

TECHNICAL SPECIFICATIONS

Standards	MID Class B, BS EN 504790-1 and BS EN 50470-3
Accuracy	Class B Active, Import and Export, Class 2/3 Reactive
Nominal voltage	230V, -20% to +15%
Frequency	50Hz
Tariffs	48 TOU registers and 4 x 8 Block Tariff rates (primary element) 4 TOU registers (secondary element)
Current	1...10(100) Amps
Display	Dot Matrix LCD, supports 8 digits and specialist icons Optional back-light
Service type's	1-Phase, 2-Wire and dual element variants
Operating temperature	-25°C to +70°C
Relative Humidity	≤ 95%
Test Pulseoutput	Optical LED 1000 Imp/kWh. Configurable for kVArh
Data storage	Non-volatile memory
Time keeping	Battery to maintain real time clock
Enclosure rating	IP54
Weight	0.6 Kg (SGM1411/12-B) 0.7Kg (SGM1415/16-B)
Terminals	BS Compliant to BS 7856:2013
Primary Load Switch	Contactora rated at 100A
Secondary Load Switch	Contactora rated at 100A (SGM1415-B/1416-B and SGM1422-B)
Auxiliary Relay Output	2 Amps
Local Interface	2 x push buttons to support scrolling of LCD, local reconnection of supply and UTRN top-ups
Communications:	Compliant with DCC ICHIS specification v2.0 Onboard ZigBee 2.4 GHz HAN for communications with a UK CSP hub and IHD/PPMID
Tamper Detection	Meter Terminal Cover Main Meter Cover Removal of Communications Module Magnetic Detection
Terminal Cover	Short

METROLOGY AND DATA CAPACITY

The SGM1400-B meter 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 x Standard Time of Day TOU Registers
- 4 x 8 Block Tariff Registers
- 2 Years Load Profile Data Storage
- 3 Months Voltage Profile Data
- Daily, Weekly and Monthly Billing Data
- Voltage Sag/Swell, Under and Overvoltage
- Over and Under Frequency
- Power Factor Threshold
- Comprehensive Event Logging
- Support for GBCS Mandated and Non-Mandated 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 Update (OTA)
- Provision of Consumer Information to In Home Display/PPMID

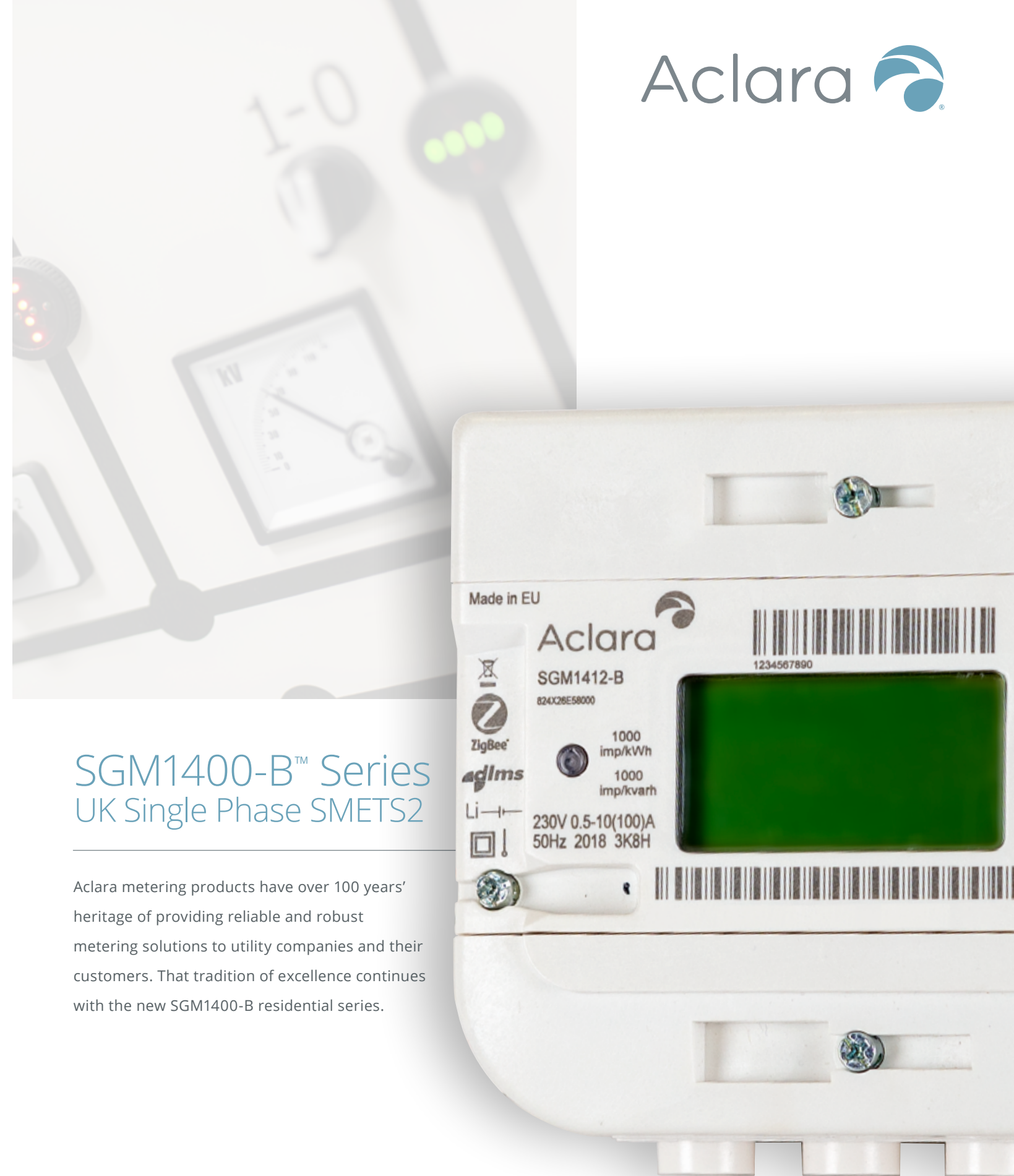
SGM1400-B Models

	Single Element				Dual/Twin Element	Three Phase		
	Direct				Direct	Direct		
	4 Terminal		5 Terminal		5 Terminal	8 Terminal		
Meter Model	SGM1411	SGM1412	SGM1415	SGM1416	SGM1422	SGM1431	SGM1432	SGM1433
Primary Contactor	100A	100A	100A	100A	100A	100A	100A	100A
Secondary Contactor			100A	100A	100A	100A	100A	100A
Third Contactor						100A	100A	100A
Auxiliary 1		2A		2A			2A	2A
Auxiliary 2							2A	2A

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E-meter-UK-1019-SGM1400single



SGM1400-B™ Series UK Single Phase SMETS2

Aclara metering products have over 100 years' heritage of providing reliable and robust metering solutions to utility companies and their customers. That tradition of excellence continues with the new SGM1400-B residential series.

SGM1400-B™ Series

UK Single Phase SMETS2



The SGM1400-B SMETS2 meter from Aclara is an advanced modular designed family of products for domestic and small commercial installations.

ELECTRICITY METER FOR SMARTER INSTALLATIONS

The SGM1400-B is available in both single phase single element, 5 terminal (single and dual element) and polyphase 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-B 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)/PPMID respectively.

With the SGM1400-B meter, a utility can meet its smart metering needs with Aclara's world-class standard for manufacturing quality and product reliability.

KEY BENEFITS

- Increased number of installations per day due to added value information available on the custom designed LCD
- Modular communications capability via an intimate communications hub for choice of HAN and WAN Communications
- Extensive billing features and comprehensive event logging, with enhanced tamper-proofing for effective fraud detection
- Optimised, compact footprint enables faster deployment when replacing existing legacy meters

EXTENSIVE FEATURE SET

- The SGM1400-B meter is supplied with an integrated 100A switch for connect/disconnect of the consumer supply and an optional 100A switch/contacter via a 5th terminal for heating control. The meter can also support a dual element that also measures the energy consumed via the 5th terminal.
- The SGM1400-B 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 2 years 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 are all provided as standard.
- Designed for installation in mind, the SGM1400-B 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.

CREDIT AND PREPAYMENT MODE

The SGM1400-B 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.

SECURITY CERTIFIED

The SGM1400-B 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.

FLEXIBLE COMMUNICATIONS

Equipped with two-way, real-time, secure communications, the SGM1400-B family supports a ZigBee RF HAN for communication to consumer IHD or PPMID that provides the consumer with the ability to more effectively manage their bills and usage.

The ZigBee HAN also enables secure communications to CSP communications Hub providing UK coverage for the northern, central and southern regions via cellular and 423MHz solutions.

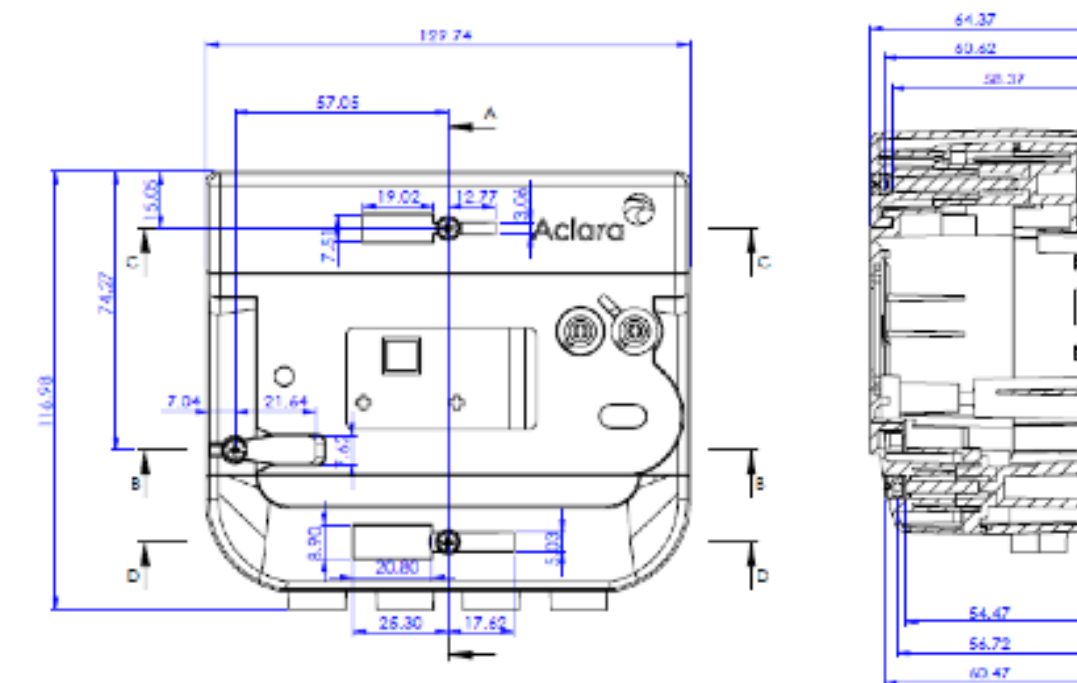
DETAILED LCD DISPLAY

Aclara's smart meter custom LCD design is a unique, purposely developed dot-matrix display based on extensive customer feedback. It provides added-value information to improve the installation and operational experience of the SGM1400-B, including visual indication of:

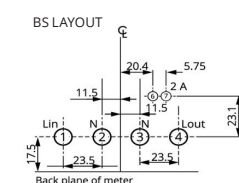
- Dedicated icons for AMI devices
- HAN pairing progress with notification to the installation team of pairing completeness
- Received Signal Strength Indication (RSSI) for HAN connections



MAXIMUM METER DIMENSIONS



SINGLE PHASE



FIVE TERMINAL COMPARISON

