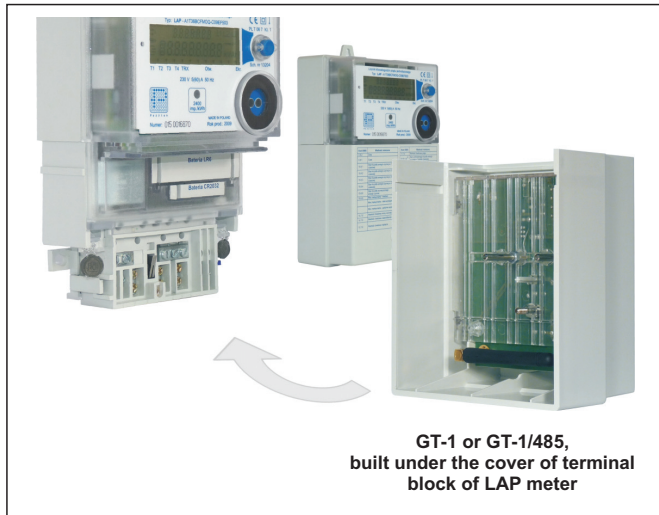




GT-1, GT-1/485

Communication modules for single phase electricity meters type LABM, LAP and LAP-A1/485 working in CSD and GPRS mode



Application

GT-1 and GT-1/485 communication modules are designed for remote data transmission from single phase electricity meters type LABM, LAP and LAP-A1/485, using GSM (2G, 3G) network. GT-1 and GT-1/485 are considered as a specially designed compact modules for installing under the cover of terminal block.

These modules may be installed in the meter at any time of its operation without necessity of removing its seals.

Communication between GT-1 module and electricity meter is performed using wireless optical interface.

In case of GT-1/485 module, communication with electricity meter is performed by wire connection using RS485 interface.

GT-1 and GT-1/485 functions

GT-1 and GT-1/485 modules are “transparent” devices which means that in case of connection with reading application, they compile transparent connection with electricity meters.

Defining the mode and scope of reading data (billing data or power profile) is performed using reading application at each reading session (Fig. 1).

That kind of operation makes it easy to adapt the device to a different data systems.

GT-1 and GT-1/485 communication modules may work in following working modes:

- GPRS packet data transmission (SIM card should have static IP address),
- CSD or GPRS data transmission (SIM card should have static IP address as well as the number for CSD data transmission),
- GPRS packet transmission with a programmable time window for CSD mode (SIM card should have a static IP address as well as the number for the CSD mode),
- data transmission in CSD mode (SIM card should have the number for CSD data transmission).

GT-1 and GT-1/485 are equipped with LEDs on the front panel of the terminal block cover for indicating their operation mode.

GT-1 and GT-1/485 enable real-time clock synchronization of electricity meters based on the time from http or ntp server, according to the configuration schedule. Synchronization feature is available when the device is equipped with a SIM card with activated GPRS transmission service.

Configuration of modules is performed by „GT Konfigurator” software supplied with the device.

Readout and analysis of data from GT-1 and GT-1/485 modules is performed by SOLEN, SKADEN and “Automatyczny Inkasent” software designed by ZEUP POZYTON.

Note: GT-1 and GT-1/485 modules allow communication within GSM network of chosen operator.

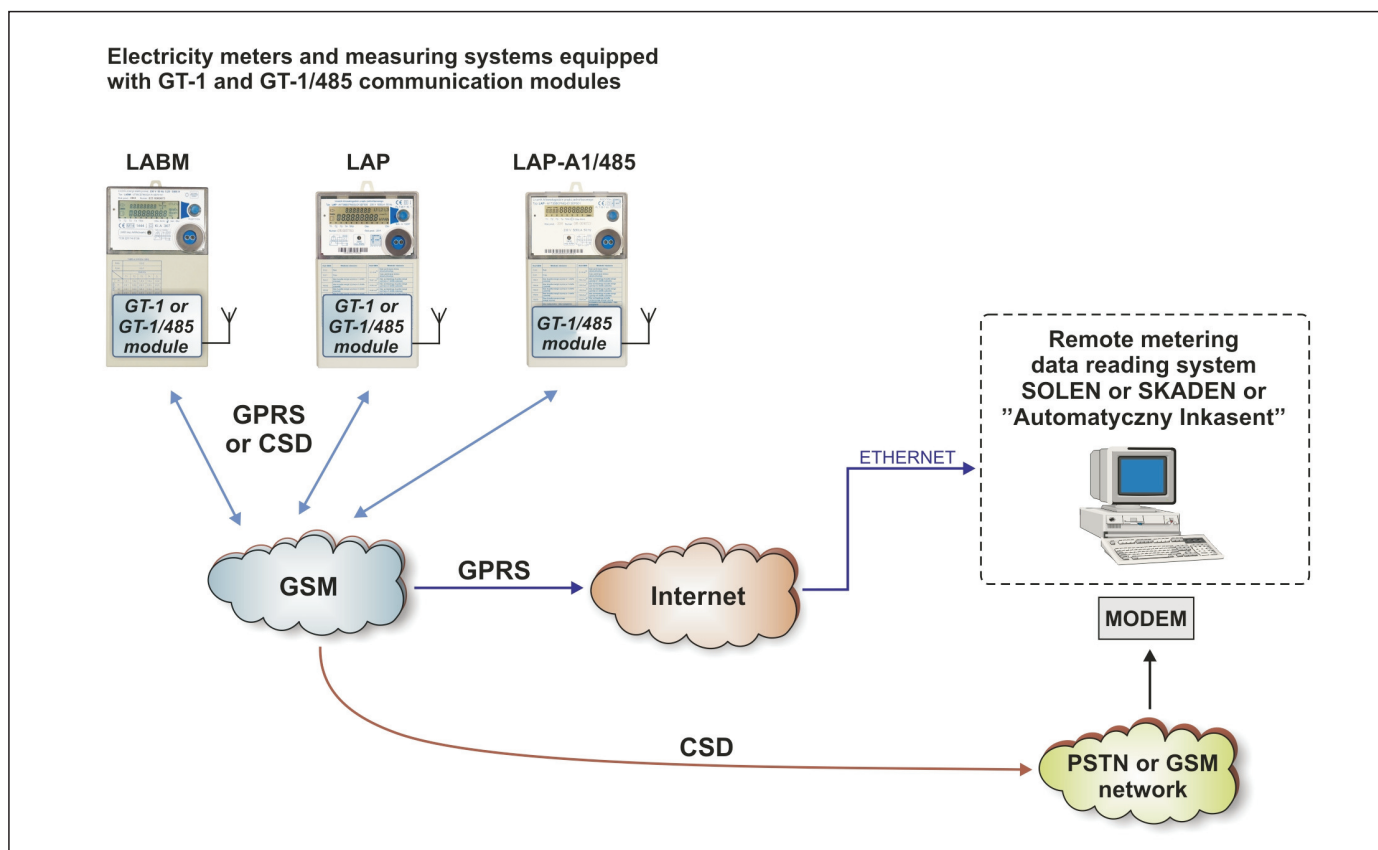


Figure 1. Schematic of data transmission from LABM, LAP and LAP-A1/485 electricity meters equipped with GT-1 and GT-1/485 communication modules.

GT-1 and GT-1/485 technical data

	GT-1 for LAP or LABM	GT-1/485 for LAP-A1/485, LAP and LABM with RS485
Voltage	180 V AC ÷ 265 V AC	180 V AC ÷ 265 V AC
Power supply method (according to order requirements)	Before or after the measuring system	Before or after the measuring system
Frequency	50 Hz	50 Hz
Maximum current consumption	50 mA	50 mA
GSM standards	UMTS (WCDMA/FDD) 900/2100 MHz GSM/GPRS/EDGE 900/1800 MHz GPRS - Multislot Class 33 EGPRS (EDGE) - Multislot Class 33 HSPA+ - Max Uplink/Downlink 5.76/21 Mbps	UMTS (WCDMA/FDD) 900/2100 MHz GSM/GPRS/EDGE 900/1800 MHz GPRS - Multislot Class 33 EGPRS (EDGE) - Multislot Class 33 HSPA+ - Max Uplink/Downlink 5.76/21 Mbps
Emission	GSM 900 – 2 W EDGE 900 – 0,5 W EDGE 1800 – 0,4 W WCDMA 900/2100 – 0,25 W	GSM 900 – 2 W EDGE 900 – 0,5 W EDGE 1800 – 0,4 W WCDMA 900/2100 – 0,25 W
SIM cards	1,8 V and 3 V	1,8 V and 3 V
Configuration interfaces	USB 2.0 (mini-B socket)	USB 2.0 (mini-B socket)
Electromagnetic compatibility	PN-EN 55024:2000, PN-EN 55022:2006	PN-EN 55024:2000, PN-EN 55022:2006
Operating temperature range	- 20° C ... + 60° C	- 20° C ... + 60° C
Dimensions (with cover of the terminal block)	130 x 138 x 73 mm or 130 x 113 x 72 mm [width/height/depth]	130 x 138 x 73 mm or 130 x 113 x 72 mm [width/height/depth]
Weight (with cover of the terminal block)	~ 0,28 kg	~ 0,28 kg

GT-1 and GT-1/485 communication modules are supplied with cover of the terminal block.

ALL FEATURES ARE SUBJECT TO CHANGE WITHOUT NOTICE ACCORDING TO PRODUCTS IMPROVEMENTS.