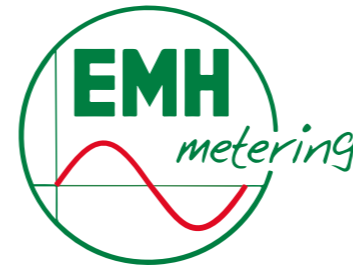


**The LZQJ-SGM complies with the following standards among others:**

|                         |   |
|-------------------------|---|
| 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)              |
| 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 62053-1             | 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



## 4-quadrant meter / combi meter

- 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





| LZQJ-SGM  |  | 4-quadrant meter / combi meter   |   |
|---|--|--|---|
|   |  | Direct metering version  | Transformer version   |
| <b>Voltage</b>                                  | 4-wire meter   | 3 x 220/380 V<br>or 3 x 230/400 V<br>or 3 x 240/415 V  | 3 x 58/100 V – 3 x 240/415 V<br>or 3 x 58/100 V or 3 x 63/110 V<br>or 3 x 115/200 V or 3 x 127/220 V<br>or 3 x 220/380 V or 3 x 230/400 V<br>or 3 x 240/415 V |
| <b>Current</b>                                  |  | 0.25–5 (100) A   | 0.01–1(10) A  |
| <b>Utilisation category</b>                     | UC (Utilisation Category)  | UC 2 as per IEC 62052-31   |   |
| <b>Frequency</b>                                |  | 50 Hz, 60 Hz   | 50 Hz, 60 Hz  |
| <b>Accuracy</b>                                 | Active energy<br>Reactive energy   | Cl. B (Cl. 1), Cl. A (Cl. 2)<br>Cl. 2, Cl. 3   | Cl. B (Cl. 1), Cl. A (Cl. 2)<br>Cl. 2, Cl. 3  |
| <b>Measuring system</b>                         | Designation  | Compensated transformer  |   |
| <b>Measuring types</b>                          | Active energy<br>Reactive energy<br>Apparent energy  | +A, –A<br>+R, –R, R1, R2, R3, R4<br>S  |   |
| <b>Pulse values</b>                             | LED (pulse/kWh, pulse/kvarh)<br>Output (pulse/kWh, pulse/kvarh)  | 500...1000 (type-specific)<br>250...500 (type-specific)  | 10 000...100 000 (type-specific)<br>5 000...50 000 (type-specific)  |
| <b>Energy registers</b>                         | Maximum number   | up to 50   |   |
| <b>Maximum registers</b>                        | Maximum number<br>Measuring period   | up to 48<br>1, 2, 5, 10, 15, 20, 30, 60 min, adjustable  |   |
| <b>Load profile P.01</b>                        | Maximum number of channels<br>typical memory depth<br>Registration period<br>Recording type                                  | 16<br>90 days (for 6 channels and 15 min registration period)<br>1, 2, 5, 10, 15, 20, 30, 60 min, adjustable<br>Power, energy, energy feed                         |   |
| <b>Load profile P.02</b>                        | Maximum number of channels<br>typical memory depth<br>Registration period<br>Measured values                                 | 18<br>30 days (for 18 channels and 10 min registration period)<br>1, 10, 15 min<br>Measuring of current and voltage (minimum, average value and maximum for each)  |   |
| <b>Real time clock</b>                          | Running accuracy<br>Synchronisation<br>Power reserve of battery  | Within ± 5 ppm<br>Via data interfaces, control input<br>> 10 years   |   |
| <b>Inputs</b>                                   | System voltage inputs  | up to 2  |   |
| <b>Data preservation</b>                        |  | Voltage-free in flash memory, at least 10 years  |   |
| <b>Display</b>                                  | Version<br>Height of digits  | VDEW display, 84 mm x 26.5 mm<br>8 mm  |   |
| <b>Operation</b>                                | Mechanical buttons   | For calling and resetting the display (sealable under module flap)   |   |
| <b>Data interfaces</b>                          | Optical data interface<br>Electrical data interface<br>Data protocols  | Optical data interface D0 (38400 Baud)<br>CL0 (19200 Baud) / RS232, RS485 (115200 Baud)<br>IEC 62056-21 (1107), DLMS/COSEM   |   |
| <b>Communication module (plug-in)</b>           | Modem<br>Interface module<br>Maximum transfer rate   | LTE, GPRS, Ethernet<br>RS232, RS485<br>19200 baud (fixed or C/E mode)  |   |
| <b>Outputs</b>                                  | Number of Optocoupler MOSFET<br>System voltage, Optocoupler MOSFET   | max. 7<br>max. 250 V AC/DC, 100 mA (make contact)  |   |
| <b>Energy supply</b>                            | Switched-mode power supply<br>Mains failure buffering time   | 3-phase<br>> 200 ms  |   |
| <b>Supply</b>                                   |  | internal supply  |   |
| <b>Power consumption per phase (base meter)</b> | Voltage circuit<br>Current path  | <1.3 VA/<1.0 W<br><0.004 VA @ I <sub>N</sub> =5 A  | <1.9 VA/<1.2 W<br><0.04 VA @ I <sub>N</sub> =1 A  |
| <b>Safety characteristics</b>                   | Over voltage category (OVC)<br>Rated peak withstand voltage (U <sub>imp</sub> )  | OVC III as per IEC 62052-31<br>4kV as per IEC 62052-31   |   |
| <b>EMC characteristics</b>                      | Insulation strength<br>Surge voltage<br>Resistance to HF fields  | 4 kV AC, 50 Hz, 1 min<br>6 kV, pulse 1.2/50 µs, 500 Ω<br>10 V/m (under load)   |   |
| <b>Temperature range</b>                        | Defined operating range<br>Limit range for operation,<br>Storage and transport   | –25 °C...+55 °C<br>–40 °C...+70 °C   |   |
| <b>Humidity</b>                                 |  | max. 95%, non-condensing, as per IEC 62052-11, EN 50470-1 and IEC 60068-2-30   |   |
| <b>Housing</b>                                  | Dimensions<br>Protection class<br>Degree of protection of housing /<br>terminal block<br>Housing material<br>Fire properties | approx. 180 x 290 x 80 (W x H x D) mm<br>II<br>IP 54 / IP 31<br>Glass-fibre reinforced polycarbonate, halogen-free, recyclable<br>as per IEC 62052-31              |   |
| <b>Environmental conditions</b>                 | Mechanical<br>Electromagnetic<br>Intended operating location   | M1 according to the Measuring Instruments Directive (2014/32/EU)<br>E2 according to the Measuring Instruments Directive (2014/32/EU)<br>Interior as per EN 50470-1 |   |
| <b>Weight</b>                                   |  | 1.2 kg   | 1.0 kg  |

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:**



Optical communication unit (OKK USB)

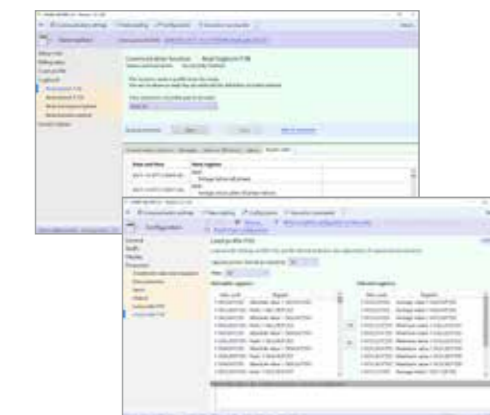


Meter modem VARIOMOD-XC (LTE, GPRS, Ethernet) and interface module (RS232, RS485)



Terminal covers in different lengths  
Standard version: L = 130.0 mm  
Long version: L = 167.5 mm

Communication and parametrisation software with user-friendly interface



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

