

# WiBAS



## Installation & Cabling

### Terminal stations

**The information contained in this document is subject to change without prior notice.**

© INTRACOM S.A. TELECOM SOLUTIONS, 2022 All rights reserved.

All copyright, intellectual and industrial rights in this document and in the technical knowledge it contains are owned by INTRACOM S.A. TELECOM SOLUTIONS and/or their respective owners.

This document is made available to the end users only for their internal use.

No part of this document nor any data herein may be published, disclosed, copied, reproduced, redistributed by any form or means, electronically or mechanically, or used for any other purpose whatsoever without the prior written approval of INTRACOM S.A. TELECOM SOLUTIONS.

Information as well as drawings and specifications contained in this document are subject to change without prior notice.

All trademarks and copyrights mentioned herein are the property of INTRACOM S.A. TELECOM SOLUTIONS and/or their respective owners.

Any rights not expressly granted herein are reserved.

Printed in Greece.

**INTRACOM TELECOM**

19.7 km Markopoulou Ave., Peania, Athens, GR 19002

T +30 210 667 1000, F +30 210 667 1001

**<http://www.intracom-telecom.com>**

**email (product support): [wireless-support@intracom-telecom.com](mailto:wireless-support@intracom-telecom.com)**

## Document Revision History

### Revisions

This page shows the main changes effected in relation to the previous edition of the *WiBAS™ / WiBAS™ G5 Terminal Stations Installation & Cabling manual*.

| Revisions                        |            |
|----------------------------------|------------|
| Previous Document Edition:       | 2.0        |
| <b>Current Document Edition:</b> | <b>2.1</b> |

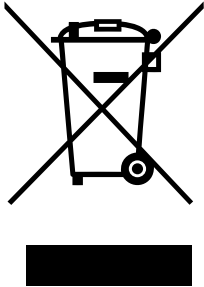
### Reasons of change

The table below shows the main reason for the document change effected in relation to the previous document edition:

| Chapter or Paragraph   | Changes                            |
|--|------------------------------------|
| Statement: Information to the User (page <a href="#">6</a> )           | Paragraph updated.                 |
| Radio Units & Antennas Compatibility Matrix (page <a href="#">16</a> ) | Paragraph added.                   |
| Safety Precautions (page <a href="#">17</a> )                          | RF exposure assesment updated.     |
| Antennas (page <a href="#">31</a> )                                    | List of antennas updated (values). |
| WiBAS G5 Connect+ (page <a href="#">36</a> )                           | Pics of unit updated (label).      |

(Page intentionally left blank)

## Equipment Disposal



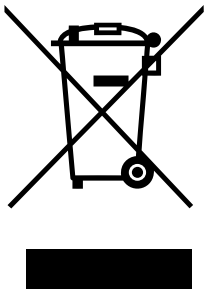
**Disposal of old electrical and electronic equipment (applicable through the European Union and other European countries with separate waste collection systems).**

This symbol, found on this product and any of its parts or on its operating instructions or on its packaging, indicates that electrical and electronic equipment may not be disposed of as unsorted municipal waste. Instead, this product should be handed over to applicable collection points for the recycling of electrical and electronic equipment.

By ensuring the correct disposal of this product, you will help prevent potential negative consequences to the environment and human health, which could otherwise be caused by inappropriate disposal of this product.

By recycling, reusing and other forms of recovery of old electrical and electronic equipment you are making an important contribution to the conservation of natural resources and to the protection of the environment.

For more information about the recycling of this product, please contact your local municipal authorities, municipal waste disposal service or the store where you purchased this product.



**Απόρριψη παλαιών ηλεκτρικών και ηλεκτρονικών συσκευών (ισχύει στην Ευρωπαϊκή Ένωση και άλλες Ευρωπαϊκές χώρες με συστήματα χωριστής συλλογής απορριμμάτων).**

Το σύμβολο αυτό, που απεικονίζεται πάνω στο προϊόν και σε τυχόν εξαρτήματα του ή στο εγχειρίδιο οδηγιών του ή στη συσκευασία του, δείχνει ότι οι ηλεκτρικές και ηλεκτρονικές συσκευές, μετά το πέρας της λειτουργίας τους, δεν θα πρέπει να απορρίπτονται μαζί με τα αστικά απόβλητα. Αντίθετα θα πρέπει να παραδίδονται σε κατάλληλα σημεία συλλογής για την ανακύκλωση των ηλεκτρικών και ηλεκτρονικών συσκευών.

Διασφαλίζοντας τη σωστή απόρριψη αυτού του προϊόντος, συνεισφέρετε στην πρόληψη πιθανών αρνητικών συνεπειών στο περιβάλλον και την ανθρώπινη υγεία, οι οποίες θα μπορούσαν να προκληθούν από την μη ενδεδειγμένη απόρριψη του προϊόντος.

Η ανακύκλωση, επαναχρησιμοποίηση και άλλες μορφές αξιοποίησης των παλαιών ηλεκτρικών και ηλεκτρονικών συσκευών βοηθούν στη διαφύλαξη των φυσικών πόρων και στην προστασία του περιβάλλοντος.

Για περισσότερες πληροφορίες σχετικά την ανακύκλωση αυτού του προϊόντος, παρακαλούμε επικοινωνήστε με τις τοπικές δημοτικές αρχές, την υπηρεσία αποκομιδής αστικών αποβλήτων ή το κατάστημα από το οποίο αγοράσατε το συγκεκριμένο προϊόν.

Για περισσότερες πληροφορίες, μπορείτε να επικοινωνείτε με το Συλλογικό Σύστημα Εναλλακτικής Διαχείρισης Αποβλήτων Ηλεκτρικού και Ηλεκτρονικού Εξοπλισμού "Ανακύκλωση Συσκευών Α.Ε." ([www.electrocycle.gr](http://www.electrocycle.gr)).

## Statement: Information to the User

---

**Concerned  
equipment**

The statement hereinafter concerns the following equipment:

- WiBAS™ G5 Connect+ Terminal Station (auto polarization)
- WiBAS™-Connect Terminal Station
- WiBAS™-Connect Terminal Station (auto polarization)
- WiBAS™ OSDR-Terminal Station
- Outdoor DC power injector (order code: **PONE-OD-DC**)
- Outdoor AC power injector (order code: **PONE-OD67-AC**)
- Outdoor DC power injector (order code: **POE-HP-OD67-DC**)

---

*Continued on next page*

## Statement: Information to the User, Continued

---

WiBAS G5 Connect+  
(auto polarization)

WiBAS-Connect

WiBAS-Connect  
(auto-polarization)

### **Class B equipment**

#### **FCC Part 15.19 Statement: Information to the User**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1)** this device may not cause harmful interference, and
- (2)** this device must accept any interference received, including interference that may cause undesired operation.

#### **FCC Part 15.21 Statement: Information to the User**

Changes or modifications made to this equipment, not expressly approved by the party responsible for compliance, could void the user's authority to operate the equipment.

#### **FCC Part 15.105 Statement: Information to the User**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### **RF Exposure Statement**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, this equipment should be installed and operated with minimum distance **440 cm** between the antenna and your body during normal operation. Users must follow the specific operating instructions for satisfying RF exposure compliance.

---

*Continued on next page*

## Statement: Information to the User, Continued

---

### WiBAS OSDR-TS

#### **Class A equipment**

##### **EN 55022 / EN 55032:**

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

**Warning:** This is a Class A product according to EN 55022/EN 55032.

Operation of this equipment in a residential environment could cause radio interference in which case the user may be required to take adequate measures.

##### **FCC Part 15.19:**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

##### **FCC Part 15.21:**

Changes or modifications made to this equipment, not expressly approved by the party responsible for compliance, could void the user's authority to operate the equipment.

##### **FCC Part 15.105:**

This equipment has been tested and found to comply with the limits for a **Class A digital device**, pursuant to part 15 of the FCC rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own.

---

*Continued on next page*



## Statement: Information to the User, Continued

---

PONE-OD-DC

### **Class B equipment**

#### **EN 55022 / EN 55032:**

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

#### **FCC Part 15.19:**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

#### **FCC Part 15.21:**

Changes or modifications made to this equipment, not expressly approved by the party responsible for compliance, could void the user's authority to operate the equipment.

#### **FCC Part 15.105:**

This equipment has been tested and found to comply with the limits for a **Class B digital device**, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

---

PONE-OD67-AC  
POE-HP-OD67-DC

### **Class B equipment**

#### **EN 55022 / EN 55032:**

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

---

## Declaration of Conformity

---

### English

Hereby, Intracom S.A. Telecom Solutions declares that the product **WiBAS™** is CE marked in compliance with the essential requirements of the Radio Equipment Directive **2014/53/EU**, Eco Design Directives **2009/125/EC**, **2017/1369/EU**, RoHS directive **2011/65/EU**, **2015/863/EU** and relevant amendments of the above directives.

The full text of the EU declaration of conformity is available at the following URL: <http://emc.intracom-telecom.com/en/start.htm>

---

## Δήλωση Συμμόρφωσης

---

### Greek

Με την παρούσα, η Intracom A.E. Τηλεπικοινωνιακών Λύσεων δηλώνει ότι το προϊόν **WiBAS™** συμμορφώνεται με τις απαιτήσεις της οδηγίας Ραδιοεξοπλισμού **2014/53/ΕΕ**, Οικολογικού Σχεδιασμού **2009/125/ΕΚ**, **2017/1369/ΕΕ**, οδηγίας RoHS **2011/65/ΕΕ**, **2015/863/ΕΕ** και λοιπών τροποποιήσεων των παραπάνω οδηγιών.

Το πλήρες κείμενο της δήλωσης συμμόρφωσης (ΕΥ) είναι διαθέσιμο στην ακόλουθη διεύθυνση URL: <http://emc.intracom-telecom.com/en/start.htm>

---

## Table of Contents

---

|   |            |
|---|------------|
| <b>1. Introduction .....</b>  | <b>13</b>  |
| About this Document .....   | 13         |
| About WiBAS Terminal Stations .....   | 15         |
| Radio Units & Antennas Compatibility Matrix.....                                  | 16         |
| Safety Precautions .....  | 17         |
| <b>2. Materials .....</b>   | <b>30</b>  |
| <b>3. Before Starting the Installation .....</b>                                  | <b>35</b>  |
| 3.1. Radio Unit Connection Points.....  | 35         |
| WiBAS G5 Connect+ .....   | 36         |
| WiBAS-Connect .....   | 39         |
| WiBAS OSDR-TS.....  | 46         |
| 3.2. Radio Unit Cabling Overview .....  | 49         |
| Gigabit ETH cable for service Traffic, Inband Management and Powering .....       | 50         |
| 3.3. Site Prerequisites .....   | 58         |
| 3.4. Recommended Installation Tools .....   | 61         |
| <b>4. Installation Procedures.....</b>  | <b>63</b>  |
| 4.1. Installing Radio Units and Antennas.....                                     | 64         |
| WiBAS G5 Connect+ Combo .....   | 65         |
| WiBAS-Connect Combo .....   | 74         |
| WiBAS-Connect and Low Profile 0.3 m / 0.5 m.....                                  | 97         |
| WiBAS-Connect and Parabolic 0.3 m with Adaptation Plate / 0.6 m with Clamps ..... | 110        |
| WiBAS-Connect and Panel.....  | 124        |
| WiBAS OSDR-TS and Parabolic 0.3 m .....   | 140        |
| WiBAS OSDR-TS and Panel .....   | 144        |
| 4.2. Installing Radio Units Cables.....   | 157        |
| Grounding Cable .....   | 158        |
| ETH Cable.....  | 162        |
| Cable Holder .....  | 170        |
| <b>Appendix A - Installing Power Injectors .....</b>                              | <b>173</b> |
| POE-AC75-ID / POE-ID-AC72 / POE-AC56-IDH / POE-ID-AC35 .....                      | 174        |
| PONE-OD67-AC .....  | 181        |
| PONE-OD-DC .....  | 188        |
| POE-HP-OD67-DC.....   | 198        |
| <b>Appendix B – Terminating Cables .....</b>                                      | <b>203</b> |
| Ethernet (S-FTP) .....  | 204        |
| Grounding .....   | 209        |
| Power .....   | 212        |

---

(Page intentionally left blank)

# 1. Introduction

## About this Document

---

### Scope of document

The scope of this document is to provide detailed instructions to the installation and cabling of the following wireless **PtMP / PtP** Terminal Station products:

- **WiBAS™ G5 Connect+** (auto polarization)
- **WiBAS™ – Connect** (single & auto polarization)
- **WiBAS™ OSDR-TS**



**OSDR** is an **O**utdoor **S**oftware-**D**efined **R**adio platform. The same radio unit, based on software running **is capable** to operate, as follows:

- **PtMP** Terminal Station: WiBAS™ OSDR-TS.
- **PtMP** Base Station: WiBAS™ OSDR-HUB.
- **PtP** Node: OmniBAS™ OSDR.



**WiBAS™ G5 Connect+** can operate as follows:

- **PtMP** Terminal Station
- **PtP** Node

---

*Continued on next page*

## About this Document, Continued

---

### Target audience

This document is addressed to certified technicians with wireless equipment knowledge and skills concerning the following:

- Outdoor Radio Unit pole / tower / wall installation.
  - Antenna with mounting kit installation.
  - Preparation & Termination of: Ethernet & Grounding cables.
  - Laying and Installation of: Ethernet, Fiber Optic & Grounding cables.
  - Testing Ethernet cables using Ethernet testers.
- 

### Reference manuals

The listed reference manuals in the table below maybe are useful during installation process:

- WiBAS™ / WiBAS™ System Description.
  - WiBAS™ / WiBAS™ G5 Product Catalog.
  - WiBAS™ / WiBAS™ Startup & Commissioning.
  - Lightning & Surge Protection for Intracom Telecom Radios – Installation Practices.
  - Lightning & Surge Protector (LSP) Datasheet.
- 

### Document conventions

This document applies to the following conventions:

- **Bold blue** fonts are used for order codes.
- Blue underline fonts are used for references.
- **Bold black** fonts are used for indicating important information or paragraph header.



This symbol means **DANGER**. The purpose of this symbol is to warn you that any wrong action can cause bodily injury or even death.



This symbol means **CAUTION**. The purpose of this symbol is to prevent you from performing an action that might result in damage of the equipment.



The purpose of this symbol is to protect you from unauthorized entry to the site and damage your equipment.



A note calls your attention to important supplementary information.



A hint denotes helpful piece of advice or practical suggestion.

---

## About WiBAS Terminal Stations

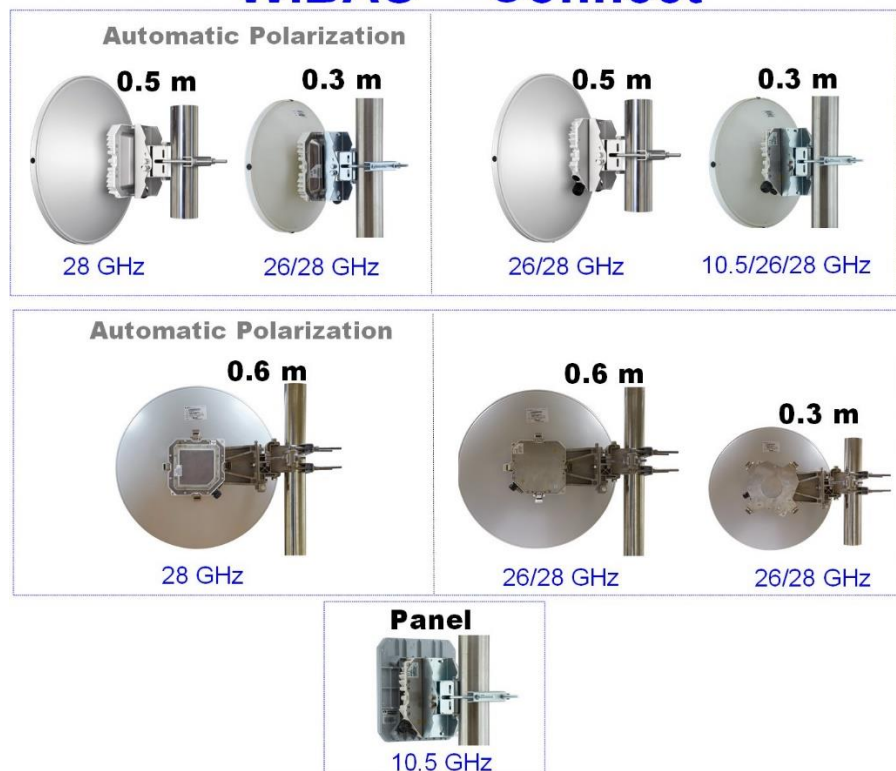
### Product installation overview

WiBAS™ solution provides high flexibility and with zero-footprint installation, through a wide variety of compact Terminal Station radio unit and smart-design antenna options, as shown below:

### WiBAS™-G5 Connect+



### WiBAS™-Connect



### WiBAS™ OSDR-TS



## Radio Units & Antennas Compatibility Matrix

### Product installation overview

WiBAS™ solution provides high flexibility, through a wide variety of compact Terminal Station radio units combined with multiple antenna options facilitating demanding coverage scenarios. The following table presents a compatibility matrix between the radio units form factors and the available antennas.

|                      |                    | WiBAS™ Terminal Station Form Factors<br>/ Frequency (GHz) |    |    |    |         |    |                        |         |              |
|----------------------|--------------------|---|----|----|----|---------|----|------------------------|---------|--------------|
|                      |                    | Single Polarization                                       |    |    |    |         |    | Automatic Polarization |         |              |
|                      |                    | OSDR-TS   |    |    |    | Connect |    |                        | Connect | G5 Connect+  |
|                      |                    | 10.5  | 26 | 28 | 32 | 10.5    | 26 | 28                     | 28      | 24 / 27 / 28 |
| Antennas Order Codes | ANT-IS-2628-1F-C   | -   | -  | -  | -  | -       | √  | √                      | -       | -            |
|                      | ANT-IS-2628-1D6F-C | -   | -  | -  | -  | -       | √  | √                      | -       | -            |
|                      | ANT-IS-2628-2F-C   | -   | -  | -  | -  | -       | √  | √                      | -       | -            |
|                      | ANT-DP-2628-1F-C   | -   | -  | -  | -  | -       | -  | -                      | √       | √            |
|                      | ANT-DP-2628-1D6F-C | -   | -  | -  | -  | -       | -  | -                      | √       | √            |
|                      | ANT-DP-2628-2F-C   | -   | -  | -  | -  | -       | -  | -                      | √       | √            |
|                      | ANT-IS-11-PL-C     | √   | -  | -  | -  | √       | -  | -                      | -       | -            |
|                      | ANT-IS-10-1F-C     | -   | -  | -  | -  | √       | -  | -                      | -       | -            |
|                      | ANT-IS-11-2F       | √   | -  | -  | -  | √       | -  | -                      | -       | -            |
|                      | ANT-IS-11-3F       |   |    |    |    |         |    |                        |         |              |
|                      | ANT-IS-11-4F       |   |    |    |    |         |    |                        |         |              |
|                      | ANT-IS-11-6F       |   |    |    |    |         |    |                        |         |              |
|                      | ANT-IS-26-1F       | -   | √  | -  | -  | -       | √  | -                      | -       | -            |
|                      | ANT-IS-26-2F       |   |    |    |    |         |    |                        |         |              |
|                      | ANT-IS-26-3F       |   |    |    |    |         |    |                        |         |              |
|                      | ANT-IS-26-4F       |   |    |    |    |         |    |                        |         |              |
|                      | ANT-IS-28-1F       | -   | -  | √  | -  | -       | -  | √                      | -       | -            |
|                      | ANT-IS-28-2F       |   |    |    |    |         |    |                        |         |              |
|                      | ANT-IS-28-3F       |   |    |    |    |         |    |                        |         |              |
|                      | ANT-IS-28-4F       |   |    |    |    |         |    |                        |         |              |
|                      | ANT-IS-32-1F       | -   | -  | -  | √  | -       | -  | -                      | -       | -            |
|                      | ANT-IS-32-2F       |   |    |    |    |         |    |                        |         |              |
|                      | ANT-IS-32-3F       |   |    |    |    |         |    |                        |         |              |



## Safety Precautions

### RF exposure assessment

#### Introduction

Any Radio Equipment is emitting Radio Frequency (RF) Radiation through its antenna which may be integrated to the equipment or not. It is important to follow any local, national or international regulation during installation and operation of the Radio Equipment to avoid radiation hazards.

#### Regulations

A lot of countries have issued and follow their own regulations but others adopted European or international regulations, standards or guidelines.

In Europe, some countries follow the recommendations included in 1999/519/EC directive which is based on the guidelines document published by the International Commission on Non-Ionizing Radiation Protection (ICNIRP). Other countries have issued their own regulations for this purpose.

The above mentioned European Directive provides the reference levels (limits) for assessment of the human exposure to electromagnetic fields based on health effects. European Union, FCC (US) and Industry Canada Reference Levels for microwave frequencies applied to INTRACOM Telecom equipment are given in the following table ([Table 1](#)).

**Table 1:** RF Exposure Reference Levels

| Regulation  | Frequency Range | Power Density                                  | Notes          |
|-------------|-----------------|--|----------------|
| 1999/519/EC | 2-300 GHz       | 10 W/m <sup>2</sup>                            | General Public |
| FCC 1.1310  | 1.5-100 GHz     | 1 mW/cm <sup>2</sup><br>(10 W/m <sup>2</sup> ) | General Public |
| FCC 1.1310  | 1.5-100 GHz     | 5 mW/cm <sup>2</sup><br>(50 W/m <sup>2</sup> ) | Occupational   |
| IC RSS-102  | 6-150 GHz       | 1 mW/cm <sup>2</sup><br>(10 W/m <sup>2</sup> ) | General Public |
| IC RSS-102  | 6-150 GHz       | 5 mW/cm <sup>2</sup><br>(50 W/m <sup>2</sup> ) | Occupational   |

*Continued on next page*

## Safety Precautions, Continued

---

### RF exposure assessment, continued

#### RF Exposure General Guidelines for equipment installation

As a general rule it is expected that the highest level of emission would be in line of sight and in close vicinity of the antenna. Additional requirements for the installation of equipment shall be as follows:

- The equipment should be located in such a way to prevent the public from accessing the area where the RF Radiation exceeds the regulation limits. For this, a compliance boundary is determined, based on its radio characteristics. Outside this area the RF radiation levels are below the reference levels (limits).
- Operation and maintenance personnel, which have to work within the RF radiation compliance boundary area, should be informed about the source of radiation and should have the capability to power off the radio equipment before entering the compliance boundary area.
- The compliance boundary area should be defined by a relevant warning sign or physical barrier.

#### Radiation Exposure Assessment – Compliance Boundary Calculation

In order to calculate the RF exposure compliance boundary around a Radio Equipment and its antenna, a theoretical approach is described below. As the installation environment could be complex, i.e obstacles causing reflections or scattering, soil conditions etc., this approach may be used to provide a rough estimation of the expected exposure in power flux density on a certain point. More precise estimations can be feasible if detailed knowledge of the installation environment is available. In some cases a safety factor can be used to increase the level of confidence.

The power flux density  $S$  can be calculated using the following formula:

$$S = P * G_{num} / (4 * r^2 * \pi)$$

where,

- $P$  = is the maximum power at the antenna port of the Radio Equipment,
- $G_{num}$  = is the numerical gain of the antenna,
- $r$  = is the distance between the antenna and the point of interest.

---

*Continued on next page*

## Safety Precautions, Continued

RF exposure  
assessment,  
continued

| Specification   | Value / Description   |
|---|-----------------------|
| <b>Radio Unit</b>   |                       |
| Type  | WiBAS™-Connect        |
| Frequency, GHz  | 28                    |
| <b>Antenna</b>  |                       |
| Type  | Low profile parabolic |
| Diameter, m   | 0.3                   |
| Gain, dBi   | 37.5                  |
| <b>Parameter</b>  |                       |
| Power Flux Density Limit, W/m <sup>2</sup> (General Public) | 10.0                  |
| Compliance Boundary, m (General Public)                     | 1.38                  |
| Power Flux Density Limit, W/m <sup>2</sup> (Occupational)   | 50.0                  |
| Compliance Boundary, m (Occupational)                       | 0.62                  |

| Specification   | Value / Description   |
|---|-----------------------|
| <b>Radio Unit</b>   |                       |
| Type  | WiBAS™-Connect        |
| Frequency, GHz  | 26                    |
| <b>Antenna</b>  |                       |
| Type  | Low profile parabolic |
| Diameter (m)  | 0.3                   |
| Gain, dBi   | 37.0                  |
| <b>Parameter</b>  |                       |
| Power Flux Density Limit, W/m <sup>2</sup> (General Public) | 10.0                  |
| Compliance Boundary, m (General Public)                     | 1.20                  |
| Power Flux Density Limit, W/m <sup>2</sup> (Occupational)   | 50.0                  |
| Compliance Boundary, m (Occupational)                       | 0.54                  |

*Continued on next page*

## Safety Precautions, Continued

### RF exposure assessment, continued

| Specification   | Value / Description   |
|---|-----------------------|
| <b>Radio Unit</b>   |                       |
| Type  | WiBAS™-Connect        |
| Frequency, GHz  | 10.5                  |
| <b>Antenna</b>  |                       |
| Type  | Low profile parabolic |
| Diameter, m   | 0.3                   |
| Gain, dBi   | 29.5                  |
| <b>Parameter</b>  |                       |
| Power Flux Density Limit, W/m <sup>2</sup> (General Public) | 10.0                  |
| Compliance Boundary, m (General Public)                     | 0.87                  |
| Power Flux Density Limit, W/m <sup>2</sup> (Occupational)   | 50.0                  |
| Compliance Boundary, m (Occupational)                       | 0.39                  |

*Continued on next page*

## Safety Precautions, Continued

RF exposure  
assessment,  
continued

| Specification   | Value / Description |
|---|---------------------|
| <b>Radio Unit</b>   |                     |
| Type  | WiBAS™-Connect      |
| Frequency, GHz  | 10.5                |
| <b>Antenna</b>  |                     |
| Type  | Panel               |
| Dimension, mm (H x W x D)                                   | 268 x 268 x 51      |
| Gain, dBi   | 25.0                |
| <b>Parameter</b>  |                     |
| Power Flux Density Limit, W/m <sup>2</sup> (General Public) | 10.0                |
| Compliance Boundary, m (General Public)                     | 0.57                |
| Power Flux Density Limit, W/m <sup>2</sup> (Occupational)   | 50.0                |
| Compliance Boundary, m (Occupational)                       | 0.26                |

| Specification   | Value / Description |
|---|---------------------|
| <b>Radio Unit</b>   |                     |
| Type  | WiBAS™-Connect      |
| Frequency, GHz  | 28                  |
| <b>Antenna</b>  |                     |
| Type  | Parabolic           |
| Diameter, m   | 0.6                 |
| Gain, dBi   | 43.0                |
| <b>Parameter</b>  |                     |
| Power Flux Density Limit, W/m <sup>2</sup> (General Public) | 10.0                |
| Compliance Boundary, m (General Public)                     | 2.60                |
| Power Flux Density Limit, W/m <sup>2</sup> (Occupational)   | 50.0                |
| Compliance Boundary, m (Occupational)                       | 1.16                |

*Continued on next page*

## Safety Precautions, Continued

### RF exposure assessment, continued

| Specification   | Value / Description |
|---|---------------------|
| <b>Radio Unit</b>   |                     |
| Type  | WiBAS™-Connect      |
| Frequency, GHz  | 26                  |
| <b>Antenna</b>  |                     |
| Type  | Parabolic           |
| Diameter, m   | 0.6                 |
| Gain, dBi   | 42.3                |
| <b>Parameter</b>  |                     |
| Power Flux Density Limit, W/m <sup>2</sup> (General Public) | 10.0                |
| Compliance Boundary, m (General Public)                     | 2.40                |
| Power Flux Density Limit, W/m <sup>2</sup> (Occupational)   | 50.0                |
| Compliance Boundary, m (Occupational)                       | 1.07                |

| Specification   | Value / Description |
|---|---------------------|
| <b>Radio Unit</b>   |                     |
| Type  | WiBAS™-Connect      |
| Frequency, GHz  | 10.5                |
| <b>Antenna</b>  |                     |
| Type  | Parabolic           |
| Diameter, m   | 0.6                 |
| Gain, dBi   | 34.5                |
| <b>Parameter</b>  |                     |
| Power Flux Density Limit, W/m <sup>2</sup> (General Public) | 10.0                |
| Compliance Boundary, m (General Public)                     | 1.64                |
| Power Flux Density Limit, W/m <sup>2</sup> (Occupational)   | 50.0                |
| Compliance Boundary, m (Occupational)                       | 0.74                |

*Continued on next page*

## Safety Precautions, Continued

RF exposure  
assessment,  
continued

| Specification                           | Value / Description   |       |
|---|-----------------------|-------|
| Radio Unit                              |                       |       |
| Type                                    | WiBAS™ G5 Connect+    |       |
| Frequency, GHz                          | 24                    |       |
| Antenna                                 |                       |       |
| Type                                    | Low profile parabolic |       |
| Diameter, m                             | 0.3                   | 0.5   |
| Actual diameter, m                      | 0.393                 | 0.505 |
| Gain, dBi                               | 36.3                  | 39.5  |
| Parameter                               |                       |       |
| Compliance Boundary, m (General Public) | 1.40                  | 2.0   |
| Compliance Boundary, m (Occupational)   | 0.70                  | 1.90  |

| Specification                           | Value / Description   |       |
|---|-----------------------|-------|
| Radio Unit                              |                       |       |
| Type                                    | WiBAS™ G5 Connect+    |       |
| Frequency, GHz                          | 26                    |       |
| Antenna                                 |                       |       |
| Type                                    | Low profile parabolic |       |
| Diameter, m                             | 0.3                   | 0.5   |
| Actual diameter, m                      | 0.393                 | 0.505 |
| Gain, dBi                               | 37.0                  | 40.0  |
| Parameter                               |                       |       |
| Compliance Boundary, m (General Public) | 1.60                  | 2.30  |
| Compliance Boundary, m (Occupational)   | 0.80                  | 1.10  |

*Continued on next page*

## Safety Precautions, Continued

### RF exposure assessment, continued

| Specification                           | Value / Description   |       |
|---|-----------------------|-------|
| Radio Unit                              |                       |       |
| Type                                    | WiBAS™ G5 Connect+    |       |
| Frequency, GHz                          | 28                    |       |
| Antenna                                 |                       |       |
| Type                                    | Low profile parabolic |       |
| Diameter, m                             | 0.3                   | 0.5   |
| Actual diameter, m                      | 0.393                 | 0.505 |
| Gain, dBi                               | 37.5                  | 40.5  |
| Parameter                               |                       |       |
| Compliance Boundary, m (General Public) | 3.10                  | 4.40  |
| Compliance Boundary, m (Occupational)   | 1.40                  | 2.00  |



## Safety Precautions, Continued

---

### RF exposure assessment, continued

#### RF Radiation Safety Information

This equipment complies with:

Cet équipement est conforme:

- ISED RSS-102
- FCC title 47 part 1.1310
- EMF Exposure Directive (1999/519/EC)

Radiation exposure limits set forth for an uncontrolled environment. This equipment (antenna) should be installed and operated with minimum distance between the radiator & the human body as depicted in the tables below. This distance provides additional safety margin for the product minimizing exposure to microwaves and is calculated as the worst case scenario (maximum transmitter power / antenna with maximum gain).

Limites d'exposition aux rayonnements établies pour un environnement non contrôlé. Cet équipement (antenne) doit être installé et utilisé avec une distance minimale entre le radiateur et le corps humain, comme indiqué dans les tableaux ci-dessous. Cette distance fournit une marge de sécurité supplémentaire pour le produit en minimisant l'exposition aux micro-ondes et est calculée comme le pire des cas (puissance d'émission maximale / antenne avec gain maximal). Ces calculs ont été effectués conformément à :

These calculations were done in accordance with:

Ces calculs ont été effectués conformément à :

- FCC Radio Frequency Exposure Methods & Limits 2.1091, 1.1310
- Health Canada Safety Code 6 / Industry Canada RSS 102
  - <https://www.canada.ca/en/health-canada/services/health-risks-safety/radiation/occupational-exposure-regulations/>
  - [https://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/h\\_sf06129.html](https://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/h_sf06129.html)
- EMF Exposure Directive (99/519/EC)

---

*Continued on next page*

## Safety Precautions, Continued

---



### General

- Do not install or operate this system in the presence of flammable gases or fumes. Operating any electrical instrument in such an environment is a safety hazard.
- Outdoor units and antennas should be installed **ONLY** by experienced installation professionals who are familiar with local building and safety codes and, wherever applicable, are licensed by the appropriate government regulatory authorities. Failure to do so may void the product warranty and may expose the end user or the service provider to legal and financial liabilities.
- INTRACOM S.A. TELECOM SOLUTIONS and its resellers or distributors are not liable for injury, damage or violation of regulations associated with the installation of outdoor units, antennas or any other accessory related to the radios.
- Appropriate labeling should exist at points with high risk of contact with hazardous voltage.
- A list with emergency phone numbers (e.g. medical assistance numbers) should be displayed at easy-to-view positions at the installation site.
- Also, recommended are for safety purposes, a fire detection system and fire extinguishers (installed at easy-to-access points) inside the installation premises.
- This equipment must be permanently earthed for protection and functional purposes.
- Changes or modifications to the radio equipment, antennas and installation accessories not expressly approved by INTRACOM S.A. TELECOM SOLUTIONS or the party responsible for compliance could void the user's permission to operate the equipment.

---

*Continued on next page*

## Safety Precautions, Continued



### Working on the Building's Roof

**During stormy weather, do not perform any mechanical assembling or antenna installation / alignment works on the building's roof.**

The metal structure of towers / masts is prone to lightning.



### Proper Grounding Installation

**Never power on any equipment unless you have completed the grounding installation.**

There is risk of equipment failure and / or electrical shock. Ensure that:

- The grounding system measures an appropriate path resistance as specified by local regulations.
- An appropriate grounding bar (or terminal) exists at the proximity of each equipment installation position.
- The equipment is intended to be installed in location only where the equipotential bonding has been applied.



### ESD Protection

When using SFP, then the product is a Class 1 laser product.



### Equipment Access

Only trained, authorized personnel should have access to the installed equipment.



### Hot Surfaces

Do not touch the outer surface of the equipment during operation without proper personal protection.

Allow unit to cool (after switch off) before servicing.

*Continued on next page*

## Safety Precautions, Continued



### Local power Source

- AC:

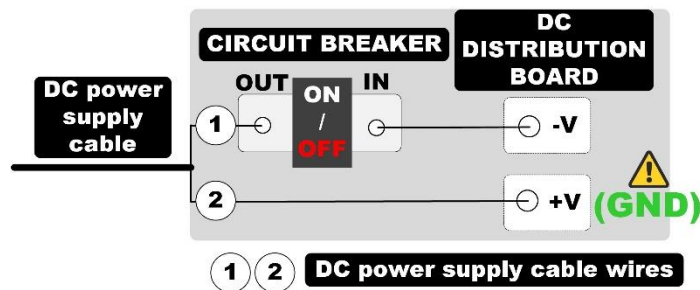
- Safety requirements require a single pole circuit-breaker to be employed between the local AC power source and power injector.
- The circuit breaker<sup>(1)</sup> must disconnect the mains phase of the AC power source.



If the plug of power supply cord is intended to be the power disconnect device of the equipment (**not recommended**), arrange in the installation to connect the equipment to a socket-outlet installed close to the power injector and easily accessible.

- DC:

- Safety requirements require a single pole circuit-breaker<sup>(2)</sup> to be employed between the local DC power source and power injector.
- The positive (+) V pole of the local DC power source must be **grounded**.
- The **circuit breaker** must control (open / close) the negative (-) V pole of the DC power source.



### Power Supply Cable

- AC:

- Power source cables must be tested for short circuits, open circuit or wrong wiring before installed.
- The **ground wire** of the AC cable must be connected to the protective earth (ground) point of the mains electricity installation.

- DC:

- Power source cables must be tested for short circuits, open circuit or wrong wiring before installed
- The **positive wire** of the DC cable must be connected to the protective earth (ground) point of the mains electricity installation (see picture above).

*Continued on next page*

<sup>(1)</sup> Single-pole MCB 6 A, 230 V AC (voltage rating), C-curve (for Industrial Applications).

<sup>(2)</sup> Single-pole MCB 6 A, 72 VDC (voltage rating), C-curve (for Industrial Applications).

## Safety Precautions, Continued

---



### Power Injector

#### Ethernet cable:

Connect the OUT receptacle of power injector to the proper receptacle of the radio unit, as described in this manual. Do not connect the power injector's OUT receptacle to network switches / routers / laptops. **There is risk of damaging the network devices** due to potential power that is carried inside the Ethernet cable.

---



### Radio Unit Powering

The radio units powering is performed through power injector only (for details how to power up the radio unit refer to *WiBAS™ / WiBAS™ G5 Startup & Commissioning manual*).

Do not plug / unplug the Ethernet cable to / from the radio unit when the power injector operates. **There is risk of damaging the radio unit.** Always ensure that the power supply source / power injector is OFF before plugging / unplugging.

---

## 2. Materials

---

### Scope

This chapter describes the installation materials of **WiBAS™ Terminal Stations**.



For each material there is an extensive packing list description to the respective installation procedure.

---

### Radio units

One of the following radio units, depending on site-specific RF planning requirements:

- WiBAS™G5 Connect+ terminal radio unit, **auto-polarization** (**WG5-CONN-PLUS-HP-27-29**).
- WiBAS™-Connect terminal radio unit (**CONN-OB-U-DSDS**).
- WiBAS™-Connect terminal radio unit **auto-polarization** (**CONN-OB-U-DSDS-DP**)
- WiBAS™ OSDR-TS (Terminal Station) radio unit (**OSDR-OB-U-DSDS-SB**).



The order codes for radio units are indicatives.

The complete list of order codes is available to the respective product catalog (see [Reference manuals](#)).

---

*Continued on next page*

## Materials, Continued

### Antennas

One of the following antennas, depending on site-specific RF planning requirements:

- Panel antenna for WiBAS™-Connect and WiBAS™ OSDR-TS, 10.5 - 10.65 GHz (25 dBi) - **rectangular flange (ANT-IS-11-PL-C)**.
- Parabolic Antenna 0.3 m for WiBAS™-Connect<sup>(1)</sup> and WiBAS™ OSDR-TS, 24.50 - 26.50 GHz (36.8 dBi), - (**ANT-IS-26-1F**).
- Low profile parabolic antenna 0.3 m for WiBAS™-Connect, 10.15 - 10.65 GHz (29 dBi) - **rectangular flange (ANT-IS-10-1F-C)**.
- Low profile wideband parabolic antenna 0.3 m for WiBAS™-Connect, 24.25 - 26.50 GHz (36.3 dBi) / 26.50 - 27.50 GHz (37.0 dBi) / 27.50 - 29.50 GHz (37.5 dBi) - **rectangular flange (ANT-IS-2628-1F-C)**.
- Low profile wideband parabolic antenna 0.3 m for auto-polarization WiBAS™G5 Connect+ and WiBAS™-Connect, 24.25 - 26.50 GHz (36.3 dBi) / 26.50 - 27.50 GHz (37.0 dBi) / 27.50 - 29.50 GHz (37.5 dBi) - **circular flange (ANT-DP-2628-1F-C)**.
- Low profile wideband parabolic antenna 0.5 m for WiBAS™-Connect, 24.25 - 26.50 GHz (39.5 dBi) / 26.50 - 27.50 GHz (40.0 dBi) / 27.50 - 29.50 GHz (40.5 dBi) - **rectangular flange (ANT-IS-2628-1D6F-C)**.
- Low profile wideband parabolic antenna 0.5 m for auto-polarization WiBAS™G5 Connect+ and WiBAS™-Connect, 24.25 - 26.50 GHz (39.5 dBi) / 26.50 - 27.50 GHz (40.0 dBi) / 27.50 - 29.50 GHz (40.5 dBi) - **circular flange (ANT-DP-2628-1D6F-C)**.
- Low profile wideband parabolic antenna 0.6 m for WiBAS™-Connect, 24.25 - 26.50 GHz (42.1 dBi) / 26.50 - 27.50 GHz (42.0 dBi) / 27.50 - 29.50 GHz (42.8 dBi) - **rectangular flange (ANT-IS-2628-2F-C)**.
- Low profile wideband parabolic antenna 0.6 m for auto-polarization WiBAS™G5 Connect+<sup>(2)</sup> and WiBAS™-Connect, 0.6 m, 24.25 - 26.50 GHz (42.1 dBi) / 26.50 - 27.50 GHz (42.0 dBi) / 27.50 - 29.50 GHz (42.8 dBi) - **circular flange (ANT-DP-2628-2F-C)**.



The order codes for antennas are indicatives.

The complete list of order codes is available to the respective product catalog (see [Reference manuals](#)).

*Continued on next page*

<sup>(1)</sup> For WiBAS™-Connect installation the adaptation plate **WCONN-PAR-ANT-KIT** is required.

<sup>(2)</sup> The 0.6 m antenna with WiBAS™ G5 Connect+ combination will be available in future product release.

## Materials, Continued

### Antenna adaptation kits

One of the following adaptation kits, depending on site-specific antenna requirements:

- Hooks ([OSDR-PL-ANT-KIT](#)).
- Adaptation plate ([WCONN-PAR-ANT-KIT](#)).

### Mounting kits

One of the following pole mounting kits, based on site-specific mounting kit requirements:

- Pole mounting kit - for poles 42 mm to 80 mm ([WG5-WCONN-PL-MNT](#)).
- Pole mounting kit - for poles 42 mm to 80 mm ([WCONN-PL-MNT](#)).
- Pole mounting kit - for poles 42 mm to 80 mm ([WCONN-DP-PL-MNT](#)).
- Wall mounting kit ([WCONN-PL-W-MNT-DP](#)).
- Pole/Wall mounting kit - for poles 48 mm to 60 mm ([OSDR-ANT-MNT](#)).
- Pole adaptation bracket - for poles 80 mm to 100 mm and 104 mm to 120 mm ([INST-ADAPT](#)).
- Pole mounting bracket - for poles 50 mm to 120 mm ([INST-PONE-PL](#)).
- Pole mounting bracket - for poles 50 mm to 120 mm ([INSTPONE-PL2](#)).

### Pole hose clamps

One of the following pole hose clamps, based on site-specific pole requirements:

- Stainless steel hose clamp – for poles 48 mm to 100 mm ([ST-CL64-140](#)).
- Stainless steel hose clamp – for poles 75 mm to 149 mm ([ST-CL102-178](#)).
- Stainless steel hose clamp – for poles 150 mm to 229 mm ([ST-CL172-248](#)).
- Stainless steel hose clamp – for poles 230 mm to 300 mm ([ST-CL242-318](#)).

*Continued on next page*



## Materials, Continued

---

### Power injectors

One of the following power injectors, depending on site-specific powering requirements:

- AC POE injector, indoor, 75 watt ([POE-AC75-ID](#)).
- AC POE injector, indoor, 72 watt ([POE-ID-AC72](#)).
- AC POE injector, indoor, 56 watt ([POE-AC56-IDH](#)).
- AC POE injector, indoor, 35 watt ([POE-ID-AC35](#)).
- AC PONE injector, outdoor, 67 watt ([PONE-OD67-AC](#)).
- DC PONE injector, outdoor, 60 watt ([PONE-OD-DC](#)).
- DC PONE injector, outdoor, 114 watt ([POE-HP-OD67-DC](#)).

---

### Grounding kit

The following grounding kit, depending on site-specific equipment requirements:

- Grounding kit ([GND-KIT16-OD](#)).

---

### Cables

One of the following cables, depending on site-specific cabling requirements:

- Ethernet cable, shielded, Cat5E (S-FTP) ([ETH-CAB-SFTP](#)).
- AC power supply cable - 3 x 0.75 mm<sup>2</sup> ([AC-PWR-CAB](#)).
- DC power supply cable - 2 x 1 mm<sup>2</sup> ([DC-PWR-CAB-1](#)).
- DC power supply cable - 2 x 2.5 mm<sup>2</sup> ([DC-PWR-CAB-2](#)).
- DC power supply cable - 2 x 2.5 mm<sup>2</sup> ([DC-PWR-CAB-3](#)).
- Grounding cable, indoor use - 6 mm<sup>2</sup> ([GND-CAB6-ID](#)).

---

### Cables gland

One of the following cables gland, depending on site-specific cabling requirements:

- M20 gland for Ethernet cable ([M20-GLAND](#)).

## Materials, Continued

---

### Others

One of the following items, depending on site-specific installation requirements:

- Cable holder for fastening 2 x **M20-GLAND** with cables (**OSDR-HOLD-2**).
  - Alignment tool (set of two) for WiBAS™-Connect terminal station radio unit (both editions) (**WCONN-ALT-KIT**).
  - Outdoor lightning surge protector with IP68 ingress protection for Ethernet line (**ETH-SRG-OD68**).
  - Hand crimping tool for RJ-45 (**ST-RJ45**) connector (**CRIMP-TOOL-S**).
  - Optional tool for M20 gland (**TOOL-M20**).
-

## 3. Before Starting the Installation

---

**Scope** This chapter describes all the prerequisites that must be considered prior to installing the following wireless equipment:

- WiBAS™ G5 Connect+
  - WiBAS™ -Connect
  - WiBAS™ -Connect auto-polarization
  - WiBAS™ OSDR-TS
- 

### 3.1. Radio Unit Connection Points

---

**Introduction** This section describes all the available connection points of the following radio units:

| Description                       | Page               |
|-----------------------------------|--------------------|
| <a href="#">WiBAS G5 Connect+</a> | <a href="#">36</a> |
| <a href="#">WiBAS-Connect</a>     | <a href="#">39</a> |
| <a href="#">WiBAS OSDR-TS</a>     | <a href="#">46</a> |

---

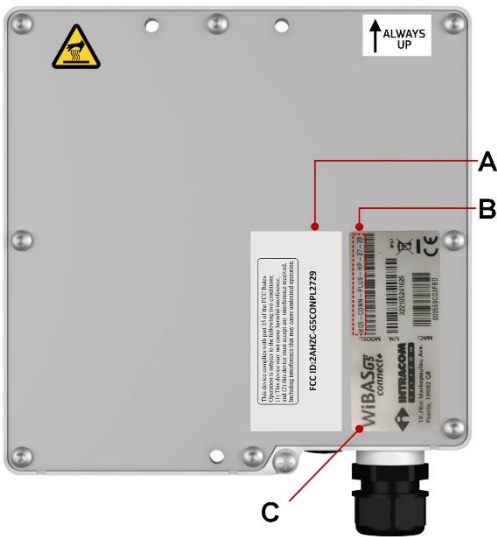
WiBAS G5 Connect+

Receptacles



| # | Marking | Description   | Use  |
|---|---------|---|--|
| A | GbE1    | Gigabit Ethernet, Electrical R-J45 (100 / 1000 Base-T). | To connect the S-FTP cable for traffic, inband management and power. |
| B | RSSI    | RSSI cable entry with screw-in tap.                     | To connect the RSSI cable for antenna alignment.                     |

Label



| # | Description   |
|---|---|
| A | FCC statement.                                      |
| B | Order code (27 GHz lower band - 29 GHz upper band). |
| C | Product description.                                |

Continued on next page

WiBAS G5 Connect+, Continued

Label,  
continued

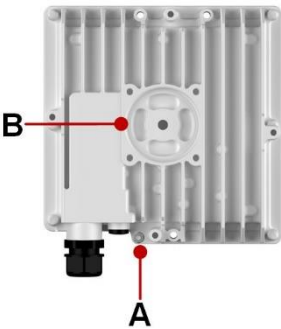


| Antennas   | Radio Unit Orientation Label |
|--|------------------------------|
| ANT-DP-2628-1F-C<br>ANT-DP-2628-1D6F-C<br>ANT-DP-2628-2F-C |                              |

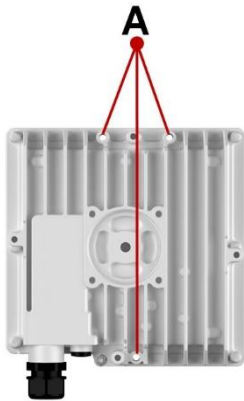
Continued on next page

# WiBAS G5 Connect+, Continued

Other points



| # | Marking | Description                 | Use   |
|---|---------|-----------------------------|---|
| A | GND     | Radio unit grounding screw. | To connect 16 mm <sup>2</sup> grounding terminal. |
| B | -       | Wave guide interface.       | To connect antenna feeder.                        |



| # | Marking | Description                     | Use  |
|---|---------|---------------------------------|--|
| A | -       | Radio unit holes for M5 screws. | <a href="#">WG5-WCONN-PL-MNT</a> installation with <a href="#">ANT-DP-2628-1F-C</a> and <a href="#">ANT-DP-2628-1D6F-C</a> antennas. |

## WiBAS-Connect

---

### Receptacles

### WiBAS™-Connect (single / auto polarization)



| # | Marking | Description   | Use  |
|---|---------|---|--|
| A | RSSI    | RSSI cable entry with screw-in tap.                   | To connect the RSSI cable for antenna alignment.                     |
| B | GbE1    | Gigabit Ethernet, Electrical R-J45 (100/1000 Base-T). | To connect the S-FTP cable for traffic, inband management and power. |

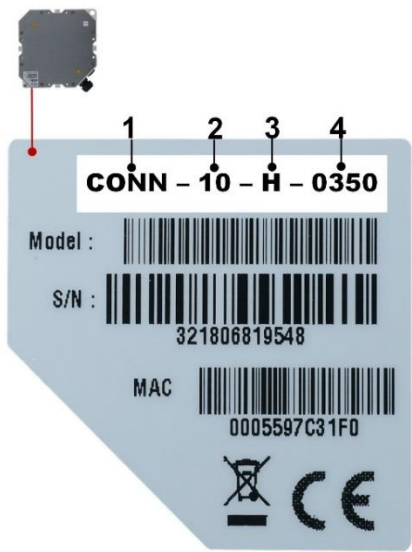
---

*Continued on next page*

WiBAS-Connect, Continued

Label

WiBAS™-Connect



| # | Description   |
|---|---|
| 1 | Product description.  |
| 2 | Frequency band.   |
| 3 | <b>L</b> or <b>H</b> = WiBAS™-Connect determination transmit as <b>(L)ow</b> or <b>(H)igh</b> in the link pair. |
| 4 | Duplex spacing (MHz).   |

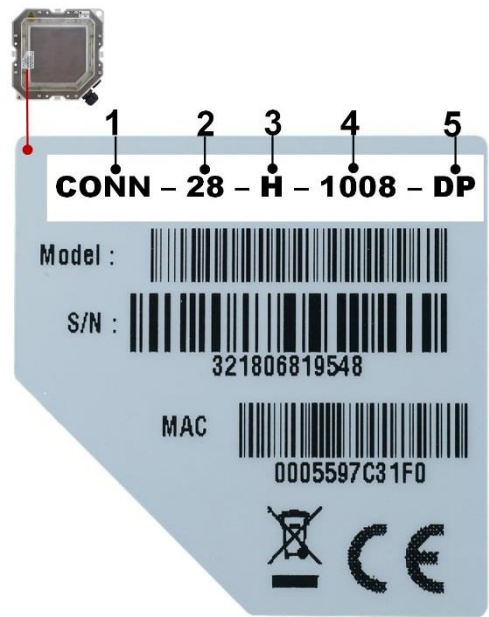
Continued on next page



WiBAS-Connect, Continued

Label,  
continued

WiBAS™-Connect (auto-polarization)



| # | Description   |
|---|---|
| 1 | Product description.  |
| 2 | Frequency band.   |
| 3 | <b>L</b> or <b>H</b> = WiBAS™-Connect determination transmit as <b>(L)ow</b> or <b>(H)igh</b> in the link pair. |
| 4 | Duplex spacing (MHz).   |
| 5 | Auto polarization edition.  |

Continued on next page

WiBAS-Connect, Continued

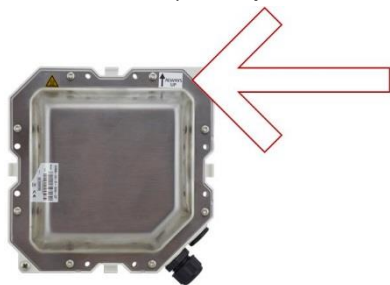
Label,  
continued

WiBAS™-Connect



| Antennas   | Radio Unit Orientation Label |          |
|--|------------------------------|----------|
|  | Horizontal                   | Vertical |
| ANT-IS-2628-1F-C<br>ANT-IS-2628-1D6F-C<br>ANT-IS-2628-2F-C<br>ANT-IS-26-1F |                              |          |
| ANT-IS-11-PL-C   |                              |          |

WiBAS™-Connect (auto-polarization)



| Antennas   | Radio Unit Orientation Label |
|--|------------------------------|
| ANT-DP-2628-1F-C<br>ANT-DP-2628-1D6F-C<br>ANT-DP-2628-2F-C | <b>ALWAYS UP</b>             |

Continued on next page

## WiBAS-Connect, Continued

### Other points

### WiBAS™-Connect (both editions)



| # | Marking | Description                    | Use  |
|---|---------|--------------------------------|--|
| A | -       | Anchor point.                  | For installation of safety lanyard.            |
| B | -       | Wave guide interface.          | To connect antenna feeder <sup>(1)</sup> .     |
| C | GND     | Radio unit grounding terminal. | To connect 16 mm <sup>2</sup> grounding cable. |

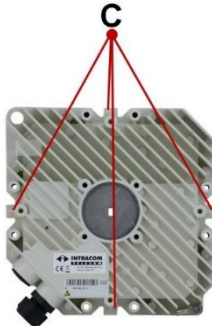
*Continued on next page*

<sup>(1)</sup> Circular for WiBAS™-Connect (auto-polarization) / Rectangular for WiBAS™-Connect.

# WiBAS-Connect, Continued

Other points,  
continued

## WiBAS™-Connect



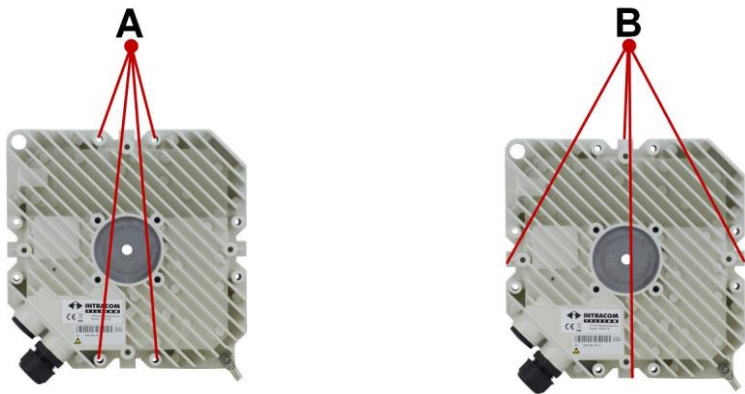
| #   | Marking | Description                     | Use  |
|-----|---------|---------------------------------|--|
| A   | -       |                                 | <ul style="list-style-type: none"><li>Radio unit (<b>horizontal</b> or <b>vertical polarization</b>) for <b>WCONN-PL-MNT</b> installation with <b>ANT-IS-2628-1F-C</b>, <b>ANT-IS-2628-1D6F-C</b> and <b>ANT-IS-11-PL-C</b> antennas.</li></ul>  |
| A&B | -       | Radio unit holes for M5 screws. | <ul style="list-style-type: none"><li>Radio unit (<b>horizontal</b> or <b>vertical polarization</b>) for installation with <b>WCONN-PAR-ANT-KIT</b> and the following antennas:<ul style="list-style-type: none"><li>– <b>ANT-IS-11-2F / -3F / -4F / -6F</b></li><li>– <b>ANT-IS-26-1F / -2F / -3F / -4F</b></li><li>– <b>ANT-IS-28-1F / -2F / -3F / -4F</b></li></ul></li></ul> |
| C   |         | Hook features.                  | <ul style="list-style-type: none"><li>Radio unit (<b>horizontal</b> or <b>vertical polarization</b>) for <b>ANT-IS-2628-2F-C</b> antenna installation.</li></ul>   |

Continued on next page

WiBAS-Connect, Continued

Other points,  
continued

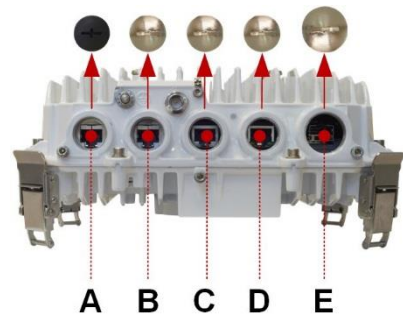
WiBAS™-Connect (auto-polarization)



| # | Marking | Description                     | Use   |
|---|---------|---------------------------------|---|
| A | -       | Radio unit holes for M5 screws. | <ul style="list-style-type: none"><li>Radio unit for <b>WCONN-DP-PL-MNT</b> installation with <b>ANT-DP-2628-1F-C</b> and <b>ANT-DP-2628-1D6F-C</b> antennas.</li></ul> |
| B | -       | Hook features.                  | <ul style="list-style-type: none"><li>Radio unit for <b>ANT-DP-2628-2F-C</b> antenna installation.</li></ul>  |

# WiBAS OSDR-TS

## Receptacles

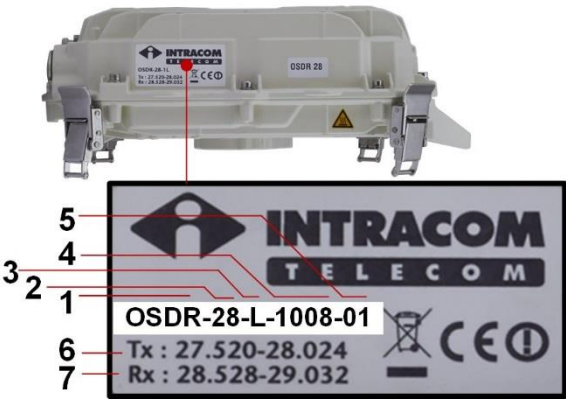


| # | Marking | Description   | Use   |
|---|---------|---|---|
| A | GbE2    | Gigabit Ethernet, Electrical RJ-45 (100/1000 Base-T). | To connect Ethernet (S-FTP) cable for traffic / inband management and power via power injector. |
| B | FE      | Fast Ethernet, RJ-45 (100 Base-T).                    | To connect Ethernet (S-FTP) cable for outband management / power via power injector.            |
| C | -       | -   | Reserved for future use.  |
| D | -       | -   | Reserved for future use.  |
| E | GbE1    | Gigabit Ethernet, SFP cage.                           | To connect SFP module (electrical / optical) for traffic and inband management.                 |

Continued on next page

WiBAS OSDR-TS, Continued

Label

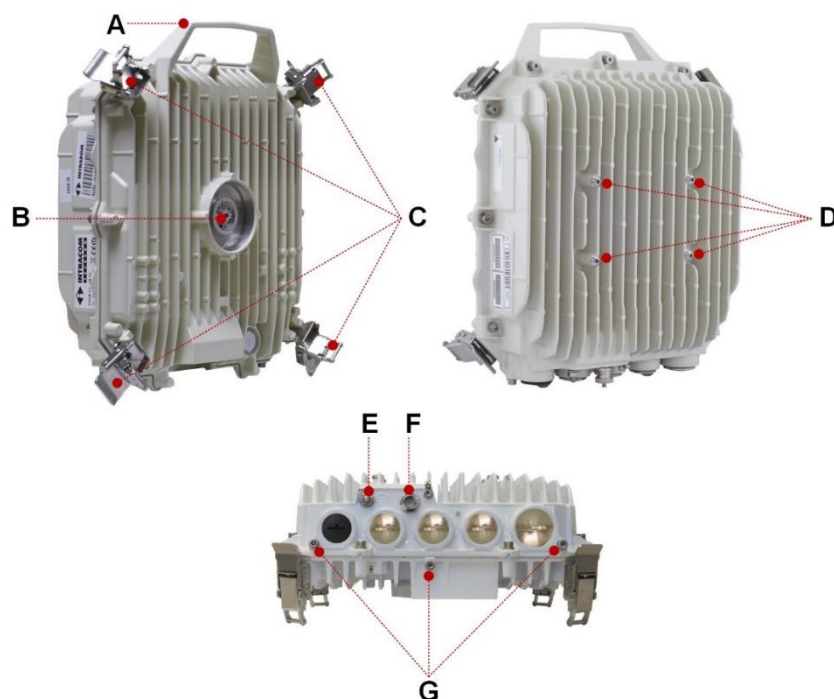


| # | Description   |
|---|---|
| 1 | Product description.  |
| 2 | Frequency band.   |
| 3 | OSDR determination as <u>L</u> ow or <u>H</u> igh in the link pair. |
| 4 | Duplex spacing (MHz).   |
| 5 | For 26 / 28 / 32 GHz Sub-band (01 up to 02).                        |
| 6 | Transmit frequencies.   |
| 7 | Receive frequencies.  |

Continued on next page

## WiBAS OSDR-TS, Continued

### Other points



| # | Marking     | Description                      | Use  |
|---|-------------|----------------------------------|--|
| A | -           | Anchor point                     | To fit lanyard for lifting to the pole.                          |
| B | -           | Wave guide                       | To install antenna feeder.                                       |
| C | -           | Clamps                           | To mount antenna.  |
| D | -           | Female threads for M5 screws.    | To install mounting kit for panel antenna.                       |
| E | <b>GND</b>  | Enclosure grounding terminal.    | To connect 16 mm <sup>2</sup> grounding cable.                   |
| F | <b>RSSI</b> | Receive signal level indication. | To connect the RSSI cable for measuring receive signal in volts. |
| G | -           | Female threads for screws.       | To install cable holder.   |



## 3.2. Radio Unit Cabling Overview

### Introduction

This section describes all the available cabling connections of **WiBAS™ Terminal Stations**.

The cabling overview described, as follows:

[Gigabit ETH cable for service Traffic, Inband Management and Powering](#)

### Precaution



The section describes the cabling overview **without** using any additional device for lightning surge protection.

For additional information regarding surge protection refer to [Lightning and surge protection](#) on page [59](#).

### List of power injectors for radio unit powering

The following list shows the power injectors connected to **WiBAS™ Terminal Stations** for powering.

| Order Code                     | Type |    | WiBAS™ Terminal Station |         |
|--------------------------------|------|----|-------------------------|---------|
|                                | AC   | DC | Connect G5 Connect+     | OSDR-TS |
| <a href="#">POE-ID-AC35</a>    | ✓    | -  | ✓                       | -       |
| <a href="#">POE-AC56-IDH</a>   | ✓    | -  | ✓                       | ✓       |
| <a href="#">PONE-OD67-AC</a>   | ✓    | -  | ✓                       | ✓       |
| <a href="#">POE-ID-AC72</a>    | ✓    | -  | ✓                       | ✓       |
| <a href="#">POE-AC75-ID</a>    | ✓    | -  | -                       | ✓       |
| <a href="#">PONE-OD-DC</a>     | -    | ✓  | ✓                       | ✓       |
| <a href="#">POE-HP-OD67-DC</a> | -    | ✓  | ✓                       | ✓       |

## Gigabit ETH cable for service Traffic, Inband Management and Powering

---

### Ethernet cable length restrictions

The Gigabit Ethernet (S-FTP) cable for service traffic, inband management and external powering applies to the following restriction:

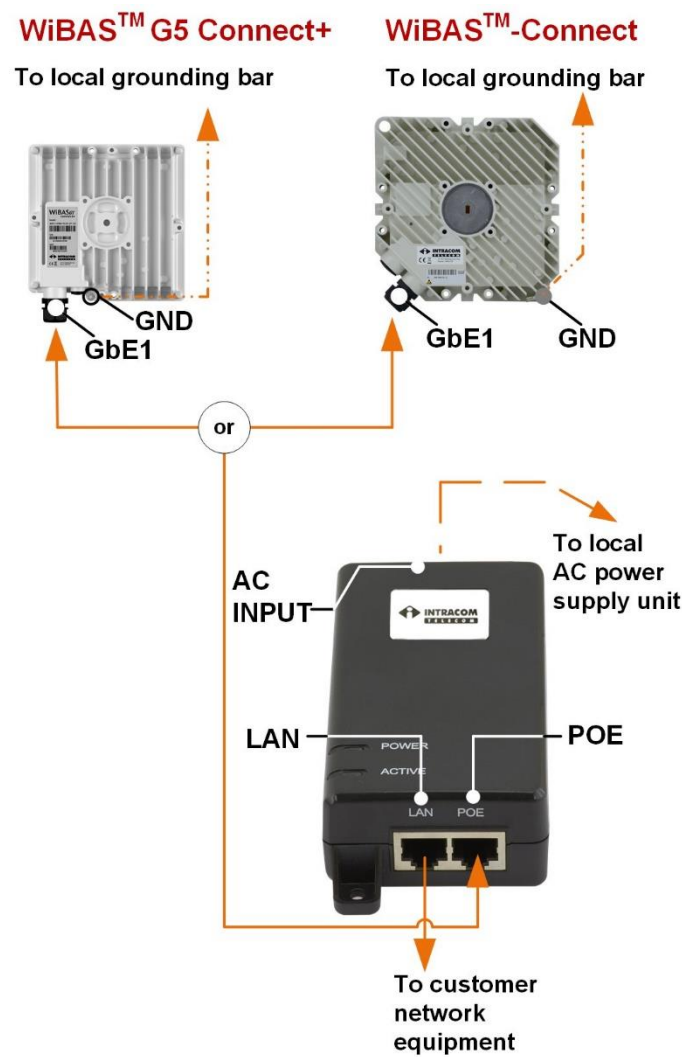
The **maximum length** of Gigabit Ethernet (S-FTP) cable (Cat5E or Cat6), between **WiBAS™ receptacles** and **customer network receptacle** cannot exceed 100 meters.

---

*Continued on next page*

# Gigabit ETH cable for service Traffic, Inband Management and Powering, Continued

**AC power injector**      The following schematic shows a cabling overview of **WiBAS™ Terminal Stations** when powering is through power injector with order code **POE-ID-AC35**:



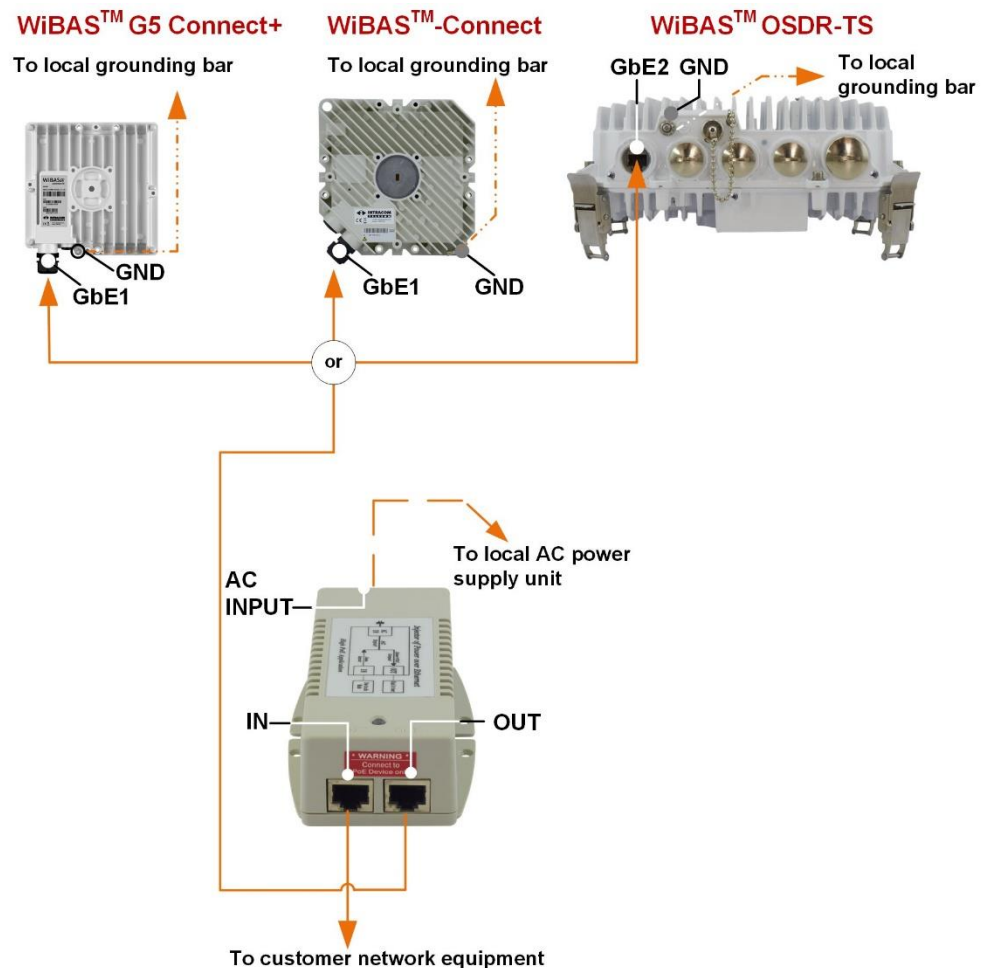
| Marking    | Cable Type   |
|------------|--|
| GbE1 / POE | Gigabit Ethernet (S-FTP) cable for traffic, inband management and superimposed DC power. |
| LAN        | Gigabit Ethernet (S-FTP) cable for traffic and inband management.                        |
| AC INPUT   | AC power supply cord.  |
| GND        | Grounding cable 16 mm <sup>2</sup> .   |

Continued on next page

## Gigabit ETH cable for service Traffic, Inband Management and Powering, Continued

**AC power injector, continued**

The following schematic shows a cabling overview of **WiBAS™ Terminal Stations** when powering is through power injector with order code **POE-AC56-IDH:**



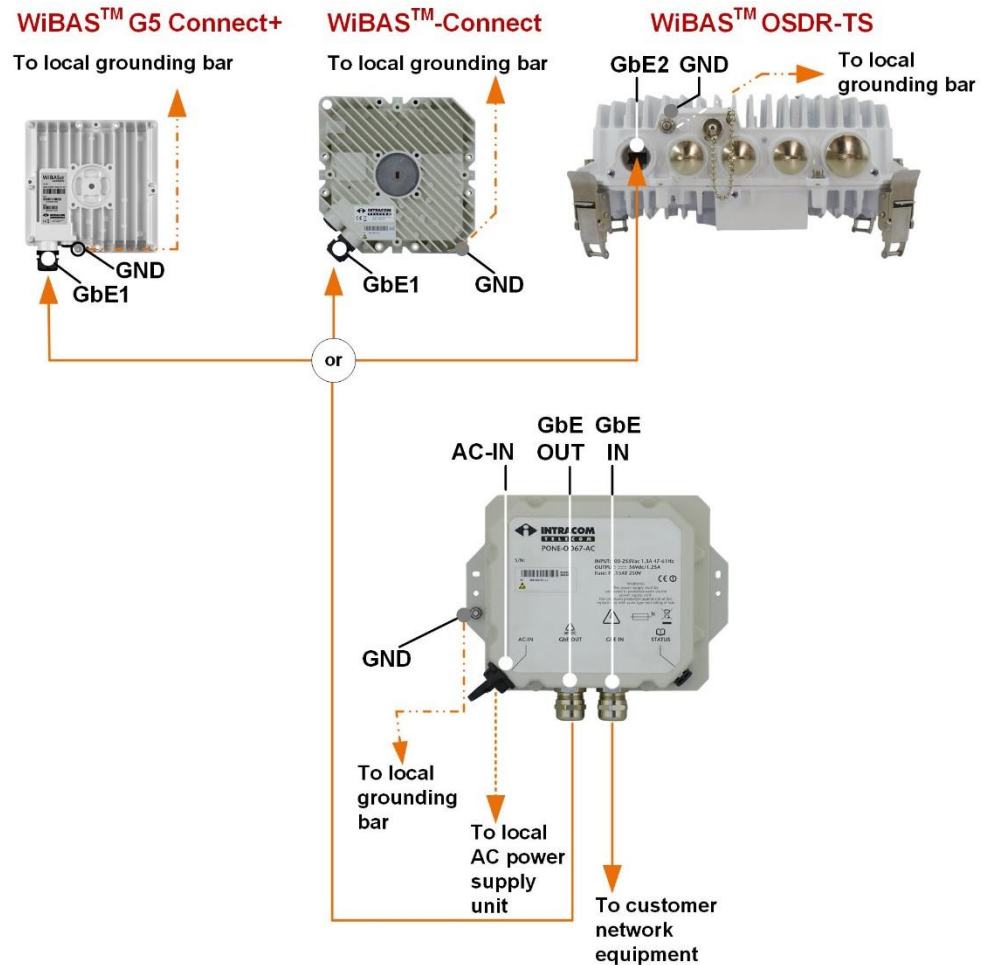
| Marking         | Cable Type   |
|-----------------|--|
| GbE1, GbE2, OUT | Gigabit Ethernet (S-FTP) cable for traffic, inband management and superimposed DC power. |
| IN              | Gigabit Ethernet (S-FTP) cable for traffic and inband management.                        |
| AC INPUT        | AC power supply cord.  |
| GND             | Grounding cable 16 mm <sup>2</sup> .   |

*Continued on next page*

## Gigabit ETH cable for service Traffic, Inband Management and Powering, Continued

AC power injector, continued

The following schematic shows a cabling overview of **WiBAS™ Terminal Stations** when powering is through power injector with order code **PONE-OD67-AC**:



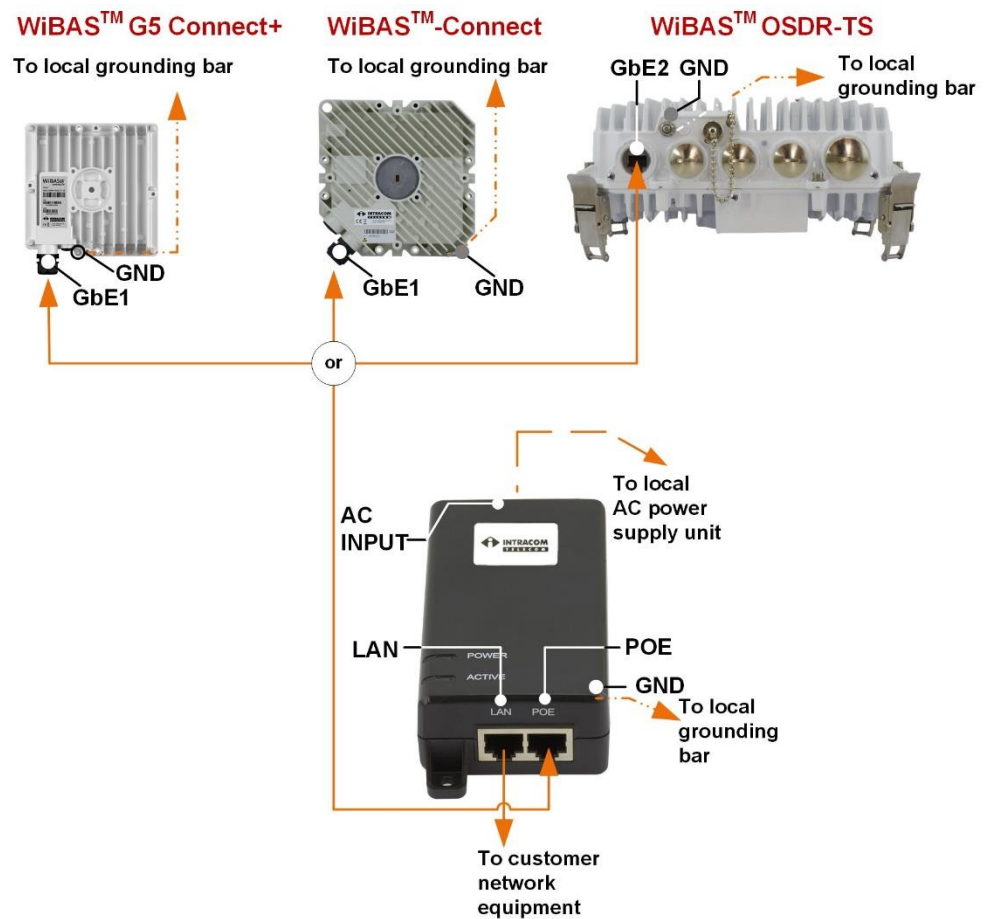
| Marking             | Cable Type   |
|---------------------|--|
| GbE1, GbE2, GbE OUT | Gigabit Ethernet (S-FTP) cable for traffic, inband management and superimposed DC power. |
| GbE IN              | Gigabit Ethernet (S-FTP) cable for traffic and inband management.                        |
| AC-IN               | AC power supply cable.   |
| GND                 | Grounding cable 16 mm <sup>2</sup> .   |

Continued on next page

# Gigabit ETH cable for service Traffic, Inband Management and Powering, Continued

AC power injector, continued

The following schematic shows a cabling overview of **WiBAS™ Terminal Stations** when powering is through power injector with order code **POE-ID-AC72**:



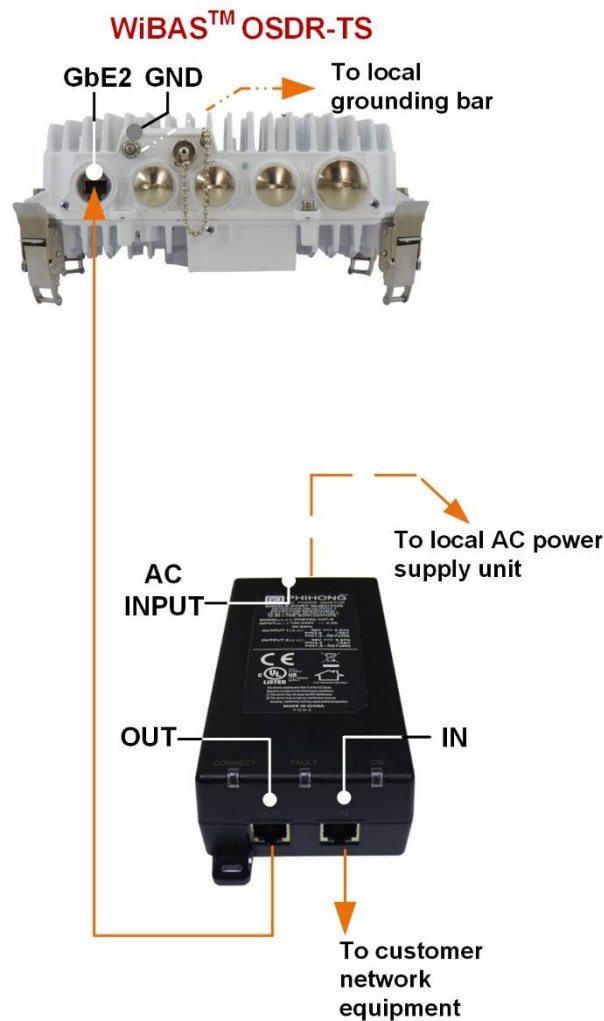
| Marking         | Cable Type  |
|-----------------|---|
| GbE1, GbE2, POE | Gigabit Ethernet (S-FTP) cable for traffic, inband management and superimposed DC power.        |
| LAN             | Gigabit Ethernet (S-FTP) cable for traffic and inband management.                               |
| AC INPUT        | AC power supply cord.   |
| GND             | Grounding cable 16 mm <sup>2</sup> for radio unit and 6 mm <sup>2</sup> for <b>POE-ID-AC7</b> . |

Continued on next page

## Gigabit ETH cable for service Traffic, Inband Management and Powering, Continued

AC power injector, continued

The following schematic shows a cabling overview of **WiBAS™ Terminal Stations** when powering is through power injector with order code **POE-AC75-ID:**



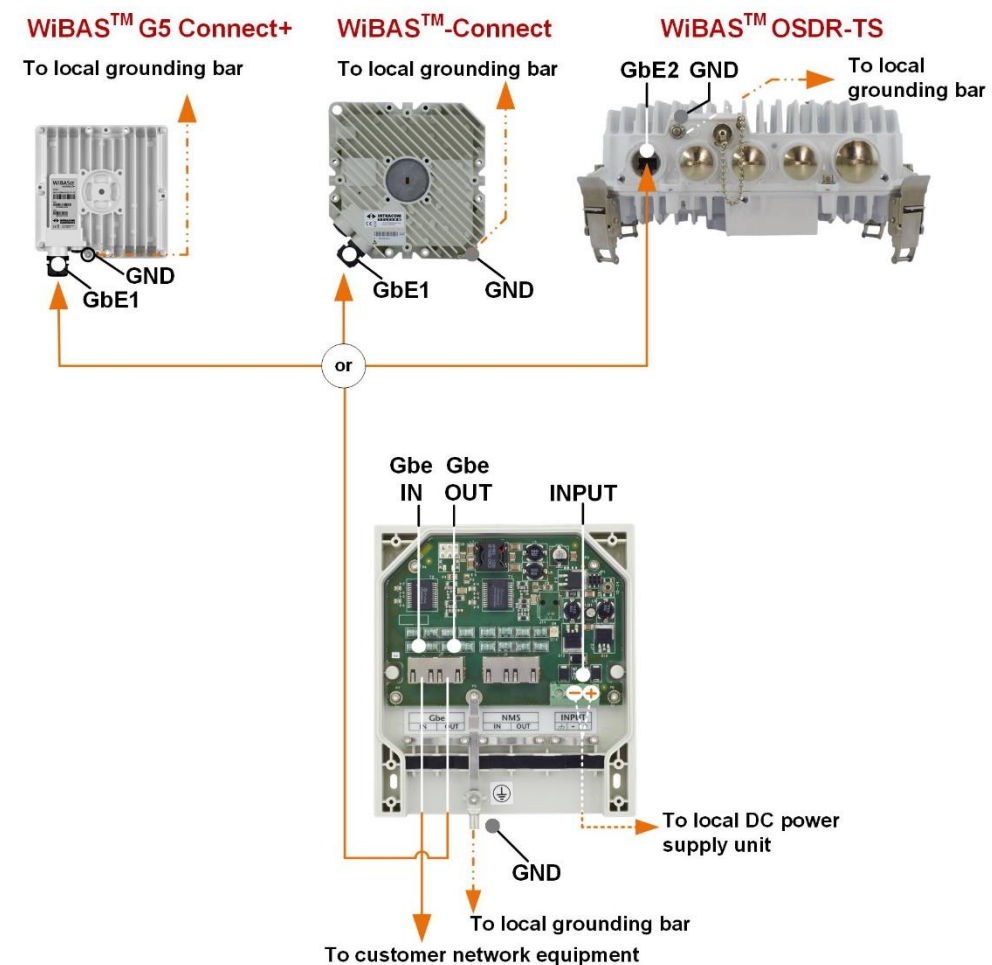
| Marking   | Cable Type   |
|-----------|--|
| GbE2, OUT | Gigabit Ethernet (S-FTP) cable for traffic, inband management and superimposed DC power. |
| IN        | Gigabit Ethernet (S-FTP) cable for traffic and inband management.                        |
| AC INPUT  | AC power supply cord.  |
| GND       | Grounding cable 16 mm <sup>2</sup> .   |

*Continued on next page*

## Gigabit ETH cable for service Traffic, Inband Management and Powering, Continued

### DC power injector

The following schematic shows a cabling overview of **WiBAS™ Terminal Stations** when powering is through power injector with order code **PONE-OD-DC**:



| Marking             | Cable Type  |
|---------------------|---|
| GbE1, GbE2, GbE OUT | Gigabit Ethernet (S-FTP) cable for traffic, inband management and superimposed DC power.        |
| GbE IN              | Gigabit Ethernet (S-FTP) cable for traffic and inband management.                               |
| INPUT               | DC power supply cable.  |
| GND                 | Grounding cable 16 mm <sup>2</sup> for radio unit and 6 mm <sup>2</sup> for <b>PONE-OD-DC</b> . |

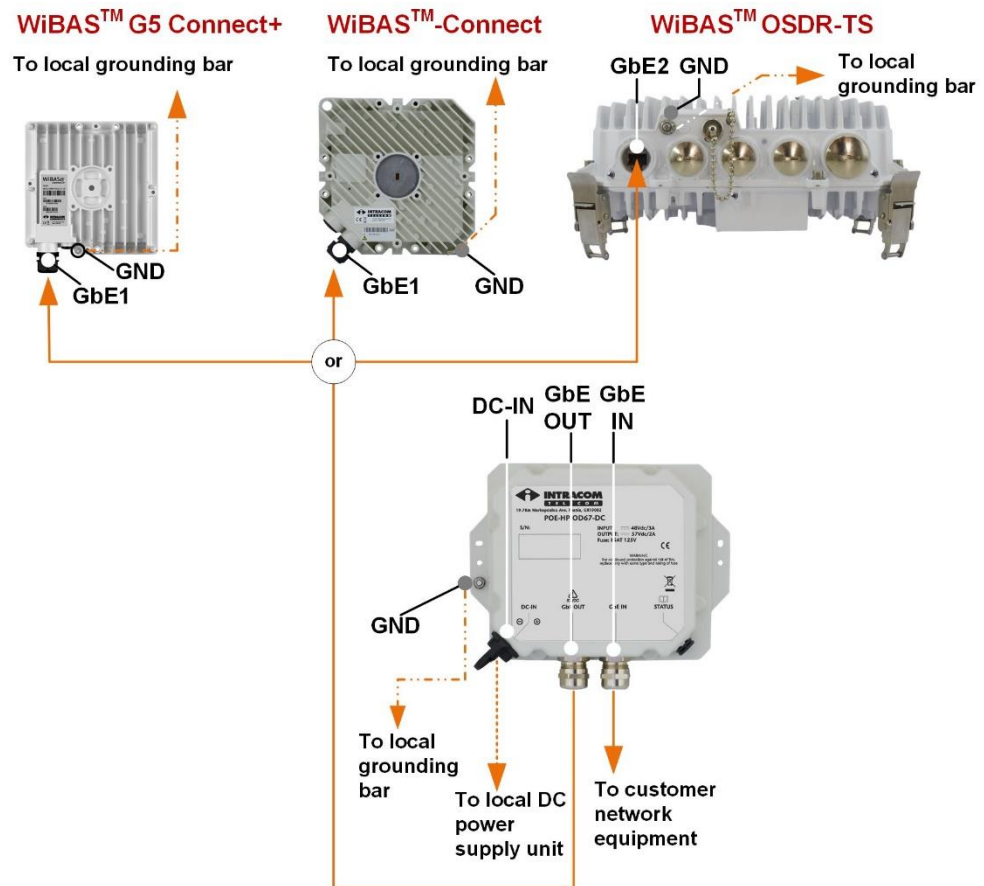
*Continued on next page*



## Gigabit ETH cable for service Traffic, Inband Management and Powering, Continued

DC power injector, continued

The following schematic shows a cabling overview of **WiBAS™ Terminal Stations** when powering is through power injector with order code **POE-HP-OD67-DC**:



| Marking             | Cable Type   |
|---------------------|--|
| GbE1, GbE2, GbE OUT | Gigabit Ethernet (S-FTP) cable for traffic, inband management and superimposed DC power. |
| GbE IN              | Gigabit Ethernet (S-FTP) cable for traffic and inband management.                        |
| DC-IN               | DC power supply cable.   |
| GND                 | Grounding cable 16 mm <sup>2</sup> .   |

## 3.3. Site Prerequisites

---

### Site survey

Site survey should be done before start the installation taking in consideration the following:

#### Premises information

- Site details (address, contact persons, GPS and/or map co-ordinates, etc.).
- Site access and storage information (means of transport, equipment storage and lifting information, etc.).
- Site location maps.

#### Network planning

- Site Coordinates.
- LOS verification (between WiBAS™ Base stations and WiBAS™ Terminal stations).
- Rooftop information (height, status, access, dimensions, layout, etc.).
- Information about pre-existing indoor/ outdoor equipment.
- Available mounting space (on the buildings' roofs) to reserve for the installation of the outdoor equipment.

#### Site-specific information

- Mechanical specifications of masts/ towers (type, dimensions/ diameter, material, exterior finishing, etc.).
  - Location of appropriate grounding points (bar or terminals).
  - Location of appropriate power supply distribution points.
  - Location of cable conduits available for routing the cables.
  - Location of the network port distributors.
  - Total length of the cables required.
- 

### Preparation of the installation premises

- Access to the installation premises must be facilitated during the installation period.
  - Entrances must be large enough to enable the easy transportation of the new equipment.
  - The floor must be level, smooth and able to bear the load of the equipment.
  - The roof must be engineered to bear the weight of the service personnel and the outdoor equipment.
- 

*Continued on next page*

## Site Prerequisites, Continued

|                                       |  |
|---------------------------------------|--|
| <b>Network port distributors</b>      | <ul style="list-style-type: none"><li>• Suitable electrical network port distributor should be available.</li><li>• The exact location of the network port distributor, as well as the network ports to reserve, should be known prior to installing the equipment.</li><li>• Also, all the reserved ports on the network port distributors should be qualified and tested before realizing the network connections with the equipment.</li></ul>  |
| <b>Power supply cable routing</b>     | Routing of AC or DC power supply power cable should be implemented as prescribed by the local regulations regarding outdoor electrical installations.  |
| <b>Cable conduits</b>                 | Appropriate cable conduits should exist for the routing of installed cables.   |
| <b>Grounding</b>                      | <p>Ensure the following:</p> <ul style="list-style-type: none"><li>• To make a protective earth connection, use the grounding point located close to the radio unit.</li><li>• A grounding point (designated GND) should be located close to the mounting position of the radio unit (0 to 2 m max).</li><li>• The grounding point must be connected to grounding cable at least 16 mm<sup>2</sup> diameter.</li><li>• An appropriate, low-resistance grounding system as specified by the local regulations is required.</li><li>• The equipment will be connected to this grounding point, via the supplied grounding cable. This can also provide partial protection against Lightning-induced current. For additional protection against lightning LSPs required to be used. For more information regarding the installation of LSP/PSP please refer to <b>item 1</b> of <a href="#">Reference manuals</a> on page <a href="#">14</a>.</li></ul> |
| <b>Lightning and surge protection</b> | <p>In case additional protection against lightning is required for the radio the following should be applied:</p> <p><b><u>A: For Ethernet (S-FTP) Cables:</u></b><br/>Lighting surge protection device (LSP) is required to minimize equipment damage from lighting induced surges.</p> <p><b><u>B: Power Supply Cables (for power injectors):</u></b><br/>A power surge protection device (PSP) is required to avoid equipment damage from lightning induced surges or power supply surges.</p> <p>For more information regarding the installation of LSP/PSP please refer to <b>item 1</b> of <a href="#">Reference manuals</a> on page <a href="#">14</a>.</p>   |

*Continued on next page*

## Site Prerequisites, Continued

### Circuit breakers

The following table provides the circuit breakers characteristics for powering of power injectors:

| Order Code   | Required Circuit Breaker   |
|--|--|
| <ul style="list-style-type: none"> <li>• <b>POE-AC75-ID</b></li> <li>• <b>POE-ID-AC72</b></li> <li>• <b>POE-AC56-IDH</b></li> <li>• <b>PONE-OD67-AC</b></li> <li>• <b>POE-ID-AC35</b></li> </ul> | <ul style="list-style-type: none"> <li>• single-pole MCB 6 A</li> <li>• 230 V AC (voltage rating)</li> <li>• C-curve (for Industrial Applications)</li> </ul>    |
| <ul style="list-style-type: none"> <li>• <b>PONE-OD-DC</b></li> <li>• <b>POE-HP-OD67-DC</b></li> </ul>   | <ul style="list-style-type: none"> <li>• single-pole MCB 6 A</li> <li>• min 72 V DC (voltage rating)</li> <li>• C-curve (for Industrial Applications)</li> </ul> |

### Equipment installation

- The outdoor equipment, inclusive of the radio transceiver(s) and antenna(s), should be mounted on a mast or on a tower.
- The radio/antenna mounting kit should roughly point to the direction of the opposite unit (based on the site survey data).
- Each radio and antenna unit must be installed according to the radio planning data (height, degrees e.t.c).





### Tower or monopole installation

- The pole construction should be rust free and strong enough to handle the weight and restrict movement due to air pressure.
- Should be perfectly perpendicular to allow correct alignment of the antenna.
- The antenna mounting kit should roughly point to the direction of the opposite unit (based on the site survey data).
- Each radio and antenna unit must be installed according to the radio planning data for pole installation (height, degrees e.t.c).
- The outdoor equipment, inclusive of the radio transceiver(s) and antenna(s), should be mounted on a mast or on a tower.

## 3.4. Recommended Installation Tools

|                      |  |
|----------------------|--|
| <b>Introduction</b>  | This section describes all the recommended tools for installation of <b>WiBAS™ Terminal Stations</b> . |
| <b>Prerequisites</b> | It is installer responsibility to provide the tools for equipment installation.                        |

### Equipment installation tools

| Item | Tool / Photo  | Description   |
|------|---|---|
| 1    |    | Adjustable torque U-wrench tool (up to 29 mm opening and supporting max tightening torque 40 Nm).<br><br>Used for tightening screws and nuts. |
| 2    |   | Adjustable torque wrench tool with bits (supporting max tightening torque 20 Nm).<br><br>Used for tightening screws and nuts.                 |
| 3    |  | Set of allen keys.<br><br>Used for WiBAS™ OSDR-TS radio unit polarization change (1.5 mm) and cable holder installation (2.5 mm).             |
| 4    |  | Cross head and Flat head slotted tip screwdrivers (PH2 / PH3).<br><br>Used for general works.   |










*Continued on next page*

## Recommended Installation Tools, Continued



### Termination of cables

#### Type of cables to be terminated:

- Ethernet (S-FTP) ([ETH-CAB-SFTP](#)).
- Power supply cable ([AC-PWR-CAB](#), [DC-PWR-CAB-1 / 2 / 3](#)).
- Grounding ([GND-CAB6-ID](#), [GND-KIT16-OD](#)).

| Item | Tool / Photo  | Description   |
|------|---|---|
| 1    |    | Blade.  |
| 2    |    | Cable cutter.   |
| 3    |    | Pliers (long nose).   |
| 4    |    | <a href="#">CRIMP-TOOL-S</a>  |
| 5    |    | Ethernet cable tester.  |
| 6    |   | Crimping tool for 6 mm <sup>2</sup> and 16 mm <sup>2</sup> grounding cable. |
| 7    |  | Hot air gun.  |
| 8    |  | Soldering iron.   |
| 9    |  | Solder.   |

### Specific works

| Item | Tool / Photo  | Description   |
|------|---|---|
| 1    |  | Drill machine with 5 mm bit.<br>Used for wall installation of power injectors.  |
| 2    |  | <a href="#">TOOL-M20</a><br>Used for cable gland installation of power injectors ( <a href="#">PONE-OD67-AC</a> - <a href="#">POE-HP-OD67-DC</a> ). |

## 4. Installation Procedures

---

### Scope

This chapter describes the main installation procedures of **WiBAS™ Terminal Stations**, as follows:

| Description   | Page                |
|---|---------------------|
| <a href="#">Installing Radio Units and Antennas</a> | <a href="#">64</a>  |
| <a href="#">Installing Radio Units Cables</a>       | <a href="#">157</a> |

---

## 4.1. Installing Radio Units and Antennas

**Overview** This section describes the installation procedures for radio unit and antenna, as follows:

| # | Description   | Overview  |
|---|---|---|
| 1 | <a href="#">WiBAS G5 Connect+ Combo</a>   |    |
| 2 | <a href="#">WiBAS-Connect Combo</a>   |    |
| 3 | <a href="#">WiBAS-Connect and Low Profile 0.3 m / 0.5 m</a>                                 |     |
| 4 | <a href="#">WiBAS-Connect and Parabolic 0.3 m with Adaptation Plate / 0.6 m with Clamps</a> |     |
| 5 | <a href="#">WiBAS-Connect and Panel</a>   |    |
| 6 | <a href="#">WiBAS OSDR-TS and Parabolic 0.3 m</a>   |    |
| 7 | <a href="#">WiBAS OSDR-TS and Panel</a>   |    |



## WiBAS G5 Connect+ Combo

---

**Introduction**      Apply this procedure for installing the following wireless equipment:



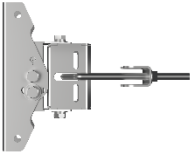


- WiBAS™ G5 Connect+ Combo
  - Terminal radio unit **WG5-CONN-PLUS-LB-UB** with pre-mounted antenna **0.3 m (ANT-IS-2628-1F-C)**.
- Mounting kit
  - Pole Mounting kit **WG5-WCONN-PL-MNT** for installing WiBAS™ G5 Connect+ Combo.

---

*Continued on next page*

# WiBAS G5 Connect+ Combo, Continued

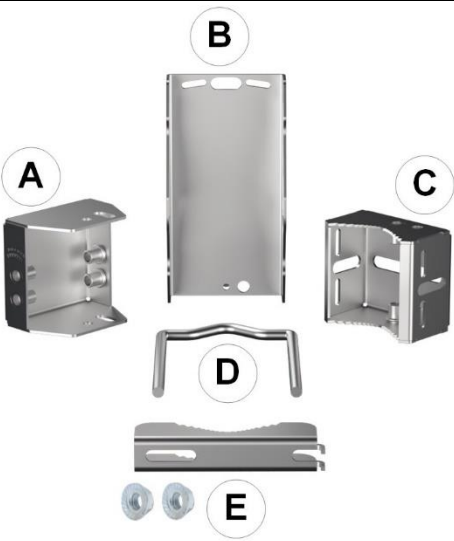
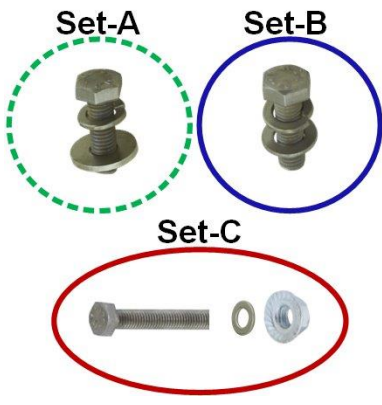

Pole  
installation  
overview

|  |
|--|
| WiBAS™ G5 Connect+ / Antenna / Mounting Kit  |
| WG5-CONN-PLUS-LB-UB and ANT-IS-2628-1F-C   |
|     |
| WG5-CONN-PLUS-LB-UB and ANT-IS-2628-1D6F-C   |
|     |
| WG5-WCONN-PL-MNT   |
|  |
| Pole Installation Overview with 0.3 m Antenna  |
|  |
| Pole Installation Overview with 0.5 m Antenna  |
|  |

Continued on next page

## WiBAS G5 Connect+ Combo, Continued

### Mounting kits packing materials

| WiBAS™ G5 Connect+<br>WG5-WCONN-PL-MNT  | Details   |
|---|---|
|   | <ul style="list-style-type: none"> <li>• Azimuth bracket <b>(A)</b>.</li> <li>• Elevation bracket <b>(B)</b>.</li> <li>• Pole bracket <b>(C)</b>.</li> <li>• U-BOLT, M8 x 100 mm <b>(D)</b>.</li> <li>• U-BOLT bracket and M5 nuts flange serrated (x2) <b>(E)</b>.</li> </ul>  |
|  | <ul style="list-style-type: none"> <li>• <b>Set-A:</b> <ul style="list-style-type: none"> <li>– M8 x 25 mm screws (x4).</li> <li>– M8 washers steel (x4).</li> <li>– M8 lock washers (x4).</li> </ul> </li> <li>• <b>Set-B:</b> <ul style="list-style-type: none"> <li>– M8 x 25 mm screws (x4).</li> <li>– M8 washers (x4).</li> <li>– M8 lock washers (x4).</li> </ul> </li> <li>• <b>Set-C:</b> <ul style="list-style-type: none"> <li>– M5 x 30 mm screws (x3).</li> <li>– M5 nuts flange serrated (x3).</li> <li>– M5 washers (x3).</li> </ul> </li> </ul> |
|  | <ul style="list-style-type: none"> <li>• Mounting kit assembly leaflet.</li> </ul>  |

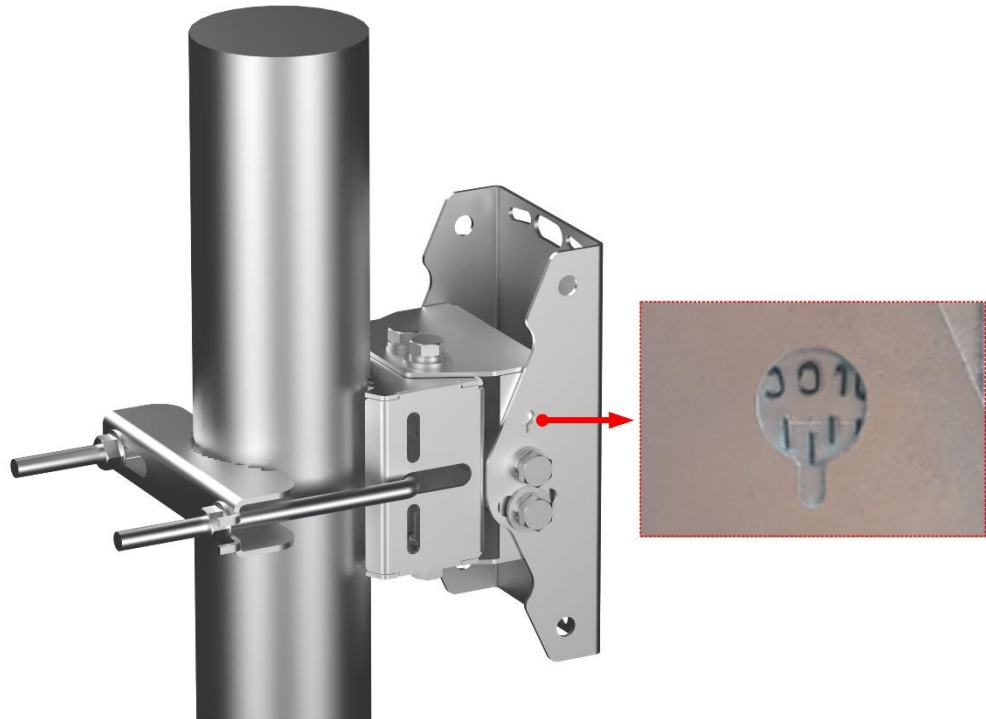
*Continued on next page*

## WiBAS G5 Connect+ Combo, Continued

---

### Prerequisites

For elevation adjustment there is an elevation degrees indicator at both sides of the mounting kit, as shown below. The bracket during installation should be installed in 0 degrees. During commissioning the proper elevation degrees will be applied.



---

*Continued on next page*

## WiBAS G5 Connect+ Combo, Continued

### Precautions

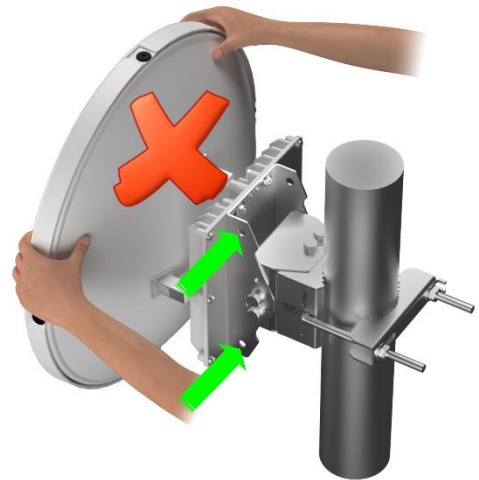
- Do not grab, nor touch the antenna during lifting, turning or any handling of the terminal while the terminal is mounted on the pole, it may lead to damage of the antenna.



**DO NOT USE YOUR  
HANDS TO ALIGN THE  
ANTENNA !**

**Antenna will be damaged !**

Use a set of screwdrivers at these points to align the antenna. How to align the antenna please refer to commissioning manual.

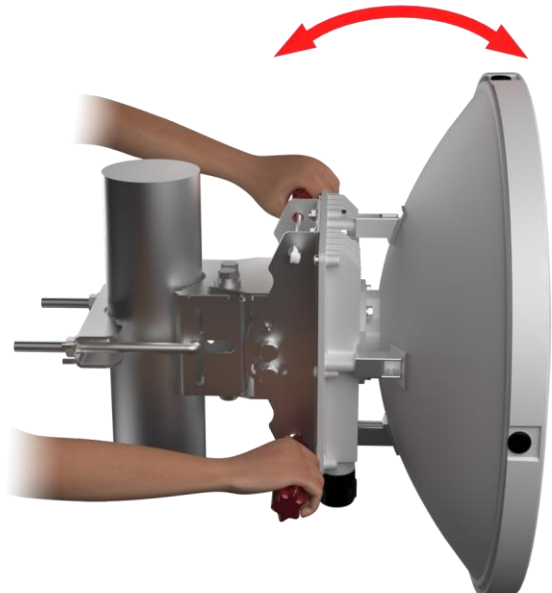


### ANTENNA ALIGNMENT using a set of screwdrivers

#### AZIMUTH AXIS



#### ELEVATION AXIS



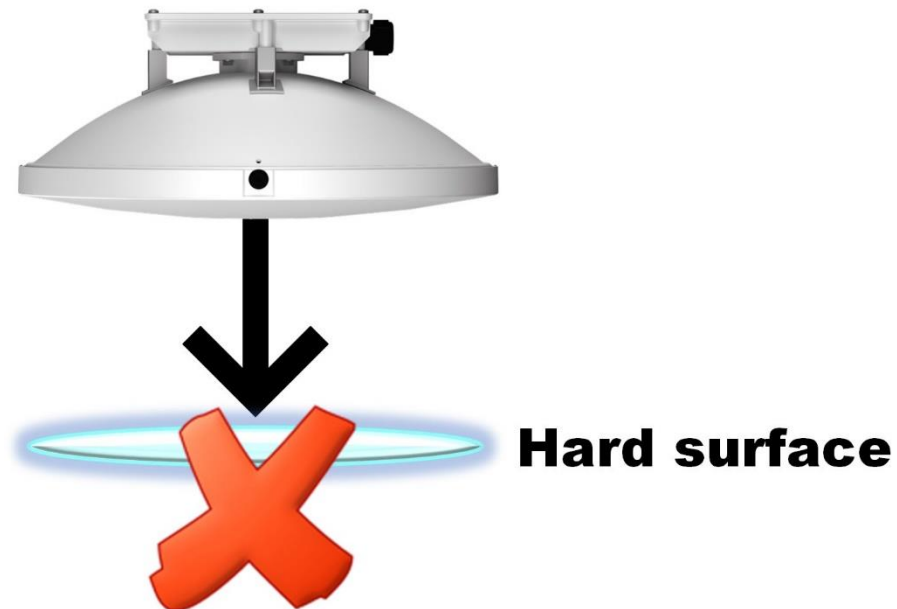
*Continued on next page*

## WiBAS G5 Connect+ Combo, Continued

---

### Precautions, continued

- The parabolic low profile antenna should NEVER be placed on a hard surface. Handle the antenna with care and avoid the application of pressure on the antenna cover as this may lead to breakage of the antenna dipole.



- Never leave unoccupied receptacles without cover. Covering receptacles is necessary to protect against humidity penetration.

---

### Tools

- Adjustable torque U-wrench.
- Drilling machine (fitted with a 13 mm drill bit) for wall mount installation.

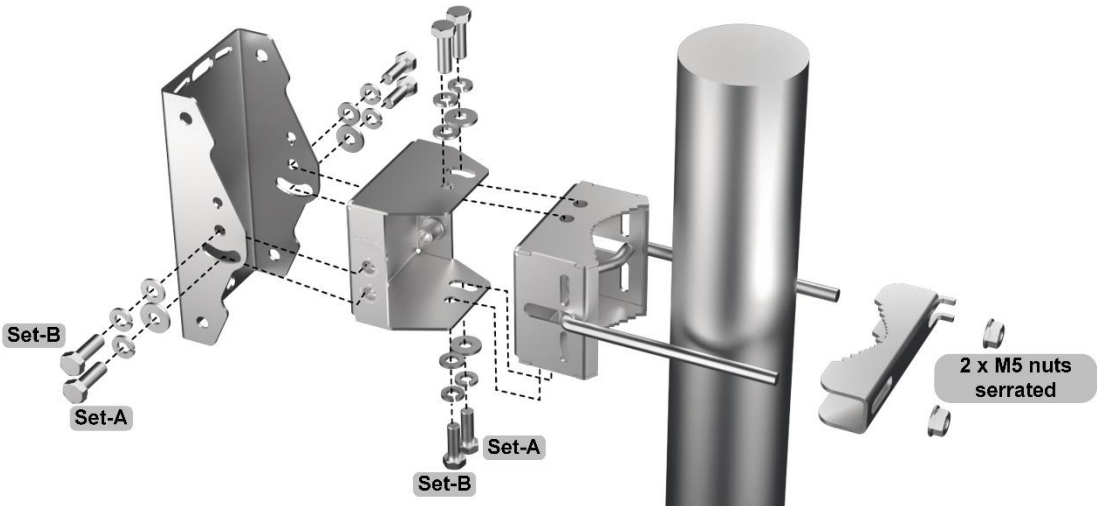
---

*Continued on next page*

## WiBAS G5 Connect+ Combo, Continued

**Procedure for  
WiBAS G5  
Connect+  
Combo**

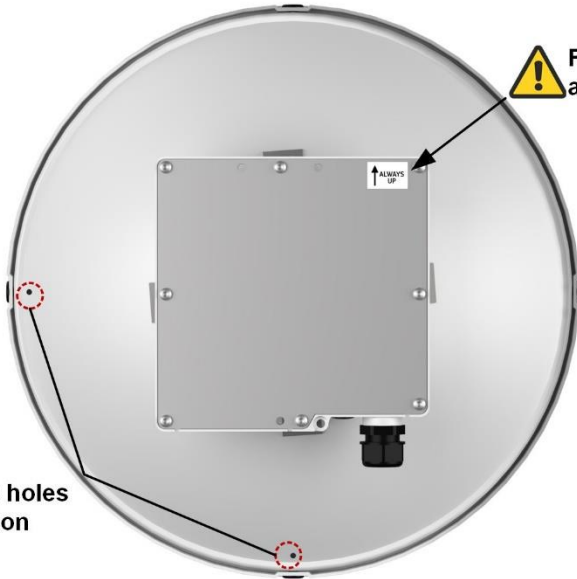
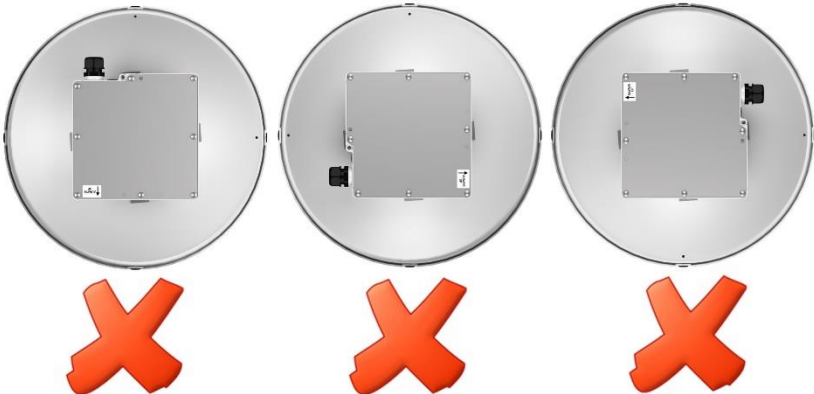
How to install the WiBAS™ G5 Connect+ Combo to pole mounting kit (**WG5-WCONN-PL-MNT**), proceed as follows:

| Step | Action   |
|------|--|
| 1    | <p>Mount the azimuth bracket onto the pole bracket and then install the respective set of mounting kit packing materials, as shown below:</p>  <p><b>⚠ Do not over tighten the screws (Set-A and Set-B).</b> Adjust the tool for applying max tightening torque <b>15 Nm</b>.</p> <p><b>Do not over tighten the M5 serrated nuts.</b> Overtightening will cause deformation of the support clamp.</p> |

*Continued on next page*

## WiBAS G5 Connect+ Combo, Continued

Procedure for  
WiBAS G5  
Connect+  
Combo  
continued

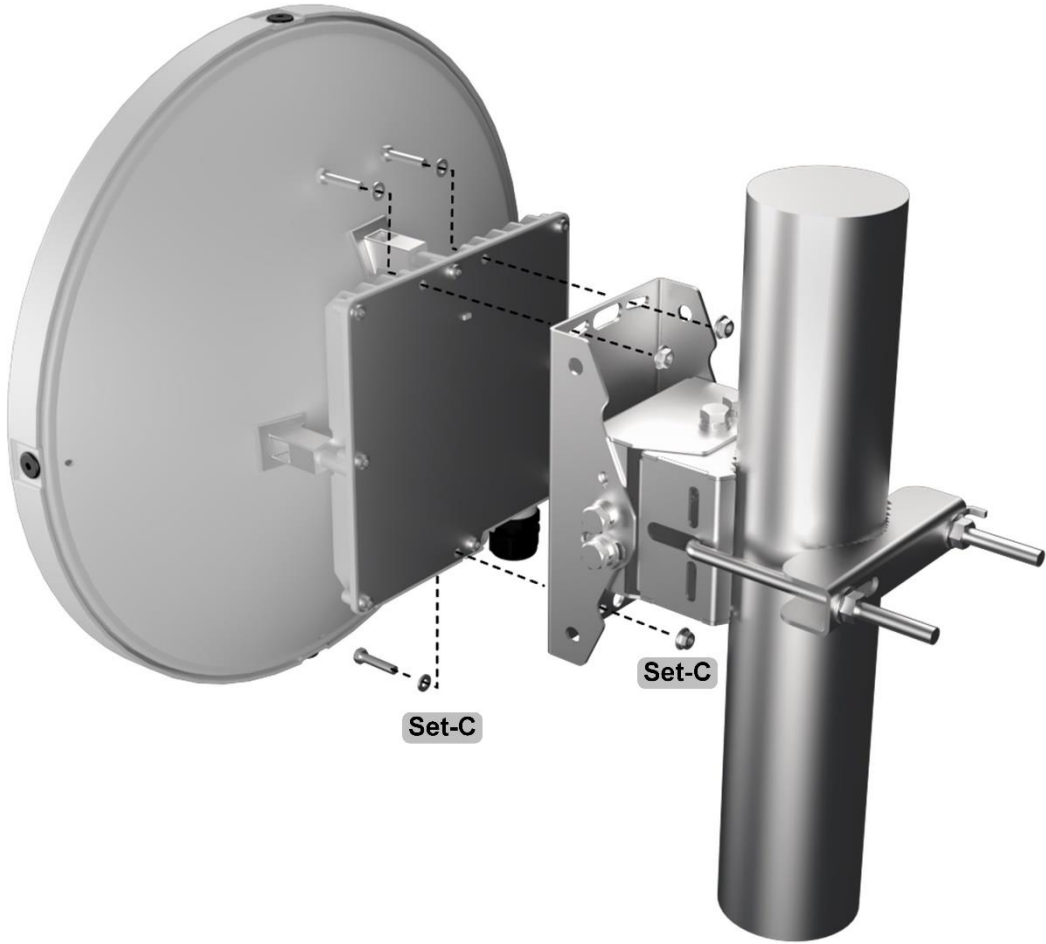

| Step | Action   |
|------|--|
| 2    | <p>Set the antenna position as shown below:</p>  <p><b>Follow the arrow</b></p> <p><b>Drainage holes position</b></p> <p><b>DO NOT TURN the ANTENNA, as shown below:</b></p>  |

*Continued on next page*



WiBAS G5 Connect+ Combo, Continued

Procedure for WiBAS G5 Connect+ Combo continued

| Step | Action   |
|------|--|
| 3    | <p>Mount the elevation bracket onto the radio unit and then install the respective set of mounting kit packing materials, as shown below:</p>  <p><b>Set-C</b></p> <p><b>Set-C</b></p> <p><b>Set-C</b></p> <p> <b>Do not over tighten the screws.</b> Adjust the tool for applying max tightening torque <b>5.5 Nm</b> for <b>M5 screws</b>.</p> |
| 4    | <p>For cables installation refer to <a href="#">Installing Radio Units Cables</a> .</p>  |

End of procedure.

## WiBAS-Connect Combo

---

### Introduction

Apply this procedure for installing the following wireless equipment:









- WiBAS™-Connect Combo
  - Terminal radio unit **CONN-OB-U-DSDS** with pre-mounted antenna **0.3m** (**ANT-IS-2628-1F-C**) or **0.5 m** (**ANT-IS-2628-1D6F-C**).
  - Terminal radio unit **CONN-OB-U-DSDS-DP** with pre-mounted antenna **0.3 m** (**ANT-DP-2628-1F-C**) or **0.5 m** (**ANT-DP-2628-1D6F-C**).
- Mounting kits
  - Pole Mounting kit **WCONN-PL-MNT** for WiBAS™-Connect Combo.
  - Pole Mounting kit **WCONN-DP-PL-MNT** for WiBAS™-Connect (auto-polarization) Combo.
  - Wall mounting kit **WCONN-PL-W-MNT-DP** for for WiBAS™-Connect (auto-polarization) Combo.

---

*Continued on next page*

## WiBAS-Connect Combo, Continued

### Pole installation overview

| WiBAS™-Connect / Antenna /<br>Mounting kit  | WiBAS™-Connect (auto-polarization)<br>/ Antenna / Mounting Kit                        |
|---|---|
| <b>CONN-OB-U-DSDS</b> and<br><b>ANT-IS-2628-1F-C</b>                                | <b>CONN-OB-U-DSDS-DP</b> and<br><b>ANT-DP-2628-1F-C</b>                               |
|    |    |
| <b>CONN-OB-U-DSDS</b> and<br><b>ANT-IS-2628-1D6F-C</b>                              | <b>CONN-OB-U-DSDS-DP</b><br>and <b>ANT-DP-2628-1D6F-C</b>                             |
|   |   |
| <b>WCONN-PL-MNT</b>   | <b>WCONN-DP-PL-MNT</b>  |
|  |  |
| <b>Pole Installation Overview with 0.3 m Antenna</b>                                |   |
|  |  |
| <b>Pole Installation Overview with 0.5 m Antenna</b>                                |   |
|  |  |

*Continued on next page*

## WiBAS-Connect Combo, Continued

### Wall installation overview

| CONN-OB-U-DSDS-DP and<br>ANT-DP-2628-1F-C   | WCONN-PL-W-MNT-DP   |
|---|---|
|  |  |
| CONN-OB-U-DSDS-DP and<br>ANT-DP-2628-1D6F-C                                       |   |
|  |   |

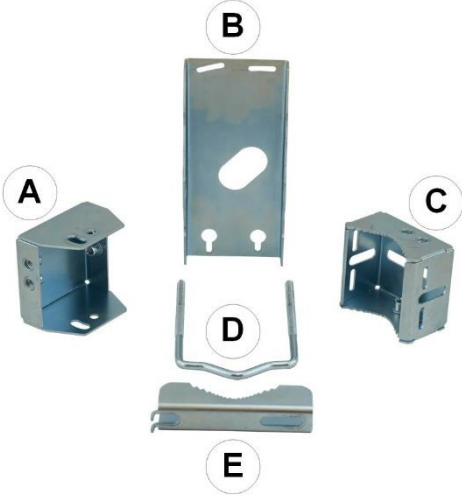
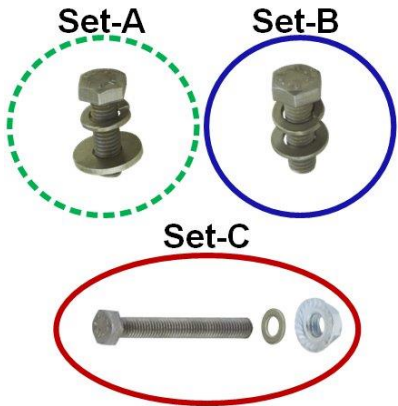

Overview with 0.3 m antenna



*Continued on next page*

## WiBAS-Connect Combo, Continued

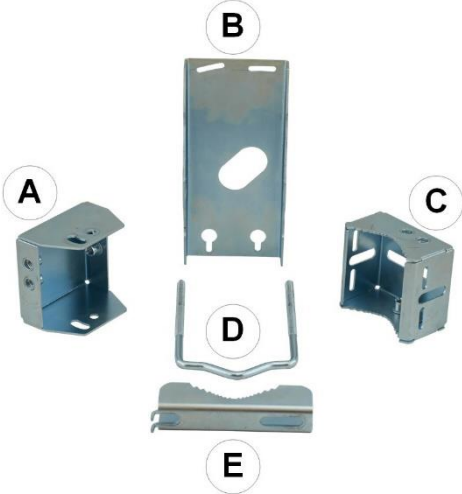
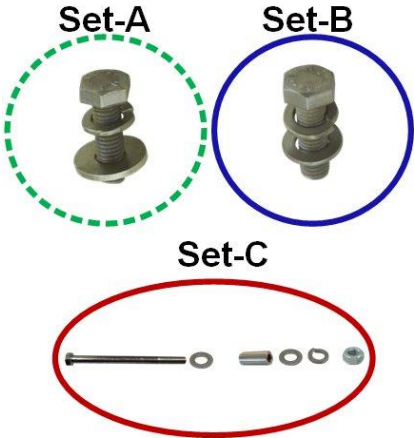

### Mounting kits packing materials

| WiBAS™-Connect<br><b>WCONN-PL-MNT</b>   | Details   |
|---|---|
|    | <ul style="list-style-type: none"> <li>• Azimuth bracket <b>(A)</b>.</li> <li>• Elevation bracket <b>(B)</b>.</li> <li>• Pole bracket <b>(C)</b>.</li> <li>• U-BOLT, M8 x 100 mm <b>(D)</b>.</li> <li>• U-BOLT bracket <b>(E)</b>.</li> </ul>   |
|  | <ul style="list-style-type: none"> <li>• <b>Set-A:</b> <ul style="list-style-type: none"> <li>– M8 x 25 mm screws (x4).</li> <li>– M8 washers steel (x4).</li> <li>– M8 lock washers (x4).</li> </ul> </li> <li>• <b>Set-B:</b> <ul style="list-style-type: none"> <li>– M8 x 25 mm screws (x4).</li> <li>– M8 washers (x4).</li> <li>– M8 lock washers (x4).</li> </ul> </li> <li>• <b>Set-C:</b> <ul style="list-style-type: none"> <li>– M5 x 40 mm screws (x4).</li> <li>– M5 nuts flange serrated (x4).</li> <li>– M5 washers (x4).</li> </ul> </li> </ul> |
|  | <ul style="list-style-type: none"> <li>• Mounting kit assembly leaflet.</li> </ul>  |

*Continued on next page*

## WiBAS-Connect Combo, Continued

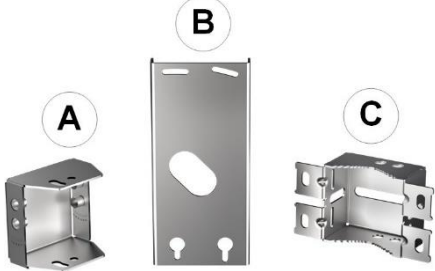
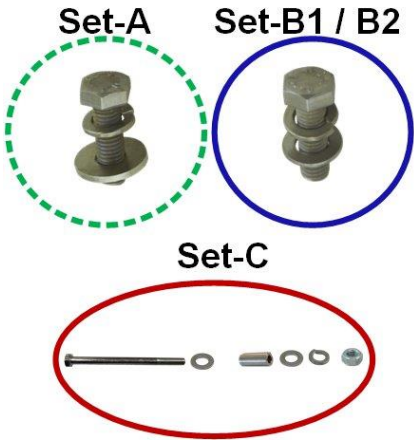

Mounting kits  
packing  
materials,  
continued

| <b>WiBAS™-Connect</b><br><b>(auto-polarization)</b><br><br><b>WCONN-DP-PL-MNT</b>   | <b>Details</b>  |
|---|---|
|    | <ul style="list-style-type: none"> <li>• Azimuth bracket <b>(A)</b>.</li> <li>• Elevation bracket <b>(B)</b>.</li> <li>• Pole bracket <b>(C)</b>.</li> <li>• U-BOLT, M8 x 100 mm <b>(D)</b>.</li> <li>• U-BOLT bracket <b>(E)</b>.</li> </ul>   |
|  | <ul style="list-style-type: none"> <li>• <b>Set-A:</b> <ul style="list-style-type: none"> <li>– M8 x 25 mm screws (x4).</li> <li>– M8 washers steel (x4).</li> <li>– M8 lock washers (x4).</li> </ul> </li> <li>• <b>Set-B:</b> <ul style="list-style-type: none"> <li>– M8 x 25 mm screws (x4).</li> <li>– M8 washers (x4).</li> <li>– M8 lock washers (x4).</li> </ul> </li> <li>• <b>Set-C:</b> <ul style="list-style-type: none"> <li>– M5 x 70 mm screws (x4).</li> <li>– M5 nuts (x4).</li> <li>– M5 lock washers (x4).</li> <li>– M5 washers (x8).</li> <li>– Spacers 25 mm (x4) - aluminum</li> </ul> </li> </ul> |
|  | <ul style="list-style-type: none"> <li>• Mounting kit assembly leaflet.</li> </ul>  |

*Continued on next page*

## WiBAS-Connect Combo, Continued

Mounting kits  
packing  
materials,  
continued

| <b>WiBAS™-Connect</b><br>(auto-polarization)<br><br><b>WCONN-PL-W-MNT-DP</b>        | <b>Details</b>  |
|---|---|
|    | <ul style="list-style-type: none"> <li>• Azimuth bracket <b>(A)</b>.</li> <li>• Elevation bracket <b>(B)</b>.</li> <li>• Wall bracket <b>(C)</b>.</li> </ul>  |
|   | <ul style="list-style-type: none"> <li>• <b>Set-A:</b> <ul style="list-style-type: none"> <li>– M8 x 25 mm screws (x4).</li> <li>– M8 washers steel (x4).</li> <li>– M8 lock washers (x4).</li> </ul> </li> <li>• <b>Set-B1 / B2:</b> <ul style="list-style-type: none"> <li>– M8 x 25 mm screws (x4).</li> <li>– M8 washers (x4).</li> <li>– M8 lock washers (x4).</li> </ul> </li> <li>• <b>Set-C:</b> <ul style="list-style-type: none"> <li>– M5 x 70 mm screws (x4).</li> <li>– M5 nuts (x4).</li> <li>– M5 lock washers (x4).</li> <li>– M5 washers (x8).</li> <li>– Spacers 25 mm (x4) - aluminum</li> </ul> </li> </ul> |
|  | <ul style="list-style-type: none"> <li>• Mounting kit assembly leaflet.</li> </ul>  |

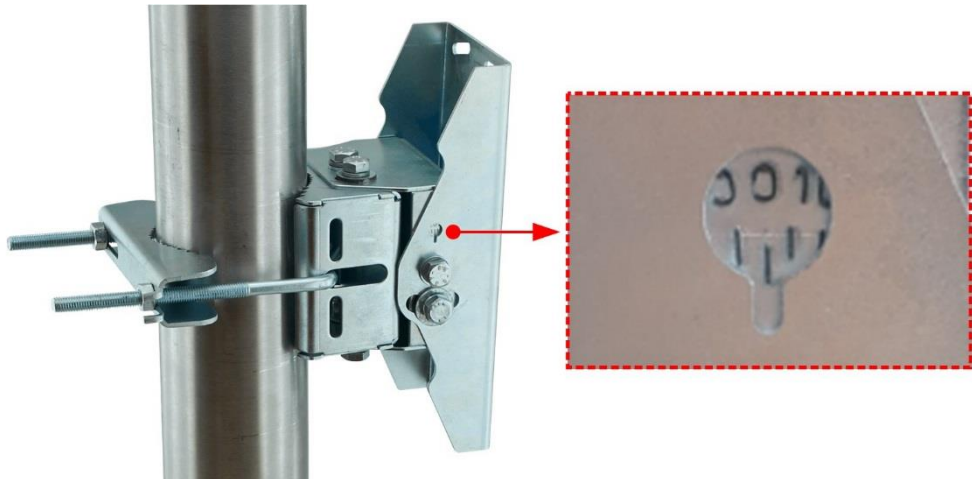
*Continued on next page*

## WiBAS-Connect Combo, Continued

---

### Prerequisites

For elevation adjustment there is an elevation degrees indicator at both sides of the mounting kit, as shown below. The bracket during installation should be installed in 0 degrees. During commissioning the proper elevation degrees will be applied.



---

*Continued on next page*



## WiBAS-Connect Combo, Continued

### Precautions

- Do not grab, nor touch the antenna during lifting, turning or any handling of the terminal while the terminal is mounted on the pole, it may lead to damage of the antenna.

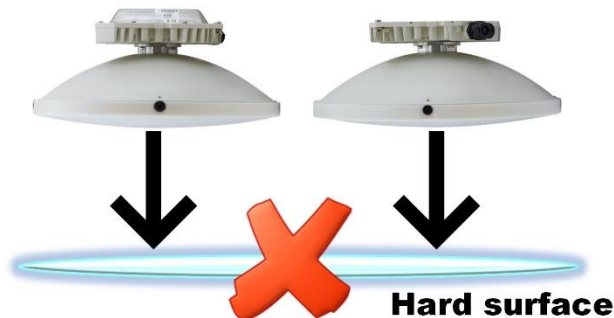
**DO NOT USE YOUR  
HANDS TO ALIGN THE  
ANTENNA!**

**Antenna will be damaged!**



**Use the alignment tools [WCONN-ALT-KIT](#)  
at these points to align the antenna, as  
instructed in the commissioning manual!**

- The parabolic low profile antenna should NEVER be placed on a hard surface. Handle the antenna with care and avoid the application of pressure on the antenna cover as this may lead to breakage of the antenna dipole.



- Never leave unoccupied receptacles without cover. Covering receptacles is necessary to protect against humidity penetration.

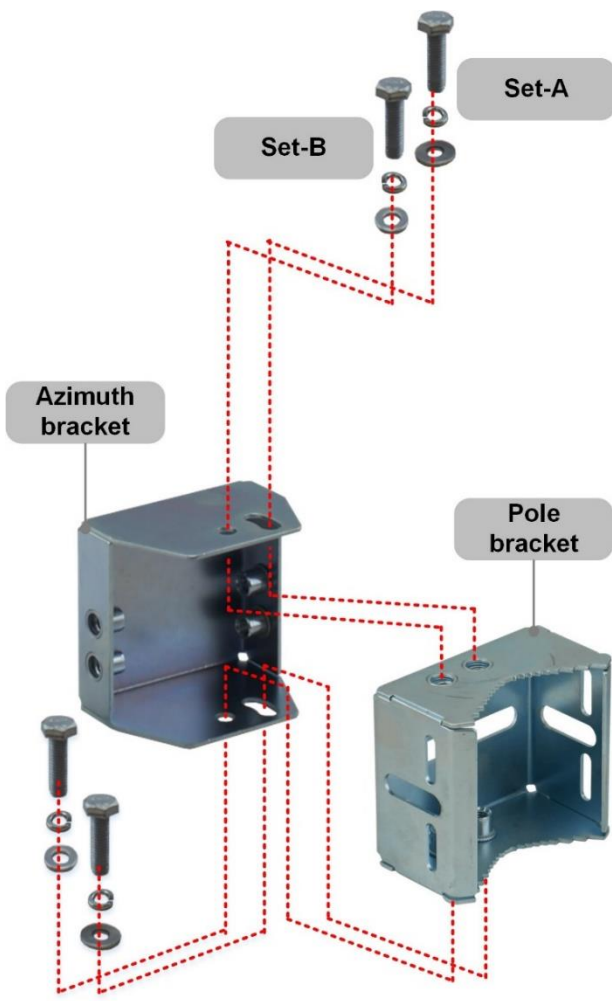
*Continued on next page*

# WiBAS-Connect Combo, Continued

- Tools
- Adjustable torque U-wrench.
  - Drilling machine (fitted with a 13 mm drill bit) for wall mount installation.

Procedure for  
WiBAS-  
Connect  
Combo

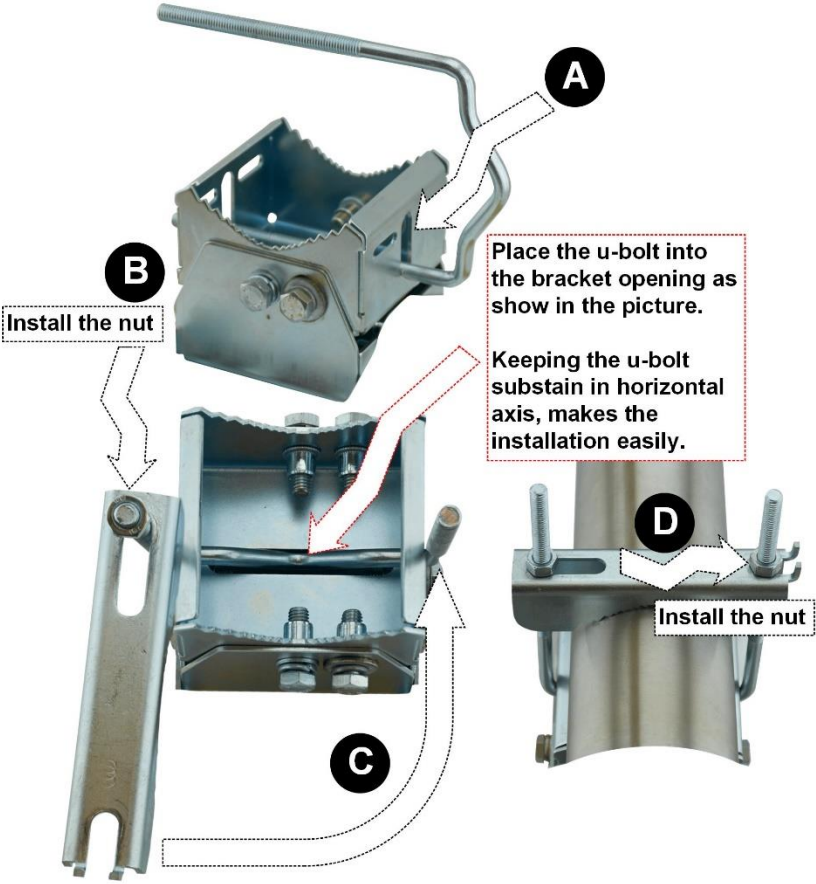
How to install the WiBAS™-Connect Combo to pole mounting kit ([WCONN-PL-MNT](#)), proceed as follows:

| Step | Action  |
|------|---|
| 1    | <div><p>Mount the azimuth bracket onto the pole bracket and then install the respective set of mounting kit packing materials, as shown below:</p><p><b>⚠ Do not over tighten the screws.</b> Adjust the tool for applying max tightening torque <b>15 Nm</b>.</p></div> |

Continued on next page

## WiBAS-Connect Combo, Continued




**Procedure for  
WiBAS-  
Connect  
Combo,  
continued**

| Step | Action   |
|------|--|
| 2a   | <p>For installing the <b>pole bracket onto the pole</b> perform the respective actions <b>A, B, C</b> and <b>D</b>, as shown below.</p> <p>For installing the <b>pole bracket onto the pole</b> using <b>hose clamps</b> go to the next step.</p>  <p><b>A</b> Place the u-bolt into the bracket opening as show in the picture.</p> <p><b>B</b> Install the nut</p> <p>Keeping the u-bolt subtain in horizontal axis, makes the installation easily.</p> <p><b>C</b></p> <p><b>D</b> Install the nut</p> <p><b>!</b> Do not over tighten the nuts. Overtightening will cause deformation of the support clamp.</p> |

*Continued on next page*

## WiBAS-Connect Combo, Continued

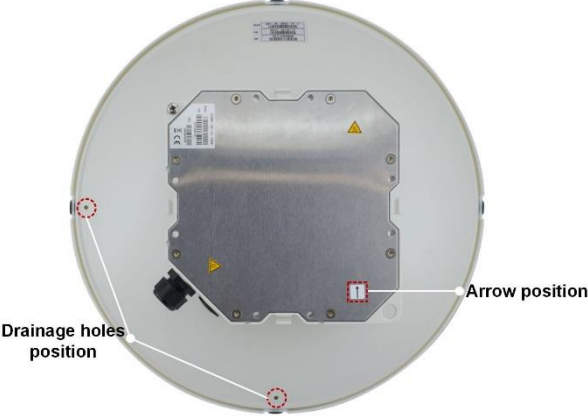
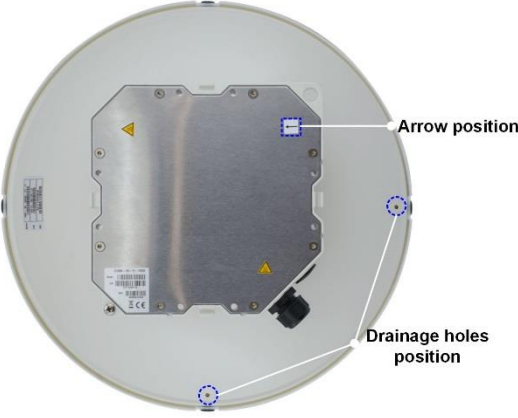
### Procedure for WiBAS- Connect Combo, continued

| Step | Action   |
|------|--|
| 2b   | <p>Pass through both clamps to pole bracket openings and then install the whole assembly onto the pole (taking into the account the caution below):</p> <div><p>Pole bracket</p></div> <p> <b>Do not over tighten the warm screws.</b> Adjust the tool for applying min / max tightening torque <b>5.5 / 7 Nm</b>.</p> |

*Continued on next page*

WiBAS-Connect Combo, Continued

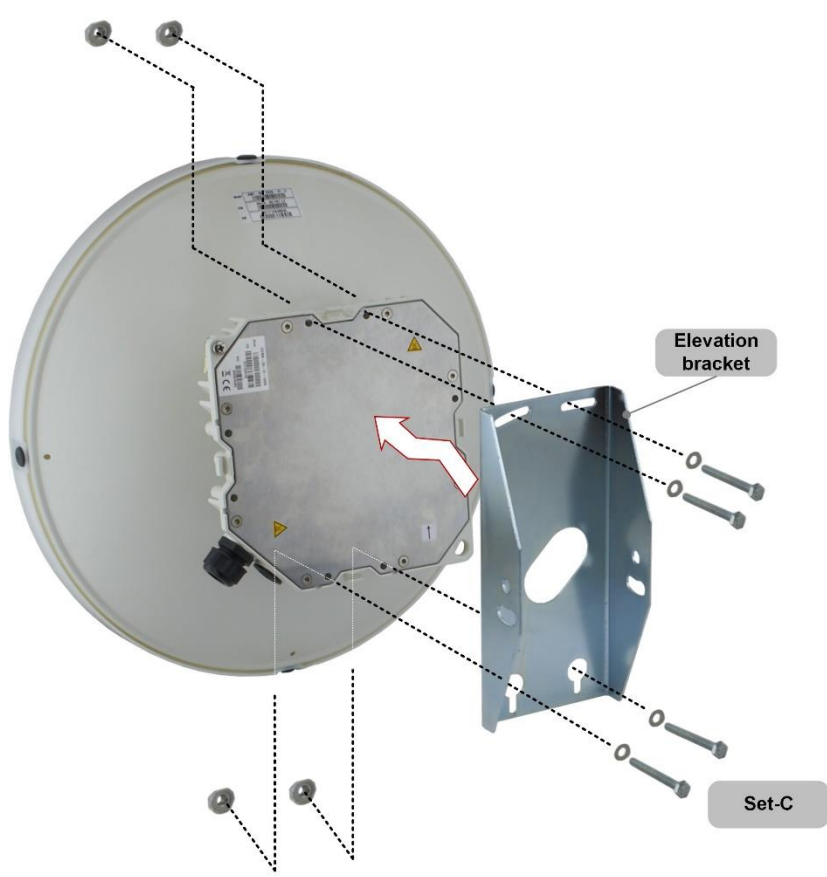
Procedure for  
WiBAS-  
Connect  
Combo,  
continued

| Step | Action  |
|------|---|
| 3    | <p>Turn the antenna to determine the desirable polarization, as shown below.</p> <p><b>VERTICAL</b></p>  <p><b>HORIZONTAL</b></p>  |

Continued on next page

## WiBAS-Connect Combo, Continued

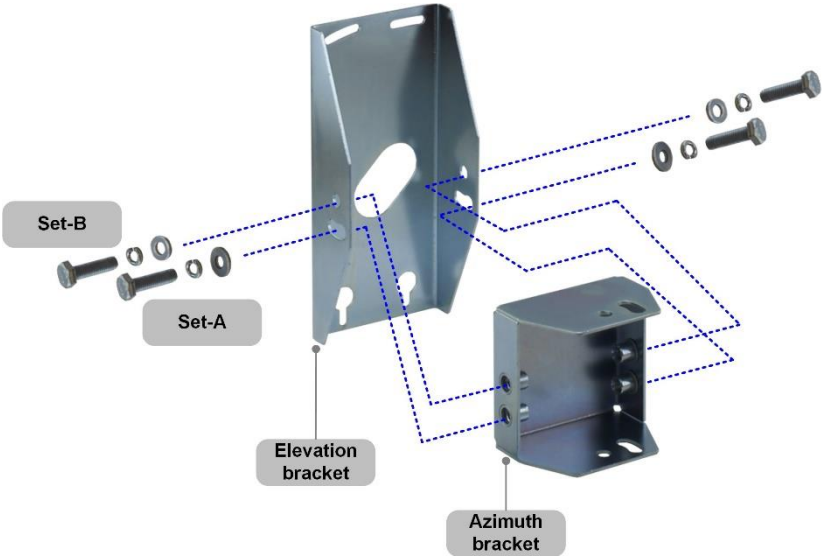
### Procedure for WiBAS- Connect Combo, continued

| Step | Action   |
|------|--|
| 4    | <p>Mount the elevation bracket onto the radio unit and then install the respective set of mounting kit packing materials, as shown below:</p>  <p><b>Do not over tighten the screws.</b> Adjust the tool for applying max tightening torque <b>5.5 Nm</b> for <b>M5</b> screws.</p> |

*Continued on next page*

WiBAS-Connect Combo, Continued

Procedure for  
WiBAS-  
Connect  
Combo,  
continued

| Step | Action  |
|------|---|
| 5    | <p>Mount the elevation bracket onto the azimuth bracket and then install the respective set of mounting kit packing materials, as shown below:</p>  <p><b>Do not over tighten the screws.</b> Adjust the tool for applying max tightening torque <b>15 Nm</b>.</p> |
| 6    | For cables installation refer to <a href="#">Installing Radio Units Cables</a> .  |

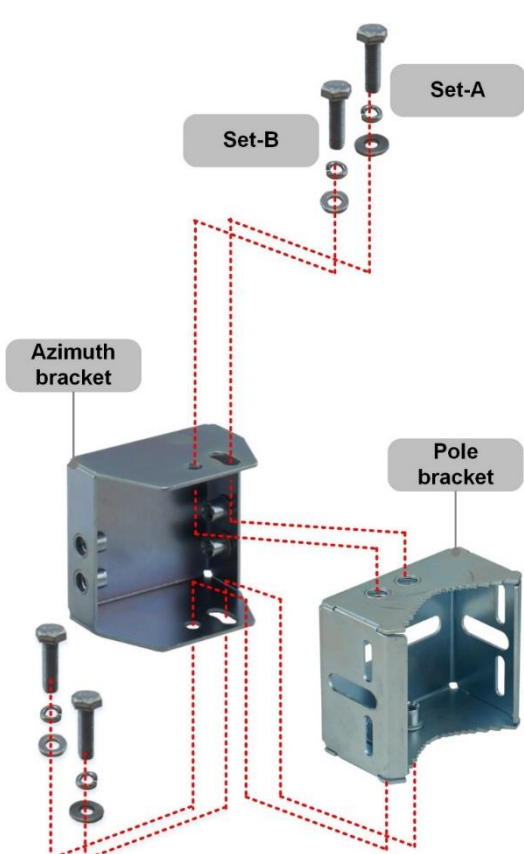
End of procedure.

Continued on next page

WiBAS-Connect Combo, Continued

Procedure for  
WiBAS-  
Connect (auto-  
polarization)  
Combo

How to install the WiBAS™-Connect auto-polarization Combo to pole mounting kit ([WCONN-DP-PL-MNT](#)) or to wall mounting kit ([WCONN-PL-W-MNT-DP](#)), proceed as follows:

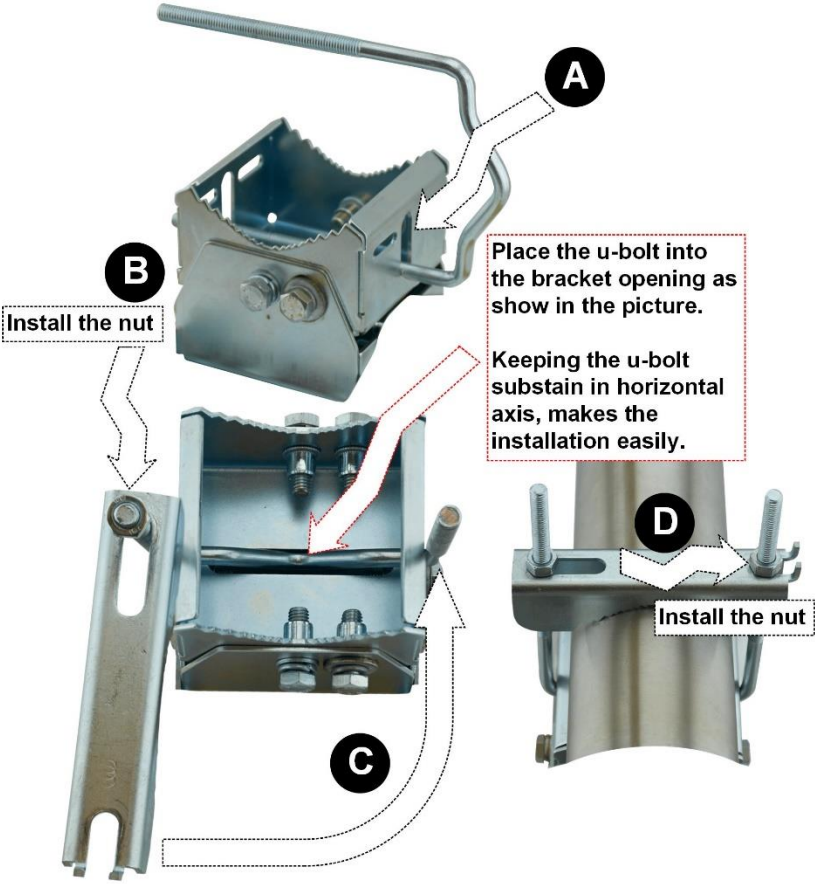

| Step | Action  |
|------|---|
| 1    | <p><b>For pole mount installation, proceed as follows.</b></p> <p><b>For wall mount installation go to step 7.</b></p> <p>Mount the azimuth bracket onto the pole bracket and then install the respective set of mounting kit packing materials, as shown below:</p>  <p><b>Do not over tighten the screws.</b> Adjust the tool for applying max tightening torque <b>15 Nm</b>.</p> |

Continued on next page



WiBAS-Connect Combo, Continued

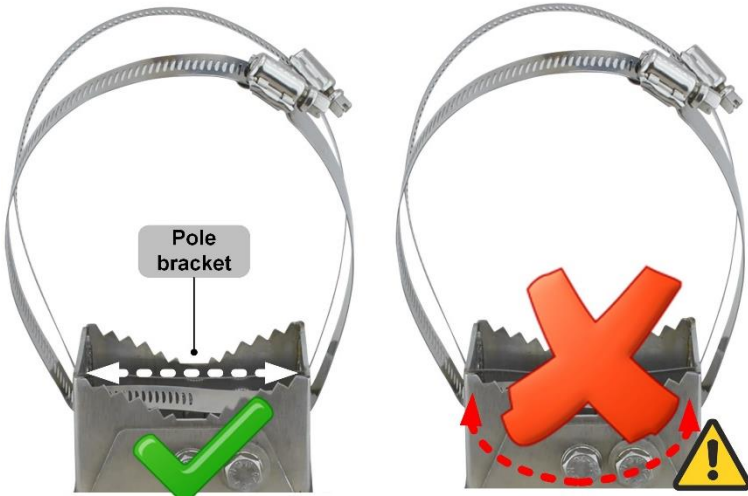

Procedure for  
WiBAS-  
Connect (auto-  
polarization)  
Combo,  
continued

| Step | Action   |
|------|--|
| 2a   | <p>For installing the <b>pole bracket onto the pole</b> perform the respective actions <b>A, B, C</b> and <b>D</b>, as shown below.</p> <p>For installing the <b>pole bracket onto the pole</b> using <b>hose clamps</b> go to the next step.</p> <div><p><b>A</b></p><p>Place the u-bolt into the bracket opening as show in the picture.</p><p><b>B</b></p><p>Install the nut</p><p>Keeping the u-bolt substain in horizontal axis, makes the installation easily.</p><p><b>C</b></p><p><b>D</b></p><p>Install the nut</p><p> <b>Do not over tighten the nuts.</b> Overtightening will cause deformation of the support clamp.</p></div> |

Continued on next page

## WiBAS-Connect Combo, Continued

### Procedure for WiBAS- Connect (auto- polarization) Combo, continued

| Step | Action   |
|------|--|
| 2b   | <p>Pass through both clamps to pole bracket openings and then install the whole assembly onto the pole (taking into the account the caution below):</p> <div style="text-align: center;">  <p>The diagram consists of two side-by-side illustrations of the WiBAS-Connect Combo assembly. The left illustration shows the assembly being passed through the openings of a pole bracket, with a green checkmark indicating this is the correct method. A label 'Pole bracket' points to the bracket. The right illustration shows the assembly being forced onto the pole bracket, marked with a large red 'X' and a warning triangle, indicating this is incorrect. Red dashed arrows point to the bottom of the assembly where the warning is shown.</p> </div> <p> <b>Do not over tighten the warm screws.</b> Adjust the tool for applying min / max tightening torque <b>5.5 / 7 Nm</b>.</p> |

*Continued on next page*

WiBAS-Connect Combo, Continued

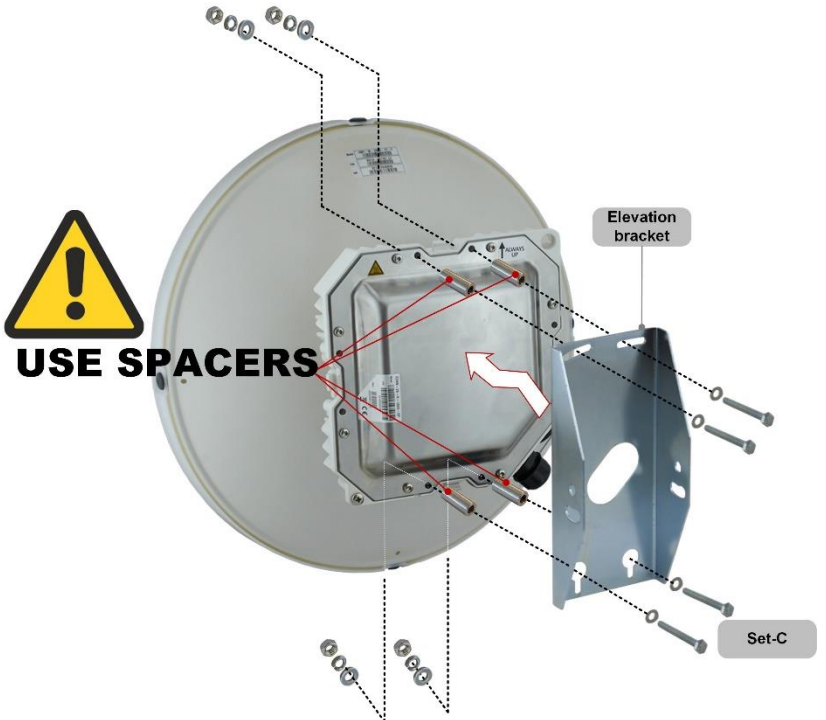
Procedure for  
WiBAS-  
Connect (auto-  
polarization)  
Combo,  
continued

| Step | Action  |
|------|---|
| 3    | <p>Set the antenna position as shown below:</p> <div></div> <p> <b>DO NOT TURN the ANTENNA</b>, as shown below:</p> <div></div> |

Continued on next page

## WiBAS-Connect Combo, Continued

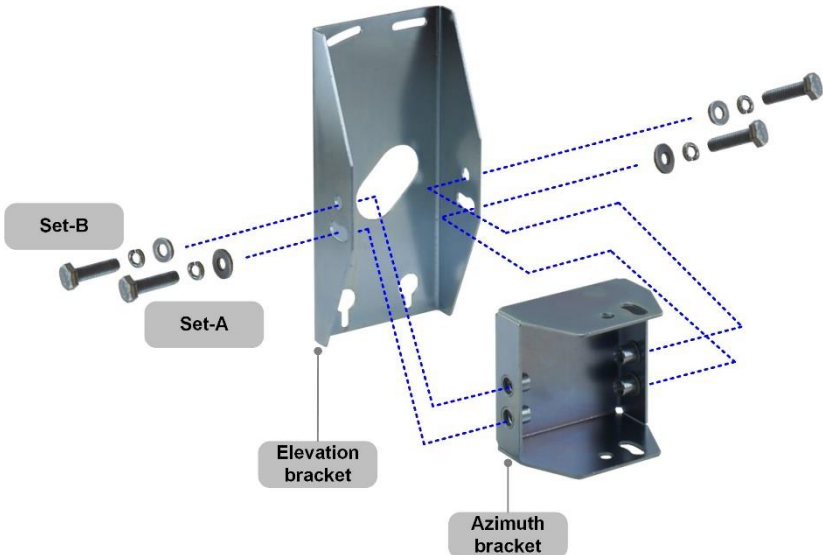

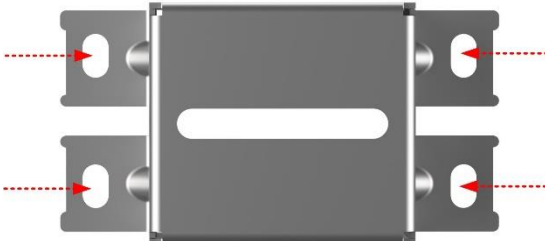
Procedure for  
WiBAS-  
Connect (auto-  
polarization)  
Combo,  
continued

| Step | Action  |
|------|---|
| 4    | <p>Mount the elevation bracket onto the radio and then install the respective set of mounting kit packing materials, as shown below:</p>  <p><b>USE SPACERS</b></p> <p><b>Do not over tighten the screws.</b> Adjust the tool for applying max tightening torque <b>5.5 Nm</b> for <b>M5 screws</b>.</p> |

*Continued on next page*

## WiBAS-Connect Combo, Continued

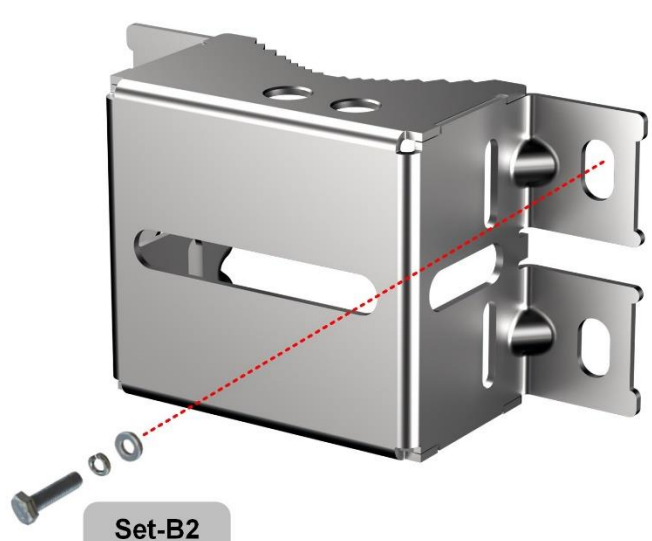
Procedure for  
WiBAS-  
Connect (auto-  
polarization)  
Combo,  
continued

| Step | Action  |
|------|---|
| 5    | <p>Mount the elevation bracket onto the azimuth bracket and then install the respective set of mounting kit packing materials, as shown below:</p>  <p> <b>Do not over tighten the screws.</b> Adjust the tool for applying max tightening torque <b>15 Nm</b>.</p> |
| 6    | <p>For cables installation refer to <a href="#">Installing Radio Units Cables</a> .</p> <p><b>End of procedure for pole mount installation.</b></p>   |
| 7    | <p>Perform the following actions:</p> <ul style="list-style-type: none"> <li>• Mark with a pencil the holes in the wall surface.</li> <li>• Use the drilling machine (fitted with a 13 mm drill bit) to open the respective holes.</li> </ul>   |

*Continued on next page*

## WiBAS-Connect Combo, Continued

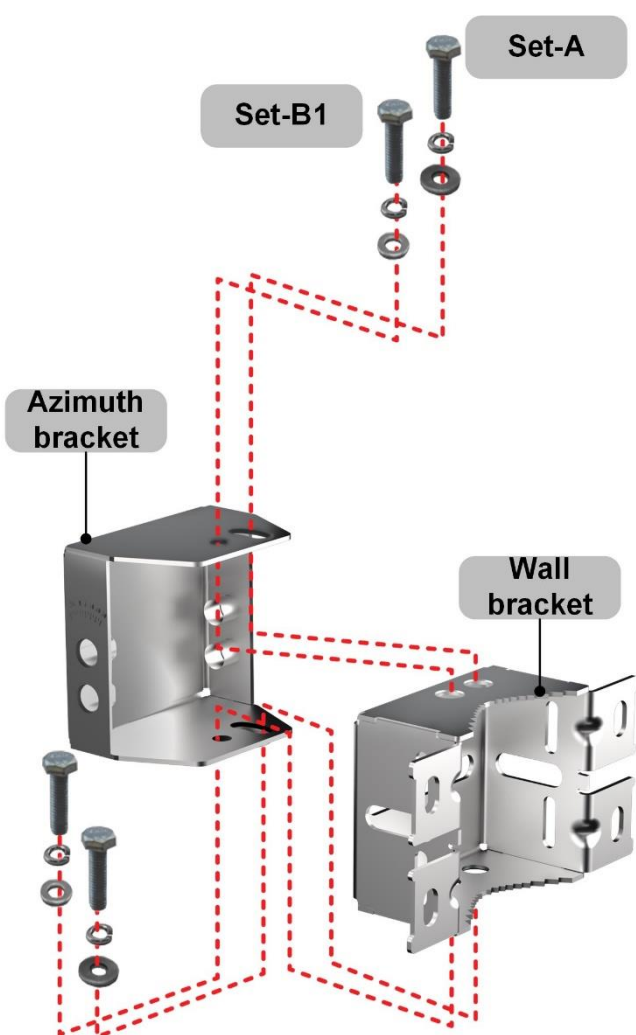

**Procedure for  
WiBAS-  
Connect (auto-  
polarization)  
Combo,**  
continued

| Step | Action  |
|------|---|
| 8    | <p>Perform the following actions:</p> <ul style="list-style-type: none"> <li>• Attach the wall bracket into the wall surface.</li> <li>• Install the respective set of mounting kit packing materials, as shown below.</li> </ul>  |

*Continued on next page*

WiBAS-Connect Combo, Continued




Procedure for  
WiBAS-  
Connect (auto-  
polarization)  
Combo,  
continued

| Step | Action   |
|------|--|
| 9    | <p>Mount the azimuth bracket onto the wall bracket and then install the respective set of mounting kit packing materials, as shown below.</p>  <p><b>Set-A</b></p> <p><b>Set-B1</b></p> <p><b>Azimuth bracket</b></p> <p><b>Wall bracket</b></p> <p> <b>Do not over tighten the screws.</b> Adjust the tool for applying max tightening torque <b>15 Nm</b>.</p> |

Continued on next page

## WiBAS-Connect Combo, Continued

Procedure for  
WiBAS-  
Connect (auto-  
polarization)  
Combo,  
continued

| Step | Action   |
|------|--|
| 10   | Set the antenna position, as shown in <b>step 3</b> .  |
| 11   | <p>Mount the elevation bracket onto the radio and then install the respective set of mounting kit packing materials, as shown in <b>step-4</b>.</p> <p> <b>Do not over tighten the screws.</b> Adjust the tool for applying max tightening torque <b>5.5 Nm</b> for <b>M5 screws</b>.</p> |
| 12   | <p>Mount the elevation bracket onto the azimuth bracket and then install the respective set of mounting kit packing materials, as shown in <b>step-5</b>.</p> <p> <b>Do not over tighten the screws.</b> Adjust the tool for applying max tightening torque <b>15 Nm</b>.</p>             |
| 13   | <p>The wall mount installation should appear, as shown below:</p>  <p>For cables installation refer to <a href="#">Installing Radio Units Cables</a> .</p> <p><b>End of procedure for wall mount installation.</b></p>  |

End of procedure.



## WiBAS-Connect and Low Profile 0.3 m / 0.5 m

---

**Introduction**      Apply this procedure for installing the following wireless equipment:

- WiBAS™-Connect terminal radio unit (**CONN-OB-U-DSDS**).
- Low profile antennas **0.3 m** (**ANT-IS-2628-1F-C**) / **0.5 m** (**ANT-IS-2628-1D6F-C**).
- WiBAS™-Connect terminal radio unit auto-polarization edition (**CONN-OB-U-DSDS-DP**).
- Low profile antennas **0.3 m** (**ANT-DP-2628-1F-C**) / **0.5 m** (**ANT-DP-2628-1D6F-C**).
- Pole mounting kits (**WCONN-PL-MNT** and **WCONN-DP-PL-MNT**).

---

*Continued on next page*

## WiBAS-Connect and Low Profile 0.3 m / 0.5 m, Continued

### Installation overview







| CONN-OB-U-DSDS  | CONN-OB-U-DSDS-DP   |
|---|---|
|  |  |
| ANT-IS-2628-1F-C  | ANT-DP-2628-1F-C  |
|  |  |
| ANT-IS-2628-1D6F-C  | ANT-DP-2628-1D6F-C  |
|  |  |
| WCONN-PL-MNT  | WCONN-DP-PL-MNT   |
|  |  |



*Continued on next page*

## WiBAS-Connect and Low Profile 0.3 m / 0.5 m, Continued

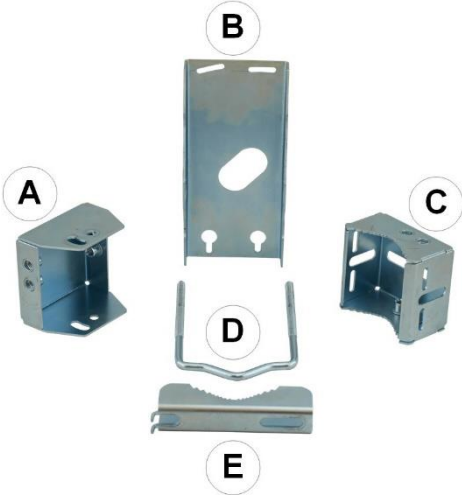
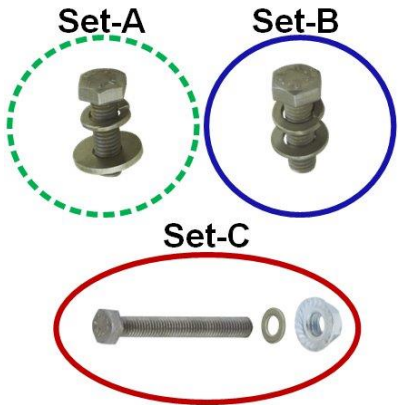

Radio unit and  
antenna  
packing  
materials

| CONN-OB-U-DSDS  | Details  |
|---|--|
|    | WiBAS™-Connect terminal radio unit.  |
| ANT-IS-2628-1F-C  | Details  |
|    | <ul style="list-style-type: none"> <li>• Low profile antenna 0.3 m – rectangular flange.</li> <li>• Greasing paste.</li> </ul> |
| ANT-IS-2628-1D6F-C  | Details  |
|    | <ul style="list-style-type: none"> <li>• Low profile antenna 0.5 m – rectangular flange.</li> <li>• Greasing paste.</li> </ul> |
| CONN-OB-U-DSDS-DP   | Details  |
|   | WiBAS™-Connect terminal radio unit <b>auto-polarization</b> edition.   |
| ANT-DP-2628-1F-C  | Details  |
|  | <ul style="list-style-type: none"> <li>• Low profile antenna 0.3 m – circular flange.</li> <li>• Greasing paste.</li> </ul>    |
| ANT-DP-2628-1D6F-C  | Details  |
|  | <ul style="list-style-type: none"> <li>• Low profile antenna 0.5 m – circular flange.</li> <li>• Greasing paste.</li> </ul>    |

*Continued on next page*

## WiBAS-Connect and Low Profile 0.3 m / 0.5 m, Continued

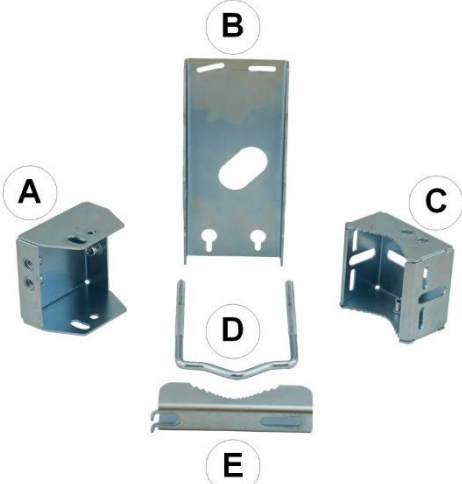
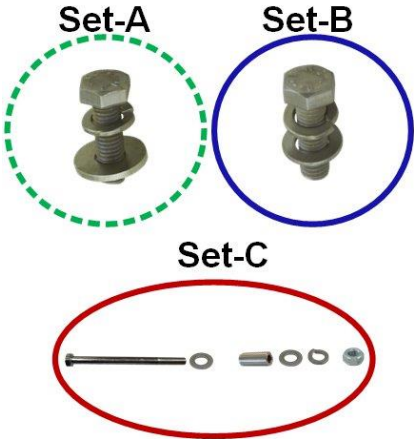

### Mounting kit packing materials

| WCONN-PL-MNT  | Details   |
|---|---|
|    | <ul style="list-style-type: none"> <li>• Azimuth bracket <b>(A)</b>.</li> <li>• Elevation bracket <b>(B)</b>.</li> <li>• Pole bracket <b>(C)</b>.</li> <li>• U-BOLT, M8 x 100 mm <b>(D)</b>.</li> <li>• U-BOLT bracket <b>(E)</b>.</li> </ul>   |
|   | <ul style="list-style-type: none"> <li>• <b>Set-A:</b> <ul style="list-style-type: none"> <li>– M8 x 25 mm screws (x4).</li> <li>– M8 washers steel (x4).</li> <li>– M8 lock washers (x4).</li> </ul> </li> <li>• <b>Set-B:</b> <ul style="list-style-type: none"> <li>– M8 x 25 mm screws (x4).</li> <li>– M8 washers (x4).</li> <li>– M8 lock washers (x4).</li> </ul> </li> <li>• <b>Set-C:</b> <ul style="list-style-type: none"> <li>– M5 x 40 mm screws (x4).</li> <li>– M5 nuts flange serrated (x4).</li> <li>– M5 washers (x4).</li> </ul> </li> </ul> |
|  | <ul style="list-style-type: none"> <li>• Mounting kit assembly leaflet.</li> </ul>  |

*Continued on next page*

## WiBAS-Connect and Low Profile 0.3 m / 0.5 m, Continued

Mounting kit  
packing  
materials,  
continued

| WCONN-DP-PL-MNT   | Details   |
|---|---|
|    | <ul style="list-style-type: none"> <li>• Azimuth bracket <b>(A)</b>.</li> <li>• Elevation bracket <b>(B)</b>.</li> <li>• Pole bracket <b>(C)</b>.</li> <li>• U-BOLT, M8 x 100 mm <b>(D)</b>.</li> <li>• U-BOLT bracket <b>(E)</b>.</li> </ul>   |
|   | <ul style="list-style-type: none"> <li>• <b>Set-A:</b> <ul style="list-style-type: none"> <li>– M8 x 25 mm screws (x4).</li> <li>– M8 washers steel (x4).</li> <li>– M8 lock washers (x4).</li> </ul> </li> <li>• <b>Set-B:</b> <ul style="list-style-type: none"> <li>– M8 x 25 mm screws (x4).</li> <li>– M8 washers (x4).</li> <li>– M8 lock washers (x4).</li> </ul> </li> <li>• <b>Set-C:</b> <ul style="list-style-type: none"> <li>– M5 x 70 mm screws (x4).</li> <li>– M5 nuts (x4).</li> <li>– M5 lock washers (x4).</li> <li>– M5 washers (x8).</li> <li>– Spacers 25 mm (x4) - aluminum</li> </ul> </li> </ul> |
|  | <ul style="list-style-type: none"> <li>• Mounting kit assembly leaflet.</li> </ul>  |

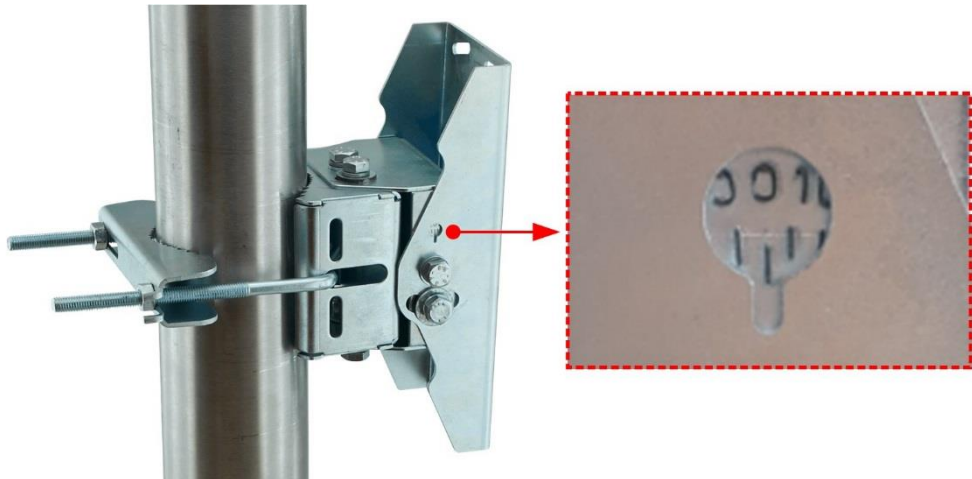
*Continued on next page*

## WiBAS-Connect and Low Profile 0.3 m / 0.5 m, Continued

---

### Prerequisites

For elevation adjustment there is an elevation degrees indicator at both sides of the mounting kit, as shown below. The bracket during installation should be installed in 0 degrees. During commissioning the proper elevation degrees will be applied.



---

*Continued on next page*

## WiBAS-Connect and Low Profile 0.3 m / 0.5 m, Continued

---

### Precautions



- Do not grab, nor touch the antenna during lifting, turning or any handling of the terminal while the terminal is mounted on the pole, it may lead to damage of the antenna.

**DO NOT USE YOUR  
HANDS TO ALIGN THE  
ANTENNA!**

**Antenna will be damaged!**



**Use the alignment tools [WCONN-ALT-KIT](#)  
at these points to align the antenna, as  
instructed in the commissioning manual!**

- The parabolic low profile antenna should NEVER be placed on a hard surface. Handle the antenna with care and avoid the application of pressure on the antenna cover as this may lead to breakage of the antenna dipole.



- Never leave unoccupied receptacles without cover. Covering receptacles is necessary to protect against humidity penetration.

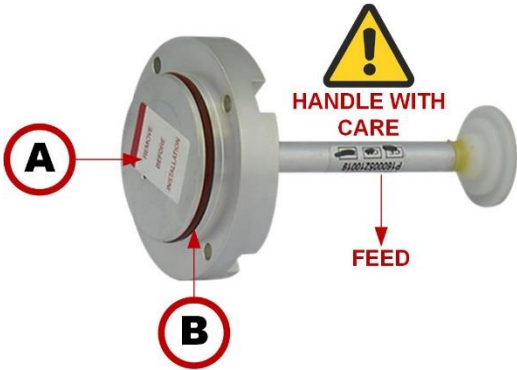
---

*Continued on next page*

WiBAS-Connect and Low Profile 0.3 m / 0.5 m, Continued

**Tools** Adjustable torque U-wrench.

**Procedure** How to install the antennas **0.3 m** or **0.5 m** parabolic low profile to radio unit (**CONN-OB-U-DSDS** or **CONN-OB-U-DSDS-DP**) and then to pole mounting kit (**WCONN-PL-MNT**), proceed as follows:

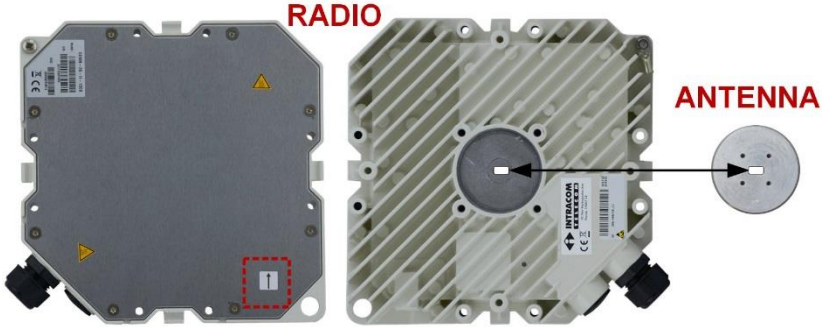

| Step | Action  |
|------|---|
| 1    | <p>Perform the following actions:</p> <ul style="list-style-type: none"><li>• Remove the antenna waveguide plastic sticker <b>(A)</b>.</li><li>• Lubricate the O-ring with silicone grease <b>(B)</b>.</li></ul> <div></div> |
| 2    | Remove the plastic sticker from radio unit wave guide.  |
| 3    | <p>Adjust radio unit with antenna for common polarization.</p> <p>For radio unit with order code <b>CONN-OB-U-DSDS</b> go to next step.</p> <p>For radio unit with order code <b>CONN-OB-U-DSDS-DP</b> go to step (5).</p>  |

Continued on next page



## WiBAS-Connect and Low Profile 0.3 m / 0.5 m, Continued

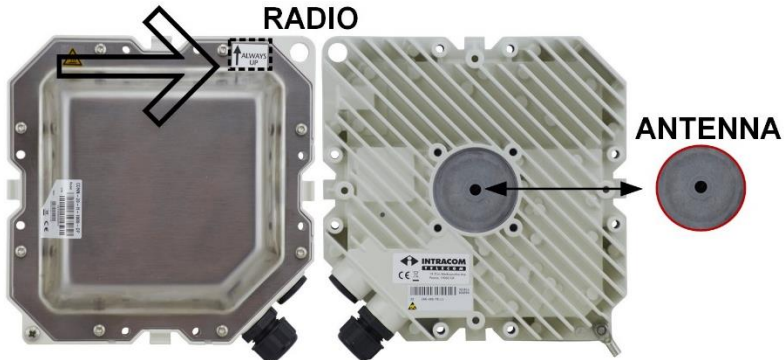

Procedure,  
continued

| Step | Action   |
|------|--|
| 4    | <p><b>Note</b> This step is related to radio unit <b>CONN-OB-U-DSDS</b> and antennas <b>ANT-IS-2628-1F-C</b> / <b>ANT-IS-2628-1D6F-C</b>.</p> <p>If the <b>LINK</b> polarization is <b>VERTICAL</b> then the feeders should be remained, as shown below (radio unit – both sides view):</p>  <p>If the <b>LINK</b> polarization is <b>HORIZONTAL</b>, rotate the radio unit and antenna feeder, as shown below (radio unit – both sides view):</p>  |

Continued on next page

## WiBAS-Connect and Low Profile 0.3 m / 0.5 m, Continued

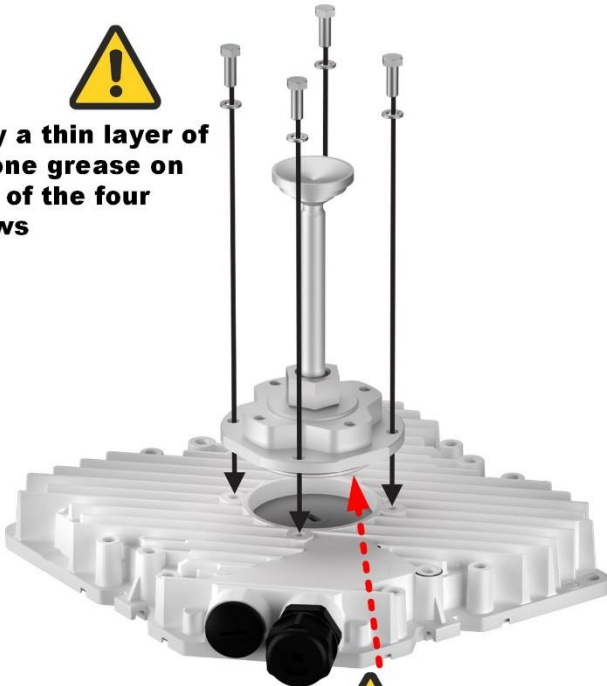

Procedure,  
continued

| Step | Action   |
|------|--|
| 5    | <p><b>Note</b> This step is related to radio unit <b>CONN-OB-U-DSDS-DP</b> and antennas <b>ANT-DP-2628-1F-C</b> / <b>ANT-DP-2628-1D6F-C</b>.</p> <p>Follow the radio unit label, as shown below.</p>  <p><b>DO NOT TURN the RADIO, as shown below:</b></p>  |

*Continued on next page*



## WiBAS-Connect and Low Profile 0.3 m / 0.5 m, Continued

Procedure,  
continued

| Step | Action  |
|------|---|
| 6    | <p>Install the feeder onto the radio wave guide, as shown below.</p> <div data-bbox="571 504 1372 1276">  <p><b>Apply a thin layer of silicone grease on each of the four screws</b></p> <p><b>Lubricate the O-Ring with a thin film of silicone grease</b></p> </div> <p>Use the cross-headed screwdriver to install the four lock washers and screws.</p> <div data-bbox="577 1451 662 1527">  </div> <p><b>Do not over tighten.</b> Adjust the tool for max tightening torque <b>4.2 Nm</b>.</p> |

*Continued on next page*

**WiBAS-Connect and Low Profile 0.3 m / 0.5 m, Continued**Procedure,  
continued

| Step | Action   |
|------|--|
| 7    | <p>Install the antenna reflector, as shown below.</p>  <p>Use the cross-headed screwdriver to install the four lock washers and screws. Fully tighten.</p> <p> <b>Do not over tighten.</b></p> |

*Continued on next page*