Sagemcom

SICONIA®
Elec

Siconia® Self-Contained and Transformer-rated Watthour meter

The new generation of Sagemcom ANSI smart meters will drive the transformation in home energy management and grid-edge computing.High processing power and high-resolution waveform at 16ksps enable real-time device identification, advanced analytics, and artificial intelligence (AI). Low latency communication via Wi-Fi makes it possible to manage electric vehicle chargers and distributed energy resources (DERs), while also providing consumers with greater awareness and insights to balance their demands according to their preferences.

Features and benefits

CONFIGURABLE LOAD PROFILES
- 3 Load profiles concurrent storage
- 50 configurable data channels
- Capture period configurable between 1 and 60 min

TIME OF USE
- Calendar with:
  - 12 season-profiles,
  - 4 week-profiles,
  - 24 day-profiles
- 30 special days
- 8 registers rates
- Up to 36 Billing registers

SERVICE SWITCH
- Support integrated latching relay
- Perform remote disconnects/reconnects through the system

ANTI-TAMPER
- Super-Magnet detection
- Top Cover insertion/removal survey
- Motion detection

POWER QUALITY
- In conformance with the IEC 61000-4-30 standard
- Integrated over 12 periods (200ms @60Hz)
- Dip, swell and voltage interruption
- Voltage unbalance
- Rapid voltage change
- Voltage harmonics by rank (up to 50) and THD
- UTC time synchronization

WAVEFORM
- Voltage and Current integrated over a period
- Data sampling: 16 ksps

GRID-EDGE COMPUTING
- Device Identification
- Power distribution monitoring

DATA ENCRYPTION
- AES standard
- Cryptographic functions
- Firmware update over the air (FOTA) with signature management

SAFETY
- In conformance with ANSI C12.1, UL2735 and UL2735c
- Impulse voltage 6kV in conformance with IEC 61180-1
- Surge 4kV in conformance with IEC 61000-4-5

Technical Data

Meets applicable standards

ANSI C12.1 [2022]	American National Standard for Electric Meters
ANSI C12.10 [2011 (R2021)]	American National Standard Physical Aspects of Watthour Meters – Safety Standard
UL2735 [2013]	STANDARD FOR SAFETY Electric Utility Meters
CAN / UL2735c [2022]	NORME DE SÉCURITÉ Compteurs des services publics d'électricité pour le Canada STANDARD FOR SAFETY Electric Utility Meters for Canada
NEMA 250 EN P1 [2021]	Summary of NEMA 250 Enclosure Types

Product availability

Type (1)	Form	Class	Phase	Elements	Wire
S011D S012D	1S	100 200	1	1	2w
S022D S023	2S	200 320	1	1,5	3w
S030	3S	20	1	1	2w
S040	4S	20	1	1,5	3w
S050	5S	20	1	2	3w, 3w Network
S050	5S	20	3	2	3w Delta, 4w Delta, 4w WYE
S080	8S	20	3	2.5	4w Delta
S090	9S	20	3	3	4w Delta, 4w WYE
S122D S123	12S	200 320	1	2	3w, 3w Network
S122D S123	12S	200 320	3	2	3w Delta
S162 S163	16S	200 320	3	3	4w Delta, 4w WYE
S252D S253	25S	200 320	1	2	3w, 3w Network
S252D S253	25S	200 320	3	2	3w Delta
S450	45S	20	3	2.5	4w Delta, 4w WYE

SPECIFICATIONS		
Basic Features	**Service Type:**	FM1S, FM2S, FM12S, FM16S and FM25S FM3S, FM4S, FM5S, FM8S, FM9S, and FM45S
	Frequency	60 Hz
	Rated Voltage	2W 120 – 240V 3W 120 – 480V 3W DELTA 120 – 480V 3W NETWORK 120/208V – 277/480V 4W DELTA 120(208)/240V – 240(416)/480V 4W WYE 120/208V – 277/480V
	Current Class:	CL20, CL100, CL200 or CL320
	Real time clock	Less than 0,5s /day @23°C (5,78 ppm) Drift < 0.15s /°K /24h - Time stamp maintained for 2 years, by battery
	Last Gasp	Power outage notification up to 90 seconds
	Accuracy for active energy	Less than 0,5s /day @ 23°C (5,78 ppm) Drift < 0,15s /°K /24h Time stamp maintained for 2 years, by battery
	Accuracy for reactive energy	In conformance with IEC 62053-24 Cl.1 (accuracy class 1%)
	Power Consumption	@Nominal Voltage Less than 1.5W / 2.5VA (without communication) 4.5W / 6.0VA (max value)
	Events Management	Configurable event logbooks · Standard event · Fraud detection event · Power Quality event · Communication event Technical parameters change event
	Operating System	APP: Linux MTR: Free RTOS
Environment	**Operating temperature inside the meter:**	-40°C ... +85°C HR <95%, non-condensing
	Temperature sensor:	Internal temperature survey - Metrology compensation
	Enclosure type	3R according to standard NEMA 250 EN P1
	Enclosure fire protective class	UL94 5VA
Customer Interaction	**Graphical LCD Display:**	Energy registers on 9 digits in kWh (more than 20 years without rollover) Voltage and current presence and direction Quadrant information Display scroll sequence programmable (factory or end user) Push Button in front face or Light sensor, which acts like a push button
	Home Area Network:	Wi-Fi enabled supporting Matter protocol Grid Apps enabled In-home Intelligence Apps enabled
Communication interface	**Optical communication port:**	ANSI Type 2 optical Port Protocol in conformance with ANSI C12.18 9600 or 19200 bauds Mechanical interface in conformance with ANSI C12.10
	Modular Wide Area Network Communication module:	In conformance with ANSI C12.22 and ANSI C12.19 supporting LTE Cat.M1 and RF Wi-Sun
Service Disconnect Switch	**Latching Relay for CL100 and CL200 meters**	Remote disconnection and connection using a service switch integrated in the meter. 6,000 cycles @200A, 240 Vac 60 Hz In conformance with UL508

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