

Scope

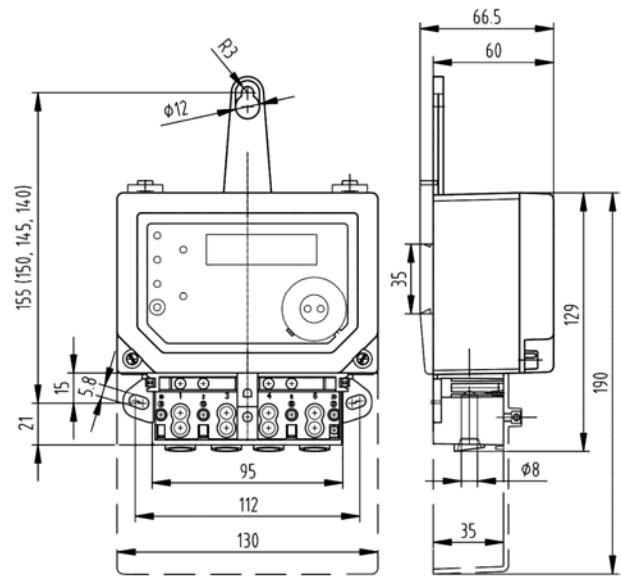
Single-phase static electricity meters **AMS B1x-FAx** are determined for direct and indirect measurement of active energy and displaying values on LCD, with measurement of instantaneous RMS values of voltage, current and P.F. The measured values are stored into special registers marked according to the OBIS codes. In cyclic mode the energy at max. 4 rates is displayed, in step mode which is controlled by button are displayed also other measured values.

In the meter memory are stored the last 15 records of the total and rate energy registers, maximum demands, voltage outages, reverse energy flow, error events. They are equipped with internal real time clock (RTC) which is used for switching of maximum four rates.

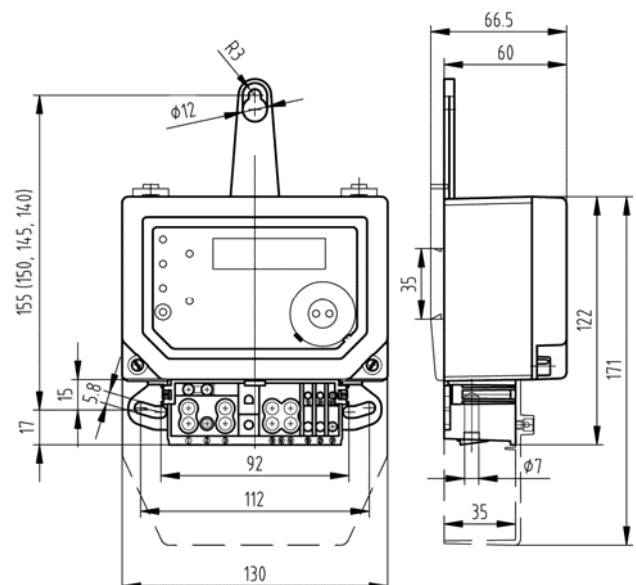
The electricity meters can be parametrized and readout by using optical probe AMOS type and software supplied by the manufacturer. The test pulses indicated by red LED are proportional to the consumed energy. The meters can be produced in version with energy measurement in summary mode (measurement „using an unidirectional mechanical register“) or with measurement in separation mode (measurement of “consumption – supply”).



Dimensional drawings



Electricity meter with BS terminal block



Electricity meter with DIN terminal block

Highlights

- The meters can be mounted on the DIN rail (the clips only on request);
- Removable and adjustable upper hinge is included in the package;
- Passive transmitting pulse SO output for remote transmission;
- Measurement of the energy, power, voltage, current, P.F.;
- Historical records – up to 15 month records;
- Event records (about influence of magnetic field, missing voltage, covers removal,...) – number of events with date of their occurrence;
- Complies with IEC/EN 62052-11, IEC/EN 62053-21; EN 50470-1, EN 50470-3 and with requirements of European Parliament and EC Directive 2014/32/EU (MID);
- It is supplied initially verified for billing measurement.

Technical data

| | |
|--|---|
| Accuracy class | A or B (MID), 2 or 1 (EN 62053-21) |
| Reference voltage [V] | 120, 220, 230, 240 (-30,+15%) |
| Nominal frequency [Hz] | 50 or 60 |
| Reference current I_{ref} [A] <i>direct connection</i> | 5 and 10 |
| Nominal current I_n [A] <i>indirect connection</i> | 5 |
| Transient current I_{tr} [A] <i>direct/indirect connection</i> | 0,5 and 1 / 0,25 |
| Starting current I_{st} [A] <i>direct/indirect connection</i> | ≤ 0,02 and 0,04 / 0,01 |
| Minimal current I_{min} [A] <i>direct/indirect connection</i> | 0,25 and 0,5 / 0,05 |
| Maximal current I_{max} [A] <i>direct/indirect connection</i> | 40, 60, 80 (BS), 100 (BS) / 6; 7,5; 10 |
| Power consumption - voltage circuit [VA/W] | ≤ 7,8 / 0,8 |
| Power consumption - current circuit [VA] | ≤ 0,1 |
| Impulse constant [imp/kWh] | |
| <i>for test output k_{TO}</i> | 1 - 10 000; normally 5000 |
| <i>for impulse output k_{SO}</i> | k _{SO} = k _{TO} / R _{SO} ; normally 2500 |
| Transistor output SO | 24 V / 30 mA |
| Operating temperature | - 40 °C up to + 70 °C |
| Mean temperature coeff. [%/K] | ≤ 0,04 |
| Terminals current; voltage; auxiliary [mm] BS (DIN) | ∅ 8 ; ∅ 3 ; ∅ 3 (∅ 7 ; ∅ 3 ; ∅ 3) |
| Degree of protection | IP54 |
| Meter dimensions w x h/h' x d [mm] BS (DIN) | 130 x 129/190 x 60 (130 x 122/171 x 60) |
| Fixing holes distance w x h [mm] BS (DIN) | 104 - 112 x 115 - 155 (92 - 112 x 115 - 155) |
| Weight [kg] | ≤ 0,6 |

Marking of meters

AMS B1x₅-FAx₈ x₉ x₁₀ x₁₁

AMS B1..... type designation

x₅ overload capacity: **1** – 120 %, **2** – 150 %, **3** – 200 %, **4** – 400 %, **6** – 600 %, **8** – 800 %, **A** – 1000 %, **B** – 1200 %

F basic version: multifunctional electricity meter with LCD and RTC

A measured energy: active

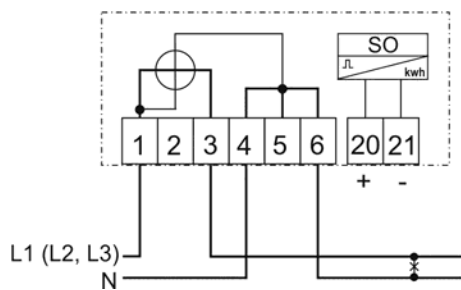
x₈ network connection: **1** - single-phase 2-wire, **2** single-phase 2-wire with measurement in phase & neutral (only at the terminal block execution of BS type), **3** - single-phase 3-wire

x₉ current converter: **S** - shunt, **T** - transformer

x₁₀ terminal block version: **B** – BS, symmetrical connection, **C** – BS, asymmetrical connection, **D** – DIN, asymmetrical connection

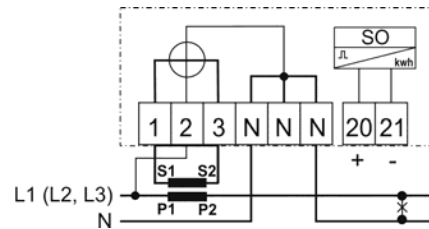
x₁₁ special modules: **I** – processor type

Connection diagrams - examples



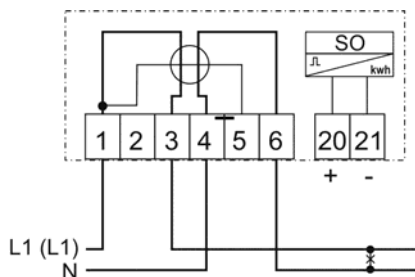
AMS B1x-FA1

(direct, BS terminal block, asymmetrical connection)



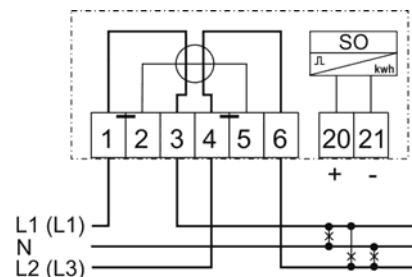
AMS B1x-FA1

(CT operated, DIN terminal block, asymmetrical connection)



AMS B1x-FA2

(direct, BS terminal block, asymmetrical connection, with measurement in phase & neutral)



AMS B1x-FA3

(direct, BS terminal block, asymmetrical 3-wire connection)

Ordering data

- Type and version marking;
- Reference voltage and current range $I_{ref}/I_n, I_{max}$;
- Reference frequency;
- Number of units;
- Required delivery terms.