

Installation Instructions

For Emlite EMA1.az Single Phase GPRS Meter



It is recommended that this electric meter is installed by a competent electrician in accordance with BS7671 and the IET Code of Practice

Before Installation

1. Establish a suitable location for the meter where it will have sufficient GSM signal quality. You should use a GSM signal analyser as near as possible to where the meter will be installed to check for signal quality on at least 1 network.

The meter has a network roaming SIM card that will lock onto the strongest available UK network operator (O2, T-Mobile, Orange and Vodafone).


Mounting the meter

2. The meter must be securely mounted to a wall or meter board.
 - a. Unscrew and remove the lower-front meter panel to expose the terminal connections.
 - b. Mount the meter using a suitable round headed screwdriver that is fitted to the wall or meter board. The width of the slot in the hanging bracket is 5mm.
 - c. The screw depth should be adjusted so that the head fits snugly under the hanging point and the meter is held firm against the wall or board
 - d. Finally the meter should be firmly screwed to the wall or board using the two mounting holes located under the terminal cover
3. The meter should be installed indoors or in an IP rated cabinet. The meter should not be in an enclosed metal container unless an external antenna is being fitted.

Confirming GSM Communications


6. After installing the meter, it can take up to 5 minutes for the meter to find a GSM network. Press the 'Display Cycle' button to show the GSM signal quality. If the display shows signal less than 14 you will need to install an external antenna to improve the signal. The external antenna connects to the SMA socket on the side of the unit. Recheck the GSM signal after installing the signal booster.
7. If the signal is still below 14 the location may not be suitable for the installation of this meter.
8. Once you have established that there is sufficient GSM signal quality, complete the system installation.
9. After installation the LED lights on the top half of the meter on the communications module will flash in the following manner.


The unit is powering up:

Green LED:  ON 4 seconds – OFF 4 seconds


Red LED:  OFF


The module is turning on:

Green LED:  ON 1 second – OFF 1 second

Red LED:  ON 1 second – OFF 1 second


The module is reading the SIM card ID:

Green LED:  ON 1 second – OFF 1 second

Red LED:  ON 1 second – OFF 1 second


The module is roaming:

Green LED:  2 flashes per second (approx.)


Red LED:  ON 1 second – OFF 1 second


The modem has registered onto a network (CSD Mode):

Green LED:  Rapid flash

Red LED:  ON 1 second – OFF 1 second

The unit is set up for AutoReg:


Green LED:  Quick FLASH for 6 seconds

Red LED:  Quick FLASH – OFF 4 seconds

Normal Mode of Operation

The modem is in GPRS modem:

Green LED:  Rapid FLASH

Red LED:  Quick FLASH – OFF 4 seconds

The meter will auto-register with the OpenMetrics web portal. It can take up to 10 minutes for the meter to reach GPRS state.

The **OpenMetrics®** Web Portal will update the latest meter readings on the day after meter installation.

Got a question?

For technical queries about an installation or if you have trouble getting a meter to show the signal strength, get in touch with us by calling 01883 460411 or send an email to support@openmetrics.co.uk.

Troubleshooting communication issues with the Emlite meter

1. The internal roaming SIM requires a CSQ signal strength of 14 or more. This is important because even though the meter may communicate at lower readings the service will be intermittent and unreliable. The signal strength should be checked in close proximity to the intended position of the antenna. If possible take the antenna you intend to use and measure with that antenna to your GSM signal analyser. The position is important because the signal can vary dramatically over less than a few cms.
2. No matter how strong the signal may be the unit will still not connect if there is interference from other nearby RF equipment. Check that the intended site for installation is not close to sources of RF interference such as radio transmitters, high current conductors, electric motors, inverters or transformers.

GSM Signal Analyser

