

Data sheet A1EM.EB

Acquisition of electric field data for monitoring

Product description

The IoT transformer A1EM.EB provides digital field data directly proportional to the current that runs through an electric line. The line is therefore led through the openings of the transformer. The digital values are collected immediately and without further treating by a 4.0 Gateway A1GW and processed.

The specific design of the A1EM.EB allows its positioning directly over line breakers or even directly at the cable channel. For this reason the line up of a monitoring solution in the subcabinet becomes very compact and space efficient. Referring to the number of monitored electric lines variants of the A1EM.EB with 3, 6 or 9 channels are available.



Application

- detailed monitoring of electric currents in the sub-distribution
- monitoring of the workload of power lines
- monitoring of power loads

Features

- 3, 6 or 9 channels
- designed to fit to all standard miniature circuit breakers (MCBs)
- measured electric range up to 64 Ampere per channel

Technical data

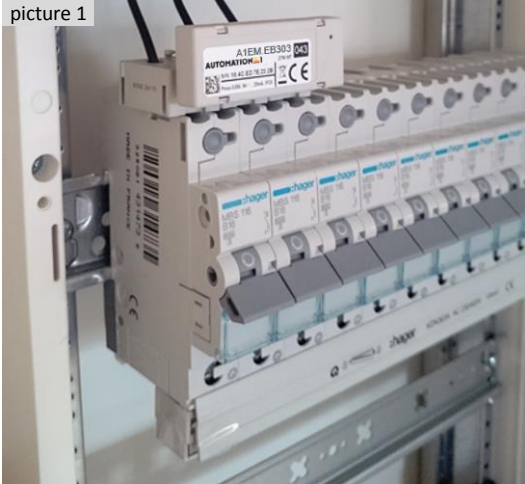
general data	3, 6 or 9 channels for energy metering
IoT data	current up to 9 channels, environmental temperature
rated value electric current	64A max.
rated value operating voltage	250V (AC) max
voltage supply	5 – 24 Vdc
power consumption	0,5W max (DC)
withstand voltage (transients) 4kV	4kV
operating temperature range	-25°C to +55°C
relative humidity (not condensing)	50 % to 95 %
operating air pressure	790 hPa to 1070 hPa

Models IoT transformer A1EM.EB

order ID	maximum values		number of channels
	current (A)	line diameter (mm)	
A1EM.EB.303.01	64	7	3
A1EM.EB.306.01	64	7	6
A1EM.EB.312.01	64	7	12

Installation of the IoT transformer A1EM.EB in the local distribution and in the cabinet

picture 1



The transformer A1EM.EB may perfectly fit to monitor cut-out lines in the building's main cabinet and also in the electric sub-distribution. These transformers do not block any space on the mounting rail, also called hat rail, but are simply put on the line of circuit breakers in the cabinet (see picture 1). Within the cabinet the transformers are individually arranged to monitor defined power lines.

picture 2



The desired power lines are led through the openings of the transformers. The mostly inflexible cables give sufficient hold to the transformers. As necessary an additional fixation by cable straps is possible. The instantaneous digitalized power values are communicated to the 4.0 Gateway A1GW via cable connection.

Advantages of monitoring current outflows and specific power lines

By monitoring current outflows and specific power lines in the sub-distribution the local power net of a building or a technical installation may be controlled easily and consistently. The setting of thresholds for different parameters guarantees the recognition of any abnormal operating status. Automatically sent alert messages make it easier for the staff to localize the source of an error promptly. Preventive maintenance services at the installation and coupled machines may avoid the appearance of severe errors or expensive time-outs. Overloads of the electric infrastructure are detected and dangerous cable fires are prevented.

exemplary application scheme

