

**DCSK SGE-PLC800 CONCENTRATOR**



The DCSK SGE.-PLC800 Concentrator is the unit that manages and reads the three-phase and single-phase energy meters with DCSK communications connected directly to the low voltage network. The format used is of the DIN rail type with PLC DCSK communications, Ethernet port and RS-485.

This manual is a quick use and operating guide of the PLC SGE-PLC800 Concentrator. This manual is available in electronic format on the **CIRCUTOR** web site: [www.circutor.es](http://www.circutor.es)

**!** Disconnect the device from the power supply source before undertaking any form of maintenance, modification of connections, repairs, etc. If you suspect an operational fault in the unit or in its protection system, remove the unit from service. The design of the unit makes it easy to replace in the event of malfunction.

**1.- INTRODUCTION**

The PLC concentrator is the device that reads both the single and three-phase energy meters connected to the low voltage network. The SGE-PLC800 concentrator is typically installed in the transformer substation with a three-phase connection to the low voltage network. This enables telemanaging the energy meters either by reading the information they supply or by executing actions that this type of unit can execute, for example, actuating on the circuit breaker, etc.

**2.- LED INDICATORS**

The SGE-PLC800 concentrator has a series of LED indicators that provide information on its operating condition and the communications status, both internal and external, such as traffic on the Ethernet port or PLC. The following is a list of what each concentrator LED indicates:

LED	FUNCTION
PC POWER	Power supply of the PLC portion of the concentrator
PLC->CPU	Communications indicator of the PLC to concentrator portion
PLC<-CPU	Communications indicator of the Concentrator to PLC portion
TX PLC	Concentrator output frame indication
RX PLC	Concentrator input frame indication
CPU POWER	Concentrator power supply
ACTIVITY	Indicates whether the concentrator is carrying out a task or activity
ALARM	Malfunction indicator
PLC.DATA	Indicates whether the concentrator is receiving PLC frames
ETH.LINK	Indicates whether there is an Ethernet connection
ETH.ACT	Activity on the Ethernet port

**3.- START-UP**

**3.1.- Initial information**

The SGE-PLC800 concentrator is fully configured on the concentrator's web site, and so there is no need for any additional start-up software. However, a computer with an Ethernet port and a crossover type network cable is necessary for configuring the unit. The concentrator's default IP is:

**IP:** 192.168.42.30  
**Port:** 80  
**Netmask:** 255.255.255.0

The user and password must be entered on the main page to access the concentrator. The user authorised to modify parameters is:

- **Username:** admin  
 - **Password:** admin.

The read-only user is:

- **Username:** user  
 - **Password:** user

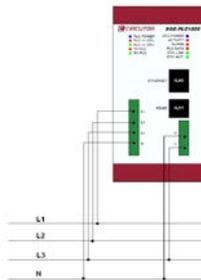
These parameters can be changed on the concentrator's web site.

**3.2.- Module assembly**

The SGE DCSK system is comprised of a base module or main concentrator (SGE-PLC800) which requires a power supply and has an embedded PC that controls the PLC and Ethernet communications.

**4.- MODULE CONNECTION**

The SGE-PLC800 concentrator connection is a:



**SG-PLC800 concentrator connection**

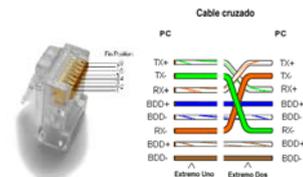
**5.- COMMUNICATIONS PORT CONNECTION**

The SGE-PLC800 concentrators are equipped with an Ethernet port and an RS-485.

**5.1.- SGE-PLC800 Ethernet port**

The concentrator Ethernet port can be connected to a modem-router, switch or computer. If the unit connected to this port is a modem-router or a computer, the network cable must be of the crossover Ethernet cable type, according to the following diagram:

**RJ-45 Connector**



**Crossover Ethernet connection diagram.**

**5.2.- SGE-PLC800 serial port**

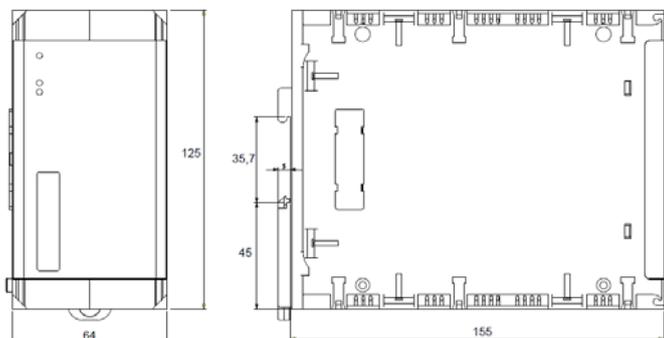
**SGE-PLC800 serial port**

RJ-11 Connector	PIN	RS-485
	1	GND
	2	
	3	
	4	A (+)
	5	B (-)
	6	GND

## 6.- TECHNICAL FEATURES

<b>SGE-PLC800 Power circuit :</b> - Single-phase: - Voltage tolerance: - Frequency: - Maximum consumption: - Working temperature: - Humidity (non-condensing):	110...230 Vac -20 % / +20 % 50 - 60 Hz ~7W and ~13VA -20°C .....+ 70 °C 95% max.	<b>PLC coupling circuit (SGE-PLC800):</b> - Rated voltage: phase-neutral / between phases - Frequency: - Modulation: - Band:	3x230/400V or 3x127/220V. 45 - 65 Hz DCSK CENELEC A or B
<b>Mechanical features:</b> - Case material: - Protection: - SGE-PLC800 dimensions: - Power supply and voltage measurement cables: - Secondary current transformer cables: - Maximum altitude:	V0 self-extinguishing plastic IP 41 155 x 64 x 125 mm Minimum cross-section: 1 mm <sup>2</sup> Minimum cross-section: 2.5 mm <sup>2</sup> 2,000 m.	<b>SGE-PLC800 Memory</b> - Type: - Capacity:	Flash 256 Mb
<b>Embedded PC:</b> - Microprocessor : - Memory:  - Consumption: - Communications ports:  - OS:		ARM 400Mhz 16MB FLASH 32 MB SDRAM 1xSD Card slot < 2.5W RS-485 1xEthernet 10/100MBit Linux	
<b>Safety:</b> Category III - 300 Vac / 520 ac. EN-61010 Double-insulated electric shock protection class II			
<b>Standards:</b> IEC 6800-4-2, IEC 6800-4-3, IEC 6800-4-4, IEC 6800-4-5, IEC 62052-11			

## 7.- DIMENSIONS



### SGE-PLC800 dimensions:

## 8.- TECHNICAL SERVICE

In the case of any query in relation to unit operation or malfunction, please contact the CIRCUTOR, S.A. Technical Support Service.

### CIRCUTOR S.A. – AFTER-SALES SERVICE

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