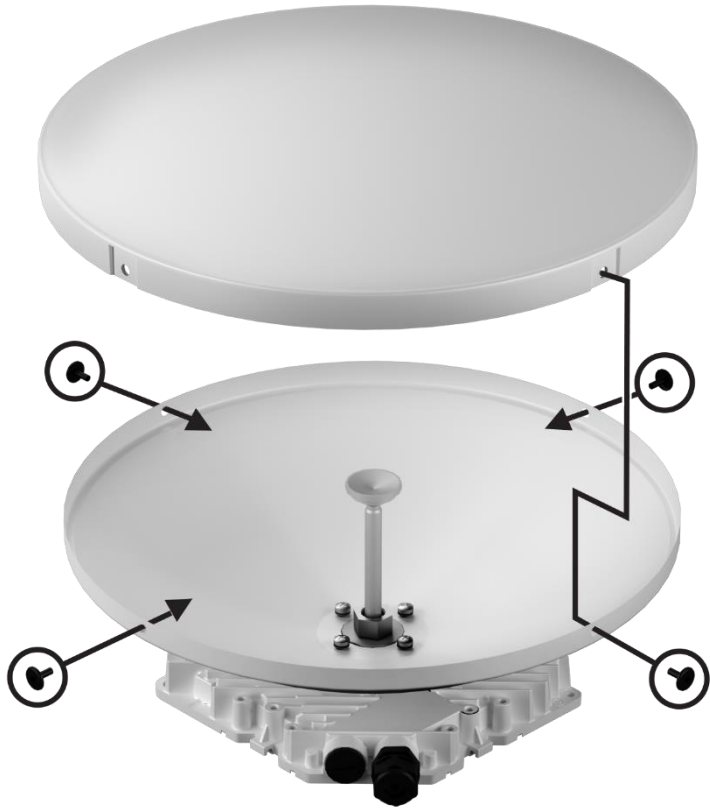


WiBAS-Connect and Low Profile 0.3 m / 0.5 m, Continued

Procedure,
continued

Step	Action
8	Install the antenna plastic cover, as shown below. 
9	Perform the following actions: • For installation of CONN-OB-U-DSDS to mounting kit follow the Procedure for WiBAS-Connect Combo on page 82 . • 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:

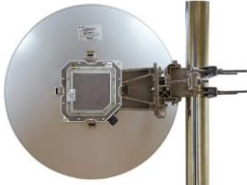
- WiBAS™-Connect terminal radio unit ([CONN-OB-U-DSDS](#)).
- Low profile parabolic antenna, **0.6 m** ([ANT-IS-2628-2F-C](#)).
- WiBAS™-Connect terminal radio unit ([CONN-OB-U-DSDS-DP](#)).
- Low profile parabolic antenna, **0.6 m** ([ANT-DP-2628-2F-C](#)).
- WiBAS™-Connect terminal radio unit ([CONN-OB-U-DSDS](#)).
- 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. • Mounting kit. • Greasing paste. • Installation leaflet.
ANT-IS-2628-2F-C ANT-DP-2628-2F-C	Details
	• 0.6 m antenna. • Clamps. • Mounting kit. • Greasing paste. • Installation leaflet.

Adaptation plate packing materials

WCONN-PAR-ANT-KIT	Details
	Adaptation plate.
Set 	• Set: – M5 x 40 mm screws (x4). – M5 x lock washers (x4). – M5 x washers (x4). – 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

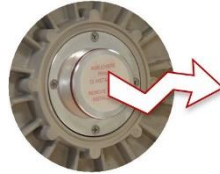
- Adjustable torque U-wrench.
- Adjustable torque wrench with hexagon female bit.

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

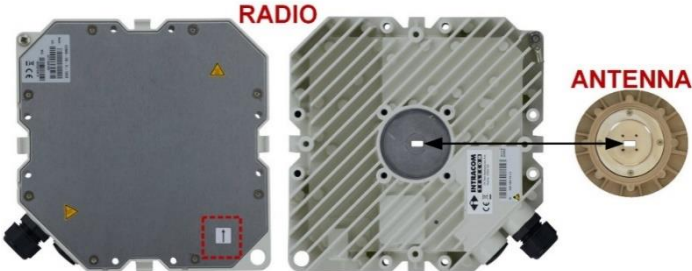
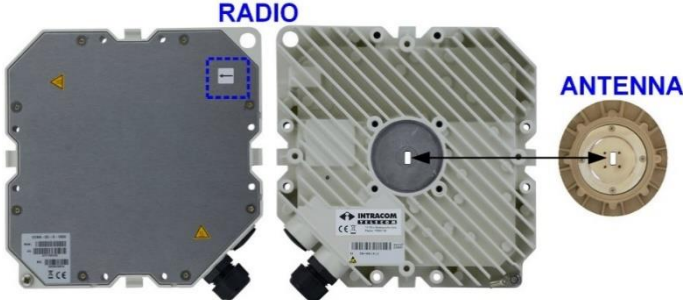
How to install WiBAS™-Connect (**CONN-OB-U-DSDS**) to 0.6 m antenna (**ANT-IS-2628-2F-C**) with clamps or WiBAS™-Connect (**CONN-OB-U-DSDS-DP**) to 0.6 m antenna (**ANT-DP-2628-2F-C**) with clamps, proceed as follows:

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

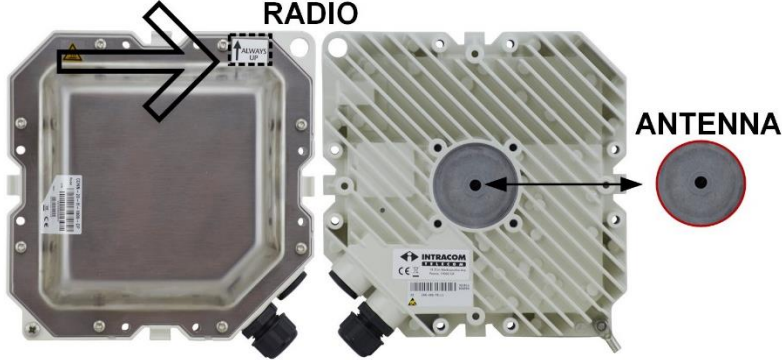
Step	Action
3a	For WiBAS™-Connect (CONN-OB-U-DSDS) to 0.6 m antenna (ANT-IS-2628-2F-C) with clamps, proceed as follows: Radio unit and antenna should be adjusted for common polarization, as shown below. If the LINK polarization is VERTICAL then the feeders should be remained, as shown below (radio unit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

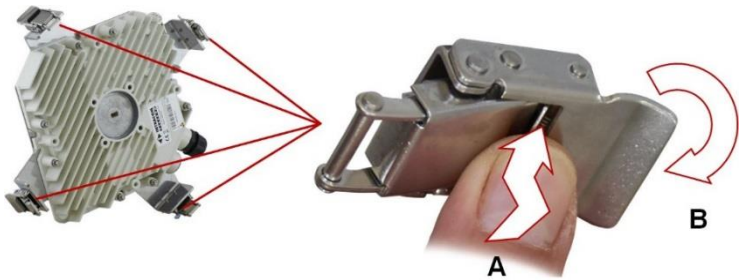
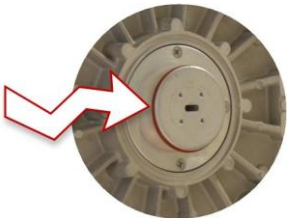
Procedure
using 0.6 m
antenna,
continued

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: Follow the radio unit label, as shown below.  DO NOT TURN the RADIO, as shown below: 

Continued on next page

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

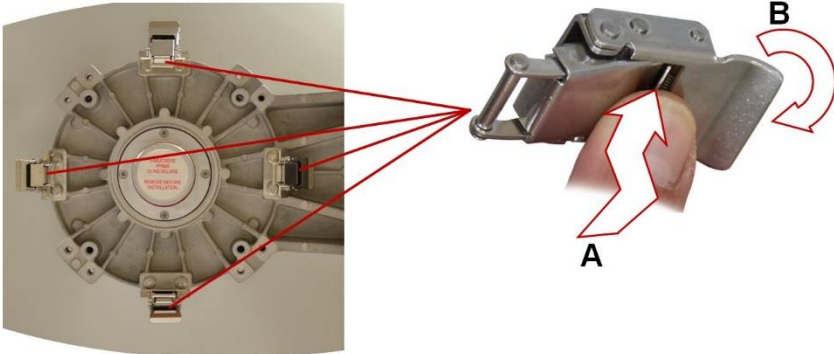
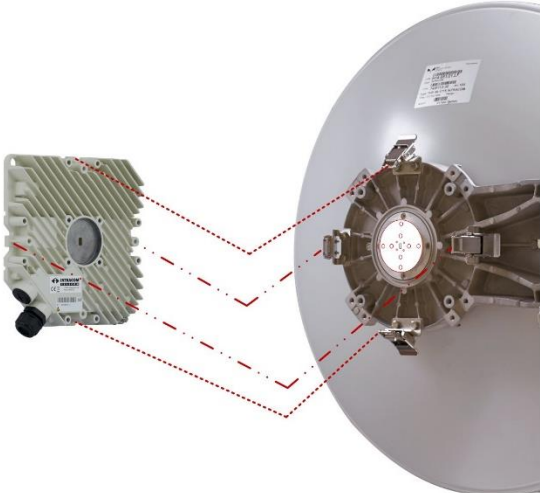
Procedure
using 0.6 m
antenna,
continued

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

Continued on next page

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

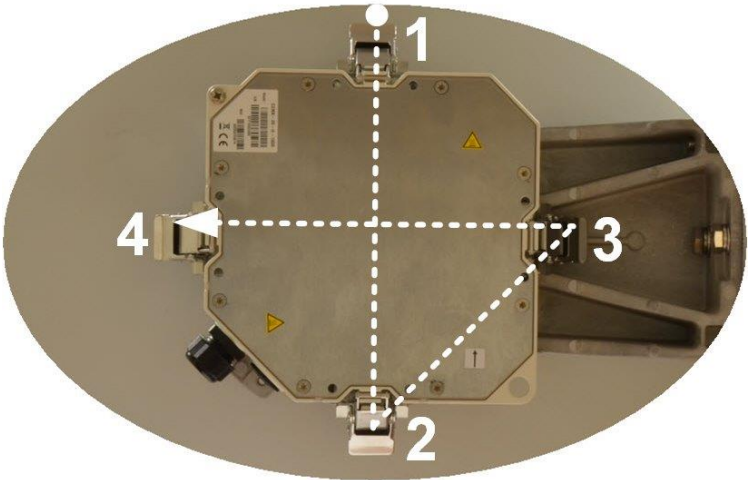
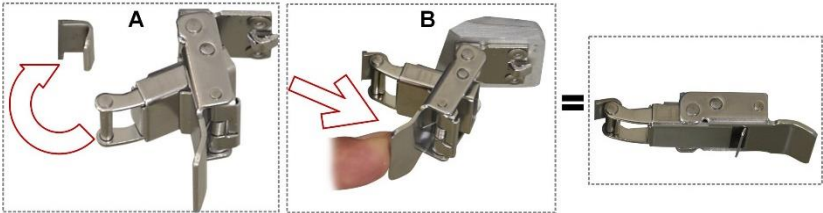
Procedure
using 0.6 m
antenna,
continued

Step	Action
6	Unlock the four antenna clamps, as shown below. 
7	Mount the radio unit onto the antenna, 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
8a	For WiBAS™-Connect (CONN-OB-U-DSDS) to 0.6 m antenna (ANT-IS-2628-2F-C) with clamps, proceed as follows: Lock and secure all four clamps according to the pattern below.  Details of Clamps closing 

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: Lock and secure all four clamps according to the pattern below. Details of Clamps closing
9	For cables installation refer to Installing Radio Units Cables .

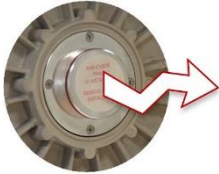
End of procedure.

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

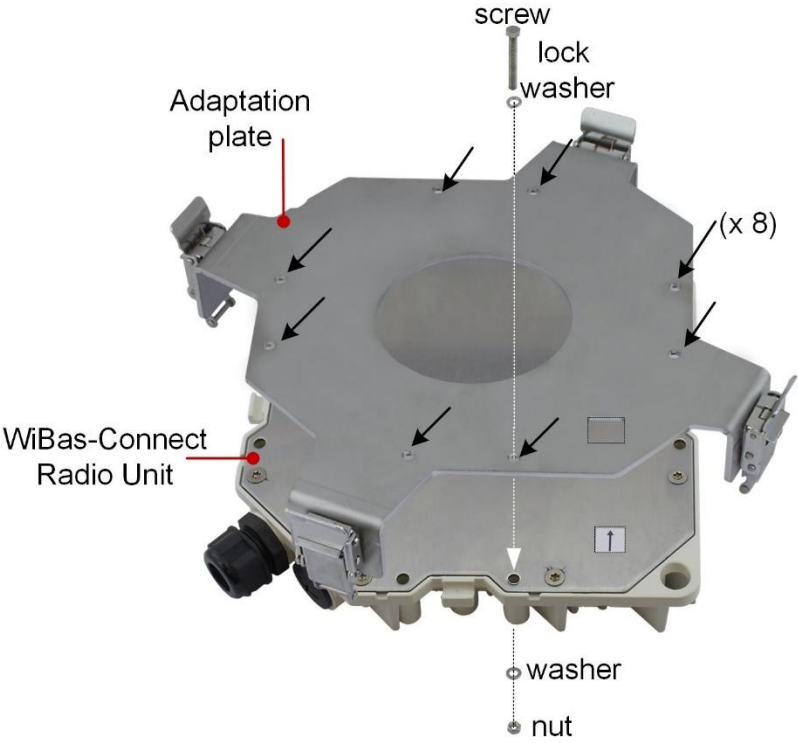
How to install WiBAS™-Connect ([CONN-OB-U-DSDS](#)) to 0.3 m antenna ([ANT-IS-26-1F](#)) with adaptation plate ([WCONN-PAR-ANT-KIT](#)), proceed as follows:

Step	Action
1	Remove antenna protection label from the feeder, as shown below. 
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):        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

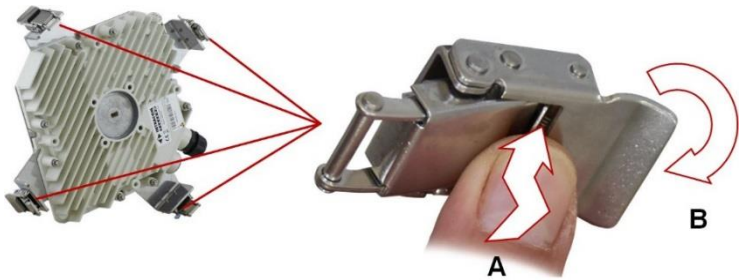
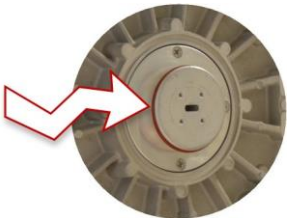
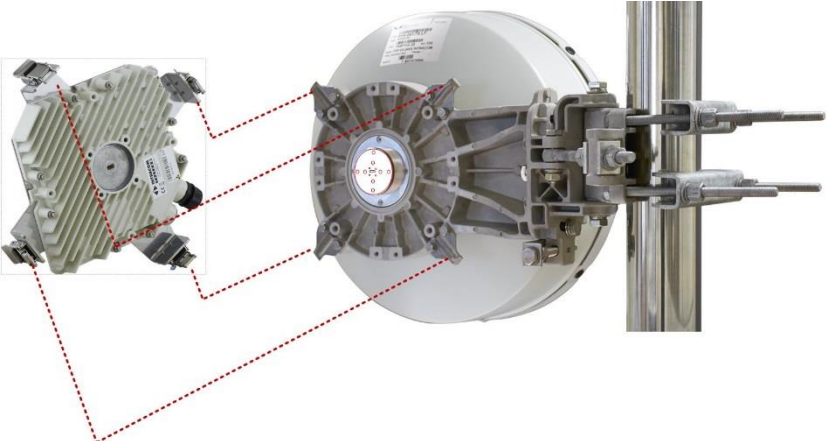
Procedure
using 0.3 m
antenna and
adaptation
plate, continued

Step	Action
3	Use the respective set of adaptation plate packing materials to install the elements, as shown below.  Use the adjustable torque wrench with hexagon female bit to tighten the screws.  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

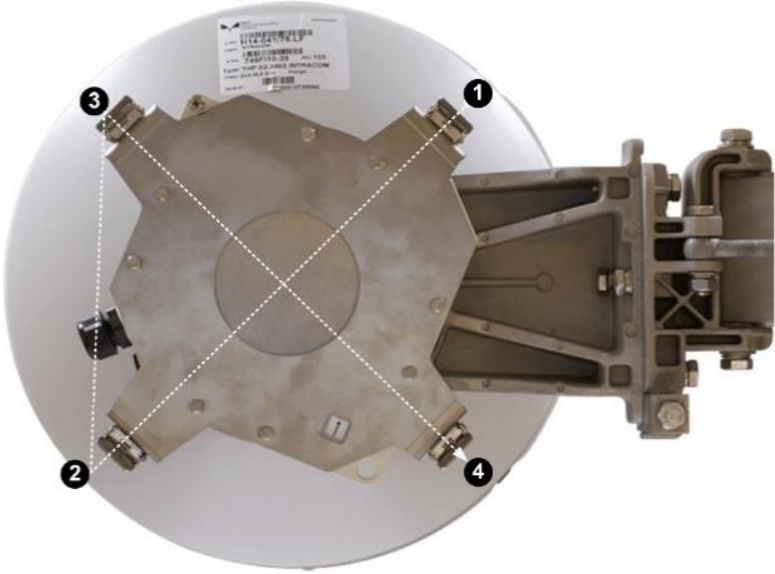
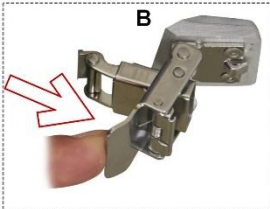
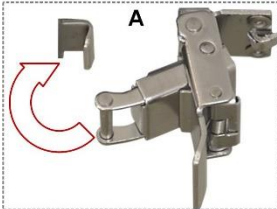
Procedure
using 0.3 m
antenna and
adaptation
plate, continued

Step	Action
4	Unlock the four antenna clamps, as shown below. 
5	Lubricate the O-ring with silicone grease, as shown below. 
6	Mount the radio unit onto the antenna, 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 0.3 m
antenna and
adaptation
plate, continued

Step	Action
7	Lock and secure all four clamps according to the pattern below.  Details of Clamps closing 
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**).

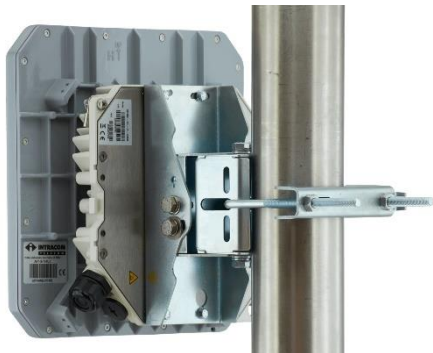
 Apply to the respective procedure, as described below:

- [Procedure for HORIZONTAL antenna orientation](#)
- [Procedure for VERTICAL antenna orientation](#)

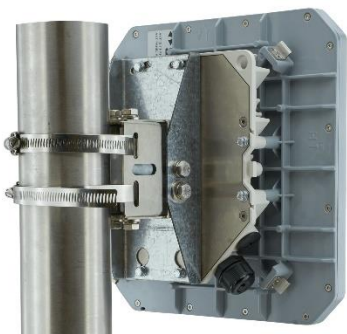
Installation overview

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™-Connect terminal radio unit.

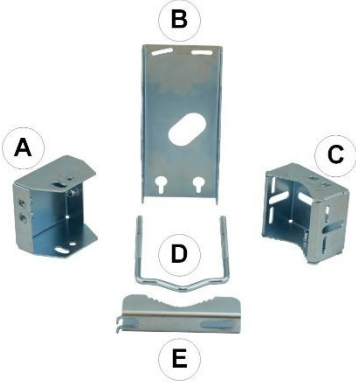
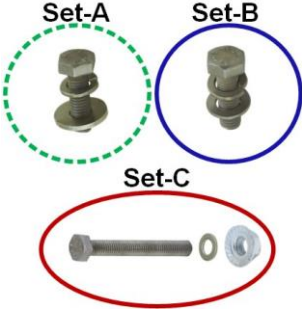
Antenna packing materials

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

Continued on next page

WiBAS-Connect and Panel, Continued

Mounting kit
packing
materials

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

Continued on next page

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.

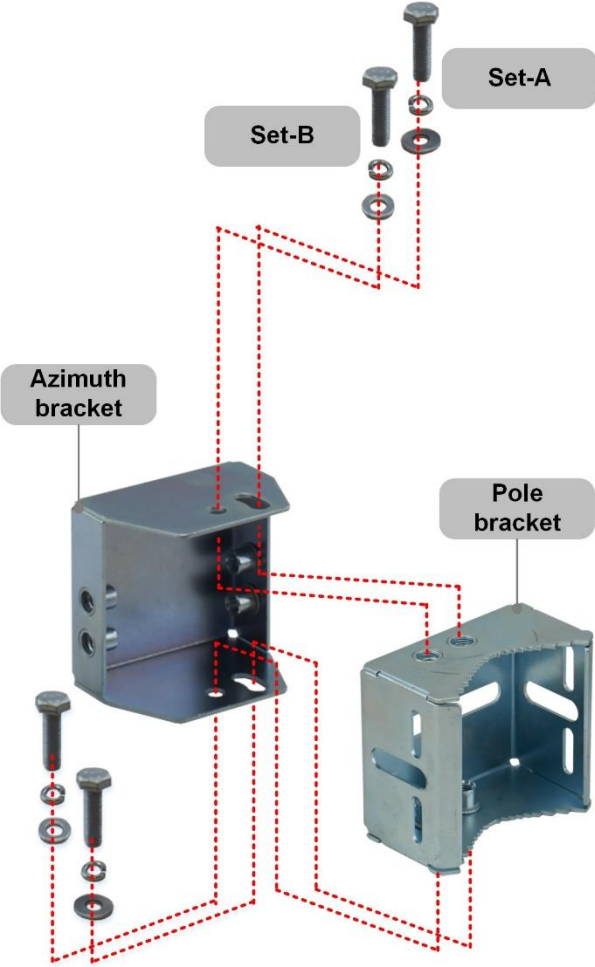
Continued on next page

⁽¹⁾ Low profile and Integrated.

WiBAS-Connect and Panel, Continued

Procedure for
HORIZONTAL
antenna
orientation

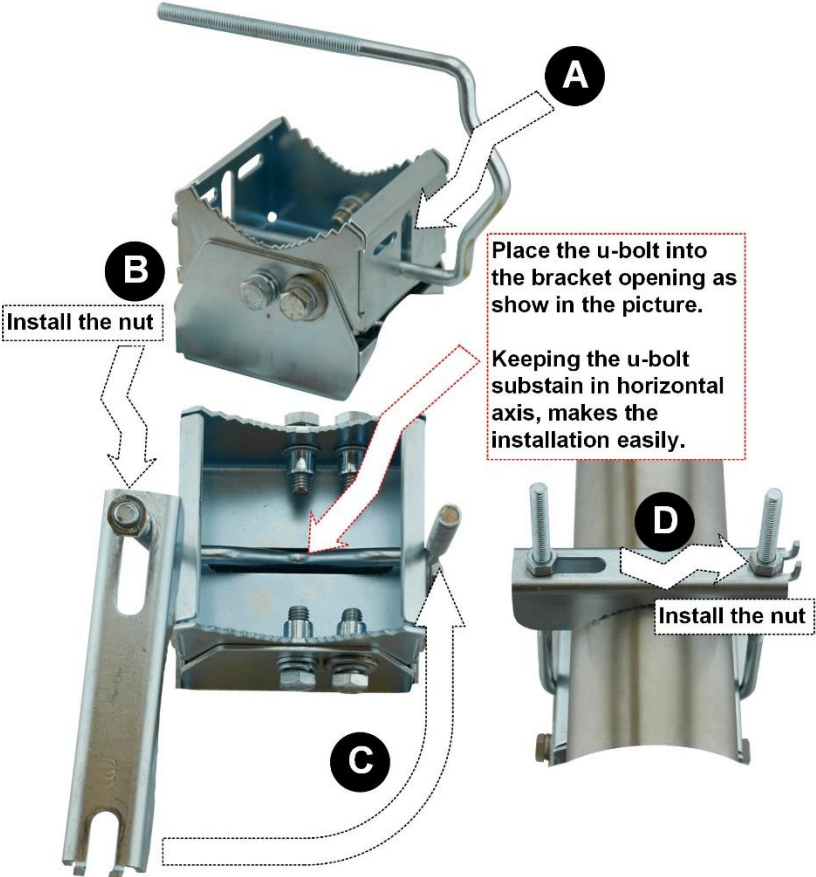
How to install WiBAS™-Connect to panel antenna in **HORIZONTAL** polarization, proceed as follows:

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:  Do not over tighten the screws. Adjust the tool for applying max tightening torque 15 Nm.

Continued on next page

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. For installing the pole bracket onto the pole using hose clamps go to the next step.  A Place the u-bolt into the bracket opening as show in the picture. B Install the nut Keeping the u-bolt substain in horizontal axis, makes the installation easily. C D Install the nut  Do not over tighten the nuts. Overtightening will cause deformation of the support clamp.

Continued on next page

WiBAS-Connect and Panel, Continued

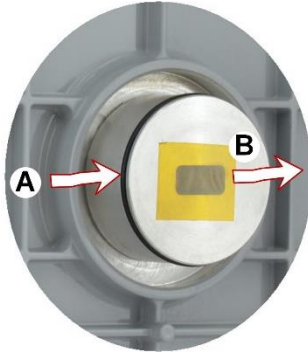
Procedure for
HORIZONTAL
antenna
orientation,
continued

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):   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

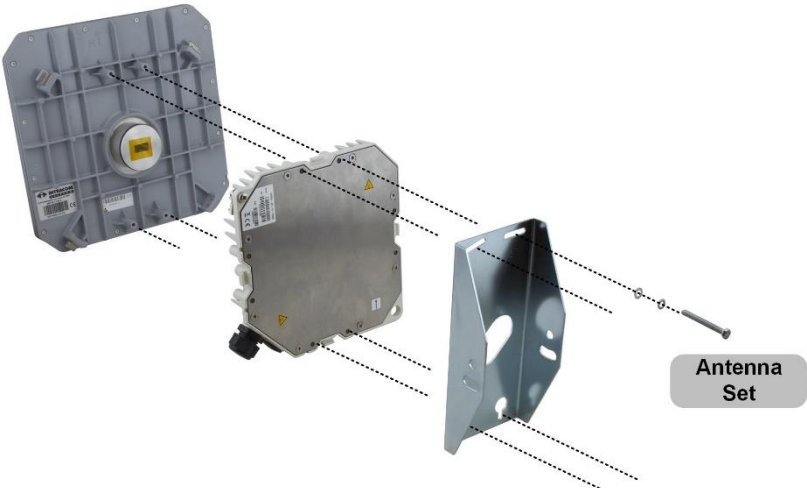
Procedure for
HORIZONTAL
antenna
orientation,
continued

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

Continued on next page

WiBAS-Connect and Panel, Continued

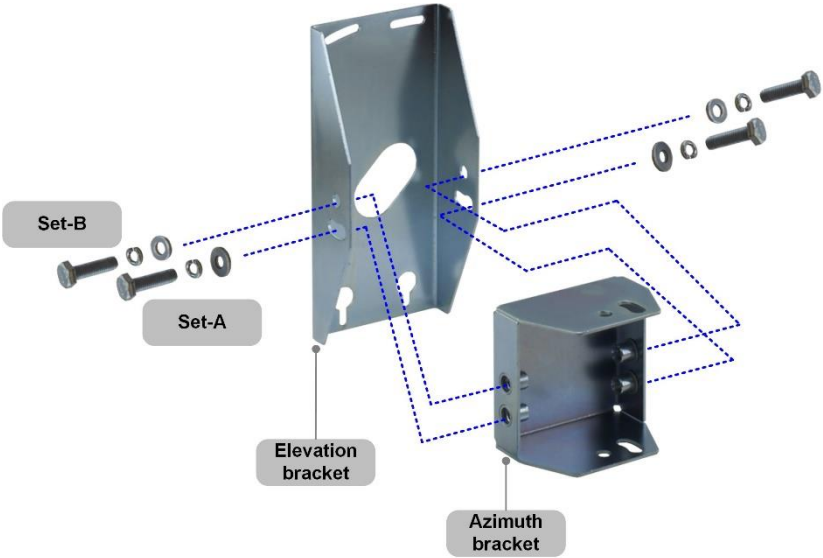
Procedure for
HORIZONTAL
antenna
orientation,
continued

Step	Action
5	Perform the following actions: • Remove antenna wave giude protection sticker. • Use the Antenna Set of antenna packing materials to install the elements, as shown below.   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:  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 .

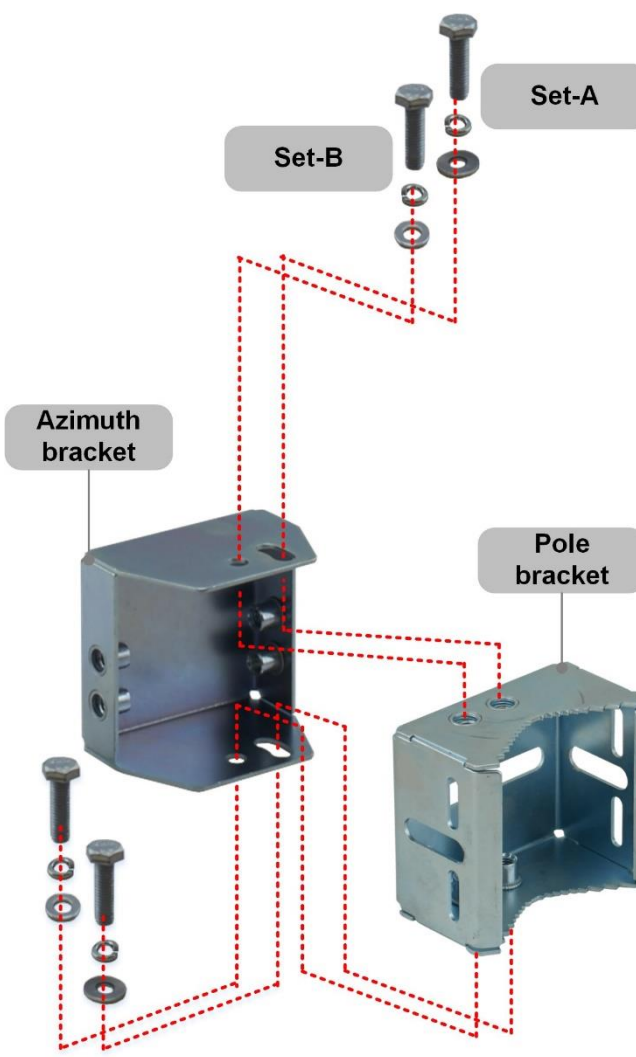
End of procedure.

Continued on next page

WiBAS-Connect and Panel, Continued

Procedure for
VERTICAL
antenna
orientation

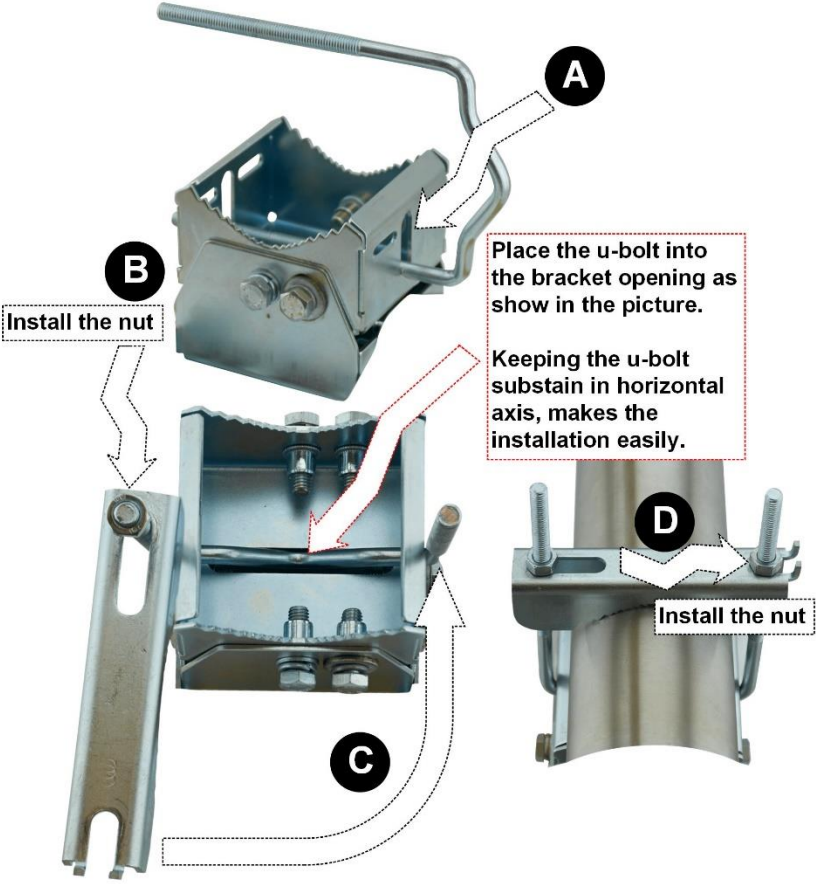
How to install WiBAS™-Connect to panel antenna in **VERTICAL** polarization, proceed as follows:

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:  ⚠ Do not over tighten the screws. Adjust the tool for applying max tightening torque 15 Nm.

Continued on next page

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. For installing the pole bracket onto the pole using hose clamps go to the next step.  A Place the u-bolt into the bracket opening as show in the picture. B Install the nut Keeping the u-bolt substain in horizontal axis, makes the installation easily. C D Install the nut  Do not over tighten the nuts. Overtightening will cause deformation of the support clamp.

Continued on next page

WiBAS-Connect and Panel, Continued

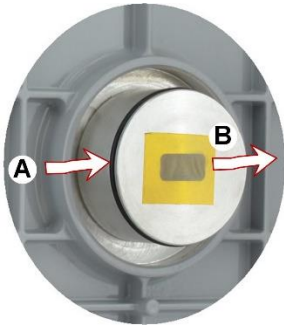
Procedure for VERTICAL antenna orientation, continued

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):  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

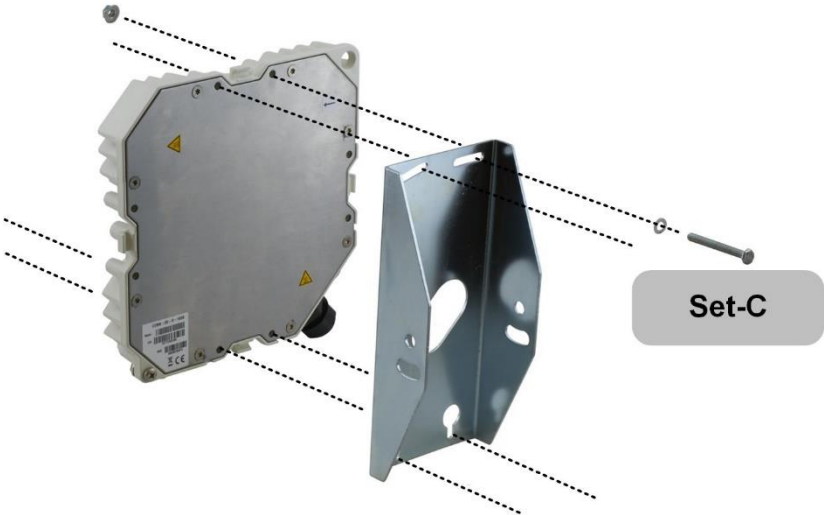
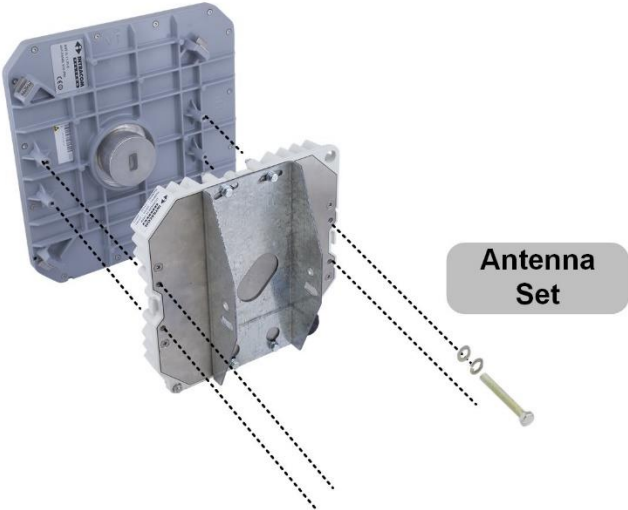
Procedure for
VERTICAL
antenna
orientation,
continued

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

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WiBAS-Connect and Panel, Continued

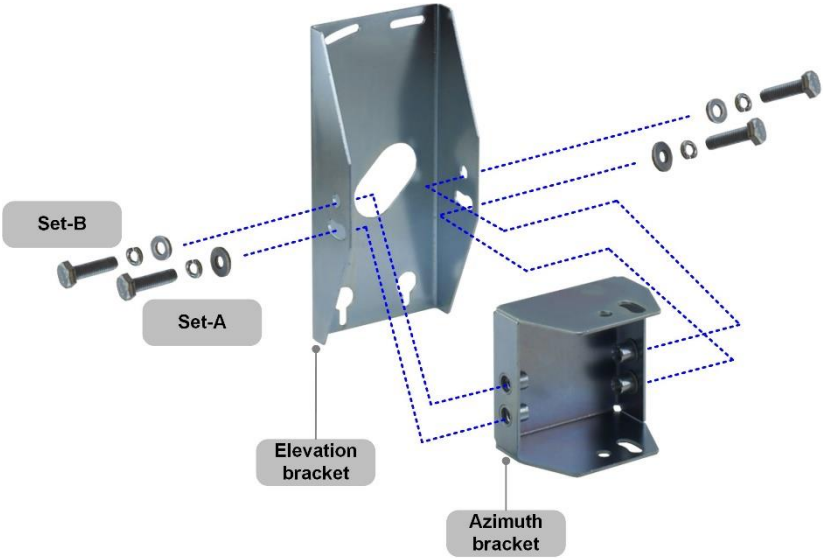
Procedure for
VERTICAL
antenna
orientation,
continued

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:   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:   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
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:   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	
		



Continued on next page

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. • Mounting kit. • Greasing paste. • 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

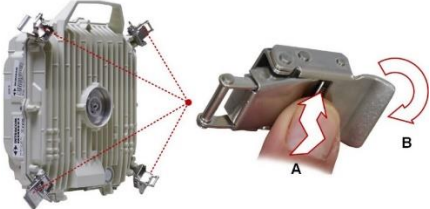
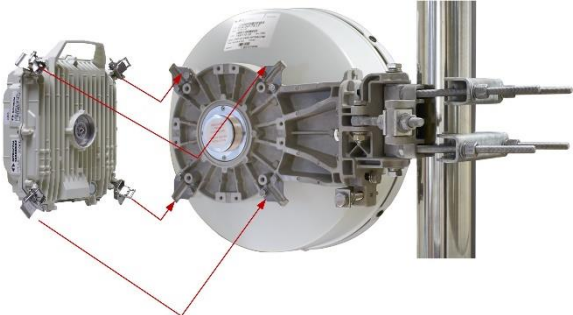
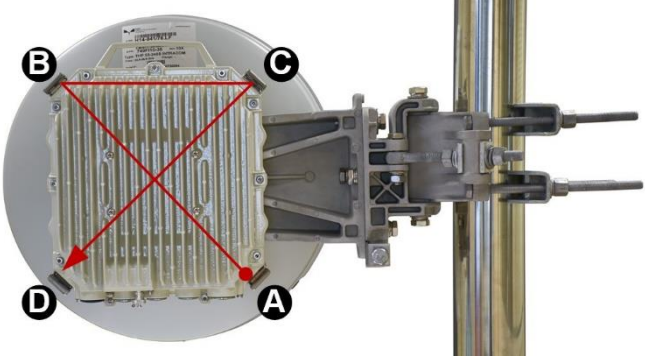
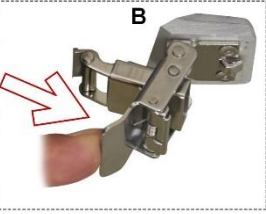
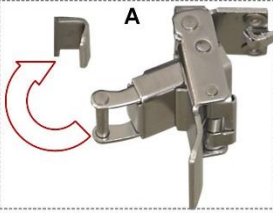
Procedure,
continued

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: Radio unit wave guide 10.5 GHz  Antenna feeder  26/28/32 GHz   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. 
5	Mount the WiBAS™ OSDR-TS onto the antenna, as shown below. 
6	Lock and secure all four clamps according to the pattern below  Details of Clamps closing 
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

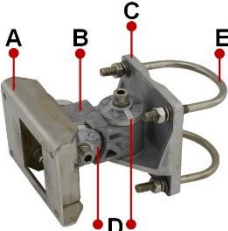
Radio unit packing materials

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.

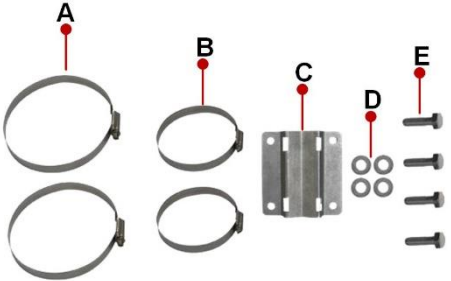
Mounting kit packing materials

OSDR-ANT-MNT	Description
	A: Mounting adapter. B: Arm. C: Arm bracket. D: Azimuth / elevation adjusters (x2). 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: - M8 washers (x8). - M8 lock washers (x8). - M8 x 30 mm screws (x4).

Continued on next page

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). • B: Hose clamps for pole diameter 104 mm up to 120 mm (x2). • C: Adaptation Bracket. • D: M8 washers (x4). • E: M8 x 25 mm screws (x4).

Antenna
adaptation
packing
materials

OSDR-PL-ANT-KIT	Details
	• Hooks (x4). • 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. For wall installation go to <u>step 20</u>. For pole installation with pole diameter 48 mm to 60 mm, go to <u>step 6</u>.

Continued on next page

WiBAS OSDR-TS and Panel, Continued

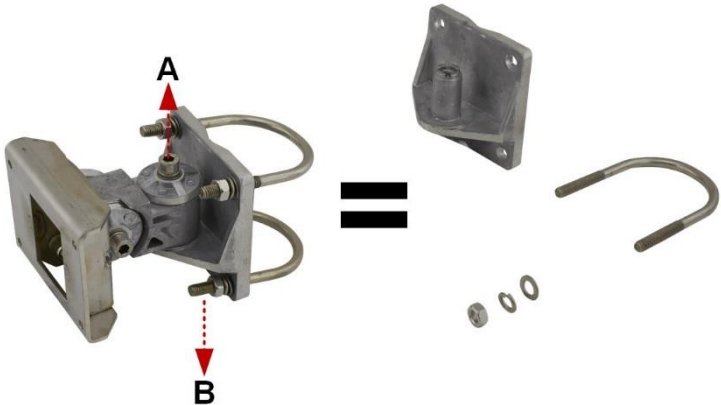
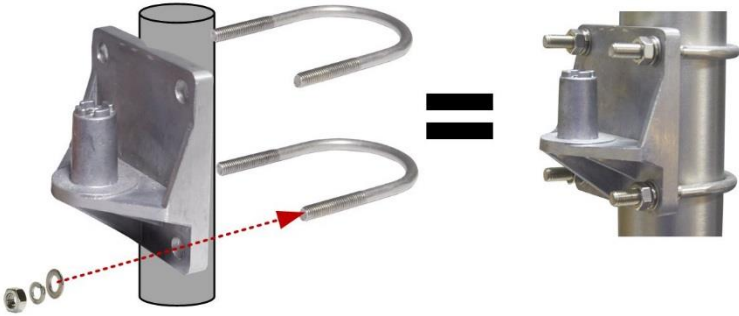
Procedure,
continued

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. 
4	Use the adjustable wrench with hexagon female bit to tighten.   Do not over tighten the M5 worm 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.  Use the adjustable wrench with hexagon female bit to tighten.  Do not over tighten the M8 nuts. Adjust the tool for applying max tightening torque 15 Nm . To continue go to step 8 .

Continued on next page

WiBAS OSDR-TS and Panel, Continued

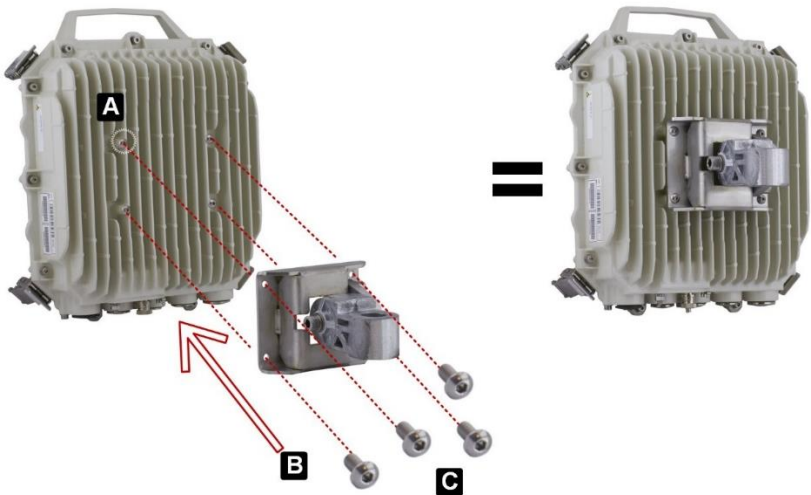
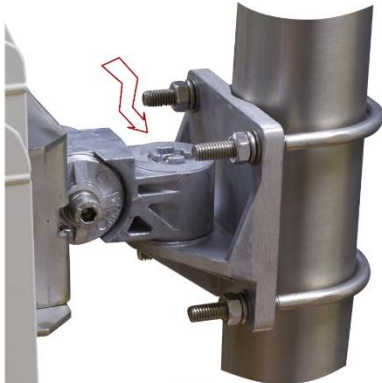
Procedure,
continued

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

Continued on next page

WiBAS OSDR-TS and Panel, Continued

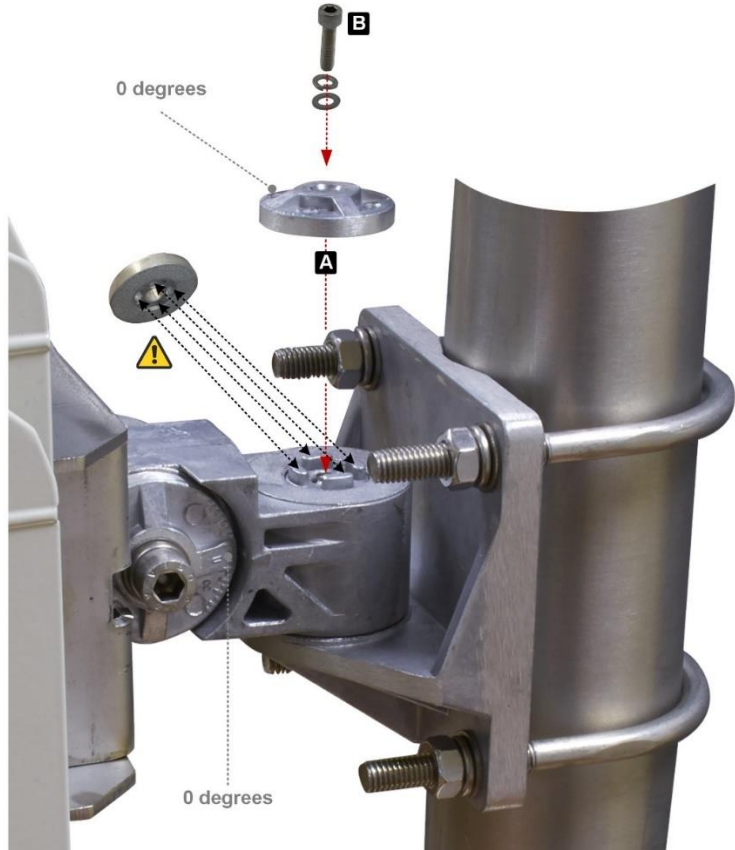
Procedure,
continued

Step	Action
8	Perform the following actions: • Unscrew the four screws (A). • Place the radio mounting adapter onto the radio unit, as shown below (B). • Use the wrench tool with hexagon male bit to tighten the screws (C).   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. 

Continued on next page

WiBAS OSDR-TS and Panel, Continued

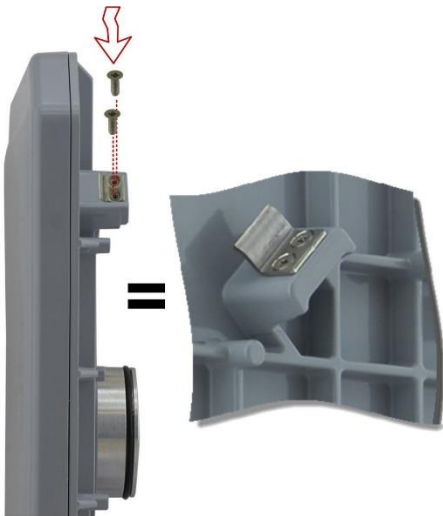
Procedure,
continued

Step	Action
10	Perform the following actions: - Place the azimuth adjuster (A) - Install the set-A of mounting kit packing materials (B), as shown below: 
11	Use the wrench tool with hexagon male bit to fully tighten the adjuster screw.  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

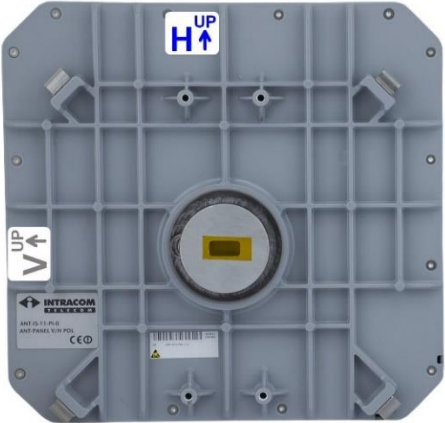
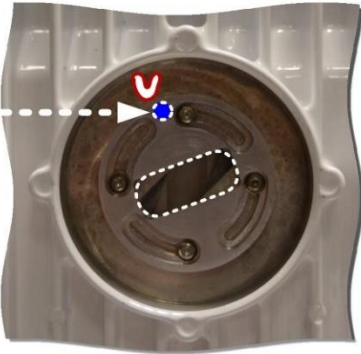
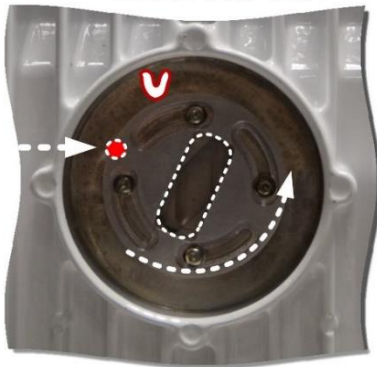
Procedure,
continued

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

Continued on next page

WiBAS OSDR-TS and Panel, Continued

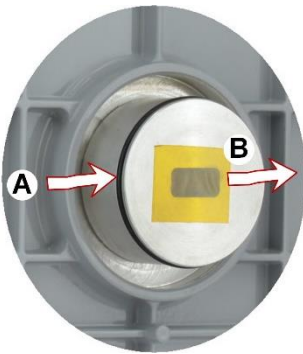
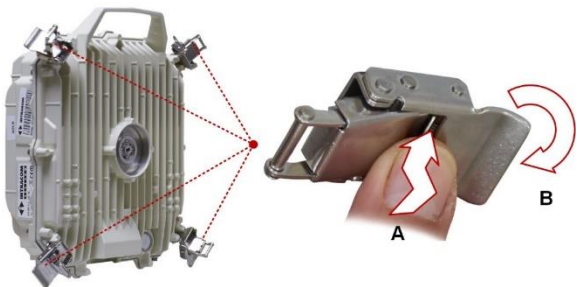
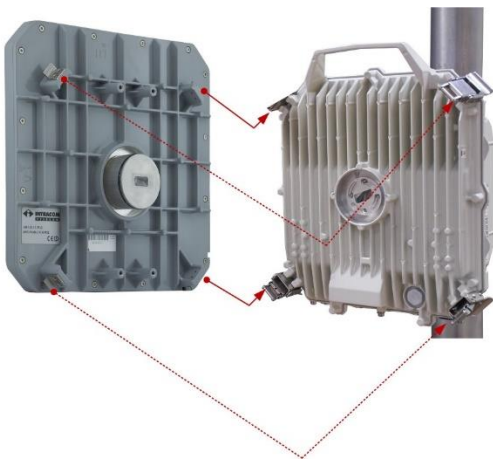
Procedure,
continued

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: OSDR 10.5 GHz  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: OSDR 10.5 GHz   The terminal station polarization at 10.5 GHz (radio-panel antenna) is specific and applicable to this case only.  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 waveguide port is intentional and does not indicate a problem.

Continued on next page

WiBAS OSDR-TS and Panel, Continued

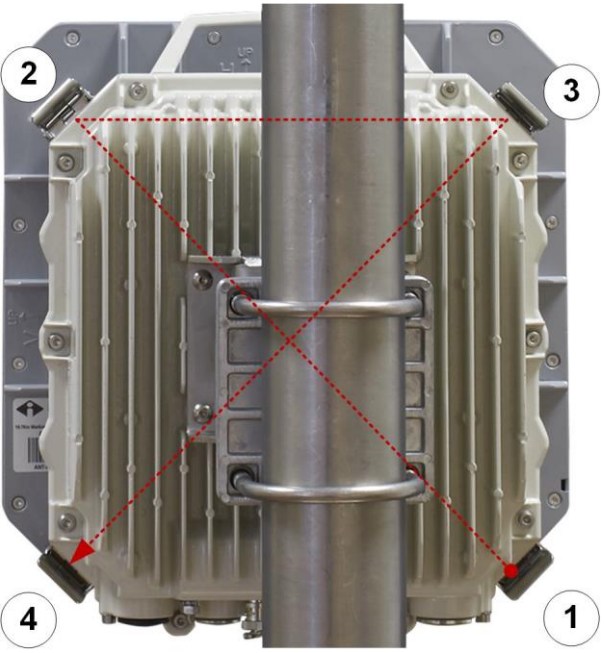
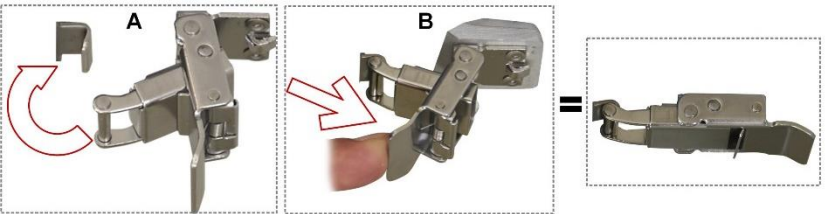
Procedure,
continued

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

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WiBAS OSDR-TS and Panel, Continued

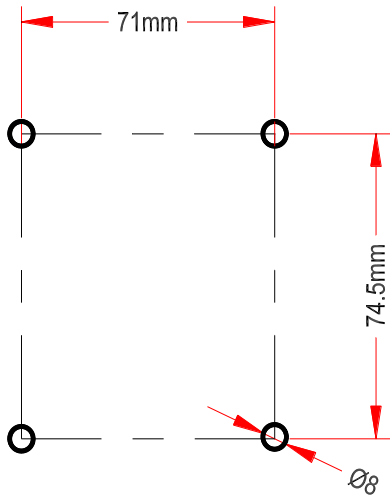
Procedure,
continued

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

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WiBAS OSDR-TS and Panel, Continued

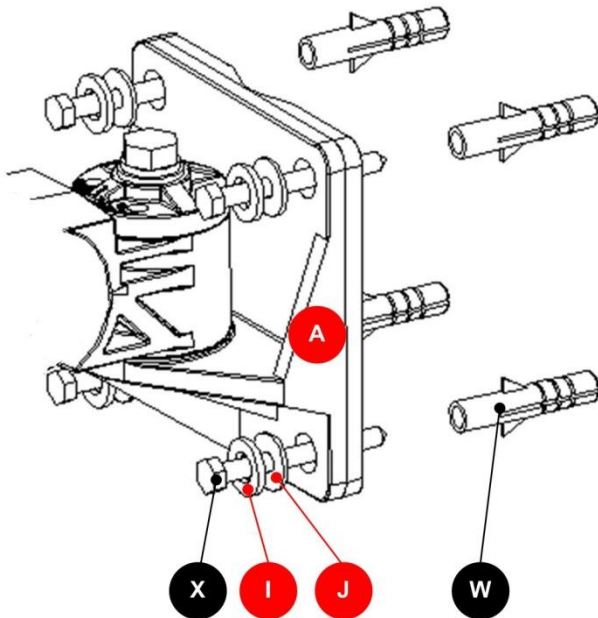
Procedure,
continued

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. 

Continued on next page

WiBAS OSDR-TS and Panel, Continued

Procedure,
continued

Step	Action																		
21	Insert items (W, A, J, I X) with order, as shown below:  The items X, W listed below are not provided: <table><tr><th>Item</th><th>Description</th><th>Qty</th></tr><tr><td>X</td><td>Wood screw 5 x 50 mm, hex-headed, DIN571</td><td>4</td></tr><tr><td>I</td><td>Lock washer M5, stainless</td><td>4</td></tr><tr><td>J</td><td>Washer M5, stainless.</td><td>4</td></tr><tr><td>A</td><td>Arm Bracket</td><td>1</td></tr><tr><td>W</td><td>Wood plug 8 mm, plastic, type B.</td><td>4</td></tr></table>	Item	Description	Qty	X	Wood screw 5 x 50 mm, hex-headed, DIN571	4	I	Lock washer M5, stainless	4	J	Washer M5, stainless.	4	A	Arm Bracket	1	W	Wood plug 8 mm, plastic, type B.	4
Item	Description	Qty																	
X	Wood screw 5 x 50 mm, hex-headed, DIN571	4																	
I	Lock washer M5, stainless	4																	
J	Washer M5, stainless.	4																	
A	Arm Bracket	1																	
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.  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	✗	✓



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

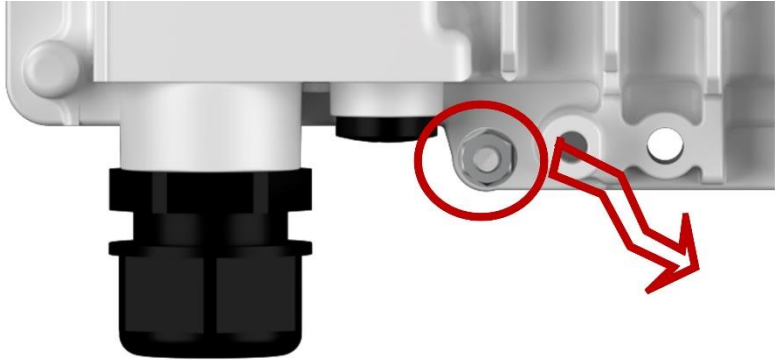
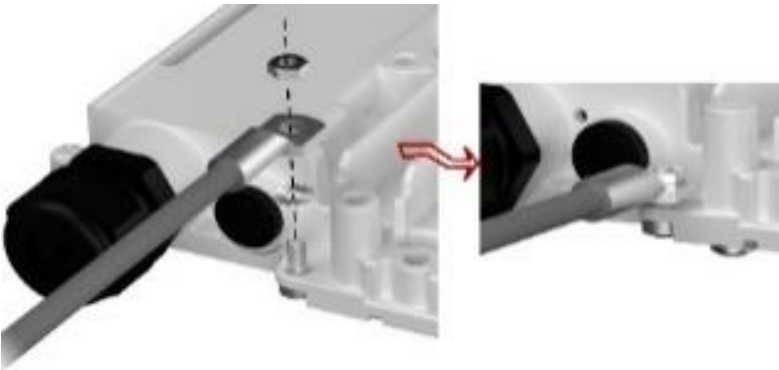
Tools	• Adjustable torque wrench with hexagon female bit (see Equipment installation tools).
Materials	• Grounding cables. • Radio units.

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

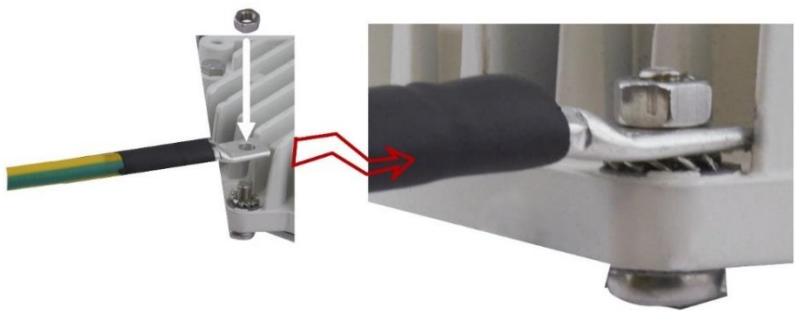
End of procedure.

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. Use the tool to remove the pre-installed M5 grounding terminal. 
2	Perform the following actions: • Install the cable, as shown below.  • Use the tool with M5 hexagon female bit to fully tighten the screw.  Do not over tighten the M5 nut. Adjust the tool for applying maximum tightening torque 4.2 Nm.  DO NOT forget to install the other end of the grounding cable to grounding bar.

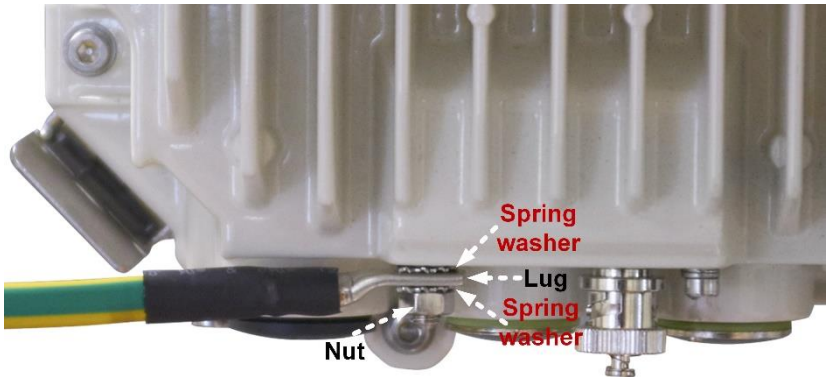
End of procedure.

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: • Install the cable, as shown below:  • Use the tool with M5 hexagon female bit to fully tighten the screw. ⚠ Do not over tighten the M5 nut. Adjust the tool for applying maximum tightening torque 4.2 Nm. ⚠ 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](#).

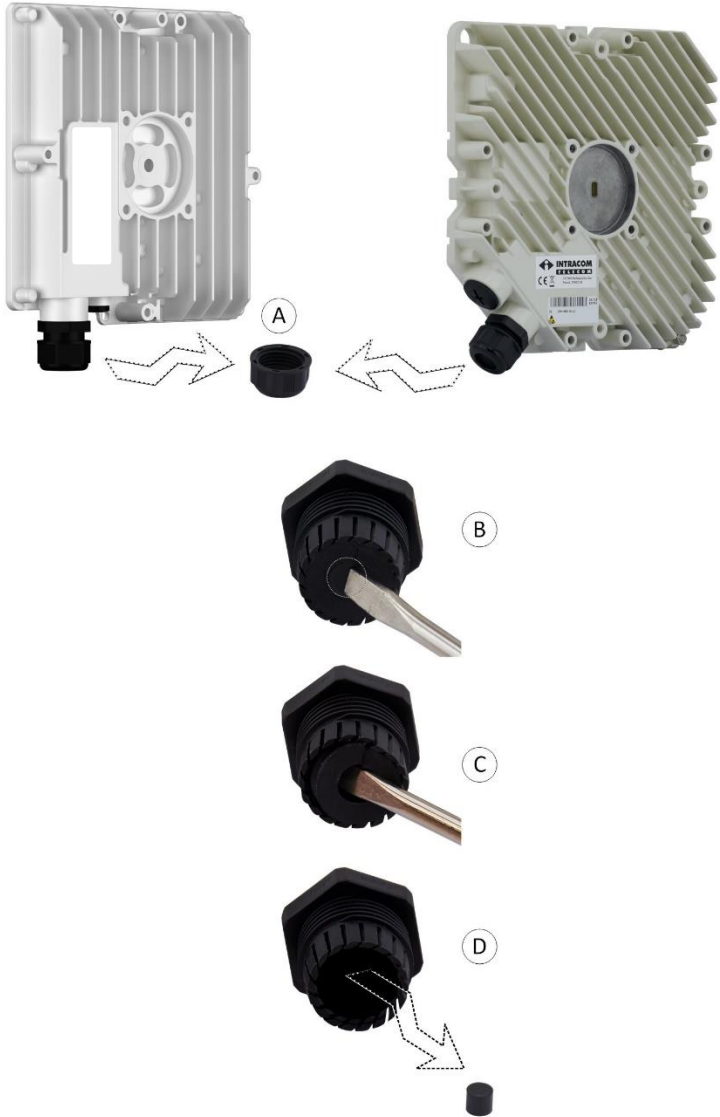
Tools and materials

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

Continued on next page

ETH Cable, Continued

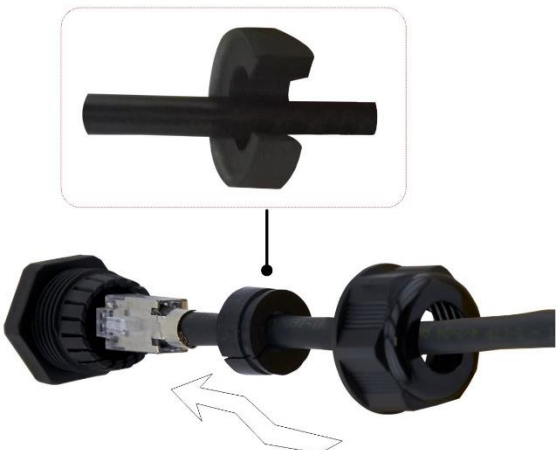
Procedure How to install the ETH cable to radio unit (**WG5-CONN-PLUS-LB-UB** / **CONN-OB-U-DSDS** / **CONN-OB-U-DSDS-DP**), proceed as follows:

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

Continued on next page

ETH Cable, Continued

Procedure,
continued

Step	Action
2	Pass the cable through the parts of gland, as shown below.  The seal shown below is split-type for easy installation and removal.  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.  Do not over tighten. Adjust the tool for applying maximum tightening torque 5 Nm. 

Continued on next page

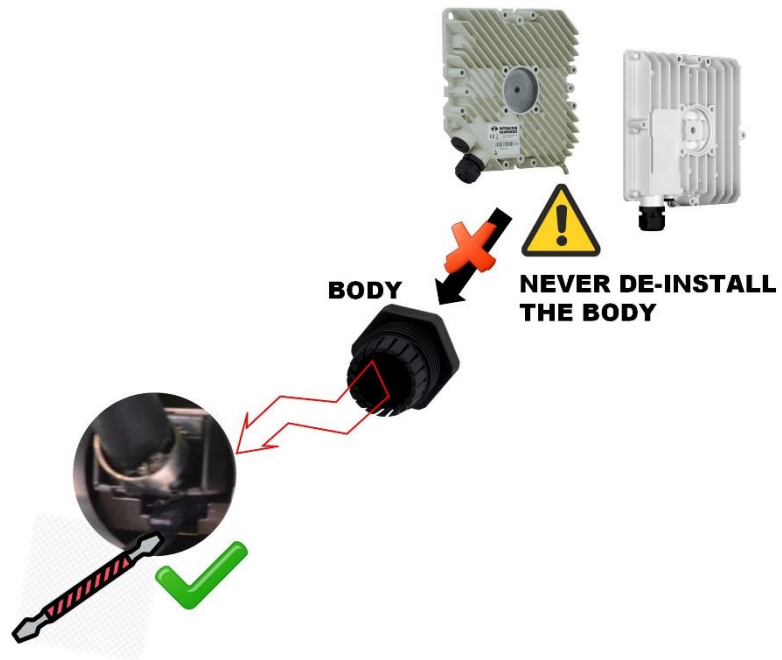
ETH Cable, Continued

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:



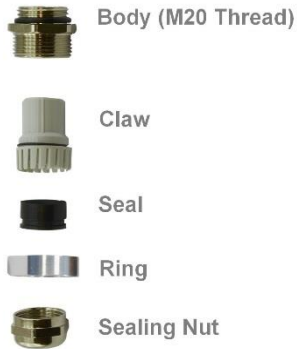
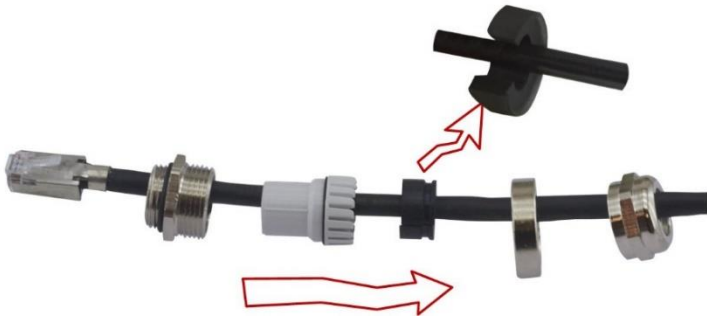
End of procedure.

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ETH Cable, Continued

Procedure

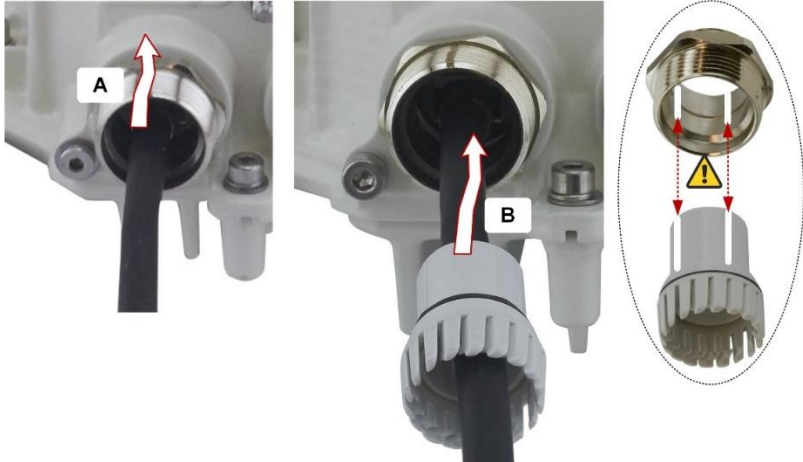
How to install the ETH cable to radio unit (**OSDR-OB-U-DSDS-SB**), proceed as follows:

Step	Action
1	Remove the protective cap (plastic for GbE2 or metallic for FE). 
2	Disassemble the M20-GLAND parts, as shown below:  Body (M20 Thread) Claw Seal Ring Sealing Nut
3	Pass the cable through the parts of gland, as shown below. The seal shown below is split-type for easy installation and removal. 

Continued on next page

ETH Cable, Continued

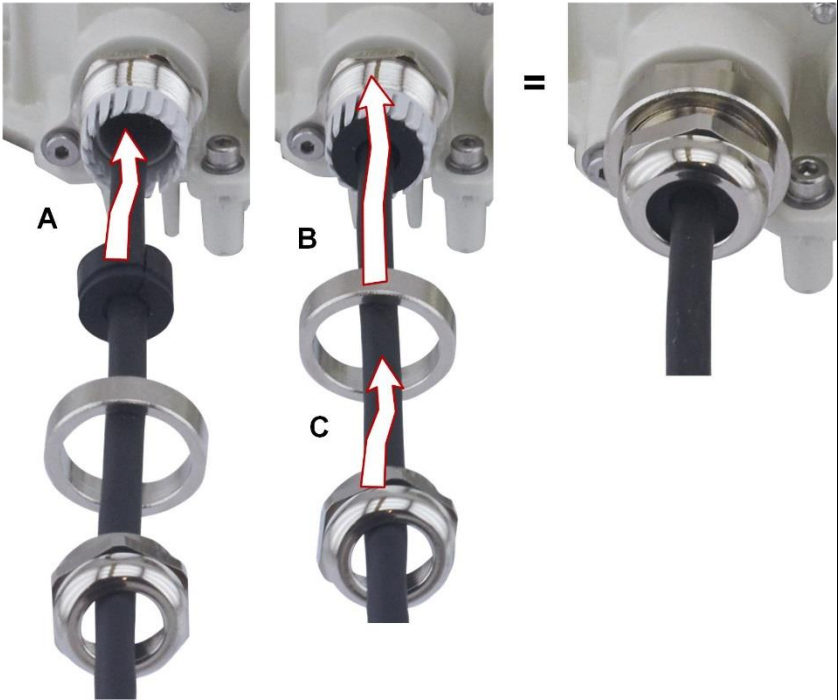
Procedure,
continued

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

Continued on next page

ETH Cable, Continued

Procedure,
continued

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

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**.

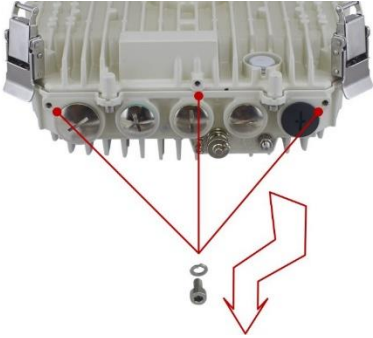
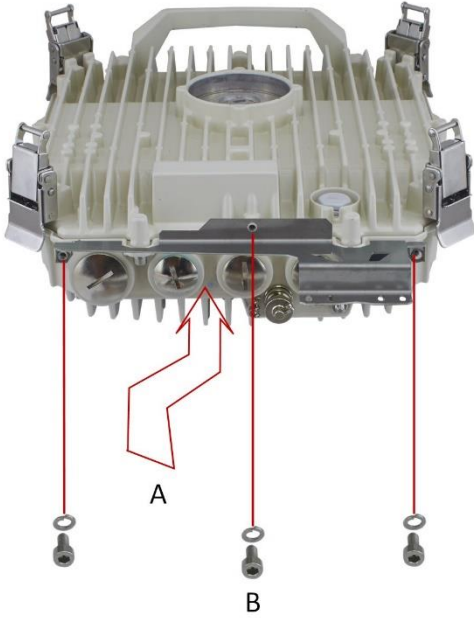
Tools and materials

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

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Cable Holder, Continued

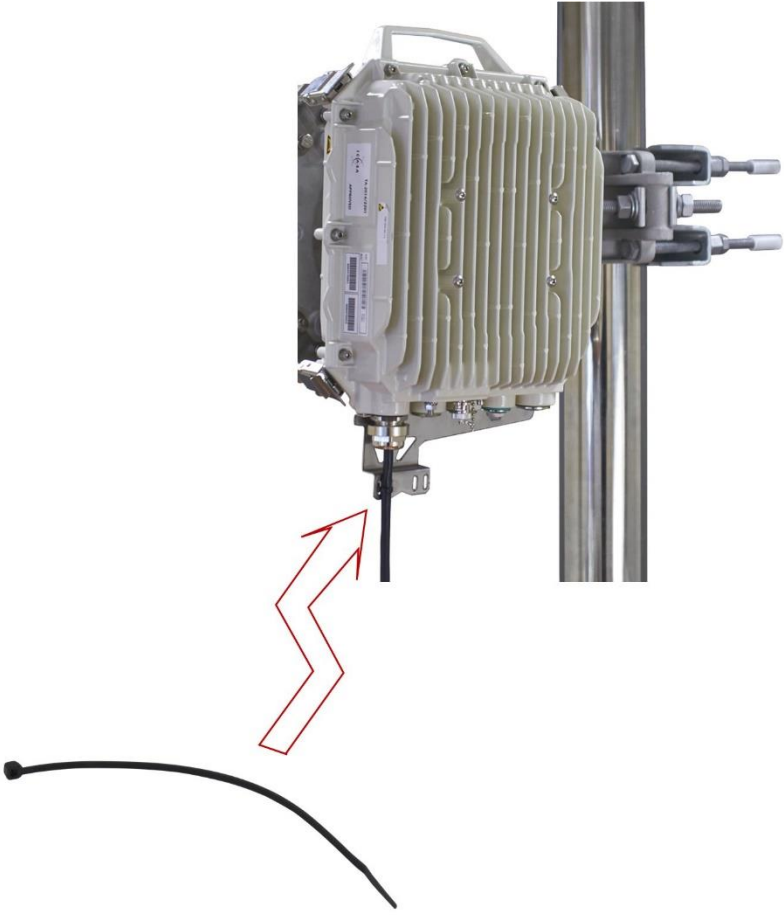
Procedure How to install the cable holder to WiBAS™ OSDR-TS radio unit, proceed as follows:

Step	Action
1	Use the wrench tool to remove the three screws with lock washers, as shown below. 
2	Perform the following actions: • Mount the holder to radio (A). • Use the wrench tool to install the three lock washers and screws (B), as shown below:   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.



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

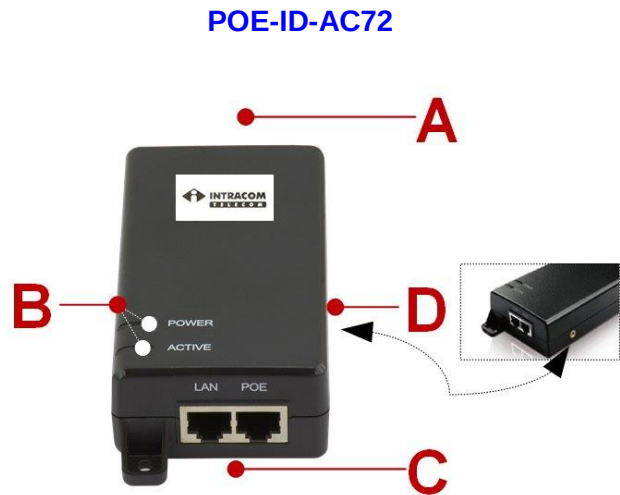


#	Marking	Details	Use
A	INPUT	3-pins AC socket (EU).	To connect the AC power supply cord.
B	LED	Multi-functioning LED.	To provide equipment status during operation.
C	IN / OUT	Gigabit Ethernet 10/100/1000 Base T, Electrical (RJ-45).	• IN: To connect the Gigabit Ethernet (S-FTP) cable for carrying towards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

Continued on next page

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

Power injectors overview, continued



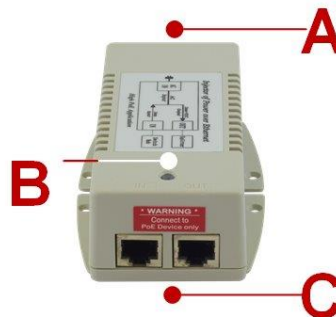
#	Marking	Details	Use
A	INPUT	3-pins AC socket (EU).	To connect the AC power supply cord.
B	LED	Multi-functioning LED.	To provide equipment status during operation.
C	LAN / POE	Gigabit Ethernet 10/100/1000 Base T, Electrical (RJ-45).	• LAN: To connect the Gigabit Ethernet (S-FTP) cable for carrying towards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

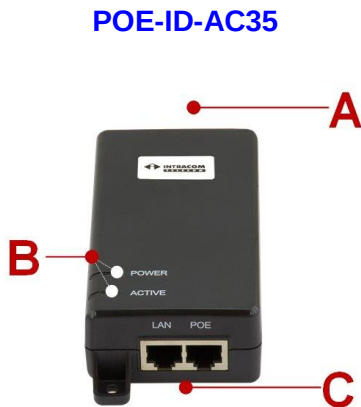


#	Marking	Details	Use
A	INPUT	3-pins AC socket (EU).	To connect the AC power supply cord.
B	LED	Multi-functioning LED.	To provide equipment status during operation.
C	IN / OUT	Gigabit Ethernet 10/100/1000 Base T, Electrical (RJ-45).	• IN: To connect the Gigabit Ethernet (S-FTP) cable for carrying towards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

Continued on next page

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

Power injectors overview, continued



#	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: – Traffic – Inband management • POE: To connect the Gigabit Ethernet (S-FTP) cable for carrying towards to radio: – Traffic – Inband management – 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) • POE-ID-AC72. • 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. 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. 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)



- 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.

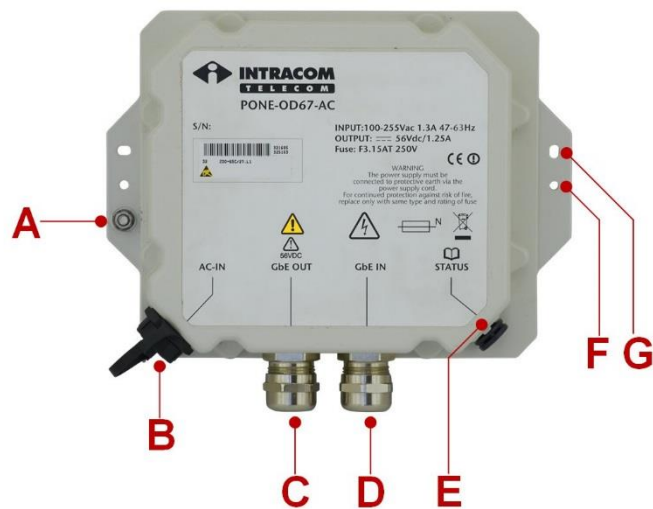


- Lightning surge protection is embedded in the unit.

Continued on next page

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 : • Traffic • Inband management • superimposed DC power
D	GbE IN		To connect the Gigabit Ethernet (S-FTP) cable for carrying towards to customer network : • Traffic • 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). TOOL-M20.
Materials	INSTPONE-PL2. PONE-OD67-AC.

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PONE-OD67-AC, Continued

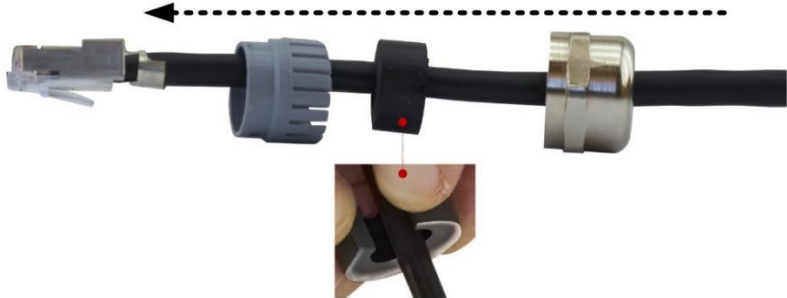
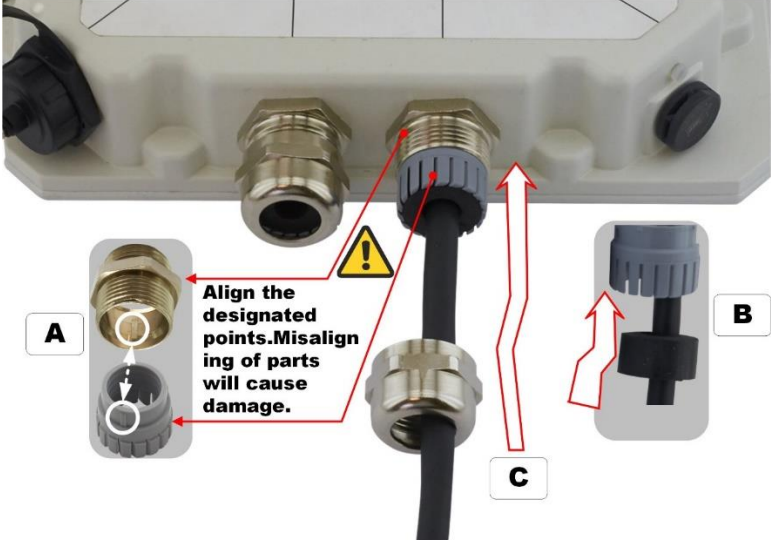
Procedure How to install the **PONE-OD67-AC** onto the pole or wall, proceed as follows:

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

Continued on next page

PONE-OD67-AC, Continued

Procedure,
continued

Step	Action
2	Pass the cable through the parts of gland, as shown below.  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: • Insert the claw to body taking in consideration the caution below (A). • Insert the seal to claw (B). • Use the adjustable torque U-wrench to screw the sealing nut to body (C).  Do not over tighten. Adjust the tool for tightening torque 2 Nm (the final torque will be applied to the next step). 

Continued on next page

PONE-OD67-AC, Continued

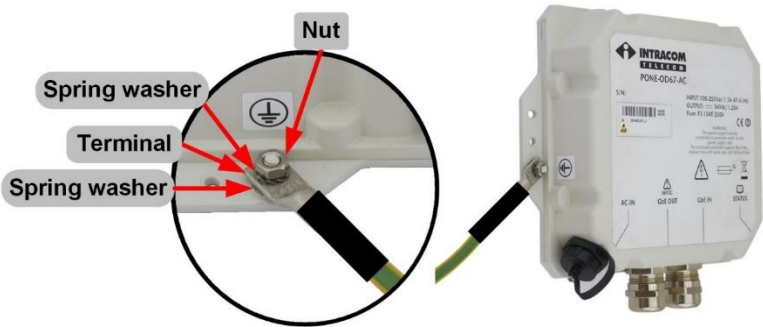
Procedure,
continued

Step	Action
4	Perform the following actions: • Insert the claw to body taking in consideration the caution below (A). • Insert the seal to claw (B). • Use the adjustable torque U-wrench to screw the sealing nut to body (C). Do not over tighten. Adjust the tool for maximum tightening torque 6 Nm. 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.

Continued on next page

PONE-OD67-AC, Continued

Procedure,
continued

Step	Action
5	Install the grounding cable as shown below.   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. 
7	For wall installation perform the following actions: • 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. • Install the 2 supplied wall plugs and using the cross headed screwdriver tighten the 2 screws. 

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)



- 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.

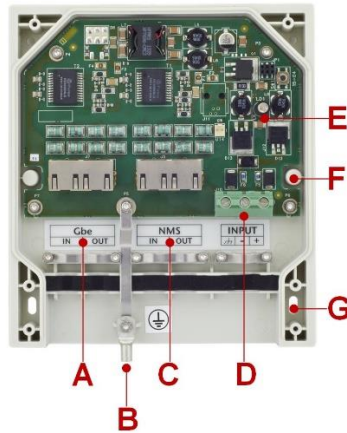


- Lightning surge protection is embedded in the unit.
-

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PONE-OD-DC, Continued

Power injector overview



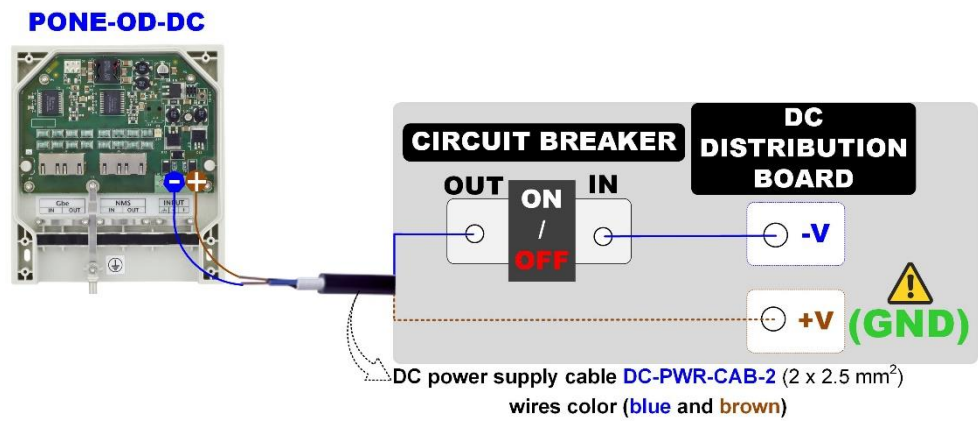
#	Marking	Details	Use
A	Gbe IN / OUT	Gigabit Ethernet 100/1000 Base-T, Electrical (RJ-45).	IN: To connect the Gigabit Ethernet (S-FTP) cable for carrying towards to customer network : - Traffic - Inband management
			OUT: To connect the Gigabit Ethernet (S-FTP) cable for carrying towards to radio : - Traffic - Inband management - 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 : Outband management
			OUT: To connect the Gigabit Ethernet (S-FTP) cable for carrying towards to radio : - Outband management - 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**:



Continued on next page

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



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). - Cable cutter and blade (see Termination of cables)
Materials	INST-PONE-PL. PONE-OD-DC.

Continued on next page

PONE-OD-DC, Continued

Procedure

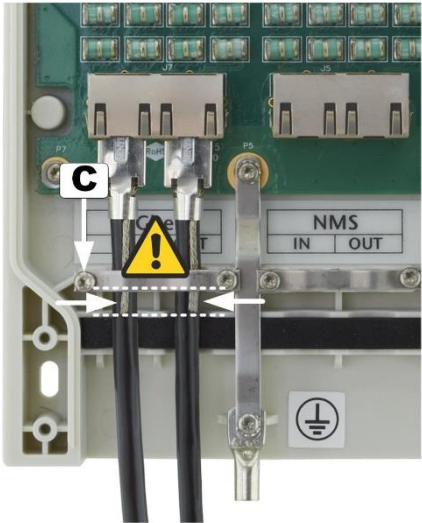
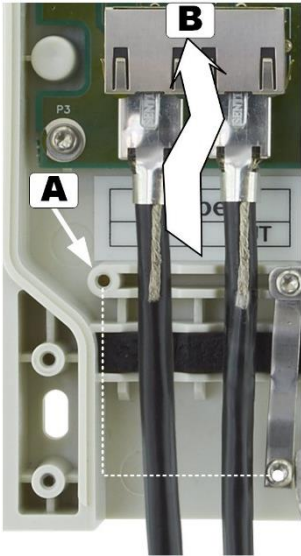
How to install the **PONE-OD-DC** onto the pole or wall, proceed as follows:

Step	Action
1	For pole installation follow this step. For wall installation go to last step. Perform the following actions: • Attach the plate onto rear side of PONE, as shown below (A). • Install lock washer and screw. Then use the cross headed screwdriver to fully tighten (B). • Pass the hose clamp through the plate holes (C). • Install the PONE onto pole. Use the tool with M5 deep socket to tighten (D).  Do not over tighten. Use the tool with TORX T10 bit for max tightening torque 2 Nm. • 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. 

Continued on next page

PONE-OD-DC, Continued

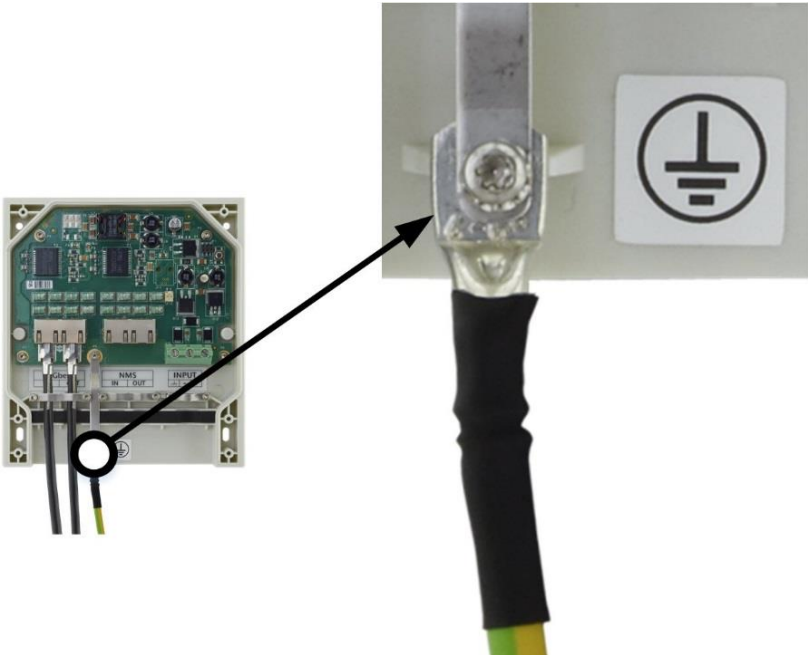
Procedure,
continued

Step	Action
2	Perform the following actions for installing the Ethernet (S-FTP) cables: • Use the tool with TORX T10 bit to remove (A) the clamp screw. Be careful not to drop the screw while removing. • 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.  The shielded wires should protrude from clamp about 0.5 cm (as shown below). • Use the tool with TORX T10 bit to install the clamp (C) for securing the cables in place.  Do not over tighten. Adjust the tool for max tightening torque 0.9 Nm. 

Continued on next page

PONE-OD-DC, Continued

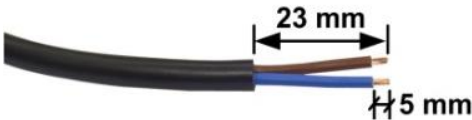
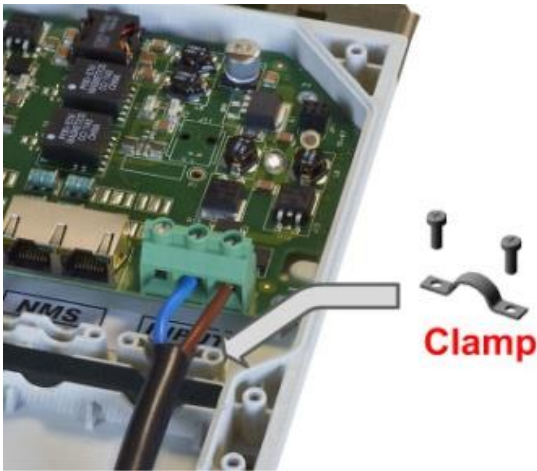
Procedure,
continued

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

Continued on next page

PONE-OD-DC, Continued

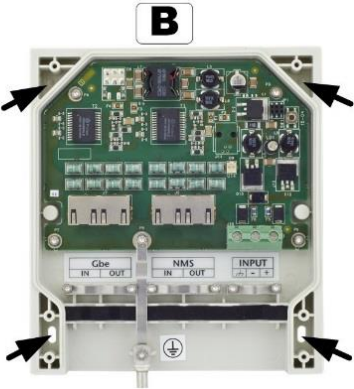
Procedure,
continued

Step	Action
4	Perform the following actions for installing the DC power supply cable onto the PONE INPUT receptacle: Switch-off the: • local DC power source & • circuit breaker (between PONE and local DC power source). • Connect the power cable to the local DC power source (brown wire: +V, blue wire: -V). • 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.  • 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: Blue wire to INPUT (-), Brown wire to INPUT (+)  • 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. • Use the tool with TORX T10 bit to install the clamp in order to secure the DC power supply cable. 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: • Use the tool with TORX T10 bit to remove the six screws (A). • Then: – 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. – Install the four supplied wall plugs and using the cross headed screwdriver and tighten the four screws. 

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).



- 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.



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

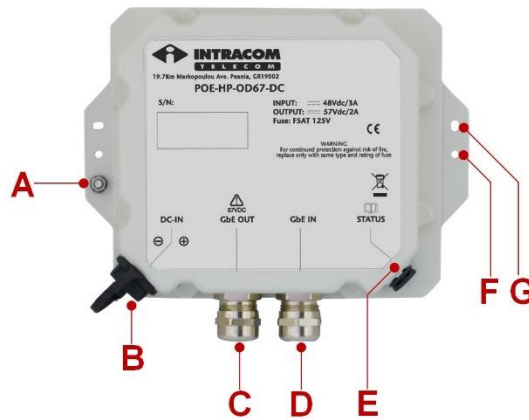


- Lightning surge protection is embedded in the unit.
-

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POE-HP-OD67-DC, Continued

Power injector overview



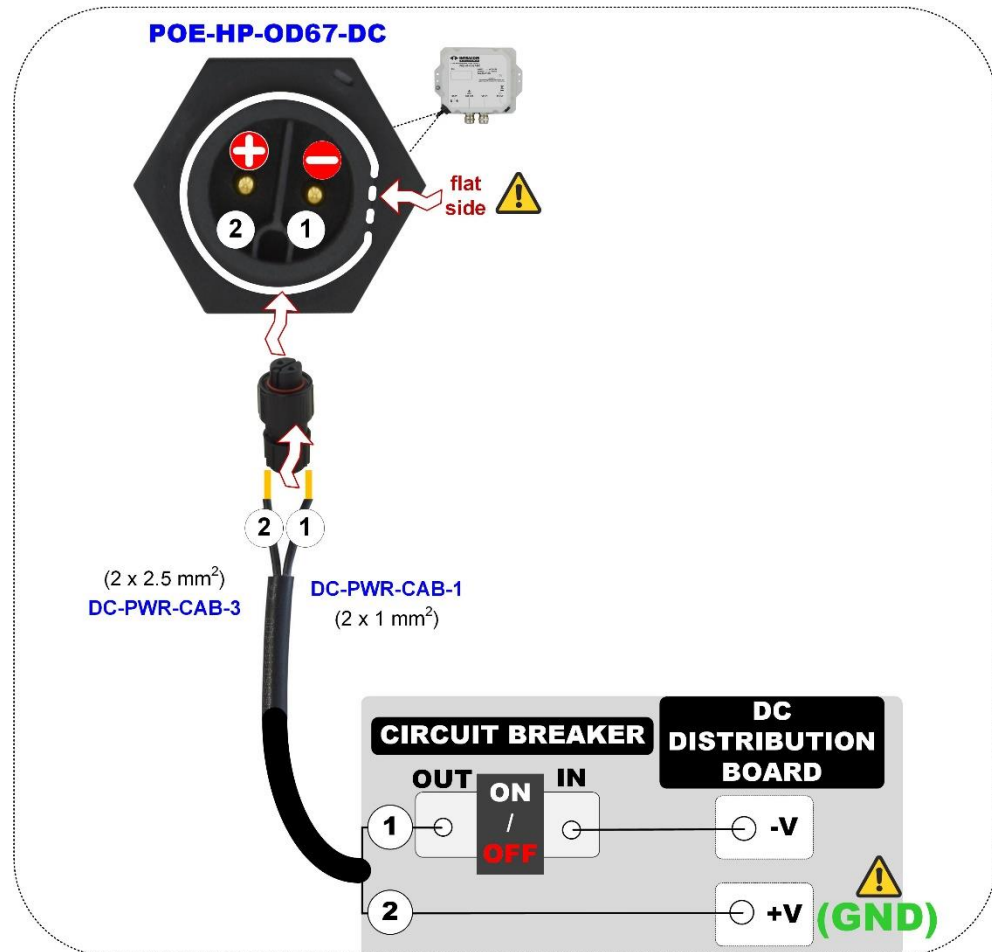
#	Marking	Details	Use
A	GND	Grounding point.	To connect 16 mm ² grounding cable.
B	AC-IN	2-pins DC receptacle.	To connect DC power supply cable with connector.
C	Gbe OUT	Gigabit Ethernet 10/100/1000 Base T, Electrical (RJ-45).	To connect the Gigabit Ethernet (S-FTP) cable for carrying towards to radio : • Traffic • Inband management • superimposed DC power
D	GbE IN		To connect the Gigabit Ethernet (S-FTP) cable for carrying towards to customer network : • Traffic • 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:



Continued on next page

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). TOOL-M20.
Materials	INSTPONE-PL2. PONE-OD67-AC. 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.

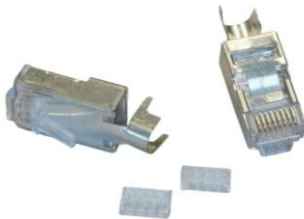
Termination overview The equipment to which you connect the cable requires a different way of cable termination.

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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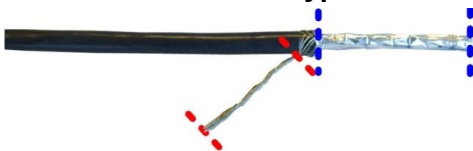
Ethernet (S-FTP), Continued

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

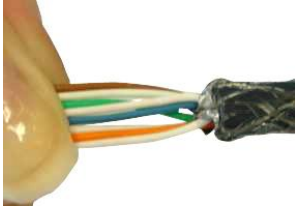
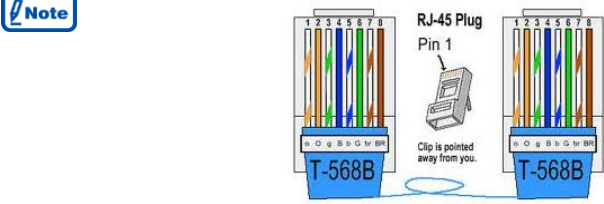
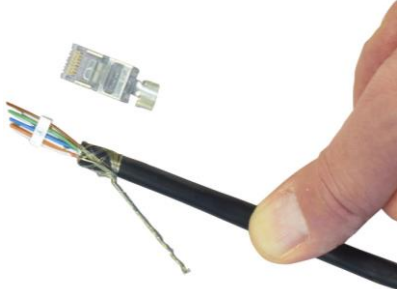
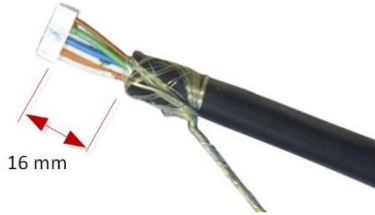
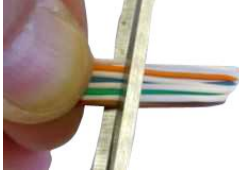
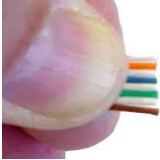
How to terminate the **Ethernet (S-FTP)** cable to **ST-RJ45** connector, proceed as follows:

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

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:  Note 
3	Carefully insert the eight wires into the cavity of the wire guide so that its numbering is visible from the top. 
4	Measure 16 mm from the jacket's end and cut all wires protruding from the guide.   

Continued on next page

Ethernet (S-FTP), Continued

Procedure,
continued

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

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. For termination type A:  For termination type B: 
8	Use the Ethernet cable tester to verify the proper cable termination.

End of procedure.

Grounding

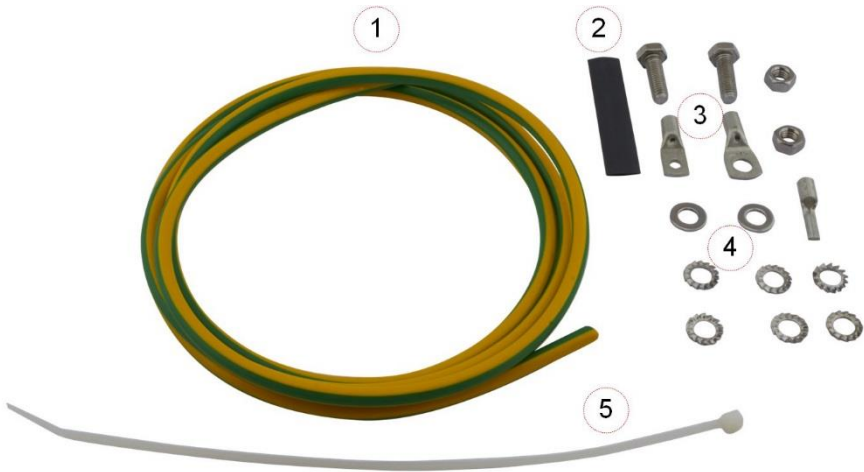
Introduction Apply this procedure for terminating the following grounding cables:

- **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 mm ² 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.

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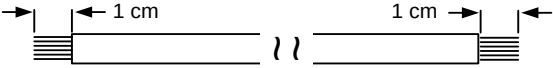
Grounding, Continued

Tools and materials

Tools	• Blade, cable cutter, crimping tool for 6 mm² and 16 mm² grounding cable and hot air gun (refer to Termination of cables).
Materials	• GND-KIT16-OD (16 mm² cable) • GND-CAB6-ID (6 mm² cable)

Procedure

How to terminate the **16 mm²** 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: 
3	Perform the following actions: • Slide the M5 grounding lug over the wires at one end of the cable and crimp it with the special crimping tool. • Cut the heat shrinkable tube in the middle in two equal pieces in order to use one piece per cable side. • 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.

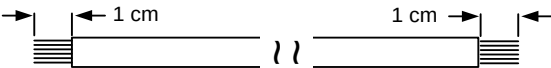
End of procedure.

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: 
3	Perform the following actions: - Use the tool with TORX T10 bit to unscrew the terminal lug from PONE-OD-DC, as shown below:  - 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 mm²)
- **DC cables** for **POE-HP-OD67-DC**:
 - **DC-PWR-CAB-1** (2 x 1 mm²)
 - **DC-PWR-CAB-3** (2 x 2.5 mm²)

Note

For DC cable termination ((**DC-PWR-CAB-2** (2 x 2.5 mm²)) 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:



AC-PWR-CAB



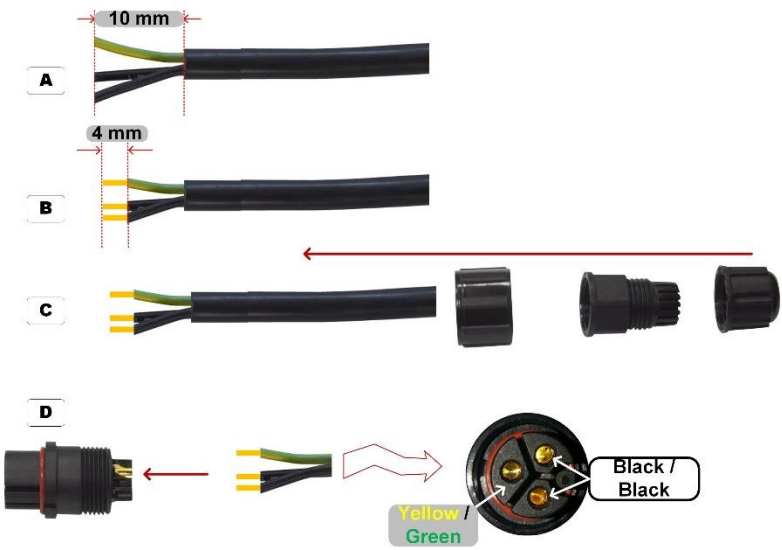
DC-PWR-CAB-1
DC-PWR-CAB-3

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

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Power, Continued

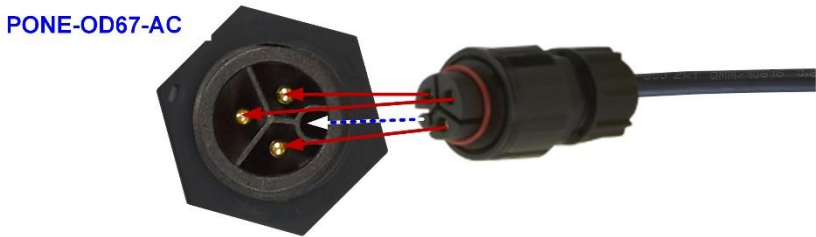
Procedure How to terminate the **3 x 0.75 mm²** AC power supply cable to **PONE-OD67-AC** connector, proceed as follows:

Step	Action
1	Perform the following: • Strip approx. 10 mm from the cable's outer sheath (A). • Strip approx. 4 mm from each wire insulation (B). • Pass the cable through the parts of gland (C). • Solder the 3 pins to the connector (D) taking in consideration the following: – The Yellow/Green wire must be soldered to the pin shown below. – 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. 

Continued on next page

Power, Continued

Procedure,
continued

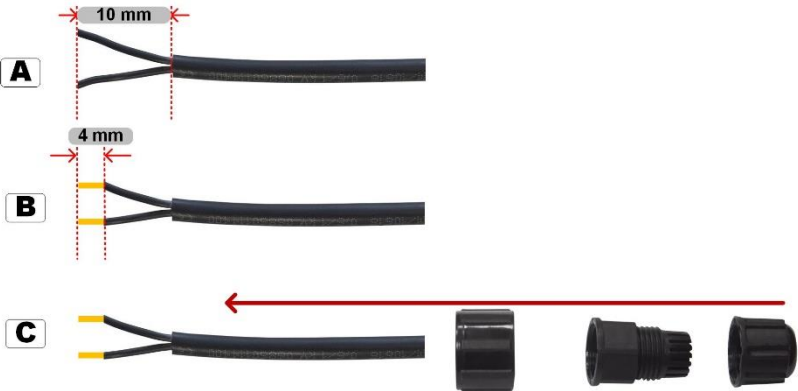
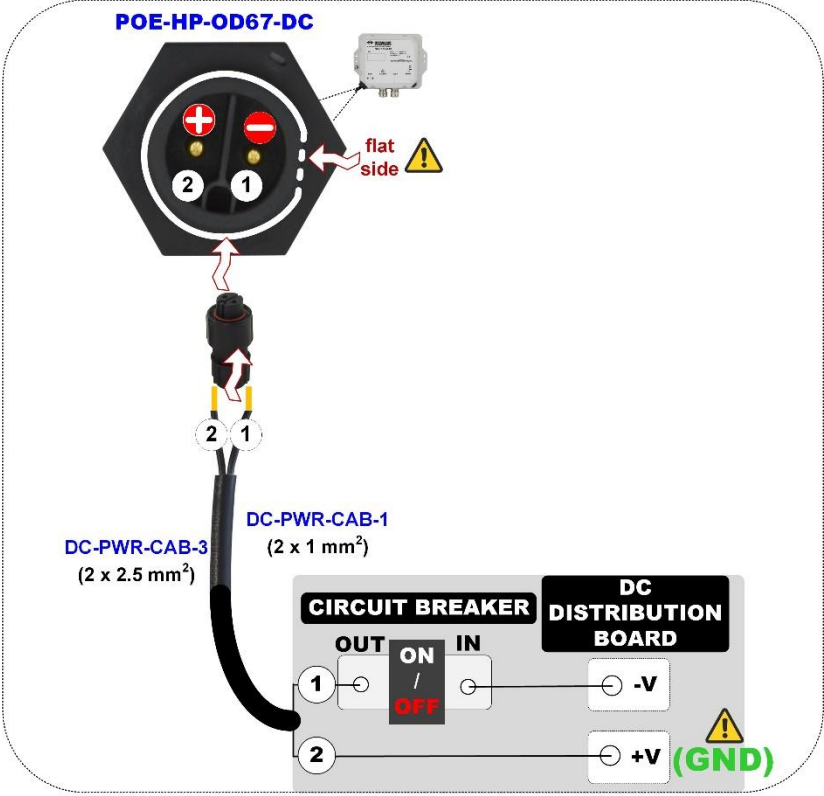
Step	Action
2	Assemble the connector by tightening all parts together, according the order (A) and (B), as shown below: 
3	Install the connector, as shown below: 
4	Screw the connector and then fully tighten, as shown below: 

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: - Strip approx. 10 mm from the cable's outer sheath (A). - Strip approx. 4 mm from each wire insulation (B). - Pass the cable through the parts of gland (C). 
2	Solder the 2 pins to the connector taking in consideration the following polarity concern: 

Continued on next page

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: POE-HP-OD67-DC 
5	Screw the connector and then fully tighten, as shown below: 

End of procedure.