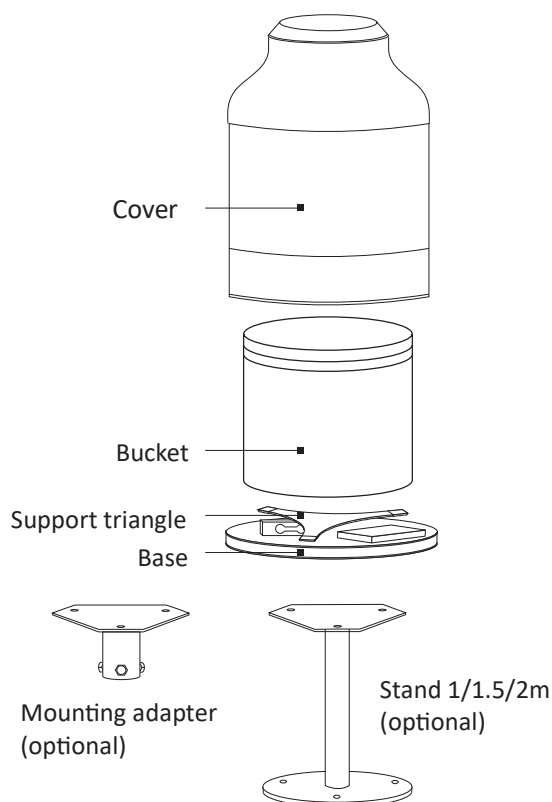


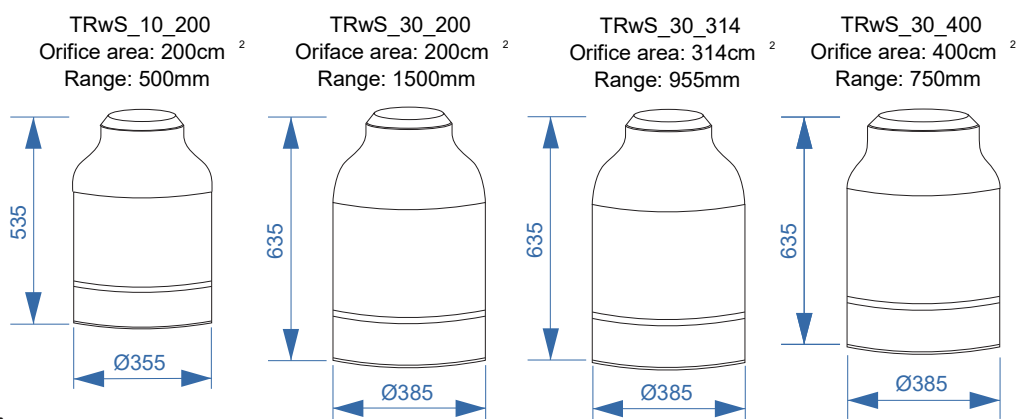
INSTALATION GUIDE TRWS_10 & TRWS_30

Follow these step-by-step instructions to assemble the TRWS for your precipitation measurement system.

Main Parts:



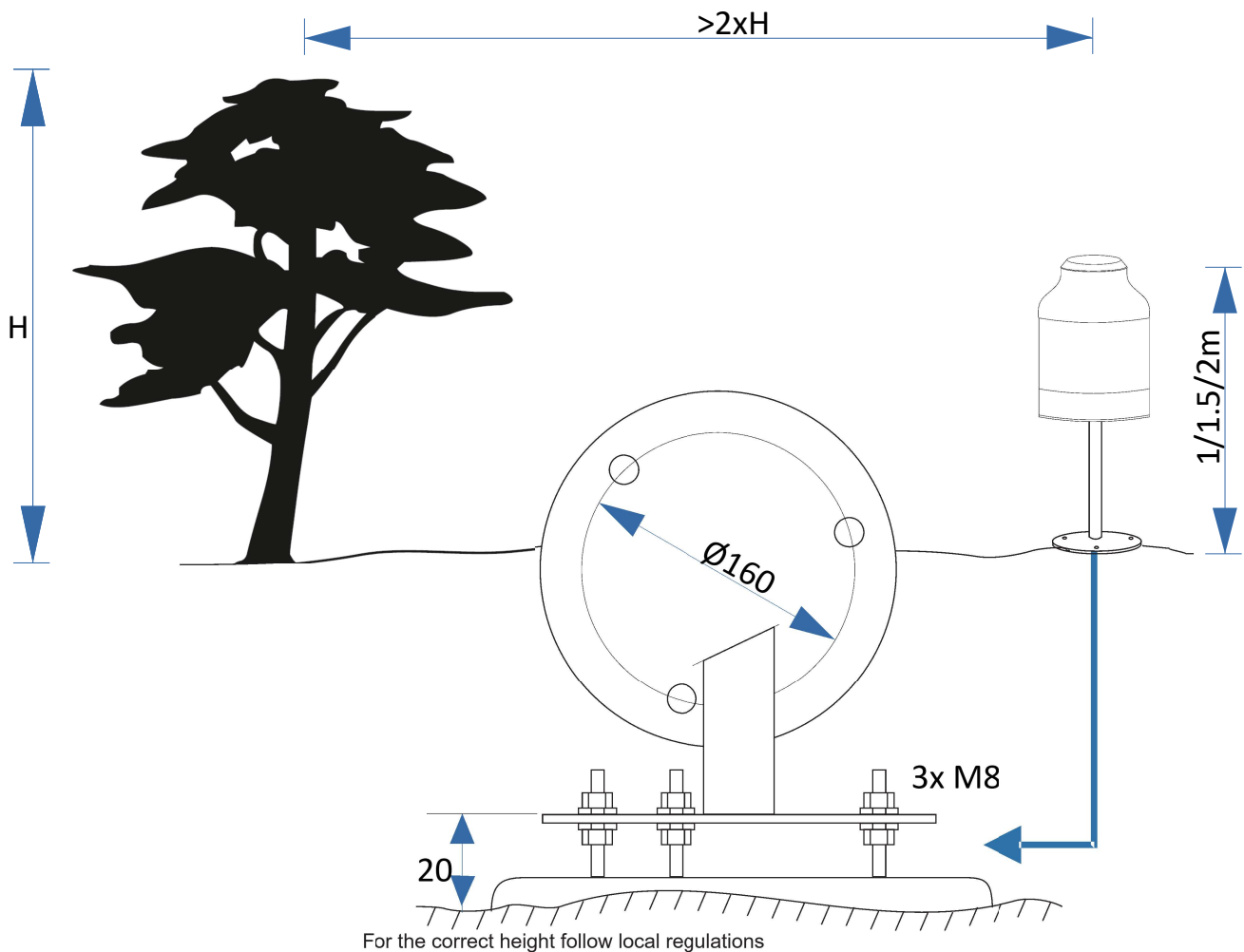
Dimmnsions:



Installation:

Choose an open area for the rain gauge, avoiding overly windy locations. Ensure the distance from the gauge to any obstruction is at least twice the height of the obstruction above the rain gauge's orifice. The height of the orifice from the surrounding terrain should comply with local regulations, typically between 0.5 and 2 meters.

Remove the cover from the rain gauge base plate by loosening the three screws at the bottom edge. Remove the bucket from the base plate before proceeding with the mounting.



1. Mounting on a Stand:

- Prepare a stable concrete base and **attach three M8 bolts** to it (e.g., using wall plugs and hanger bolts).
- **Screw three M8 nuts** onto the bolts and place the lower flange of the stand on them. Note that the lower flange is round, while the upper one is hexagonal.
- **Use a spirit level** to ensure the upper (instrument) flange of the stand is level in **two perpendicular directions**. Once level, **secure the stand** with three additional nuts and washers. Do not tighten them fully at this stage.
- **Attach the base to the stand** using three M8 screws. Check the horizontal position of the support triangle with the spirit level and adjust using the lower flange nuts if necessary.
- **Tighten all the nuts** securely.

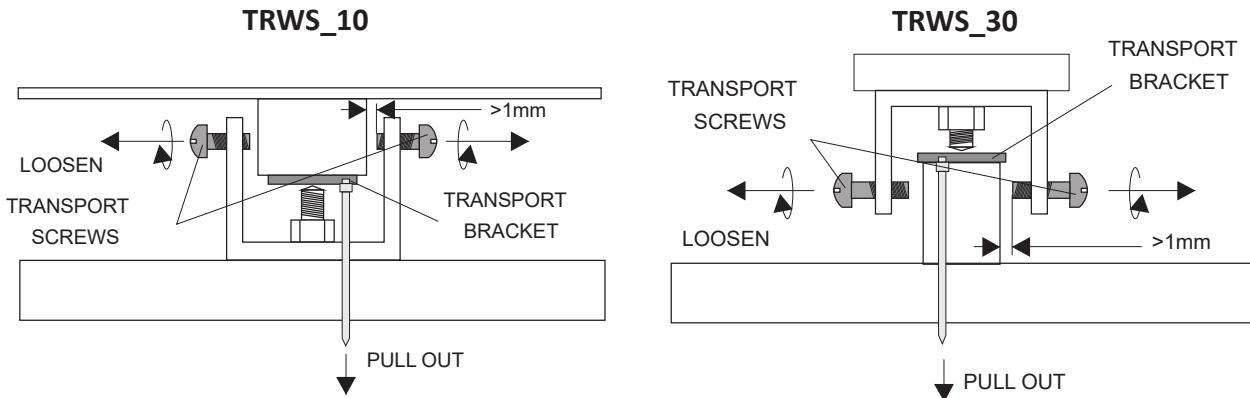
2. Mounting on a Mounting Adapter:

- **Prepare a vertical pole** with a diameter of 50-60 mm, securely fixed to a stable base.
- Place the mounting adapter onto the pole. Do not tighten the fixing screws yet.
- **Attach the base to the adapter** using three M8 screws. **Level the base using a spirit level**, adjusting the fixing screws of the adapter. Ensure the support triangle is level by placing the spirit level on both ends.
- Once the base plate is level, **tighten the mounting adapter's fixing screws** securely.

3. Removing Transport Screws and Bracket:

The rain gauge is fitted with two transport screws and a transport bracket to protect the load cell during transport.

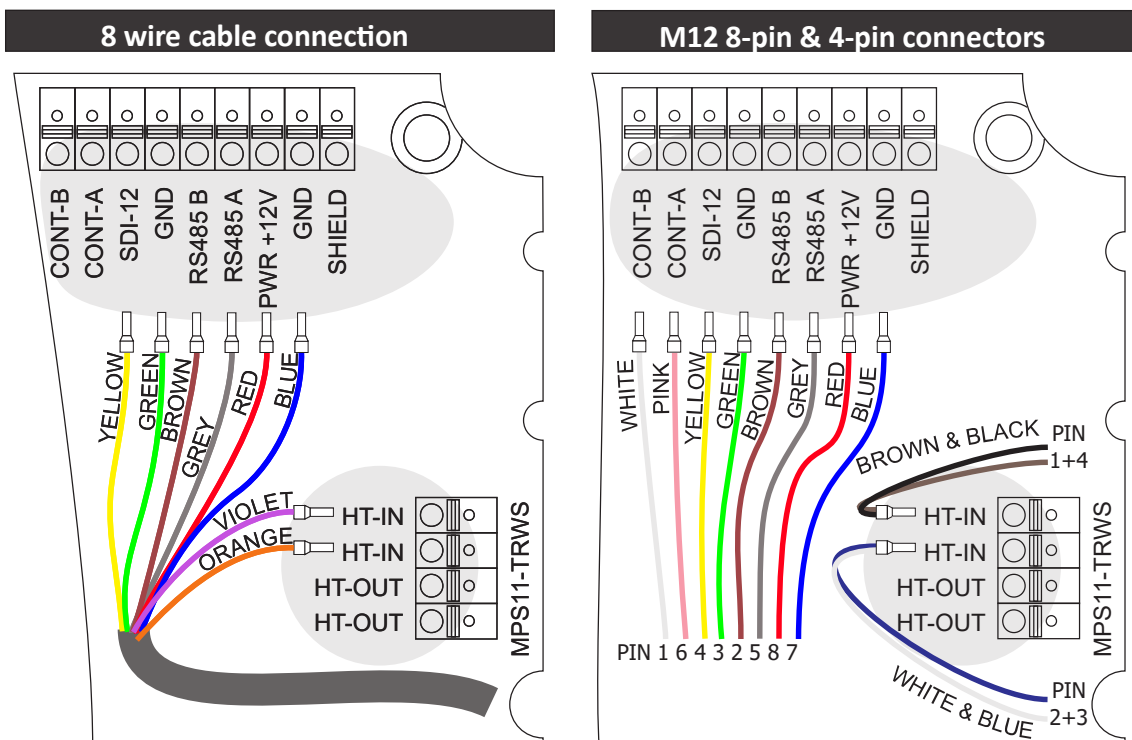
- Loosen both screws to create a gap of at least 1 millimeter between the screw tip and the gauge body.
- remove the transport bracket.



4. Final Assembly:

- Reattach the bucket and the enclosure.
- Ensure the enclosure is correctly positioned: the male part of the heating connector must be plugged into the female connector located at the base plate of the rain gauge.
- Secure the enclosure by tightening the three screws around the lower edge.
- Use your finger to check the assembly: **the bucket should not touch the enclosure.**

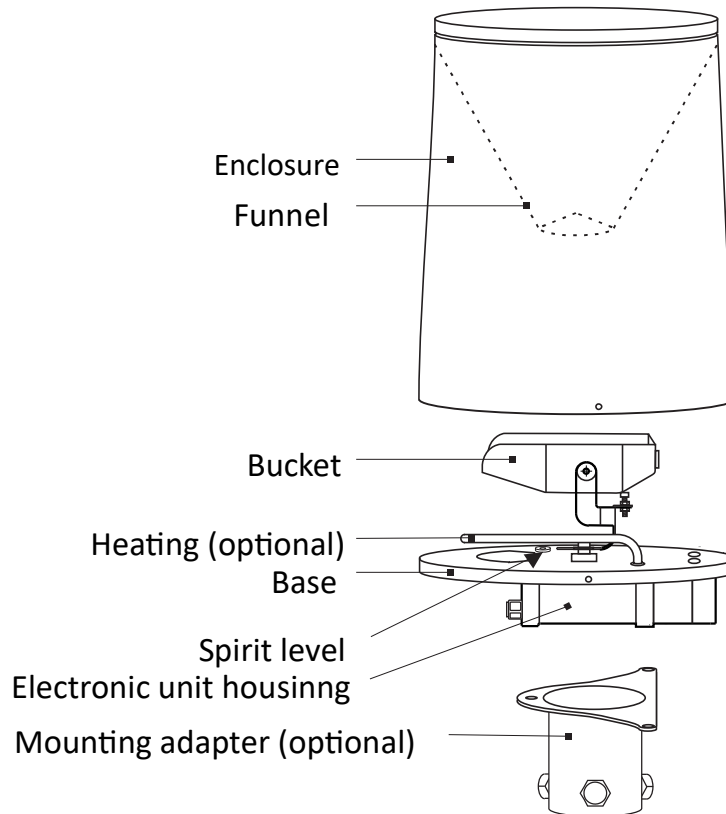
5. Cable connection:



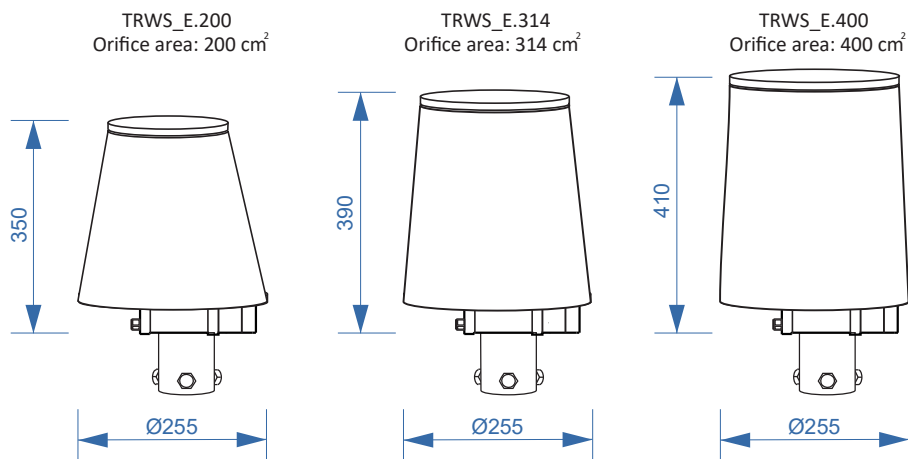
INSTALATION GUIDE TRWS_E

Follow these step-by-step instructions to assemble the TRWS for your precipitation measurement system.

Main Parts:



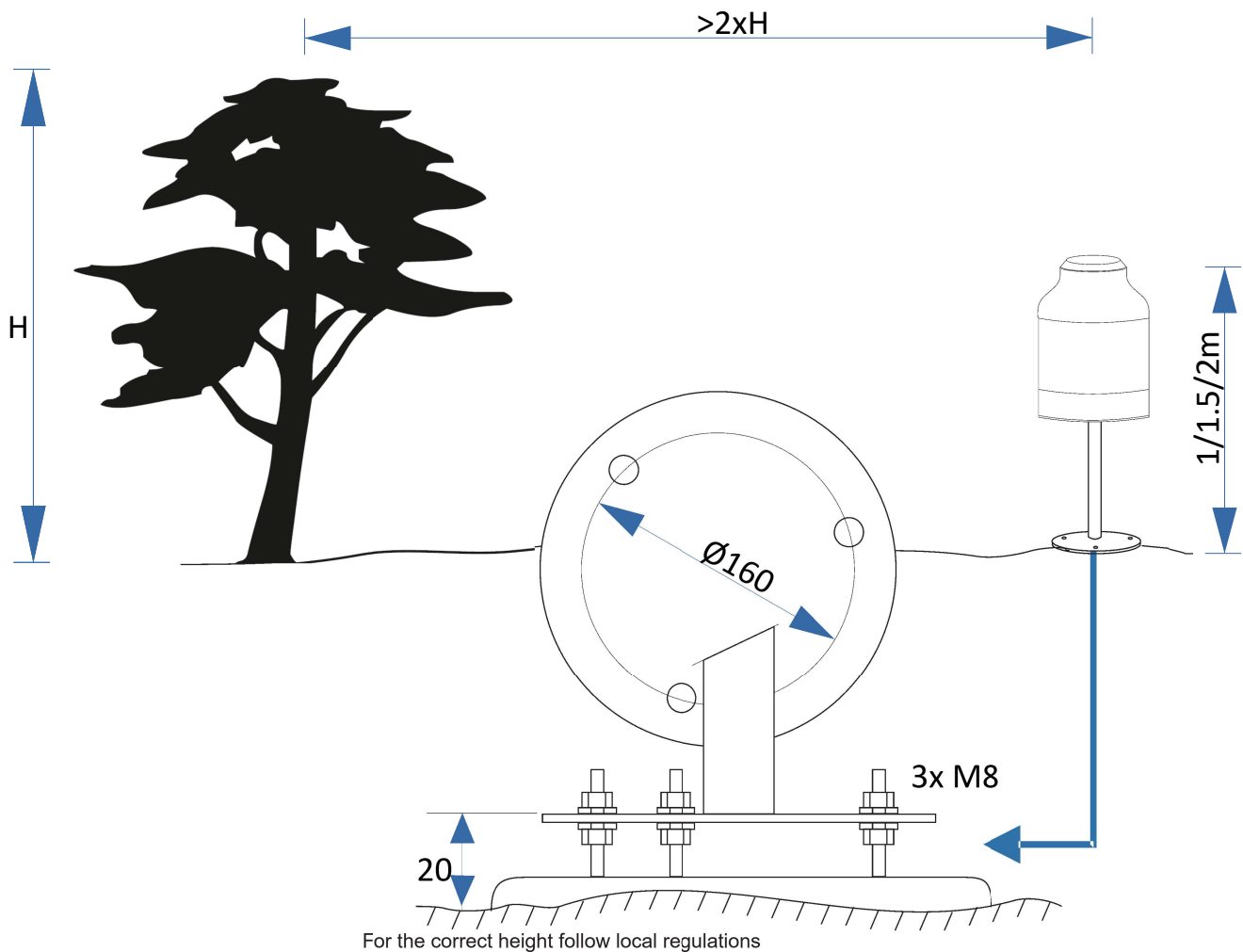
Dimmnsions:



Installation:

Choose an open area for the rain gauge, avoiding overly windy locations. Ensure the distance from the gauge to any obstruction is at least twice the height of the obstruction above the rain gauge's orifice. The height of the orifice from the surrounding terrain should comply with local regulations, typically between 0.5 and 2 meters.

Remove the cover from the rain gauge base plate by loosening the two screws at the bottom edge.



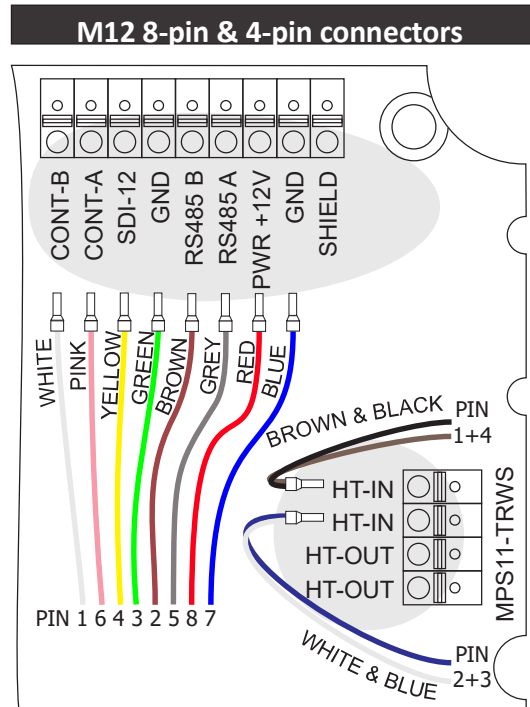
1. Mounting on a Mounting Adapter:

- **Prepare a vertical pole** with a diameter of 50-60 mm, securely fixed to a stable base.
- Place the mounting adapter onto the pole. Do not tighten the fixing screws yet.
- **Attach the base to the adapter** using three M8 screws. **Level the base using a spirit level**, adjusting the fixing screws of the adapter. Ensure the support triangle is level by placing the spirit level on both ends.
- Once the base plate is level, **tighten the mounting adapter's fixing screws** securely.

2. Final Assembly:

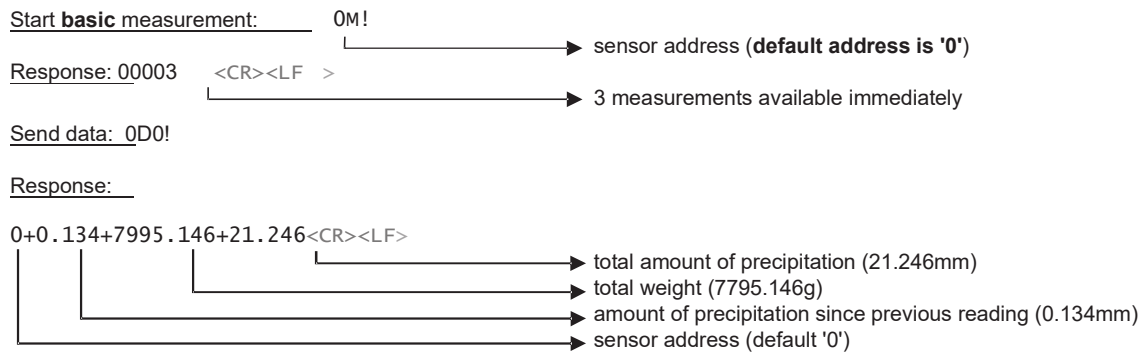
- Reattach the bucket and the enclosure.
- Ensure the enclosure is correctly positioned: the male part of the heating connector must be plugged into the female connector located at the base plate of the rain gauge.
- Secure the enclosure by tightening the three screws around the lower edge.
- Use your finger to check the assembly: **the bucket should not touch the enclosure.**

3. Cable connection:



Data protocols & Applications

SDI-12 protocol



ModBus RTU/ASCII (RS-485)

Factory-set communication parameters: 9600,8,E,1

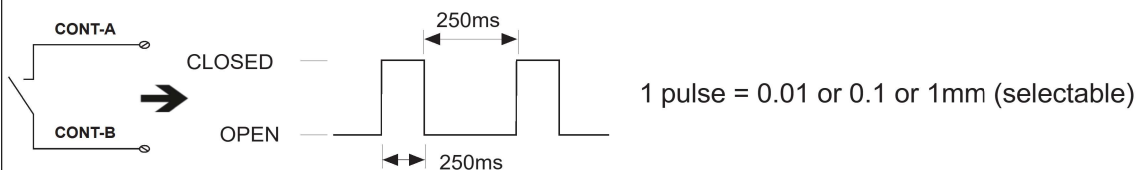
Factory-set device address: 1

Function code: 04 (read input registers)

Some important register addresses: 388 = amount of precipitation [mm]
386 = weight of the bucket content [g]
400 = temperature [°C]

All registers are of type float, read two consecutive registers to get a value.

Pulse output



AiO Application for Windows

Web application link for Windows:
<https://app.mps-system.sk/main>

Note: The online web tool is compatible only with Microsoft Edge and Chrome browsers.

AiO Application for Android & iOS



Default password: S/N of the instrument left-padded with zeroes to 6 characters.

TRWS Accuracy test

Link to access the online web-based testing tool for TRWS rain gauges, allowing you to verify and ensure precise measurement accuracy:

<https://accuracy-test-trws.mps-system.sk/>

Note: The online web tool is compatible only with Microsoft Edge and Chrome browsers.