

SGE-PLC1000

Concentrator for the PLC/PRIME system



Description

SGE-PLC1000 is the main device of Smart Metering systems in **CIRCUTOR** with PRIME protocol. The main function of **SGE-PLC1000** is to manage the mains by **CIRWATT** electricity meters or other meters with PRIME technology. This data collection is performed using the power lines from the distribution network as a medium, which is known as 'PLC Communications' (Power Line Carrier). The protocol used by the PLC concentrator is the PRIME standard.

The **SGE-PLC1000** concentrator is installed in the transformer station providing an Ethernet communications port, which offers the option to access information and interact with the system by accessing the website of the concentrator or through Web Service. The concentrator also has an RS485 or RS232 port, for service functions.

The modular format of the concentrator, allows to add on the same DIN rail, the LV Supervisor, whose main function is totalize the consumption, so that enables the management of the transformer station losses.

A variant of the **SGE-PLC1000** concentrator, is the **SGE-PLC50** with reduced management capacity since it is oriented to outdoors transformers, where there is up to 50 meters.

Application

Being a Plug & Play system, **CIRWATT** energy meters or other meters with PRIME technology, are automatically detected by the **SGE-PLC1000** concentrator. By managing tasks fully configurable by the user, through the WEB page, lets you download all data registered by meters, such as load profiles, billing closures or events. The **SGE-PLC1000** concentrator also offers the possibility to send this information automatically to an ftp server.

By the LV Supervisor, the system can offer specific functions to manage electricity demand, like loss control and fraud detection. All these options allow preventive maintenance and monitoring in detail the behavior of the electricity distribution network.

Features

Power supply	
Working voltage	100 V a 240 Vac
Consumption	~7 W y ~13 VA
PLC - Power Line Communications	
Type	OFDM with repetitive system (PRIME)
Hardware	CENELEC A
Connection	4 wire (3 phases + neutral)
Protection Degree	II
Data Memory	
Type	FLASH (industrial SD card)
Capability	512 Mb
Battery	
Type	Lithium
Position	Internal
Working Life	> 20 years @ 25 °C
Communications	
Port Type	Ethernet
Connector	RJ-45
Protocol	IEEE 802.3
Speed	10/100 Mb/s
Port Type	Serie
Connector	RS-485
Environmental Conditions	
Working Temperature Range	-20 ... +70 °C
Storage Temperature Range	-40 ... +85 °C
Humidity	95% (without condensation)
Maximum Height	2000 m
Standard	
IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 62052-11, IEC/CISPR 22, UNE-EN 50470.	

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References

Type	Code	Power Supply	PLC	PLC Band	Ethernet
SGE-PLC50	[c] Q45405	100 ... 230 V _{ac}	PRIME	PLC A	•
SGE-PLC-1000	[c] Q45408	100 ... 230 V _{ac}	PRIME	PLC A	•
Additional modules for modular PLC concentrator					
SGE-BT	[c] Q45407	-	PRIME	PLC A	-
SGE-PLC1000S (*)	[c] Q45406	100 ... 230 V _{ac}	PRIME	PLC A	•

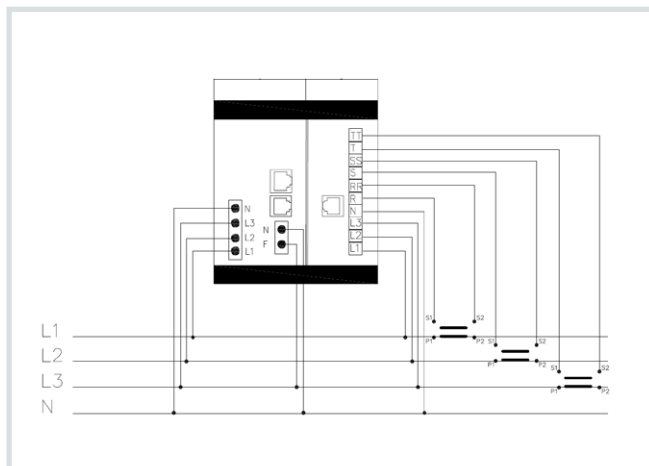
(*) Additional Modular Concentrator for the second transformer.

Screens

The screenshots display the CIRCUTOR software interface. The top left shows a list of connected devices with columns for MAC, version, and status. The top right shows a detailed view of a specific device, including its MAC address, version, and status. The bottom section shows configuration options for the device, such as the date and time, and the status of the device (disconnected or connected).

- List of conected devices
- Circuit breaker management
- Monitoring electrical instantaneous values
- Concentrator configuration

Connections



Dimensions

