

SGM1400™ Series

Single Phase Variants



The SGM1400 SMETS2 meter from Aclara is an advanced modular UK designed family of products for domestic and small commercial installations. The SGM1400 is available in single phase variants and forms an integral part of the UK dual fuel smart metering solution, offering full two way secure communications between the meter, CSP Communications Hub and the DCC head-end solution.

The SGM1400 has been designed to support a UK CSP Intimate Communications Hub, offering flexibility and choice of HAN/WAN communications. The meter offers support of an on-board ZigBee RF interface using industry standard Smart Energy Profile for HAN communications to the Communications Hub, and In Home Display (IHD) respectively.

The standard meter is supplied with an integrated 100A switch for connect/disconnect of the consumer supply. The SGM1400 also offers an optional 2A load control relay for control of other ancillary devices such as night storage heating, pumps, etc.

The meter supports a comprehensive tariff developed in association with the UK Great Britain Companion Specifications and supports both Seasonal Time of Day (STOD) and block tariffs.

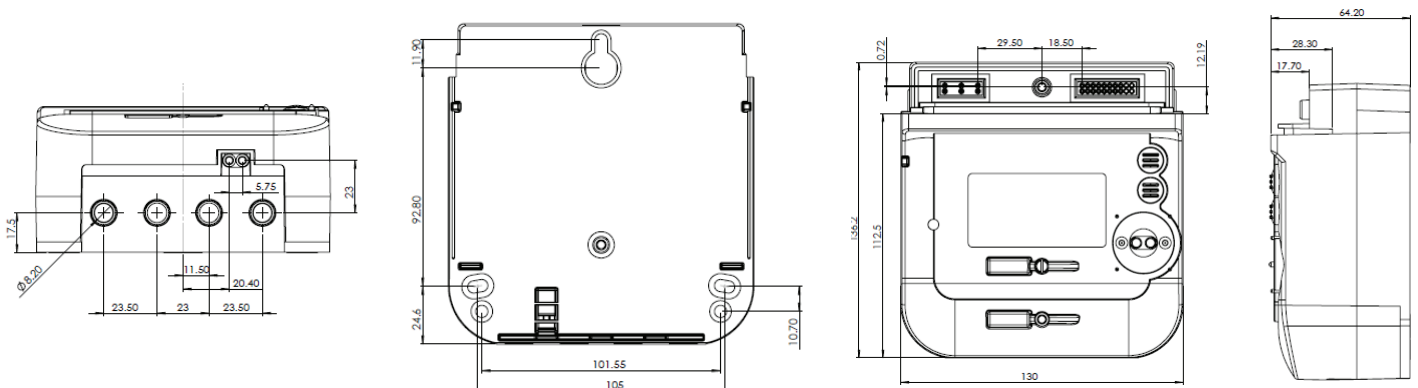
Offering storage for 365 days load profile data, the meter is also complimented with support of independent profiling of instrumentation values, typically line voltage, current, frequency, etc. Enhanced power quality features, offering support of sag/swell, under/over voltage, minimum/maximum, are all provided as standard.

Designed for installation in mind, the SGM1400 offers a means for a quick and secure deployment. A custom designed LCD provides added value information to improve the installation experience, such as HAN pairing progress, notification of pairing complete, local signal strengths for HAN, etc.

The SGM1400 provides the capability to operate in both credit and prepayment mode. Offering support for both local and remote credit top-ups, the meter also supports recovery of debt and provides the consumer with option to invoke an Emergency Credit option.

The SGM1400 has been designed to meet the most stringent of security standards and has achieved Commercial Product Assurance (CPA) from the UK National Cyber Security Centre (NCSC). CPA provides assurance for development, verification and deployment against a set of known migrations and includes rigorous "fuzz" testing to protect against malicious cyber activity.

METER DIMENSIONS (MILLIMETRES)



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TECHNICAL SPECIFICATIONS

Standards	MID Class B, BS EN 50470-1 AND BS EN 50470-3 RED/R&TTE, CPA Approved, ZigBee Certified DLMS Compliant
Accuracy	Class B Active Energy, Class 2 Reactive Energy
Nominal voltage	230V, -20% to +15%
Frequency	50Hz
Tariffs Current	48 TOU and 4 Block (Consumption) Tariff Rates 1...10 (100) Amps
Display	Dot Matrix LCD, Supports 8 Digits and Specialist Icons Backlight
Service Types	1-Phase, 2-Wires
Operating Temperature	-25°C to 55°C
Relative Humidity	≤ 95%
Test Pulse Output	Optical LED x Imp/kwh. Configurable for kVArh
Data Storage	Non-Volatile Memory
Time Keeping	Battery to Maintain Real-Time Clock
Enclosure Rating	IP53
Weight	0.625 kg
Terminals	BS Compliant to BS 7856:2013
Internal Load Switch	Contact Rated at 100A
Auxiliary Relay Output	2 Amps
Local Interface	2 x Pushbuttons to Support Scrolling of LCD, Local Reconnection of Supply and UTRN Top-Ups
Communications	Compliant with DCC ICHIS specification Onboard ZigBee 2.4 Ghz HAN for communications with a UK CSP hub and IHD Local Optical Port: IEC 62056-21 (physical)
Tamper Detection	Meter Terminal Cover Main Meter Cover Communications Module Magnetic Detection
Terminal Cover	Short

METROLOGICAL AND DATA CAPABILITY

The SGM1400 provides comprehensive support for metrological and billing data values as follows:

- Measurement of import/export active, reactive and apparent energy
- 10 x Cumulative Registers
- 10 x Demand Registers
- 4 x Maximum Demand Registers
- 48 Time of Use Registers
- 4 block tariff registers
- 365 days load profile data storage
- 3 months instrumentation profile data
- Daily, weekly and monthly billing data
- Voltage sag/swell, under and over voltage
- Over and under frequency
- Power factor threshold
- Comprehensive event logging
- Support for up to 512 events
- Support for a Security Log, Event Log, Power Event Log and ALCS Event Log
- Support for Change of Tenant and Change of Supplier
- Remote Firmware Over the Air Updates (OTA)
- Provision of consumer information to In Home Display

Aclara is a world-class supplier of smart infrastructure solutions (SIS) to more than 800 water, gas, and electric utilities globally. Aclara SIS offerings include smart meters and other field devices, advanced metering infrastructure and software and services that enable utilities to predict and respond to conditions, leverage their distribution networks effectively and engage with their customers. Aclara is owned by an affiliate of Sun Capital Partners.

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