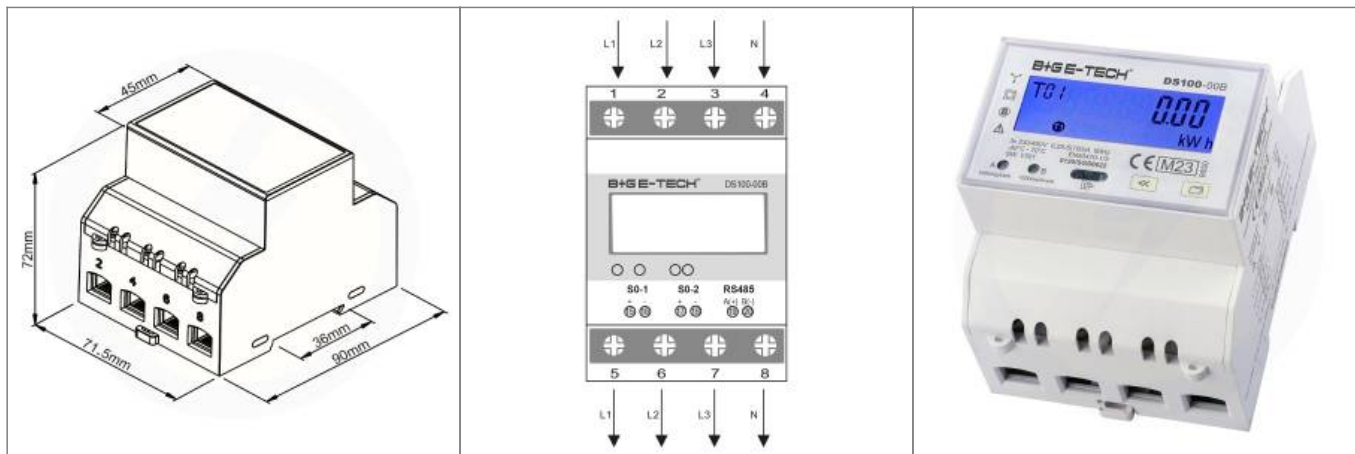


lamaPLC: B+G E-Tech DS100 Energy Meter with Modbus

This series' digital bidirectional power meter is built for direct measurement in 3-phase AC systems, supporting loads up to 100 A. It is MID B&D certified by SGS UK.



Technical data

- Type designation: DS100-009 (Article no. 1042204-M23)
- MID certified according to certificate 0120/SGS0622 from SGS UK
- 0.25-5A nominal current / 100A limit current (limit current = can be continuously loaded!)
- Electronic electricity meter (3-phase current according to EN 61036, for 4-wire three-phase networks) 3p4w
- digital LCD (backlit)
- 6 digital digits + 2 decimal places = 999999.99 kWh
- Connection: 3x230V/400V AC
- Operating range: 3*161/279 to 300/500 / 0.1 ~ 100A
- Frequency range: 50Hz +/- 10%
- Start current Cos-Phi = 1: 0.4% of Ib
- Self-consumption: ≤ 1W /12VA per phase
- Accuracy class: 1
- Pulse length: 80ms
- LED counting pulses: 1000imp/kWh
- Temp. range: -25°C to +55°C
- Rel. humidity: up to 75% - briefly up to 95%
- Mounting: DIN rail (DIN EN50022) / 4TE=71.5mm
- Dimensions: 71.5x90x72mm
- Weight: approx. 350g
- Approved for billing purposes to third parties

Modbus map

| Address | Measuring | Var.type | Unit/resolution | Rel.addr |
|-----------------------------|-----------|----------|-----------------|----------|
| Input register block | | | | |

| Address | Measuring | Var.type | Unit/resolution | Rel.addr |
|---------|-------------------------------|----------|-----------------|-----------------------------------|
| 31024 | Phase 1 to neutral volts | int32 | mV | Basis 1024, 0x00, lenght: 80 word |
| 31026 | Phase 2 to neutral volts | int32 | mV | 0x02 |
| 31028 | Phase 3 to neutral volts | int32 | mV | 0x04 |
| 31030 | Phase L1 - L2 volts | int32 | mV | 0x06 |
| 31032 | Phase L2 - L3 volts | int32 | mV | 0x08 |
| 31034 | Phase L3 - L1 volts | int32 | mV | 0x0A |
| 31036 | Average line to neutral volts | int32 | mV | 0x0C |
| 31038 | Average line to line volts | int32 | mV | 0x0E |
| 31040 | Phase 1 current | int32 | mA | 0x10 |
| 31042 | Phase 2 current | int32 | mA | 0x12 |
| 31044 | Phase 3 current | int32 | mA | 0x14 |
| 31046 | Neutral current | int32 | mA | 0x16 |
| 31048 | Three-phase vector current | int32 | mA | 0x18 |
| 31050 | Phase 1 active power | int32 | W | 0x1A |
| 31052 | Phase 2 active power | int32 | W | 0x1C |
| 31054 | Phase 3 active power | int32 | W | 0x1E |
| 31056 | Total active power | int32 | W | 0x20 |
| 31058 | Phase 1 apparent power | int32 | VA | 0x22 |
| 31060 | Phase 2 apparent power | int32 | VA | 0x24 |
| 31062 | Phase 3 apparent power | int32 | VA | 0x26 |
| 31064 | Total apparent power | int32 | VA | 0x28 |
| 31066 | Phase 1 reactive power | int32 | var | 0x2A |
| 31068 | Phase 2 reactive power | int32 | var | 0x2C |
| 31070 | Phase 3 reactive power | int32 | var | 0x2E |
| 31072 | Total reactive power | int32 | var | 0x30 |
| 31074 | Phase 1 frequency | int16 | Hz/10 | 0x32 |
| 31075 | Phase 2 frequency | int16 | Hz/10 | 0x33 |
| 31076 | Phase 3 frequency | int16 | Hz/10 | 0x34 |
| 31077 | Combinated frequency | int16 | Hz/10 | 0x35 |
| 31078 | Phase 1 power factor | int16 | 0.1 | 0x36 |
| 31079 | Phase 2 power factor | int16 | 0.1 | 0x37 |
| 31080 | Phase 3 power factor | int16 | 0.1 | 0x38 |
| 31081 | Total power factor | int16 | 0.1 | 0x39 |
| 31082 | Phase 1 active power forward | int32 | W/10 | 0x3A |
| 31084 | Phase 2 active power forward | int32 | W/10 | 0x3C |
| 31086 | Phase 3 active power forward | int32 | W/10 | 0x3E |
| 31088 | Total active power forward | int32 | W/10 | 0x40 |
| 31090 | Phase 1 active power reverse | int32 | W/10 | 0x42 |
| 31092 | Phase 2 active power reverse | int32 | W/10 | 0x44 |
| 31094 | Phase 3 active power reverse | int32 | W/10 | 0x46 |
| 31096 | Total active power reverse | int32 | W/10 | 0x48 |
| 31098 | Phase 1 active power demand | int32 | W/10 | 0x4A |
| 31100 | Phase 2 active power demand | int32 | W/10 | 0x4C |
| 31102 | Phase 3 active power demand | int32 | W/10 | 0x4E |

| Address | Measuring | Var.type | Unit/resolution | Rel.addr |
|-------------------------------|---------------------------------|----------|-----------------|----------------------------------|
| 31104 | Total active power demand | int32 | W/10 | 0x50 |
| 31082 | Phase 1 reactive power forward | int32 | var/10 | 0x52 |
| 31084 | Phase 2 reactive power forward | int32 | var/10 | 0x54 |
| 31086 | Phase 3 reactive power forward | int32 | var/10 | 0x56 |
| 31088 | Total reactive power forward | int32 | var/10 | 0x58 |
| 31090 | Phase 1 reactive power reverse | int32 | var/10 | 0x60 |
| 31092 | Phase 2 reactive power reverse | int32 | var/10 | 0x62 |
| 31094 | Phase 3 reactive power reverse | int32 | var/10 | 0x64 |
| 31096 | Total reactive power reverse | int32 | var/10 | 0x66 |
| 31098 | Phase 1 reactive power demand | int32 | var/10 | 0x68 |
| 31100 | Phase 2 reactive power demand | int32 | var/10 | 0x6A |
| 31102 | Phase 3 reactive power demand | int32 | var/10 | 0x6C |
| 31104 | Total reactive power demand | int32 | var/10 | 0x6E |
| Holding register block | | | | |
| 40270 | Total active energy forward | int32 | kWh/100 | Basis 270, 0x00, lenght: 52 word |
| 40280 | Total active energy reverse | int32 | kWh/100 | 0x0A |
| 40290 | Total active energy | int32 | kWh/100 | 0x14 |
| 40300 | Total reactive energy forward | int32 | kvarh/100 | 0x1E |
| 40310 | Total reactive energy reverse | int32 | kvarh/100 | 0x28 |
| 40320 | Total reactive energy | int32 | kvarh/100 | 0x32 |
| 41280 | Phase 1 active energy | int32 | kWh/100 | Basis 1280, 0x00, lenght: - word |
| 41290 | Phase 1 active energy forward | int32 | kWh/100 | |
| 41300 | Phase 1 active energy reverse | int32 | kWh/100 | |
| 41310 | Phase 1 reactive energy forward | int32 | kvarh/100 | |
| 41320 | Phase 1 reactive energy reverse | int32 | kvarh/100 | |
| 41330 | Phase 1 reactive energy | int32 | kvarh/100 | |
| 41380 | Phase 2 active energy | int32 | kWh/100 | |
| 41390 | Phase 2 active energy forward | int32 | kWh/100 | |
| 41400 | Phase 2 active energy reverse | int32 | kWh/100 | |
| 41410 | Phase 2 reactive energy forward | int32 | kvarh/100 | |
| 41420 | Phase 2 reactive energy reverse | int32 | kvarh/100 | |
| 41430 | Phase 2 reactive energy | int32 | kvarh/100 | |
| 41480 | Phase 2 active energy | int32 | kWh/100 | |
| 41490 | Phase 2 active energy forward | int32 | kWh/100 | |
| 41500 | Phase 2 active energy reverse | int32 | kWh/100 | |
| 41510 | Phase 2 reactive energy forward | int32 | kvarh/100 | |
| 41520 | Phase 2 reactive energy reverse | int32 | kvarh/100 | |
| 41530 | Phase 2 reactive energy | int32 | kvarh/100 | |

Modbus topics on lamaPLC

| | | |
|------|------|------|
| Page | Date | Tags |
|------|------|------|

| | | |
|--|---------------------|---|
| • Eastron Modbus maps | 2026/04/23 21:51 | modbus , modbus rtu , eastron , modbus map , mid |
| • lamaLib: #temp | 2026/04/23 21:52 | tia , scl , lamalibsimatic , source code , energy meter , modbus , register , word |
| • lamaLib: energyMeterToModbusRegs | 2026/04/23 21:52 | tia , scl , lamalibsimatic , source code , energy meter , modbus , register , word |
| • lamaPLC Communication: Modbus | 2026/04/23 21:51 | modbus , communication , bus , modicon , standard , rtu , tcp , multimaster , coil , register |
| • lamaPLC: B+G E-Tech DS100 Energy Meter with Modbus | 2026/06/05 15:59 | communication , modbus , b g , e-tech , ds100 , energy meter , em |
| • lamaPLC: Communication with Eastron Smart X96 | 2026/06/05 15:59 | communication , modbus , energy meter , em , eastron , smart , x96 |
| • lamaPLC: DM56A04 / DM36B06 digital tube display with Modbus Communication | 2026/02/14 18:25 | dm56a04 , dm36b06 , eletechsup , 7-segment , display , modbus , rtu , modbus rtu , arduino |
| • LamaPLC: Eastron SDM 230 with Modbus Communication | 2026/06/05 15:50 | modbus , modbus rtu , eastron , modbus map , mid , sdm 230 , sdm , arduino , code |
| • LamaPLC: Eastron SDM 630 Energy Meter with Modbus communication | 2026/06/05 15:50 | modbus , modbus rtu , eastron , modbus map , mid , sdm , sdm 630 , arduino , code |
| • lamaPLC: PTA8C04 4-channel PT100 Modbus Modul | 2026/02/14 18:42 | pta8c04 , sensor , modbus , rtu , rs-485 , communication , platine , um72 |
| • lamaPLC: RP2040_ETH_Modul: Modbus TCP example | 2026/05/12 16:20 | code , micropython , 2026 , rp2040 eth , modbus , test |
| • lamaPLC: RP2040_ETH_Modul: Modbus TCP sniffer | 2026/05/12 16:20 | code , micropython , 2026 , rp2040 eth , modbus , sniffer |
| • LamaPLC: S7-1500 and Metrawatt EM2389 Modbus TCP communication | 2026/04/23 21:52 | simatic , s7 , modbus , communication , metrawatt , em2389 , source code , scl , mid |
| • LamaPLC: S7-1500 and Sicam Q200 Modbus TCP communication | 2026/04/23 21:52 | simatic , s7 , modbus , tia portal , communication , sicam , q200 , sicam q200 , source code , scl , class a |
| • lamaPLC: S7-1500 and UICPAL Temp.humi.sensor Modbus TCP communication | 2023/06/19 23:24 | bus , communication , s7 , simatic , s7 1500 , s7 1200 , scl , uicpal , temperature , humidity , modbus , example , download , tia portal |
| • lamaPLC: TM1650 7-Segment Display with I²C like or Modbus Communication | 2026/02/14 18:26 | tm1650 , stc8g , tp8485e , hyuduo5x1b64edtk1244 , 7-segment , display , modbus , rtu , modbus rtu , arduino |
| • lamaPLC: TTL to RS485 Module | 2026/02/14 23:49 | modbus , rtu , modbus rtu , hw-097 , rs-485 , max485 |
| • LamaPLC: UICPAL Temp.humi.sensor | 2023/06/25 00:43 | simatic , s7 , modbus , communication , temperature , humidity , sensor |
| • LamaPLC: XTM35SC Energy meter with Modbus communication | 2026/06/05 15:59 | xtm35sc , modbus , modbus rtu , measuring , power , communication , current meter , voltmeter |
| • lamaPLC: YR-3180 - Weight sensor module with UART or Modbus communication | 2026/02/15 00:00 | communication , modbus , rtu , sensor , weight , yr-3180 , hx710b , arduino , ttl , rs-485 |
| • Modbus for Grundfos pumps | 2026/04/23 21:51 | modbus , modbus tcp , modbus rtu , grundfos |

- [NT18B07: 7 Kanal RS485 Temperatur Sensor with Modbus RTU](#) 2026/02/14 18:49 [nt18b07, sensor, modbus, rtu, rs-485, communication, platine communication, bus, modbus, error, modbus error code, 7000, 7001, 7002, 7003, 7004, 7005, 7006, 80a1, simatic, s7, siemens, tia](#)
- [Simatic Modbus S7 error- and statuscodes](#) 2026/04/23 21:52
- [Waveshare](#) 2026/04/23 21:52 [waveshare, converter, modbus, modbus rtu, modbus tcp, communication](#)
- [XTM35SC current / voltage meter](#) 2026/04/23 21:52 [xtm35sc, modbus, modbus rtu, measuring, power, communication, current meter, voltmeter](#)

[communication, modbus, B+G, E-Tech, DS100, Energy Meter, EM](#)

This page has been accessed for: Today: 3, Until now: 3

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