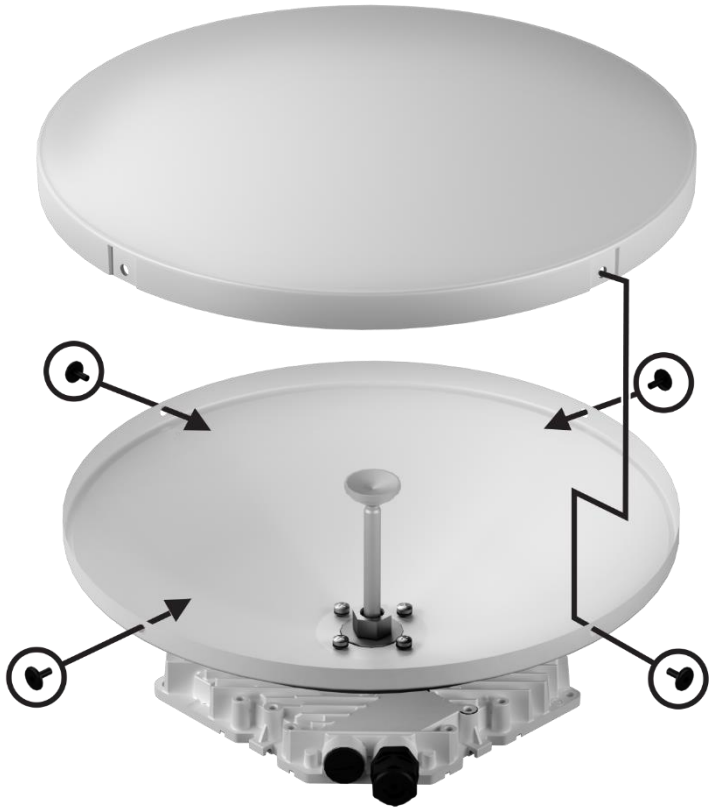
# WiBAS-Connect and Low Profile 0.3 m / 0.5 m, Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 8 | Install the antenna plastic cover, as shown below.<br>  |
| 9 | Perform the following actions:<br>• For installation of **CONN-OB-U-DSDS** to mounting kit follow the Procedure for WiBAS-Connect Combo on page 82 .<br>• For installation of **CONN-OB-U-DSDS-DP** to mounting kit follow the Procedure for WiBAS-Connect (auto-polarization) Combo on page 88 . |
| 10 | For cables installation refer to Installing Radio Units Cables . |

End of procedure.

# WiBAS-Connect and Parabolic 0.3 m with Adaptation Plate / 0.6 m with Clamps

**Introduction**

Apply this procedure for installing the following wireless equipment:

- WiBAS™-Connect terminal radio unit (**CONN-OB-U-DSDS**).
- Low profile parabolic antenna, **0.6 m** (**ANT-IS-2628-2F-C**).

- WiBAS™-Connect terminal radio unit (**CONN-OB-U-DSDS-DP**).
- Low profile parabolic antenna, **0.6 m** (**ANT-DP-2628-2F-C**).

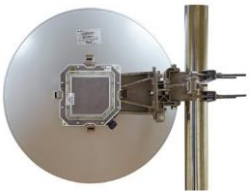
- WiBAS™-Connect terminal radio unit (**CONN-OB-U-DSDS**).
- Parabolic antenna, **0.3 m** (**ANT-IS-26-1F**).
- Adaptation plate (**WCONN-PAR-ANT-KIT**).

*Continued on next page*

# WiBAS-Connect and Parabolic 0.3 m with Adaptation Plate / 0.6 m with Clamps, Continued

**Installation overview**

| CONN-OB-U-DSDS | CONN-OB-U-DSDS-DP |
|---|---|
|  |  |
| **ANT-IS-2628-2F-C** | **ANT-DP-2628-2F-C** |
|   |   |



| CONN-OB-U-DSDS |
|---|
|  |
| **ANT-IS-26-1F** |
|   |
| **WCONN-PAR-ANT-KIT** |
|  |

*Continued on next page*

# WiBAS-Connect and Parabolic 0.3 m with Adaptation Plate / 0.6 m with Clamps, Continued

**Radio unit packing materials**

| CONN-OB-U-DSDS | Details |
|---|---|
|  | **WiBAS™-Connect** terminal radio unit. |
| **CONN-OB-U-DSDS-DP** | **Details** |
|  | WiBAS™-Connect terminal radio unit **auto-polarization** edition. |

**Antenna packing materials**

| ANT-IS-26-1F | Details |
|---|---|
|  | • 0.3 m antenna.<br>• Mounting kit.<br>• Greasing paste.<br>• Installation leaflet. |
| **ANT-IS-2628-2F-C**<br>**ANT-DP-2628-2F-C** | **Details** |
|  | • 0.6 m antenna.<br>• Clamps.<br>• Mounting kit.<br>• Greasing paste.<br>• Installation leaflet. |

**Adaptation plate packing materials**

| WCONN-PAR-ANT-KIT | Details |
|---|---|
|  | Adaptation plate. |
| Set<br>  | • **Set:**<br>– M5 x 40 mm screws (x4).<br>– M5 x lock washers (x4).<br>– M5 x washers (x4).<br>– M5 x nuts (x4). |

**Precautions**

It is very important to mount the antenna exactly as described to INSTALLATION INSTRUCTION LEAFLET (included in the antenna package).

**Tools**

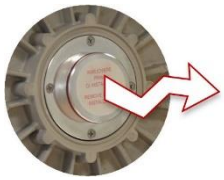
- Adjustable torque U-wrench.
- Adjustable torque wrench with hexagon female bit.

*Continued on next page*

# WiBAS-Connect and Parabolic 0.3 m with Adaptation Plate / 0.6 m with Clamps, Continued

**Procedure using 0.6 m antenna**

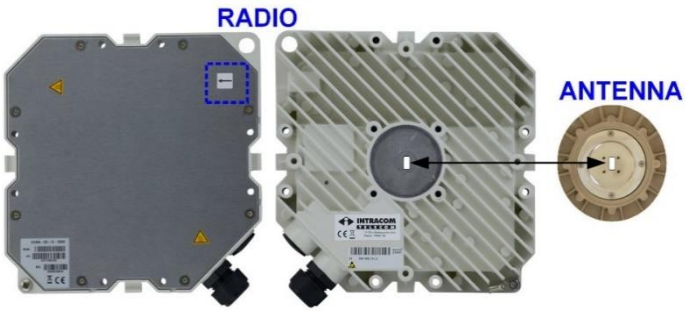
How to install WiBAS™-Connect (**CONN-OB-U-DSDS**) to 0.6 m antenna (**ANT-IS-2628-2F-C**) with clamps or WiBAS™-Connect (**CONN-OB-U-DSDS-DP**) to 0.6 m antenna (**ANT-DP-2628-2F-C**) with clamps, proceed as follows:

| Step | Action |
|---|---|
| 1 | Install antenna clamps as described to antenna installation instruction leaflet. |
| 2 | Remove antenna protection label from the feeder, as shown below.  |

*Continued on next page*

# WiBAS-Connect and Parabolic 0.3 m with Adaptation Plate / 0.6 m with Clamps, Continued

**Procedure using 0.6 m antenna**, continued

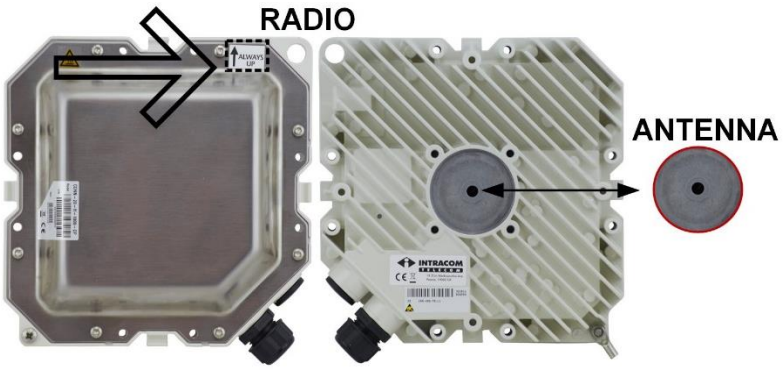
| Step | Action |
|---|---|
| 3a | For WiBAS™-Connect (**CONN-OB-U-DSDS**) to 0.6 m antenna (**ANT-IS-2628-2F-C**) with clamps, proceed as follows:<br><br>Radio unit and antenna should be adjusted for common polarization, as shown below. If the **LINK** polarization is **VERTICAL** then the feeders should be remained, as shown below (radio unit – both sides view):<br><br>  <br><br>If the **LINK** polarization is **HORIZONTAL**, rotate the radio unit and antenna feeder(1), as shown below (radio unit – both sides view):<br><br>  <br><br>Note How to change antenna polarization refer to antenna installation leaflet. |

*Continued on next page*

(1) How to rotate antenna feeder for changing polarization refer to antenna installation leaflet.

# WiBAS-Connect and Parabolic 0.3 m with Adaptation Plate / 0.6 m with Clamps, Continued

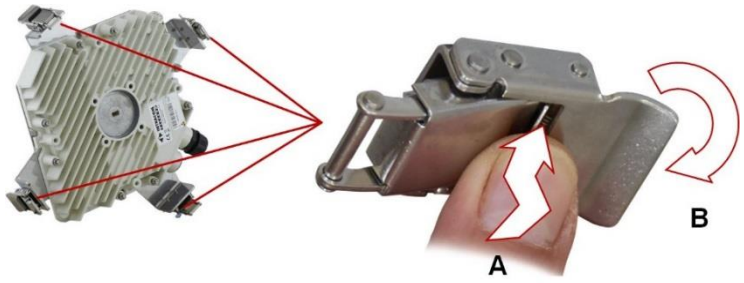
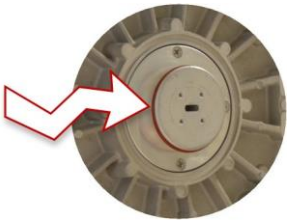
**Procedure using 0.6 m antenna**, continued

| Step | Action |
|---|---|
| 3b | WiBAS™-Connect (**CONN-OB-U-DSDS-DP**) to 0.6 m antenna (**ANT-DP-2628-2F-C**) with clamps, proceed as follows:<br><br>Follow the radio unit label, as shown below.<br><br>  <br><br><br>**DO NOT TURN the RADIO, as shown below:**<br><br>  |

*Continued on next page*

# WiBAS-Connect and Parabolic 0.3 m with Adaptation Plate / 0.6 m with Clamps, Continued

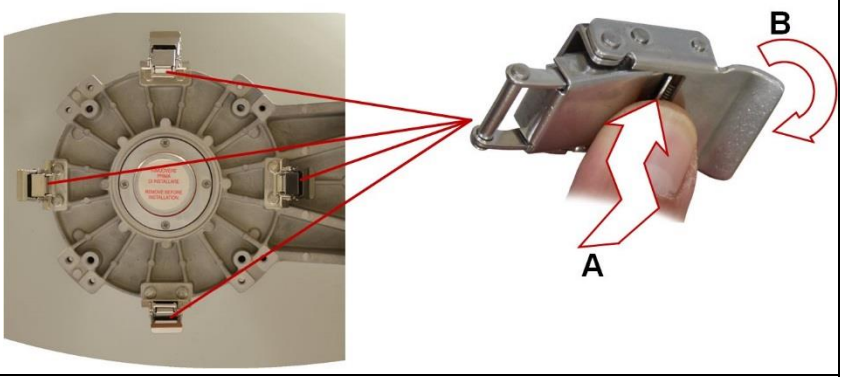
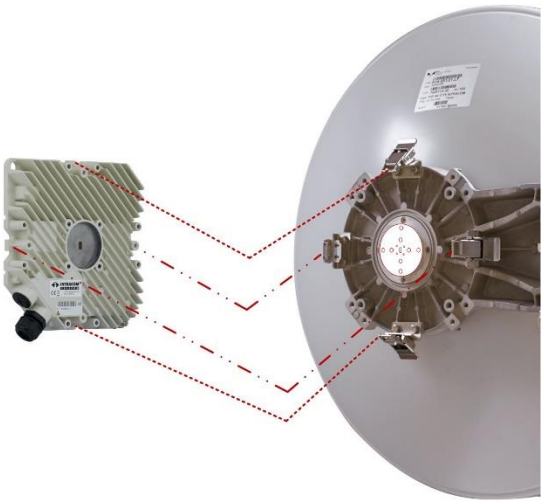
**Procedure using 0.6 m antenna**, continued

| Step | Action |
|---|---|
| 4 | Unlock the four antenna clamps, as shown below.<br>  |
| 5 | Lubricate the O-ring with silicone grease, as shown below.<br>  |

*Continued on next page*

# WiBAS-Connect and Parabolic 0.3 m with Adaptation Plate / 0.6 m with Clamps, Continued

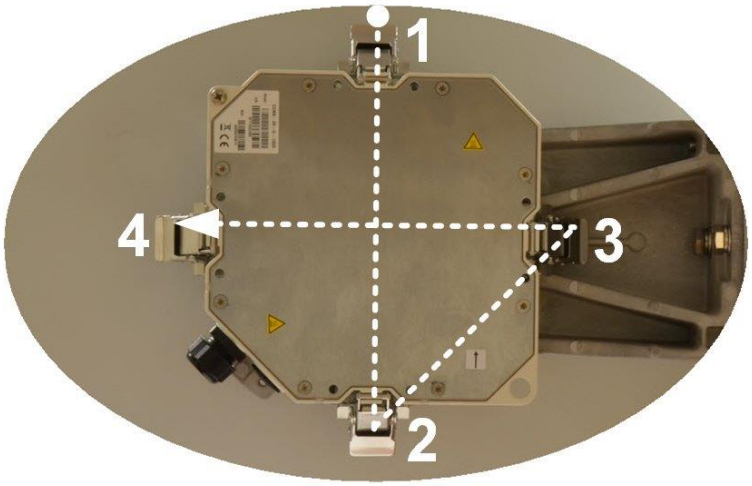
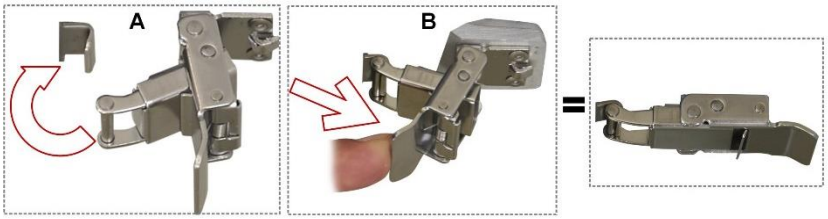
**Procedure using 0.6 m antenna**, continued

| Step | Action |
|---|---|
| 6 | Unlock the four antenna clamps, as shown below.<br>  |
| 7 | Mount the radio unit onto the antenna, as shown below.<br>  |

*Continued on next page*

# WiBAS-Connect and Parabolic 0.3 m with Adaptation Plate / 0.6 m with Clamps, Continued

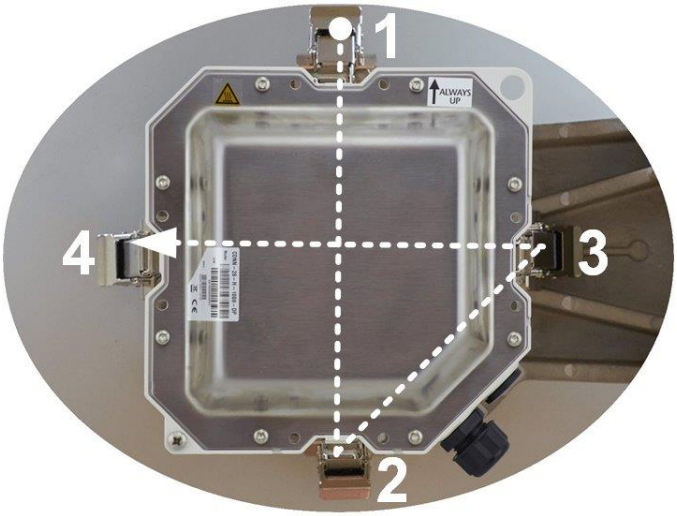
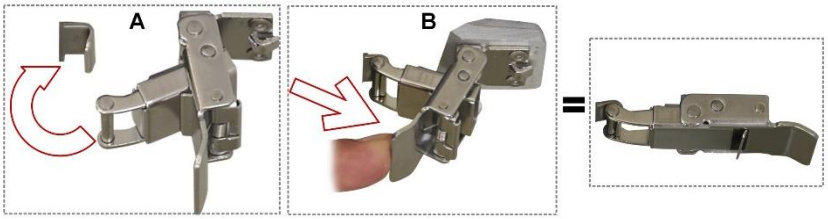
**Procedure using 0.6 m antenna**, continued

| Step | Action |
|---|---|
| 8a | For WiBAS™-Connect (**CONN-OB-U-DSDS**) to 0.6 m antenna (**ANT-IS-2628-2F-C**) with clamps, proceed as follows:<br><br>Lock and secure all four clamps according to the pattern below.<br><br>  <br><br>Details of Clamps closing<br>  |

*Continued on next page*

# WiBAS-Connect and Parabolic 0.3 m with Adaptation Plate / 0.6 m with Clamps, Continued

**Procedure using 0.6 m antenna**, continued

| Step | Action |
|---|---|
| 8b | WiBAS™-Connect (**CONN-OB-U-DSDS-DP**) to 0.6 m antenna (**ANT-DP-2628-2F-C**) with clamps, proceed as follows:<br><br>Lock and secure all four clamps according to the pattern below.<br><br>  <br><br>Details of Clamps closing<br><br>  |
| 9 | For cables installation refer to Installing Radio Units Cables . |

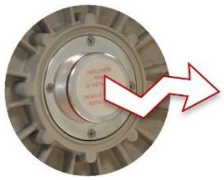
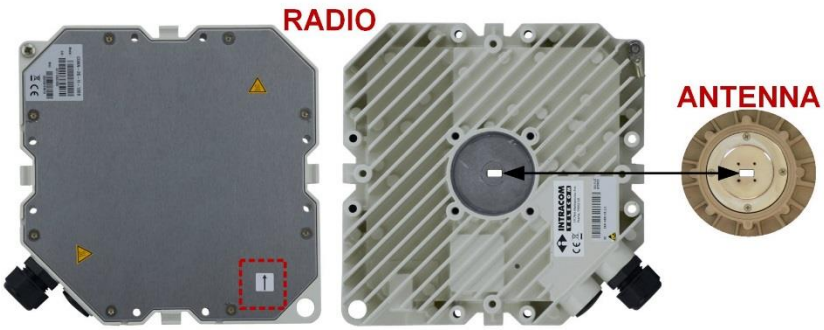
End of procedure.

*Continued on next page*

# WiBAS-Connect and Parabolic 0.3 m with Adaptation Plate / 0.6 m with Clamps, Continued

**Procedure using 0.3 m antenna and adaptation plate**

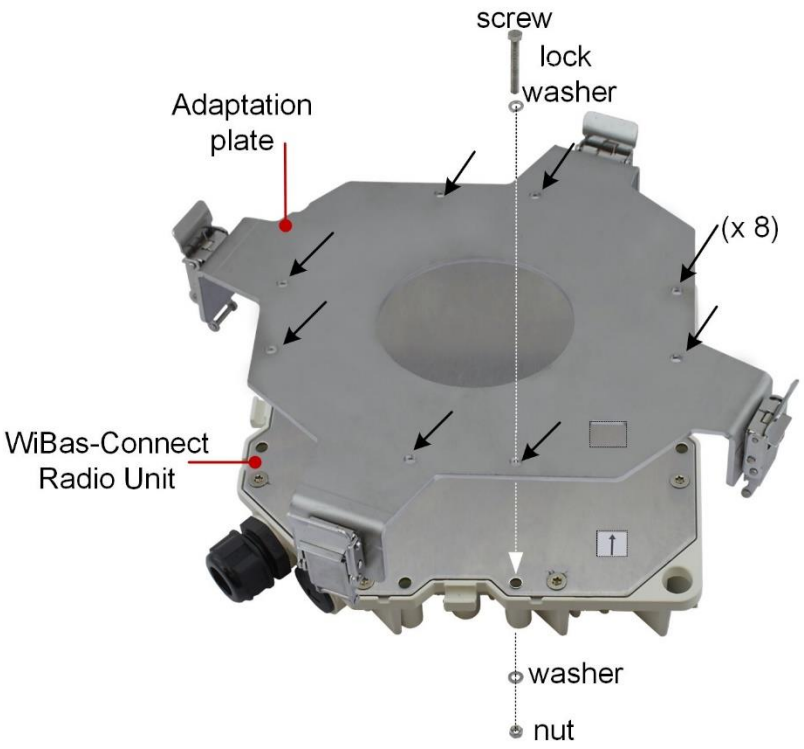
How to install WiBAS™-Connect (**CONN-OB-U-DSDS**) to 0.3 m antenna (**ANT-IS-26-1F**) with adaptation plate (**WCONN-PAR-ANT-KIT**), proceed as follows:

| Step | Action |
|---|---|
| 1 | Remove antenna protection label from the feeder, as shown below.<br>  |
| 2 | Radio unit and antenna should be adjusted for common polarization, as shown below. If the **LINK** polarization is **VERTICAL** then the feeders should be remained, as shown below (radio unit – both sides view):<br>  <br>If the **LINK** polarization is **HORIZONTAL**, rotate the radio unit and antenna feeder, as shown below (radio unit – both sides view):<br>  <br>Note How to change antenna polarization refer to antenna installation leaflet. |

*Continued on next page*

# WiBAS-Connect and Parabolic 0.3 m with Adaptation Plate / 0.6 m with Clamps, Continued

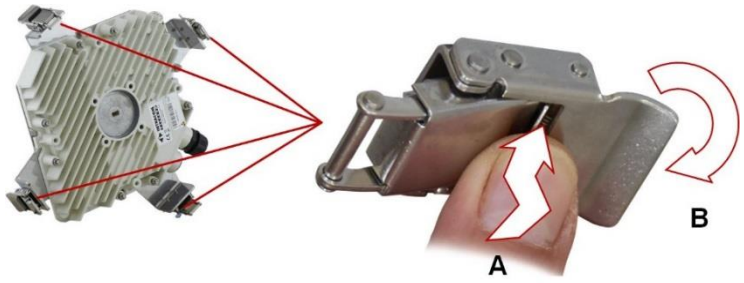
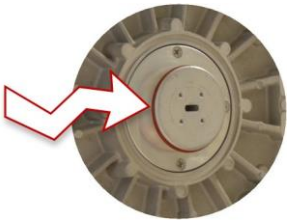
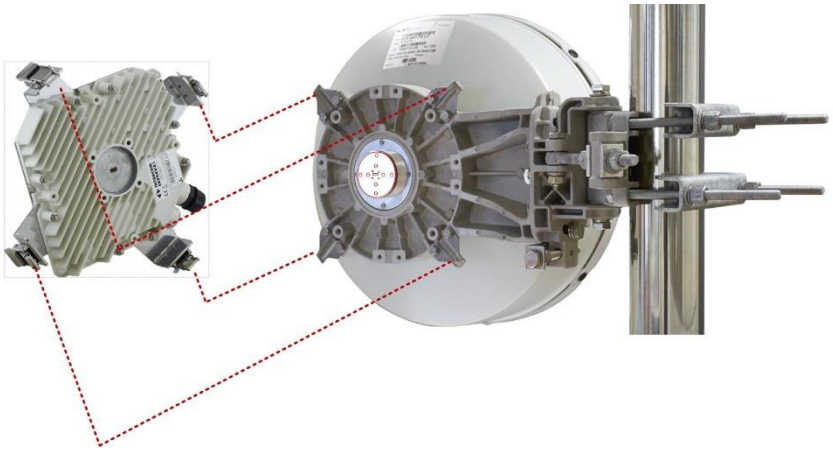
**Procedure using 0.3 m antenna and adaptation plate**, continued

| Step | Action |
|---|---|
| 3 | Use the respective set of adaptation plate packing materials to install the elements, as shown below.<br>  <br><br>Use the adjustable torque wrench with hexagon female bit to tighten the screws.<br>**Do not over tighten the screws.** Adjust the tool for applying max tightening torque **4.2 Nm**. |

*Continued on next page*

# WiBAS-Connect and Parabolic 0.3 m with Adaptation Plate / 0.6 m with Clamps, Continued

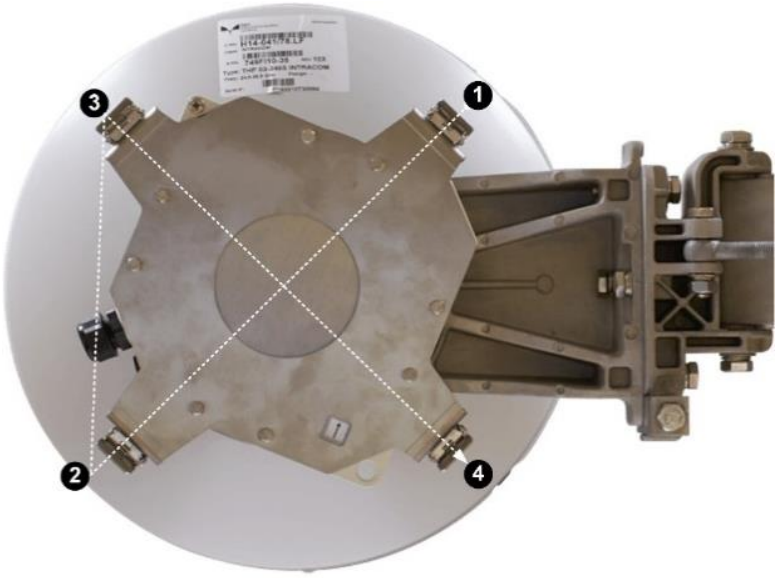
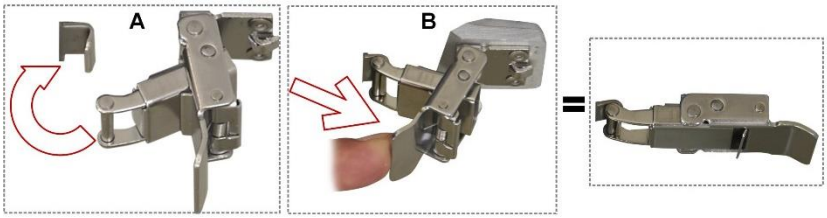
**Procedure using 0.3 m antenna and adaptation plate**, continued

| Step | Action |
|---|---|
| 4 | Unlock the four antenna clamps, as shown below.<br>  |
| 5 | Lubricate the O-ring with silicone grease, as shown below.<br>  |
| 6 | Mount the radio unit onto the antenna, as shown below.<br>  |

*Continued on next page*

# WiBAS-Connect and Parabolic 0.3 m with Adaptation Plate / 0.6 m with Clamps, Continued

**Procedure using 0.3 m antenna and adaptation plate**, continued

| Step | Action |
|---|---|
| 7 | Lock and secure all four clamps according to the pattern below.<br>  <br><br>Details of Clamps closing<br>  <br> |
| 8 | For cables installation refer to Installing Radio Units Cables . |

End of procedure.

# WiBAS-Connect and Panel

**Introduction**

Apply this procedure for installing the following wireless equipment:

- WiBAS™-Connect terminal radio unit (**CONN-OB-U-DSDS**).
- Antenna, panel, 10.5 GHz (**ANT-IS-11-PL-C**).
- Pole mounting kit (**WCONN-PL-MNT**).

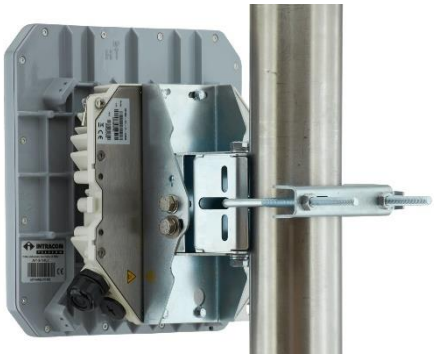
Note Apply to the respective procedure, as described below:

- Procedure for HORIZONTAL antenna orientation
- Procedure for VERTICAL antenna orientation

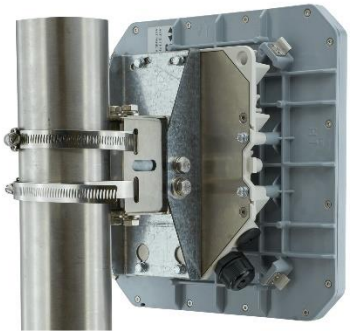
**Installation overview**

| CONN-OB-U-DSDS | ANT-IS-11-PL-C | WCONN-PL-MNT |
|---|---|---|
|  |  |  |

**Horizontal Polarization**



**Vertical Polarization**



**(Hose clamps is optional)**

*Continued on next page*

# WiBAS-Connect and Panel, Continued

**Radio unit packing materials**

| CONN-OB-U-DSDS | Details |
|---|---|
|  | **WiBAS$^{TM}$-Connect** terminal radio unit. |

**Antenna packing materials**

| ANT-IS-11-PL-C | Details |
|---|---|
|  | Antenna, **panel**, 10.5 GHz. |
| Antenna Set  | • **Antenna Set:**<br>– M5 x 40 mm screws (x4).<br>– M5 x washers (x4).<br>– M5 x lock washers (x4). |
|  | Silicone grease mini-pack. |

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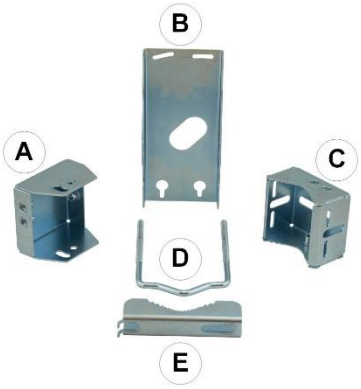
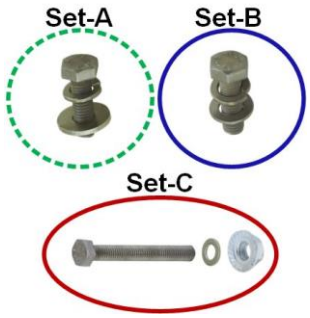
# WiBAS-Connect and Panel, Continued

**Mounting kit packing materials**

| WCONN-PL-MNT | Details |
|---|---|
|  | • Azimuth bracket **(A)**.<br>• Elevation bracket **(B)**.<br>• Pole bracket **(C)**.<br>• U-BOLT, M8 x 100 mm **(D)**.<br>• U-BOLT bracket **(E)**. |
|  | • **Set-A:**<br>– M8 x 25 mm screws (x4).<br>– M8 washers steel (x4).<br>– M8 lock washers (x4).<br>• **Set-B:**<br>– M8 x 25 mm screws (x4).<br>– M8 washers (x4).<br>– M8 lock washers (x4).<br>• **Set-C:**<br>– M5 x 40 mm screws (x4).<br>– M5 nuts flange serrated (x4).<br>– M5 washers (x4). |
| | • Mounting kit assembly leaflet. |

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# WiBAS-Connect and Panel, Continued

**Precautions**

- During installation, the antenna plastic cover should be protected in order to avoid any damage.
- The WiBAS™-Connect terminal station (radio) polarization at 10.5 GHz follows panel antenna polarization that is different from parabolic(1) antennas, as shown below:

| Antenna Type | Radio Unit Orientation Mark Point | |
|---|---|---|
| | Horizontal | Vertical |
| Parabolic low profile |  |  |
| Parabolic integrated | | |
| **Panel** |  |  |

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

**Tools**

- Adjustable torque U-wrench.
- Adjustable torque wrench with hexagon female bit.

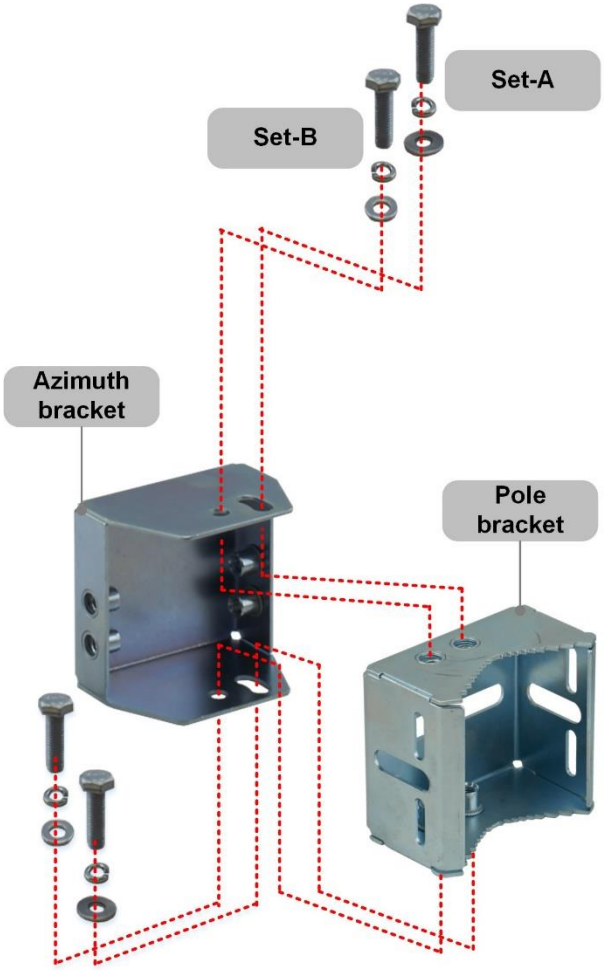
*Continued on next page*

(1) Low profile and Integrated.

# WiBAS-Connect and Panel, Continued

**Procedure for HORIZONTAL antenna orientation**

How to install WiBAS™-Connect to panel antenna in **HORIZONTAL** polarization, proceed as follows:

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

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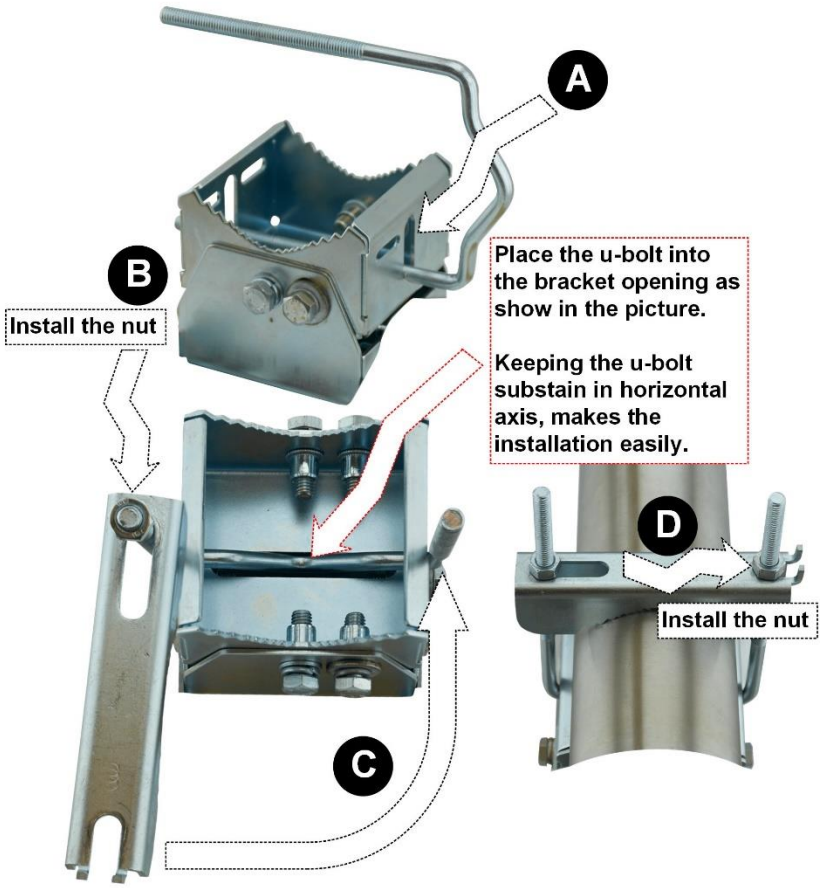
# WiBAS-Connect and Panel, Continued

**Procedure for HORIZONTAL antenna orientation**, continued

| Step | Action |
|---|---|
| 2a | For installing the **pole bracket onto the pole** perform the respective actions **A, B, C** and **D**, as shown below.<br><br>For installing the **pole bracket onto the pole** using **hose clamps** go to the next step.<br><br>  <br><br><br>**Do not over tighten the nuts.** Overtightening will cause deformation of the support clamp. |

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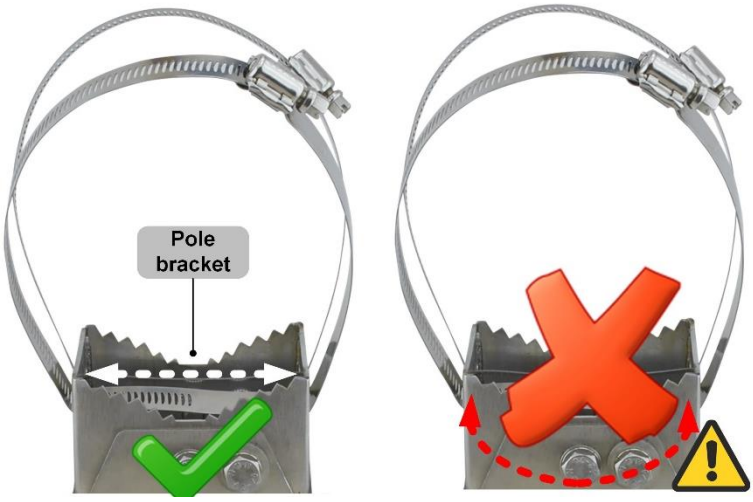
# WiBAS-Connect and Panel, Continued

**Procedure for HORIZONTAL antenna orientation**, continued

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

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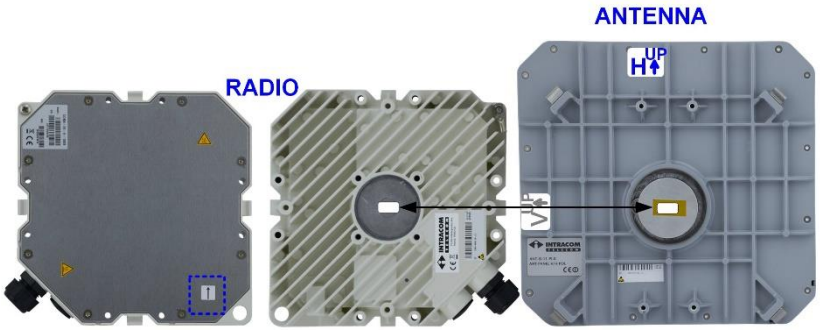
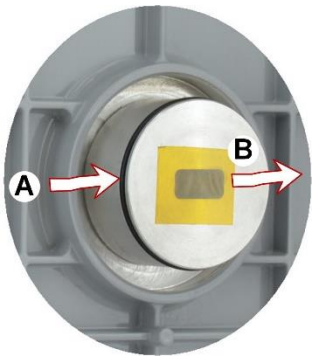
# WiBAS-Connect and Panel, Continued

**Procedure for HORIZONTAL antenna orientation**, continued

| Step | Action |
|---|---|
| 3 | For **horizontal** **link** polarization set in position both units to adjust the feeders, as shown below (radio unit – both side view):<br>  |
| 4 | Perform the following actions:<br>• Lubricate the antenna O-ring with silicone grease **(A)**.<br>• Remove antenna protection plastic sticker from the feeder **(B)**.<br>  |

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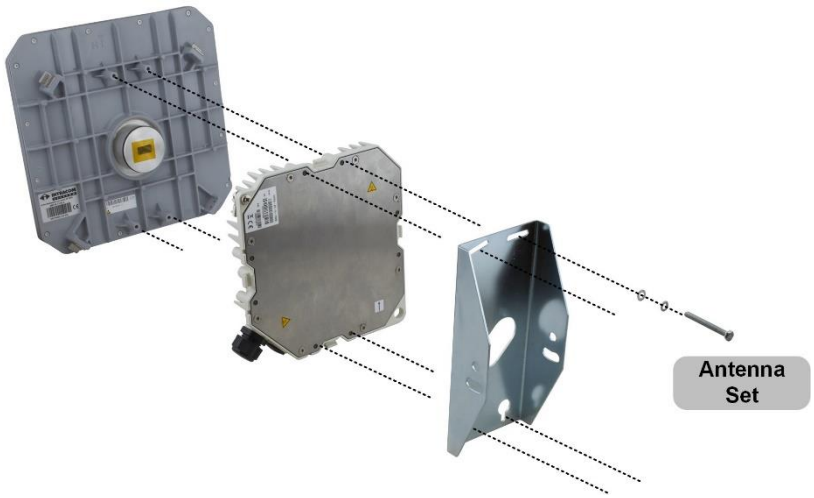
# WiBAS-Connect and Panel, Continued

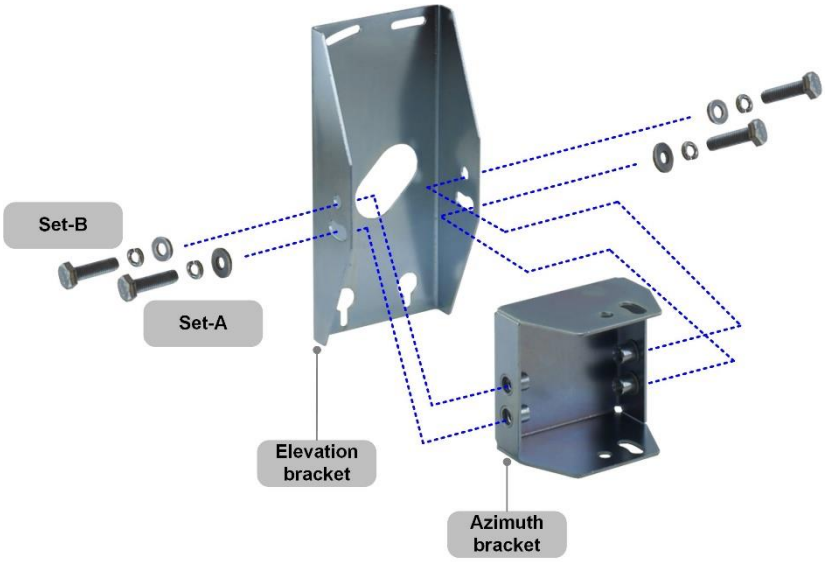
**Procedure for HORIZONTAL antenna orientation**, continued

| Step | Action |
|---|---|
| 5 | Perform the following actions:<br>• Remove antenna wave giude protection sticker.<br>• Use the Antenna Set of antenna packing materials to install the elements, as shown below.<br>  <br><br>**Do not over tighten the screws.** Adjust the tool for applying max tightening torque **4.2 Nm**. |

*Continued on next page*

# WiBAS-Connect and Panel, Continued

**Procedure for HORIZONTAL antenna orientation**, continued

| Step | Action |
|---|---|
| 6 | Mount the elevation bracket onto the azimuth bracket and then install the respective set of mounting kit packing materials, as shown below:<br>  <br><br>**Do not over tighten the screws.** Adjust the tool for applying max tightening torque **15 Nm**. |
| 7 | For cables installation refer to Installing Radio Units Cables . |

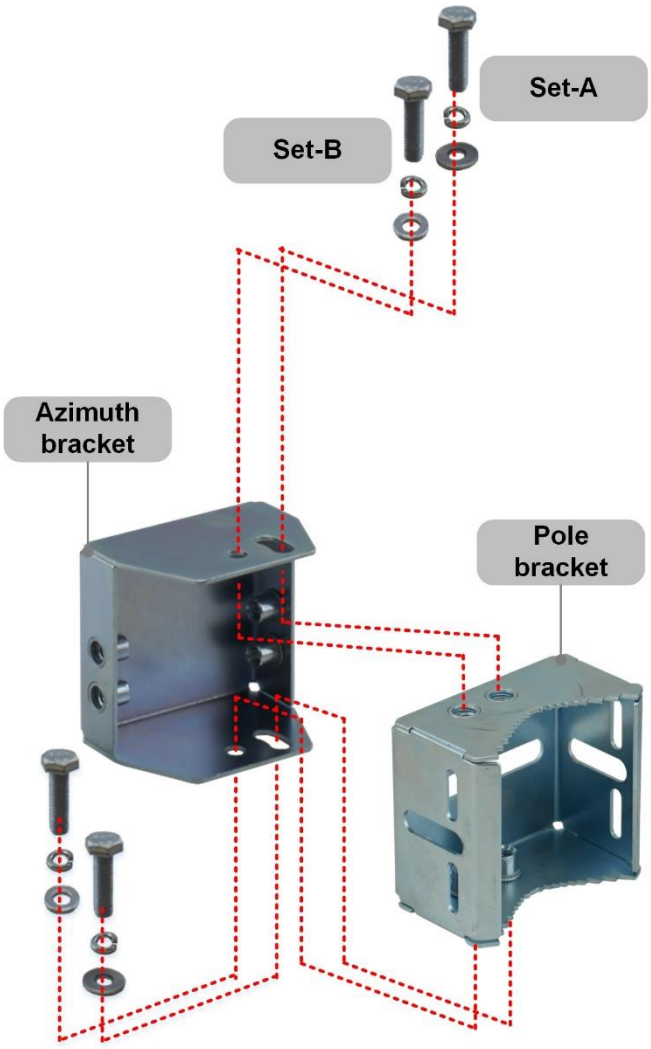
End of procedure.

*Continued on next page*

# WiBAS-Connect and Panel, Continued

**Procedure for VERTICAL antenna orientation**

How to install WiBAS™-Connect to panel antenna in **VERTICAL** polarization, proceed as follows:

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

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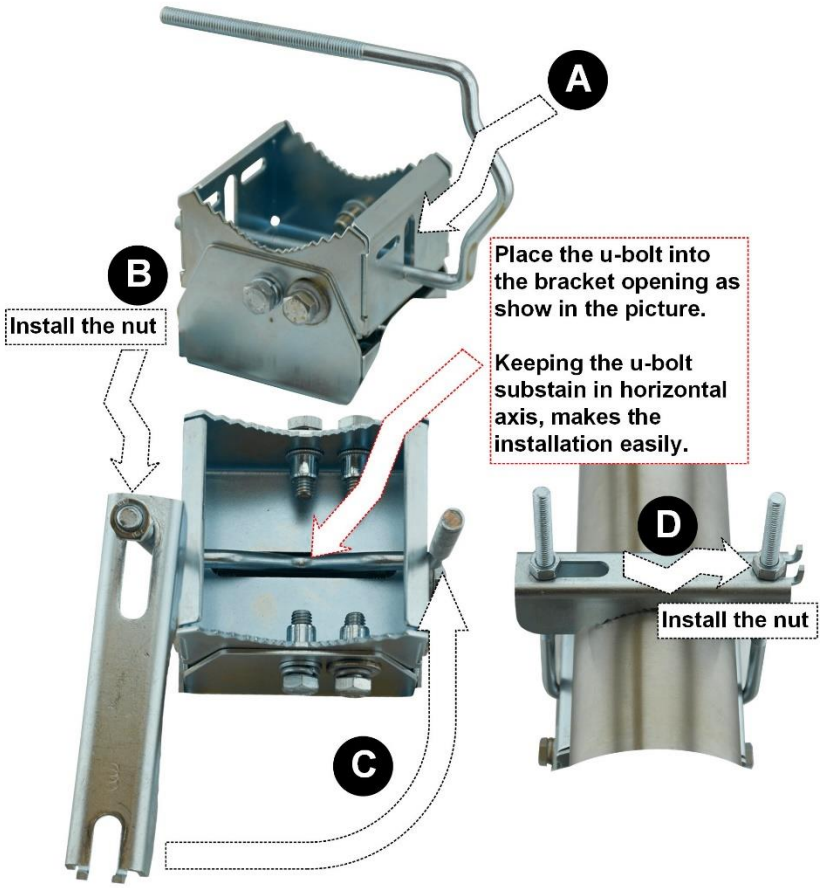
# WiBAS-Connect and Panel, Continued

**Procedure for VERTICAL antenna orientation**, continued

| Step | Action |
|---|---|
| 2a | For installing the **pole bracket onto the pole** perform the respective actions **A, B, C** and **D**, as shown below.<br><br>For installing the **pole bracket onto the pole** using **hose clamps** go to the next step.<br><br>  <br><br><br>**Do not over tighten the nuts.** Overtightening will cause deformation of the support clamp. |

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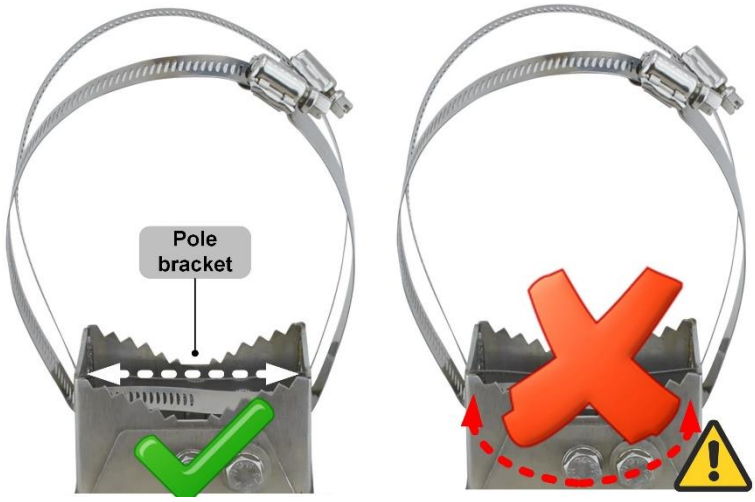
# WiBAS-Connect and Panel, Continued

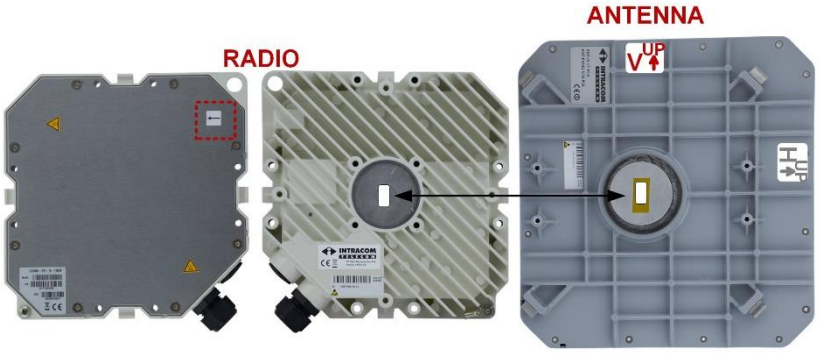
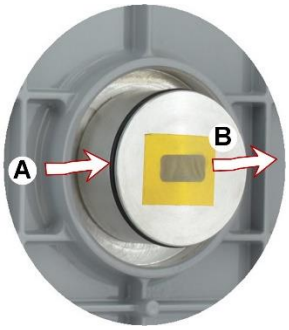
**Procedure for VERTICAL antenna orientation**, continued

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

*Continued on next page*

# WiBAS-Connect and Panel, Continued

**Procedure for VERTICAL antenna orientation**, continued

| Step | Action |
|---|---|
| 3 | For **vertical link** polarization set in position both units to adjust the feeders, as shown below (radio unit – both sides view):<br>  |
| 4 | Perform the following actions:<br>• Lubricate the O-ring with silicone grease **(A)**.<br>• Remove antenna protection plastic sticker from the feeder **(B)**.<br>  |

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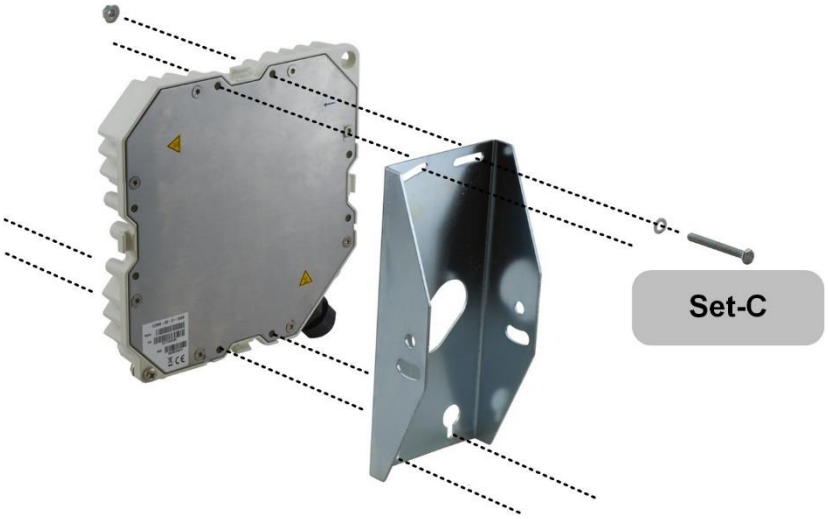
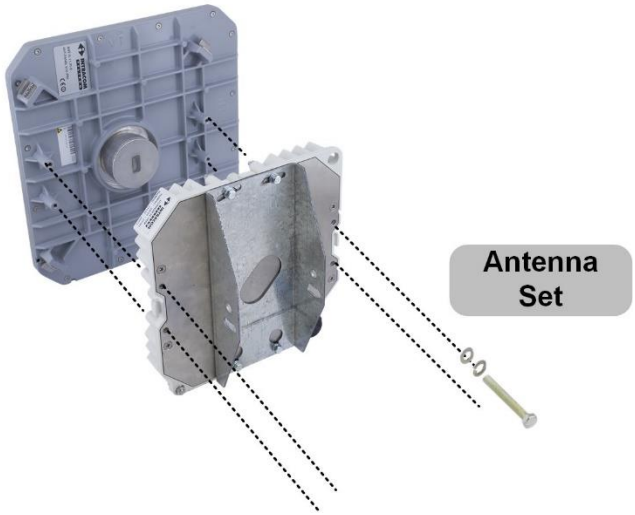
# WiBAS-Connect and Panel, Continued

**Procedure for VERTICAL antenna orientation**, continued

| Step | Action |
|---|---|
| 5 | Mount the elevation bracket onto the radio unit and then install the respective set of mounting kit packing materials, as shown below:<br>  <br>**Do not over tighten the screws.** Adjust the tool for applying max tightening torque **4.2 Nm**. |
| 6 | Mount the radio unit onto the antenna and then install the respective set of antenna packing materials, as shown below:<br>  <br>**Do not over tighten the screws.** Adjust the tool for applying max tightening torque **4.2 Nm**. |

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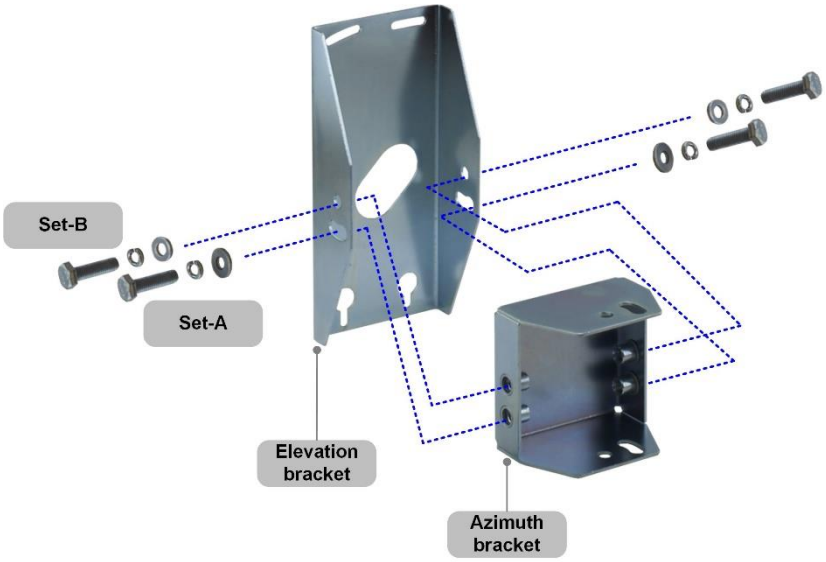
# WiBAS-Connect and Panel, Continued

**Procedure for VERTICAL antenna orientation**, continued

| Step | Action |
|---|---|
| 7 | Mount the elevation bracket onto the azimuth bracket and then install the respective set of mounting kit packing materials, as shown below:<br>  <br><br>**Do not over tighten the screws.** Adjust the tool for applying max tightening torque **15 Nm**. |
| 8 | For cables installation refer to Installing Radio Units Cables . |

End of procedure.

# WiBAS OSDR-TS and Parabolic 0.3 m

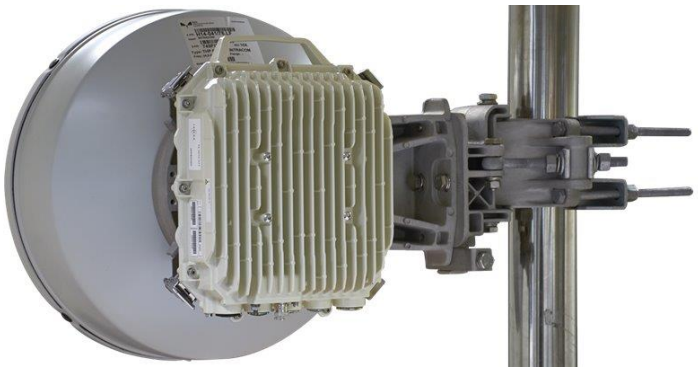
**Introduction**

Apply this procedure for installing the following wireless equipment:

- WiBAS™ OSDR-TS radio unit (**OSDR-OB-U-DSDS-SB**).
- Parabolic antenna, **0.3 m** (**ANT-IS-26-1F**).

**Installation overview**

| OSDR-OB-U-DSDS-SB | ANT-IS-26-1F | |
|---|---|---|
|  |  |  |



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# WiBAS OSDR-TS and Parabolic 0.3 m, Continued

**Radio unit packing materials**

| OSDR-OB-U-DSDS-SB | Details |
|---|---|
|  | • WiBAS™ OSDR-TS radio unit. |

**Antenna packing materials**

| ANT-IS-26-1F | Details |
|---|---|
|  | • Antenna.<br>• Mounting kit.<br>• Greasing paste.<br>• Installation leaflet. |

**Precautions**

It is very important to mount the antenna exactly as described to INSTALLATION INSTRUCTION LEAFLET (included in the antenna package).

**Tools**

- Adjustable torque U-wrench
- Allen Key (1.5 mm)

**Procedure**

How to install the WiBAS™ OSDR-TS to parabolic antenna 0.3 m , proceed as follows:

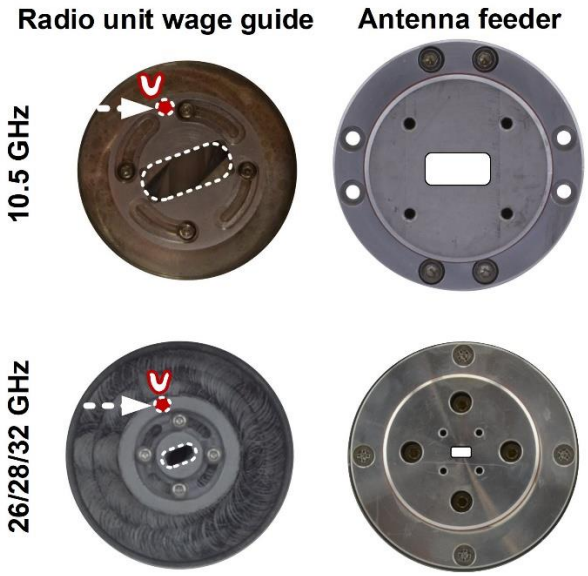
| Step | Action |
|---|---|
| 1 | Remove antenna feeder protection label. |

*Continued on next page*

# WiBAS OSDR-TS and Parabolic 0.3 m, Continued

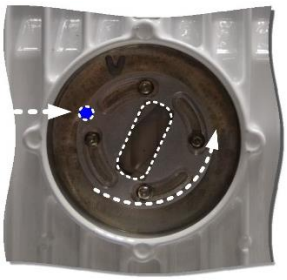
**Procedure**, continued

| Step | Action |
|---|---|
| 2 | Radio unit and antenna should be adjusted for common polarization, as shown below. If the **LINK** polarization is **VERTICAL** then the feeders should be remained, as shown below: |




If the **LINK** polarization is **HORIZONTAL**, use the allen key to loosen the four screws at the waveguide port of the OSDR (do not remove the screws) and then **TURN** the polarizer, as shown below:

Radio unit wave guide



Note How to change antenna polarization refer to antenna installation leaflet.

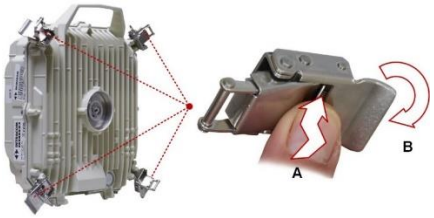
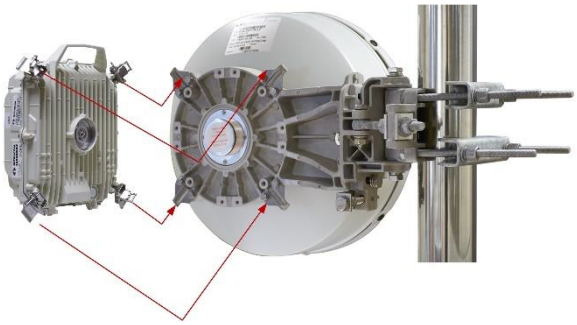
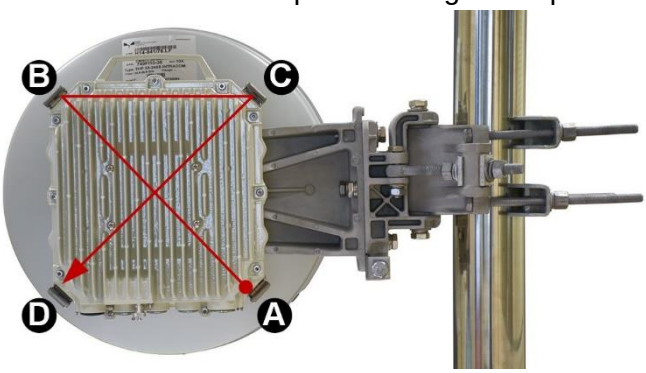
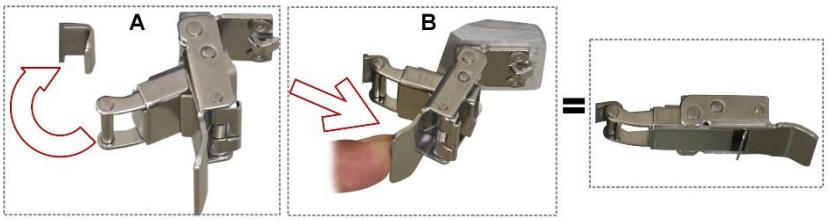
Do not over tighten the screws. Apply maximum tightening torque **0.6 Nm**.

Note The misalignment of slots between the movable part and the stationary part of the radio unit wave guide port is intentional and does not indicate a problem.

*Continued on next page*

# WiBAS OSDR-TS and Parabolic 0.3 m, Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 3 | Lubricate the antenna feeder O-ring with silicone grease. |
| 4 | Unlock the four clamps of the radio unit, as shown below.<br>  |
| 5 | Mount the WiBAS™ OSDR-TS onto the antenna, as shown below.<br>  |
| 6 | Lock and secure all four clamps according to the pattern below<br>  <br>Details of Clamps closing<br>  |
| 7 | For cables installation refer to Installing Radio Units Cables . |

End of procedure.

# WiBAS OSDR-TS and Panel

**Introduction**

Apply this procedure for installing the following wireless equipment:

- WiBAS™ OSDR-TS radio unit (**OSDR-OB-U-DSDS-SB**).
- Pole/Wall mounting kit (**OSDR-ANT-MNT**).
- Antenna, panel, 10.5 GHz (**ANT-IS-11-PL-C**).
- Antenna adaptation kit (**OSDR-PL-ANT-KIT**).
- Pole adaptation bracket (optional) (**INST-ADAPT**).

**Installation overview**

| **OSDR-OB-U-DSDS-SB** | |
|---|---|
|  | |
| **OSDR-ANT-MNT** | **ANT-IS-11-PL-C** |
|  |  |
| **INST-ADAPT** (optional) | **OSDR-PL-ANT-KIT** |
|  |  |

*Continued on next page*

# WiBAS OSDR-TS and Panel, Continued

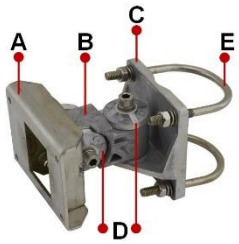
**Radio unit packing materials**

| OSDR-OB-U-DSDS-SB | Details |
|---|---|
|  | • WiBAS™ OSDR-TS Radio unit. |

**Antenna packing materials**

| ANT-IS-11-PL-C | Details |
|---|---|
|  | Antenna, panel, 10.5 GHz. |
| Antenna Set  | Used only for WiBAS-Connect and Panel |
|  | Silicone grease mini-pack. |

**Mounting kit packing materials**

| OSDR-ANT-MNT | Description |
|---|---|
|   | • **A:** Mounting adapter.<br>• **B:** Arm.<br>• **C:** Arm bracket.<br>• **D:** Azimuth / elevation adjusters (x2).<br>• **E:** M8 U-bolts (x2) (id=60 mm, l=99 mm) (for pole diameter 48 mm up to 60 mm). |
|  | • M8 nuts (x4). |
|  | • **Set-A:**<br>– M8 washers (x8).<br>– M8 lock washers (x8).<br>– M8 x 30 mm screws (x4). |

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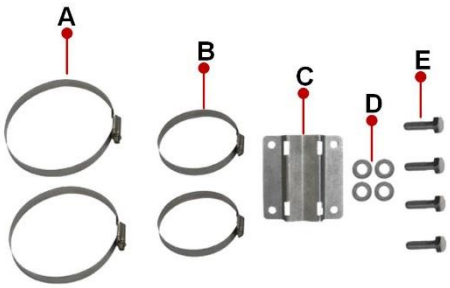
# WiBAS OSDR-TS and Panel, Continued

**Pole adaptation packing materials**

| INST-ADAPT | Details |
|---|---|
|  | • **A:** Hose clamps for pole diameter 80 mm up to 100 mm (x2).<br>• **B:** Hose clamps for pole diameter 104 mm up to 120 mm (x2).<br>• **C:** Adaptation Bracket.<br>• **D:** M8 washers (x4).<br>• **E:** M8 x 25 mm screws (x4). |

**Antenna adaptation packing materials**

| OSDR-PL-ANT-KIT | Details |
|---|---|
|  | • Hooks (x4).<br>• M3 x 8 mm screws (x8). |

**Tools**

- Adjustable torque U-wrench
- Adjustable torque wrench with hexagon male and female bits
- Cross screw driver

**Procedure**

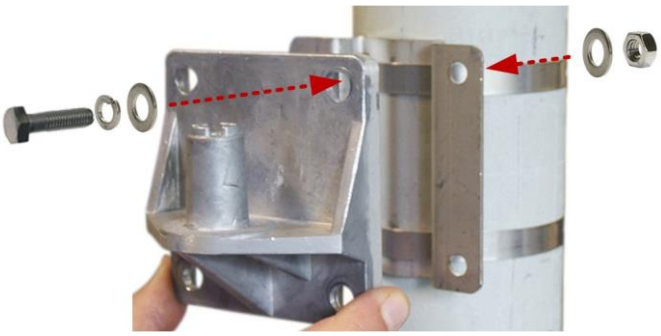
How to install the WiBAS™ OSDR-TS to panel antenna, proceed as follows:

| Step | Action |
|---|---|
| 1 | For pole installation with poles diameters 61 mm to 100 mm and 101 mm to 120 mm, proceed to the next step.<br><br>For wall installation go to **step 20**.<br><br>For pole installation with pole diameter 48 mm to 60 mm, go to **step 6**. |

*Continued on next page*

# WiBAS OSDR-TS and Panel, Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 2 | Choose the proper hose clamps of the pole adaptation packing materials, based on the pole diameter. |
| 3 | Choose the correct position onto the pole to install the bracket.<br>  |
| 4 | Use the adjustable wrench with hexagon female bit to tighten.<br>  <br>**Do not over tighten the M5 warm screws.** Adjust the tool for applying min **5.5 Nm** and max **7 Nm** tightening torque. |
| 5 | Use the respective pole adaptation packing materials to install the arm bracket onto the adaptation bracket, as shown below.<br>  <br>Use the adjustable wrench with hexagon female bit to tighten.<br>**Do not over tighten the M8 nuts.** Adjust the tool for applying max tightening torque **15 Nm**.<br>To continue go to **step 8**. |

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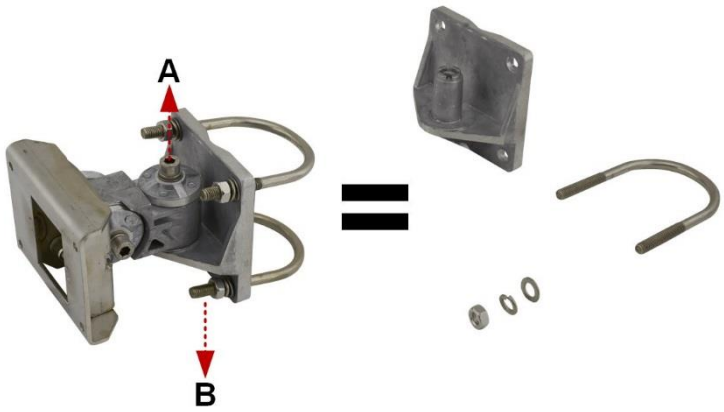
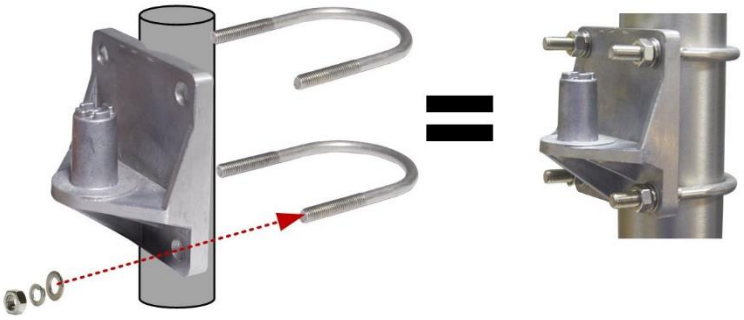
# WiBAS OSDR-TS and Panel, Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 6 | For pole installation with pole diameter 48 mm to 60 mm, perform the following actions:<br>• Unscrew the Set-A of mounting kit packing materials **(A)**.<br>• Release the u-bolts **(B)**.<br>  |
| 7 | Place the arm bracket to the pole and install the two U-bolts, as shown below.<br><br>Use the U-wrench to tighten (washer, lock washer and nut).<br>  <br>**Do not over tighten the M5 nuts.** Adjust the tool for applying max tightening torque **15 Nm**. |

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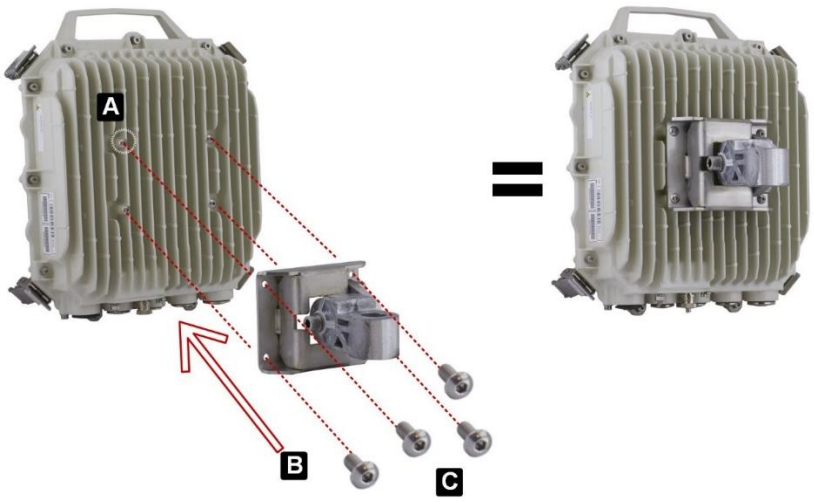
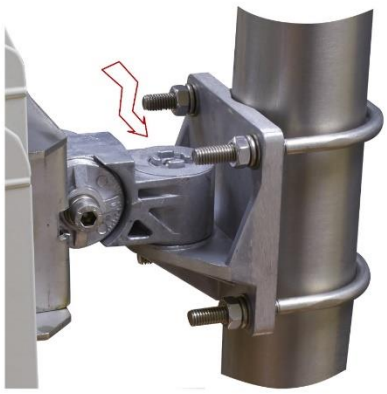
# WiBAS OSDR-TS and Panel, Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 8 | Perform the following actions:<br>• Unscrew the four screws **(A)**.<br>• Place the radio mounting adapter onto the radio unit, as shown below **(B)**.<br>• Use the wrench tool with hexagon male bit to tighten the screws **(C)**.<br>  <br>**Do not over tighten the M5 screws.** Adjust the tool for applying max tightening torque **4.2 Nm**. |
| 9 | Insert arm into the arm bracket, as shown below.<br>  |

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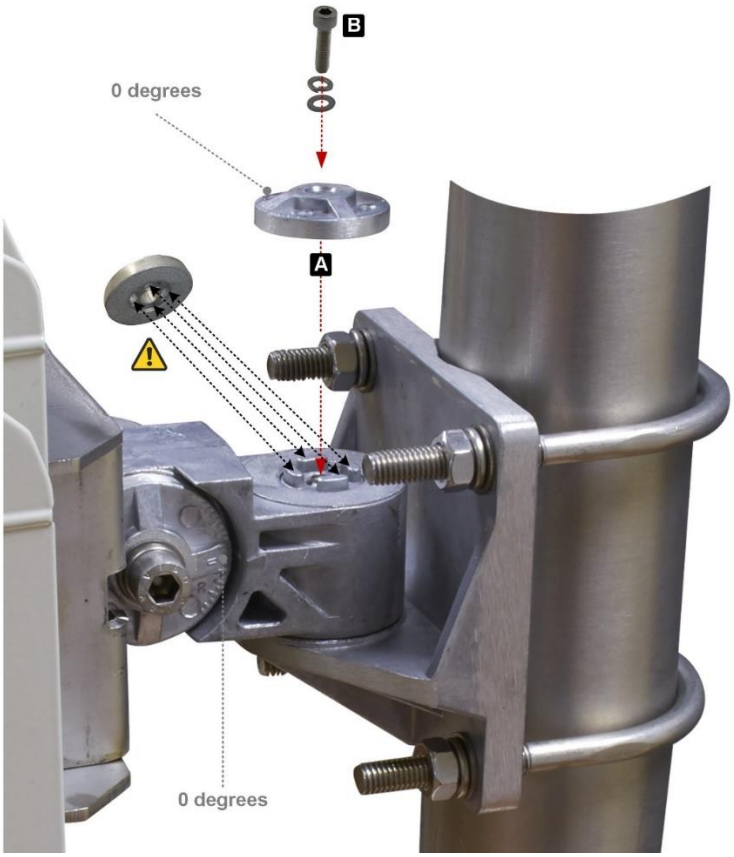
# WiBAS OSDR-TS and Panel, Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 10 | Perform the following actions:<br>• Place the azimuth adjuster **(A)**<br>• Install the set-A of mounting kit packing materials **(B)**, as shown below:<br>  <br> |
| 11 | Use the wrench tool with hexagon male bit to fully tighten the adjuster screw.<br>**Do not over tighten the screws.** Adjust the tool for applying max tightening torque **20 Nm**. |

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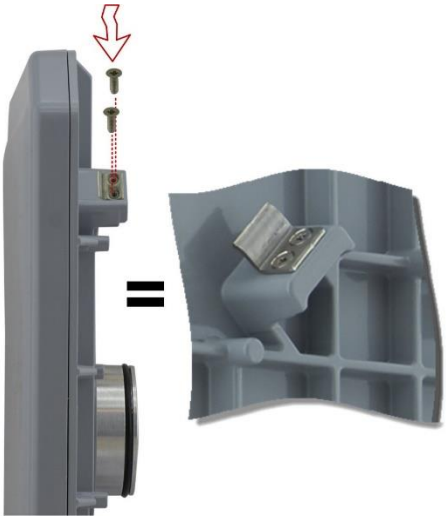
# WiBAS OSDR-TS and Panel, Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 12 | The installation should appear, as follows:<br>  |
| 13 | Use the cross screw driver to install the antenna adaptation packing materials (x4), as shown below.<br>  |

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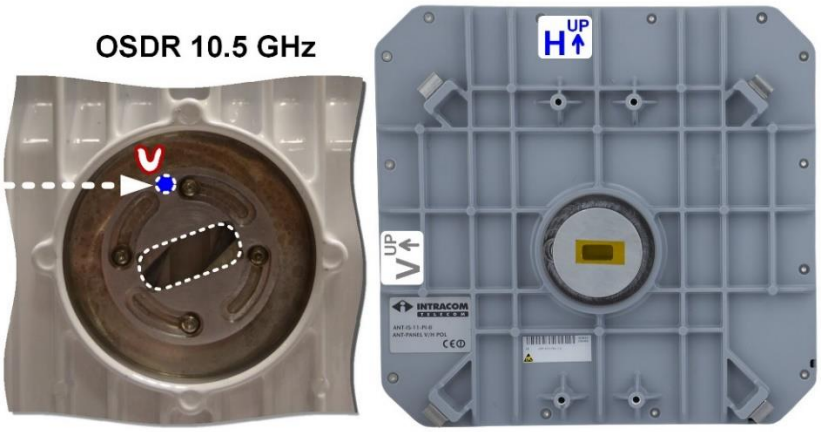
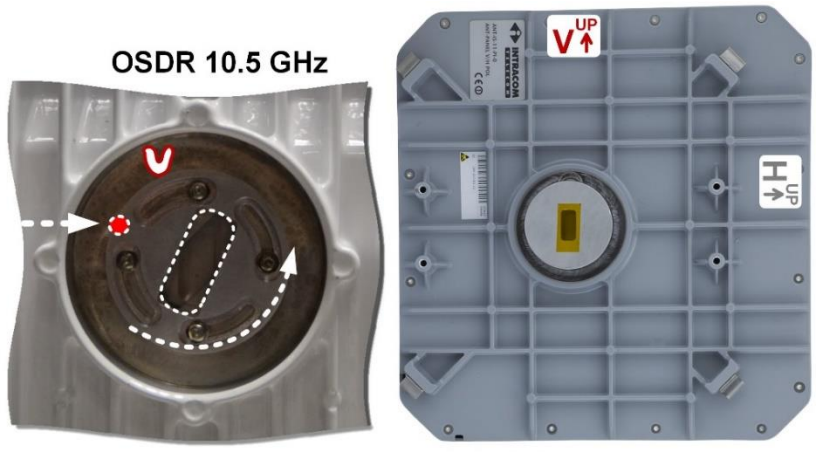
# WiBAS OSDR-TS and Panel, Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 14 | Radio unit and antenna should be adjusted for common polarization. If the **LINK** polarization is **HORIZONTAL** then the feeders should be remained, as shown below:<br>  <br>If the **LINK** polarization is **VERTICAL**, use the allen key to loosen the four screws at the waveguide port of the radio (do not remove the screws) and then **TURN** the polarizer, as shown below:<br>  <br>The terminal station polarization at 10.5 GHz (radio-panel antenna) is specific and applicable to this case only.<br>Do not over tighten the screws. Apply maximum tightening torque 0.6 Nm.<br>Note: The misalignment of slots between the movable part and the stationary part of the radio waveguide port is intentional and does not indicate a problem. |

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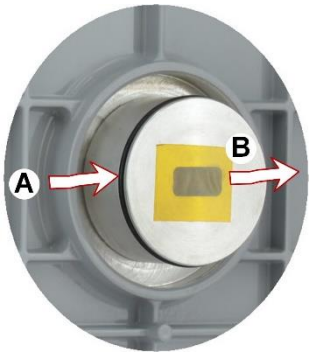
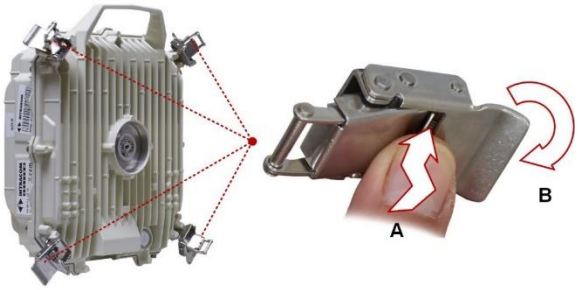
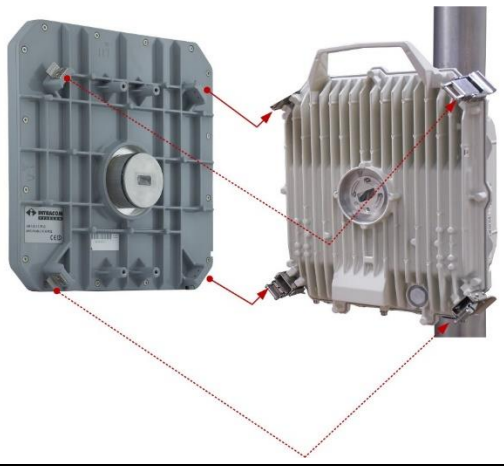
# WiBAS OSDR-TS and Panel, Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 15 | Perform the following actions:<br>• Lubricate the O-ring with silicone grease **(A)**.<br>• Remove antenna protection plastic sticker from the feeder **(B)**.<br>  |
| 16 | Unlock the four radio unit clamps, as shown below.<br>  |
| 17 | Mount the panel antenna onto the WiBAS™ OSDR-TS, as shown below<br>  |

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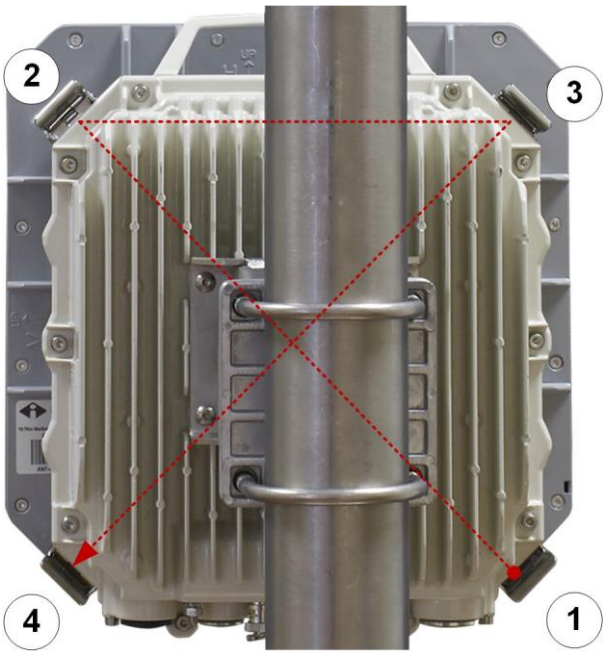
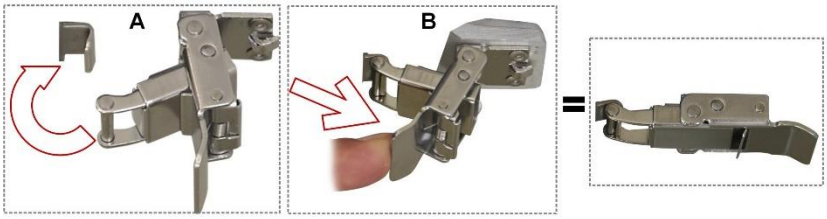
# WiBAS OSDR-TS and Panel, Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 18 | Lock and secure all four clamps according to the pattern below.<br>  <br>Details of Clamps closing<br>  <br>End of procedure. |
| 19 | For cables installation refer to Installing Radio Units Cables . |

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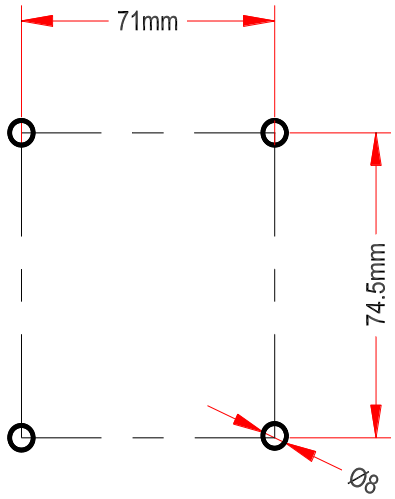
# WiBAS OSDR-TS and Panel, Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 20 | Use a drilling machine (fitted with an 8 mm drill bit) and the following drill template to drill the holes in the wall surface, as shown below.<br>  <br> |

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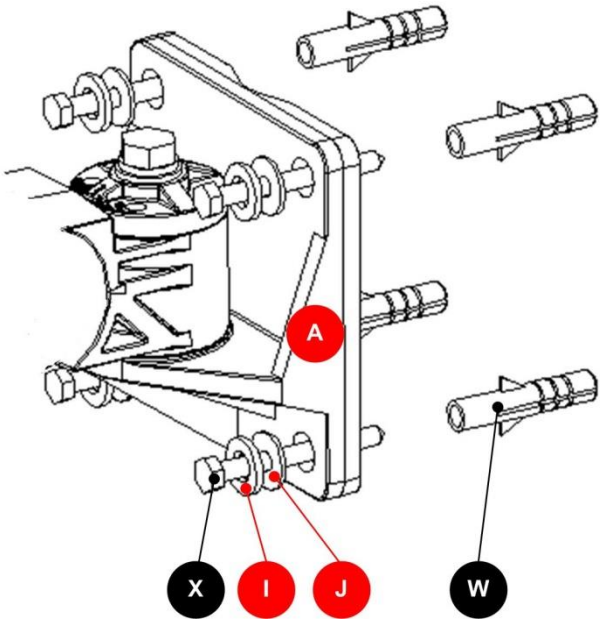
# WiBAS OSDR-TS and Panel, Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 21 | Insert items (W, A, J, I X) with order, as shown below:<br>  <br><br>The items **X, W** listed below are not provided:<br><br>Item / Description / Qty<br>**X** — Wood screw 5 x 50 mm, hex-headed, DIN571 — 4<br>I — Lock washer M5, stainless — 4<br>J — Washer M5, stainless. — 4<br>A — Arm Bracket — 1<br>**W** — Wood plug 8 mm, plastic, type B. — 4 |
| 22 | Use the adjustable U-wrench tool to **fully tighten** the four screws (item X) to secure the arm bracket on the wall surface.<br><br>**Do not over tighten the M5 screws.** |
| 23 | To continue go to **step 8**. |

End of procedure.

# 4.2. Installing Radio Units Cables

**Introduction**

This section describes the installation procedures for radio unit cables, as follows:

| Description | WiBAS™ G5 Connect+ WiBAS™-Connect | WiBAS™ OSDR-TS |
|---|---|---|
| Grounding Cable | ✔ | ✔ |
| ETH Cable | ✔ | ✔ |
| Cable Holder | ✘ | ✔ |

Note **For powering of power injectors refer to Appendix B – Terminating Cables in paragraph Power.**

# Grounding Cable

**Introduction**

Apply this procedure for installing the grounding cables (**GND-KIT16-OD** and **GND-CAB6-ID**) to the following radio units:

- **WG5-CONN-PLUS-LB-UB**
- **CONN-OB-U-DSDS**
- **CONN-OB-U-DSDS-DP**
- **OSDR-OB-U-DSDS-SB**

**Precautions**

**Ensure that:** the Safety Precautions on page 17 are applied.

**Prerequisites**

Prepare and terminate the grounding cables as described in Appendix B – Terminating Cables.

**Tools and materials**

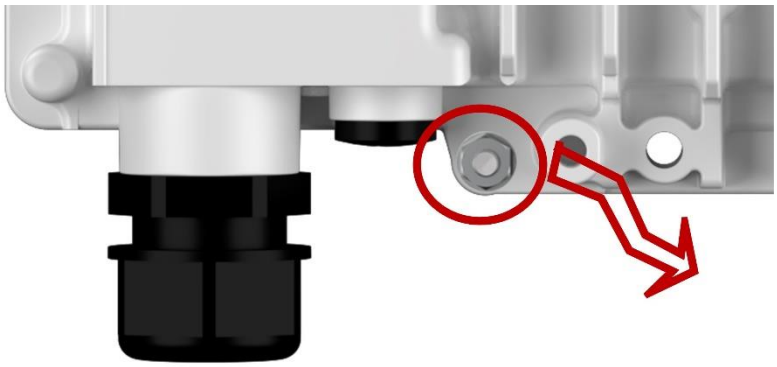
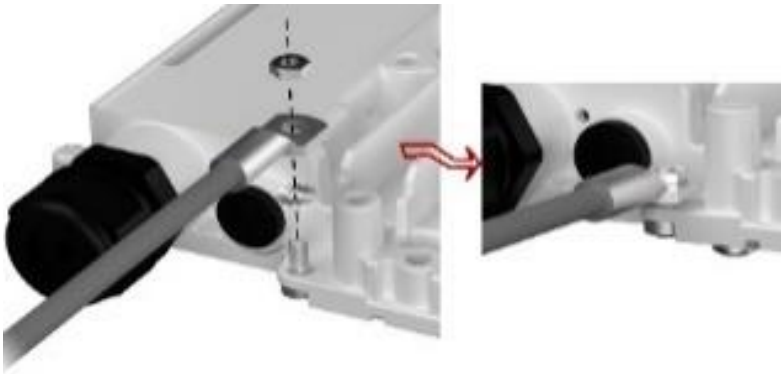
| | |
|---|---|
| Tools | • Adjustable torque wrench with hexagon female bit (see Equipment installation tools). |
| Materials | • Grounding cables.<br>• Radio units. |

*Continued on next page*

# Grounding Cable, Continued

**Procedure for WiBAS G5 Connect+**

How to install the grounding cable to radio unit (**WG5-CONN-PLUS-LB-UB**), proceed as follows:

| Step | Action |
|---|---|
| 1 | Use the tool (adjustable torque wrench with hexagon female bit) to remove the pre-installed M5 grounding nut.<br>  |
| 2 | Perform the following actions:<br>• Install the cable, as shown below.<br>  <br>• Use the tool (adjustable torque wrench with hexagon female bit) to tighten the screw.<br>**Do not over tighten the M5 nut.** Adjust the tool for applying maximum tightening torque **4.2 Nm**.<br>**DO NOT forget to install the other end of the grounding cable to grounding bar.** |

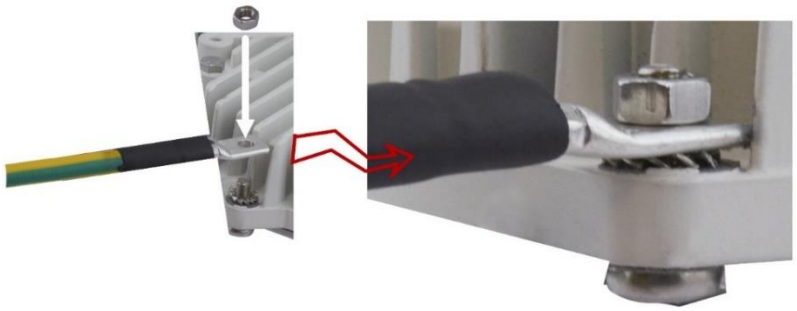
End of procedure.

*Continued on next page*

# Grounding Cable, Continued

**Procedure for WiBAS-Connect (both editions)**

How to install the grounding cable to radio units (**CONN-OB-U-DSDS** / **CONN-OB-U-DSDS-DP**), proceed as follows:

| Step | Action |
|---|---|
| 1 | If the terminal lug is installed then follow this step. If the terminal lug is not installed then follow step 2.<br><br>Use the tool to remove the pre-installed M5 grounding terminal.<br>  |
| 2 | Perform the following actions:<br><br>• Install the cable, as shown below.<br>  <br>• Use the tool with M5 hexagon female bit to fully tighten the screw.<br><br>**Do not over tighten the M5 nut.** Adjust the tool for applying maximum tightening torque **4.2 Nm**.<br><br>**DO NOT forget to install the other end of the grounding cable to grounding bar.** |

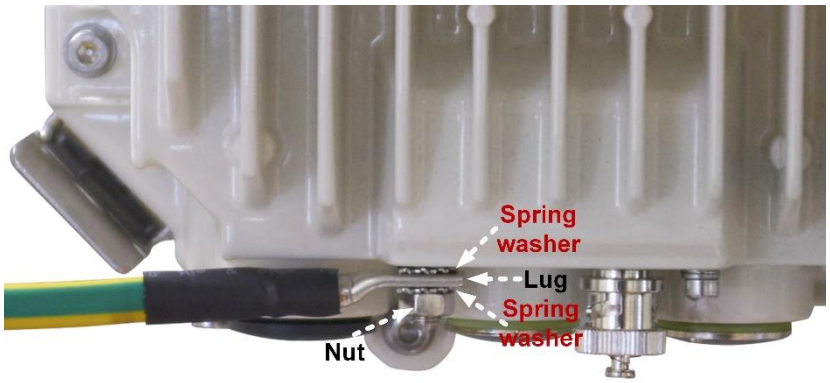
End of procedure.

*Continued on next page*

# Grounding Cable, Continued

**Procedure for WiBAS OSDR-TS**

How to install the grounding cable to radio unit (**OSDR-OB-U-DSDS-SB**), proceed as follows:

| Step | Action |
|---|---|
| 1 | Use the tool to remove the M5 nut and one spring washer. |
| 2 | Perform the following actions:<br><br>• Install the cable, as shown below:<br><br>  <br><br><br>• Use the tool with M5 hexagon female bit to fully tighten the screw.<br><br>**Do not over tighten the M5 nut.** Adjust the tool for applying maximum tightening torque **4.2 Nm**.<br><br>**DO NOT forget to install the other end of the grounding cable to grounding bar.** |

End of procedure.

# ETH Cable

**Introduction**

Apply this procedure for installing the ETH cable to the following radio units:

- **WG5-CONN-PLUS-LB-UB**
- **CONN-OB-U-DSDS**
- **CONN-OB-U-DSDS-DP**
- **OSDR-OB-U-DSDS-SB**

**Precautions**

**Ensure that:** the Safety Precautions on page 17 are applied.

**Prerequisites**

Prepare and terminate the ETH cable as described in Appendix B – Terminating Cables.

**Tools and materials**

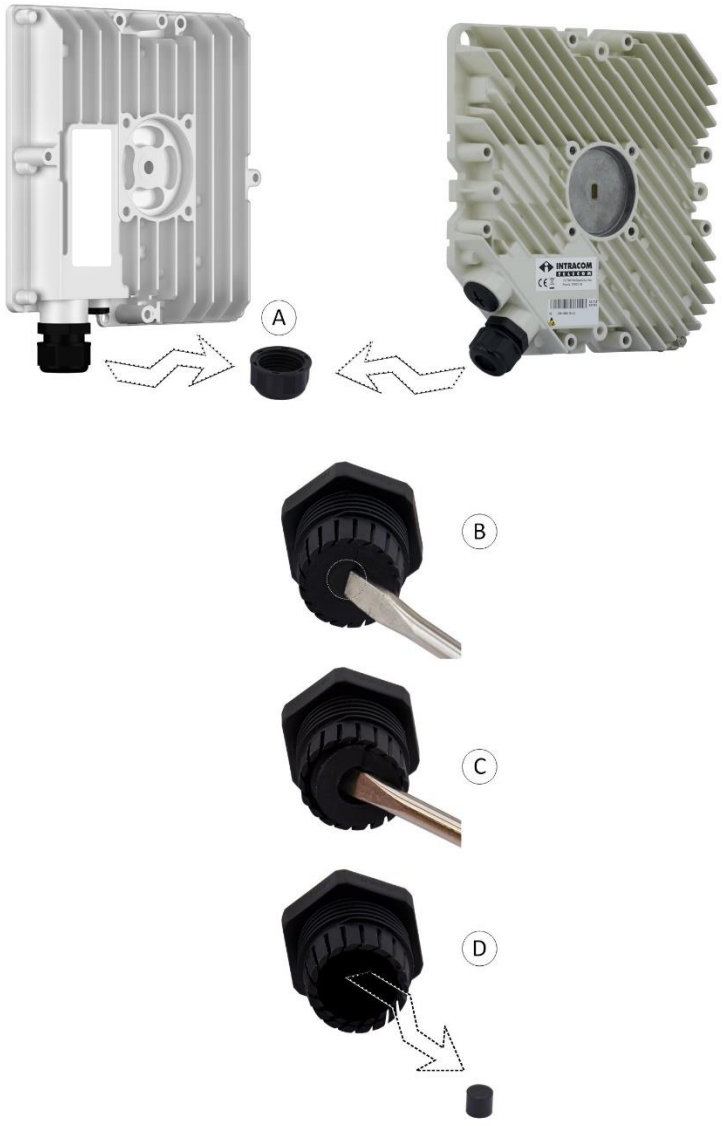
| | |
|---|---|
| Tools | • Adjustable torque U-wrench and screwdrivers (see Equipment installation tools). |
| Materials | • **M20-GLAND**<br>• Ethernet cable.<br>• Radio units.<br><br>Note WiBAS™-Connect gland for ETH cable is already installed in the radio unit. |

*Continued on next page*

# **ETH Cable,** Continued

**Procedure**

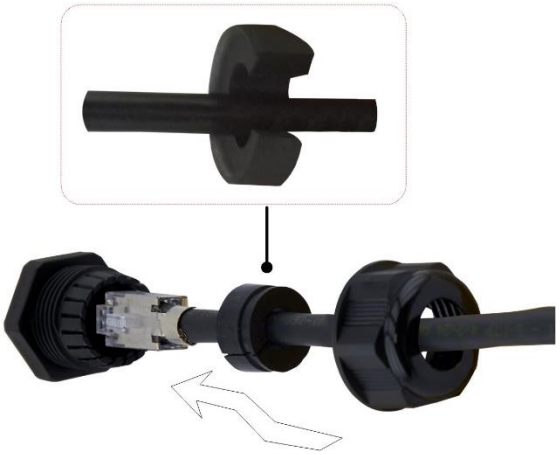
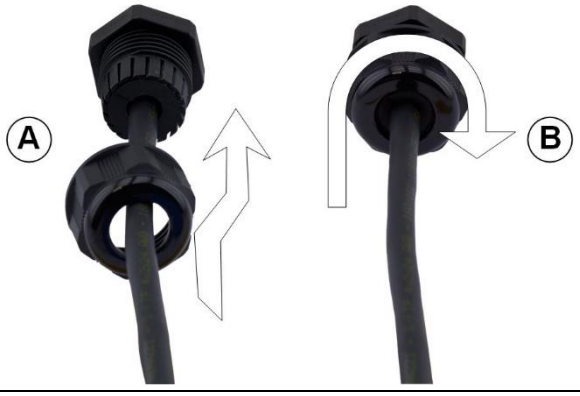
How to install the ETH cable to radio unit (**WG5-CONN-PLUS-LB-UB** / **CONN-OB-U-DSDS** / **CONN-OB-U-DSDS-DP**), proceed as follows:

| Step | Action |
|---|---|
| 1 | Perform the following actions:<br>• Unscrew the sealing nut **(A)**.<br>• Use the screwdriver for pushing forward the plastic protection in the middle of the seal **(B)**.<br>• Use the screwdriver for pulling outwards the seal **(C)**.<br>• Remove the plastic part **(D)**.<br>  |

*Continued on next page*

# **ETH Cable**, Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 2 | Pass the cable through the parts of gland, as shown below.<br><br>The seal shown below is split-type for easy installation and removal.<br><br>  <br><br>Insert and install the RJ-45 jack of the cable into the mating receptacle radio unit. **Listen for a "click" when inserting.** This verifies that the jack has been inserted properly. |
| 3 | Use the U-wrench to tighten.<br><br>**Do not over tighten.** Adjust the tool for applying maximum tightening torque **5 Nm**.<br><br>  <br> |

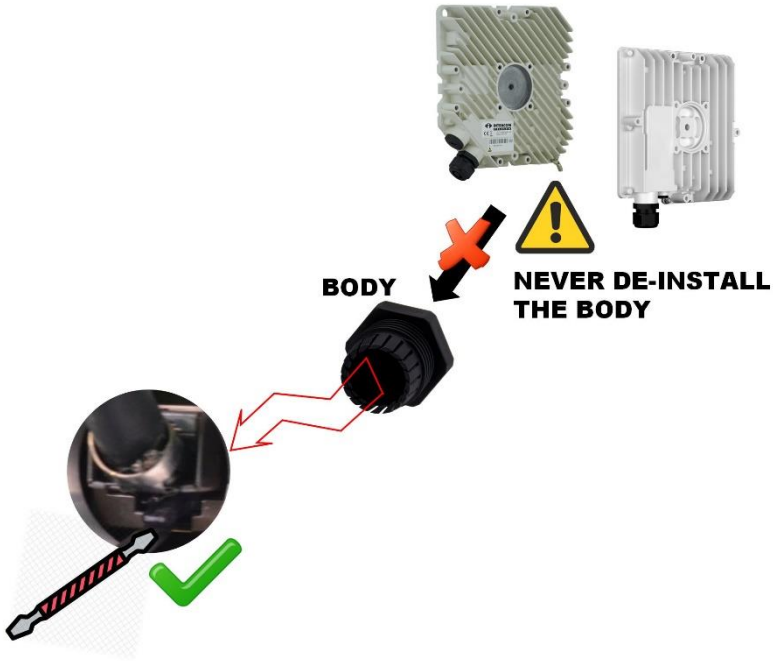
*Continued on next page*

# **ETH Cable,** Continued

**Procedure**, continued

**Take care when you unplug the RJ-45 jack.** The latter is locked into the mating receptacle.

After removing the gland parts of the cable use the flat-headed screwdriver to extract the RJ-45 jack by pressing the clip upwards, as shown below:



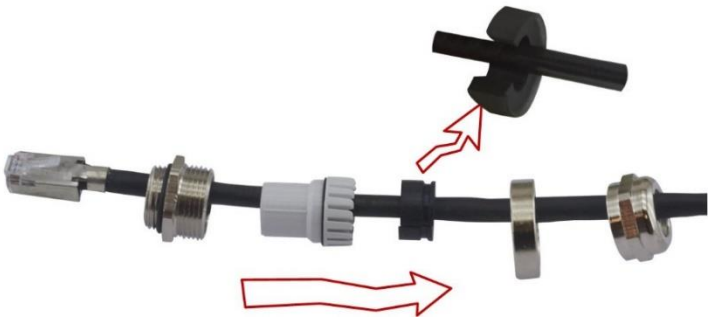

End of procedure.

*Continued on next page*

# **ETH Cable**, Continued

**Procedure**

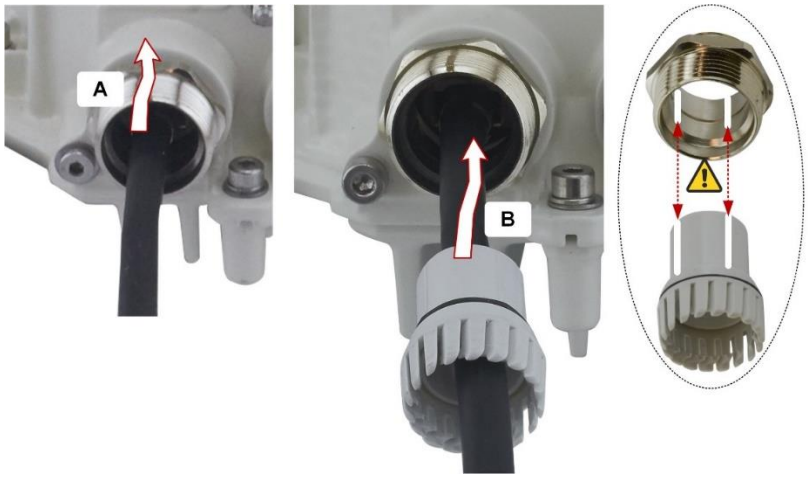
How to install the ETH cable to radio unit (**OSDR-OB-U-DSDS-SB**), proceed as follows:

| Step | Action |
|---|---|
| 1 | Remove the protective cap (plastic for GbE2 or metallic for FE).<br>  |
| 2 | Disassemble the **M20-GLAND** parts, as shown below:<br>  |
| 3 | Pass the cable through the parts of gland, as shown below. The **seal** shown below is split-type for easy installation and removal.<br>  |

*Continued on next page*

# **ETH Cable,** Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 4 | Plug the RJ-45 jack into the GbE2 or FE port of the WiBAS™ OSDR-TS.<br><br>**Listen for a "click" when inserting.** This verifies that the jack has been inserted properly.<br><br>  |
| 5 | Perform the following actions:<br>• Use the U-wrench to screw the body into the radio thread **(A)**.<br>**Do not over tighten.** Adjust the tool for applying maximum tightening torque **7 Nm**.<br>• Insert claw into the body **(B)** taking into account the caution.<br>**Align the designated points.** Misaligning of parts will cause damage.<br><br>  |

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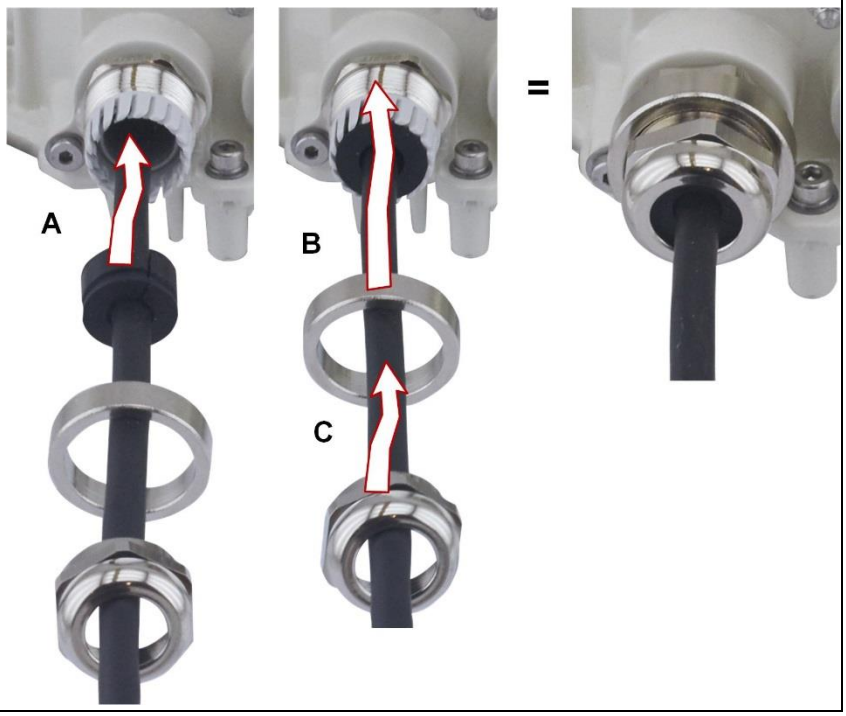
# **ETH Cable**, Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 6 | Perform the following actions:<br><br>• Insert the seal into “pressure fingers” of claw **(A)**.<br>• Insert the O-ring **(B)**.<br>• Screw the sealing nut **(C)**. Use the U-wrench to fully tighten.<br><br>**The metallic O-ring protects from overtightening.**<br><br>  |

*Continued on next page*

# **ETH Cable,** Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 7 | Install the cable to holder, as described in Cable Holder. |

**Take care when you unplug the RJ-45 jack.** The latter is locked into the mating receptacle.

After removing the gland parts of the cable use the flat-headed screwdriver to extract the RJ-45 jack by pressing the clip upwards, as shown below:

End of procedure.

# Cable Holder

**Introduction**

Apply this procedure for installing the cable holder (**OSDR-HOLD-2**) to radio unit **OSDR-OB-U-DSDS-SB**.

**Tools and materials**

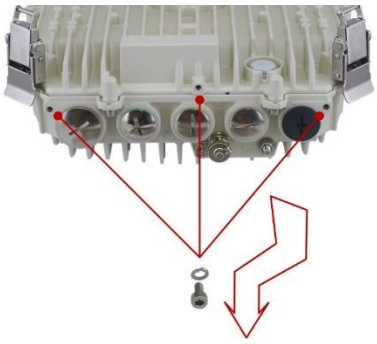
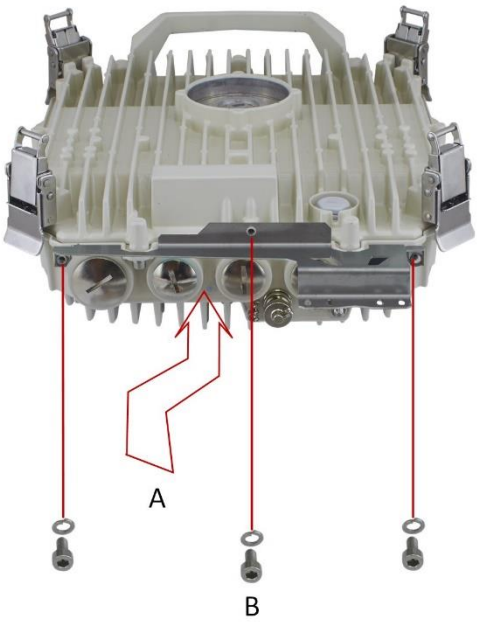
| | |
|---|---|
| Tools | • Adjustable torque wrench tool with hexagon male bit (refer to Equipment installation tools). |
| Materials | • **OSDR-HOLD-2** |

*Continued on next page*

# **Cable Holder**, Continued

**Procedure**

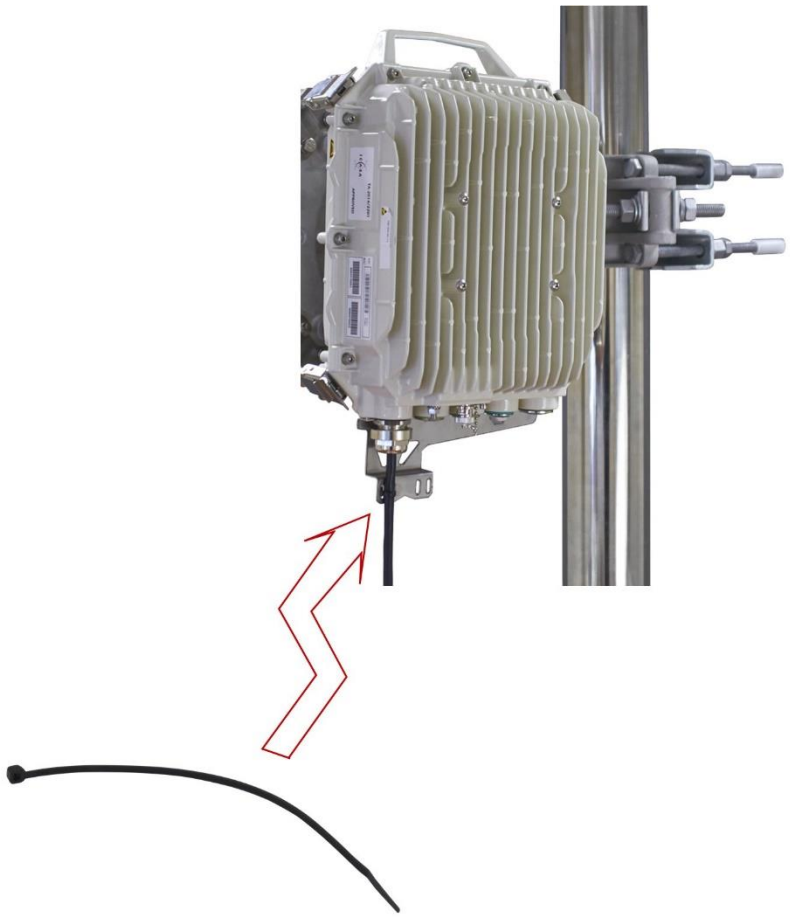
How to install the cable holder to WiBAS™ OSDR-TS radio unit, proceed as follows:

| Step | Action |
|---|---|
| 1 | Use the wrench tool to remove the three screws with lock washers, as shown below.<br>  |
| 2 | Perform the following actions:<br>• Mount the holder to radio **(A)**.<br>• Use the wrench tool to install the three lock washers and screws **(B)**, as shown below:<br>  <br>**Do not over tighten.** Adjust the tool for applying maximum tightening torque **2 Nm**. |

*Continued on next page*

# **Cable Holder**, Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 3 | Use the tie wrap to tighten the cable, as shown below:  |

End of procedure.

# Appendix A - Installing Power Injectors

**Scope**

This chapter describes the pole/wall installation and cabling procedures of power injectors, as follows:

| Procedure Description | Type | | WiBAS™ Terminal Station | |
|---|---|---|---|---|
| | AC | DC | OSDR-TS | Connect |
| POE-AC75-ID / POE-ID-AC72 / POE-AC56-IDH / POE-ID-AC35 | ✓ | | ✓ | ✓ |
| | ✓ | | ✓ | ✓ |
| | ✓ | | ✓ | ✓ |
| | ✓ | | | ✓ |
| PONE-OD67-AC | ✓ | | ✓ | ✓ |
| PONE-OD-DC | | ✓ | ✓ | ✓ |
| POE-HP-OD67-DC | | ✓ | ✓ | ✓ |

# POE-AC75-ID / POE-ID-AC72 / POE-AC56-IDH / POE-ID-AC35

**Introduction**

Apply this procedure for installing the indoor AC power injectors **POE-AC75-ID** / **POE-ID-AC72** / **POE-AC56-IDH** / **POE-ID-AC35**.

**Power injectors details**

- **POE-AC75-ID**: AC POE injector, indoor, 75 W, -20° C to +40° C, 90 V AC to 264 V AC, 47 Hz to 63 Hz.
- **POE-ID-AC72**: AC POE injector, indoor, 72 W, -5° C to +45° C, 100 V AC to 240 V AC, 50 Hz to 60 Hz.
  - This model offers Network Signal and POE Power Output surge protection (10 / 700 μs): 6 Kv.
  - Grounding cable 6 mm2 is included in the package
- **POE-AC56-IDH**: AC POE injector, indoor, temperature hardened, 56 W.
- **POE-ID-AC35**: AC POE injector, indoor, 35 W.

Note Materials for wall mount installation are not included on the packing list.

*Continued on next page*

# POE-AC75-ID / POE-ID-AC72 / POE-AC56-IDH / POE-ID-AC35,
Continued

**Power injectors overview**

## POE-AC75-ID

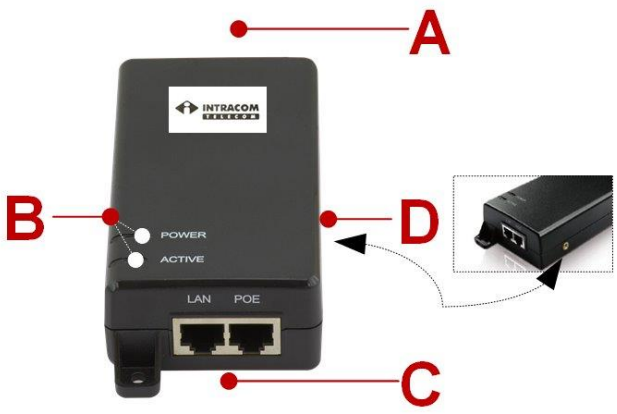

| # | Marking | Details | Use |
|---|---|---|---|
| A | **INPUT** | 3-pins AC socket (EU). | To connect the AC power supply cord. |
| B | **LED** | Multi-functioning LED. | To provide equipment status during operation. |
| C | **IN / OUT** | Gigabit Ethernet 10/100/1000 Base T, Electrical (RJ-45). | • **IN:** To connect the Gigabit Ethernet (S-FTP) cable for carrying **towards to customer network:**<br>– Traffic<br>– Inband management<br>• **OUT:** To connect the Gigabit Ethernet (S-FTP) cable for carrying **towards to radio:**<br>– Traffic<br>– Inband management<br>– superimposed DC power |

*Continued on next page*

# POE-AC75-ID / POE-ID-AC72 / POE-AC56-IDH / POE-ID-AC35, Continued

**Power injectors overview**, continued

**POE-ID-AC72**



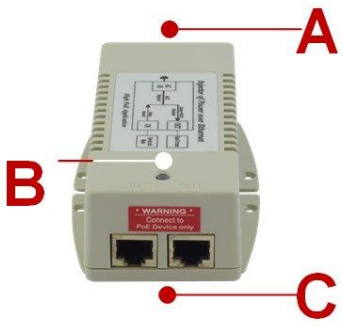

| # | Marking | Details | Use |
|---|---|---|---|
| A | **INPUT** | 3-pins AC socket (EU). | To connect the AC power supply cord. |
| B | **LED** | Multi-functioning LED. | To provide equipment status during operation. |
| C | **LAN / POE** | Gigabit Ethernet 10/100/1000 Base T, Electrical (RJ-45). | • **LAN:** To connect the Gigabit Ethernet (S-FTP) cable for carrying **towards to customer network:**<br>– Traffic<br>– Inband management<br>• **POE:** To connect the Gigabit Ethernet (S-FTP) cable for carrying **towards to radio:**<br>– Traffic<br>– Inband management<br>– superimposed DC power |
| D | **GND** | Grounding. | To connect 6 $mm^2$ grounding cable. |

*Continued on next page*

# POE-AC75-ID / POE-ID-AC72 / POE-AC56-IDH / POE-ID-AC35,
Continued

**Power injectors overview**, continued

**POE-AC56-IDH**




| # | Marking | Details | Use |
|---|---|---|---|
| A | **INPUT** | 3-pins AC socket (EU). | To connect the AC power supply cord. |
| B | **LED** | Multi-functioning LED. | To provide equipment status during operation. |
| C | **IN / OUT** | Gigabit Ethernet 10/100/1000 Base T, Electrical (RJ-45). | • **IN:** To connect the Gigabit Ethernet (S-FTP) cable for carrying **towards to customer network:**<br>– Traffic<br>– Inband management<br>• **OUT:** To connect the Gigabit Ethernet (S-FTP) cable for carrying **towards to radio:**<br>– Traffic<br>– Inband management<br>– superimposed DC power |

*Continued on next page*

# POE-AC75-ID / POE-ID-AC72 / POE-AC56-IDH / POE-ID-AC35, Continued

**Power injectors overview**, continued

**POE-ID-AC35**


| # | Marking | Details | Use |
|---|---|---|---|
| A | **INPUT** | 3-pins AC socket (EU). | To connect the AC power supply cord. |
| B | **LED** | Multi-functioning LED. | To provide equipment status during operation. |
| C | **IN / OUT** | Gigabit Ethernet 10/100/1000 Base T, Electrical (RJ-45). | • **LAN:** To connect the Gigabit Ethernet (S-FTP) cable for carrying **towards to customer network:**<br>– Traffic<br>– Inband management<br>• **POE:** To connect the Gigabit Ethernet (S-FTP) cable for carrying **towards to radio:**<br>– Traffic<br>– Inband management<br>– superimposed DC power |

*Continued on next page*

# POE-AC75-ID / POE-ID-AC72 / POE-AC56-IDH / POE-ID-AC35,
Continued

**Precautions**

**Ensure that:** the Safety Precautions on page 17 are applied.

**Prerequisites**

Prepare and terminate the ETH cable as described in Appendix B – Terminating Cables.

Prepare and terminate the grounding cable as described in Appendix B – Terminating Cables (only for **POE-ID-AC72**).

**Tools and materials**

| | |
|---|---|
| Tools | • For wall installation screwdrivers (see Equipment installation tools) and drill machine (refer to Specific works). |
| Materials | • **POE-AC75-ID ( or POE-ID-AC35)**<br>• **POE-ID-AC72.**<br>• **POE-AC56-IDH**. |

*Continued on next page*

# POE-AC75-ID / POE-ID-AC72 / POE-AC56-IDH / POE-ID-AC35, Continued

**Procedure**

How to install the cables (Ethernet, power and grounding), proceed as follows:

| Step | Action |
|---|---|
| 1 | For **POE-ID-AC72** install the grounding cable. |
| 2 | Connect the Gigabit Ethernet (S-FTP) cable to **IN** or **LAN** receptacle of the power injectors.<br><br>Then connect the other end of the cable to customer network receptacle. |
| 3 | Connect the Gigabit Ethernet (S-FTP) cable to **OUT** or **POE** receptacle of the power injectors.<br><br>Then connect the other end of the cable to **the respective receptacle of the radio unit.** |
| 4 | Connect IEC plug to the respective input of the power injector with the main AC socket. |

End of procedure.

**Procedure**

How to install the devices onto the wall surface, proceed as follows:


| Step | Action |
|---|---|
| 1 | Position the device on the wall surface and using a pencil mark the drill points. With the drill machine (fitted with 5 mm bit), drill four holes on the wall surface, at a depth of 30 mm. |
| 2 | Install the wall plugs and using the cross headed screwdriver tighten the screws. |

End pf procedure.

# PONE-OD67-AC

**Introduction**

Apply this procedure for installing the outdoor AC power injector **PONE-OD67-AC**.

**Power injector details**

**Characteristics:**

- AC PONE injector
- Outdoor
- 67 watt
- Wall mount
- Temperature hardened
  - Operating temperature -40° C to +55° C
- 110 V AC to 240 V AC, tested for 99 V AC to 255 V AC
- 50 Hz to 60 Hz
- IEC 60529 / IP67 class.

**Packing List:**

- Ethernet cable glands are pre-installed on the unit.
- Grounding screw is pre-installed on the unit.
- AC Power connector is included in the package.
- Screws, washers and wall plugs are included in the package (for wall installation)

Note
- For pole installation, a mounting bracket (**INSTPONE-PL2**) should be ordered.
- For grounding, a grounding kit (**GND-KIT16-OD**) should be ordered.
- For powering, an AC power cable (**AC-PWR-CAB**) should be ordered.

Note
- Lightning surge protection is embedded in the unit.

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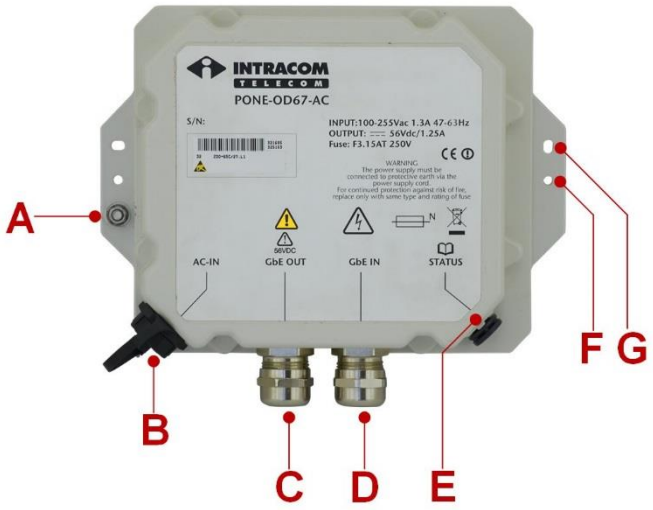
# **PONE-OD67-AC,** Continued

**Power injector overview**




| # | Marking | Details | Use |
|---|---|---|---|
| A | **GND** | Grounding point. | To connect 16 mm$^2$ grounding cable. |
| B | **AC-IN** | 3-pins AC receptacle. | To connect AC power supply cable with connector. |
| C | **Gbe OUT** | Gigabit Ethernet 10/100/1000 Base T, Electrical (RJ-45). | To connect the Gigabit Ethernet (S-FTP) cable for carrying **towards to radio**:<br>• Traffic<br>• Inband management<br>• superimposed DC power |
| D | **GbE IN** | | To connect the Gigabit Ethernet (S-FTP) cable for carrying **towards to customer network**:<br>• Traffic<br>• Inband management |
| E | **STATUS** | Multi-functioning LED. | To provide radio unit status during operation. |
| F | **-** | Pole installation. | To mount **INSTPONE-PL2**. |
| G | **-** | Wall installation. | To mount wall installation screws. |

*Continued on next page*

# **PONE-OD67-AC,** Continued

**Precautions**

**Ensure that:** the Safety Precautions on page 17 are applied.

**Prerequisites**

Prepare and terminate the following cables:

ETH cable as described in Ethernet (S-FTP).

Grounding cable as described in Grounding.

Power supply cable as described in Power.

**Tools and materials**

| | |
|---|---|
| Tools | • Adjustable torque wrench tool with bits, Adjustable torque U-wrench tool (see to Equipment installation tools) and drill machine (refer to Specific works).<br>• **TOOL-M20**. |
| Materials | • **INSTPONE-PL2**.<br>• **PONE-OD67-AC**. |

*Continued on next page*

# PONE-OD67-AC, Continued

**Procedure**

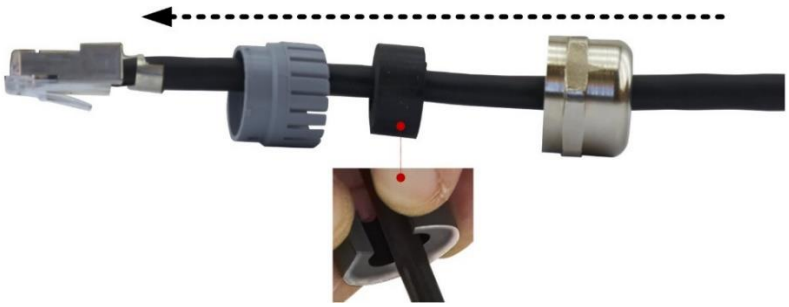
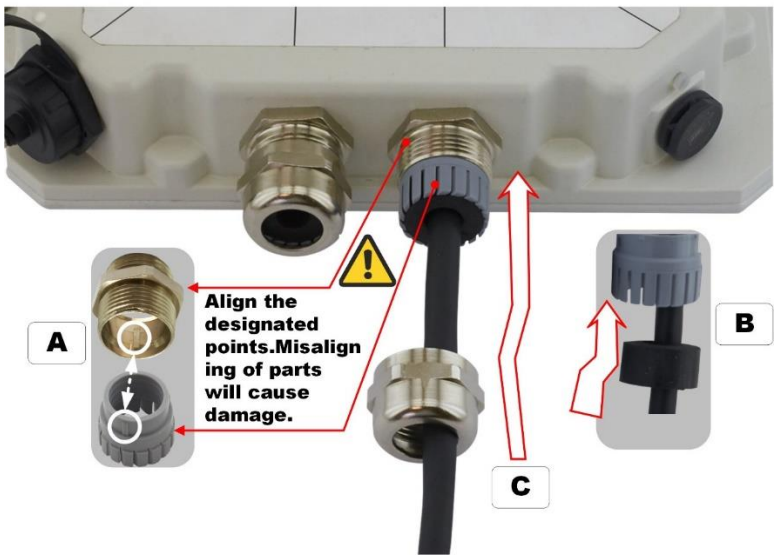
How to install the **PONE-OD67-AC** onto the pole or wall, proceed as follows:

| Step | Action |
|---|---|
| 1 | For pole installation follow this step. For wall installation go to last step.<br><br>Perform the following actions:<br>• Attach the plate onto rear side of PONE **(A)**, as shown below.<br>• Install lock washer and screw. Then use the cross headed screwdriver to fully tighten **(B)**.<br>• Pass the hose clamp through the plate holes **(C)**.<br>• Install the PONE onto pole. Use the tool with M5 deep socket to tighten **(D)**.<br>**Do not over tighten.** Adjust the tool for max tightening torque **2 Nm**.<br>• Use the wrench tool to remove the two sealing nuts **(E)**. Then remove the claw and seal.<br><br>  |

*Continued on next page*

# **PONE-OD67-AC,** Continued

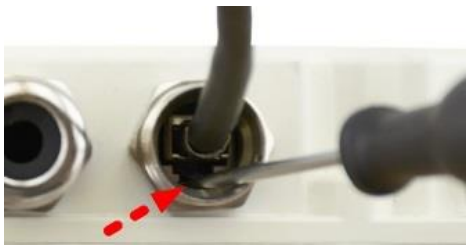
**Procedure**, continued

| Step | Action |
|---|---|
| 2 | Pass the cable through the parts of gland, as shown below.<br>  <br>Plug the Ethernet cables to the GbE receptacles (**OUT:** goes to radio and **IN:** goes to customer network). **Listen for a "click" when inserting**. This verifies that the jack has been inserted properly. |
| 3 | Perform the following actions:<br>• Insert the claw to body taking in consideration the caution below **(A)**.<br>• Insert the seal to claw **(B)**.<br>• Use the adjustable torque U-wrench to screw the sealing nut to body **(C)**.<br>**Do not over tighten.** Adjust the tool for tightening torque **2 Nm** (the final torque will be applied to the next step).<br>  |

*Continued on next page*

# **PONE-OD67-AC,** Continued

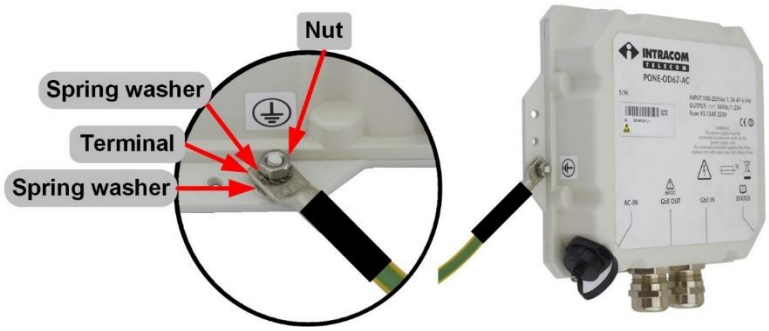
**Procedure**, continued

| Step | Action |
|---|---|
| 4 | Perform the following actions:<br>• Insert the claw to body taking in consideration the caution below **(A)**.<br>• Insert the seal to claw **(B)**.<br>• Use the adjustable torque U-wrench to screw the sealing nut to body **(C)**.<br>  <br>**Do not over tighten.** Adjust the tool for maximum tightening torque **6 Nm**.<br>Take care when you unplug the RJ-45 jack. The latter is locked into the mating receptacle and must be extracted first (with the tip of a flat-headed screwdriver) after removing the gland parts from the lower part of PONE.<br>  |

*Continued on next page*

# **PONE-OD67-AC,** Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 5 | Install the grounding cable as shown below.<br>  <br>**Do not over tighten.** Adjust the tool with M5 deep socket for maximum tightening torque **3 Nm**. |
| 6 | Install the power cable as shown below.<br>  |
| 7 | For wall installation perform the following actions:<br>• Position the device on the wall surface and using a pencil mark the drill points. With the drill machine (fitted with 5 mm bit), drill four holes on the wall surface, at a depth of 45 mm.<br>• Install the 2 supplied wall plugs and using the cross headed screwdriver tighten the 2 screws.<br>  |

End of procedure.

# PONE-OD-DC

**Introduction**

Apply this procedure for installing the outdoor DC power injector **PONE-OD-DC**.

**Power injector details**

**Characteristics:**

- DC PONE injector
- Outdoor
- 60 watt
- Wall mount
- Operating temperature -33° C to +55° C
- DC voltage (V DC)
  - Input nominal: 48
  - Min: 40.5
  - Max: 57
- DC current (A)
- Input: 1.9 max
- Output: 1.85 max

**Packing List:**

- Grounding lug M4 is pre-installed on the unit.
- Screws, washers and wall plugs are included in the package (for wall installation)

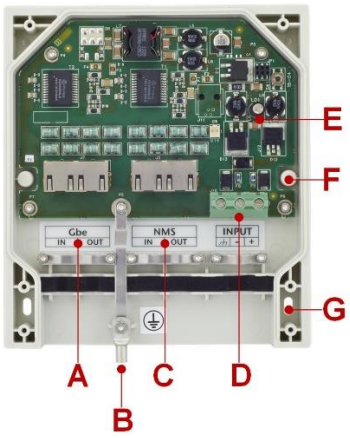
Note
- For pole installation, a mounting bracket (**INST-PONE-PL**) should be ordered.
- For grounding, a grounding cable (**GND-CAB6-ID**) should be ordered.
- For powering, a DC power cable (**DC-PWR-CAB-2**) should be ordered.

Note
- Lightning surge protection is embedded in the unit.

*Continued on next page*

# **PONE-OD-DC,** Continued

**Power injector overview**



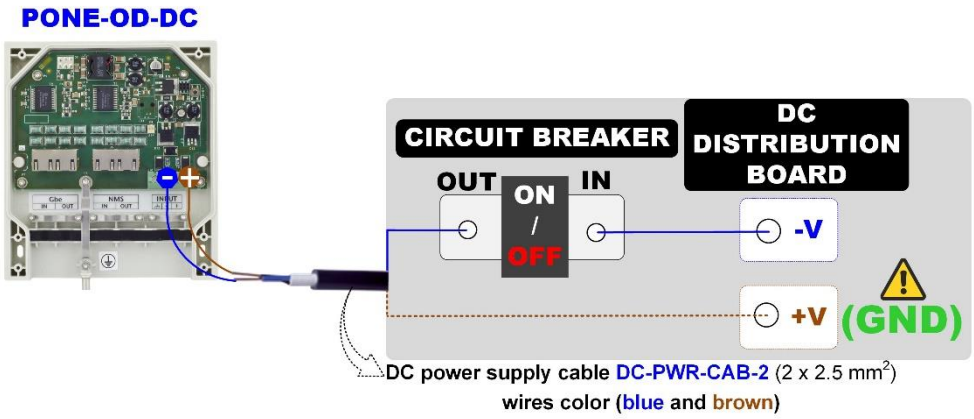

| # | Marking | Details | Use |
|---|---|---|---|
| A | **Gbe IN / OUT** | Gigabit Ethernet 100/1000 Base-T, Electrical (RJ-45). | **IN:** To connect the Gigabit Ethernet (S-FTP) cable for carrying **towards to customer network**:<br>• Traffic<br>• Inband management |
| | | | **OUT:** To connect the Gigabit Ethernet (S-FTP) cable for carrying **towards to radio**:<br>• Traffic<br>• Inband management<br>• superimposed DC power |
| B | **GND** | Grounding point. | To connect 6 $mm^2$ grounding cable. |
| C | **NMS IN / OUT** | Ethernet 100 Base-T, Electrical (RJ-45). | **IN:** To connect the Gigabit Ethernet (S-FTP) cable for carrying **towards to customer network**:<br>• Outband management |
| | | | **OUT:** To connect the Gigabit Ethernet (S-FTP) cable for carrying **towards to radio**:<br>• Outband management<br>• superimposed DC power |
| D | **INPUT** | Screw type terminals. | To connect the DC power supply cable (open end). |
| E | **-** | Multi-functioning LED. | To provide radio unit status during operation. |
| F | **-** | Pole installation. | To mount **INST-PONE-PL**. |
| G | **-** | Wall installation. | To mount wall installation screws. |

*Continued on next page*

# PONE-OD-DC, Continued

**Connection diagram between PONE-OD-DC and local DC power source**

The following diagram shows the connection between local dc power source and **PONE-OD-DC** using DC power supply cable **DC-PWR-CAB-2**:

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# **PONE-OD-DC,** Continued

**Minimum input voltage versus S-FTP cable length**

When the DC voltage at the input of the PONE is below **41 V** for Cat6 cable and **41.7 V** for Cat5E then the **length** of Gigabit Ethernet (S-FTP) cable (Cat5E or Cat6), between **radio unit receptacles** and **PONE receptacle**, cannot reach more than 100 meters.

The following table shows the maximum S-FTP cable length versus the voltage at the input of the PONE for Cat5E and Cat6 cable types:

| Input voltage to the PoNE (V DC) | max length of Cat6 S-FTP cable (m) | max length of Cat5E S-FTP cable (m) |
|---|---|---|
| 40.5 | 90.00 | 75.00 |
| 40.75 | 95.00 | 80.00 |
| 41 | 100.00 | 85.00 |
| 41.25 | 100.00 | 90.00 |
| 41.5 | 100.00 | 95.00 |
| 41.75 | 100.00 | 100.00 |
| 42-57.5 | 100.00 | 100.00 |

Note

The restriction is applied because of the following reasons:

- the **PONE-OD-DC** injector combines power and data passively and
- the voltage drop on the S-FTP cable will result in the voltage at the input of the DC power module of the radio unit to be less than the min allowable value for operation. Higher input voltage need to be applied to ensure proper powering of the radio.

*Continued on next page*

# **PONE-OD-DC,** Continued

**Precautions**

**Ensure that:** the Safety Precautions on page 17 are applied.

**Prerequisites**

Prepare and terminate the following cables:

ETH cable as described in Ethernet (S-FTP).

Grounding cable as described in Grounding.

Power supply cable as described in Power.

**Tools and materials**

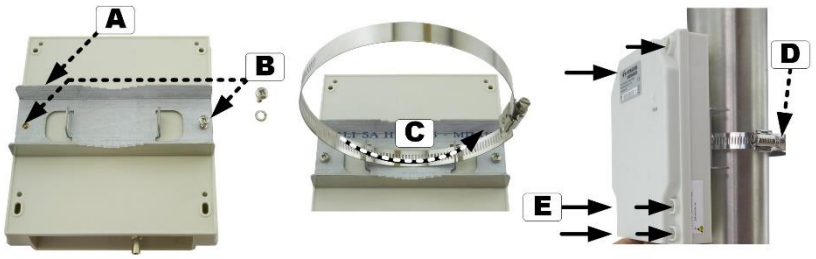
| | |
|---|---|
| Tools | • Adjustable torque wrench tool with TORX bit and screwdrivers (refer to Equipment installation tools) and drill machine (refer to Specific works).<br>• Cable cutter and blade (see Termination of cables) |
| Materials | • **INST-PONE-PL**.<br>• **PONE-OD-DC**. |

*Continued on next page*

# **PONE-OD-DC,** Continued

**Procedure**

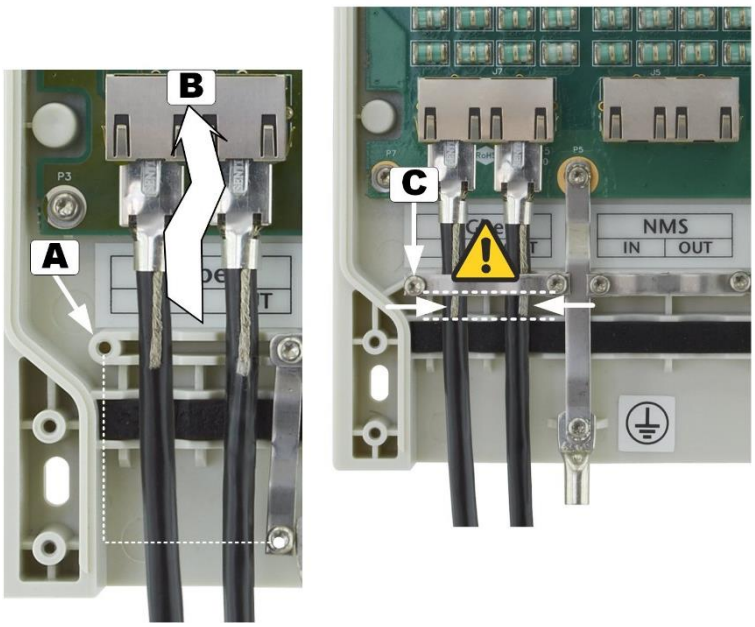
How to install the **PONE-OD-DC** onto the pole or wall, proceed as follows:

| Step | Action |
|---|---|
| 1 | For pole installation follow this step. For wall installation go to last step.<br><br>Perform the following actions:<br>• Attach the plate onto rear side of PONE, as shown below **(A)**.<br>• Install lock washer and screw. Then use the cross headed screwdriver to fully tighten **(B)**.<br>• Pass the hose clamp through the plate holes **(C)**.<br>• Install the PONE onto pole. Use the tool with M5 deep socket to tighten **(D)**.<br>**Do not over tighten.** Use the tool with TORX T10 bit for max tightening torque **2 Nm**.<br>• Use the tool with TORX T10 bit to remove the six screws **(E)**. Then detach the PONE cover for installing the cables. **Be careful not to drop the screws while removing.**<br><br>  |

*Continued on next page*

# PONE-OD-DC, Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 2 | Perform the following actions for installing the Ethernet (S-FTP) cables:<br><br>• Use the tool with TORX T10 bit to remove **(A)** the clamp screw. **Be careful not to drop the screw while removing.**<br>• Plug **(B)** the Ethernet cables to the Gbe receptacles (**OUT**: goes to radio unit and **IN**: goes to customer network). **Listen for a "click" when inserting.** This verifies that the jack has been inserted properly.<br>The shielded wires should protrude from clamp about 0.5 cm (as shown below).<br>• Use the tool with TORX T10 bit to install the clamp **(C)** for securing the cables in place.<br>**Do not over tighten.** Adjust the tool for max tightening torque **0.9 Nm**.<br><br>  |

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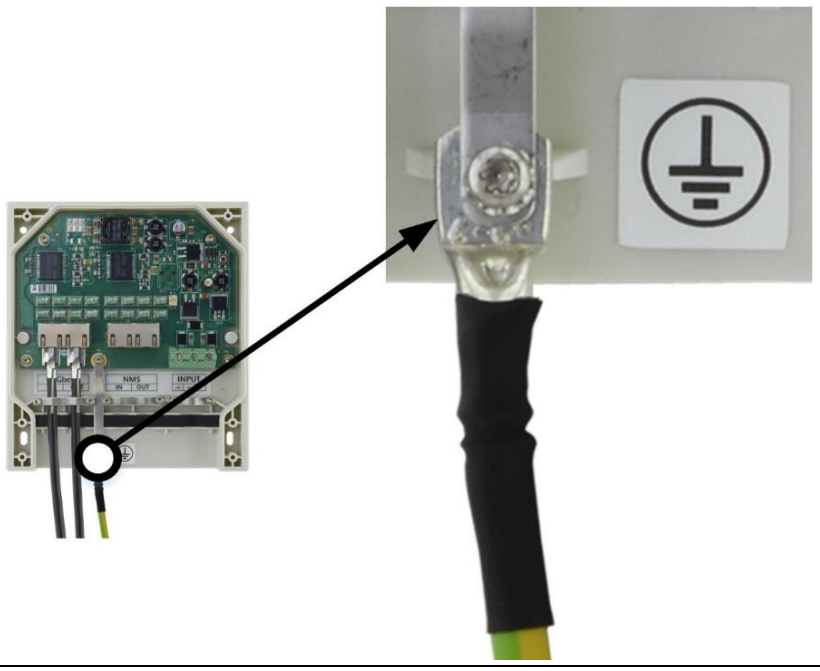
# **PONE-OD-DC,** Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 3 | Use the tool with TORX T10 bit to install the grounding cable, as shown below.<br>**Do not over tighten.** Adjust the tool for max tightening torque **0.9 Nm**.<br>  |

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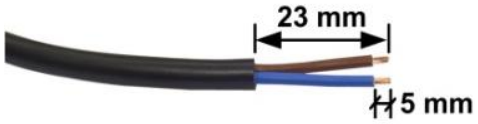
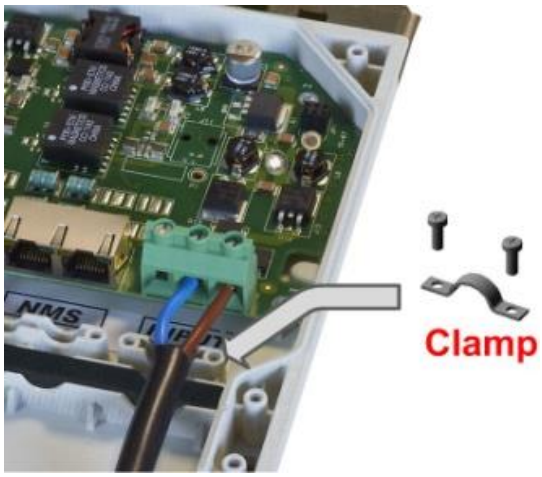
# PONE-OD-DC, Continued

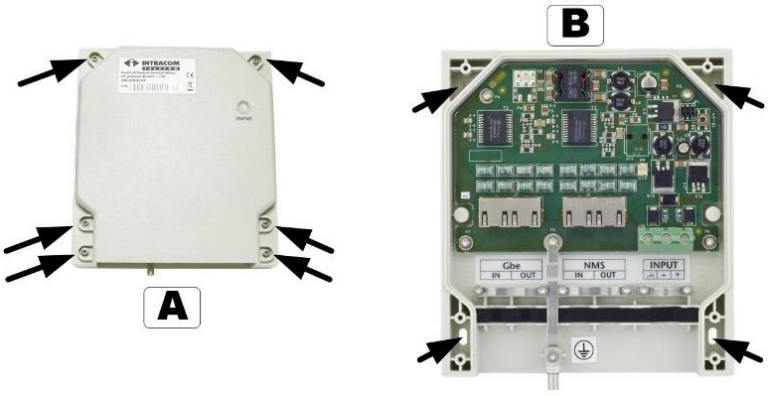
**Procedure**, continued

| Step | Action |
|---|---|
| 4 | Perform the following actions for installing the DC power supply cable onto the PONE INPUT receptacle:<br>**Switch-off the:**<br>• local DC power source &<br>• circuit breaker (between PONE and local DC power source).<br>• Connect the power cable to the local DC power source (**brown wire**: **+V**, **blue wire: -V**).<br>• At the other end of the cable, use a blade to strip the wires of the cable, as shown below. Twist strands well to facilitate their insertion into the INPUT receptacle of DC PONE device.<br>  <br>• Use the tool with TORX T10 bit to remove the clamp and insert the bare ends of the cable into the corresponding positions of the INPUT receptacle, as shown below:<br>**Blue wire** to **INPUT (-)**, **Brown wire** to **INPUT (+)**<br>  <br>• Use the flat-headed screwdriver to tighten the INPUT receptacle screws. **Do not over tighten**. The screws, securing the wire strands into the receptacle, are well isolated each other – no danger for accidental short circuit.<br>• Use the tool with TORX T10 bit to install the clamp in order to secure the DC power supply cable.<br>**Do not over tighten.** Adjust the tool for max tightening torque 0.9 Nm. |

*Continued on next page*

# **PONE-OD-DC,** Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 6 | For wall installation perform the following actions:<br><br>• Use the tool with TORX T10 bit to remove the six screws **(A).**<br>• Then:<br>– Position the device on the wall surface and using a pencil mark the drill points **(B)**. With the drill machine (fitted with 5 mm bit), drill four holes on the wall surface, at a depth of 45 mm.<br>– Install the four supplied wall plugs and using the cross headed screwdriver and tighten the four screws.<br><br>  |

End of procedure.

# POE-HP-OD67-DC

**Introduction**

Apply this procedure for installing the outdoor DC power injector **PONE-HP-OD67-DC**.

**Power injector details**

**Characteristics:**

- DC POE injector
- outdoor-IP67 class
- 114 watt
- Wall mount
- temperature hardened
  - operating temperatures -40° C to +55° C
- DC voltage (V DC)
  - Input nominal: 48
  - Min: 40.5
  - Max: 57
- DC current (A):
  - Input: 3
  - Output: 2

**Packing List:**

- Ethernet cable glands are pre-installed on the unit (current sharing on all four pairs of Ethernet cable).
- Grounding screw is pre-installed on the unit.
- DC Power connector is included in the package.
- Screws, washers and wall plugs are included in the package (for wall installation).

Note
- For pole installation, a mounting bracket (**INSTPONE-PL2**) should be ordered.
- For grounding, a grounding kit (**GND-KIT16-OD**) should be ordered.
- For powering, a DC power cable (**DC-PWR-CAB-1** or **DC-PWR-CAB-3**) should be ordered.

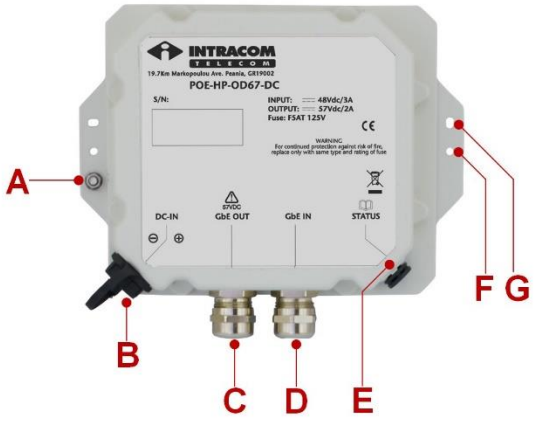
Note
- Applicable Ethernet cable: S-FTP (Cat5E or Cat6) with shielded RJ-45 plugs.

Note
- Lightning surge protection is embedded in the unit.

*Continued on next page*

# POE-HP-OD67-DC, Continued

**Power injector overview**



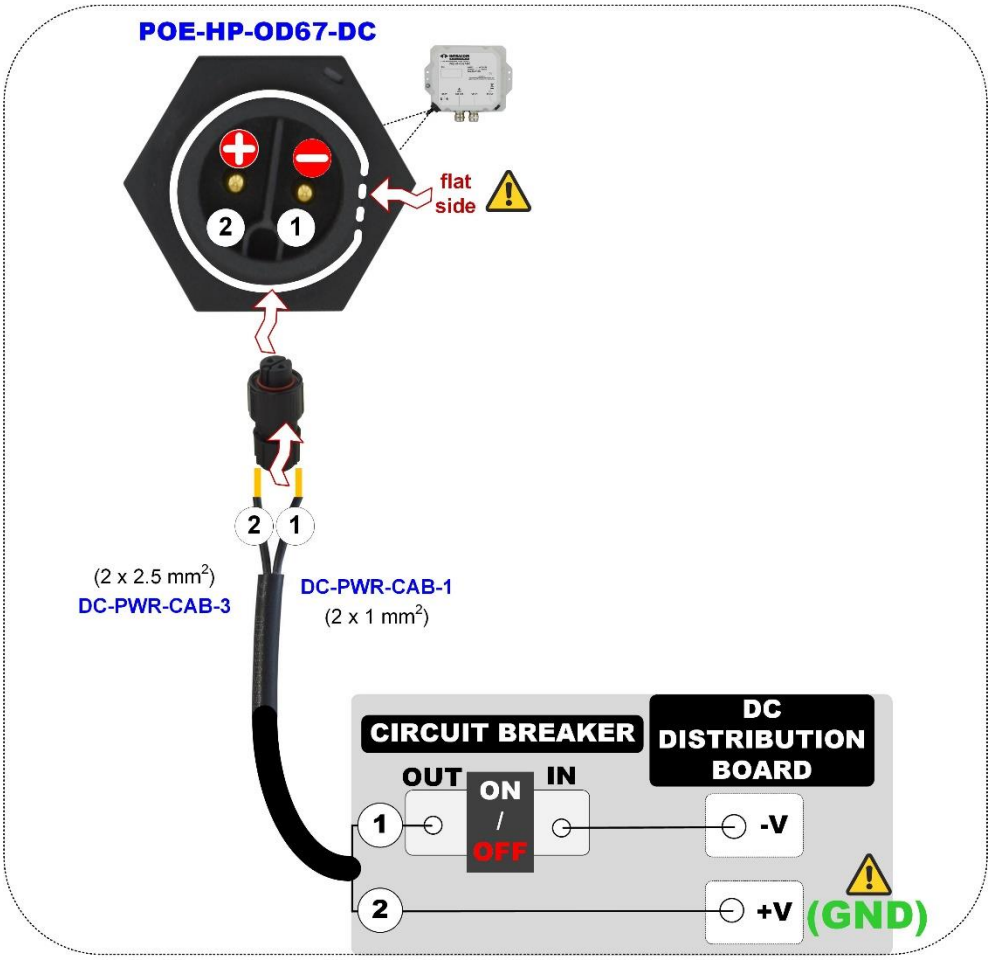

| # | Marking | Details | Use |
|---|---|---|---|
| A | **GND** | Grounding point. | To connect 16 mm$^2$ grounding cable. |
| B | **AC-IN** | 2-pins DC receptacle. | To connect DC power supply cable with connector. |
| C | **Gbe OUT** | Gigabit Ethernet 10/100/1000 Base T, Electrical (RJ-45). | To connect the Gigabit Ethernet (S-FTP) cable for carrying **towards to radio**:<br>• Traffic<br>• Inband management<br>• superimposed DC power |
| D | **GbE IN** | | To connect the Gigabit Ethernet (S-FTP) cable for carrying **towards to customer network**:<br>• Traffic<br>• Inband management |
| E | **STATUS** | Multi-functioning LED. | To provide radio unit status during operation. |
| F | **-** | Pole installation. | To mount **INSTPONE-PL2**. |
| G | **-** | Wall installation. | To mount wall installation screws. |

*Continued on next page*

# POE-HP-OD67-DC, Continued

**Connection diagram between POE-HP-OD67-DC and local DC power source**

The following diagram shows the connection between **POE-HP-OD67-DC** and local DC power source, using **DC-PWR-CAB-1** or **DC-PWR-CAB-3** cables:

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# POE-HP-OD67-DC, Continued

**Precautions**

**Ensure that:** the Safety Precautions on page 17 are applied.

**Prerequisites**

Prepare and terminate the following cables:

ETH cable as described in Ethernet (S-FTP).

Grounding cable as described in Grounding.

Power supply cable as described in Power.

**Tools and materials**

| | |
|---|---|
| Tools | • Adjustable torque wrench tool with bits, Adjustable torque U-wrench tool (see to Equipment installation tools) and drill machine (refer to Specific works).<br>• **TOOL-M20**. |
| Materials | • **INSTPONE-PL2**.<br>• **PONE-OD67-AC**.<br>• **DC-PWR-CAB-1** or **DC-PWR-CAB-3** |

**Procedure**

For pole / wall and cabling installation of **POE-HP-OD67-DC** refer to PONE-OD67-AC Procedure on page 184.

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# Appendix B – Terminating Cables

**Scope**

This chapter describes the termination of the following cables of **WiBAS™ OSD-TS** and **WiBAS™-Connect,** as follows:

Ethernet (S-FTP)
Grounding
Power

# Ethernet (S-FTP)

**Introduction**

Apply this procedure for terminating the **ETH-CAB-SFTP** cable to **ST-RJ45** connector.

**Termination overview**

The equipment to which you connect the cable requires a different way of cable termination.

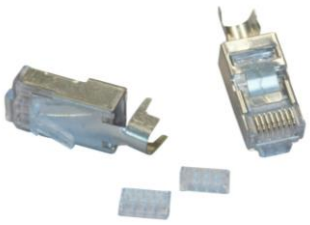
Mainly there are two types of cable termination, as shown below:

| Termination Type | Details / Photo | Equipment to Connect |
|---|---|---|
| A | **No shield wires exposed**  | All, except **PONE-OD-DC** |
| B | **Shield wires (twisted) exposed**  | **PONE-OD-DC** |

**ST-RJ45 connector overview**

The connector **ST-RJ45** is composed of two parts, as described below:

- the main body and
- the wire guide (with numbering)



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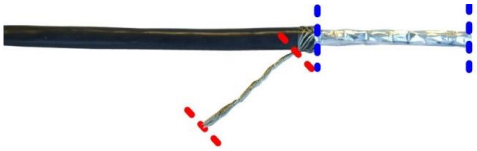
# Ethernet (S-FTP), Continued

**Tools and materials**

| | |
|---|---|
| Tools | Blade, cable cutter, plier (long nose) and **CRIMP-TOOL-S** (refer to Termination of cables). |
| Materials | **ETH-CAB-SFTP** and **ST-RJ45**. |

**Procedure**

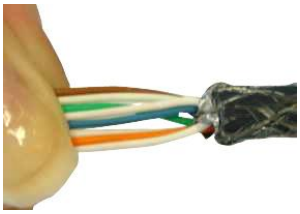
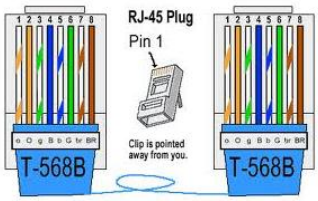
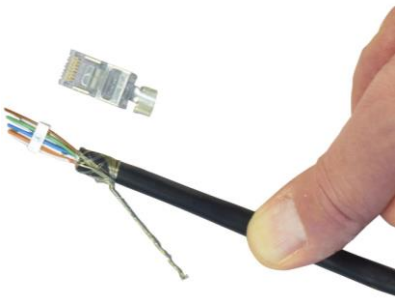
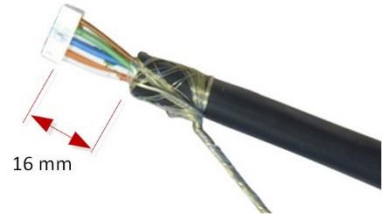
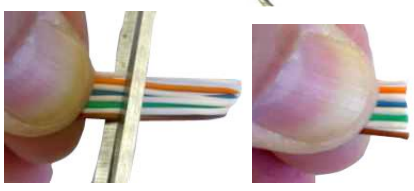
How to terminate the **Ethernet (S-FTP)** cable to **ST-RJ45** connector, proceed as follows:

| Step | Action |
|---|---|
| 1 | Perform the following actions:<br><br>• Strip the outer jacket<br>– 40 mm **for termination type A**<br>– 80 mm **for termination type B**<br>• Fold shield back (over the jacket).<br>• Do the following:<br>– Twist shield wires together and allow 10 mm of shield to surround jacket's end (**for termination type A**)<br>– Twist shield wires together and allow 20 mm of shield to surround jacket's end (**for termination type B**)<br>• Completely remove the exposed foil.<br><br>**Termination type A:**<br>  <br>**Termination type B:**<br>  |

*Continued on next page*

# **Ethernet (S-FTP),** Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 2 | Untwist wire pairs and arrange according to the T-568 standard straight-through cable, as shown below:<br>  <br>Note<br>  |
| 3 | Carefully insert the eight wires into the cavity of the wire guide so that its numbering is visible from the top.<br>  |
| 4 | Measure 16 mm from the jacket's end and cut all wires protruding from the guide.<br>  <br>  |

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# **Ethernet (S-FTP),** Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 5 | Perform the following:<br><br>• Fold back the crimping terminal of the connector.<br>• Fully insert wire guide and cable into the connector's body until the shield (overlapping the jacket's end) reaches the crimping position.<br><br>**For termination type A:**<br>  <br>**For termination type B:**<br>  |
| 6 | Terminate the wires onto the RJ-45 jack using the tool **CRIMP-TOOL-S.**<br>  |

*Continued on next page*

# Ethernet (S-FTP), Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 7 | With the pliers, bring the terminal of the connector back, over the exposed shield, and press gently around the terminal to form. This will achieve good contact with the shield.<br><br>**For termination type A:**<br><br>  <br><br>**For termination type B:**<br><br>  |
| 8 | Use the Ethernet cable tester to verify the proper cable termination. |

End of procedure.

# Grounding

**Introduction**

Apply this procedure for terminating the following grounding cables:

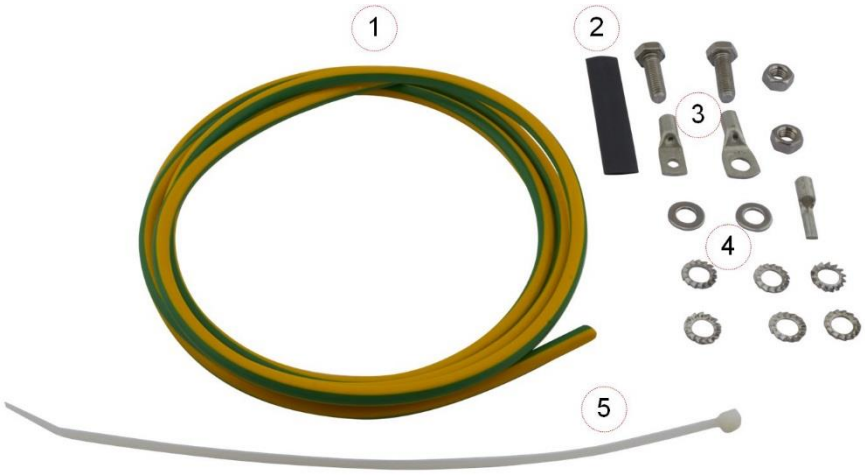
- **Yellow / green 6 mm² cable** (**GND-CAB6-ID**) for:
  - **PONE-OD-DC**
  - **POE-ID-AC72**

- **Yellow / green 16 mm² cable** (**GND-KIT16-OD)** for:
  - **WiBAS™ Terminal Stations**
  - **POE-HP-OD67-DC**
  - **PONE-OD67-AC**

**Termination overview**

The picture below shows a termination overview of 16 mm2 grounding cable to M5 and M8 grounding lugs (**GND-KIT16-OD**):

**GND-KIT16-OD kit overview**




| Item | Packing List |
|---|---|
| 1 | 16 mm² cable, stranded, green / yellow, 450 V (2 m). |
| 2 | Heat shrinkable tube, black, d= 9.5 mm / 4.8 mm. |
| 3 | 1 x M8 and 1 x M5 terminal rings (lugs). |
| 4 | M8 screws (x 2), nuts (x 2), washers (x 2), lock spring washers (x 6) |
| 5 | 1 x tie wrap. |

*Continued on next page*

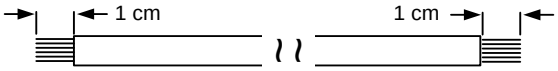
# **Grounding**, Continued

**Tools and materials**

| | |
|---|---|
| Tools | • Blade, cable cutter, crimping tool for 6 $mm^2$ and 16 $mm^2$ grounding cable and hot air gun (refer to Termination of cables). |
| Materials | • **GND-KIT16-OD** (16 $mm^2$ cable)<br>• **GND-CAB6-ID** (6 $mm^2$ cable) |

**Procedure**

How to terminate the **16 $mm^2$** grounding cable to **GND-KIT16-OD** lugs, proceed as follows:

| Step | Action |
|---|---|
| 1 | Cut the grounding cable according to the distance between equipment and grounding bar. |
| 2 | Use the blade to strip 1 cm from each end of the cable, as below:<br>  |
| 3 | Perform the following actions:<br>• Slide the **M5** grounding lug over the wires at one end of the cable and crimp it with the special crimping tool.<br>• Cut the heat shrinkable tube in the middle in two equal pieces in order to use one piece per cable side.<br>• Slide the one piece of the heat shrinkable tube over the cable. **Heat it over rear grounding ring body and down on to cable jacket using the hot air blower.** |
| 4 | Repeat step 3 for the other end of the cable in order to terminate the **M8** grounding lug. |

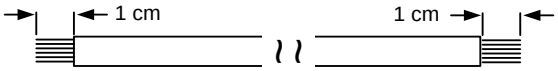
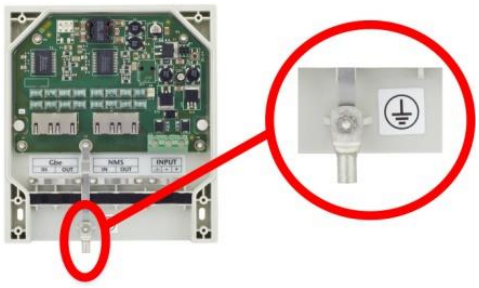
End of procedure.

*Continued on next page*

# **Grounding**, Continued

**Procedure**

How to terminate the **6 mm²** grounding cable to the attached lug of **PONE-OD-DC**, proceed as follows:

| Step | Action |
|---|---|
| 1 | Cut the grounding cable according to the distance between equipment and grounding bar. |
| 2 | Use the blade to strip 1 cm from each end of the cable, as below:<br>  |
| 3 | Perform the following actions:<br>• Use the tool with TORX T10 bit to unscrew the terminal lug from **PONE-OD-DC**, as shown below:<br>  <br>• Slide the **M4** grounding lug over the wires at one end of the cable and crimp it with the special crimping tool. |
| 4 | Use the tool with TORX T10 bit to screw the terminal lug onto the **PONE-OD-DC.** |
| 5 | Terminate the other end of the grounding cable accordingly. |

End of procedure.

# Power

**Introduction**

Apply this procedure for terminating the following power supply cables:

- **AC cable** for **PONE-OD67-AC**:
  – **AC-PWR-CAB** (3 x 0.75 $mm^2$)

- **DC cables** for **POE-HP-OD67-DC**:
  – **DC-PWR-CAB-1** (2 x 1 $mm^2$)
  – **DC-PWR-CAB-3** (2 x 2.5 $mm^2$)

Note For DC cable termination ((**DC-PWR-CAB-2** (2 x 2.5 $mm^2$)) of PONE-OD-DC refer to Procedure on page 193.

**Termination overview**

The pictures below shows a termination overview of power supply cable to the respective connector:


**Tools and materials**

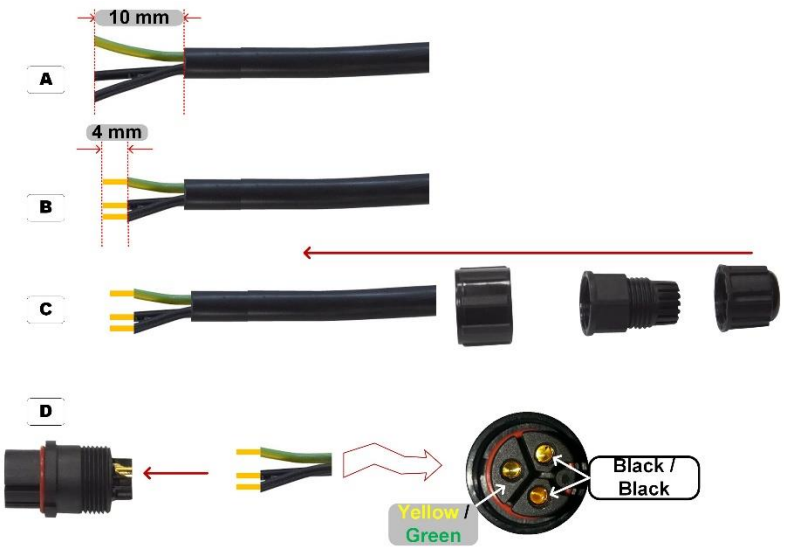
| | |
|---|---|
| Tools | • Blade, cable cutter, soldering iron, solder (refer to Termination of cables). |
| Materials | • **AC-PWR-CAB**<br>• **DC-PWR-CAB-1** or **DC-PWR-CAB-3**<br>• **PONE-OD67-AC**<br>• **POE-HP-OD67-DC** |

*Continued on next page*

# **Power,** Continued

**Procedure**

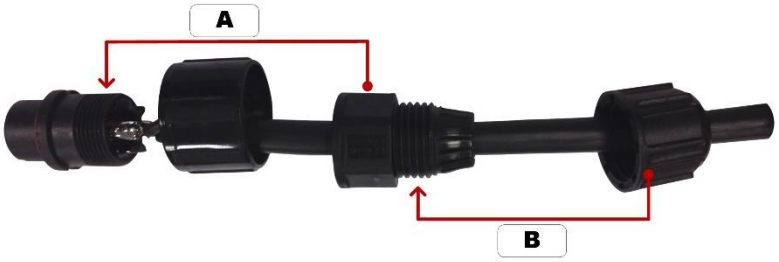
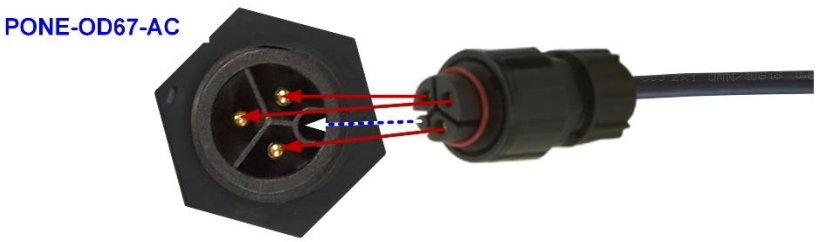
How to terminate the **3 x 0.75 mm²** AC power supply cable to **PONE-OD67-AC** connector, proceed as follows:

| Step | Action |
|---|---|
| 1 | Perform the following:<br>• Strip approx. 10 mm from the cable's outer sheath **(A)**.<br>• Strip approx. 4 mm from each wire insulation **(B)**.<br>• Pass the cable through the parts of gland **(C)**.<br>• Solder the 3 pins to the connector **(D)** taking in consideration the following:<br>– The **Yellow/Green** wire must be soldered to the pin shown below.<br>– The remaining two black wires are for live **(L)** and neutral **(N).** Both wires must be soldered to the other two pins. **There is no polarity concern regarding these two specific wires.**<br>  |

*Continued on next page*

# **Power,** Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 2 | Assemble the connector by tightening all parts together, according the order **(A)** and **(B)**, as shown below:<br>  |
| 3 | Install the connector, as shown below:<br>  |
| 4 | Screw the connector and then fully tighten, as shown below:<br>  |

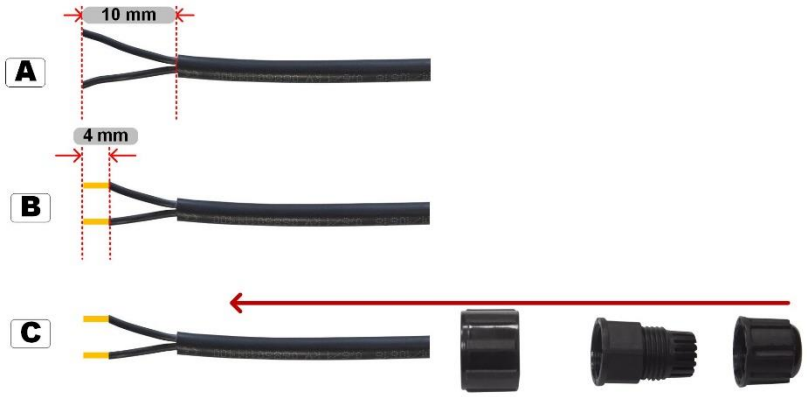
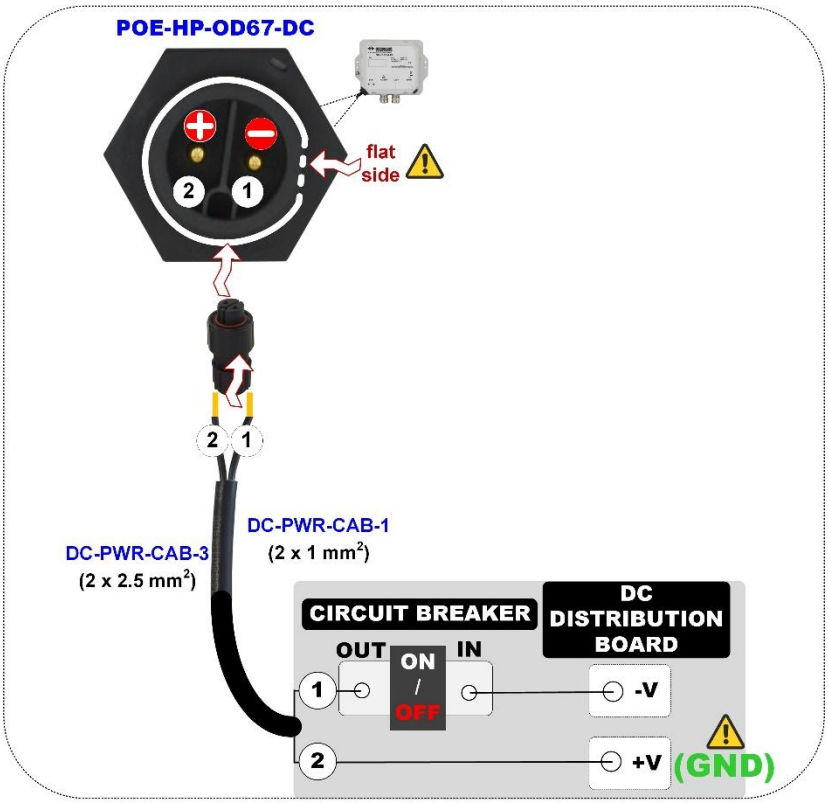
End of procedure.

*Continued on next page*

# **Power,** Continued

**Procedure**

How to terminate the **2 x 1 mm²** or **2 x 2.5 mm²** DC power supply cable to **POE-HP-OD67-DC** connector, proceed as follows:

| Step | Action |
|---|---|
| 1 | Perform the following:<br>• Strip approx. 10 mm from the cable's outer sheath **(A)**.<br>• Strip approx. 4 mm from each wire insulation **(B)**.<br>• Pass the cable through the parts of gland **(C)**.<br>  |
| 2 | Solder the 2 pins to the connector taking in consideration the following polarity concern:<br>  |

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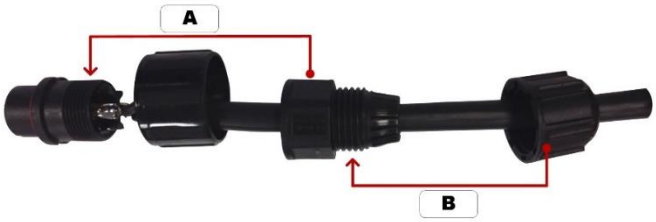
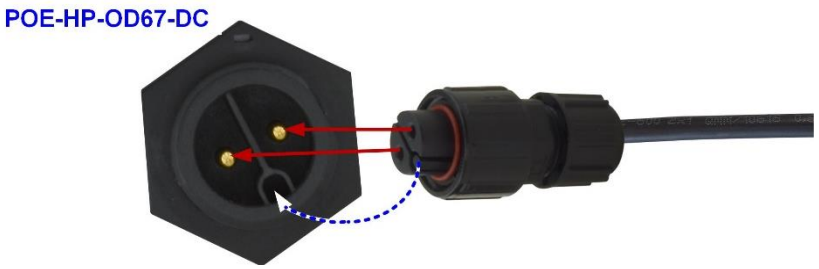
# **Power,** Continued

**Procedure**, continued

| Step | Action |
|---|---|
| 3 | Assemble the connector by tightening all parts together, according the order **(A)** and **(B)**, as shown below:   |
| 4 | Install the connector, as shown below:   |
| 5 | Screw the connector and then fully tighten, as shown below:  |

End of procedure.