

SGM1400-B™ Series Global Polyphase

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.



SGM1400-B™ Series

Global Polyphase

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

Offering full two-way secure communications between the meter, communications hub and the designated headend solution, the SGM1400 has been designed to support a common communications interface, offering flexibility and choice of WAN communications. Utilising DLMS Cosem, the meter has been developed to meet the requirements of internationally accredited standards.

With the SGM1400 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 polyphase meter is supplied with an integrated 3 x 100A electronically ganged switch/contactors for connect/disconnect of the consumer supply.
- 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 DLMS COSEM standard and supports 16 TOU registers.
- Offering storage for 1 year 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 offers a means for a quick and secure deployment. A custom designed LCD provides added value information to improve the installation experience, such as reverse detection, connection to AMI, error warning, 4 quadrant icon.
- Enhanced security features are support as standard including removal of terminal cover and main meter covers, removal of the communications module, magnetic detection, event logging and immediate notification.

SGM1400 COMMUNICATIONS OPTIONS

The SGM1400 family has been designed to allow for the interchangeability of AMR/AMI modules and cover the broadest range of possible AMI communication technologies including TWACS®, point to multi point, RF mesh and cellular.

Modules can be added at the Aclara factory, during deployment or replaced with another compatible module if the meter is redeployed, offering complete plug and play options.

Additional support:

- For integration with 3rd party communications solutions providers
- IEC optical port, compliant to IEC 62056-21 as standard
- Firmware Over The Air (FOTA) as standard'

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:

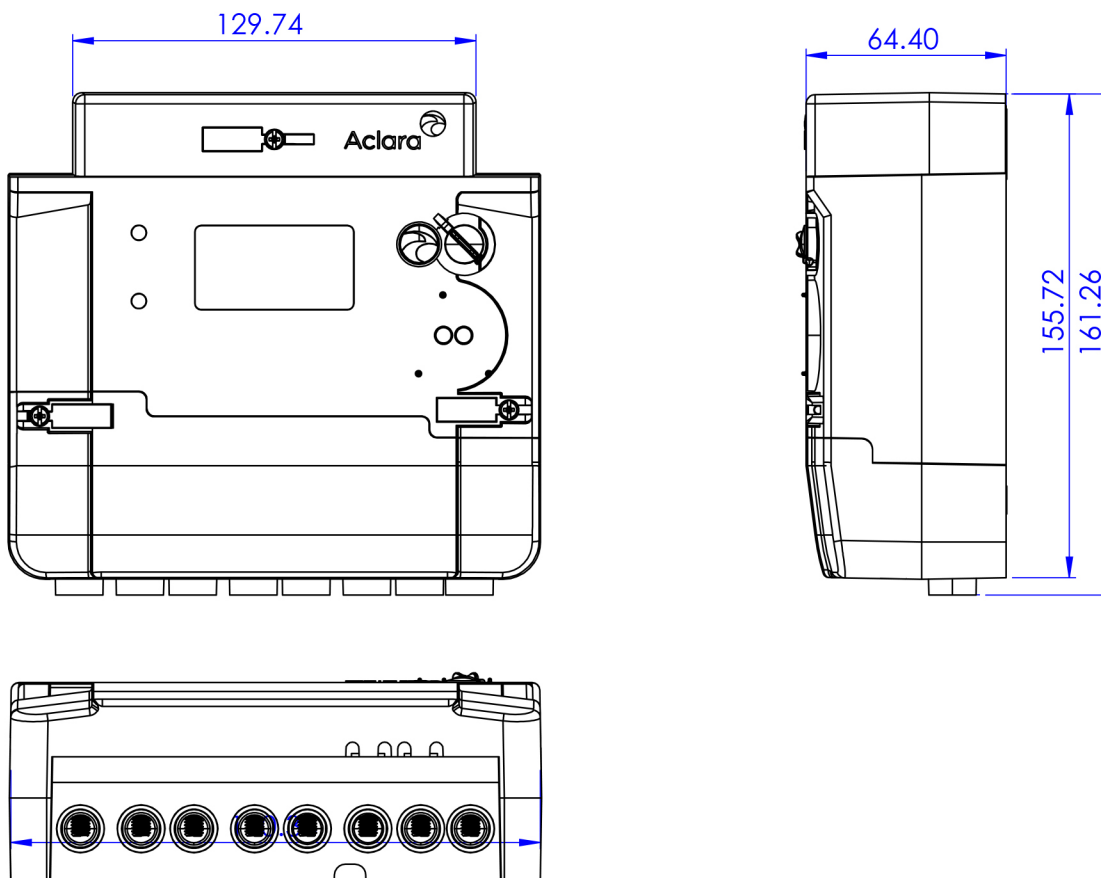
- Dedicated icons for AMI devices
- HAN pairing progress with notification to the installation team of pairing completeness
- Received Signal Strength Indication (RSSI) for HAN connections

FLEXIBILITY FOR REMOTE UPDATES

The SGM1400 meter has been designed to stay on the wall for the lifetime of the product. This is achieved by offering full flexibility and support for remote Firmware Over The Air (OTA) updates and also remote updates to the configurable parameters such as tariff, integration/demand period, etc.



MAXIMUM METER DIMENSIONS



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	3 x 110v or 230V, -20% to +15%
Frequency	50/60Hz
Tariffs	Support for 16 x time of use registers
Current	1...10(100) Amps and 5(10A) CT option
Display	Dot Matrix LCD, supports 8 digits and specialist icons Optional back-light
Service type's	3-Phase,3-Wire and 3 phase,4-wire direct connect variants CT options also available
Operating temperature	-25°C to +70°C
Relative Humidity	≤ 95%
Test Pulseoutput	Active and Reactive test pulse LED's
Data storage	Non-volatile memory
Time keeping	Battery to maintain real time clock
Enclosure rating	IP54
Weight	0.8 Kg
Terminals	BS Terminal Layout
Primary Load Switch	3 x 100A contactors (electronically ganged)
Secondary Load Switch	Optional 1 or 2 x 2A aux relays
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:	Offering support of a common communications interface Hardwired connections to AMI Interchangeable AMI communications
Tamper Detection	Meter Terminal Cover Main Meter Cover Removal of Communications Module Magnetic Detection
Terminal Cover	Short and Extended Terminal Covers

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
- 16 x Standard Time of Day TOU Registers
- 2 Years Load Profile Data Storage
- 3 Months Voltage Profile Data
- Daily, Weekly and Monthly Billing Data
- Voltage Sag/Swell, Under and Overvoltage per phase
- Over and Under Frequency
- Power Factor Threshold
- Comprehensive Event Logging
- Comprehensive List of Events
- Support for Standard, Fraud and Power Event Logs
- Remote Firmware Over the Air Update (OTA)

SGM1400-B Models

	Three Phase			Three Phase		
	Direct			CT		
	8 Terminal			8 Terminal		
Meter Model	SGM1431	SGM1432	SGM1433	SGM14C0	SGM14C1	SGM14C2
Primary Conactor	100A	100A	100A			
Secondary Conactor	100A	100A	100A			
Third Conactor	100A	100A	100A			
Auxilliary 1		2A	2A		2A	2A
Auxilliary 2			2A			2A

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