

# INSTALLATION MANUAL

# HUBER+SUHNER

HUBER+SUHNER AG  
Power-to-the-Antenna distribution box 12 RRH

Item no. 85153205  
DOC-0000901130 Revision B

March 08, 2021  
Page 1 of 7

## Power-to-the-Antenna distribution box 12 RRH 16mm<sup>2</sup>



### Features

- Power distribution for 12 RRH
- Suitable for 24-core power cable and power jumper with cross section 16 mm<sup>2</sup>
- Latest connection technology - push in terminals with front access for easy and fast connection
- Robust polycarbonate box with ingress protection IP65
- Quick release cover screws

The Power-to-the-Antenna distribution box 12 RRH is fitted with the latest connection technology - push in terminals - for conductors up to 16mm<sup>2</sup> cross section. The push in terminals have front access to allow easy and fast connection. 12 power jumper can be installed by only two cable gland with a 6-fold seal which is tailored to HUBER+SUHNER 2-core power cables with 16mm<sup>2</sup> conductors. With robust mounting brackets the box can be installed on a pole, mast or wall. A set of 2 hose clamps is included. The PTTA box has a hinged cover with 2 latch locks.

### Technical data

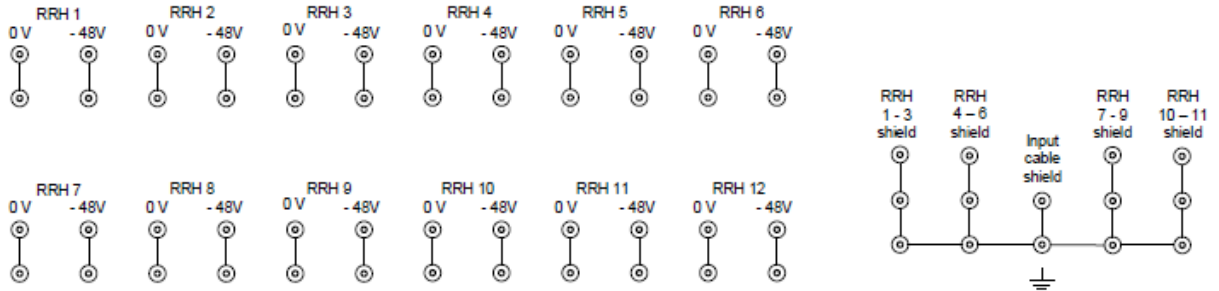
Characteristics		
Number of RRH		12
Power entry cable compatibility	M63	Ø 41.0 – 47.0 mm HUBER+SUHNER power cable: Item no. 85146104: 24 x 16mm <sup>2</sup> , CPR, Ø 45.5mm, 36.7 A
Power exit cable compatibility	M75	6-fold Ø 17.6 mm HUBER+SUHNER power cable: Item no. 85092557: 2 x 16 mm <sup>2</sup> , CPR, Ø 17.6 mm
Grounding cable diameter range	M20	Ø 6 - 12 mm
Box dimensions	L x w x h	400 x 300 x 180 mm
Weight		4.6 kg
Maximum voltage		- 74 Vdc
Maximum current per RRH		36 A (with 24x 16mm <sup>2</sup> power cable)
Temperature range during installation		-10 to 40°C IEC 61300-2-22
Temperature range during service		-40 to 75°C IEC 61300-2-22
Terminals		Phoenix Contact PT10, Push-in type up to 16mm <sup>2</sup> Nominal current 57 A
Material	Box Seal Mounting bracket	Polycarbonat Polyurethan Stainless steel
Color		RAL7035, light grey
Ingress protection		IP65 EN 60529
Impact resistance		IK08 EN 62262
Flammability		UL 746C5
Halogen free		yes
UV resistance		UL 508

HUBER+SUHNER disclaims any liability resulting from incorrect installation and use, including any damages resulting from the use of tools and accessories other than the ones recommended herein. Any installation performed by unqualified personnel voids the product warranty provided by HUBER+SUHNER. All due care and attention must be exercised when performing the installation of these products. For advice concerning the general handling of these products please contact HUBER+SUHNER.

Protective vent typical airflow

1500 ml/min

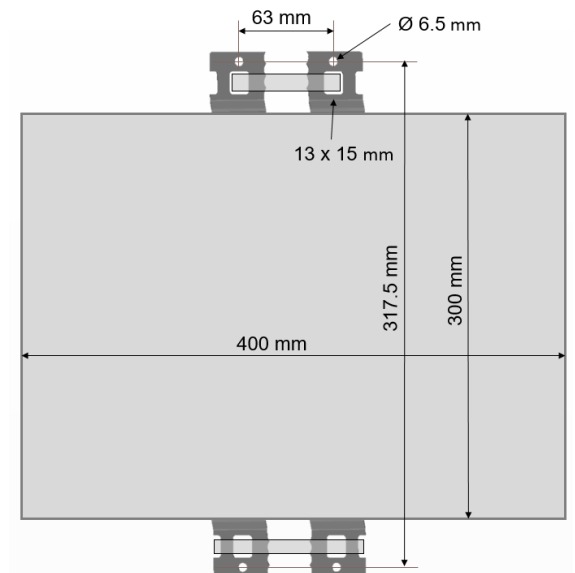
**Circuit drawing**



**Mounting bracket**

The mounting brackets have 4 rectangular cut out 13 mm x 15 mm for pole mounting with hose clamps.  
 Suitable hose clamps are:  
 - Item no. 84076411 for pole diameter 40 to 160 mm  
 - Item no. 84076412 for pole diameter 60 to 500 mm

For wall mounting, the mounting brackets have 4 holes with diameter 6.5 mm.



**Installation manual**

A label in the box cover includes a QR-code with a link to the installation manual on HUBER+SUHNER's website

**HUBER+SUHNER**



Installation Manual  
 PTTA distribution box 12 RRH  
 Power distribution up to 18mm<sup>2</sup>, up to 18mm<sup>2</sup> jumper  
 Item no 85153205

Please scan the QR code for the installation manual.

**Safety notes**



Installation and maintenance work on this device may only be carried out by an authorized electrician.

National laws and regulations must be observed during installation. The housing and the components used must be checked for exterior damage prior to installation. If the device is defective, it may not be used.

**Installation**

**Mounting on a pole, mast or wall**

1 Pole mounting

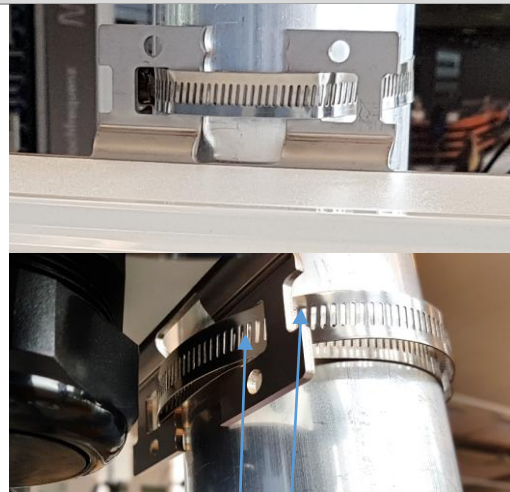
Fit a hose clamp through the rectangular cut out 13 mm x 15 mm of the upper and lower bracket.

2 hose clamps (HUBER+SUHNER Item no. 84076411) are included and are suitable for pole diameter 40 to 160 mm.

For poles with diameter 60 to 500 mm the hose clamps have to be ordered separately (HUBER+SUHNER Item no. 84076412)

Mast and wall mounting

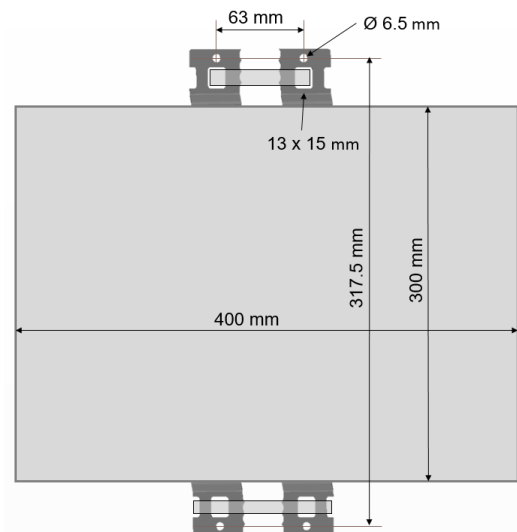
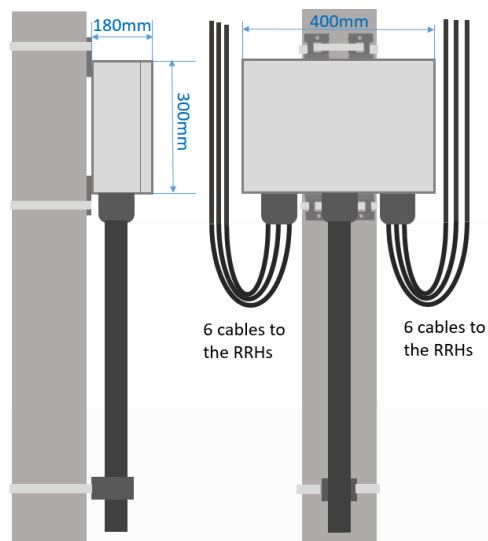
The mounting brackets have 4 holes with diameter 6.5 mm. Hole pattern: 63 x 317.5mm



use rectangular cut out for pole diameter < 160 mm  
use outer cut out for pole diameter > 160 m



The PTTA box has to be mounted with cable glands directed downwards.



**Connection of the 24-core power input cable**

2 Strip jacket, length approx. 45cm.  
 Cut the braid to a length of approx. 20cm.  
 Disentangle the braided copper shield and twist the single wires. Use a yellow/green shrink tube for the shield wires.  
 Cut the conductors to the recommended length as shown on below table.

Cond. no.	Terminal	Cond. length	Cond. no	Terminal	Cond. length
1	1 0V	34 cm	13	7 0V	34 cm
2	1 -48V	35 cm	14	7 -48V	35 cm
3	2 0V	36 cm	15	8 0V	36 cm
4	2 -48V	37 cm	16	8 -48V	37 cm
5	3 0V	38 cm	17	9 0V	38 cm
6	3 -48V	39 cm	18	9 -48V	39 cm
7	4 0V	40 cm	19	10 0V	40 cm
8	4 -48V	41 cm	20	10 -48V	41 cm
9	5 0V	42 cm	21	11 0V	42 cm
10	5 -48V	43cm	22	11 -48V	43cm
11	6 0V	44 cm	23	12 0V	44 cm
12	6 -48V	45 cm	24	12 -48V	45 cm
			Shield	Ground	20 cm



3 Feed the 24-core power cable through the M63 cable gland in the middle. The cable gland has 3 seals:  
 Seal no 1 inner diameter Ø 47.0 mm  
 Seal no 2 inner diameter Ø 41.0 mm  
 Seal no 3 inner diameter Ø 31.0 mm


Use seals no 1 and 3 for HUBER+SUHNER power cable:  
 Item no. 85146095: 24 x 6mm<sup>2</sup>, Ø 32.6 mm

Use seals no 1 and 2 for HUBER+SUHNER power cable:  
 Item no. 85146102: 24 x 10mm<sup>2</sup>, Ø 39.0 mm

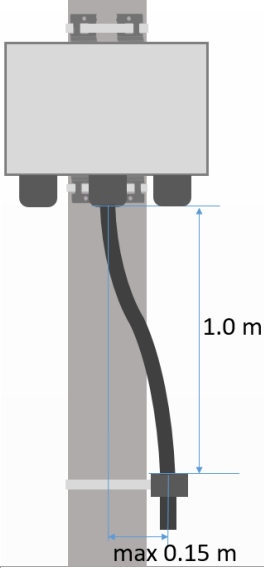
Use only seal no 1 for HUBER+SUHNER power cable:  
 Item no. 85146104: 24 x 16mm<sup>2</sup>, Ø 45.5 mm



**4** Tight cable gland.  
Install the 24-core power cable straight downward. The first cable clamp below the box must have a distance of 1m. Maximum horizontal misalignment is 0.15m.




Do not bend the 24-core power cable right after the cable gland.

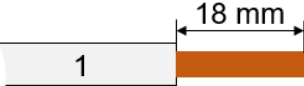


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**5** Strip insulation from the conductors.

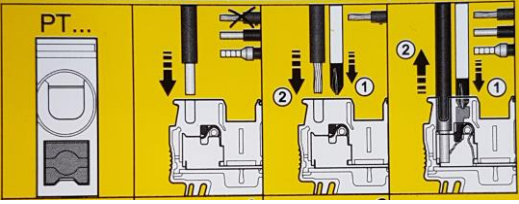


Stripping length is 18 mm



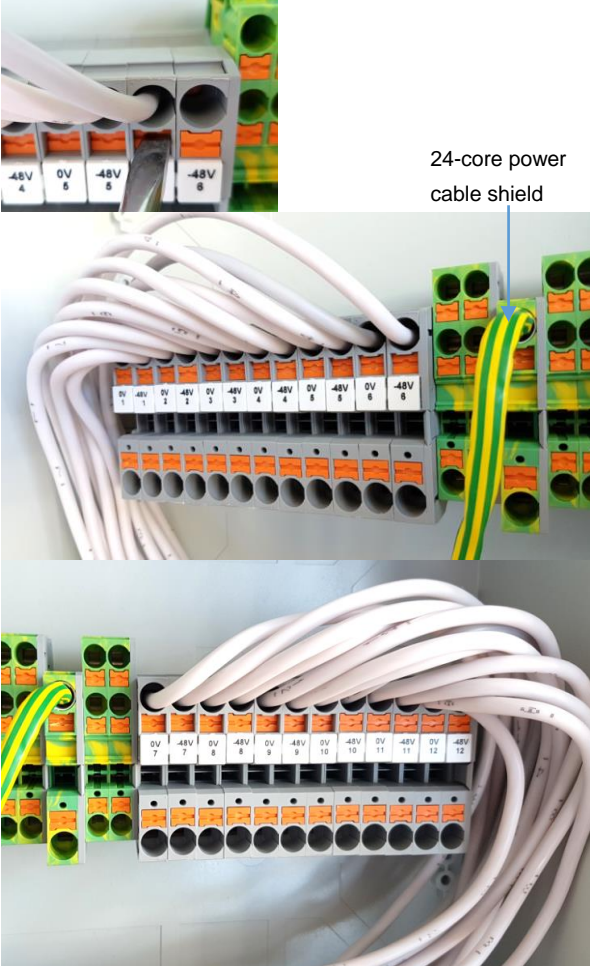
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**6** HUBER+SUHNER power cables have flexible class 5 conductors. To connect the conductor to the PT10 push-in terminal, push-in the orange knob with a medium size screw driver.



Recommended connection allocation:

Cond. no.	Terminal	Cond. length	Cond. no.	Terminal	Cond. length
1	1 0V	34 cm	13	7 0V	34 cm
2	1 -48V	35 cm	14	7 -48V	35 cm
3	2 0V	36 cm	15	8 0V	36 cm
4	2 -48V	37 cm	16	8 -48V	37 cm
5	3 0V	38 cm	17	9 0V	38 cm
6	3 -48V	39 cm	18	9 -48V	39 cm
7	4 0V	40 cm	19	10 0V	40 cm
8	4 -48V	41 cm	20	10 -48V	41 cm
9	5 0V	42 cm	21	11 0V	42 cm
10	5 -48V	43cm	22	11 -48V	43cm
11	6 0V	44 cm	23	12 0V	44 cm
12	6 -48V	45 cm	24	12 -48V	45 cm
			Shield	Ground	20 cm

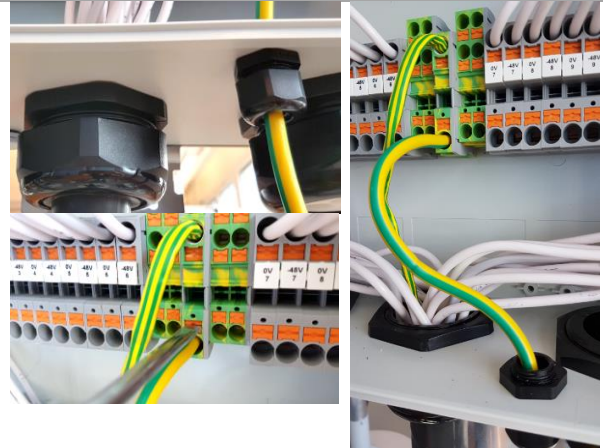


24-core power cable shield

**Connection of the earthing cable**

There is one pre-installed M20 cable gland for the earthing cable, which is suitable for cable with a diameter of 6 – 12 mm (1 x 16 mm<sup>2</sup>)

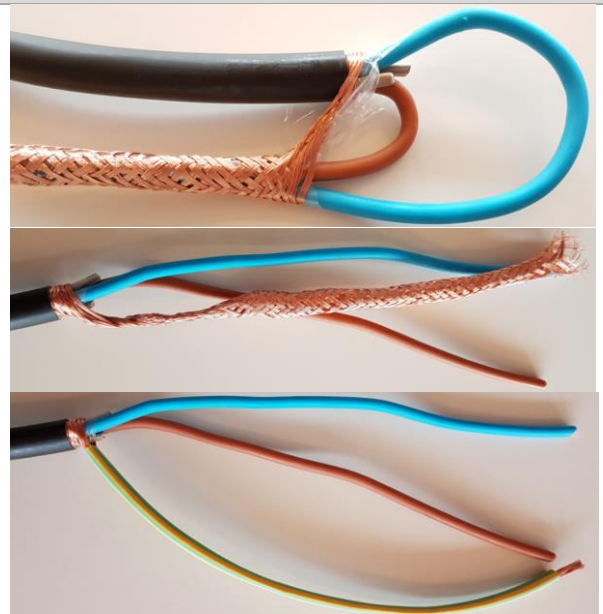
- 7 Feed the grounding cable through the M20 cable gland.
  
- Connect the grounding cable to the yellow/green terminal
  
- Tight the cable gland



**Connection of the power jumper cable**

- 8 Strip jacket, length approx. 20cm  
Disentangle the braided copper shield and twist the single wires. Optional: Pull the conductors through the braid to avoid to disentangle the braided copper shield.
  
- Use a yellow/green shrink tube for the twisted wires.  
Cut the conductors to the recommended length as shown on below table.

Conductor number	Terminal	length
blue	x 0V	15-20 cm
brown	x -48V	15-20 cm
shield	ground	15-20 cm



- 9 The PTTA box is equipped with 2 M75 cable gland for each 6 power jumpers. The 2 M75 cable glands have a 6-fold seal suitable for:  
HUBER+SUHNER power cable item no. . 85092557  
2 x 16 mm<sup>2</sup>, CPR, Ø 17.6 mm.
  
- Remove the 12 blind plugs from the M75 cable gland on the left and right side of the box.
  
- Feed the 12 power jumpers through the cable glands.
  
- Tight the cable glands.



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HUBER+SUHNER power cables have flexible class 5 conductors. To connect the conductor to the PT10 push-in terminal, push-in the orange knob with a medium size screw driver.

Recommended connection allocation:

Jumper / RRH number and conductor color	Terminal	Jumper / RRH number and conductor color	Terminal
1 blue	1 0V	7 blue	7 0V
1..brown	1 -48V	7..brown	7 -48V
1 shield	ground	7 shield	ground
2 blue	2 0V	8 blue	8 0V
2..brown	2 -48V	8..brown	8 -48V
2 shield	ground	8 shield	ground
3 blue	3 0V	9 blue	9 0V
3..brown	3 -48V	9..brown	9 -48V
3 shield	ground	9 shield	ground
4 blue	4 0V	10 blue	10 0V
4..brown	4 -48V	10 brown	10 -48V
4 shield	ground	10 shield	ground
5 blue	5 0V	11 blue	11 0V
5..brown	5 -48V	11.brown	11 -48V
5 shield	ground	11 hield	ground
6 blue	6 0V	12 blue	12 0V
6..brown	6 -48V	12 brown	12 -48V
6 shield	ground	12 shield	ground

**Close PTTA box cover**

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Close PTTA box with the 2 latch locks

