ENERGY MANAGEMENT AND AUTOMATION

It is a web-based system that is designed to monitor the energy consumption of enterprises and to remotely manage the devices that are suitable for their structure.

SmartPower energy management systems use GPRS or Ethernet communication substructure to communicate with energy-consuming machines in enterprises and to control auxiliary elements and machines. According to the defined rules, it can also intervene in the operation of the devices. SmartPower energy management systems can be used online via www.enerjitakibi.com web address or server software.

How does the system work?

By connecting the appropriate GSM, GSM AUTOMATION and ETHERNET terminals to the device to be monitored and controlled, the data is sent to the central server. The user does not need to install any program. By entering the user name (own e-mail address) and password to our website www.enerjitakibi.com with any device connected to the internet (such as computer, smartphone, tablet), he/she can view the devices defined in his/her account on his/her screen. Thanks to user authorization levels, the same enterprise can be followed by different people with different authorization levels. If you want to control the machines, this is possible by using input and output modules and sensors.

GSM AUTOMATION TERMINAL

KEY FEATURES

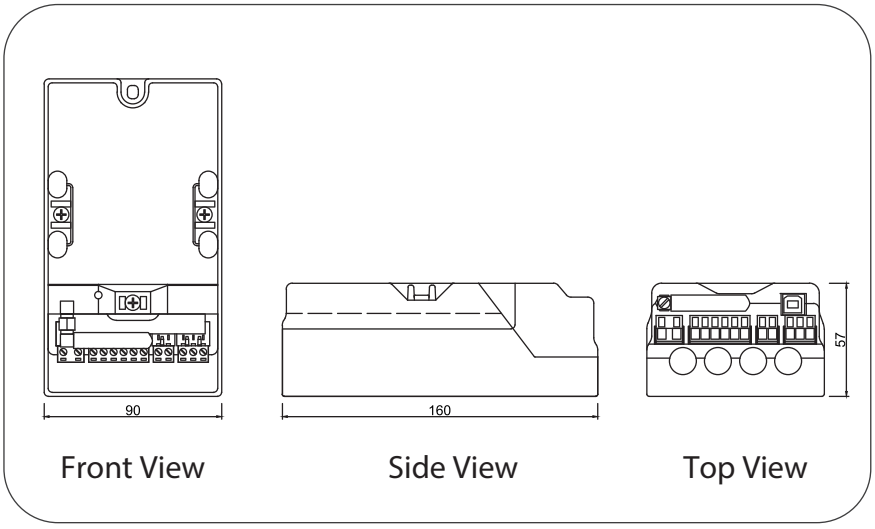
- Microprocessor based.
- It works with 85-265 V AC or 10-30 V DC.
- It can read 32 counters or 247 Modbus devices via RS-485.
- One meter can be read via optical reader and RS-232.
- It can communicate with all meters that support TS EN 62056-21 protocol.
- It has LEDs indicating RS-485/Optical/RS-232 (Communication), Out (Output), In (Input), GSM connection and internet status.
- Data sending period: Can be set between 1-240 minutes.
- It has a system architecture that does not require static IP.
- It has 2 dry contact monitoring inputs and 2 5 A relay outputs.
- It has wired GSM antenna support for places where GSM network signal is weak.
- It works compatible with M2M data lines of all GSM operators.
- It can operate at ambient temperatures between -10°C and +60°C.
- Supply consumption power < 1VA.
- Protection class: IP40.

TECHNICAL FEATURES

Product Code	Product Name	Connection			Protocol	Communication Type	Feeding
		RS-485	RS-232	Optic			
GA3121	HT G21	✓	✓	✓	Counter	GSM	85-265 V AC
GA3122	HT G22	✓			Modbus	GSM	85-265 V AC
GA3123	HT G23	✓			Modbus	GSM	10-30 V DC

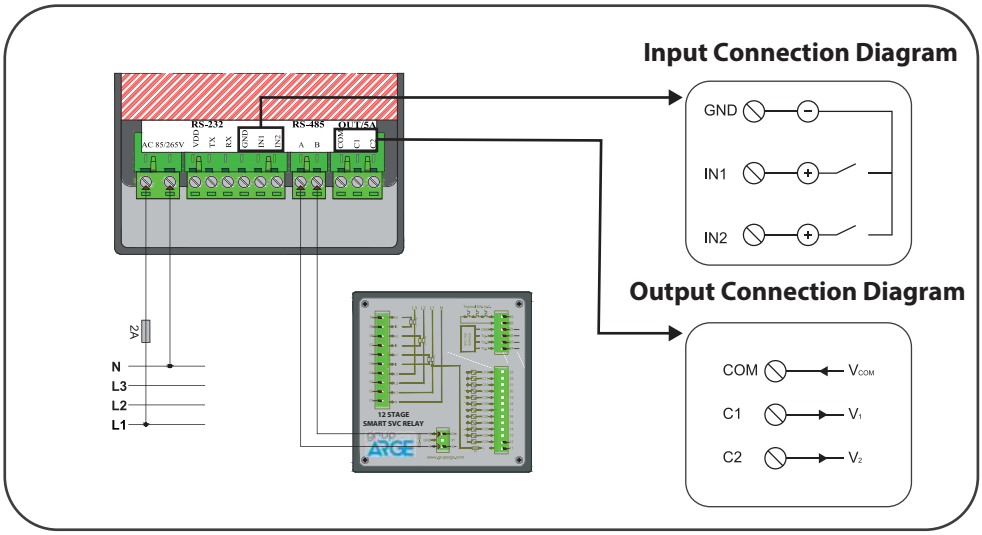
- Terminals can provide communication via www.enerjitakibi.com or to the specified servers.
- GSM terminals use GPRS infrastructure. This model can also be optionally produced with LTE Cat-M1 support.
- Maximum 32 devices can be read in counter protocol, 247 devices in Modbus protocol and 1 device with optical reader.

TECHNICAL DRAWINGS

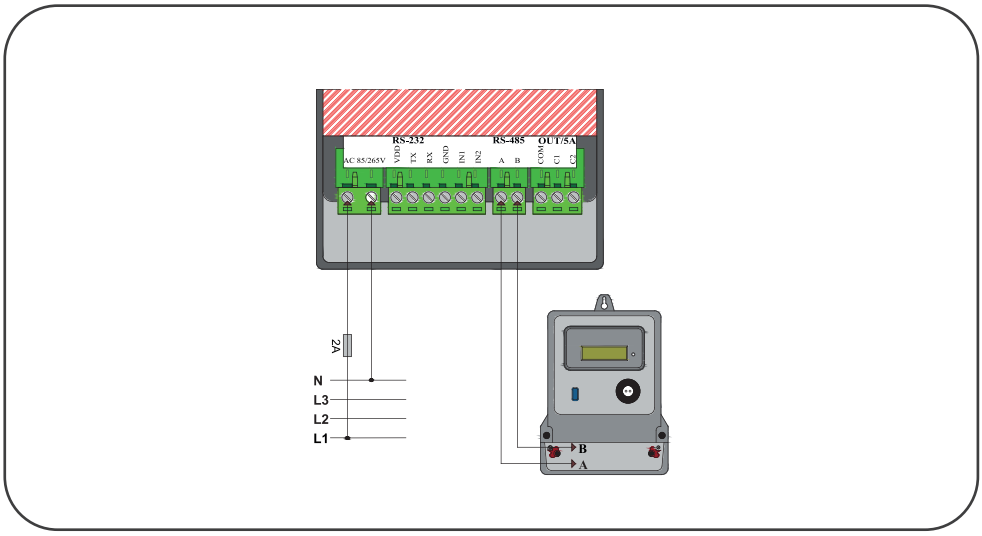


GSM AUTOMATION TERMINAL CONNECTION DIAGRAM

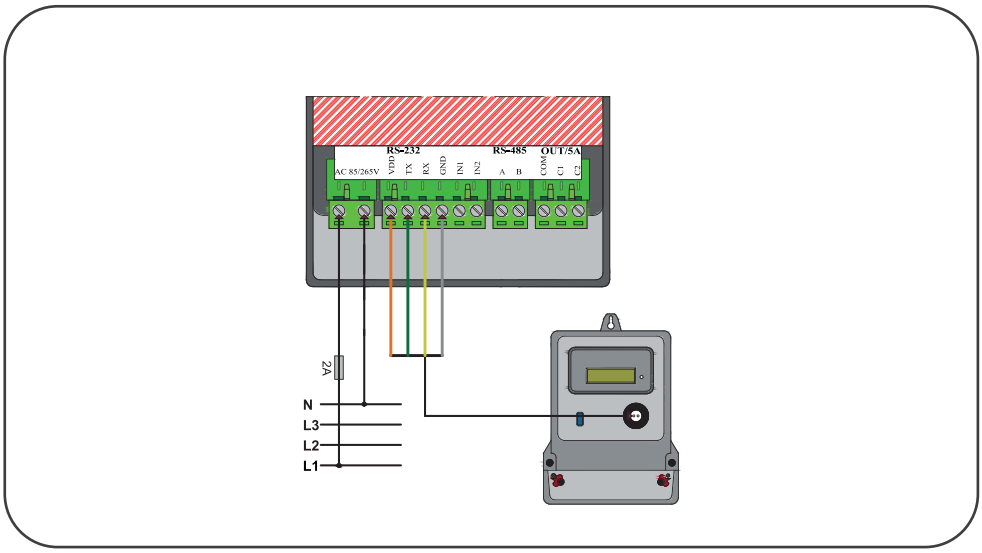
GSM AUTOMATION TERMINAL - RELAY CONNECTION DIAGRAM



GSM AUTOMATION TERMINAL - METER (RS-485) CONNECTION DIAGRAM



GSM AUTOMATION TERMINAL - METER OPTICAL READER CONNECTION DIAGRAM



ETHERNET TERMINAL

KEY FEATURES

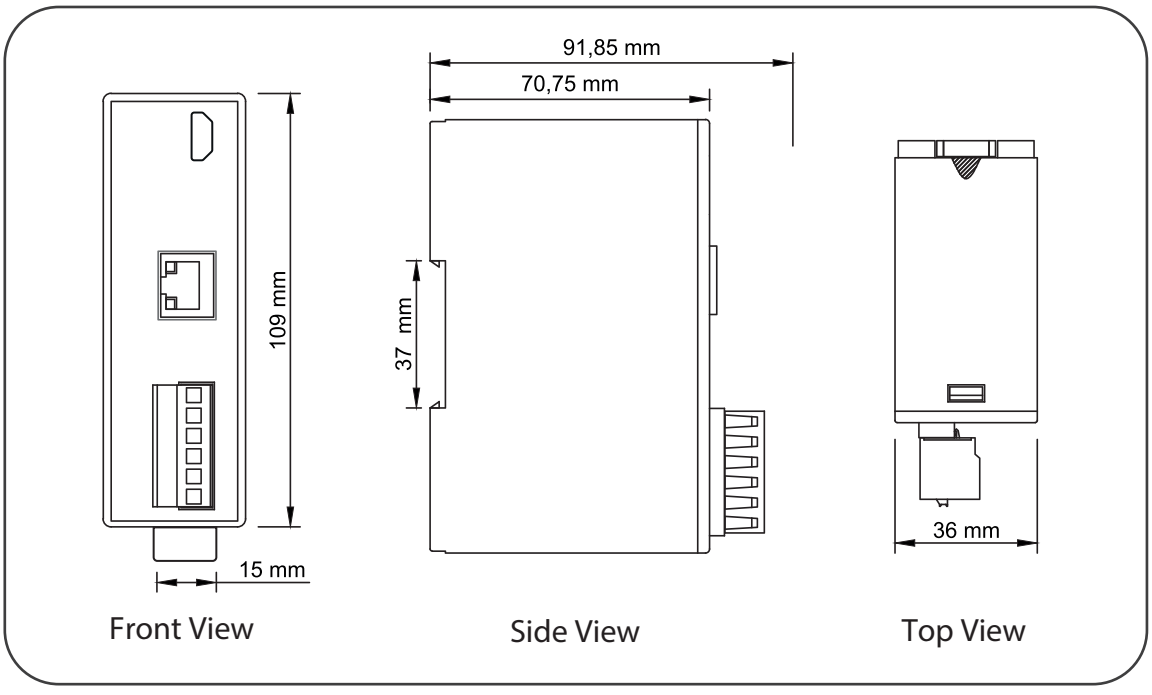
- Microprocessor based.
- Works with 220 V AC supply.
- RS-485 Standard Modbus RTU protocol supports RS-232 and optical port communication channels.
- It has RS-485, RS-232 and optical communication ports.
- It can communicate with devices that support Modbus RTU and ASCLL protocols.
- It can communicate with all meters that support TS EN 62056-21 protocol.
- It can read 32 meters or 247 Modbus devices via RS-485.
- It can read one meter via optical reader and RS-232.
- It has LEDs indicating Power, RS-485-Optical (Communication), IP and internet status.
- Data sending period can be set between 1-240 minutes.
- It has a system architecture that does not require static IP. In cases where static IP is required, the necessary settings can be made via the USB port on it.
- It can operate at ambient temperatures between -10°C and +60°C.
- Supply consumption power < 1 VA.
- Protection class: IP40.

TECHNICAL FEATURES

Product Code	Product Name	Product Description	Connection			Feeding	Protocol
			RS-485	RS-232	Optic		
GA3103	HT E21	ETHERNET TERMINAL (COUNTER/MODBUS)	✓	✓	✓	85-265 V AC	COUNTER/MODBUS

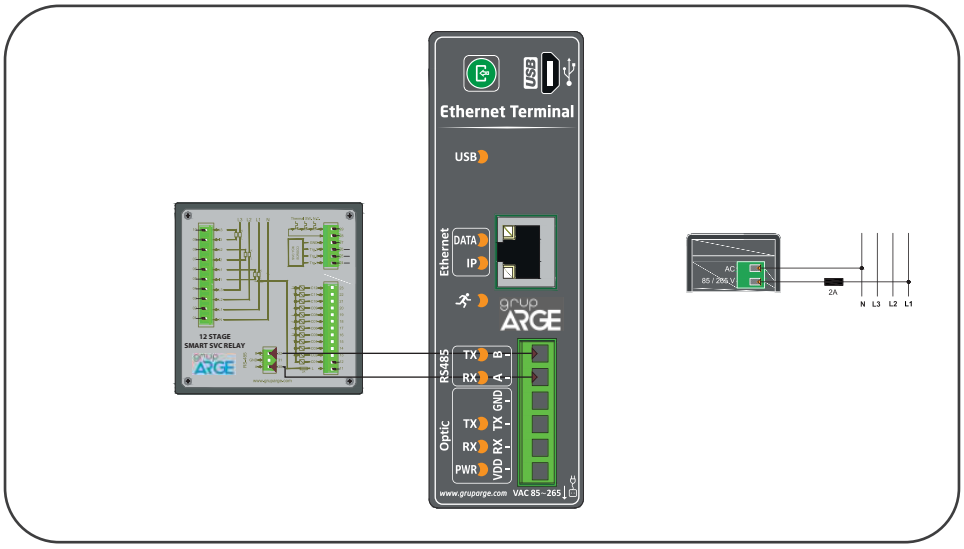
▸ It can read up to 32 devices in counter protocol, 247 devices in Modbus protocol and 1 device with optical reader.

TECHNICAL DRAWINGS

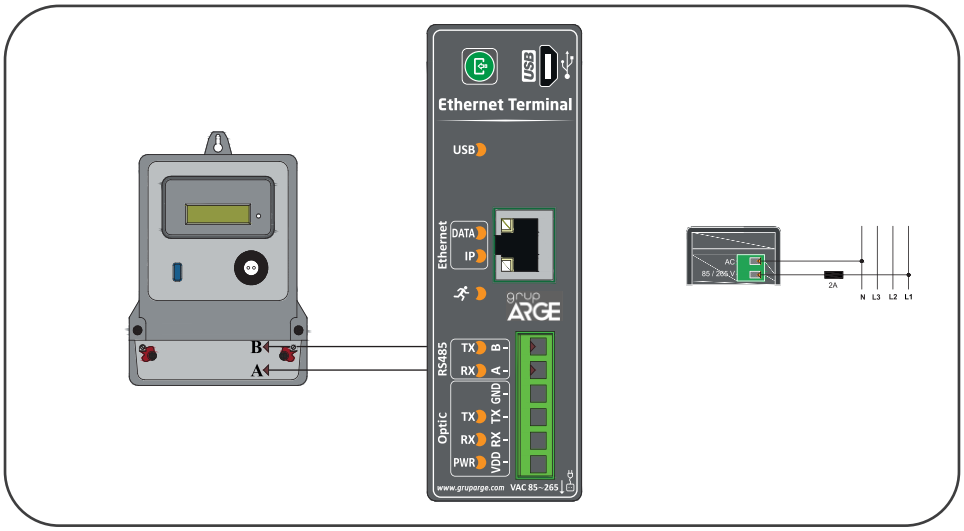


ETHERNET TERMINAL CONNECTION DIAGRAM

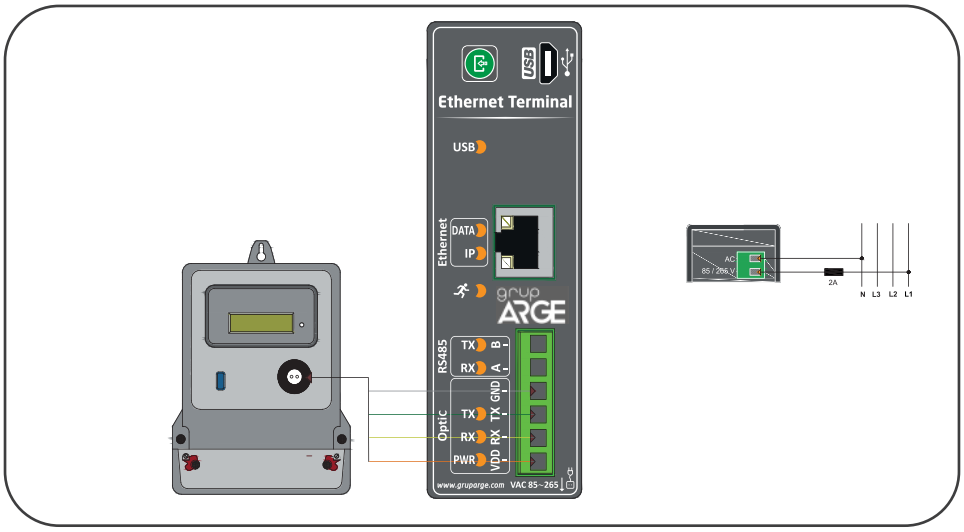
EHTERNET TERMINAL - RELAY CONNECTION DIAGRAM



EHTERNET TERMINAL - METER (RS-485) CONNECTION DIAGRAM



EHTERNET TERMINAL - METER OPTICAL READER CONNECTION DIAGRAM



GSM TERMINAL

KEY FEATURES

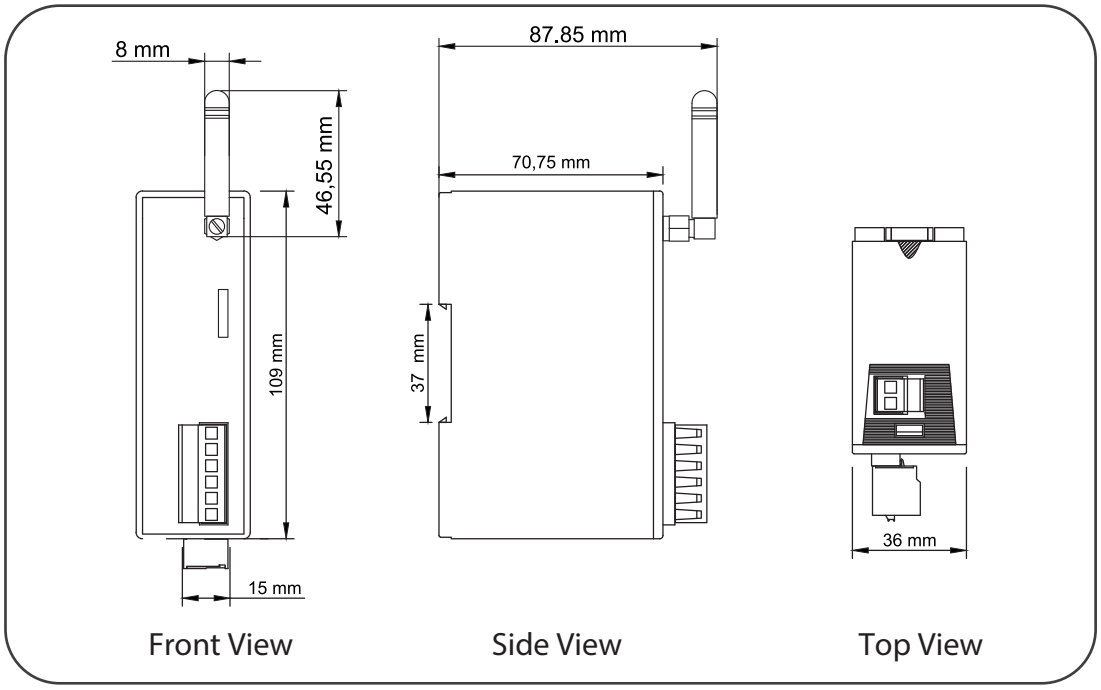
- Microprocessor based.
- Works with 85-265 V AC supply.
- It works with 10-30 V DC supply.
- HT G11 model detects power failure and notifies the center. (HT G12 model does not have this feature.)
- It can read 32 meters or 247 Modbus devices via RS-485.
- It can read one meter via optical reader and RS-232.
- It can communicate with all meters that support TS EN 62056-21 protocol.
- It has LEDs indicating RS-485/Optical/RS-232 (Communication), GSM connection and internet status.
- Data sending period can be set between 1 min-240 min.
- It has a system architecture that does not require static IP.
- It has wired GSM antenna support for places where GSM network signal is weak.
- Compatible with M2M data lines of all GSM operators.
- The operating ambient temperature of the device is between -10°C and +55°C.
- Protection class: IP40.

TECHNICAL FEATURES

Product Code	Product Name	Product Description	Connection			Feeding	Protocol
			RS-485	RS-232	Optic		
GA3111	HT G11	GSM TERMINAL (COUNTER/MODBUS)	✓	✓	✓	85-265 V AC	COUNTER/MODBUS
GA3112	HT G12	GSM TERMINAL (COUNTER/MODBUS)-DC	✓	✓	✓	10-30 V DC	COUNTER/MODBUS

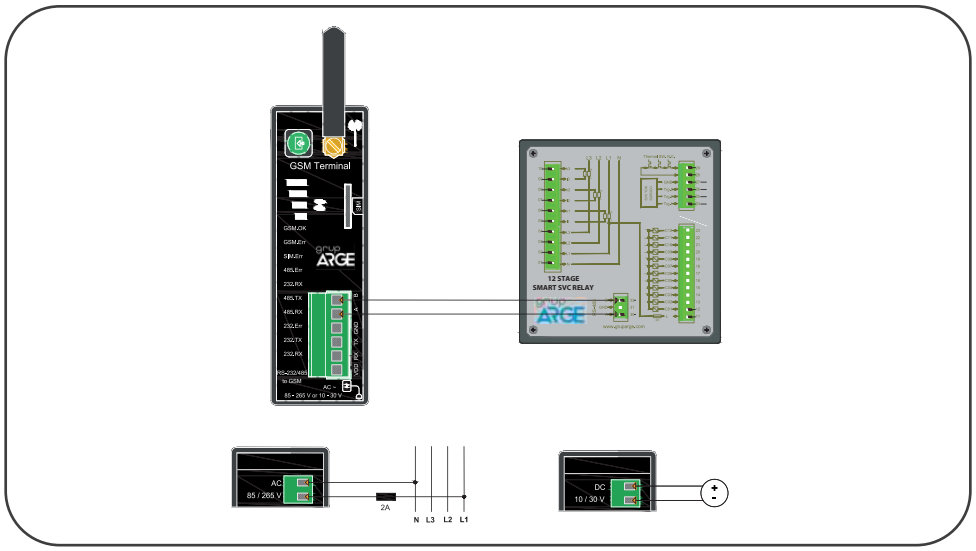
▸ It can read up to 32 devices in counter protocol, 247 devices in Modbus protocol and 1 device with optical reader.

TECHNICAL DRAWINGS

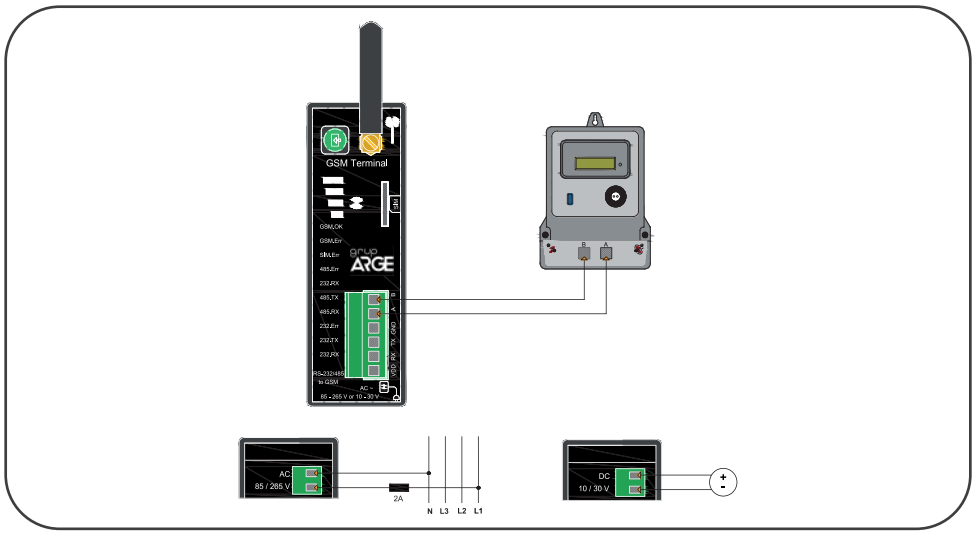


GSM TERMINAL CONNECTION DIAGRAM

GSM TERMINAL - METER CONNECTION DIAGRAM



GSM TERMINAL - METER (RS - 485) CONNECTION DIAGRAM



GSM TERMINAL - METER (OPTICAL READER) CONNECTION DIAGRAM