*SINGLE-PHASE STATIC ELECTRICITY METERS **AMS B2x-Fx***

for active, reactive and apparent energy, multirate, with RTC and data profiles

Single-phase static electricity meters **AMS B2x-Fx** are determined for measurement of active, reactive and apparent energy, instantaneous active, reactive and apparent maximum demand, voltage, current and P.F. in 2-wire networks in direct connection. They enable measurement of energy in rates controlled by internal clock (up to 4 rates) or externally controlled in two rates.

The measured values stored in registers according to the OBIS codes are displayed on LCD in cyclic or stepping mode. The electricity meters can be parametrized and readout by using optical probe AMOS type and software supplied by the manufacturer. The testing pulses are signalling by a red LEDs separately for active and reactive energy. The meters can be produced in version with measurement in summary mode (unidirectional register) or with measurement in separation mode (consumption – supply).

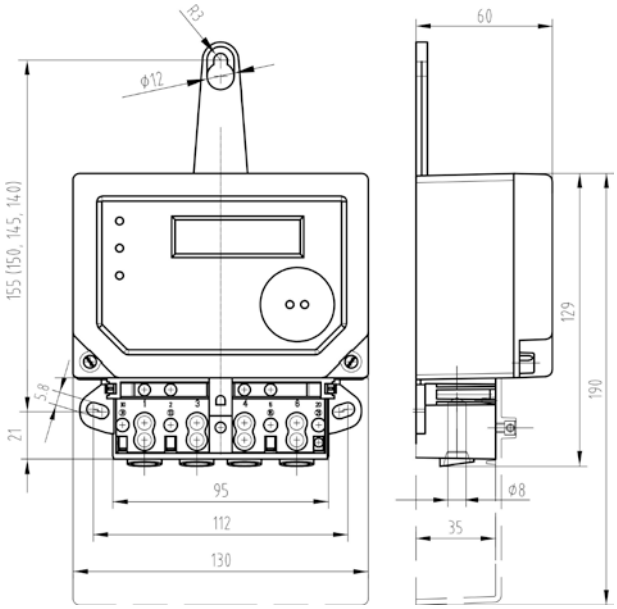
Highlights

- Measurement of energy, power, voltage, current, power factor ... (+A, -A, +R_i, -R_i, +R_c, -R_c, +R, -R, +S, -S, +P, -P, P_{max}, U, I, cos φ...);
- Historical records of the selected registers, created in the end of month - maximum 15 month historical records;
- Event records (about influence of magnetic field, missing voltage, covers removal,...) – number of events with date of their occurrence;
- Data record in three independent profiles with selectable channels (20 channels);
- Passive impulse SO outputs (particularly for active and reactive energy);
- Communication interface: optical, RS485 or Mesh with internal or external antenna (EN 62056-21, C mode);
- Possible versions with disconnection function with SCS (Supply control switch), relay 1 and relay2. The disconnection method is defined by modes 0 to 6;
- Welded case on a customer request;
- Removable and adjustable upper hinge is included in the package;
- Compliance 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);
- Electricity meter is delivered with conformity assessment (initial verification) for active energy billing purposes.

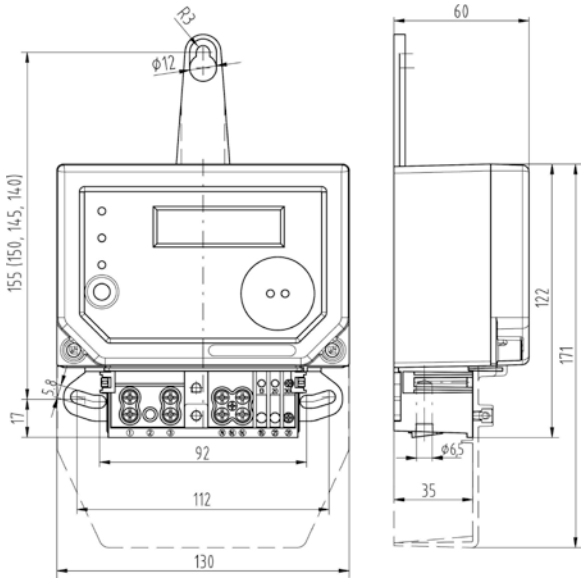
Ordering data

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

Dimensional drawings



*Electricity meter with **BS** terminal block*



*Electricity meter with **DIN** terminal block*

Technical data

Accuracy Class		**A** and **B** (MID); **2** and **1** (IEC 62053-21); **2** and **3** for reactive energy (IEC 62053-23)
Reference voltage U_n [V]		220, 230, 240 (-30,+15 %)
Reference current I_{ref} [A] (I_{ref} = 10 I_{tr})		5 and 10
Transient current I_{tr} [A]		0,5 and 1
Starting current I_{st} [A]		≤ 0,02
Minimum current I_{min} [A]		0,25 and 0,5
Maximum current I_{max} [A]		60 (DIN terminal block), 100 (terminal block)
Current overloadability [%]		**4** - 400, **6** - 600, **8** - 800; **A** - 1000, **B** - 1200, **D** - 1600, **E** - 2000
Nominal frequency f_n [Hz]		50 (± 2 %)
Consumption	in voltage circuits [VA/W]	≤ 3,0 / 1,7 (including RS 485)
	in current circuits [VA]	≤ 0,02
Temperatura [°C]		from -40 up to +70
Mean temperature coefficient [%/K]		≤ 0,04
Testing output impulse constant k_{TO} [imp/kWh]		Parametrizable by manufacturer 1 up to 30000, default value: 5000
Mechanical and electromagnetic environment		M1, E2
Terminals – current ; voltage ; auxiliary **[mm]** DIN / BS		ϕ 6,5 ; ϕ 3 ; ϕ 3 **/** ϕ 8 ; ϕ 3 ; ϕ 3
Maxim. section of current wires [mm^2] DIN / BS		35 /40
Maximum section of auxiliary wires [mm^2]		6
Weight [kg]		≤ 0,6
Dimensions w x h x d **[mm]** DIN / BS		130 x 122/171 x 60**/** 130 x 129/190 x 60
Degree of protection		IP53
ISM – Mesh communication [MHz]		868 - 870
Output power		Default: 25,119 mW (14 dBm); optional 1 mW (0 dBm), 10 mW (10 dBm), 25,119 mW (14 dBm); 316,228 mW (25 dBm); 501,187 mW (27 dBm)
Range for ISM Mesh for direct connection **[m]**		150 for internal antenna; 300 for external antenna
Range for ISM Mesh in buildings with obstacles **[m]**		25 for internal antenna; 50 for external antenna
Number of nodes ISM – Mesh		256
RS485 half-duplex – transmission speed [Bd]		9600, 19200

Marking of meters

AMS B2x_5-F$x_7$1x_9 x_{10}Ix_{12}	
AMS B2 - *type designation*	
x_5	*overload capacity:* **4** – 400 %, **6** – 600 %, **8** – 800 %, **A** – 1000 %, **B** – 1200 %, **D** – 1600 %, **E** – 2000 %
F	*basic version*: multifunctional electricity meter with LCD and RTC
x_7	*measured energy:* **A** – active energy, **R** – active + reactive energy, **S** – active + reactive + apparent energy
1	*network connection:* single-phase 2- wire
x_9	*current sensor:* **S** - shunt, **T** - transformer
x_{10}	*terminal block version:* **B** – BS, symmetrical connection, **C** – BS, asymmetrical connection, **D** – DIN, asymmetrical connection
I	*used processor*
x_{12}	*special modules:* **4** - RS 485 interface, **E** - external control of the second rate, **Y** - auxiliary relay 2 A (R1, R2), **M** - Mesh interface, **A** - External antenna, **S** – supply control switch

Connection diagrams - examples