

Scope

Single-phase static electricity meters **AMS B1x-OAx** 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 1 or 2 rates is displayed, in step mode which is controlled by light pen are displayed also other measured values.

The test pulses indicated by red LED are proportional to the consumed energy. The meters can be produced in version with measurement in summary mode (measurement „using an unidirectional mechanical register“) or with measurement in separation mode (measurement of “consumption – supply”).

Highlights

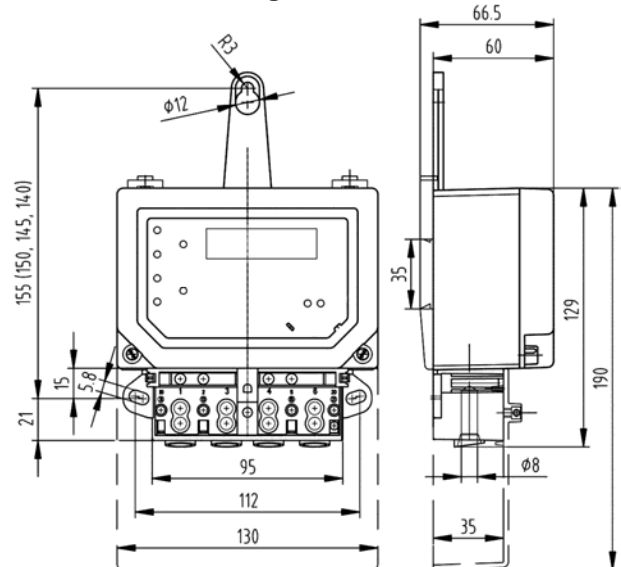
- The meters can be mounted on the DIN rail (the clips only on request);
- Removable and adjustable upper hinge is included in the package;
- Passive transmitting pulse SO output for remote transmission;
- Resistant to external influence;
- Complies with IEC/EN 62052-11, IEC/EN 62053-21; EN 50470-1, 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

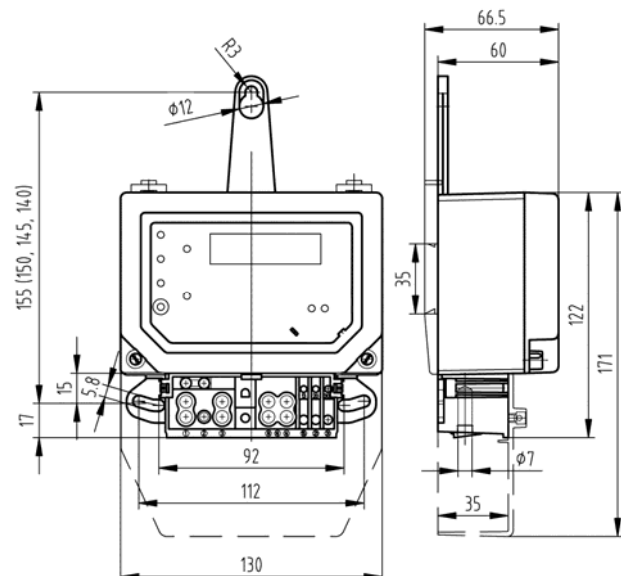
Accuracy class	A or B (MID), 2 or 1 (EN 62053-21)
Reference voltage [V]	120, 220, 230, 240 (-30,+15%)
Nominal frequency [Hz]	50 or 60
Reference current I_{ref} [A] <i>direct connection</i>	5 and 10
Nominal current I_n [A] <i>indirect connection</i>	5
Transient current I_{tr} [A] <i>direct/indirect connection</i>	0,5 and 1 / 0,25
Starting current I_{st} [A] <i>direct/indirect connection</i>	$\leq 0,02$ 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 [VAW]	$\leq 7,5 / 0,4$
Power consumption - current circuit [VA]	$\leq 0,1$
Impulse constant [imp/kWh]	
<i>for test output k_{T0}</i>	1 - 10 000; normally 5000
<i>for impulse output k_{SO}</i>	1-10 000; normally 2500
Transistor output SO	24 V / 30 mA
Operating temperature	- 40 °C up to + 70 °C
Mean temperature coeff. [%/K]	$\leq 0,04$
Terminals current; voltage; auxiliary [mm] BS (DIN)	$\emptyset 8$; $\emptyset 3$; $\emptyset 3$ ($\emptyset 7$; $\emptyset 3$; $\emptyset 3$)
Degree of protection	IP54
Meter dimensions $w \times h/h' \times d$ [mm] BS (DIN)	130 x 129/190 x 60 (130 x 122/171 x 60)
Fixing holes distance $w \times h$ [mm] BS (DIN)	104 - 112 x 115 - 155 (92 - 112 x 115 - 155)
Weight [kg]	$\leq 0,6$



Dimensional drawings



Electricity meter with BS terminal block



Electricity meter with DIN terminal block

Marking of meters

AMS B1x₅-OAx₈ 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 %*

O *basic version: electricity meter with LCD*

A *measured energy: active*

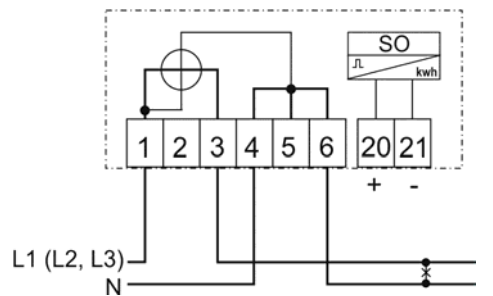
x₈ *network connection: 1 - single-phase 2-wire, 2 single-phase 2-wire with measurement in phase & neutral (only at the terminal block execution of BS type), 3 - single-phase 3-wire*

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

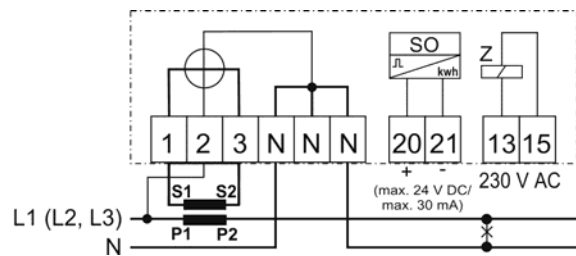
x₁₀ *terminal block version: B – BS, symmetrical connection, C – BS, asymmetrical connection, D – DIN, asymmetrical connection*

x₁₁ *special modules: I – processor type, E – external rates switching*

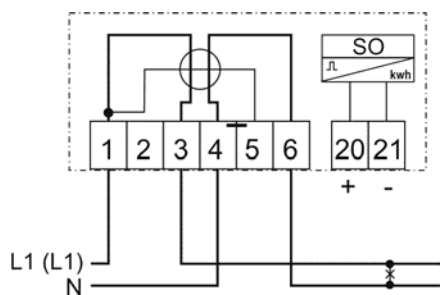
Connection diagrams - examples



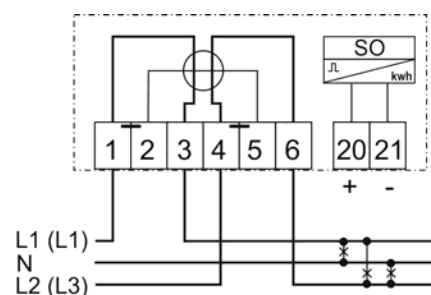
AMS B1x-OA1
(direct, BS terminal block, asymmetrical connection)



AMS B1x-OA1
(double-rate, CT operated, DIN terminal block, asymmetrical connection)



AMS B1x-OA2
(direct, BS terminal block, asymmetrical connection, with measurement in phase & neutral)



AMS B1x-OA3
(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.