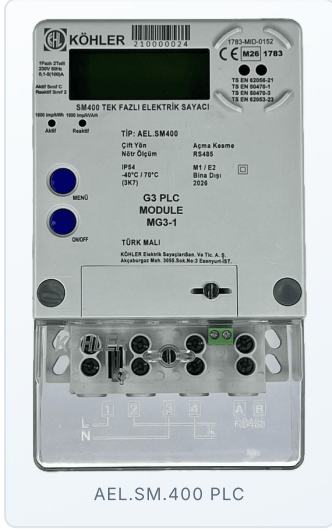


AEL.SM.400 PLC

Single-Phase Smart Electricity Meter

SINGLE-PHASE · SMART METER · G3 PLC · OUTDOOR



AEL.SM.400 PLC — Single-phase smart meter with G3 PLC communication. It operates at 230 V reference voltage over a 5(100) A current range and measures active energy to accuracy class Class C (0.5). It is MID approved.

230 V50 Hz $\pm 5\%$ **5(100) A**

Direct connection

Class C

Active accuracy (0.5)

IP54

-40...+70 °C outdoor

4 Tariffs

KEY FEATURES

- ◆ Single-phase 2-wire · 230 V, 50 Hz · 0.1–5(100) A
- ◆ Active Class C / Reactive Class 2
- ◆ G3 PLC communication module (MG3-1)
- ◆ Bidirectional metering, neutral measurement, remote disconnect
- ◆ RS485 · IP54 · -40/+70 °C · outdoor
- ◆ Optional bidirectional (import-export) metering

MID 2014/32/EU

CE

EN 50470

TECHNICAL SPECIFICATIONS

ELECTRICAL DATA

Reference voltage (Un)	230 V
Operating voltage range	90 V (min) – 265 V (max)
Reference frequency (Fn)	50 Hz $\pm 5\%$
Reference current (In/Ib)	5 A
Maximum current (Imax)	100 A
Starting current (Ist)	0.02 A
Minimum current (Imin)	0.15 A
Transitional current (Itr)	0.5 A
Accuracy class	Active C (0.5) · opt. B (Class 1) — Reactive 2 (opt.)
Meter constant	1600 imp/kWh · opt. 1600 imp/kvarh
Voltage circuit consumption	≤ 1 W
Current circuit consumption	≤ 1 VA

METERING AND RECORDING

Meter definition	Single-phase, 2-wire, active electronic meter
Connection type	Current and voltage: direct
Number of tariffs	4
Measurement direction	Single direction (bidirectional optional)
Data storage capacity	1 year
LCD display	9 (6+3) digits
LED pulse output	1 LED (active) · opt. 1 LED (reactive)
Optional features	Disconnect/reconnect relay, neutral current measurement

COMMUNICATION

Communication interface	Optical port (IEC 62056-21), RS485
Baud rate	300 – 19,200 Baud
Expansion modules	2G / 4G / NB-IoT, RF, RFID, PLC (optional)

ENVIRONMENT AND MECHANICS

IP class	IP54 (outdoor)
Protection class	II
Operating temperature	-40 °C ... +70 °C (3K7)
Relative humidity	95% (non-condensing)
Mechanical / EM environment	M1 / E2 (2014/32/EU)
Operating environment	Non-condensing humidity
ESD withstand	Contact 8 kV · air 15 kV
Impulse voltage withstand	6 kV

BATTERY, CLOCK AND LIFE

System battery life	≥ 10 years
RTC battery life	≥ 10 years
Shelf life	≥ 4 years
Clock accuracy	± 0.5 s/day (23 °C ± 2 °C, EN 62054-21)

STANDARDS AND APPROVALS

Measuring instruments directive	MID 2014/32/EU · CE
Standards	EN 50470-1, EN 50470-3, EN 62052-11, EN 62053-21, EN 62053-23

