperature rating
II 2G	II = Equipment group 2 = ATEX category G = Gas
CE 0044	CE marking and notified body number
Serial Nr	BPX=Manufacturer WX=Wireless X EX=Ex version YY=Year of manufacture SSSSSS= unique serial number
Presafe 17 ATEX 11333 X	ATEX certificate number
IECEx PRE 17.0059 X	IECEx certificate number
Mfr	Identifies the manufacturer name and address
Voltage, Amps	Maximum voltage and Amps rating

* Tamb: Two different versions
Aluminum (AL): -20 °C ≤ Tamb ≤ 60 °C
Stainless steel (SS): -20 °C ≤ Tamb ≤ 56 °C

Special Conditions for Safe Use:

"X" - The instruction indicates all the necessary information to ensure the installation and use minimize the risk from electrostatic discharge.

"X" - Equipment must only be placed in areas with low risk of mechanical danger (ref clause 26.4.2 in EN 60079-0).
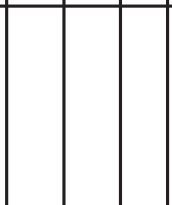
PRODUCT MODELS

BPX-WX-**-***-***-***/...

ID number for main material:
   AL: Aluminum version
   SS: Stainless steel version

ID number for cert rating:
   Zn1: Zone 1 version

ID number for configuration:
   FO1: Splice Fiber / Single Mode
   FO2: Con. based Fiber / Single Mode
   FO3: Splice Fiber / Multi Mode
   FO4: Con. based Fiber / Multi Mode
   ETH: Ethernet cable and power cable
   POE: Ethernet cable with POE
   PWR: Power cable / MESH

ID number for additional cable options
   STN: No additional option
   DSY: Daisy chain

ID numbers for internal hardware
Does not influence explosion protection

ITEM CHECK LIST

Before starting installation, check that all the following items have been included with your Wireless X *. If anything is missing, contact your dealer. Do not use any sharp objects like scissors or knives when opening the box. This may damage the content.

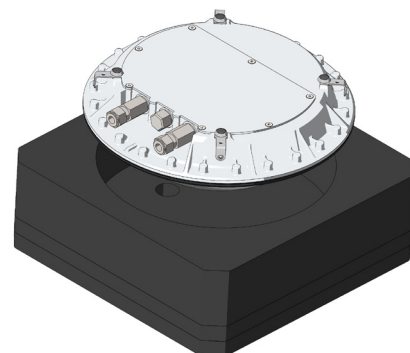*Content may vary depending on configuration.
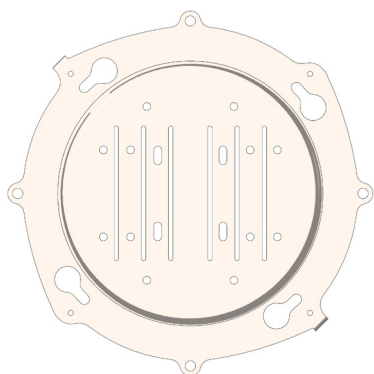

Wireless X

Wireless X enclosure

User manual

Printed user manual

Mounting fixture

Used as stable support when working in the Ex e chamber

Mounting bracket

Stainless steel mounting bracket

Locking hardware

4x M6 fasteners for locking Wireless X to the mounting bracket

PREPARATIONS FOR CABLING AND TERMINATION

⚠️ **Never perform any installation or maintenance work on the Wireless X while it is connected to power.**

⚠️ **Selection, Installation, Maintenance and repair of electrical apparatus for use in potentially explosive atmosphere should be done in accordance with IEC/EN 60079-14/ -17/ -19 . Product installation must be carried out in accordance with any local codes that may apply and should only be carried out by a competent electrical personnel.**

⚠️ **Only use suitable M25x1.5 Atex or IECEx certified compression or barrier glands depending on the cable/installation. Make sure a suitable material/quality is selected to avoid galvanic corrosion with the Wireless X.**

⚠️ **Use a suitable corrosion prohibitor between contact areas of dissimilar metal parts such as Ex e glands - chassis and Ex e lid fasteners - chassis/Ex e lid**

⚠️ **Make sure to use cable ferrules when terminating cables to the Wireless X terminal blocks.**

⚠️ **Make sure the earth cable is min. 0.75mm².**

The Wireless X has 7 main configurations:

The next section contains guides for how to install and terminate the cables for each configuration

FO1 - SPLICE FIBER / SINGLE MODE

Follow the cabling and termination instructions below for correct installation. Lay out the parts, cables and components as shown in the illustrations. It's recommended to use the included dome fixture during the cabling and termination process.
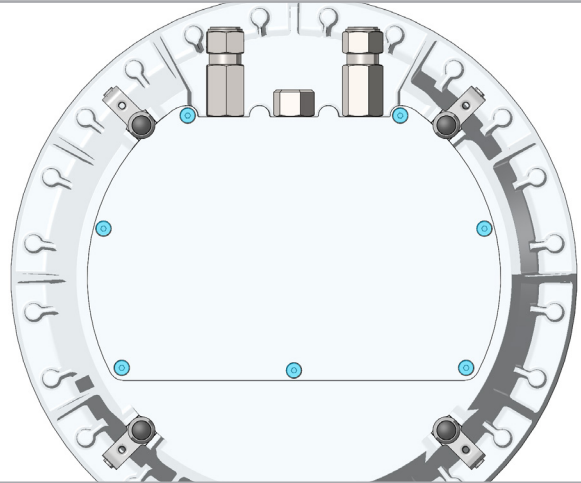
> ⚠️ **Always pay attention to the fiber cables' minimum bend radius of 30 mm. If you bend the fiber cable tighter than this minimum bend radius, you risk breaking the fiber cable.**

**1. Remove Ex e lid and insert cables into glands**

Unscrew the 7 M6x1 fasteners and remove the Ex e lid to access the power and network interfaces.

Follow the mounting instructions of the cable glands thoroughly.

2. Preparing the fiber splice tray

Unscrew the cover protecting the fiber splice tray and also the smaller cover over the slot you plan to splice the fiber cable in.
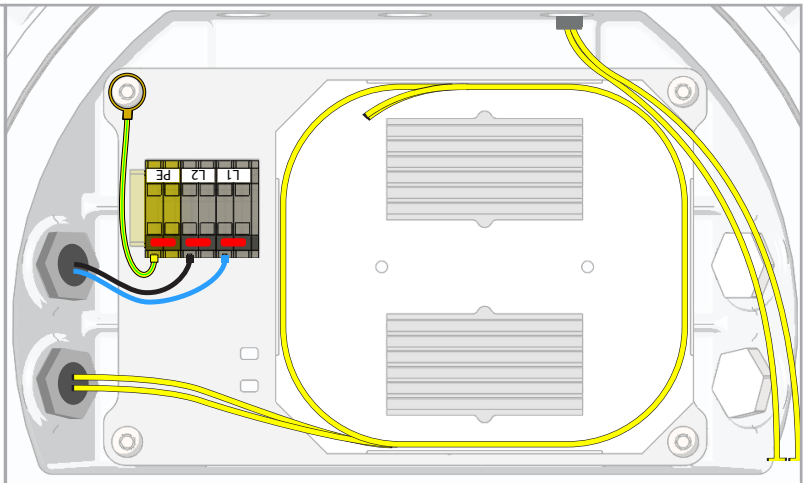
3. Splicing fiber

The RX (receive) cable is marked with a black mark. Make sure to splice RX/TX cables correctly to the LAN fiber equipment. Prepare the fiber - Strip the protective coatings, jackets, tubes, strength members, etc. leaving only the bare fiber showing. MAKE SURE THAT FIBER SURFACE AREA IS CLEAN!
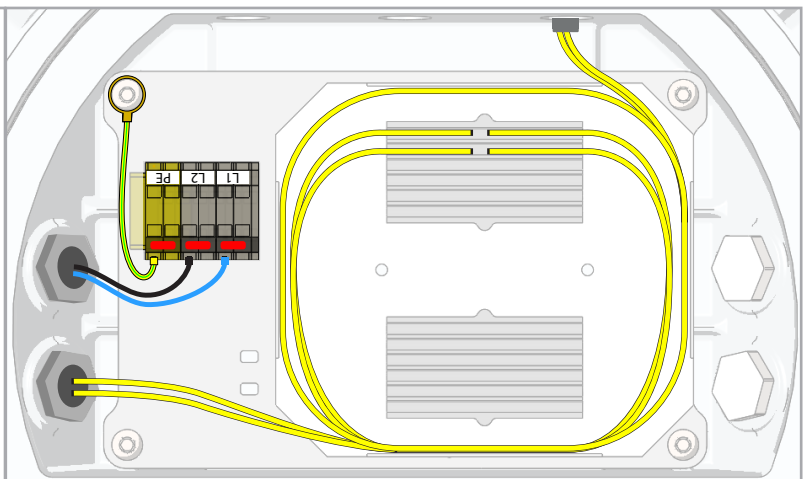
4. Splicing fiber

Once properly aligned, the fusion splicing equipment will use an electrical arc to melt the fibers, permanently welding the two fiber ends together.
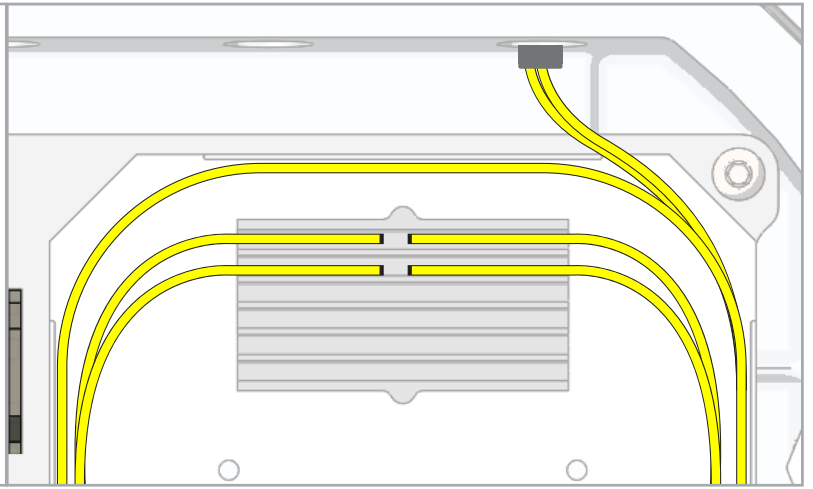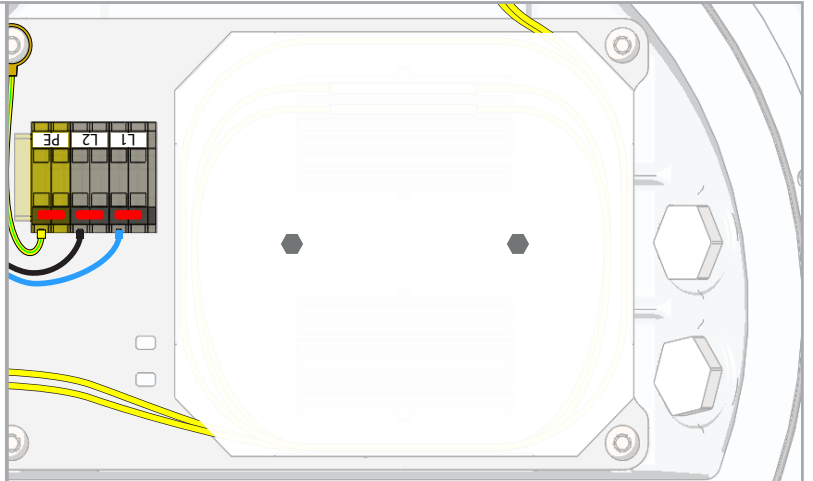
5. Protection of the splice

A typical fusion splice has a tensile strength of between 0.5 and 1.5 lbs. Using heat shrink tubing, silicone gel and/or mechanical crimp protectors will keep the splice protected from outside elements and breakage.
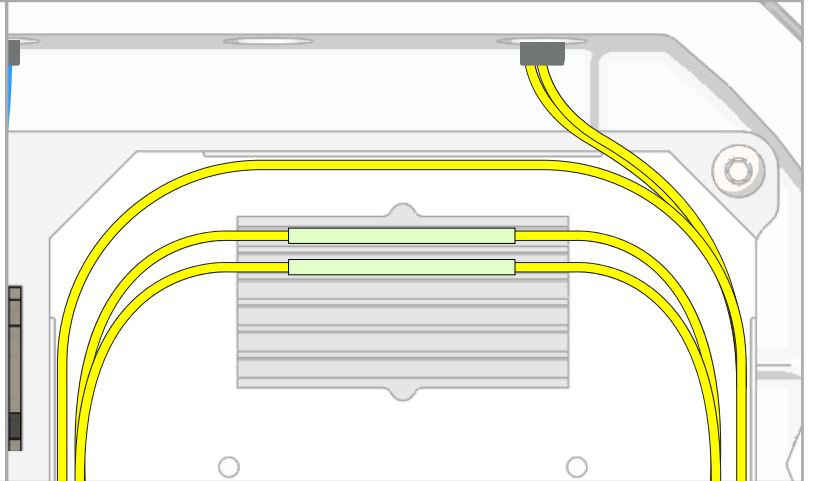
6. Mount fiber tray lid

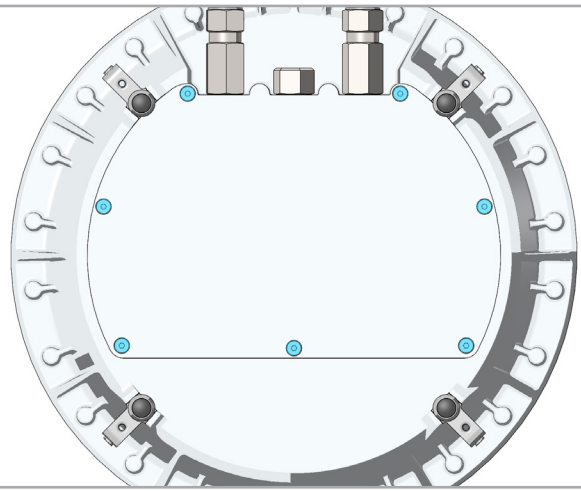Mount the small cover protecting the splice, and then the lid, protecting the entire fiber tray.

7. Connect power and ground

Verify that the incoming powercable is NOT live using a multimeter. Add cable ferrules. Connect power and ground cables to the power and earth terminals. For additional earthing info, see page: 21. For detailed terminal block wiring diagram, see page: 20.
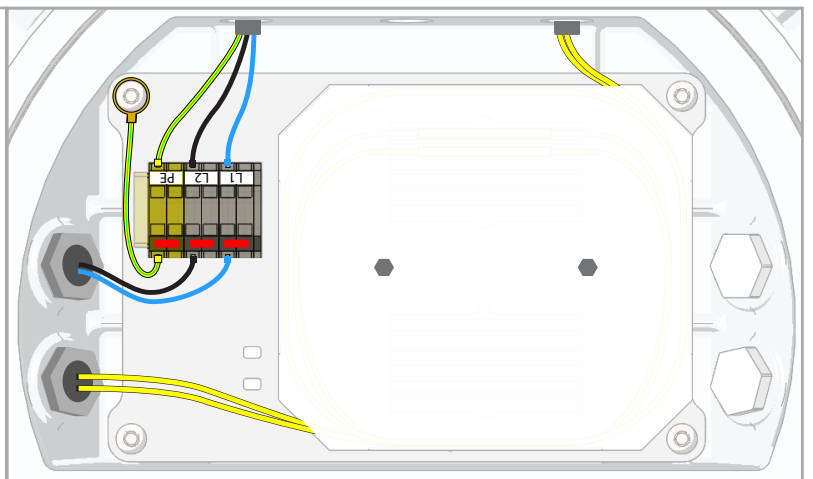
8. Mount Ex e lid

Place the protective lid over the Ex e chamber. Make sure the Ex e gasket is properly seated. Attach the 7 M6 fasteners with a 6Nm torque.

FO2 - CON. BASED FIBER / SINGLE MODE

Follow the cabling and termination instructions below for correct installation. Lay out the parts, cables and components as shown in the illustrations. It's recommended to use the included dome fixture during the cabling and termination process.

⚠️ **Always pay attention to the fiber cables' minimum bend radius of 30 mm. If you bend the fiber cable tighter than this minimum bend radius, you risk breaking the fiber cable.**

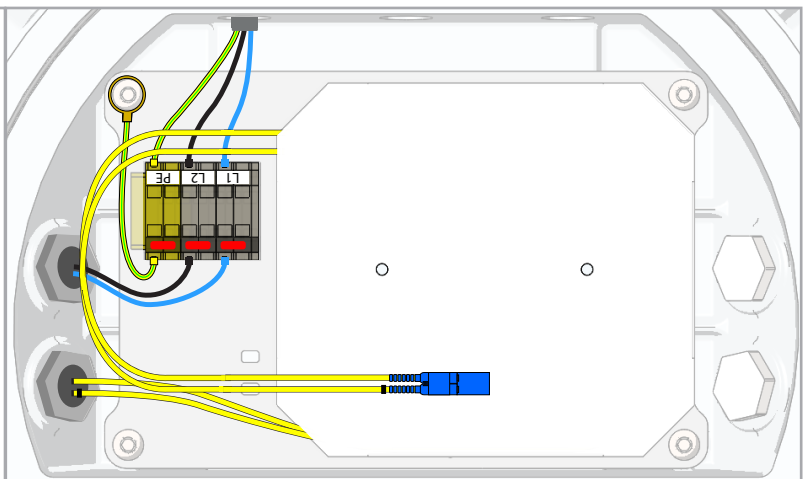## 1. Remove Ex e lid and insert cables into glands

Unscrew the 7 M6x1 fasteners and remove the Ex e lid to access the power and network interfaces.

Follow the mounting instructions of the cable glands thoroughly.
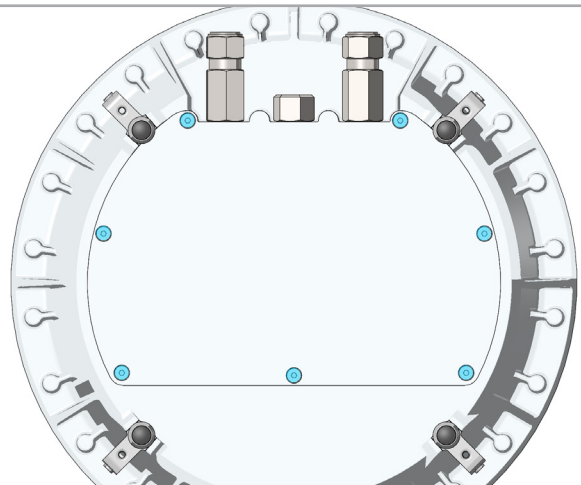
2. Prepare LC adaptor

The RX (receive) cable is marked with a black mark. Make sure to connect RX/TX cables correctly to the LAN fiber equipment.

3. Splicing the LC pigtail

Unscrew the cover protecting the fiber splice tray and also the smaller cover over the slot you plan to splice the fiber cable in. splice the LAN/field fiber cable with the included LC fiber pigtail
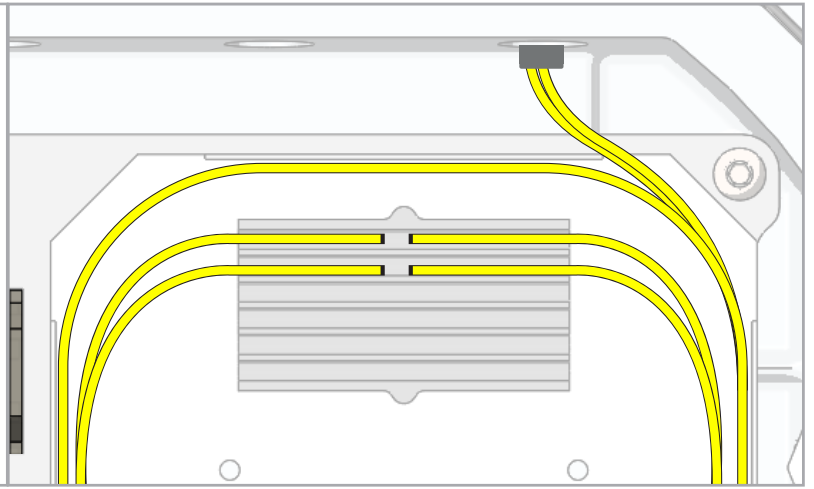
4. Protection of the splice

A typical fusion splice has a tensile strength of between 0.5 and 1.5 lbs. Using heat shrink tubing, silicone gel and/or mechanical crimp protectors will keep the splice protected from outside elements and breakage.
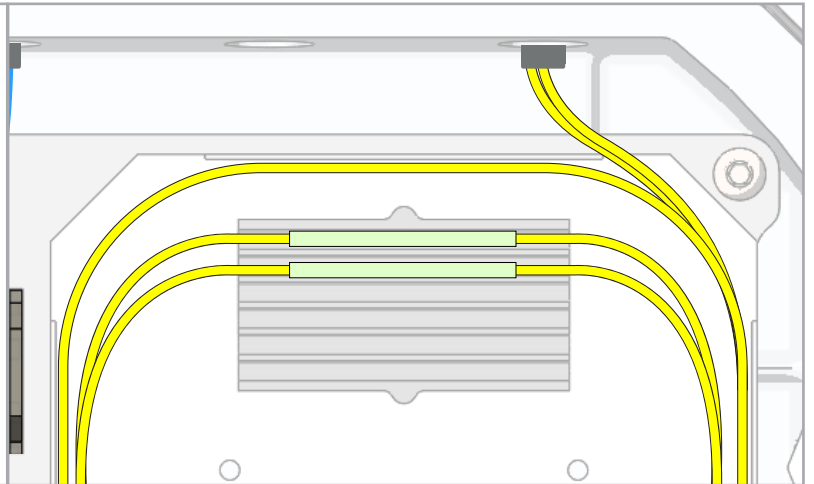
5. Mount fiber tray lid

Remove dust protectors from the LC fiber pigtail and LC adaptor and attach the LC fiber pigtail to the LC adaptor. You should hear a click sound when it locks in place. Arrange the excess fiber cable inside the fiber tray.

"Click"
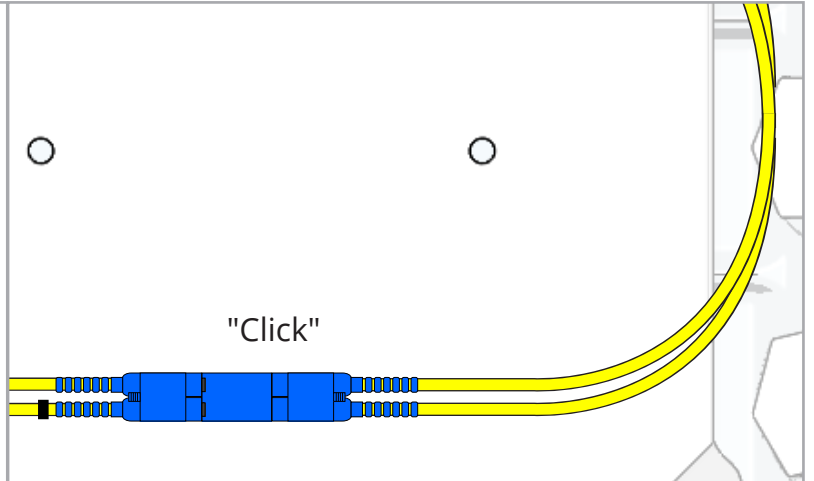
6. Connect power and ground

Verify that the incoming powercable is NOT live using a multimeter. Add cable ferrules. Connect power and ground cables to the power and earth terminals. For additional earthing info, see page: 21. For detailed terminal block wiring diagram, see page: 20.
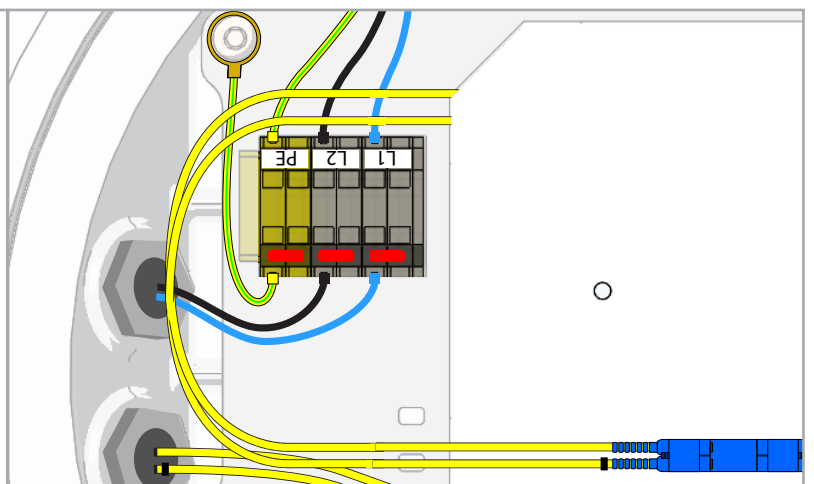
7. Mount Ex e lid

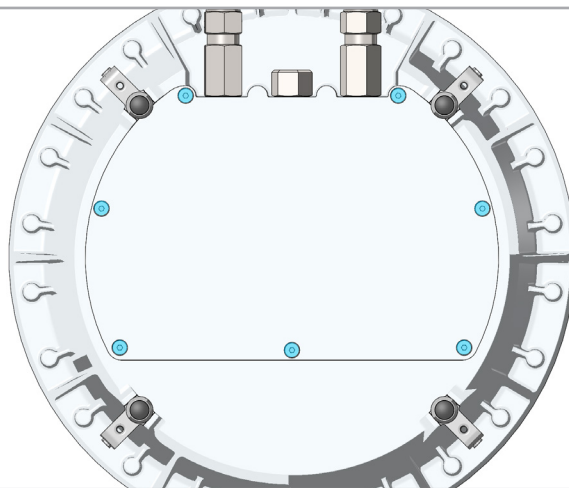Place the protective lid over the Ex e chamber. Make sure the Ex e gasket is properly seated. Attach the 7 M6 fasteners with a 6Nm torque.

POE - POWER OVER ETHERNET VERSION

Follow the cabling and termination instructions below for correct installation. Lay out the parts, cables and components as shown in the illustrations. It's recommended to use the included dome fixture during the cabling and termination process.

1. Remove Ex e lid and insert cables into glands

Unscrew the 7 M6x1 fasteners and remove the Ex e lid to access the power and network interfaces.

Follow the mounting instructions of the cable glands thoroughly.
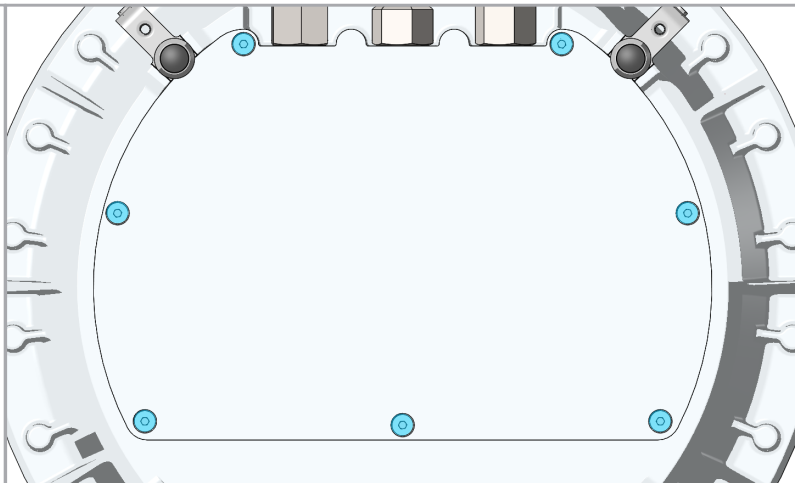
2. Positioning the Ethernet cable

Position the Ethernet cable towards the termination block.
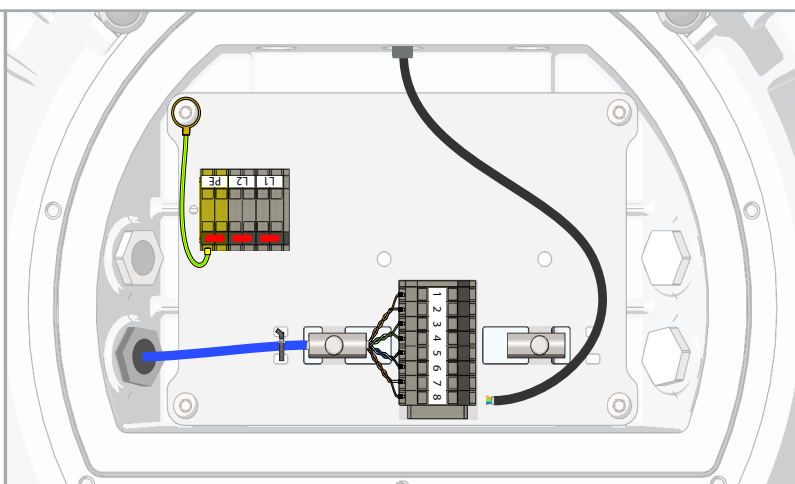
3. Cable Insulation cutting

Cut cable insulation and ethernet shielding according to the illustrated values and add cable ferrules.

Place the Ethernet cable shield in contact with the shield clamp.

45 mm

30 mm

35 mm

1
2
3
4
5
6

4. Terminate Ethernet cable

Attach the individual leads to the termination block. The connection points are spring loaded. **Important: Follow the detailed terminal block wiring diagram on page: 20. <u>Keep the pairs twisted as close as possible to the terminal block!</u>**

1
2
3
4
5
6
7
8
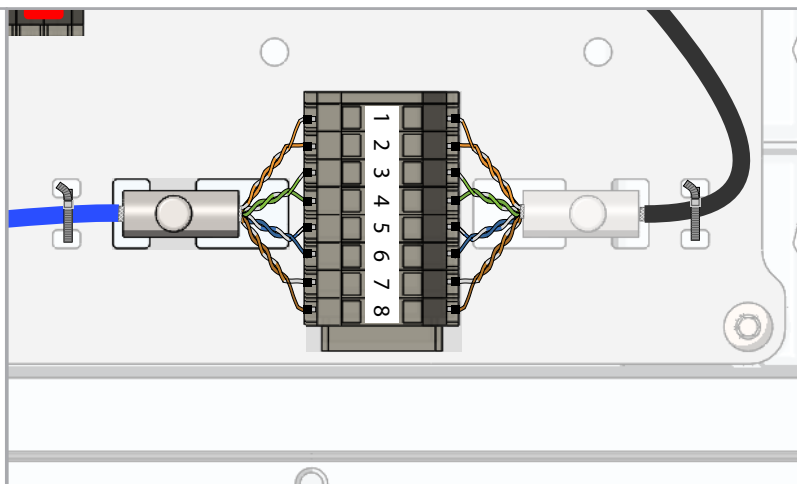
5. Earthing

Add cable ferrules. Connect ground cable to the earth terminal. For additional earthing info, see page: 21.
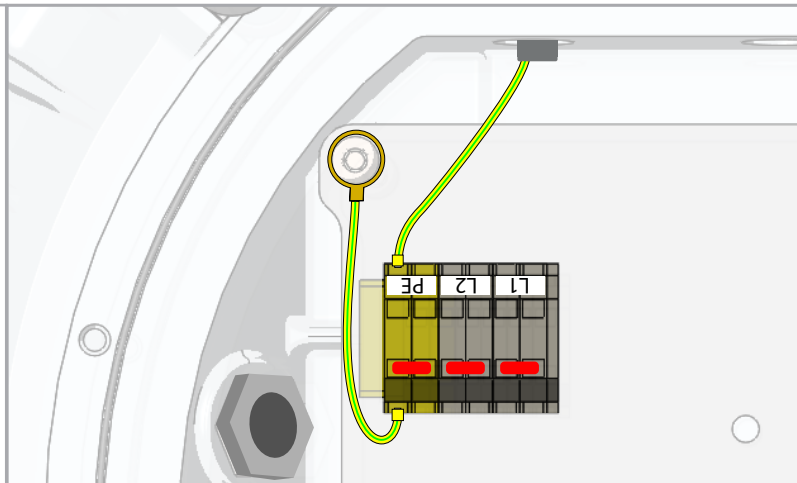
PE L2 L1

6. Mount Ex e lid

Place the protective lid over the Ex e chamber. Make sure the Ex e gasket is properly seated. Attach the 7 M6 fasteners with a 6Nm torque.
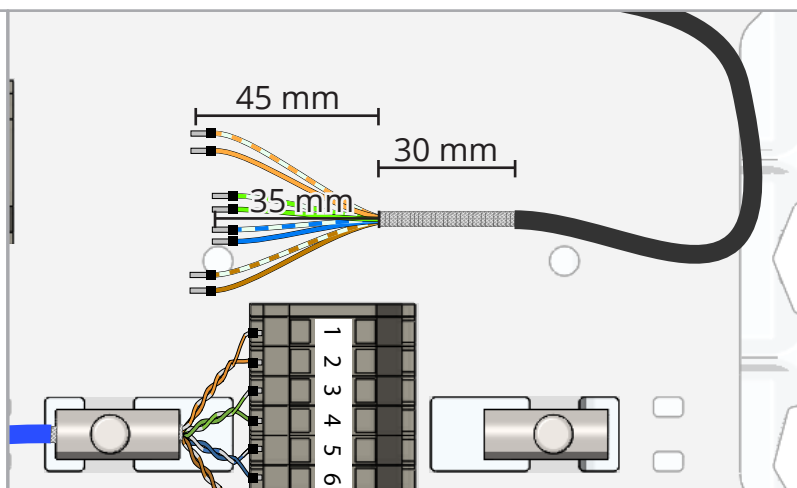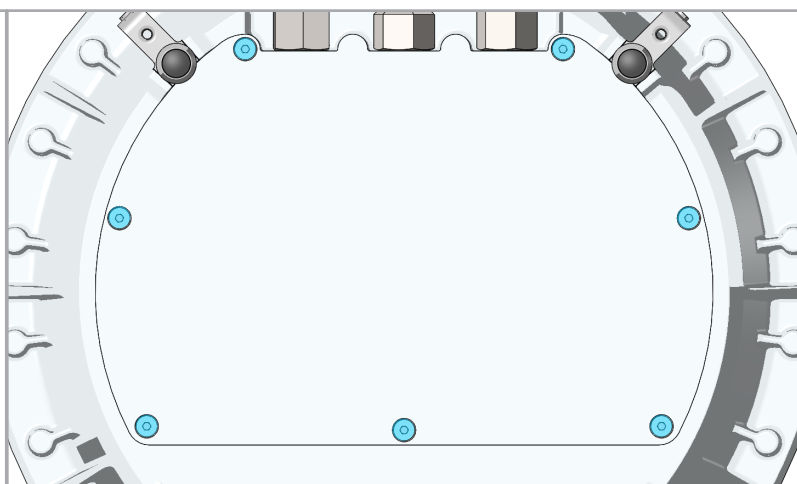
ETH - ETHERNET AND POWER VERSION

Follow the cabling and termination instructions below for correct installation. Lay out the parts, cables and components as shown in the illustrations. It's recommended to use the included dome fixture during the cabling and termination process.

1. Remove Ex e lid and insert cables into glands

Unscrew the 7 M6x1 fasteners and remove the Ex e lid to access the power and network interfaces.

Follow the mounting instructions of the cable glands thoroughly.
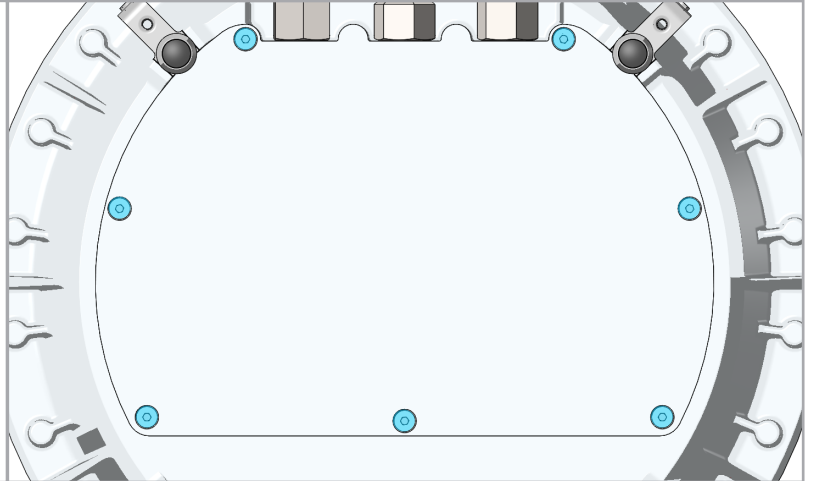
2. Cable Positioning

Position the Ethernet cable towards the termination block.
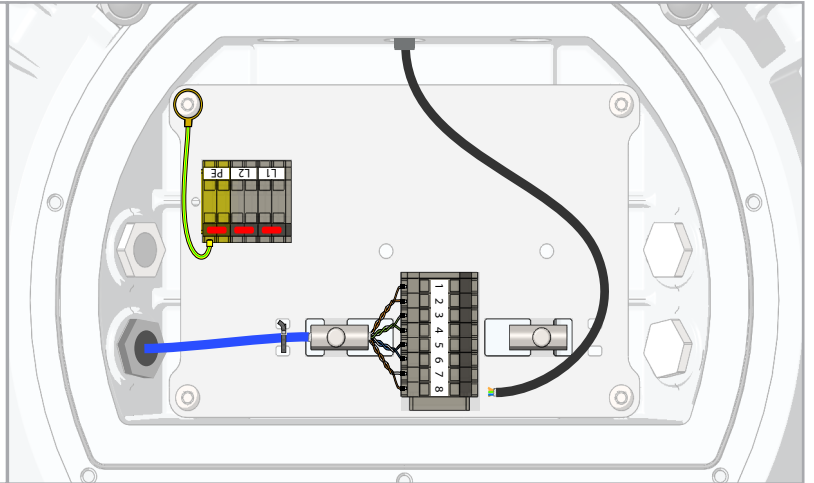
### 3. Cable Insulation cutting

Cut cable insulation and ethernet shielding according to the illustrated values and add cable ferrules.

Place the Ethernet cable shield in contact with the shield clamp.


45 mm
30 mm
35 mm

4. Terminate Ethernet cable

Attach the individual leads to the termination block. The connection points are spring loaded.
Important: Follow the detailed terminal block wiring diagram on page: 20. <u>Keep the pairs twisted as close as possible to the terminal block!</u>

5. Connect power and ground

Verify that the incoming power cable is <u>NOT</u> live using a multimeter. Add cable ferrules. Connect power and ground cables to the power and earth terminals. For additional earthing info, see page: 21. For detailed terminal block wiring diagram, see page: 20.
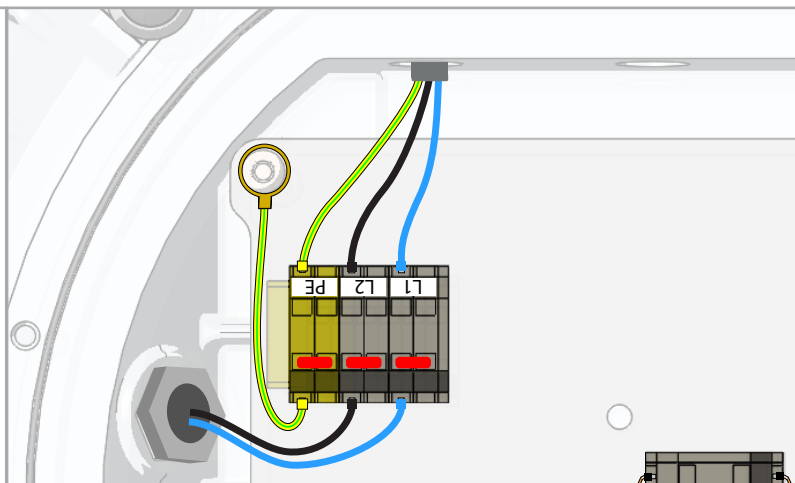
6. Mount Ex e lid

Place the protective lid over the Ex e chamber. Make sure the Ex e gasket is properly seated. Attach the 7 M6 fasteners with a 6Nm torque.
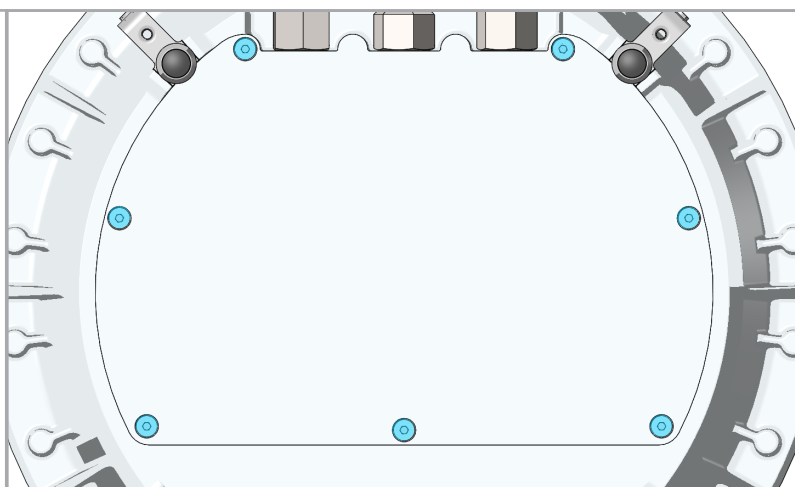
PWE - POWER VERSION / MESH

Follow the cabling and termination instructions below for correct installation. Lay out the parts, cables and components as shown in the illustrations. It's recommended to use the included dome fixture during the cabling and termination process.

1. Remove Ex e lid and insert cables into glands

Unscrew the 7 M6x1 fasteners and remove the Ex e lid to access the power and network interfaces.

Follow the mounting instructions of the cable glands thoroughly.
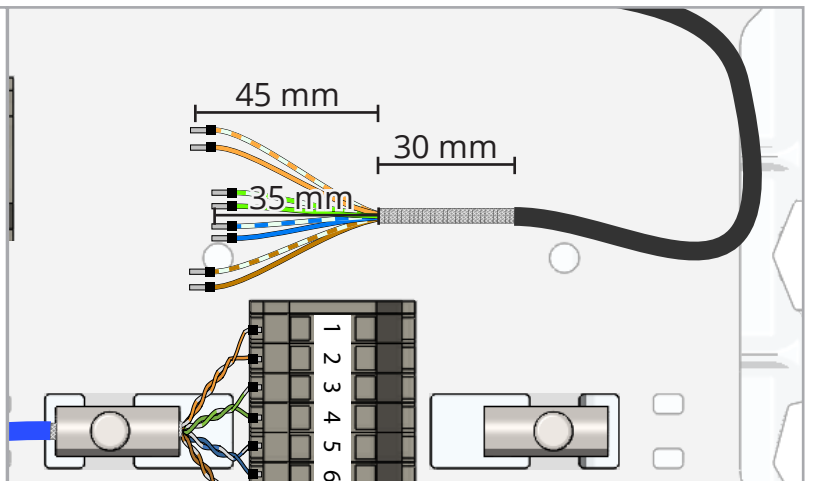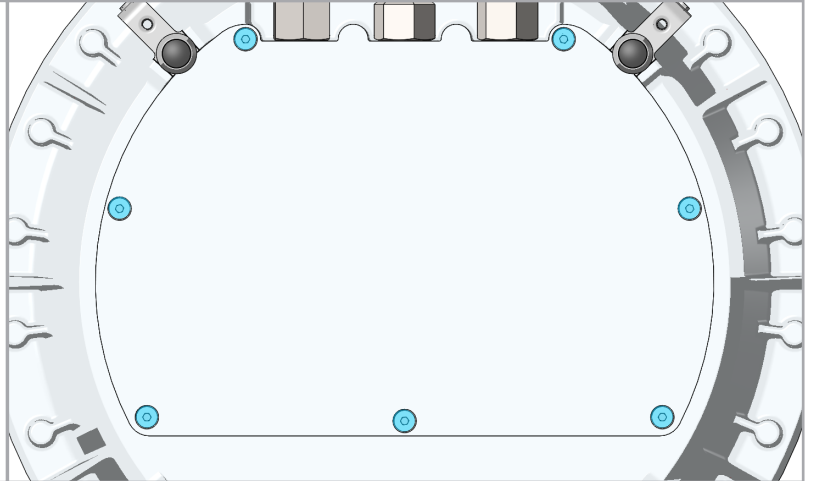

2. Cable Positioning

Position the power and ground cables. Add cable ferrules at the end of the cables.
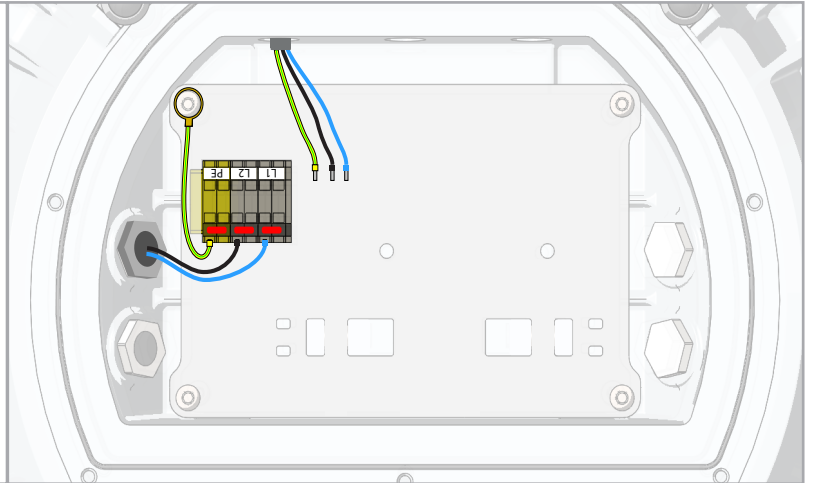
3. Terminate cables

Verify that the incoming power cable is <u>NOT</u> live using a multimeter. Connect power and ground cables to the power and earth terminals. For additional earthing info, see page: 21. For detailed terminal block wiring diagram, see page: 20.
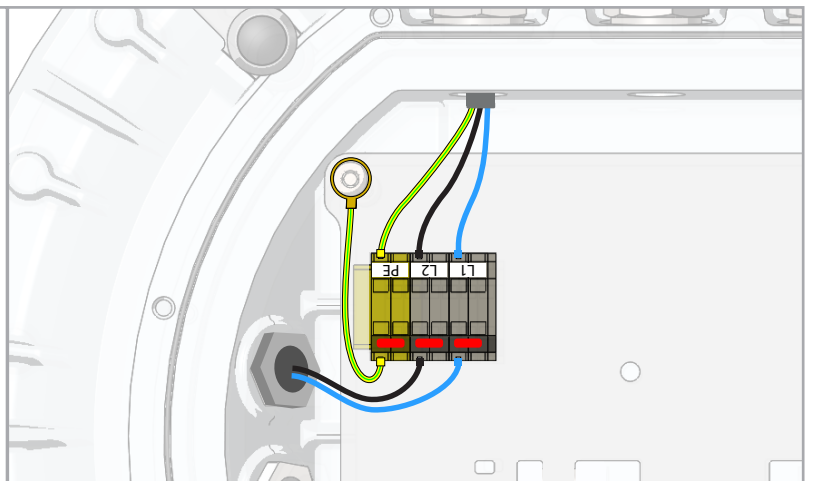
4. Mount Ex e lid

Place the protective lid over the Ex e chamber. Make sure the Ex e gasket is properly seated. Attach the 7 M6 fasteners with a 6Nm torque.
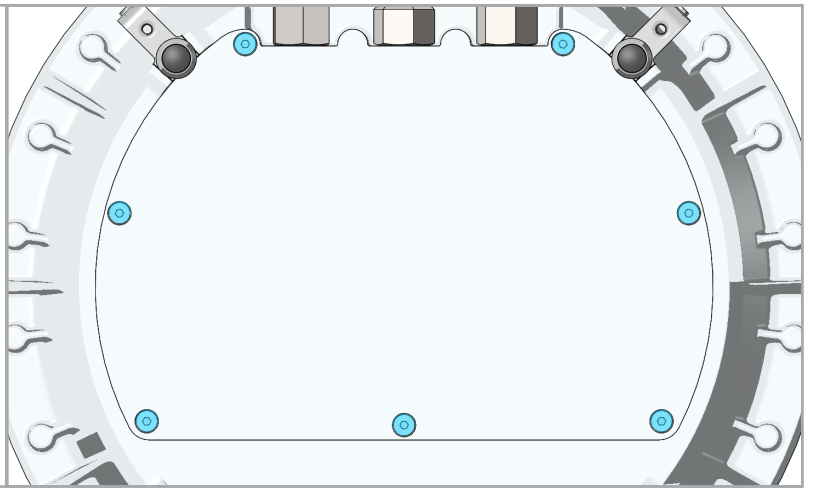
TERMINAL BLOCK DIAGRAMS

POWER TERMINAL BLOCK DIAGRAM
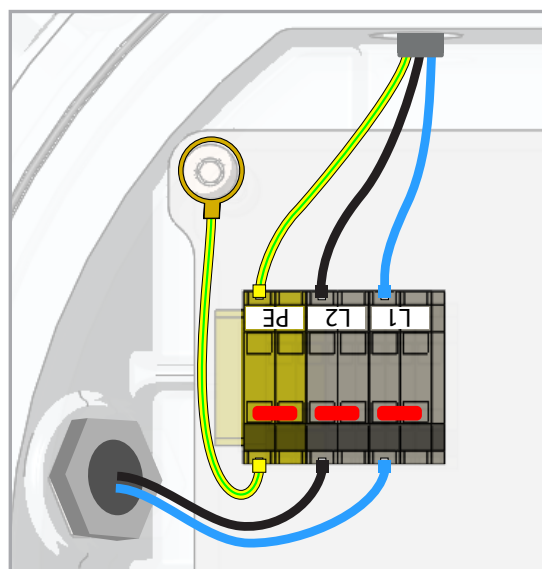
Power Terminal Block			
Terminal nr.	Min-Max core size	Cable Color	Description
PE	0.5-4 mm2	Yellow/Green	Power Earth
PE			
L2	0.5-4 mm2	Black	-V AC Power common
L2			
L1	0.5-4 mm2	Blue	+V AC Power
L1			

ETHERNET TERMINAL BLOCK DIAGRAM

Ethernet Terminal Block		
Terminal nr.	Color	Min-Max core size
1	Orange White	
2	Orange	
3	Green White	
4	Green	0.5-4 mm^2
5	Blue White	
6	Blue	
7	Brown White	
8	Brown	
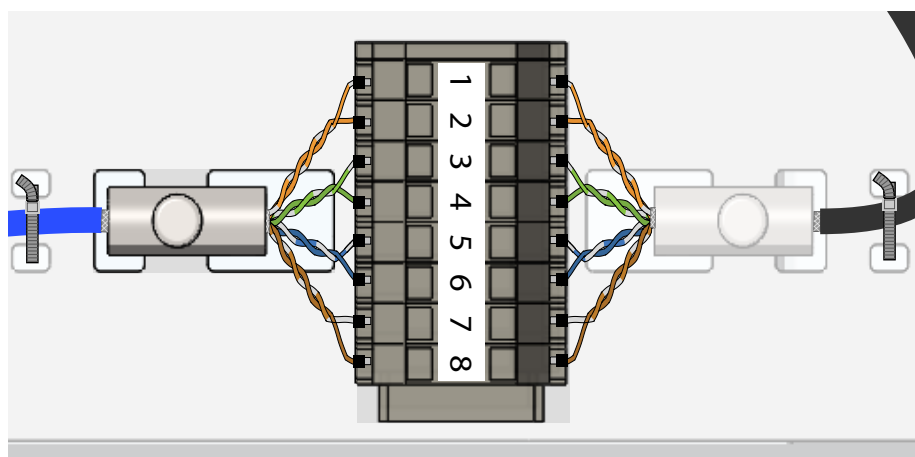
ETHERNET CABLE PINOUT (inside Ex d)
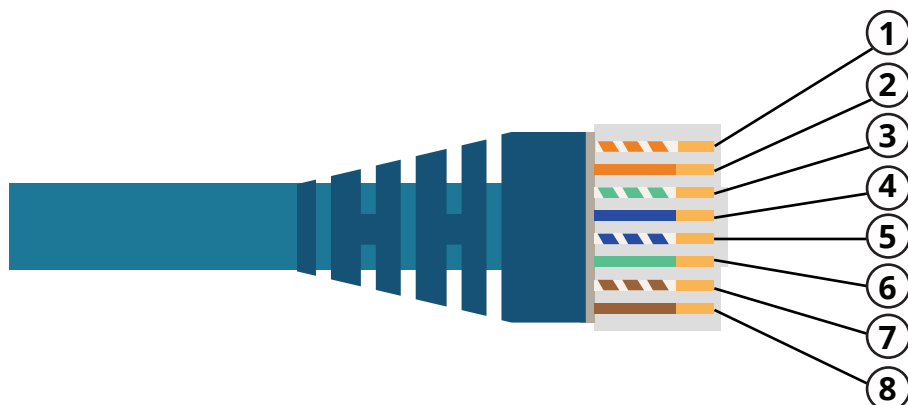
Ethernet Cable (inside Ex d)	
Pin nr.	Color
1	Orange White
2	Orange
3	Green White
4	Blue
5	Blue White
6	Green
7	Brown White
8	Brown

EARTHING

⚠ **EARTHING: BARTEC PIXAVI recommends connecting The Wireless X to earth using minimum one of the higlighted earth/fixing points, preferably the internal earth connection (highlighted below). The end customer or electrical integrator has the sole responsibility to connect the Wireless X to earth in line with the local rules and regulations for electrical equipment.**

earth
termination
pre-installed

External earth
(4 possible locations ⭕)
provided and installed by customer

- Minimum 4mm² cable
- M6 ring terminal
- M6 stainless steel locking washer
- M6 x1.0 stainless steel screw

Internal earth through gland
provided and installed
by customer

- Minimum 0.75mm² cable
- Wire ferrules
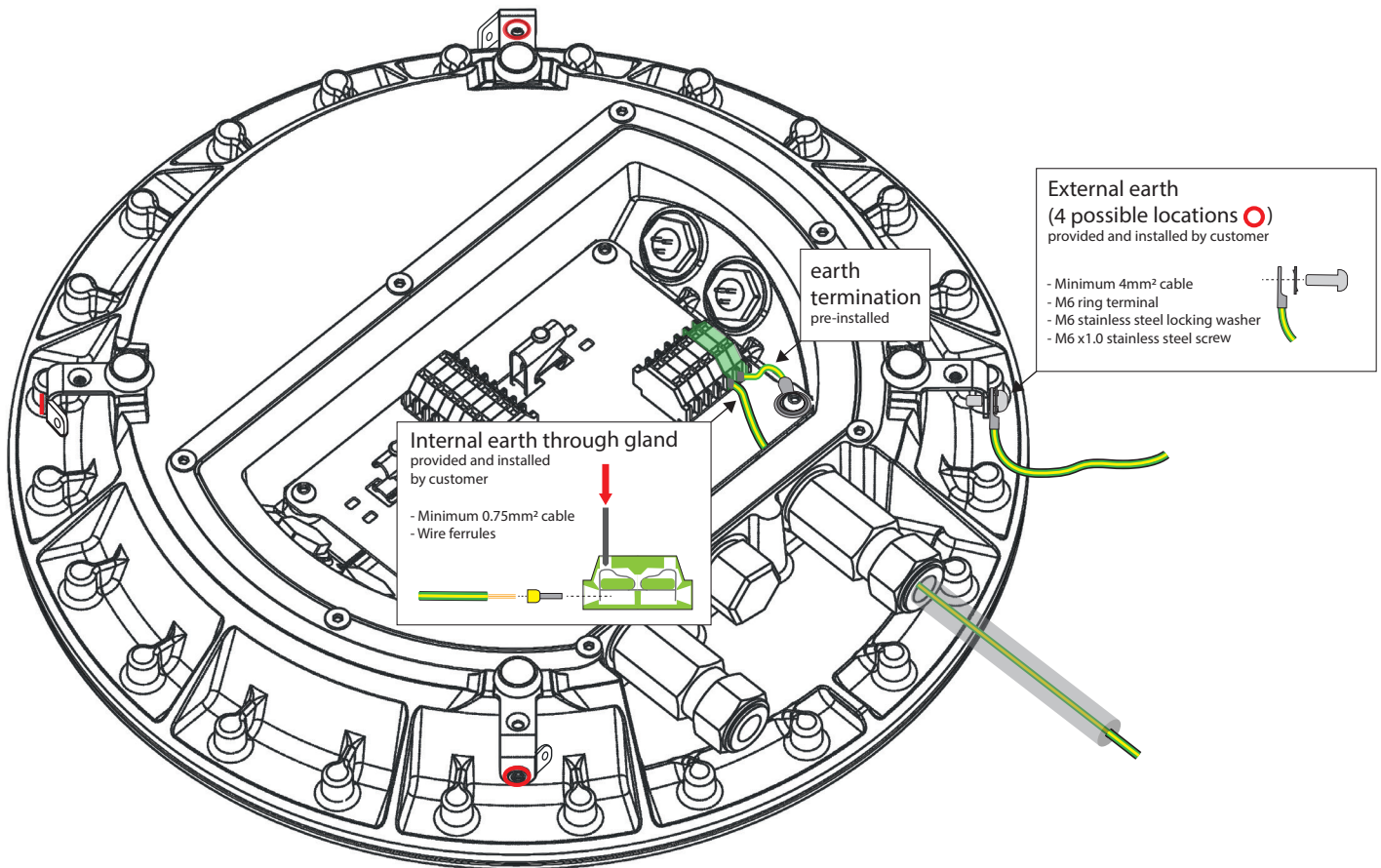
DAISY CHAIN CONFIGURATIONS

Some versions can be configured as daisy chains, by having an extra output gland:
This section contain guidelines for how to install and terminate the cables.
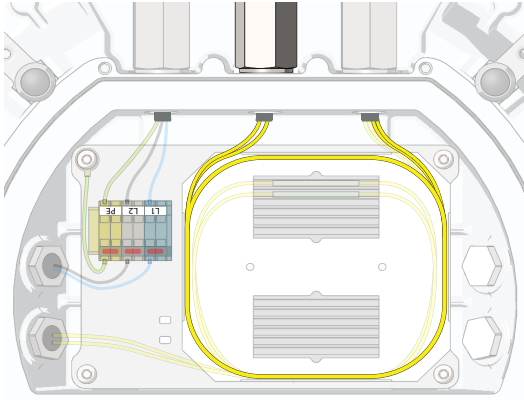
Fiber daisy chain (FIB-DSY)
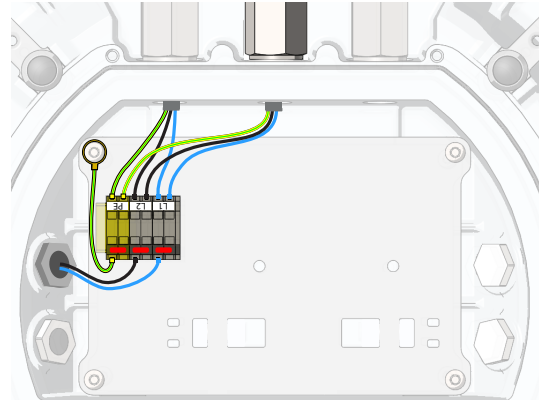
Power daisy chain (PWR/ETH-DSY)

FIBER DAISY CHAIN

The fiber cables can be configured as a daisy chain, if you have an extra set of fiber cables or more coming inside the Ex e chamber. Please follow the cabling and termination instructions below

1. Overview

Make sure the fiber and power are terminated as explained in "FIBER VERSION (FIB)". Insert an extra gland for the daisy chain output.
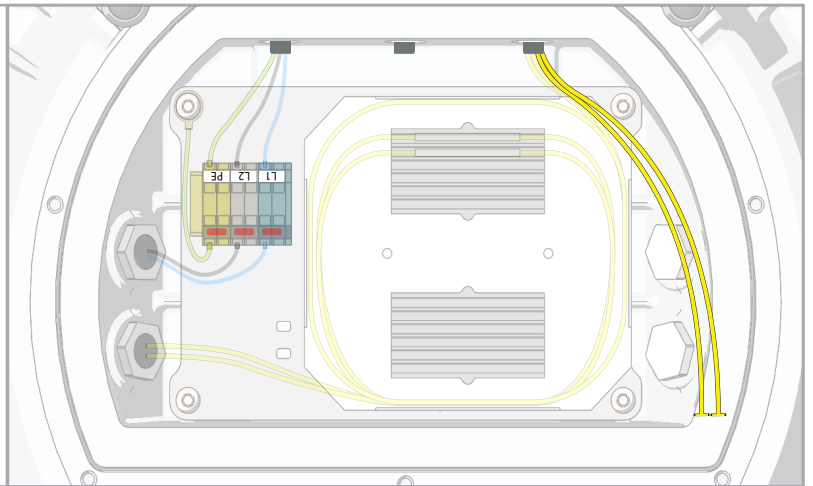
2. Positioning the fiber cable

Position the fiber cable in the fiber splice tray and feed it out of the gland.
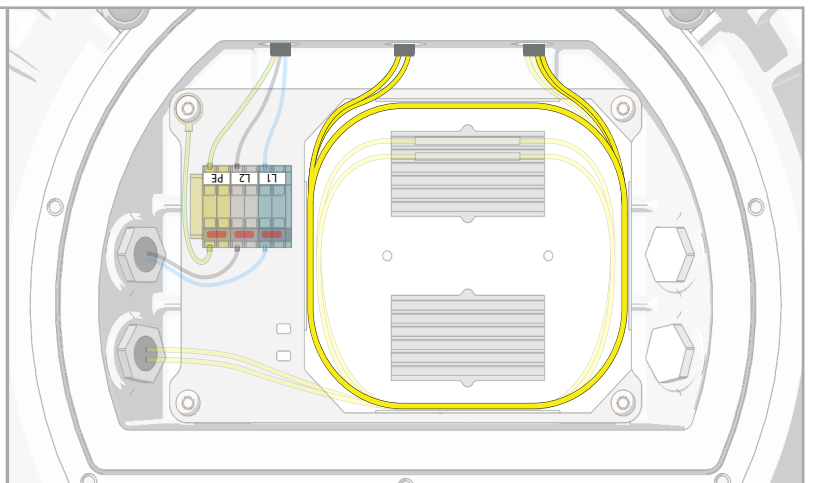
POWER DAISY CHAIN

The power/ground cables can be configured as a daisy chain. Please follow the cabling and termination instructions below

⚠️ **Make sure the CC of the power cables are in the range of 1.5mm^2 to 4mm^2**

1. Overview

Make sure the power cables are terminated as explained in "POWER VERSION (PWR)" or "ETHERNET AND POWER VERSION(ETH)" Insert an extra gland for the daisy chain output.
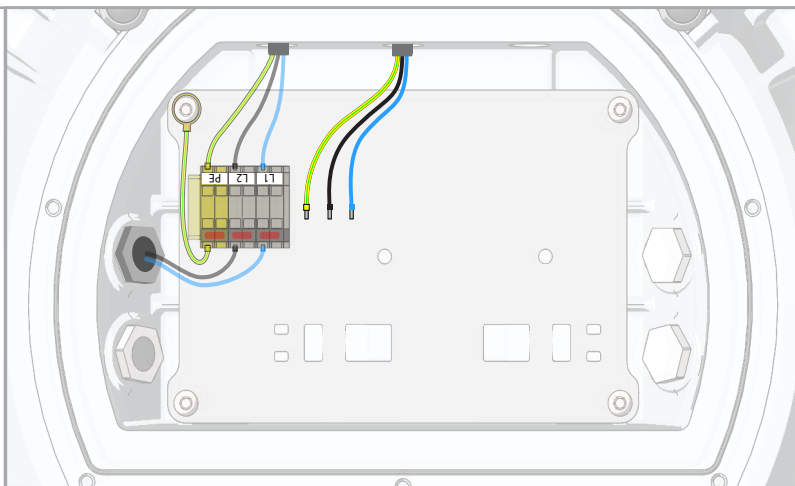
2. Termination

Terminate the cables as illustrated. Make sure to use cable ferrules.
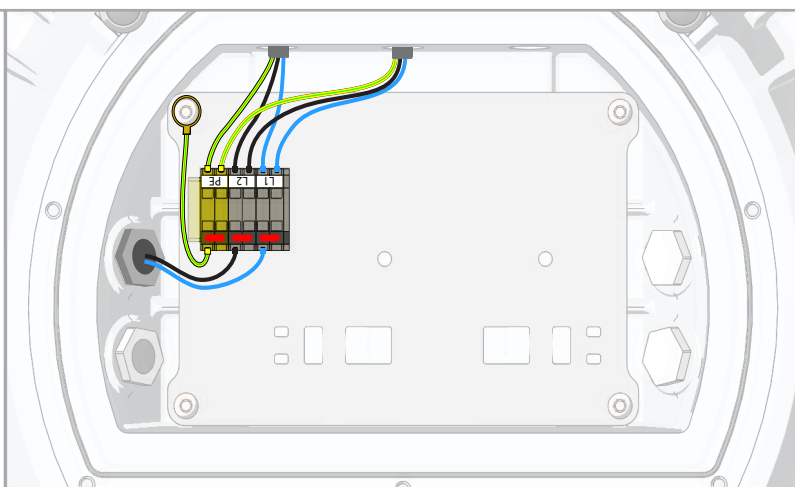
PREPARATIONS BEFORE INSTALLING

> ⚠️ **Never perform any installation or maintenance work on the Wireless X while it is connected to power.**

> ⚠️ **During installation, if working at height cannot be avoided, a risk assessment should be carried out before any work at height is undertaken.**
> **The assessment should highlight the measures that must be taken to ensure people are not at risk of falling from height.**

> ⚠️ **Only mount the Wireless X bracket to suitable structures.**

> ⚠️ **It's recommended to mount the Wireless X horizontally with the dome facing downwards for optimal wireless performance. Mounting the Wireless X vertically is also compliant with certification, however not recommended due to wireless performance.**

> ⚠️ **Please follow deployment and guidelines provided by the wireless device manufacturer when deploying the wireless equipment.**

General info:
- It's recommended to do a site survey to determine the best location to install the Wireless X.
- Optimal installation height is dependent on access point/model. Please check the manufacturer specification.

The Wireless X can be mounted in three different basic configurations:

Ceiling	Wall	Pipe (horizontal/vertical)
Part: BPX-AC-WX-CEILING-BR (included)	Part: BPX-AC-WX-WALL-BR (accessory)	Part: BPX-AC-WX-PIPE-BR (accessory)

The following section contains guidelines for installing the mounting brackets in the three different configurations, as well as, a guide on how to mount the Wireless X to the mounting brackets.

CEILING BRACKET

> ⚠️ **Only mount the Wireless X bracket to suitable structures.**

Hardware needed:

- Mounting bracket
- M8 mounting hardware (not included)

Prefered mounting holes (Ø9)

Alternative mounting holes (Ø9)

200

176,5

150

200

176,5

150

Ø 250 mm
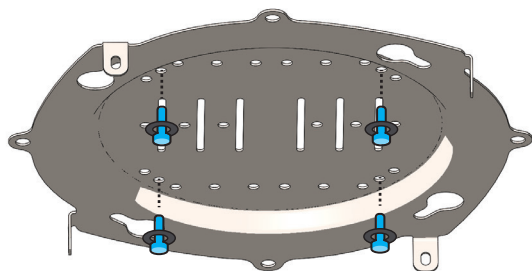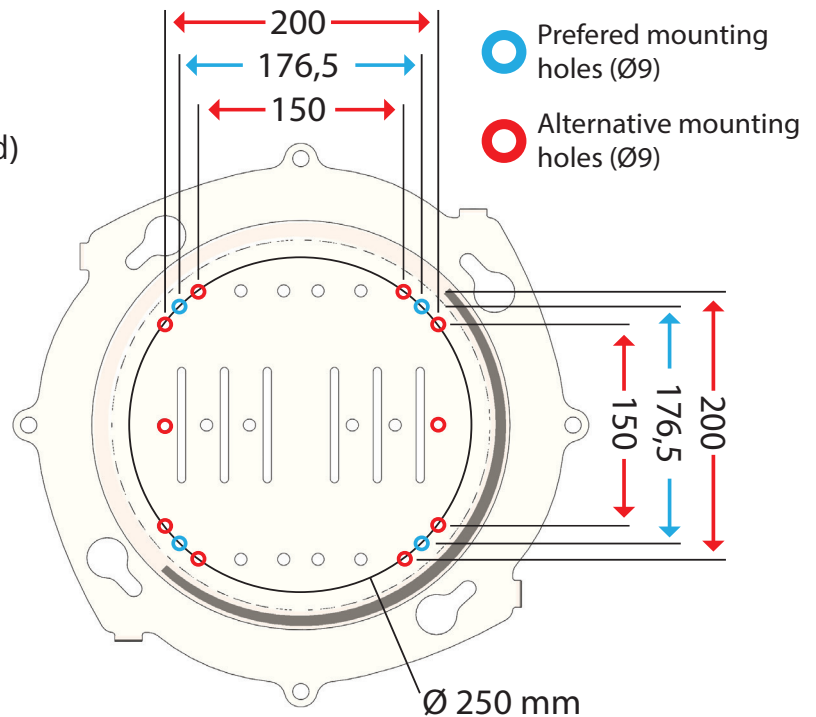
1. Mount bracket to ceiling

Mount the bracket using the recommended mounting points. Only use high quality mounting hardware recommended for the mounting structure.

WALL BRACKET

> ⚠️ **Only mount the Wireless X bracket to suitable structures.**

Hardware needed:

- Mounting bracket
- Wall bracket (BPX-AC-WX-WALL-BR)
- M8 bracket-to-wall mounting hardware (not included)

Mounting holes for wall bracket

Potential mounting holes when using the wall bracket in combination with the pipe bracket

1. Attach wall bracket

Secure the wall bracket to the ceiling bracket with the bolts, washers and nuts supplied.
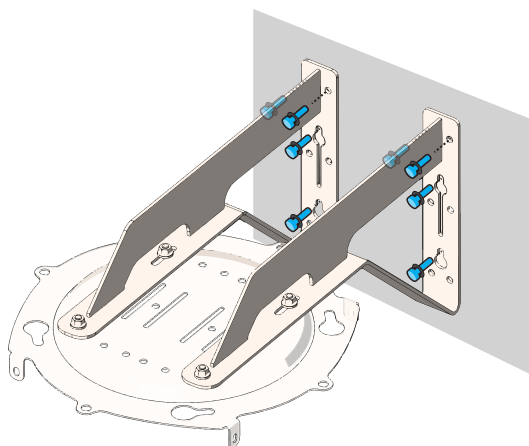
2. Mount to structure

Mount the bracket using the recommended mounting points. Only use high quality mounting hardware recommended for the mounting structure.

PIPE BRACKET (HORIZONTAL)

> ⚠ **Only mount the Wireless X bracket to suitable structures.**

Hardware needed:

- Mounting bracket
- Pipe bracket kit (BPX-AC-WX-PIPE-BR)

Not included:
Pipe bands, buckles and tool.
Recommended tools:

- 3 x C406 316SS, 3/4" (19.05mm) band
- 3 x C456 316SS, 3/4" (19.05mm) buckles
- 1 x C001 Band-it tool

35-45 cm
17-35 cm
7-17 cm

Mounting slots for Pipe bracket

Fixing holes for Pipe bracket (M8)
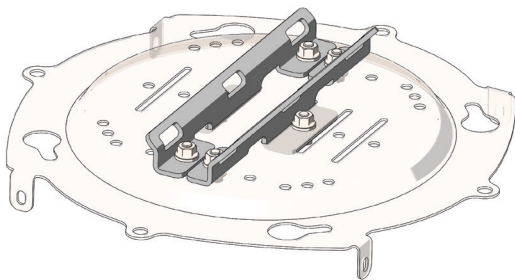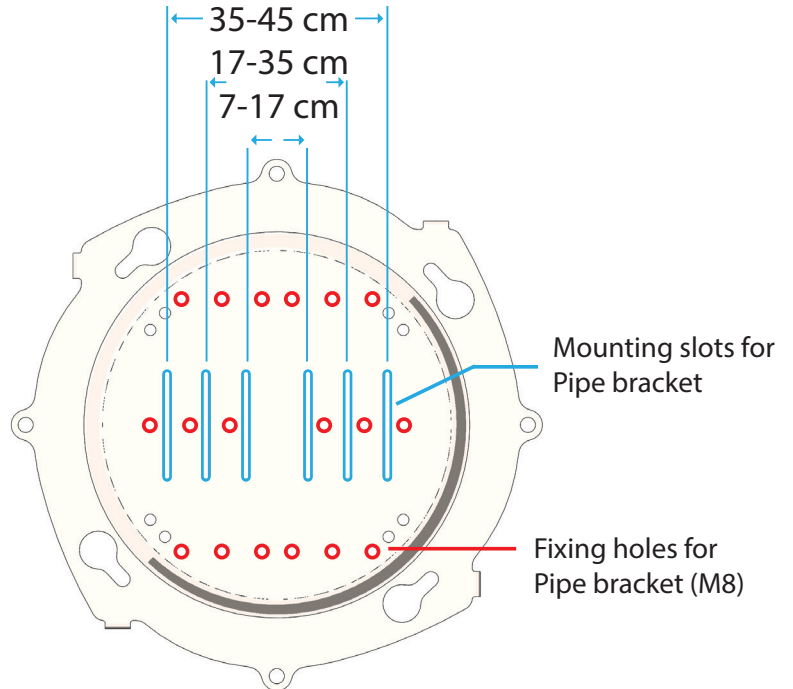
1. Attach pipe bracket

First check the diameter of the pipe/pole. Insert the pipe bracket into the slots according to the pipe diameter.

Secure the pipe bracket to the ceiling bracket with the bolts, washers and nuts supplied.
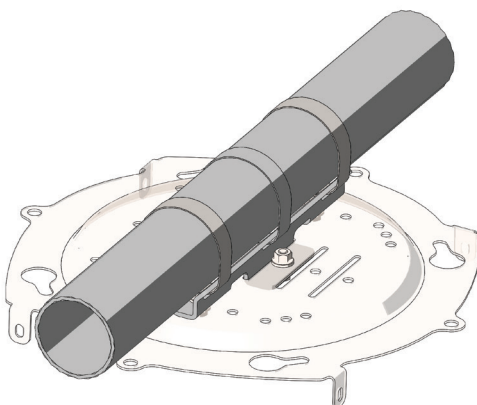
2. Mount to structure

Mount the bracket assembly to the structure using the recommended band, buckles and tool. Make sure the bracket assembly is securely mounted.

PIPE BRACKET (VERTICAL)
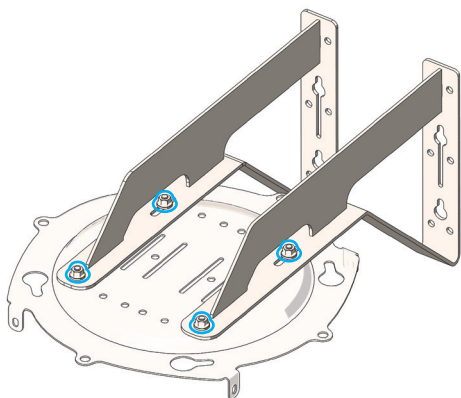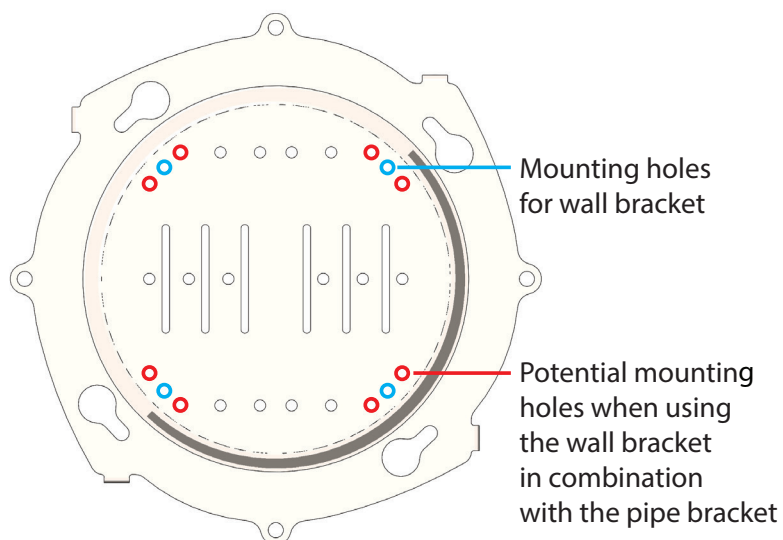
⚠️ **Only mount the Wireless X bracket to suitable structures.**

Hardware needed:

- Mounting bracket
- Pipe bracket kit (BPX-AC-WX-PIPE-BR)
- Wall bracket (BPX-AC-WX-WALL-BR)

Not included:
Pipe bands, buckles and tool.
Recommended tools:

- 3 x C406 316SS, 3/4" (19.05mm) band
- 3 x C456 316SS, 3/4" (19.05mm) buckles
- 1 x C001 Band-it tool
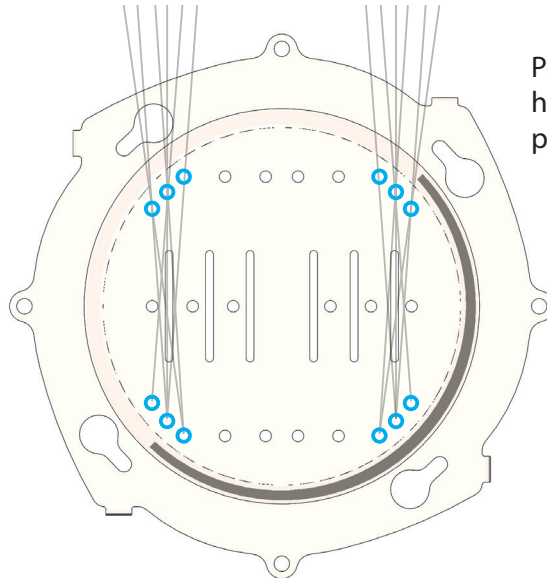
Potential mounting holes for different pipe sizes

NB: For vertical pipes and poles, a wall bracket (BPX-AC-WX-WALL-BR) is needed to ensure the dome is facing downwards. The pipe brackets would then need to be mounted on the wall bracket. The wall bracket can be mounted in different angles to fit different pipe/pole sizes.

Pipe Ø150 mm

Pipe Ø300 mm

Pipe Ø450 mm
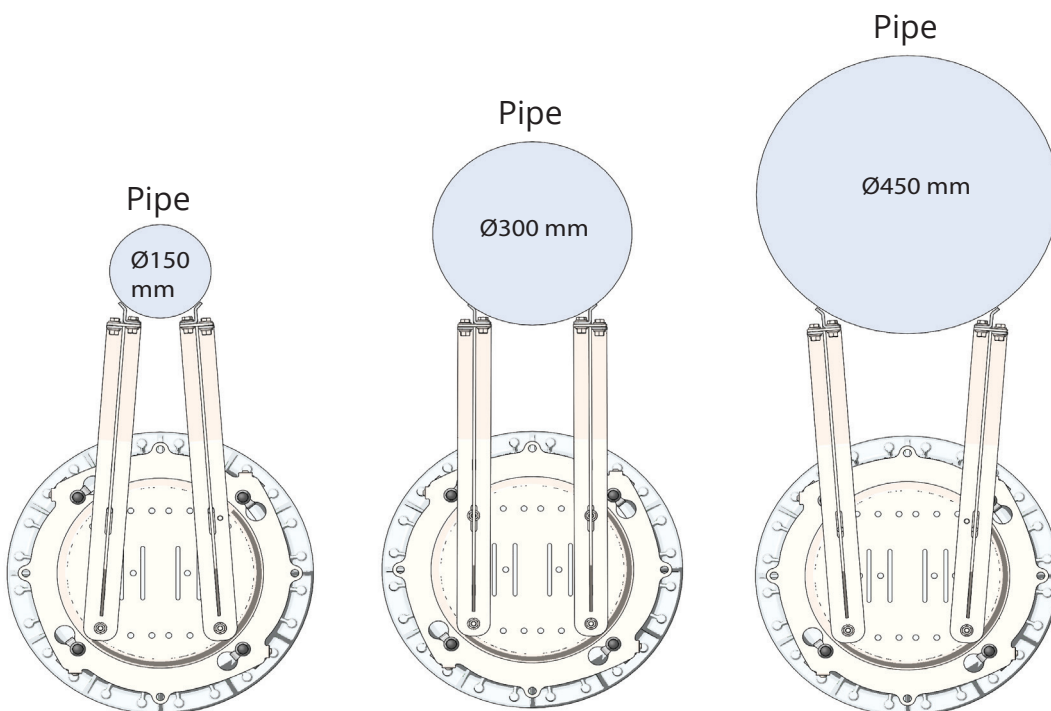
1. Attach wall bracket to ceiling bracket

First check the diameter of the pipe/pole. Use a combination of the mounting holes to fasten the wall bracket in the correct angle.
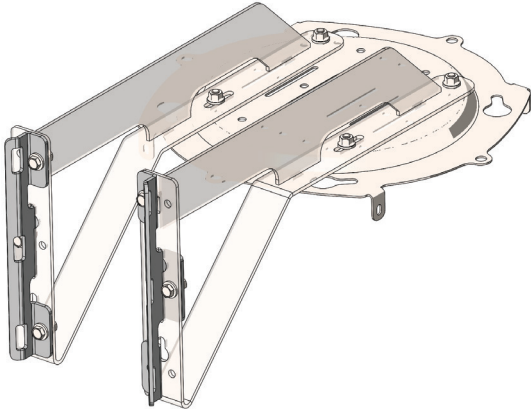
2. Attach pipe bracket

Insert the pipe bracket into the slots of the wall bracket. Make sure they are in the correct position.

Secure the pipe bracket to the wall bracket with the bolts and nuts supplied.
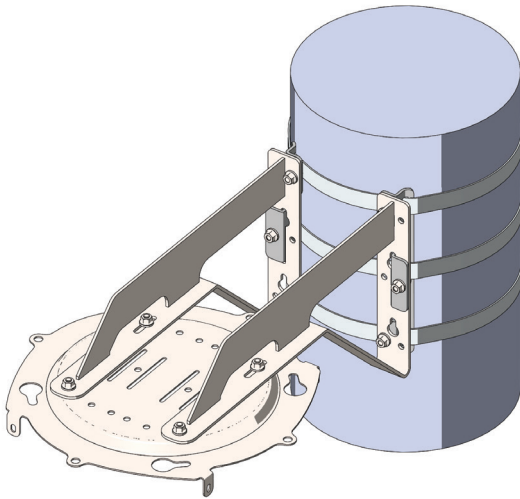
3. Mount to structure

Mount the bracket assembly to the structure using the recommended band, buckles and tool. Make sure the bracket assembly is securely mounted.

MOUNTING THE WIRELESS X

⚠️ **Ensure that the "Cabling and termination" step is finished before mounting the device to the bracket.**

⚠️ **Ensure that the mounting bracket is already mounted in the ceiling, pipe or wall configuration.**

⚠️ **Only mount the Wireless X to suitable structures.**

⚠️ **It's recommended to use a safety wire during and after the installation process. Sold separately: BPX-AC-WX-SAFETY-WR**

Hole for Wireless X enclosure

Safety wire mounting point

Tab for locking (M6 fastener)
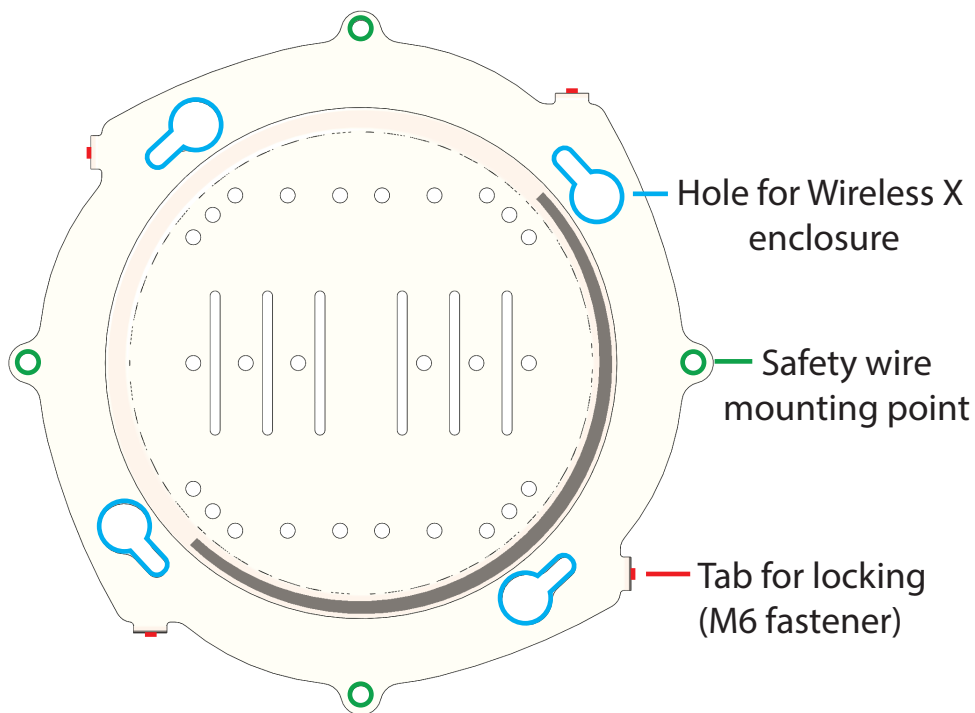
Hardware needed:

- Mounting bracket (mounted in one of the configurations above)
- M6 fasteners for locking and earthing

Not included:
- Safety wire: BPX-AC-WX-SAFETY-WR

1. Mount ceiling bracket

1) Make sure the bracket is securely fixed to the ceiling. It's recommended to use a safety wire when installing the Wireless X. Using an M6 fastener, attach safety wire to the Wireless X and then to ceiling bracket. The safety wire is not meant for carrying the entire weight of the Wireless X during installation. It's solely a safety measure to avoid the Wireless X from dropping to the ground in case of an accident.

2) Lift and align the Wireless X towards the ceiling bracket.
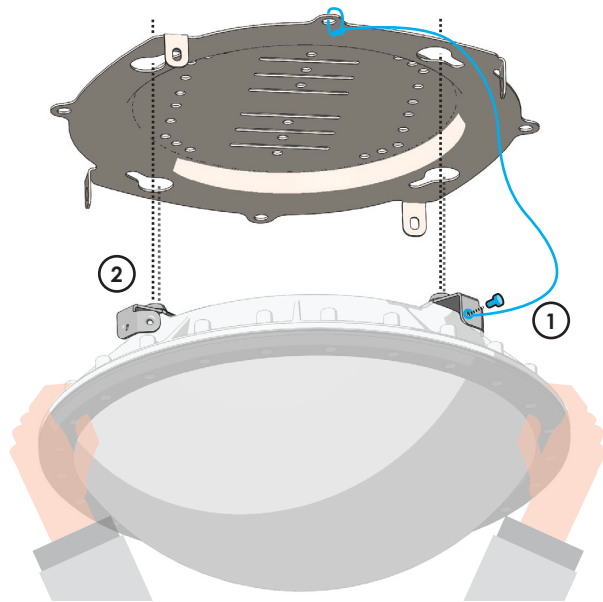
2. Attach Wireless X

Attach the Wireless X to the ceiling bracket. Make sure the feet enter the slots in the bracket.
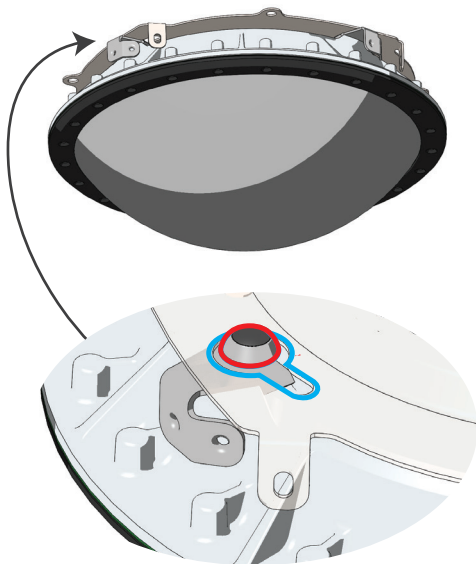
3. Fixing and earthing

1) Rotate the Wireless X clockwise to lock it to the bracket.

2) Fix the Wireless X to the ceiling bracket with M6 fasteners. At least two different tabs must be used.

The unused fixing points may be used for earthing. For additional earthing info, see page: 19.
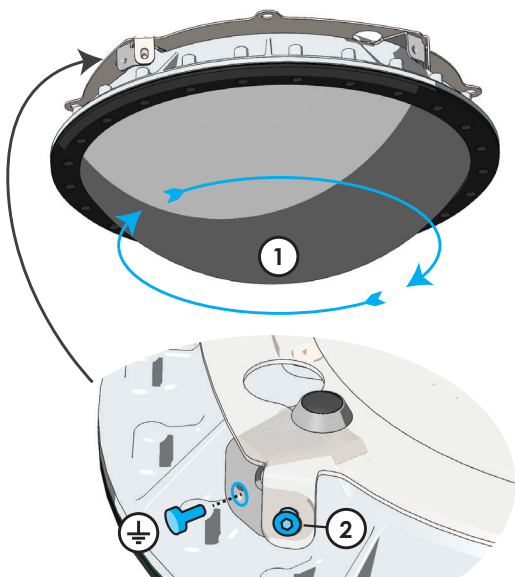
INSPECTION & MAINTENANCE

> ⚠️ **The Ex d chamber consist of a cemented joint and cannot be opened. Do not tamper with the joint or any of the 24 M6 fasteners around the flange. This will void the warranty and the Ex certification.**

> ⚠️ **The Ex e compartment is sealed with a gasket to eliminate water and moisture ingress. Moisture may however build up during rapid temperature fluctuations. It's recommended to always keep the Wireless X powered on (except during installation, maintenance and inspection) to maintain a stable temperature and reduce internal moisture levels**

Maintenance and inspection of the Wireless X, mounted in explosive atmosphere, should be done in accordance with IEC/ EN 60079-17

BARTEC PIXAVI recommends a minimum inspection interval of 36 months.

Inspection procedure guidelines:

- Detach the Wireless X from the mounting bracket to access the Ex e chamber.
- Check that the cable glands are tightly and securely fastened to the Wireless X M25 threads.
- Check that all electrical connections are tight, and no unnecessary strain is applied to the cables inside the Ex e chamber.
- Check and remove any condensation inside the Ex e chamber.
- Replace the desiccant bag taped to the inside of the Ex e back plate.
- Check that the gasket around the Ex e chamber is whole, flexible and undamaged. Replace if needed. Part nr: WRGA1_EXe_Gasket.

STORAGE AND TRANSPORTATION

The Wireless X should be stored inside the sealed original cardboard box, in a clean, dry and sufficiently ventilated room. The storage temperature and humidity leves should be regularly monitored. We recommend that the temperature in these premises should not drop below 10 °C or exceed 30 °C. We do not recommend storing the Wireless X for more than 6 months. When transporting the Wireless X, always use a heat-shrink bag or PVC or polyolefin plastic film covering the Wireless X and pallet. Never transport or ship the Wireless X without its original cardboard box.

CLEANING

Avoid electrostatic charging, only clean the unit with water using a damp cloth. In principle, rubbing with non-conductive materials must be avoided.

FAQ

What type of access points can I use inside the Wireless X?

We recommend using Cisco 27XX, 28XX, 37xx or 38xx series. For other access points, please contact BARTEC first.

Here are some of the access point requirements:
- Access point needs to be brand new when mounted inside the Wireless X
- Access point needs to withstand a pressure of 11,1 bar for min. 10 seconds.
- Access Point needs to be powered by POE or support an Input voltage of 48 volt
- Max RF throughput, Input interfaces (Power/POE etc), size along with maximum and minimum operating temperatures are also relevant.

If you are unsure if your access point will fit inside the Wireless X, your BARTEC representative can help you.

How can Wireless X accommodate M20 Glands?

If the M25 entries in the Wireless X are too big for the cable diameter you plan to use, you can install a suitable Ex certified M25 to M20 reducer. Make sure a suitable material/quality is selected to avoid galvanic corrosion with the Wireless X. For assistance please contact a BARTEC sales representative that can assist you.

How do I find the right place to mount the Wireless X?

The location you choose to install your Wireless X affects the signal strength and network speed you will achieve. To optimize the network coverage:

- Wireless X can be mounted both horizontally and vertically, but it's recommended to mount it horizontally with the dome facing downwards for optimal wireless performance.

- Select a central location or one where you use your Wi-Fi-enabled devices most often. This because the distance from the Wireless X to the Wi-Fi equipment affects performance and signal strength.

- Steering clear of other electronic equipment can help avoid interference and signal obstruction.

What could interfere with the Wireless X Wi-Fi signal?

Your surroundings can affect the Wireless X Wi-Fi performance. Metal (steel construction materials, doors, etc.), concrete and brick, glass but also equipment like microwave ovens, cordless phones and other electronic equipment might interfere with the Wireless X Wi-Fi signal.

Does the Wireless X support external antennas?

No. The concept of the Wireless X is to keep the antennas inside the Wireless X. However, you can use access points with external antennas as long as they fit inside the Wireless X.

TROUBLESHOOTING

No wireless signal can be detected near the Wireless X

Check and verify that the Access Point has power. Measure with a voltmeter if necessary. Check and verify that the Access Point is connected to the LAN. Check the AP vendors documentation/Implementation guidelines for further troubleshooting.

How can I verify that the Access Point inside the Wireless X is powered up and working?

Connect to the management system of the Access Point (via Web interface) or the centralised management system (if the Access Point is the lightweight/managed type) and do a simple diagnostics check. You can also access the logs of your DHCP server, to verify that the Access Point is connected and has received an IP address. Check the AP vendors documentation/ Implementation guidelines for further troubleshooting.

The Wi-Fi performance is slower than expected

BARTEC PIXAVI does not provide any wired or wireless bandwidth specific guarantees. The network speed and performance depends on the actual equipment mounted inside the Wireless X, the splicing and termination quality, network cable length, network cable type and also interference coming from other RF equipment nearby. Check that you have spliced the fiber (for fiber version) or terminated the Ethernet cable (for Ethernet/POE version) as specified in this user manual. Check that the maximum network cable length is not exceeding 100 meters for Ethernet and 3 Km for fiber cable.

REPAIR

Repair and maintenance work on the Wireless X should only be performed by authorized personnel with appropriate training. Maintenance and servicing is performed based on EN 60079-17. As part of the maintenance, in particular, parts that depend on the ignition safety must be inspected. This includes, in particular, the seals, the fastening system, cable and wire entries.

SUPPORT

Email: **support@bartec-pixavi.com**
Phone: **+47 51 73 15 15**
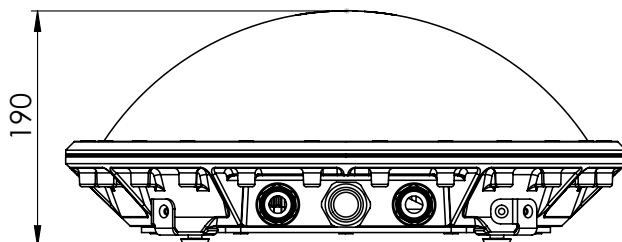Web **https://www.pixavi.com/support-forum/**
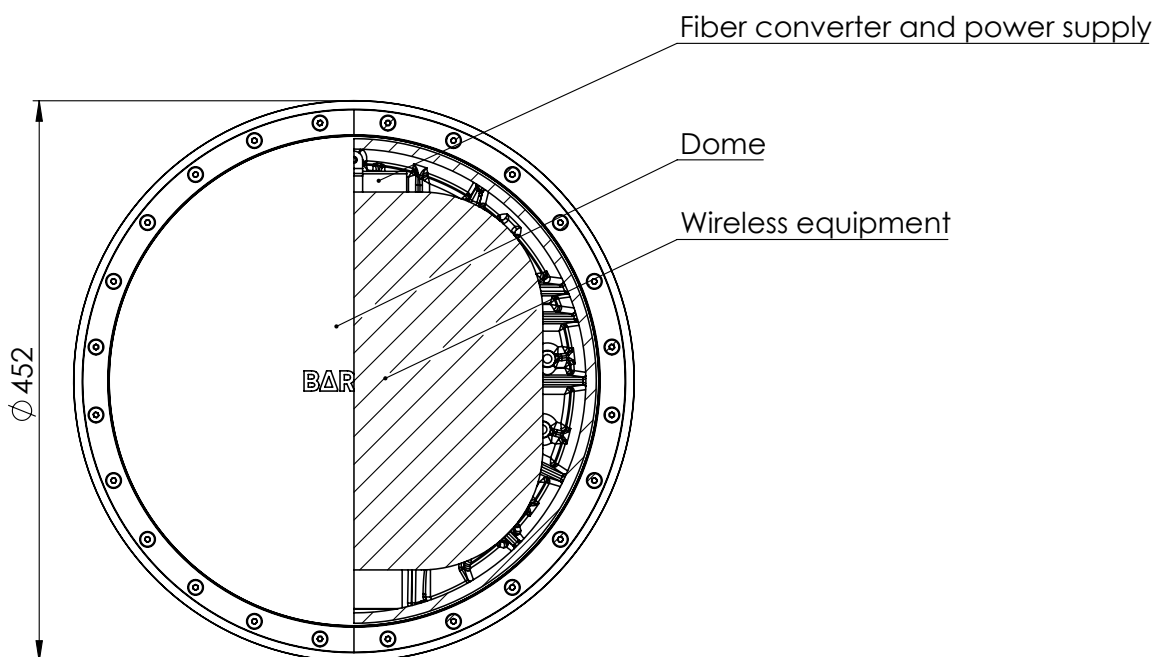
⚠️ **WARNING**

Only genuine accessories and spare parts, made by BARTEC PIXAVI, may be used. Using non-genuine parts will void warranty.

TECHNICAL DRAWINGS

Side view

190

Fiber converter and power supply

Dome

Wireless equipment

**Top view
(Ex d)
tion view of dome**

⌀ 452

BAR

3 Ex e glands

Fixing/earthing bracket

O-ring

Termination plate
For PWR, Fiber and Ethernet

Ex e compartment

4 Ex d bushings

M6 fasteners for Ex e lid

**Bottom view
(Ex e)**
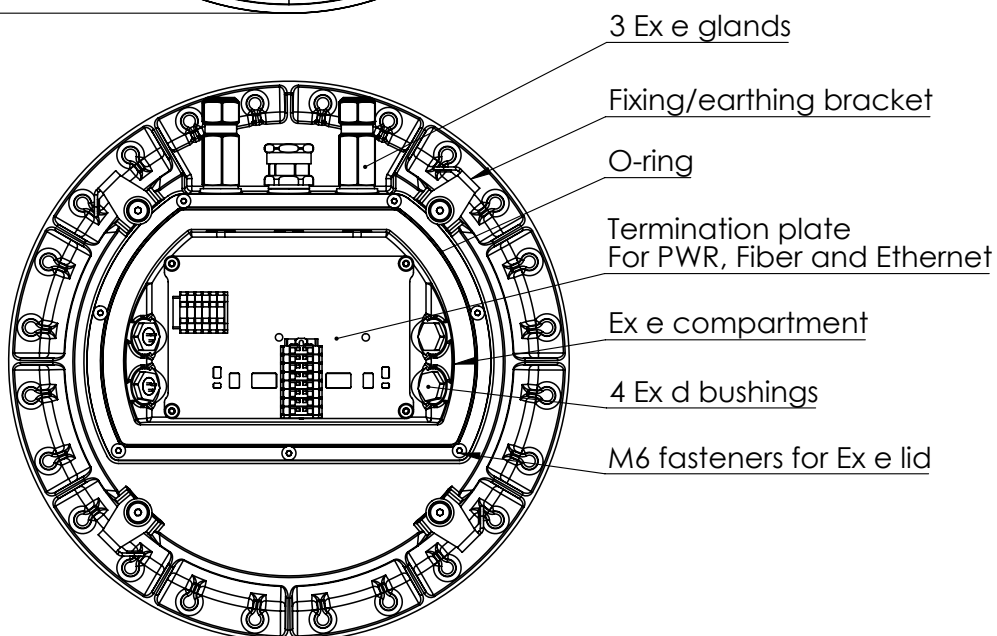
MATERIAL LIST

Item	Description	Material
Main Chassis and Ring	Chassis and ring around dome	**Aluminum version:** Marine grade aluminum, Powder coated
		Stainless Steel version: Stainless steel CF3M, Acid pickling/passivation, Powder coated
Dome	Dome for Ex d chamber	Composite, Marine grade gelcoat
Ex e lid	Lid for Ex e chamber	**Aluminum version:** Marine grade aluminum, Powder coated
		Stainless Steel version: Stainless steel 316L, Acid pickling/passivation
Ex e Gasket	Gasket for Ex e chamber	NBR, CS= 1.5mm, ID= 275mm
Screws and mountingparts	All fasteners and external brackets	316L Stainless steel
Mounting brackets	Ceiling, wall and pipe brackets	316L Stainless steel, Acid pickling/passivation

LETTER OF CONFORMITY

https://www.bartec.de/en/products/automation-enterprise-mobility/network-technology/wireless-x/

COMPLIANCE

Equipment is complying with:

- EN IEC 60079-0:2018 (IEC 60079-0:2017 Edition 7.0)

- EN 60079-1:2014 (IEC 60079-1:2014 Edition 7.0)

- EN IEC 60079-7:2015/A1:2018 (IEC 60079-7:2017 Edition 5.1)

- EN 60950-1 Information technology equipment - Safety - Part 1: General requirements

BARTEC

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