Standards applied:

|	
DIN 43856	Electricity meters, tariff time switches and ripple control receivers; connection diagrams, terminal marking, 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 50470-3	Electricity metering equipment – Part 3: Particular requirements – Static meters for AC active energy (class indexes A, B and C)
IEC 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 – Particular requirements – Part 21: Static meters for AC active energy (classes 0,5, 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 62056-5-3	Electricity metering data exchange – The DLMS/COSEM suite – Part 5-3: DLMS/COSEM application layer
IEC 62056-6-1	Electricity metering data exchange – The DLMS/COSEM suite – Part 6-1: Object Identification System (OBIS)
IEC 62056-6-2	Electricity metering data exchange – The DLMS/COSEM suite – Part 6-2: COSEM interface classes
VDEW specifications 2.1	Electronic load profile meter

EMH metering
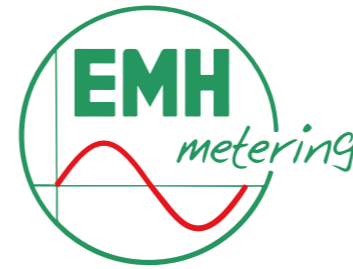
LZQJ-SGM D
LZQJ-SGM T
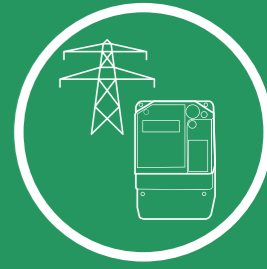
4-quadrant meter / combi meter

- LOAD PROFILE METER FOR RECORDING PERFORMANCE MEASUREMENTS

- DATA SECURITY BASED ON HIGH INDUSTRIAL STANDARD (DLMS HLS)

- 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

LZQJ-SGM		4-quadrant meter / combi meter	
		Direct metering version D	**Transformer version T**
Voltage	4-wire meter	3 x 220/380 V or 3 x 230/400 V or 3 x 240/415 V	3 x 57.7/100 V – 3 x 240/415 V or 3 x 58/100 V – 3 x 240/415 V or 3 x 57.7/100 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 (60) A or 0.25–5 (100) A	0.01–1 (6) A oder 0.01–1 (10) A
Utilisation category		UC 2 as per IEC 62052-31	–
Frequency		50 Hz, 60 Hz	
Accuracy	Active energy Reactive energy	Cl. A (Cl. 2), Cl. B (Cl. 1) Cl. 3, Cl. 2	
Measuring system	Designation	Compensated current transformer	
Measuring values	Active energy Reactive energy Apparent energy	+A, −A +R, −R, R₁, R₂, R₃, R₄ S	
Pulse values	LED (pulse/kWh, pulse/kvarh) Output (pulse/kWh, pulse/kvarh)	500…1 000 (type-specific) 250…500 (type-specific)	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	Number of channels Registration period Recording type Memory depth	Max. 32 1, 2, 5, 10, 15, 20, 30, 60 min, adjustable Power, energy, feed register Max. 90 days (for 32 channels and 15 min registration period)	
Load profile P.02	Number of channels Registration period Measured values Memory depth	Max. 18 1, 10, 15 min Measuring of current and voltage (minimum, average value and maximum for each) Typically 30 days (for 18 channels and 10 min registration period)	
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, (100…240 V AC)	
Outputs	Number System voltage, Opto-MOSFET	up to 7 max. 250 V AC/DC, 100 mA (normally open contact)	
Data preservation		Voltage-free in flash memory, at least 10 years	
Display	Version Height of digits	VDEW-Anzeige, 84 mm x 26.5 mm 8 mm	
Operation	Mechanical buttons	For calling and resetting the display (sealable under module flap)	
Data interfaces	Optical data interface Electrical data interfaces Data protocols	Optical data interface D0 (38400 baud) CL0 (19200 baud) / RS232, RS485 (115200 baud) DLMS/COSEM, IEC 62056-21 (1107)	
Communication module (plug-in)	Modem Interface module Maximum transfer rate	LTE, GPRS, Ethernet RS232, RS485 19200 baud (fixed or C/E mode)	
Energy supply	Switched-mode power supply Mains failure buffering time	3-phase (measuring voltage) > 200 ms	
Power consumption per phase (base meter)	Voltage circuit Current path	< 1.3 VA / < 1.0 W < 0.004 VA @ I_N=5 A	< 1.9 VA / < 1.2 W < 0.04 VA @ I_N=1 A
Safety characteristics	Overvoltage 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 and IEC 60068-2-30	
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 IEC 62052-11	
Housing	Dimensions Protection class Degree of protection of housing Degree of protection terminal block Housing material Fire properties	approx. 180 x 290 x 80 (W x H x D) mm II IP54 IP31 Non-transparent sections of housing: Glass-fibre reinforced polycarbonate, halogen-free, recyclable Transparent sections of housing: Polycarbonate, halogen-free, recyclable as per IEC 62052-31	
Weight		1.2 kg	1.0 kg

All details apply to reference conditions.
Subject to technical changes.

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

Optical communication unit
(OKK USB)

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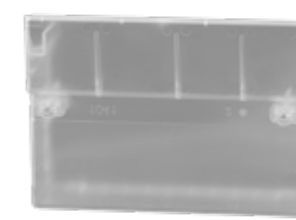and interface module
(RS232, RS485)

Communication and parametrisation
software with user-friendly interface

Terminal covers in different versions

Standard: L = 130.0 mm

Transparent: L = 130.0 mm

Long: L = 167.5 mm