



iWAP XN3

INSTALLATION AND OPERATING MANUAL

Document Number X124391(6) Refer to Extronics DDM for release status.
Based on type approval documents X123263 and X124186.

The photograph on the front page shows the XN3 Aluminium Enclosure version.

For warranty information, refer to Terms and Conditions at <http://www.extronics.com>

© 2021 Extronics Limited. This document is Copyright Extronics limited.

Extronics reserve the right to change this manual and its contents without notice, the latest version applies.

Contents

1	Introduction	4
2	Safety Information and Notes	5
2.1	Storage of this Manual	5
2.2	Special Conditions for Safe Use / Conditions particulières d'utilisation	5
2.2.1	ATEX/IECEX	5
2.2.2	MET	5
2.3	List of Notes	6
3	Installation.....	11
3.1	Installation Overview for MET Certified XN3	11
3.2	Mounting.....	11
3.3	Opening and Closing the Enclosure	14
3.3.1	Opening the front cover plate	14
3.3.2	Closing the Enclosure.....	14
3.4	Cable Entries	15
3.4.1	Typical Cable Entries and Connections	15
3.5	Earthing	16
3.5.1	Protective Earth Connection	16
3.5.2	Location of XN3 enclosure earth bond points	16
3.6	Electrical Installation	18
3.7	Power Supply / Input Connector.....	19
3.8	Fuse Rating	19
3.9	External Overcurrent Protection	20
3.10	Data Connections	20
3.10.1	Copper Ethernet.....	20
3.10.2	Power-Over-Ethernet (POE)	20
3.10.3	Optical Fibre	20
3.10.4	Console Port	21
3.11	Intrinsically Safe RF Outputs.....	22
3.11.1	Example of RF threshold power calculation	22
3.12	Antenna Requirements.....	24
3.13	Antenna Installation	24
3.14	Ex Main Enclosure Test	24
4	Intended Purpose Usage	25
4.1	Transportation and Storage	25
4.2	Authorized Persons.....	25
4.3	Cleaning and Maintenance	25
4.4	Cleaning and Maintenance Intervals.....	25
4.5	Aggressive substances and environments	25
4.6	Exposure to external stresses	25
5	Pole Mounting.....	26
6	Technical Data.....	27
7	Marking information	28
7.1.1	ATEX/IECEX.....	28
7.1.2	MET.....	29
8	Type Codes	30
8.1.1	ATEX/IECEX.....	30
8.1.2	MET.....	30
9	EU Declaration of Conformity.....	31

1 Introduction

The iWAP XN3 has been designed to enable the deployment of popular wireless access points, radio and communications equipment or Industrial Internet of Things IIoT / Industry 4.0 devices in Zone 2 / Division 2 hazardous areas (Gas or Dust). Available in 4 different heights, designated Model 15, 24, 30 and 36, the iWAP XN3 will suit a wide range of equipment sizes, from a small (IIoT) device to an industrial access point with wireless gateway in the same enclosure.

The RF outputs of the iWAP XN3 are galvanically isolated to make them intrinsically safe, allowing users to choose non-certified antennas for use with their wireless hardware – such as the Extronics iANT2xx range of high quality rugged outdoor antennas. Any antennas not listed in the Extronics range must be assessed by the user to ensure they meet the requirements for installation of non-electrical equipment in hazardous areas.

A range of wireless devices from multiple manufacturers including CISCO and ARUBA, have been assessed by our engineers, following the guidelines of our Notified Body, as suitable for use in the iWAP XN3 and complying with all regulations. Wireless access points, radio and communications equipment or IIoT / Industry 4.0 devices can be chosen by the customer as required.

With IP66 / Type 4 (NEMA standards) ingress protection and a Marine grade copper-free aluminium alloy, e-coat with epoxy powder coated enclosure plus the option of surge protection, the iWAP XN3 is suitable for a wide variety of industrial and off-shore locations including chemical and pharmaceutical plants, oil refineries, FPSOs and oil and gas platforms.

2 Safety Information and Notes

2.1 Storage of this Manual

Keep this user manual safe and in the vicinity of the device. All persons required to work on or with the device should be advised on where the manual is stored. Conserver ce manuel d'utilisation en lieu sûr et à proximité de l'appareil. Toutes les personnes devant travailler sur ou avec l'appareil doivent être informées de l'endroit où est rangé le manuel.

2.2 Special Conditions for Safe Use / Conditions particulières d'utilisation

2.2.1 ATEX/IECEX

1. The equipment is not to be mounted in a high airflow dust laden atmosphere and should only be cleaned with a damp cloth.
2. The equipment is to be mounted in a vertical orientation with the Ec connection box at the base.
3. The connection between the antenna and the factory installed N-type connector shall maintain at least IP54.
4. The 'ec' portion of the enclosure may contain a USB console connection. When fitted this connection is for service purposes only and shall not be used in normal operation.

2.2.2 MET

1. The equipment is not to be mounted in an area with a high airflow dust laden atmosphere, in addition, cleaning of the enclosure shall only be with a damp cloth. L'équipement ne doit pas être monté dans une zone à l'atmosphère à haut débit d'air chargé de poussière. En outre, le nettoyage du boîtier ne doit être effectué qu'avec un chiffon humide.
2. The enclosure shall only be mounted in a vertical orientation with the top plate face up. Le boîtier doit être monté uniquement orienté à la verticale, avec la plaque supérieure face vers le haut.
3. The connection between the antenna and the factory installed N-type connector shall maintain at least IP54. La connexion entre l'antenne et le connecteur de type N installé en usine doit préserver au moins un IP54.
4. The 'ec' portion of the enclosure may contain a USB console connection. When fitted this connection is for service purposes only and shall not be used in normal operation. La partie « ec » du boîtier peut contenir une connexion à une console USB. Lorsqu'elle est montée, cette connexion sert uniquement à des fins d'entretien et ne doit pas être utilisée en fonctionnement normal.
5. Temperatures may exceed 70°C at the junction box gland entry point and 80°C at the cable branching point, use suitably rated cable and cable entry devices. La température peut dépasser 70 °C au point d'entrée du presse-étoupe du boîtier de raccordement, et 80 °C au point de dérivation du câble. Utiliser un câble et des dispositifs d'entrée de câbles d'une puissance suffisamment adaptée.

2.3 List of Notes

The notes supplied in this chapter provide information on the following:

- Warning!
 - Possible hazard to life or health.
- Caution
 - Possible damage to property.
- Important
 - Possible damage to enclosure, device or associated equipment.
- Information
 - Notes on the optimum use of the device.

Warning! Installation of the XN3 must be performed in accordance with IEC 60079-14 and IEC 60079-25. Maintenance and inspection must be performed in accordance with IEC 60079-17.

Avertissements! L'installation de l'iWAP XN3 doit être effectuée conformément aux normes CEI 60079-14 et CEI 60079-25. La maintenance et l'inspection doivent être réalisées conformément à la norme CEI 60079-17.

Warning! Installation of the XN3 is only to be performed by skilled electricians and instructed personnel in accordance with national legislation.

Warning! The XN3 contains INTRINSICALLY SAFE circuits.

Warning! The XN3 Intrinsically Safe RF output ports are located in the positions shown in Section 3.4. Only antennas in accordance with Section 3.12 may be connected to these ports. Refer to Section 3.13 for antenna installation requirements.

Warning! The XN3 MUST be earthed. It must be connected to the plant earth system using at least one of the external bonding points, using a minimum 4mm² conductor. The earth cable must be installed in accordance with the requirements of IEC 60079-14. Refer to Section 3.4 for details. The cover plate earth bond must not be removed.

Avertissements! L'iWAP XN3 doit être mis à la terre. Il doit être raccordé au système de mise à la terre de l'installation, en utilisant au moins un des points externes de liaison à la terre, avec un conducteur d'un minimum de 4 mm². Le câble de terre doit être installé conformément aux exigences de la norme CEI 60079-14.

Warning! The XN3 front cover plate earth bond must not be removed.

Avertissements! La liaison à la terre de la plaque de protection de l'iWAP XN3 ne doit pas être retirée.

Warning! The XN3 internal power input connector has an earth connection, which must be terminated to the protective earth conductor of the incoming power supply.

Warning! The XN3 must NOT be installed in hazardous areas requiring Category 1, 2, M1 or M2 equipment.

Warning! The XN3 enclosure must NOT be opened when an explosive gas or dust atmosphere is present, or when the equipment is energized.

Avertissements! L'iWAP XN3 ne doit pas être ouvert dans une atmosphère contenant de la poussière ou un gaz explosif, ni lorsque l'équipement est sous tension.

Warning! The XN3 enclosure must be secured only with the bolts supplied, and these must be tightened to the correct torque value. See Section 3.3.2 for details. Contact Extronics for replacement bolts.

Avertissements! La plaque de protection de l'iWAP XN3 ne doit être fixée qu'avec les boulons fournis et serrés à la valeur de couple correcte.

Warning! The XN3 enclosure must only be fitted with suitably approved cable entry devices. See Section 3.4 for details.

Avertissements! L'iWAP XN3 ne doit être monté qu'avec des composants d'entrée de câbles correctement évalués.

Warning! Do not exceed the RF Threshold Power for the equipment group in which the XN3 and its antennas are to be installed; it must be controlled in accordance with IEC 60079-0, and must not exceed the following levels:

- IIC – 2W (+33dBm)**
- IIB – 3.5W (+35.4dBm)**
- IIA – 6W (+37.7dBm)**
- III – 6W (+37.7dBm)**

See Section 3.11.1 for an example of how to calculate the RF Threshold Power

Avertissements! Ne pas dépasser la puissance RF seuil pour le groupe d'équipement, dans lequel le XN3 et ses antennes doivent être installés ; il doit être contrôlé conformément à la norme CEI 60079-0.

Warning! The XN3 must not be modified in any way.

Warning! Hazardous voltages are present within the XN3 enclosure.

Warning! Hot surfaces may be present on the XN3 enclosure - observe any warning labels fitted.

Warning! Optical radiation hazards may be present within the XN3 enclosure – observe any warning labels fitted.

Warning! The XN3 may weigh up to 25Kg. Exercise care when handling and mounting.

Warning! DO NOT lift the XN3 using the threaded entries or N-type RF connectors. Good manual handling practice should be followed.

Warning! User access: Normal user access to the enclosure is through the cover plate and junction box

Avertissements! Accès utilisateur: L'accès normal d'un utilisateur au boîtier s'effectue par la plaque de protection et le boîtier de raccordement.

Warning! Special access: If the main enclosure is opened, integrity of the main enclosure sealing must be confirmed by a competent person

Avertissements! Accès special: Si le boîtier principal est ouvert, l'intégrité de son étanchéité doit être confirmée par une personne compétente.

Warning! Console port connections can only be used during setup or maintenance activities. They should not be left connected in a hazardous area.

Avertissements! Les connexions du port de la console ne peuvent être utilisées que pendant les opérations de configuration ou de maintenance.

Warning! Internal cells or batteries if applicable must only be replaced with cells or batteries of the same type.

Avertissements! Les cellules ou batteries internes, le cas échéant, ne doivent être remplacées que par des cellules ou batteries du même type.

Warning! The XN3 protective plastic transport caps fitted to all threaded cable entries MUST be replaced with suitably certified cable glands or stopping plugs before installation in a hazardous area.

Warning! Although antennas connected to the Intrinsically Safe RF outputs of the XN3 may be installed in a hazardous areas requiring Category 1 equipment, the XN3 enclosure must NOT be installed in these environments.

Warning! Maintenance and inspection of the XN3 must be performed in accordance with IEC 60079-17.

Important Before setting the units to work, read the technical documentation carefully.

Important The latest version of the technical documentation or the corresponding technical supplements is valid in each case.

Important Do not exceed the power supply parameters specified on the XN3 external rating plate.

Important Ensure that only the correct fibre transceiver format/power is connected to the XN3. Damage to the XN3 fibre interface or customer equipment may occur if the wrong format/excessive optical power is used.

Important Ensure that NO TOOLS come into contact with the gasket of the enclosure, as this may cause irreparable damage and render the unit unsafe.

Important The XN3 may be powered from a number of different power sources, depending on its configuration. Refer to the rating plate of the unit supplied for details.

Important There should be no need to enter the unit and change the fuse as it is resettable.

3 Installation

3.1 Installation Overview for MET Certified XN3

Mount the iWAP XN3 to a suitable structure using mounting points shown in Figure 1. The recommended fixings are:

- M10 Flat Washer Form A DIN125A A4.
- Socket Cap Head Screw M10 x 30 DIN912 A4-80 (minimum thread length of 30mm). Thread can be longer to suit application.

Connect suitably assessed antennas to RF outputs, Figure 3 marked A-D as appropriate.

- Connection type: N-type.

Apply suitably assessed glands to cable entries, Figure 3 marked E and F as appropriate.

- Thread maximum size is M25x1.5 or 3/4" NPT depending on customer specification.
- Connect cables to glands as required.

Make off connections inside junction box

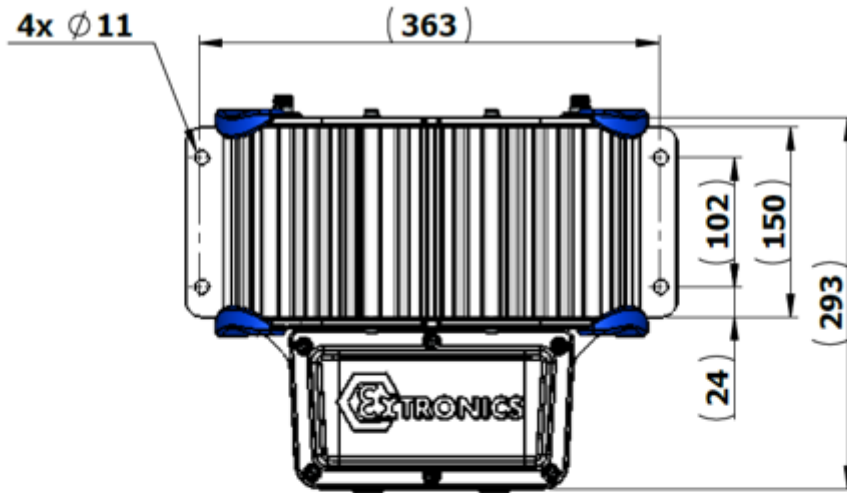
- Remove cover plate and keep bolts for reassembly
- When refitting cover plate, only use supplied bolts and tighten to a torque of 3.5Nm. Check seal position and condition.

3.2 Mounting

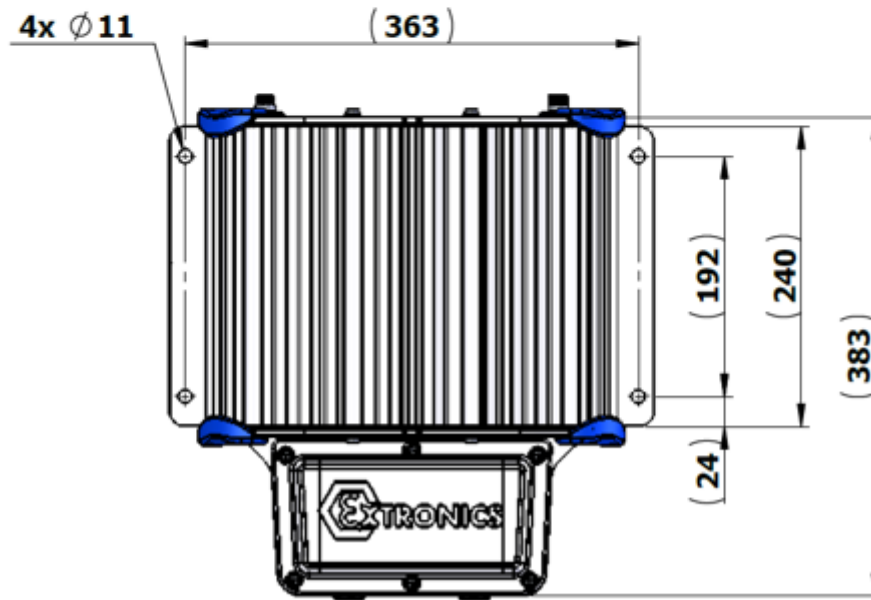
Mount the XN3 enclosure to a suitable structure, using the mounting points shown in Figure 1.

The recommended fixings are:

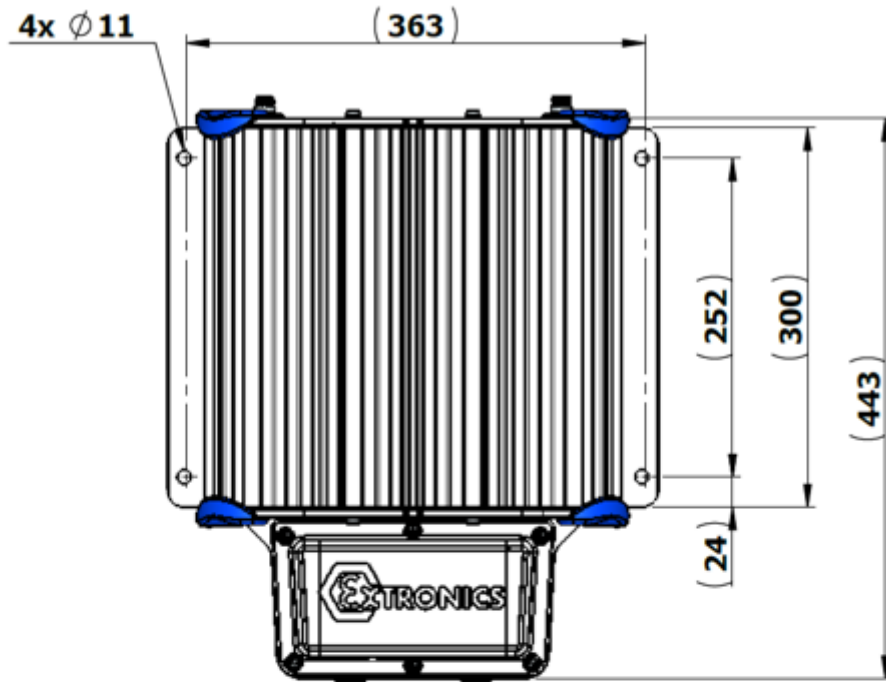
- M10 Flat Washer Form A DIN125A A4.
- Socket Cap Head Screw M10 x 30 DIN912 A4-80 (minimum thread length of 30mm). Thread can be longer to suit application.



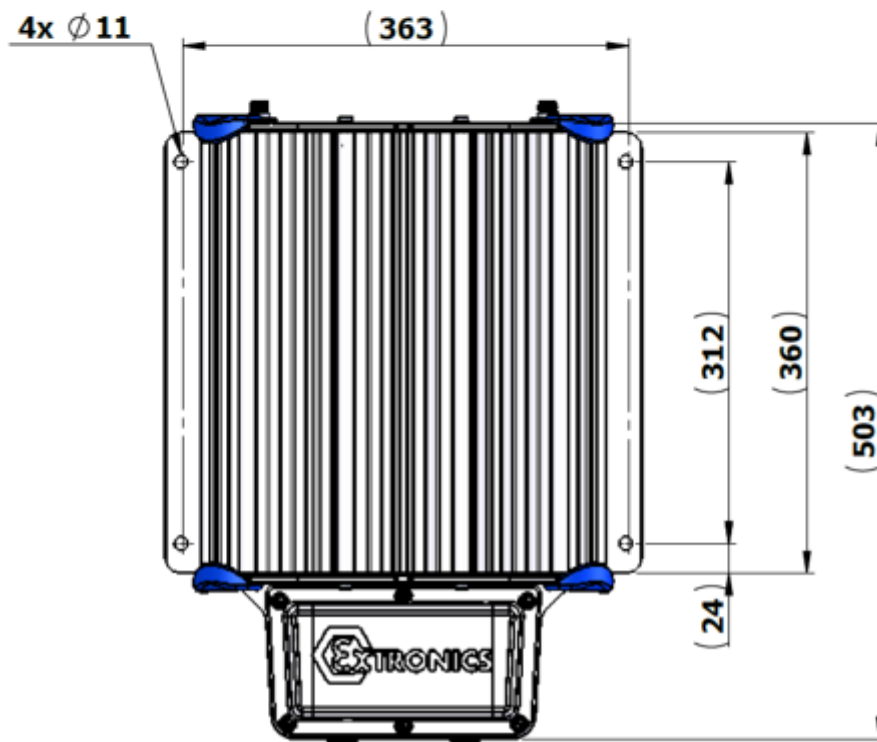
MODEL 15



MODEL 24



MODEL 30



MODEL 36

Figure 1: Aluminium Enclosure Mounting Dimensions

3.3 Opening and Closing the Enclosure

3.3.1 Opening the front cover plate

The front cover plate is shown in Figure 2.

- Remove all bolts using a metric hex key. Store the bolts carefully to avoid damage or loss.
- Ensure care is taken when removing the cover. Do not use a screwdriver or any other sharp implement to prise the cover apart as it may damage the sealing gasket.

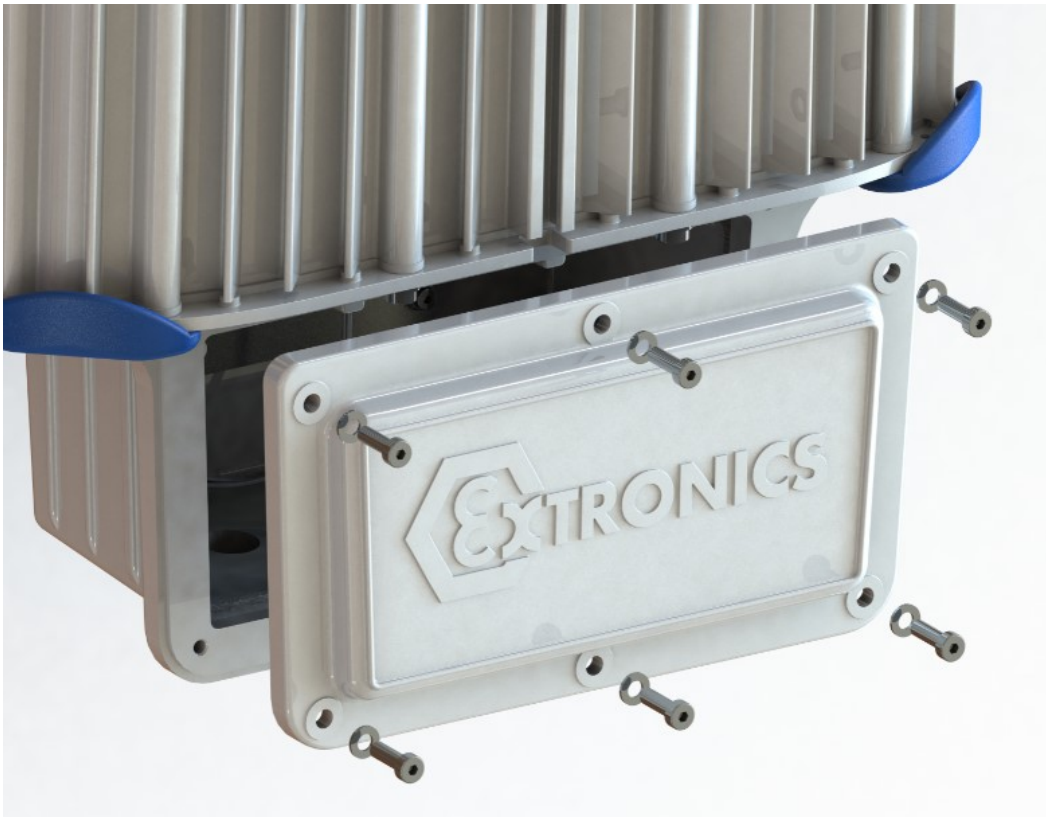


Figure 2: Opening XN3 Front Cover Plate.

3.3.2 Closing the Enclosure

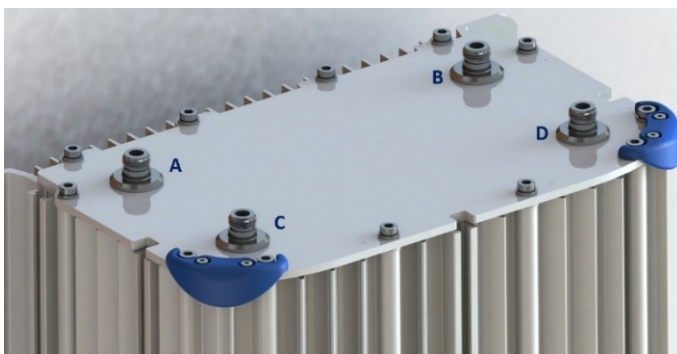
- Inspect the gasket to ensure its sealing integrity. If the front cover gasket is damaged it must be replaced.
- Check all bolts are the correct type and free from damage.
- Re-insert the bolts and hand-tighten only.
- Using a torque wrench fitted with an 3mm hex head, tighten the bolts in opposite corners of the enclosure, then work clockwise around the front cover. Tighten to a torque of 3.5Nm.

3.4 Cable Entries

3.4.1 Typical Cable Entries and Connections

A typical XN3 enclosure is supplied with entries and connectors as shown in Figure 3.

- Connections A-D are INTRINSICALLY SAFE outputs providing galvanically isolated RF signals (see Section 3.10 for details), carried on conventional 50Ω impedance N-type female connections. The N-type connections are the front part of the bulkhead which transit through the enclosure and are approved as part of the XN3 ATEX/IECEX certification.
- Apply suitably assessed blanking plugs or cable entry devices to locations marked E and F as appropriate.
 - Standard thread size is M20 x 1.5.
 - Suitably certified M20 IP66 blanking plugs can be fitted.
 - Cable entry devices or adaptors can be fitted to meet IP66.
 - Threaded adaptors may be used according to customer order specification.
 - The XN3 may be shipped with thread protectors in cable entries E and F which are not to be used for Ex or IP protection.
- The position and configuration of cable entries and connections can vary depending on the XN3 ordered. Mark off connections inside the junction box.
 - Remove cover plate and keep bolts for reassembly.
 - When refitting the cover plate, only use supplied bolts and tighten to torque 3.5Nm. Check seal position and condition. Refer back to Section 3.2.2.
 - Check with Extronics for more information if required.



Figures 3: XN3 entries and connectors.

3.5 Earthing

3.5.1 Protective Earth Connection

The protective earth connection is provided on the power input connector, Figure 6, item B. The protective earth conductor must have the minimum sizes, Table 1 and must be protected.

Conductor protection	Conductor Size
Heavy-duty cord jacket, metallic flexible conduit	2.5mm ²
Non-flexible metal conduit	1.5mm ²

Table 1: Protective Earth Connection

The use of non-metallic flexible conduit is not allowed.

3.5.2 Location of XN3 enclosure earth bond points

There are two earth bonding points, one inside the junction box and one outside the junction. Torque earth bonding fixings 3.5Nm.

Inside the junction box there is an M6 threaded earth bonding point, Figure 4. Removal of the front cover plate is required to access the area. Before putting in service:

- Perform applicable electrical safety checks.
- Visually check integrity of seals.

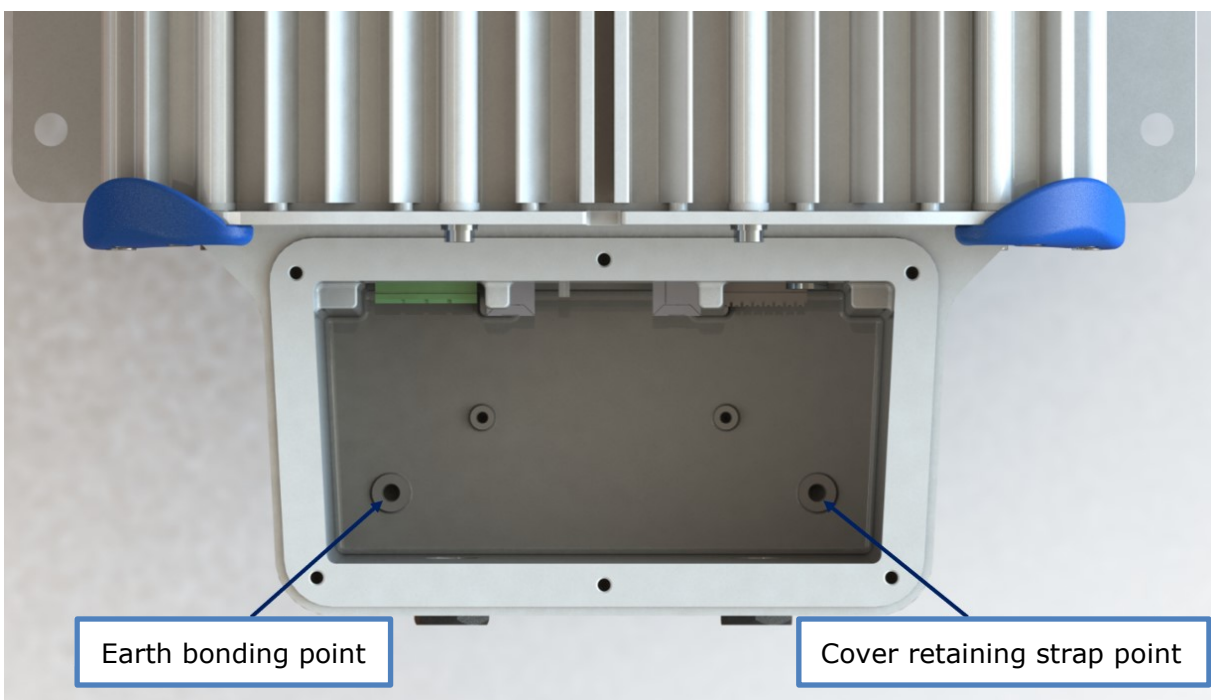


Figure 4: XN3 Enclosure Junction Box Earth Bonding Point.

Outside the Junction Box, an earth bonding point is also provided, Figure 5.

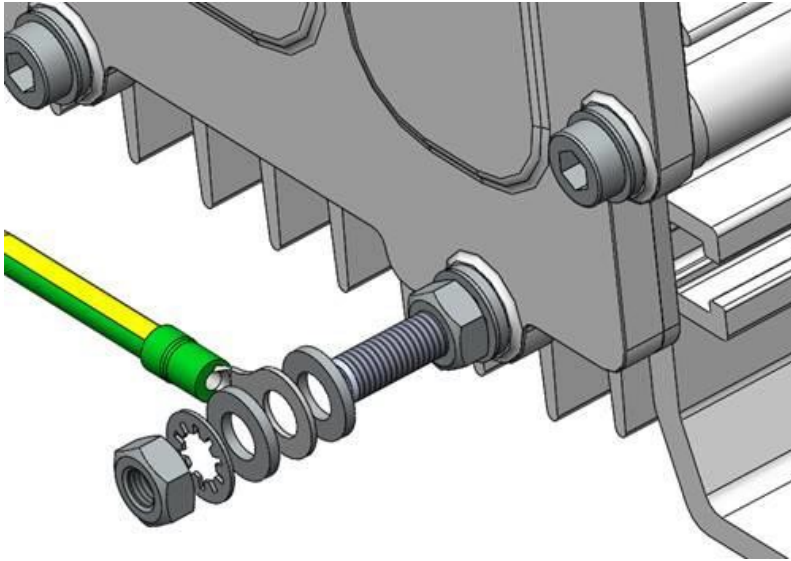


Figure 5: External earth bonding point.

MET additional information:

- The iWAP XN3 must be connected to the plant earth system using at least one of the bonding points, using a minimum 4mm² conductor. The earth cable must be installed in accordance with the requirements of NFPA 70 and CSA C22.1.
- Assemble the external earth bond as shown in Figure 5.

3.6 Electrical Installation

View inside junction box, Figure 6 and Table 2.

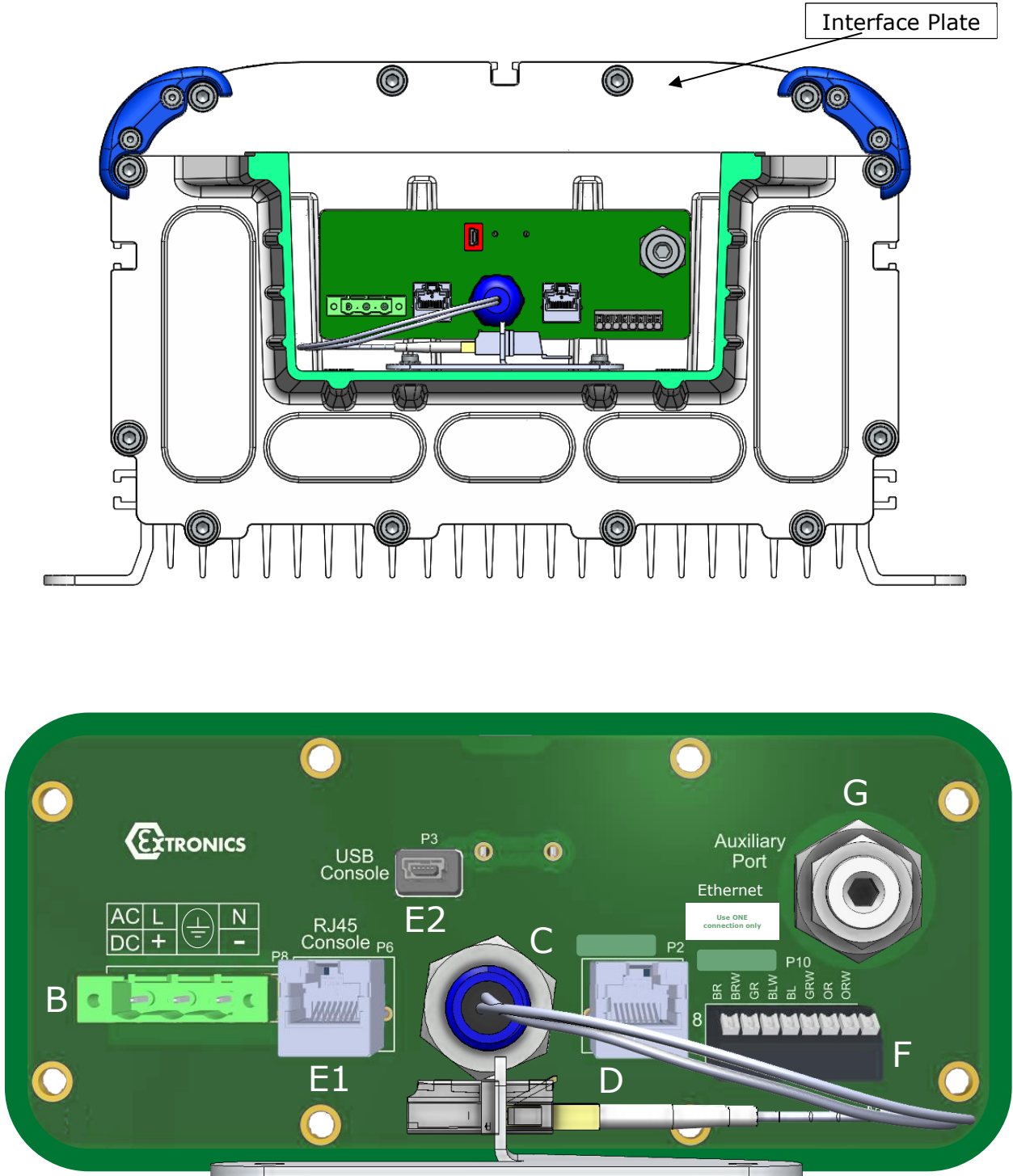


Figure 6: XN3 Internal Connections Showing All Options.

Designator	Purpose	Comments
B	Power input	Mains (L,N,E) or DC (+,-,E) input, dependent on product configuration.
C	Fibre input cabled to separate dual LC coupler.	Can be replaced by a blanking plate, depending on product options. None fibre configurations will be supplied with a difference PCBA.
D	Ethernet input	For or Ethernet connection. Alternative connection to F
E1	Console port	Alternative connection to E2
E2	Console port	Maintenance / setup use only. Must not be used when iWAP XN3 is in service. Note* On some Access Points a USB converter is supplied to enable a connection using AP specific maintenance cables.
F	PoE/PoE(+) input	Alternative connection to D for Ethernet. 8-way push fit connector
G	Auxiliary port	Pressure test port

Table 2: XN3 Internal Connection/Features

3.7 Power Supply / Input Connector

The mains power connection is a phoenix socket on the PCB. The plug part is Phoenix contact 1795789. It requires a minimum tightening torque of 0.5Nm. Note wire types in Table 3.

Wire Type	Minimum Cross-Sectional Area	Maximum Cross-Sectional Area
Single Solid Core	0.2mm ²	2.5mm ²
Single Stranded Wire	0.2mm ²	2.5mm ²

Table 3: XN3 Power Connector Wire Gauges

MET additional information:

The actual wire gauge size to be used should be sufficiently rated with regards to the overcurrent protection device fitted and must be as per the applicable installation code - National Electrical Code, Canadian Electrical Code, etc.

3.8 Fuse Rating

The iWAP XN3 is fitted with a single resettable fuse on the live circuit with ratings dependant on the application. Maximum (and typical) values are:

- AC input: 2A (750mA)
- DC input: 7A (2.5A)

If there is a power fault, the fuse may activate in which case power should be removed from the unit and reapplied.

3.9 External Overcurrent Protection

The XN3 should be installed on a circuit with a double-pole circuit breaker of a maximum rating of 25A. This is the maximum current rating of the smallest internal chassis earth bond in accordance with EN60950-1 2.6.3.3. Refer to Extronics if it becomes necessary to exceed this rating.

3.10 Data Connections

3.10.1 Copper Ethernet

Information Check that the line speed of the switch port to which the XN3 is connected matches the XN3 port configuration, otherwise communication may not be established.

If Copper Ethernet is specified, this will be terminated in a standard CAT5E RJ45 Socket on the front plate of the XN3, Position D in Figure 6. Typically, the interface will be an IEEE 10/100/1000BaseT format, but this is dependent on the access point installed.

Terminate the RJ45 plug as shown in Figure 7 (EIA 568B standard).

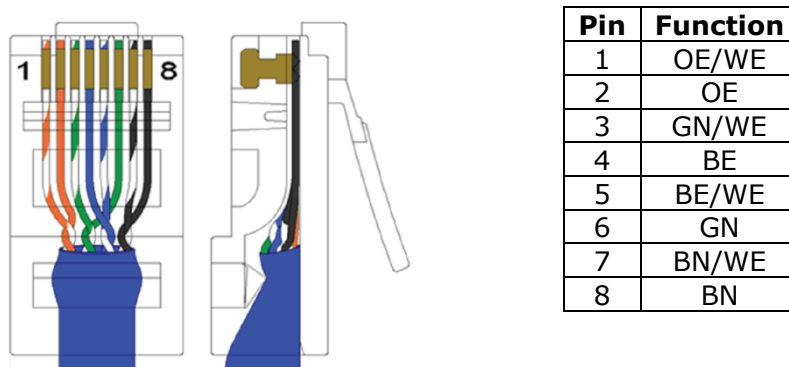


Figure 7: RJ45 CAT5E EIA 568B Plug Wiring

3.10.2 Power-Over-Ethernet (POE)

If POE is used, the format will depend on the access point installed in the XN3. Ensure that the correct Power Sourcing Equipment (PSE) is used. Connect the RJ45 cable per Section 3.10.1.

3.10.3 Optical Fibre

The XN3 optical fibre format may be any shown in Table 4, refer to product option code #5 for details. Other optical formats are available on request.

Option #5	Fibre Format	Connection	Transmitter Power	Receiver Sensitivity	Max Receiver Input Without Damage	Wavelength	Typical Range
MF	1000 Base-SX	LC Duplex Multimode	-3 to -9.5dBm (62/125µm) -1 to - 9dBm (50/125µm)	-19dBm	-1dBm	850nm	550m
SF	1000 Base-LX	LC Duplex Single	-3 to -9.5dBm	-20dBm	-3dBm	1310nm	20km

Table 4: Fibre Formats

MET additional information:

Where fitted, the fibre optic connection may only be supplied from a Class 1 laser source. The output from the fibre optic connection is also a Class 1 laser source.

3.10.4 Console Port

There are two types of console port connectors that can be specified as below. Only one type is possible on the same unit.

3.10.4.1 RJ45

The console port, Table 5, is a standard Cisco RS232 configuration port on an RJ45 socket. The port for Cisco Access Points is 9600 baud, 8 data bits, no parity, 1 stop bit. Other vendors may use different formats.

Pin	Function
1	RTS
2	DTR
3	TXD
4	GND
5	GND
6	RXD
7	DSR
8	CTS

Mini USB

Pin	Function
1	Vcc
2	D-
3	D+
4	ID
5	GND

Table 5: Cisco console port wiring

3.11 Intrinsically Safe RF Outputs

Refer to Figure 8 for location of Intrinsically Safe RF outputs.

3.11.1 Example of RF threshold power calculation

The following example shows how the RF threshold power may be calculated:

Maximum transmitter output power (from transmitter datasheet) = 20dBm (100mW)

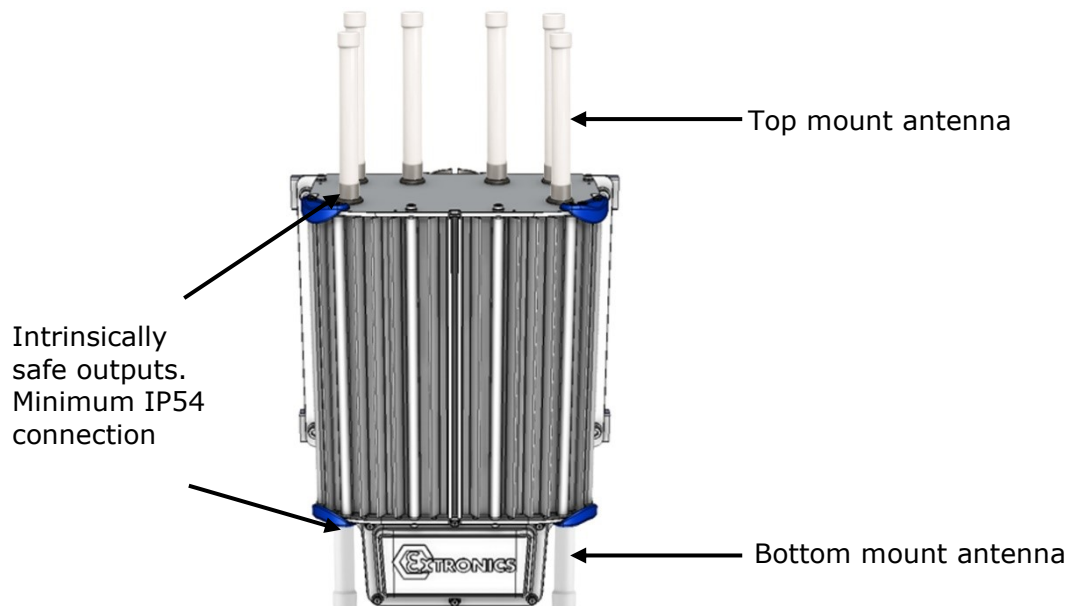
Coaxial cable loss = 2dB

Antenna gain = 5dBi

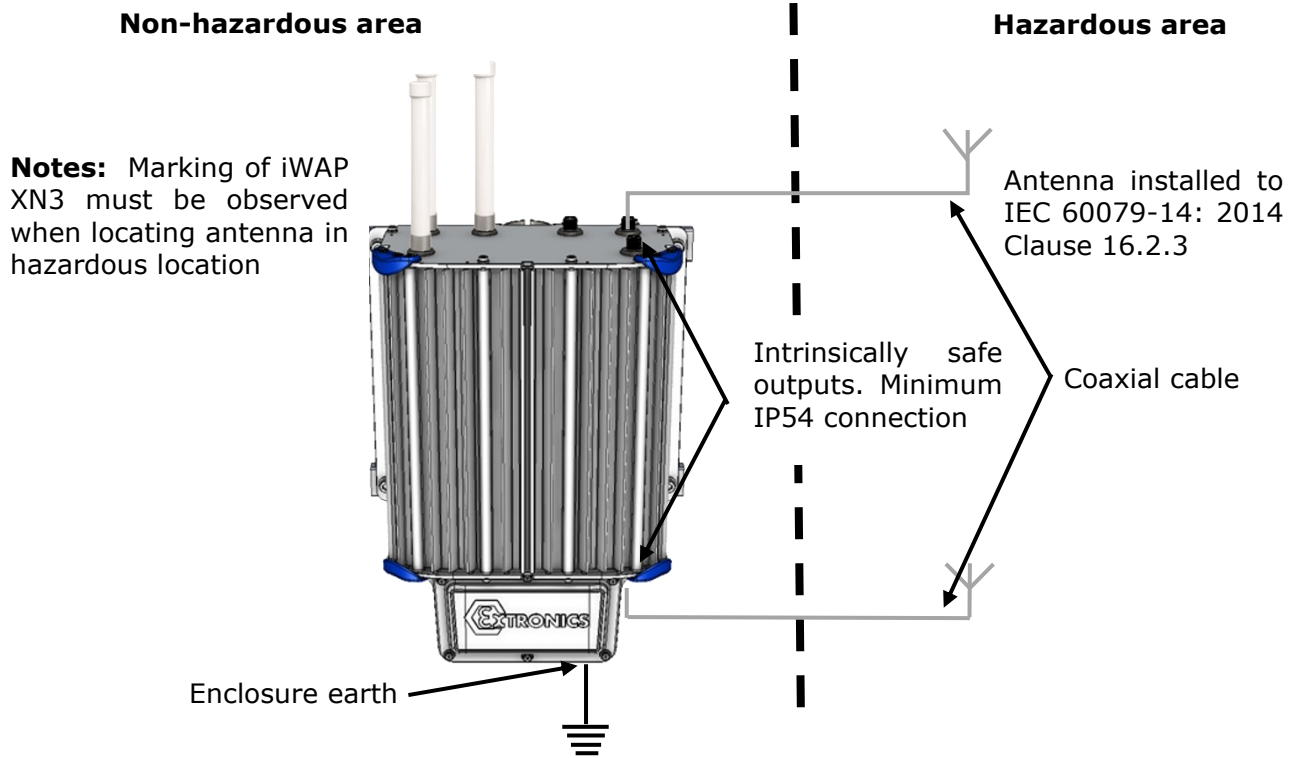
Threshold power = 20dBm - 2dB + 5dBi

Threshold power = 23dBm (200mW)

Standard configuration



Remote mounting



Maintain $>500V_{rms}$ isolation between conductive parts of antenna and nearby conductive structures in accordance with IEC60079-14:2014 clause 16.2.3

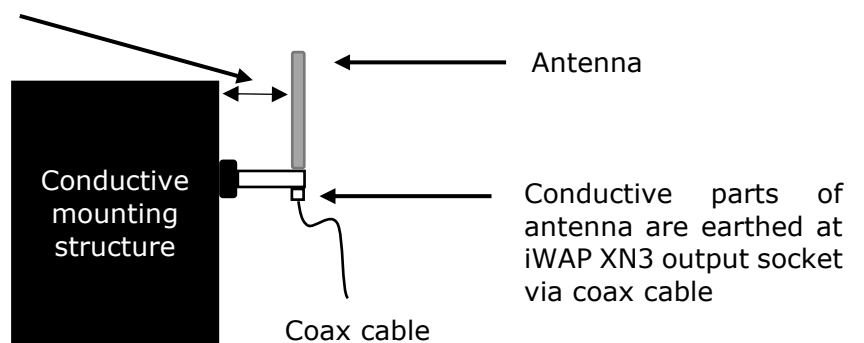


Figure 8: XN3 IS RF Installation Diagram.

3.12 Antenna Requirements

Antennas connected to the XN3 Intrinsically Safe RF outputs must be assessed as 'simple apparatus' in accordance with IEC 60079-11. Antennas supplied by Extronics for use with the XN3 already meet these requirements. It is possible to assess other antennas for this purpose, contact Extronics for details.

3.13 Antenna Installation

Antennas approved by Extronics for use with the XN3 may either be fitted directly to the RF connectors of the XN3 or via a length of coaxial cable. Table 6 provides a list of approved antennas.

Approved antennas				
iANT212	iANT213-2400	iANT213-5000	iANT213-QB	iANT214
iANT215	iANT216-M	iANT216-F	iANT217	iANT218
iANT219-2400	iANT219-5000	iANT220-2400	iANT220-5000	iANT221
iANT293-US				

Table 6: Approved Antennas.

If antennas are sited remotely from the XN3 flameproof enclosure, any metallic parts of the antennas must be isolated from earth by $>500V_{r.m.s}$, to prevent hazardous earth currents from flowing in the coaxial cable.

3.14 Ex Main Enclosure Test

If required, the integrity of the main enclosure sealing can be checked. To order at Pressure Test Kit, Figure 9, use order code iWAPTK01.



Figure 9: Pressure Test Kit.

Sealing integrity confirmed if under constant temperature conditions, the time interval required for an internal pressure of 0.3kPa (+10%, -0%) below atmosphere to change to half the initial value shall not be less than 180 seconds.

4 Intended Purpose Usage

The XN3 is built using modern components and is extremely reliable in operation. It must only be used for its intended purpose. Please note that the intended purpose also includes compliance with the instructions issued by the manufacturer for installation, setting up and service.

Any other use is regarded as conflicting with the intended purpose. The manufacturer is not liable for any subsequent damage resulting from such inadmissible use. The user bears the sole risk in such cases.

4.1 Transportation and Storage

All XN3 devices must be so transported and stored that they are not subjected to any excessive mechanical stresses.

4.2 Authorized Persons

Only persons trained for the purpose are authorized to handle the XN3; they must be familiar with the unit and must be aware of the regulation and provisions required for explosion protection as well as the relevant accident prevention regulations.

4.3 Cleaning and Maintenance

In general the XN3 and all its components require no maintenance. The XN3 does include seals. These seals should be replaced every 10 years and the enclosure retested using the Pressure Test Kit described in Section 3.13.

All work on the XN3 by personnel who are not expressly qualified for such activities will cause the Ex approval and the guarantee to become void.

4.4 Cleaning and Maintenance Intervals

The cleaning intervals depend on the environment where the system is installed.

4.5 Aggressive substances and environments

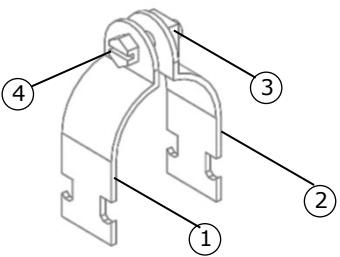
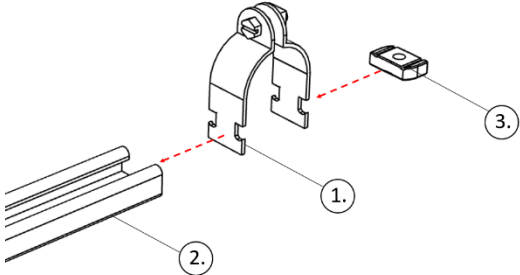
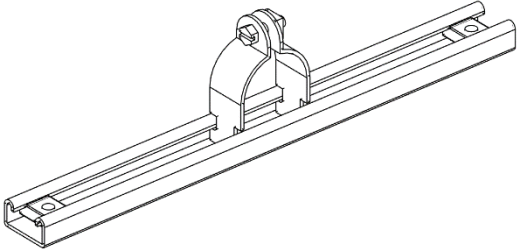
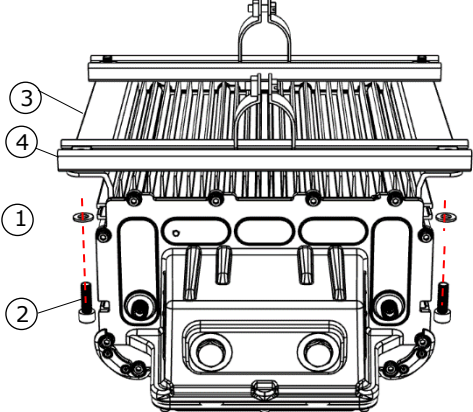
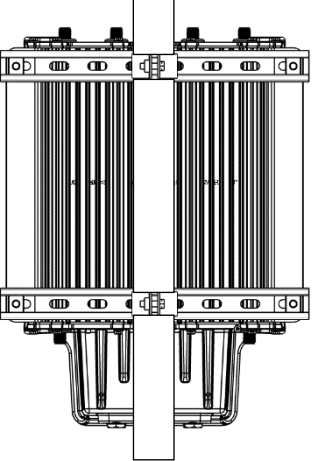
The XN3 is not designed to encounter aggressive substances or environments, please be aware that additional protection may be required.

4.6 Exposure to external stresses

The XN3 is not designed to be subjected to excessive stresses e.g. vibration, heat or impact. Additional protection is required to protect against these external stresses.

The XN3 will require additional protection if it is installed in a location where it may be subjected to damage.

5 Pole Mounting

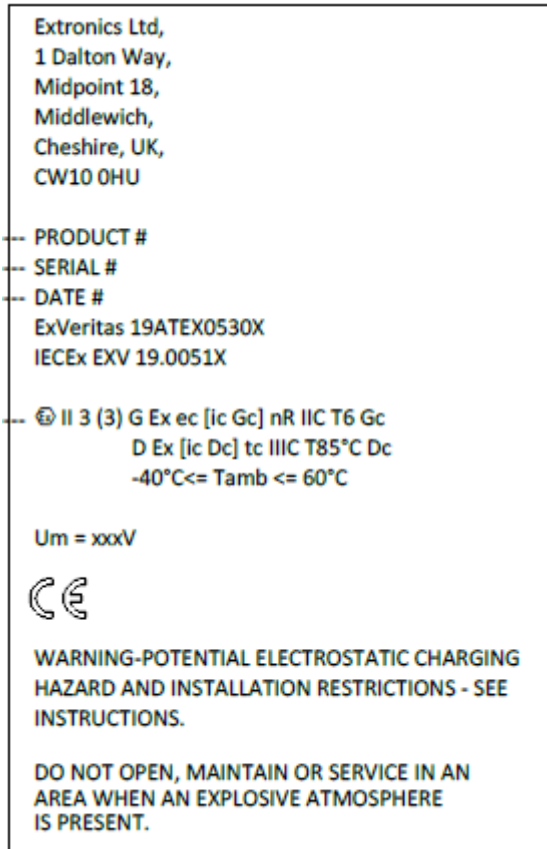
	
<ol style="list-style-type: none"> Using the clamp brackets (1) and (2) place them together as shown. Align the square nut (3) on one side and secure with the fixing screw (4). 	<ol style="list-style-type: none"> Align the pole mounting bracket (1) with the end of the rail (2) and slide it down the rail as shown. Align the fixing nut (3) and repeat the process. Repeat for the other side and the other rail.
	
<ol style="list-style-type: none"> This is how the assembly looks when completed. 	<ol style="list-style-type: none"> Place the iWAPX3 on a protective surface as shown 3. Align both rails on the rear as shown 4. Using washer 1, affix this in to the fixing screw 2 and pass through both the chassis and the mounting rail and screw in to the prefitted nut. Repeat for the other side and the other rail.
	
<ol style="list-style-type: none"> The unit is now ready to slide on to the mounting pole. Tighten all fixings. 	

6 Technical Data

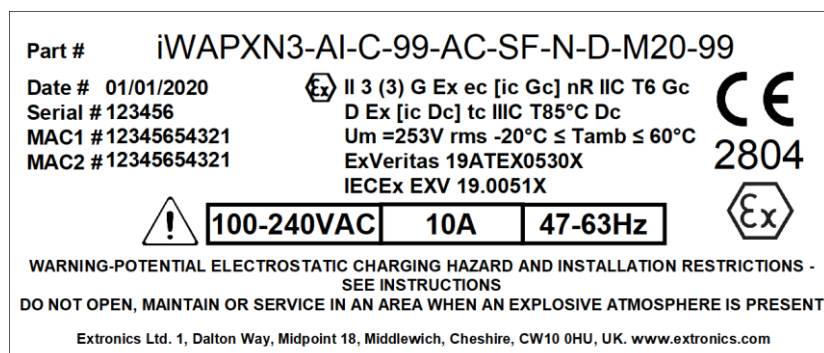
Certification	<p> Ex II 3 (3) G Ex ec [ic Gc] nR IIC T6 Gc 3 (3) D Ex [ic Dc] tc IIIC T85°C Dc cMETus Class I, Div 2, Groups A - D Class II, Div 2, Groups F - G cMETus Class I, Zone 2 AEx ec ic nR IIC T6 Gc Class II, Zone 22 AEx ec ic tc IIIC T85°C Dc -40°C ≤ Tamb ≤ 60°C </p>																											
Power supply	Specify POE / POE+ IEEE802at, AC or DC power																											
Maximum power consumption	Dependant on access point chosen and power supply option, see below																											
Enclosure material	Marine grade copper-free aluminium alloy with electrophoretic base and polyester powder top coat																											
Ingress protection	IP66 and NEMA 4																											
Enclosure weight (approx. excluding AP)	Model 15 7.8 Kg Model 24 10.3 Kg Model 30 12.0 Kg Model 36 13.7 Kg																											
Dimensions (including connection chamber and mounting points)	Model 15 293 x 388 x 220 mm (height x width x depth) Model 24 383 x 388 x 220 mm Model 30 443 x 388 x 220 mm Model 36 503 x 388 x 220 mm																											
Operating temperature	Dependant on access point chosen, see below																											
Storage temperature	Dependant on access point chosen, see below																											
Relative humidity	0 to 95%, non-condensing																											
Input connections	POE / POE+ Gigabit Ethernet on Weidmuller 8-way wired connector with console connections RJ45 and mini USB B sockets <u>or</u> AC or DC power via Phoenix 1829167 socket with console connections RJ45 and mini USB B sockets <u>and either</u> Gigabit Ethernet on RJ45 connector <u>or</u> Dual LC fibre connector (specify multi mode or single mode fibre)																											
Output connection	<p>Up to 8 galvanically isolated, intrinsically safe external RF outputs via external N-type RF connectors (maximum of 6 top or 6 bottom mounted). Internal surge arrestors are optional. Antennas may be Direct (top) mounted or Remote (bottom) mounted. Unless otherwise specified, Extronics will use the same number of RF outputs as available on the wireless device(s) chosen.</p> <table border="1"> <thead> <tr> <th>Frequency band</th> <th>Insertion loss (dB)</th> <th>Loss including surge arrestor (dB)</th> </tr> </thead> <tbody> <tr> <td>150MHz - 1GHz</td> <td>0.25</td> <td>0.40</td> </tr> <tr> <td>1GHz - 3.5GHz</td> <td>0.33</td> <td>0.48</td> </tr> <tr> <td>3.5GHz - 6GHz</td> <td>0.38</td> <td>0.53</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Spot frequency</th> <th>Insertion loss (dB)</th> <th>Loss including surge arrestor (dB)</th> </tr> </thead> <tbody> <tr> <td>400MHz</td> <td>0.22</td> <td>0.37</td> </tr> <tr> <td>900MHz</td> <td>0.24</td> <td>0.39</td> </tr> <tr> <td>2.45GHz</td> <td>0.32</td> <td>0.47</td> </tr> <tr> <td>5.5GHz</td> <td>0.36</td> <td>0.51</td> </tr> </tbody> </table>	Frequency band	Insertion loss (dB)	Loss including surge arrestor (dB)	150MHz - 1GHz	0.25	0.40	1GHz - 3.5GHz	0.33	0.48	3.5GHz - 6GHz	0.38	0.53	Spot frequency	Insertion loss (dB)	Loss including surge arrestor (dB)	400MHz	0.22	0.37	900MHz	0.24	0.39	2.45GHz	0.32	0.47	5.5GHz	0.36	0.51
Frequency band	Insertion loss (dB)	Loss including surge arrestor (dB)																										
150MHz - 1GHz	0.25	0.40																										
1GHz - 3.5GHz	0.33	0.48																										
3.5GHz - 6GHz	0.38	0.53																										
Spot frequency	Insertion loss (dB)	Loss including surge arrestor (dB)																										
400MHz	0.22	0.37																										
900MHz	0.24	0.39																										
2.45GHz	0.32	0.47																										
5.5GHz	0.36	0.51																										

7 Marking information

7.1.1 ATEX/IECEX




- Um = 60Vdc or 253Vac depending on customer specification.
- Alternative ambient temperature ranges may be specified depending on the service temperature of installed equipment.
- Alternative coding when Extronics iSOLATE501 is installed for DC isolation:
AII 3 (1) G Ex ec [ia Ga] nR IIC T6 Gc
D Ex [ia Da] tc IIIC T85°C Dc
- Alternative coding for configurations with no RF output:
AII 3 G Ex ec nR IIC T6 Gc
D Ex tc IIIC T85°C Dc



7.1.2 MET

Extronics Ltd,
1 Dalton Way,
Midpoint 18,
Middlewich,
Cheshire, UK,
CW10 0HU

1 ---- PRODUCT #
2 ---- SERIAL #
3 ---- DATE#

 EXXXXXX

4 ---- Class I, Division 2, Groups A - D
Class II, Division 2, Groups F - G
Class I, Zone 2 AEx ec [ic Gc] nR IIC T6 Gc
Class II, Zone 22 AEx [ic Dc] tc IIIB T85°C Dc
-40°C <= Tamb <= 60°C

Um = xxxV

WARNING-POTENTIAL ELECTROSTATIC CHARGING HAZARD AND
INSTALLATION RESTRICTIONS - SEE INSTRUCTIONS.
AVERTISSEMENT - RISQUE DE CHARGE ÉLECTROSTATIQUE ET
RESTRICTIONS D'INSTALLATION - VOIR LES INSTRUCTIONS.
DO NOT OPEN, MAINTAIN OR SERVICE IN AN AREA WHEN AN EXPLOSIVE
ATMOSPHERE IS PRESENT.
NE PAS OUVRIR, ENTREtenir OU RÉPARER DANS UNE ZONE À
ATMOSPHÈRE EXPLOSIVE.
REFER TO INSTRUCTION DOCUMENT FOR SPECIFIC CONDITIONS OF USE.
SE REPORTER AU DOCUMENT D'INSTRUCTION POUR LES CONDITIONS
PARTICULIÈRES D'UTILISATION.

vvv V cc	aaa A	fff Hz
----------	-------	--------

RATING INFORMATION:

Um= xxx (SEE SHEET 1, NOTE 2)	vvv V cc	aaa A	fff Hz
60Vdc	0-60Vdc	0-7A	Not Used
253Vac	0-253Vac	0-2A	47-63Hz

MAXIMUM AND MINIMUM VALUES SHOWN
ACTUAL VALUES DEPEND ON INCLUDED EQUIPMENT

- Alternative ambient temperature ranges may be specified depending on the service temperature of installed equipment.
- Alternative coding when Extronics iSOLATE501 is installed for DC isolation:
 - Class I, Zone 2 AEx ec [iaGa] nR IIC T6 Gc
 - Class II, Zone 22 AEx [iaDa] tc IIIB T85°C Dc
- Alternative coding for configurations with no RF output:
 - Class I, Zone 2 AEx ec nR IIC T6 Gc
 - Class II, Zone 22 AEx tc IIIB T85°C Dc

8 Type Codes

Refer to iWAP XN3 datasheet.

The iWAP XN3 conforms to the following standards:

8.1.1 ATEX/IECEX

- BS EN 60079-0: 2018
- BS EN 60079-7: 2015+A1:2018
- BS EN 60079-11: 2012
- BS EN 60079-15: 2019
- BS EN 60079-31: 2014

8.1.2 MET

- UL62368-1, Third Edition: Standard for Audio/video, Information and Communication Technology Equipment - Part 1: Safety requirements, Rev. December 2019
- CSA C22.2 No. 62368-1, Third Edition: Audio/video, Information and Communication Technology Equipment - Part 1: Safety Requirements, Rev. December 2019
- UL 60079-0, 7th Ed: Standard for Explosive Atmospheres - Part 0: Equipment - General Requirements; 2019-03-26
- UL 60079-7, 5th Ed: Standard for Explosive Atmospheres - Part 7: Equipment Protection by Increased Safety "e"; 2017-02-24
- UL 60079-11, Ed 6: Explosive Atmospheres - Part 11: Equipment Protection by Intrinsic Safety 'i'; 2018-09-14
- UL 60079-15, Ed 4: Explosive atmospheres - Part 15: Equipment protection by type of protection 'n'; 2017-05-05
- CSA C22.2 NO 60079-0: 2015; Standard for Explosive Atmospheres - Part 0: Equipment - General Requirements
- CSA C22.2 NO 60079-7: 2016; Standard for Explosive Atmospheres – Part 7: Equipment protected by Increased Safety "e"
- CSA C22.2 NO 60079-11: 2014 (R2018); Standard for Explosive Atmospheres – Part 11: Equipment protected by Intrinsic Safety "i"
- CSA C22.2 NO 60079-15: 2018; Standard for Explosive Atmospheres – Part 15: Equipment protected by type of protection "n"

9 EU Declaration of Conformity



EU Declaration of Conformity

Extronics Ltd, 1 Dalton Way, Midpoint 18, Middlewich, Cheshire CW10 0HU, UK

Equipment Type: **iWAP XN3, iRFID XN3**

This declaration is issued under the sole responsibility of the manufacturer

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation.

Directive 2014/34/EU Equipment and protective systems intended for use in potentially explosive atmospheres (ATEX)

Provisions of the directive fulfilled by the equipment:

⊕ **II 3 (3) G Ex ec [ic Gc] nR IIC T6 Gc
D Ex [ic Dc] tc IIIC T85°C Dc
-20°C ≤ T_{amb} ≤ 60°C**

Notified Body **Ex Veritas 2585** performed EU-Type Examination and issued the EU-Type certificate.

EU-Type Examination Certificates:

19ATEX0530X Issue 0

Notified Body for Production:

Ex Veritas 2804

Harmonised Standards used:

EN 60079-0:2018	Explosive atmospheres – Part 0: Equipment - General requirements
EN 60079-7:2015+A1:2018	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"
EN 60079-11:2012	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
EN 60079-15:2019	Explosive atmospheres – Part 15: Part 15: Equipment protection by type of protection "n"
EN 60079-31:2014	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

Extronics Limited

1 Dalton Way, Midpoint 18, Middlewich, Cheshire, UK. CW10 0HU

Tel: +44 (0) 845 277 5000 Fax: +44 (0)845 277 4000 E-mail: info@extronics.com Web: www.extronics.com





Directive 2014/30/EU EMC Directive

Harmonised Standards Used:

BS EN 61000-6-2:2005	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments
BS EN 61000-6-4:2007+A1:2011	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments

Directive 2011/65/EU Restriction of the use of certain hazardous substances (RoHS) Compliant.

Other Standards and Specifications used:

BS EN 62368-1:2014	Audio/video, information and communication technology equipment - Safety requirements
---------------------------	---

For and on behalf of Extronics Ltd, I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms with all technical and regulatory requirements of the above listed directives.

Signed

Nick Saunders

Operations Director

Date: 6 February 2020

X124361(1)

Extronics Limited
 1 Dalton Way, Midpoint 18, Middlewich, Cheshire, UK. CW10 0HU
 Tel: +44 (0) 845 277 5000 Fax: +44 (0)845 277 4000 E-mail: info@extronics.com Web: www.extronics.com

