

CALMS d.o.o.

Getting started with CAL-EDGE-0 device



Product:

CALMS CAL-EDGE-0 monitoring device

Release date:

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1. Introduction

This document provides a practical introduction to working with the **CAL-EDGE-0 device**, designed to support technicians during installation, setup, and initial configuration. It includes essential information, wiring guidelines, and configuration tips to ensure a smooth and reliable integration of the CAL-EDGE-0 into your system.

The CAL-EDGE-0 device is a highly sophisticated and affordable remote data logger for compressed air systems. Device connects directly to CALMS web application which provides real time access to data from any web browser for any end user and their service partner. This guide is focused on helping field technicians understand the basics, avoid common mistakes, and get the device up and running as quickly and efficiently as possible.

Whether you're setting up the CAL-EDGE-0 for the first time or assisting with on-site troubleshooting, this guide will serve as a quick reference to ensure proper handling and configuration.

2. CAL-EDGE-0 device

The **CALMS CAL-EDGE-0** is a plug&play device, the easiest and cheapest solution used for remote monitoring and auditing, alarming and reporting, designed and configured for majority of compressors and sensors on the market.

Purchasing the CAL-EDGE-0 includes:

CAL-EDGE-0



CALMS-EDGE-0 survey device LTE 4G with Modbus RTU & TCP/IP;
Portable measurement device with Ethernet, RS485 and CAN interface connection
Supported protocols: Modbus RTU, TCP/IP, OPC UA (without sensors)
3G/4G Modem SMA with external antenna (with SIM card provided EU/Global);
1 x Ethernet port 10/100 Base-T (LAN);
1x RS485 port and 1x CAN port;
Internal memory eMMC 8GB, optional µSD 256 GB
Ambient temperature range: -25°C to +60°C
Power Supply included 24VDC, 2,1A, 50W;
Approval UL / CE / FCC Class A

3. Mechanical and electrical installation

For starting up the device, it needs to be powered on, connected to a **power supply**. The device is powered with 24VDC. When purchasing the device it comes with a power supply included.

When successfully powering on the device the **Status** LED starts blinking.

To ensure proper connection, please check the electrical schematic down below.

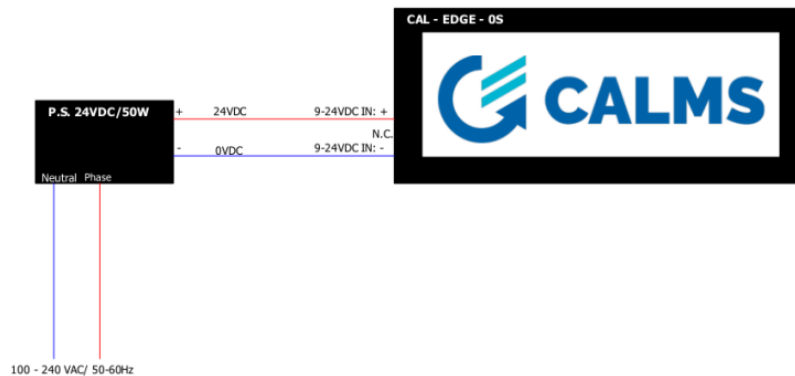


Photo 1: Electrical schematic of the CAL-EDGE-0 device

Next is to get the device online. That can be done by connecting an antenna or by connecting the device to LAN.

- If you're connecting an antenna, you need to connect it to **ANT1** and screw it firmly. For best possible signal reception we recommend you mount it as high as possible, or near a window.
- If you're connecting it to LAN, plug in the ethernet cable into the ethernet port on the device labeled with **LAN**.



Below is a table of the terminals on the device and what they all represent:

Terminal	Description
LAN	Used to connect device to any other TCP/IP protocol capable device (MODBUS TCP, ADS...). Can be used to connect device on internet (DHCP server must be installed in the network!)
LED RS485	If MODBUS communication between sensor and device is established, LED flashes rapidly (red color). If LED is not flashing communication is not established.
LED STATUS	- On -> continuous voice call state 125ms ON, 125ms OFF -> Data transmission 1800ms ON, 200ms OFF -> Idle state 1800ms OFF, 200ms ON -> Network searching
CAN-BUS/RS485	Terminal used to connect RS485 fieldbus. To properly connect the sensor check the electric scheme!
DCIN	Power supply terminal. Device accepts voltage 24VDC.
ANT1	Used for antenna connection with SMA connector. ANT1 is MAIN terminal! Connect antenna to ANT1 terminal! Mount antenna on the place with best signal reception possible!
ANT2, ANT3, ANT4, ANT5, PROG, SERIAL	Not used!

4. Device configuration on CALMS

To view the captured data the device has to be configured on the CALMS application.

Firstly, open the CALMS application. Open the following link : <https://calms.com/>

Create a new system, add the device into the system and connect it to your sensor. Open the following link for more detailed information on how that can be done: <https://docs.calms.com/introduction/getting-started/web/setting-up-your-system/>

Connecting MODBUS RTU sensors to the CAL-EDGE-0 device

1. Device has one RS485 port where MODBUS RTU sensors are connected.
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/calms-device-systems-guide/sensor_notes/)
4. RS485 LED is blinking red if the device communicates with connected sensors.
5. Check sensor values on the **Device dashboard** page.

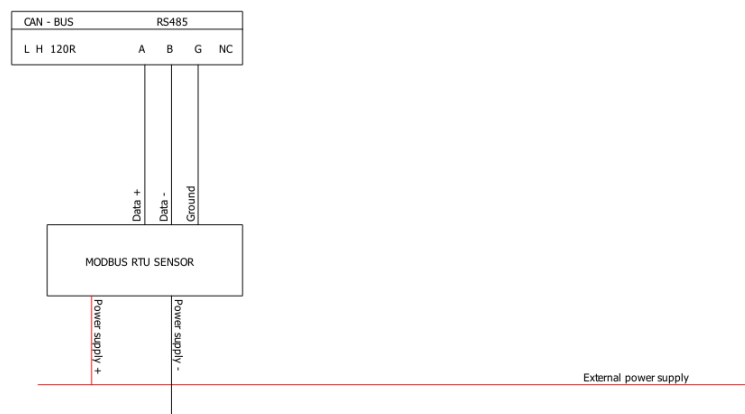


Photo 2: Connection of MODBUS sensors to the CAL-EDGE-0 device

Connecting MODBUS TCP sensors to the CAL-EDGE-0 device

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 addresses!**
4. Follow the guide provided on CALMS (https://docs.calms.com/calms-device-systems-guide/sensor_notes/)
5. Check sensor values on the »**Device dashboard**« page.

5. Troubleshooting

Below are some troubleshooting tips in case you encounter some of these situations:

- **Status LED is constantly OFF:**

Check the power supply. Device accepts 9-24VDC.

- **Device does not want to connect to the internet:**

Connect the antenna firmly on »**ANT1**« port.

Place the antenna near windows and on higher places.

Reboot the device.

- **MODBUS communication is not working:**

Follow the installation guide provided on CALMS (https://docs.calms.com/calms-device-systems-guide/sensor_notes/)

Check the configuration on CALMS (communication parameters)

For more instructions and troubleshooting scan the QR code!





6. Contact and support

If you experience any issues that cannot be resolved using this manual, please contact the CALMS support team support@calms.com.

For technical assistance, please, provide the following information when reaching out:

- Serial number (located on the device label)
- Description of the issue
- Steps already taken to resolve the issue



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