Date: 27/08/2024

Synapses LTE/WiFi modem installation for Kamstrup meter.

Technical data

Current: Normal operation	50 mA
Input Voltage	220 V AC
Modem power interface	Terminal
GSM LTE	Quad-band: 850/900/1800/1900MHz
WiFi	2.4GHz, IEEE 802.11b/g/n protocol
GNSS (GPS)	99 acquisition/33 tracking/210 PRN channels
Extended Temperature:	-40°C ~ +85°C

Figure 1: Meter with terminal cover removed.

Step 1: Modem Power

Install the meter according to the manufacturer specifications. DLMS address must be set to 16 for the base meter.

1. Modem power ,220VAC, is supplied from the meter
    a. Modem Live - **Direct** Meter terminal 1
    b. Modem Neutral - **Direct** Meter terminal 10
    c. Modem Live - **CT** Meter terminal 2
    d. Modem Neutral - **CT** Meter terminal 11

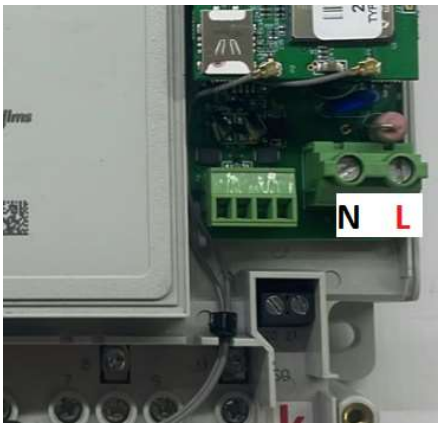
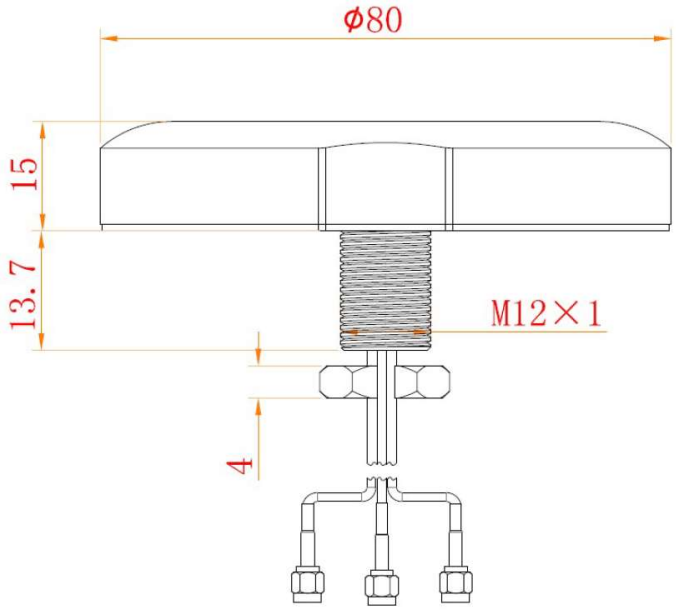


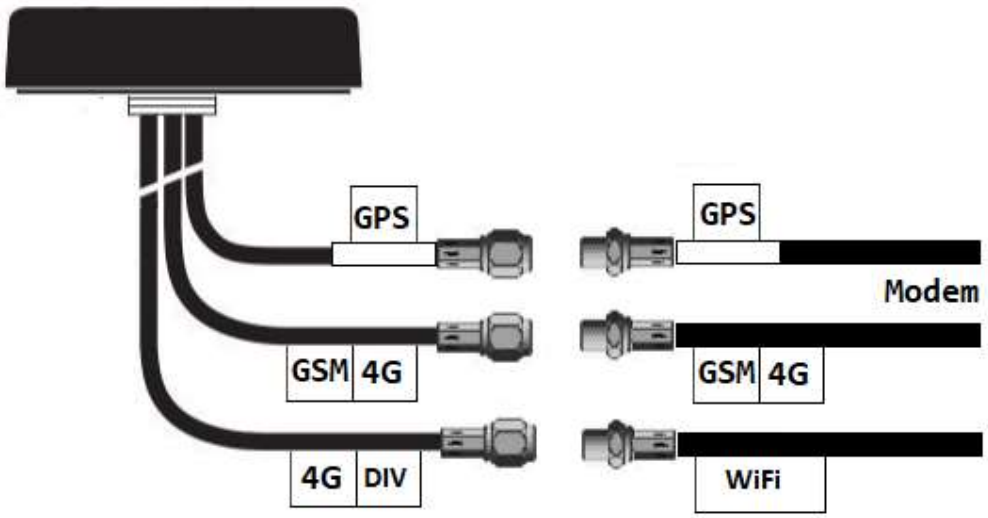
Figure 1: Modem AC connection.

Step 2: GSM Antenna installation & connection:

.SCREW MOUNT COMBO ANTENNA
ASSEMBLY INSTRUCTIONS



- Drill a 5/8" (16mm) hole in flat horizontal surface
- Remove mounting nut & washer and feed coax cable through hole
- Remove bottom plastic liner to expose adhesive
- Press antenna into hole and tighten nut & washer from underneath
- Optionally apply a thin bead of silicone caulk around the antenna rim
- Keep coax lead cable as short as possible & weatherproof all outdoor connectors



1. Antenna must not be mounted inside steel enclosure; best placement is for the antenna to point to clear sky.
2. Connect the Antenna SMA Male connector marked (Black sleeve) GSM/4G to the modem SMA Female connector marked GSM [4G], ensure that the heat shrink is fitted over the cable before fitment off the SMA. **Shrink the heat shrink over the SMA joint to ensure that no metal part is visible.**
3. Connect the Antenna SMA Male connector marked (white sleeve) GPS [or GNSS] to the modem SMA Female connector marked GPS [or GNSS], ensure that the heat shrink is fitted over the cable before fitment off the SMA. **Shrink the heat shrink over the SMA joint to ensure that no metal part is visible.**

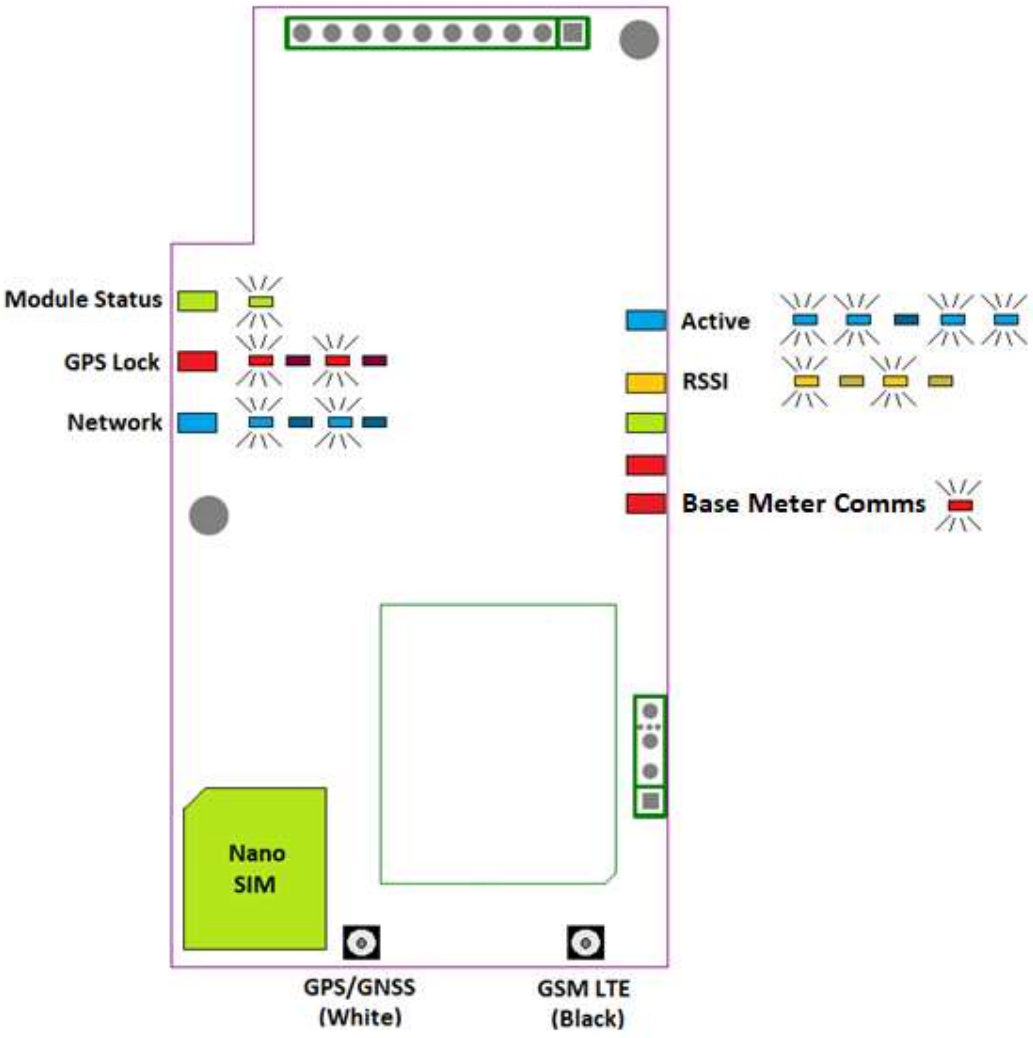
Note: For WiFi use the 4G Div antenna lead.

Step 3:

Power the meter up. Take care as the terminal cover is open and the terminals will be live.

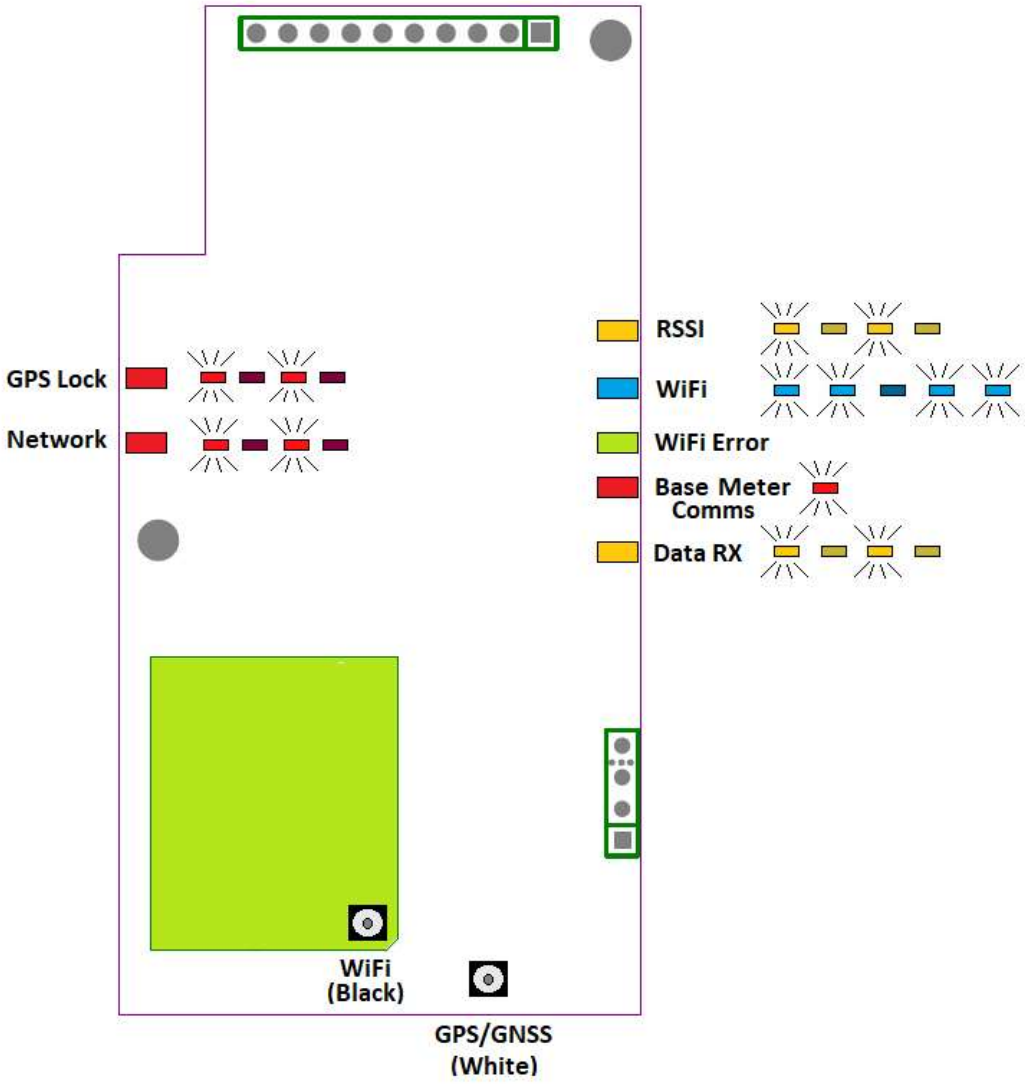
Step 4: Check LEDs

LTE



Note: base meter LED Solid ON – reading meter

WiFi



Note: base meter LED Solid ON – reading meter

Step 5: Check current direction (import / export) on Meter LCD.

Step 6:

Power the meter down. Close the terminal cover. Ensure that the antenna fly leads are in the slot (modem to terminals) so that the terminal cover does not squeeze the fly leads when closed.

Power the meter up.

End