

AM100 AS230 GSM/GPRS Communications



Features

- GSM and GPRS communications
- IEC 62056-21, transparent link
- Self registration on installation
- Transmission speed 9600 baud
- Immediate alarm notification
- Supports Static and dynamic IP addresses
- Scheduling facility to support GPRS initiated comms
- LED support for installation procedure
- Electrical isolation from meter
- Separately sealed from metrology
- Internal antenna
- Optional connection for external antenna
- Over the Air Programming (OTP)
- Posts GSM signal strength on AS230 meter
- Ease of Installation
- 230V Power Supply (Supplied from AS230 Meter)

The AM100 GSM/GPRS communications module has been designed specifically for use with the Elster AMI AS230 electricity meter.

The module forms part of the AMI (Advanced Metering Infrastructure) that allows meter data to be passed back to the utility at regular intervals or on request. The module supports remote downloads of firmware, increasing functionality. The AM100 module also has the facility to self register and report meter alarms.

The module is supplied as standard with an internal antenna. For areas of poor reception, a module with a connection for an external antenna can be provided as an alternative. A future development may include a HAN interface to be fitted to the same circuit board.

The modules can be used in any area that provides GSM coverage and can be used with the Service Provider of your choice.

AM100 Module



Communications

The communications interface supports both GSM and GPRS. The modem supports static and dynamic IP addresses. Communications across the GSM and GPRS channel is based on a transparent link utilising IEC 62056-21 protocol.

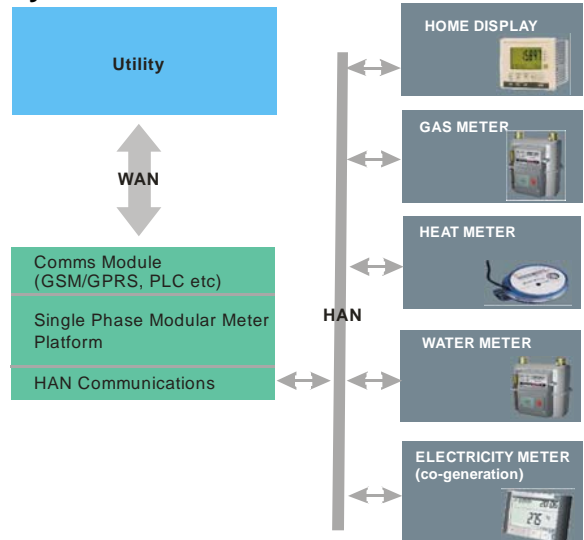
Antenna

The antenna is internally mounted on the upper module PCB. For areas of poor mobile reception, a module with a connection for an external antenna can be supplied as an alternative.

User Interface

The module has eight LED's to indicate that the module is operating correctly. The LED's can also be used to aid installation.

System



Over the Air Programming (OTP)

The module supports remote downloads of firmware allowing the functionality of the system to be modified or increased.

Alarm Reporting

The AM100 notifies the Head End System if an alarm or event has been activated in the meter.

Typical Alarms Include:

- Power outage
- Reverse run
- Terminal cover removal

Technical Data

Nominal Voltage	2-wire	220V - 240V
Nominal Frequency		50Hz +/- 5%
Antenna	GSM/GPRS Frequency Peak Gain VSWR Polarisation Azimuth beam-width Power Handling Feed point impedance	Antenna mounted on PCB 880-960, 1710-1990 MHz +1 dBi Less than 2.5:1 Linear Omni-directional 10Watt cw 50 Ohms unbalanced
Interface AM100 - E meter	Connection protocol	12 pin connector (Rx, Tx) EN 62056-21, Mode C
User interface	Indication	8 LED's
Time back-up for RTC	Supercap	Power outage <= 1 hour After 1 hour the RTC will be supplied from the meter
Temperature, conditions	Operating Storage Humidity	-30°C to +65°C -40°C to +70°C 0 to 95 rel humidity, non condensing
EMC compatibility	Surge withstand (1,2/50µs) Dielectric test	6kV, R _{source} = 2Ω 4kV, 1 min, 50Hz
Power consumption	AM100	9VA, 1.4W @ 230V
Housing	Material	Polycarbonate, flame retardant, self extinguishing plastic, recyclable
Weight	Module	<0.4kg

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