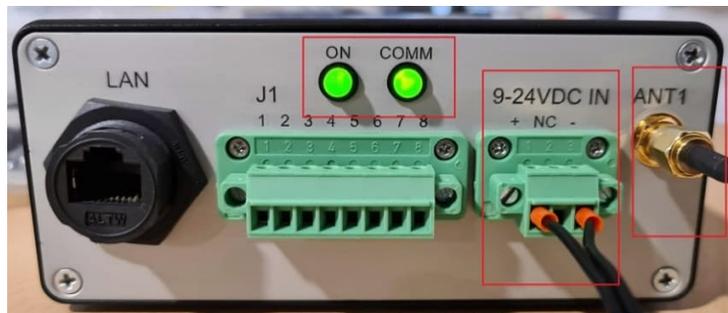


Getting started with CAL-EDGE-8 device

Thank you for purchasing CALMS device. Further in this document you will find how to start using it.

CONNECTING ANTENNA & POWER SUPPLY

1. Connect the **antenna** to CAL-EDGE-8. Install antenna connector to »ANT1« port and screw it firmly. Place antenna where signal reception is best (near the window, higher place,...).
2. Connect the device to **power supply**. Tight the screws well, so that the connector can't fall out of the header.
Device has two LEDs. »ON« led turns on when the device successfully boots. Usually it takes 10-20sec. »COMM« LED turns on when device successfully connects to the internet. It can take up to 10 minutes, depends on mobile signal strength.



START USING CALMS APPLICATION

1. Device will start capturing data after it is configured on CALMS → Open CALMS app.calms.com
2. Create new »System«, add device into the system and connects sensors to it. (<https://docs.calms.com/getting-started/web/setting-up-your-system/>)

CONNECTING ANALOG SENSORS

ANALOG INPUTS

1. Device has eight (8) analog inputs 4-20mA, labeled from A1 to A8.
2. Connect sensors accordingly to configuration you've done on CALMS system setup.
3. Use extension cables if you need longer distances.



CONNECTING CABLES TO CAL- EDGE-8

Step 1.
Connect cables on white dots.



Step 2.
Tighten the cable with nut.



CONNECTING ACTIVE AND PASSIVE SENSORS USING OPEN-END CABLES

Open-end cables (CAB-SENSOR) are used to connect your own custom 4-20mA sensors to CAL-EDGE-8 device.

NOTE: When using open-end cables to connect your own custom sensors double check the connection. Improper connection can damage the device.

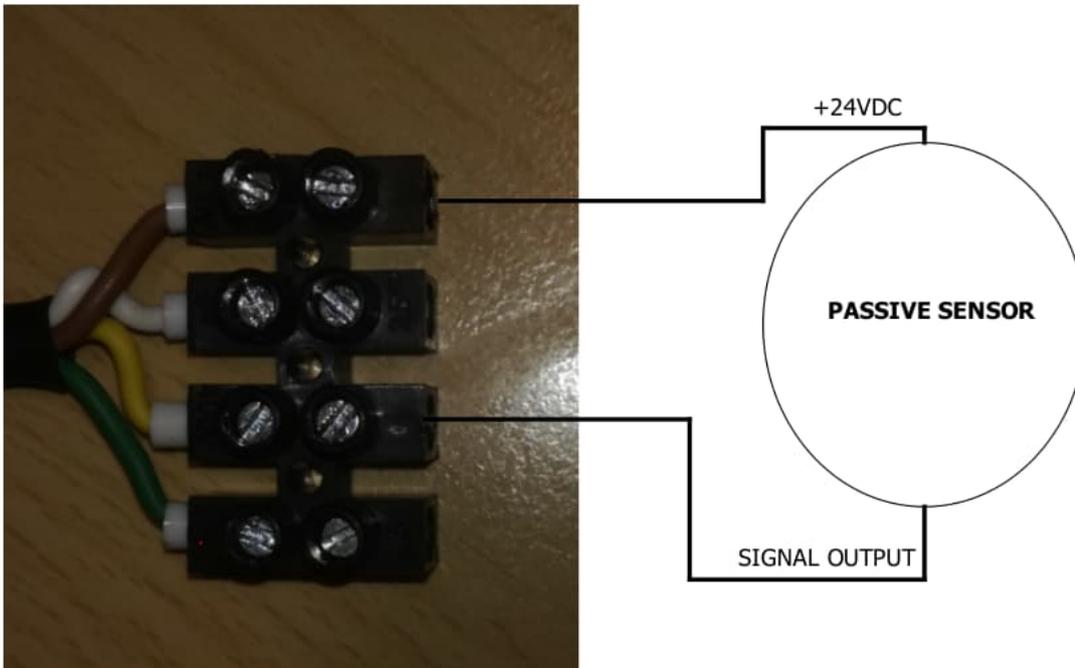
Passive (2-wire) sensors are powered via current loop and thatswhy they need only two wires.

Active sensors (3-wire or 4-wire) are powered seperately and thatswhy they need 3 or 4 wires.

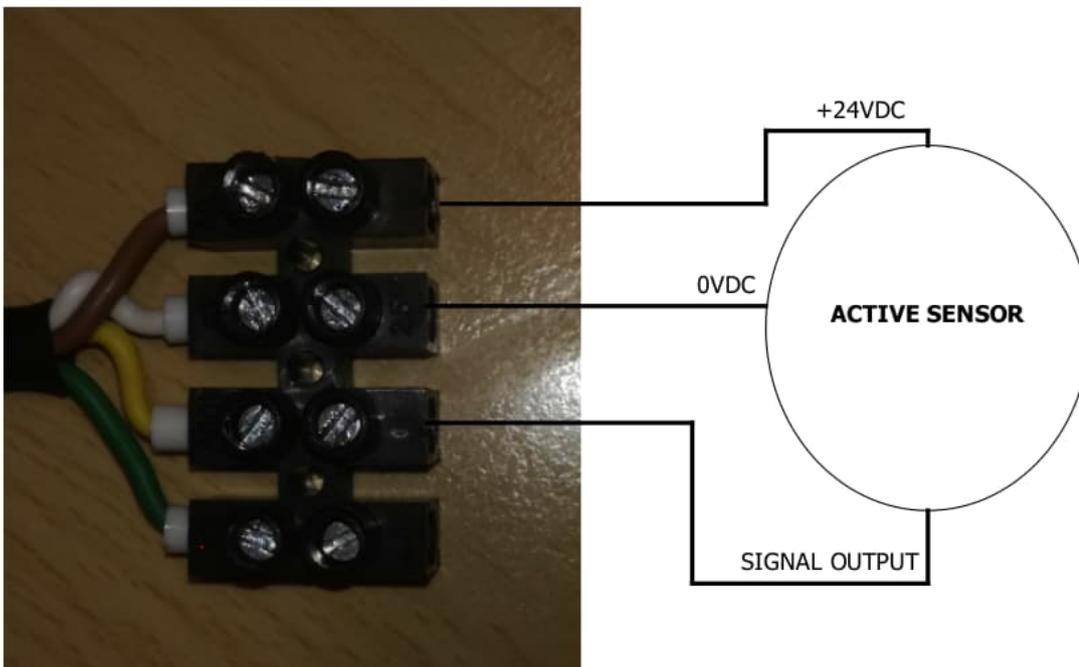
Before wiring, also check the table below.

| Color coded wire on the open-end cable | Number coded wire on the open-end cable | Description |
|--|---|---|
| Brown | 1 | 24VDC – used to power supply the sensor |
| White | 2 | 0VDC |
| Yellow | 3 | 4-20mA signal |
| Green | 4 | Not used |

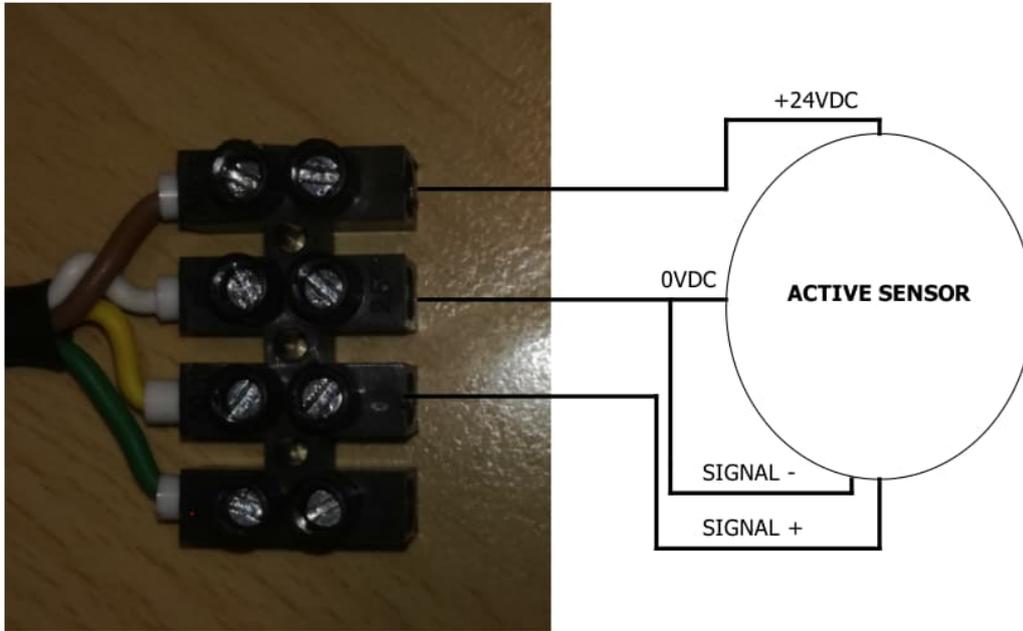
Wiring passive - 2 wire sensor



Wiring active - 3 wire sensor



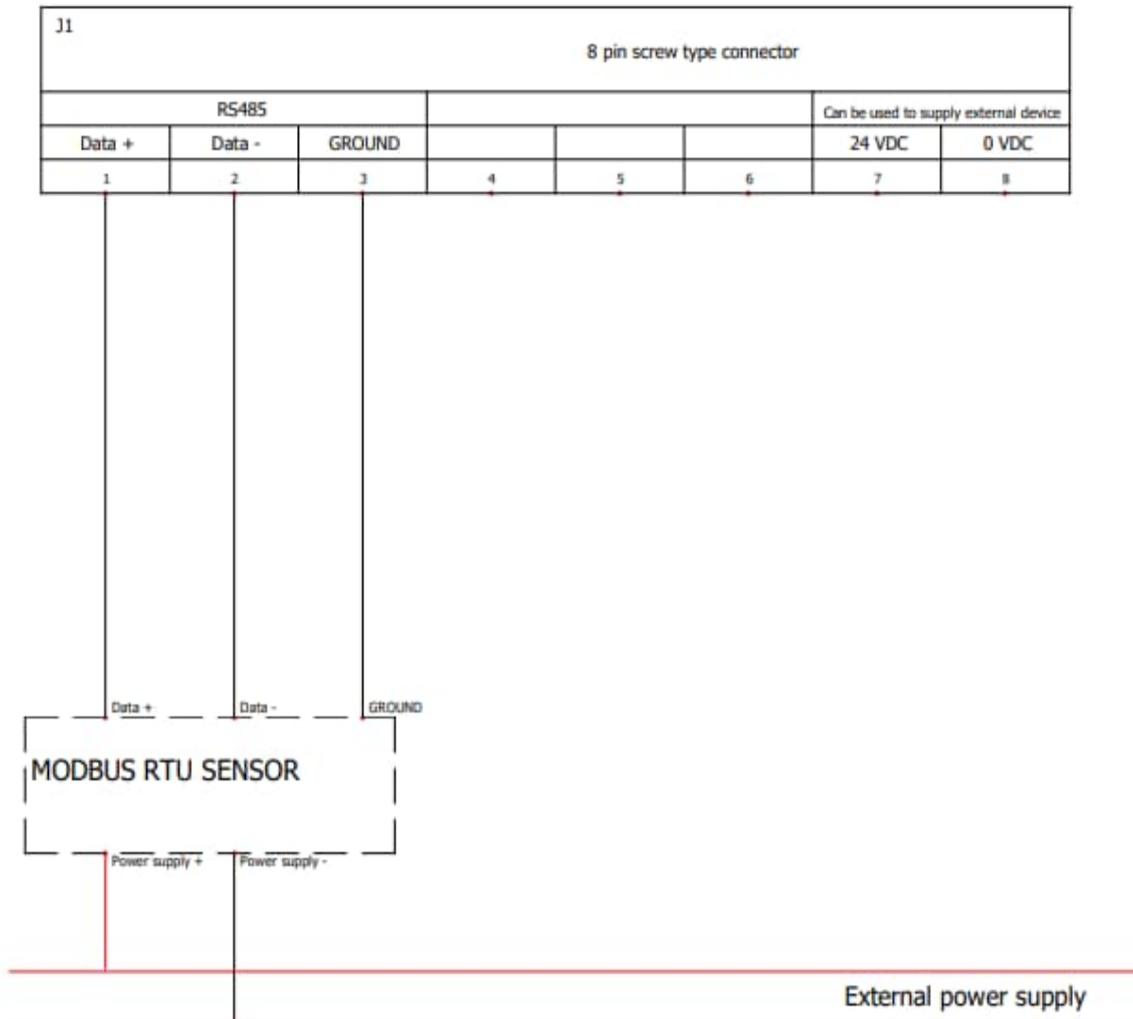
Wiring active 4 wire sensor



MODBUS RTU SENSORS

1. Device has one RS485 port (»J1« terminal) where MODBUS RTU sensors are connected. (check the picture below)
2. Connect sensors accordingly to configuration you've done on CALMS system setup. **Double check the communication parameters and sensor MODBUS addresses!**
3. Follow the installation guide provided on CALMS (https://docs.calms.com/resources/field_installation_setup_guide_template/)
4. Check sensor values on the »**Device dashboard**« page.

NOTE: Be careful when wiring sensors to device. Improper connection may lead to device damage. Always make sure to screw plug to the header to avoid unintentional disconnection!



Rogowski coil connected to EDGE-DEVICE-0 via Modbus.



- Red wire = +24V DC
- Blue wire = 0V DC
- Green wire = Data + (A)
- Yellow wire = Data - (B)

MODBUS TCP SENSORS

1. Device has one ethernet port (»LAN«) where MODBUS TCP sensors are connected.
2. Device receives its static IP address (**192.168.0.102**) after start-up if there is not DHCP server in the network.
3. Connect sensors accordingly to configuration you've done on CALMS system setup. **Double check the sensors IP adresses!**
4. Follow the guide provided on CALMS
(https://docs.calms.com/resources/field_installation_setup_guide_template/)
5. Check sensor values on the »**Device dashboard**« page.

TROUBLESHOOTING

- **»ON« LED is constantly off:**
 - check the power supply. Device accepts 9-24VDC.
 - Contact CALMS support
- **Device does not want to connect to the internet (»COMM« LED is off):**
 - Connect the antenna firmly on »ANT1« port.
 - Place the antenna near windows and on higher places.
 - Reboot the device.
- **Data from analog sensors is not visible on CALMS:**
 - Check that device has internet connection and it is ONLINE on CALMS.
 - Go to »Device dashboard« page and check the device inputs for data.
 - Check the sensor wiring.
 - Measure the 4-20mA loop current.
- **MODBUS communication is not working:**
 - Follow the installation guide provided on CALMS
(https://docs.calms.com/resources/field_installation_setup_guide_template/)
 - Check the configuration on CALMS (communication parameters)
 - Check the device logs on »Device dashboard« page.

For more instructions and troubleshooting scan the QR code!



If you have any difficulty, please contact support team for further assistance.

Contact: support@calms.com

When contacting support team, please send them the serial number of your device (written on back of device).