

DESCRIPTION

The mains measuring unit is a module packed in a plastic housing intended for installation on a DIN mounting rail.

The box is PHOENIX type ME MAX 22.5 U-U1 KMGY, width: 22.6 mm, height: 99 mm, depth: 113.65 mm.

The unit enables the measurement of 3 voltages and 3 currents, and from this it calculates active, reactive and apparent power and power factor. In addition, it also measures the network frequency.

On the front of the box there are 2 connectors, one 4-pin with a contact spacing of 7.5 mm for the connection of measuring voltages and the other 6-pin connector with a contact spacing of 3.5 mm for the connection of 3 current transformers.

On the upper side of the box there are 4 two-position switches (DIP switch) and a signal led.

On the back side of the box, in addition to the acceptance for mechanical fastening, there are outputs on the PCB made so as to enable connection to the "DIN rail bus connector" (PHOENIX type ME 22.5 TBUS 1.5/ 5-ST-3.81 KM – 2713722) through which the power supply and CAN communication are realized.

On the bottom side of the box are two RJ11 connectors for CAN communication.



Front side



Bottom side

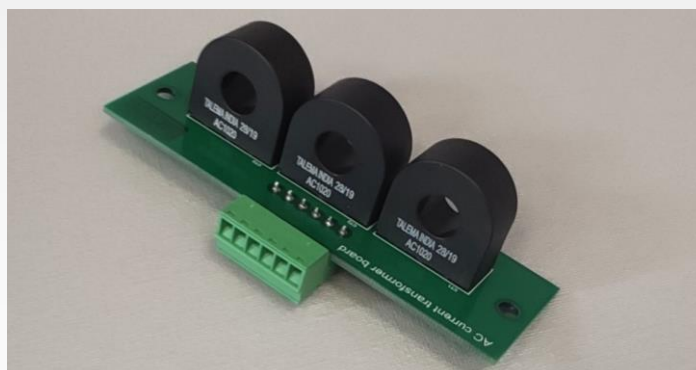


Top side



Back side

In addition to this box, an integral part of the AC measuring unit is the AC-3T board on which there are 3 current transformers with final (burden) resistors.



Meaning of individual switches on the upper side of the box (DIP switch):

Switch 1: ON position - 120 ohm terminating resistance on, OFF - resistance off.

Switch 2: Position ON – CAN ID module = 0x152, OFF – CAN ID module = 0x150.

Switches 3 and 4 define the current transformer used, namely:

Switch3 = OFF, Switch4 = OFF – transformer for 20 A, burden resistance 200 ohm,

Switch3 = ON, Switch4 = OFF – transformer for 50 A, burden resistance 100 ohm

Signaling of the signal led:

Constant lighting: Communication with the supervisor established and ongoing.

Blinking with a frequency of 1 Hz: Communication with the monitoring unit has been interrupted for more than 3 seconds.

Electrical characteristics:		
Supply voltage	8 – 12	V
Supply current max.	100	mA
Voltage range of voltage inputs	0 – 290	Vrms
Accuracy of voltage channels	0.5	%
Current range of current inputs	Depending on the current transformer	
Accuracy of measuring current channels	0.5	%

CAN connector pins	Function
1,2	Power supply positive pole, +8 to +12 V
3	CANH
4	CANL
5,6	Power supply negative pole.