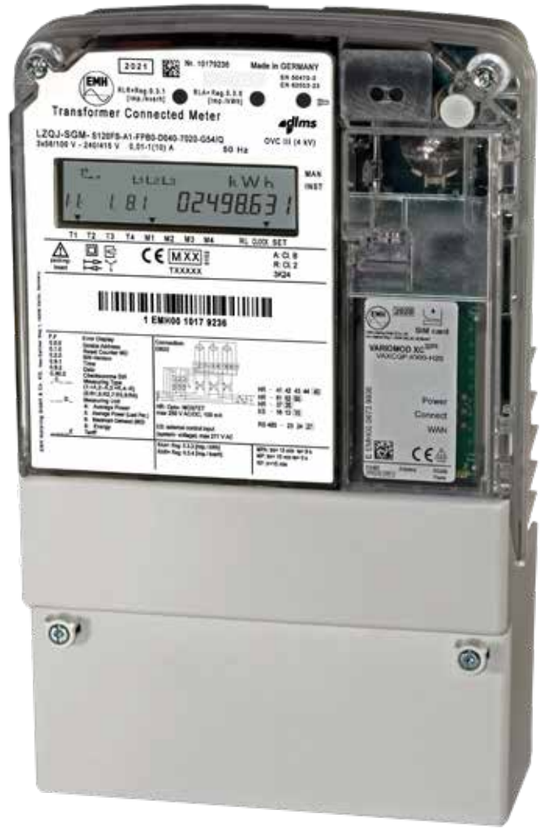
The LZQJ SGM complies with the following standards among others:

DIN 43856	Energy meters, tariff time switches and ripple control receivers, connection diagrams, terminal markings, circuit diagrams
DIN 66348-1	Interfaces and basic data link control procedures for serial measurement data communication; start-stop-transmission, point-to-point connection
EN 50470-1	Electricity metering equipment (a. c.) – Part 1: General requirements, tests and test conditions. Metering equipment (class indexes A, B and C)
EN 50470-3	Electricity metering equipment (a.c.) Part 3: Particular requirements – Static meters for active energy (class indexes A, B and C)
EN 60529	Degrees of protection provided by enclosures (IP Code)
IEC 62052-11	Electricity metering equipment (AC) – General requirements, tests and test conditions – Part 11: Metering equipment
IEC 62052-31	Electricity metering equipment (AC) – General requirements, tests and test conditions – Part 31: Product safety requirements and tests
IEC 62053-21	Electricity metering equipment (a.c.) – Particular requirements – Part 21: Static meters for active energy (classes 1 and 2)
IEC 62053-23	Electricity metering equipment – Particular requirements – Part 23: Static meters for reactive energy (classes 2 and 3)
IEC 62056-21	Electricity metering – Data exchange for meter reading, tariff and load control – Part 21: Direct local data exchange
IEC 62056-46	Electricity metering – Data exchange for meter reading, tariff and load control – Part 46: Data link layer using HDLC protocol
IEC 62056-53	Electricity metering – Data exchange for meter reading, tariff and load control – Part 53: COSEM application layer
IEC 62056-61	Electricity metering – Data exchange for meter reading, tariff and load control – Part 61: Object identification system (OBIS)
IEC 62056-62	Electricity metering – Data exchange for meter reading, tariff and load control – Part 62: Interface classes
ITU-T V.24	List of definitions for interchange circuits between data terminal equipment (DTE) and data circuit-terminating equipment (DCE)
TIA/EIA-485	Electrical Characteristics of Generators and Receivers for Use in Balanced Digital Multipoint Systems
VDEW specifications 2.1	Electronic load profile meter

LZQJ-SGM

- ✓ Load profile meter for recording performance measurements
- ✓ High data security according to the DLMS High-Level-Security Standard
- ✓ IP 54 protection rating against damage from dust and splash water
- ✓ Firmware separation allows update of the application part, local and remote
- ✓ Full compliance with meter safety standard IEC 62052-31



EMH metering
GmbH & Co. KG
Neu-Galliner Weg 1
19258 Gallin
GERMANY
Tel. +49 38851 326-0
Fax +49 38851 326-1129
Email info@emh-metering.com
Web www.emh-metering.com

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		Direct metering version	Transformer version
Voltage	4-conductor meter	3 x 220/380 V or 3 x 230/400 V or 3 x 240/415 V	3 x 58/100 V – 3 x 240/415 V or 3 x 58/100 V or 3 x 63/110 V or 3 x 115/200 V or 3 x 127/220 V or 3 x 220/380 V or 3 x 230/400 V or 3 x 240/415 V
Current		0.25–5 (100) A	0.01–1(10) A
Utilisation category	UC (Utilisation Category)	UC 2 as per IEC 62052-31	
Frequency		50 Hz, 60 Hz	50 Hz, 60 Hz
Accuracy	Active energy Reactive energy	Cl. B (Cl. 1), Cl. A (Cl. 2) Cl. 2, Cl. 3	Cl. B (Cl. 1), Cl. A (Cl. 2) Cl. 2, Cl. 3
Measuring system	Designation	Compensated transformer	
Measuring types	Active energy Reactive energy Apparent energy	+A, –A +R, –R, R_1, R_2, R_3, R_4 S	
Pulse values	LED (pulse/kWh, pulse/kvarh) Output (pulse/kWh, pulse/kvarh) Configurability	500...1 000 (type-specific) 250...500 (type-specific) After calibration by means of log created during calibration	10 000...100 000 (type-specific) 5 000...50 000 (type-specific)
Energy registers	Maximum number	up to 50	
Maximum registers	Maximum number Measuring period	up to 48 1, 2, 5, 10, 15, 20, 30, 60 min, adjustable	
Load profile P.01	Maximum number of channels Memory depth Registration period Recording type	16 90 days 1, 2, 5, 10, 15, 20, 30, 60 min, adjustable Power, energy, energy feed	
Load profile P.02	Maximum number of channels Memory depth Registration period Measured values	18 30 days 1, 10, 15 min Measuring of current and voltage (minimum, average value and maximum for each)	
Real time clock	Running accuracy Synchronisation Power reserve of battery	Within ± 5 ppm Via data interfaces, control input > 10 years	
Inputs	System voltage inputs	up to 2	
Data preservation		Voltage-free in flash memory, at least 10 years	
Display	Version Height of digits	VDEW display, 84 mm x 24 mm 8 mm	
Operation	Mechanical buttons	For calling and resetting the display (sealable under module flap)	
Data interfaces	Optical data interface Electrical data interface Data protocols	Optical data interface D0 (38400 Baud) CL0 (19200 Baud) / RS232, RS485 (115200 Baud) IEC 62056-21 (1107), DLMS/COSEM	
Communication module (plug-in)	Modem Interface module Maximum transfer rate	LTE, GPRS, Ethernet RS232, RS485 19200 baud (fixed or C/E mode)	
Outputs	Number of Optocoupler MOSFET	max. 7 max. 250 V AC/DC, 100 mA (make contact)	
Energy supply	Switched-mode power supply Mains failure buffering time	3-phase > 200 ms	
Supply		internal supply	
Power consumption per phase (base meter)	Voltage circuit Current path	<1.7 VA/<1.1 W	<1.7 VA/<1.1 W < 0.03 VA
Safety characteristics	Over voltage category (OVC) Rated peak withstand voltage (U_{Imp})	OVC III as per IEC 62052-31 4kV as per IEC 62052-31	
EMC characteristics	Insulation strength Surge voltage Resistance to HF fields	4 kV AC, 50 Hz, 1 min 6 kV, pulse 1.2/50 µs, 500 Ω 10 V/m (under load)	
Temperature range	Defined operating range Limit range for operation, Storage and transport	–25 °C...+55 °C –40 °C...+70 °C	
Humidity		max. 95%, non-condensing, as per IEC 62052-11, EN 50470-1 and IEC 60068-2-30	
Housing	Dimensions Protection class Degree of protection of housing / terminal block Housing material Fire properties	approx. 180 x 290 x 80 (W x H x D) mm, as per DIN 43857 II IP 54 / IP 31 Glass-fibre reinforced polycarbonate, halogen-free, recyclable as per IEC 62052-31	
Environmental conditions	Mechanical Electromagnetic Intended operating location	M1 according to the Measuring Instruments Directive (2014/32/EU) E2 according to the Measuring Instruments Directive (2014/32/EU) Interior as per EN 50470-1	
Weight		1.2 kg	1.0 kg

Subject to technical changes.

The meters in the LZQJ-SGM series are designed for universal applications as per VDEW specifications 2.1. Thanks to a tried-and-tested measuring system, the meters are highly reliable. The powerful processor system guarantees a solid foundation for future extensions.

The LZQJ-SGM can be functionally enhanced with the following accessories:

Meter modem VARIOMOD-XC
(LTE, GPRS, Ethernet)
and interface module
(RS232, RS485)

Terminal cover different length
Standard version: L = 130.0 mm
Long version: L = 167.5 mm

Communication and parametrisation software
with user-friendly interface