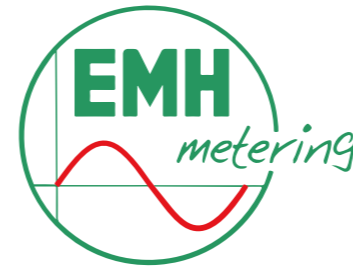


### Standards applied:

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 50470-1	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)
IEC 60529	Degrees of protection provided by enclosures (IP Code)
IEC 61000-4-30	Electromagnetic compatibility (EMC) - Part 4-30: Testing and measurement techniques - Power quality measurement methods
IEC 62052-11	Energy meters - 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 62053-22	Electricity metering equipment - Particular requirements - Part 22: Static meters for AC active energy (classes 0,1S, 0,2S and 0,5S)
IEC 62053-23	Electricity metering equipment - Particular requirements - Part 23: Static meters for reactive energy (classes 2 and 3)
IEC 62053-24	Electricity metering equipment - Particular requirements - Part 24: Static meters for fundamental component reactive energy (classes 0,5S, 1S, 1, 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
VDEW specifications 2.1	Electronic load profile meter



# LZQJ-SGM S LZQJ-SGM P



## 4-quadrant meter / combi meter

- HIGHLY MODERN ENERGY METER OPTIMISED FOR MEDIUM, HIGH AND ULTRA HIGH VOLTAGE
- ACCURACY CLASS UP TO 0.1S
- INTEGRATED POWER QUALITY ANALYZER CLASS A
- PROVEN POWER QUALITY MONITORING
- DATA SECURITY BASED ON HIGH INDUSTRIAL STANDARD (DLMS HLS)
- 5 INDEPENDENTLY USABLE DATA INTERFACES
- HIGHLY SECURE FIRMWARE UPDATE FOR SUSTAINABLE FUNCTIONAL EXPANSION
- FUTURE-PROOF ARCHITECTURE FOR INTEGRATION INTO THE SMART GRID





LZQJ-SGM		4-quadrant meter / combi meter	
		Transformer version S	Transformer version P
<b>Voltage</b>	4-wire meter	3 x 57.7/100 V – 3 x 277/480 V or 3 x 58/100 V – 3 x 240/415 V or 3 x 58/100 V – 3 x 277/480 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	
	3-wire meter	3 x 100 V – 3 x 415 V or 3 x 100 V – 3 x 480 V or 3 x 100 V or 3 x 110 V or 3 x 415 V or 3 x 480 V	
<b>Current</b>		0.01–1(2) A or 0.01–1(6) A or 0.01–1(10) A or 0.05–5(6) A or 0.05–5(20) A or 5 A	
<b>Frequency</b>		50 Hz, 60 Hz	
<b>Accuracy</b>	Active energy	Cl. B (Cl. 1), Cl. C (Cl. 0.5S)	Cl. 0.2S, Cl. 0.1S
	Reactive energy	Cl. 2, Cl. 1S	Cl. 0.5S
<b>Measuring system</b>	Designation	Compensated current transformer	
<b>Measured values</b>	Active energy	+A, –A	
	Reactive energy	+R, –R, R1, R2, R3, R4	
	Additional	S, U <sup>2</sup> h, I <sup>2</sup> h	
<b>Pulse values</b>	LED (pulse/kWh, pulse/kvarh)	10 000...100 000 (type-specific)	
	Output (pulse/kWh, pulse/kvarh)	5 000...50 000 (type-specific)	
<b>Energy registers</b>	Maximum number	up to 64	
<b>Maximum registers</b>	Maximum number	up to 48	
	Measuring period	1, 2, 5, 10, 15, 20, 30, 60 min, adjustable	
<b>Load profile P.01</b>	Number of channels	Max. 60	
	Registration period	1, 2, 5, 10, 15, 20, 30, 60 min, adjustable	
	Recording type	Average values, feed rates, absolute states	
	Memory depth	Max. 90 days (for 60 channels and 15 min registration period)	
<b>Load profile P.02</b>	Number of channels	Max. 60	
	Registration period	1, 2, 5, 10, 15, 20, 30, 60 min, adjustable	
	Measured values	Measuring of current and voltage (minimum, average value and maximum for each)	
	Memory depth	Max. 30 days (for 60 channels and 10 min registration period)	
<b>Real time clock</b>	Running accuracy	Within ± 5 ppm	
	Synchronisation	Via data interfaces, control input, NTP server	
<b>Inputs</b>	System voltage inputs	up to 10, (100...240 V AC)	
	Low-voltage inputs	up to 10, (18...40 V DC)	
	50 inputs	up to 2, (max. 27 V DC, 27 mA)	
<b>Outputs</b>	Opto-MOSFET	up to 9, max. 250 V AC/DC, 100 mA (normally open contact)	
	Relay	up to 3, max. 250 V AC, 30 V DC, max. 2 A	
<b>Data preservation</b>		Voltage-free in flash memory, at least 10 years	
<b>Display</b>	Version	VDEW display, 84 mm x 26.5 mm	
	Height of digits	8 mm	
	Number of digits	8	
	Illumination	optional	
<b>Operation</b>	Mechanical buttons	For calling and resetting the display (sealable under module flap)	
	Optical call sensor	optional	
<b>Data interfaces</b>	Optical data interface	Optical data interface D0 (38400 baud)	
	Electrical data interfaces	Max. 3: CL0 (19200 baud) / RS232, RS485 (115200 baud) / Ethernet (10/100 Mbit/s)	
	Customer interface	P1 HAN port (115200 baud)	
	Data protocols	DLMS/COSEM, IEC 62056-21 (1107), DSMR v. 5.0.2	
<b>Communication module (plug-in)</b>	Modem	LTE, GPRS, Ethernet	
	Interface module	RS232, RS485	
	Maximum transfer rate	19200 baud (fixed or C/E mode)	
<b>Energy supply</b>	Switched-mode power supply	3-phase	
	Mains failure buffering time	> 200 ms	
<b>Supply (measuring voltage, combination or pure auxiliary supply)</b>	Measuring voltage	See voltage version	
	Auxiliary voltage	60 (-20%) – 260 V (+15%) AC/DC or 24 V DC / power consumption < 5.3 VA	
<b>Power consumption per phase (base meter)</b>	Voltage circuit		
	With auxiliary voltage	< 0.02 VA / < 0.02 W (3 x 58/100 V)	
	Without auxiliary voltage	< 1.7 VA / < 1.1 W	
<b>Safety characteristics</b>	Current path	< 0.01 VA @ I <sub>n</sub> = 1 A	
	Overvoltage category (OVC)	OVC III as per IEC 62052-31	
<b>EMC characteristics</b>	Rated peak withstand voltage (U <sub>imp</sub> )	4kV as per IEC 62052-31	
	Insulation strength	4 kV AC, 50 Hz, 1 min	
	Surge voltage	6 kV, pulse 1.2/50 μs, 500 Ω	
<b>Temperature range</b>	Resistance to HF fields	10 V/m (under load)	
	Defined operating range	–25 °C...+55 °C	
	Limit range for operation, storage and transport	–40 °C...+70 °C	

LZQJ-SGM		4-quadrant meter / combi meter	
		Transformer version S	Transformer version P
<b>Humidity</b>		max. 95%, non-condensing, as per IEC 62052-11, EN 50470-1 and IEC 60068-2-30	
<b>Environmental conditions</b>	Mechanical	M1 according to the Measuring Instruments Directive (2014/32/EU)	
	Electromagnetic	E2 according to the Measuring Instruments Directive (2014/32/EU)	
<b>Housing</b>	Intended operating location	Interior as per EN 50470-1	
	Dimensions	approx. 180 x 290 x 80 (W x H x D) mm	
	Protection class	II	
	Degree of protection of housing / terminal block	IP 54 / IP 31	
	Housing material	Non-transparent sections of housing: Glass-fibre reinforced polycarbonate, halogen-free, recyclable Transparent sections of housing: Polycarbonate, halogen-free, recyclable	
<b>Weight</b>	Fire properties	as per IEC 62052-31	
		Max. 1.2 kg	

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

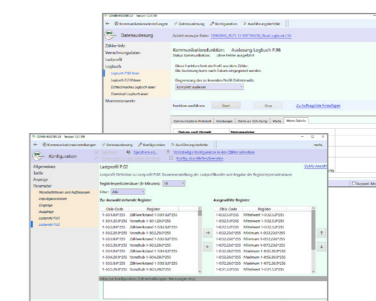
The LZQJ-SGM can be functionally enhanced with the following accessories:



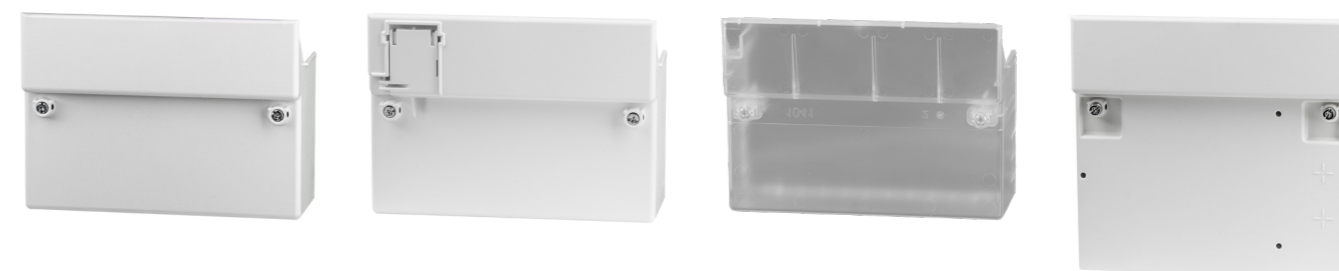
Optical communication unit (OKK USB)



Meter modem VARIOMOD-XC (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

With P1 connection: L = 130.0 mm

Transparent: L = 130.0 mm

Long: L = 167.5 mm