AMI AS230
Single Phase Smart Meter

Features

- EN 62053-21: Accuracy Class 1 or Class 2 EC Directive 2004/22/EC (MID): Class A or B
- kWh, kvarh and kVAh Energy Measurement
- Import/Export
- Modular WAN/LAN Capability
- Home Automation Network allowing access to: Gas, Water, Other Meter Data, Customer Display
- Comprehensive Tariff Structure
- Maximum Demand Registration
- Load Limiting
- Load Profiling Recording (4 channels)
- Instrumentation Profile Recording (8 channels)
- Extensive Security Features
- External Register Storage
- Product Design Life 20 Years
- Optical Communications Port
- Internal Clock with Battery Back-up
- Compact Design
- IP53 in accordance with IEC 60529:1989

Options

- Modular Remote Communications Unit
- Internal Disconnect Contactor
- Magnetic field Detection
- 100mA Output
- Reactive LED

The AMI domestic Smart Meter offers multi-tariff metering and flexible modular communications to interface directly to the utility via a Wide Area Network (WAN) or Local Area Network (LAN) and to connect to a consumer's Home Automation Network (HAN).

The module provides the platform for many different forms of communications including GSM/GPRS, PLC and Lower Power Radio for WAN/LAN communications. The modular and optical port can be used to read data from any meter connected to the HAN.

The meter measures a combination of import and export active energy, four-quadrant reactive energy and apparent energy. Extensive security features protect the meter and module from fraud or tampering.

Instrumentation values are available to aid meter commissioning. The meter records up to 120 days of load and instrumentation profile data in shared storage.

Power Master Unit software provides a Windows™ graphical interface for programming the meter and reading meter data.

Meters can be supplied to meet EC Directive 2004/22/EC (MID): accuracy Class A or Class B. kvarh is to EN 62053-23 Class 2 or 3.

The meter has an ingress protection rating of IP53 to IEC 60529:1989.

Display

Programmable Display sequence with English display descriptors or OBIS identifiers.

Communications

Local

- Optical bidirectional IEC 62056-21 port
- HAN interface will be available to match market requirements

Remote

- WAN communications port allowing remote meter reading and programming of meter data.
- Modules will be available for: GSM/GPRS; PLC; Low Power Radio

Tariff Structure

- 8 Time-of-Use Registers
- 1 Maximum Demand Register
- 12 Seasons
- 24 Change of Season Dates
- 48 Switching Times
- 32 Exclusion Dates
- 13 End of Billing Dates
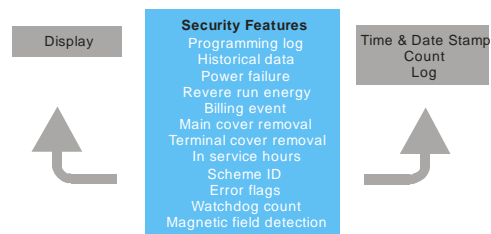- 10 Daily Billing Registers
- Daylight Savings
- Deferred Tariff

Typical Load/Instrumentation Profiling

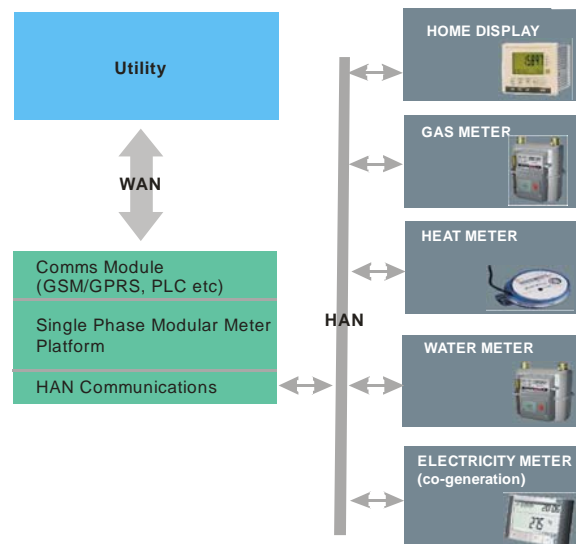| Load Profile	Instrumentation Profile
120(D), 4(C), 30(M)	80(D), 1(C), 30(M)
120(D), 2(C), 30(M)	120(D), 2(C), 30(M)
100(D), 2(C), 30(M)	70(D), 2(C), 15(M)

(D) Days, (C) Channels, (M) Integration Period in Minutes

Security

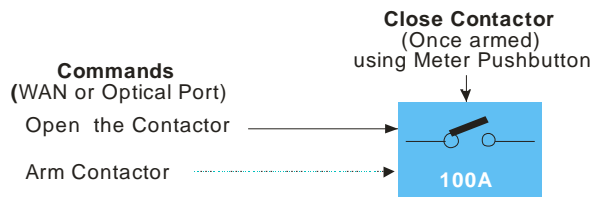The meter offers high security against fraud or tampering.

System

M-Bus allows any remote meter to be read directly by the Utility or to be viewed on the Home Display.

Contactor Disconnect

The main 100A contactor can be disconnected locally or remotely by the Utility. This can be driven directly or driven by the meter at load limiting thresholds

Technical Data

Current Range	5-100A
Voltage Range	220-240V
Frequency	50Hz
Impulse Withstand	12kV impulse (from 40 Ohm source)
	6kV impulse from 2 ohm source
Display Characters	9.8 x 3.5
	High contrast, wide angle
Baud Rates	Optical - 300 to 9600 baud
	WAN - 9600 baud
Product Design Life	20 years
Temperature	-25° C to +65° C (operational range) -25° C to +85° C (storage)
Humidity	Annual mean 75% (non condensing)
Test Indicator output	100, 200, 250, 500, 1000 or 2000
Dimensions *	170 (High) x 132 (Wide) x 65 (Deep)
Specification	EC Directive 2004/22/EC (MID):
Accuracy	Class A or Class B
	kvarh Class 2 or 3 EN 62053-23
Case	IP53 to IEC 60529:1989

* With short terminal cover. A long cover (enclosing the meter tails) is also available.