

# DATA CONCENTRATOR-GATEWAY



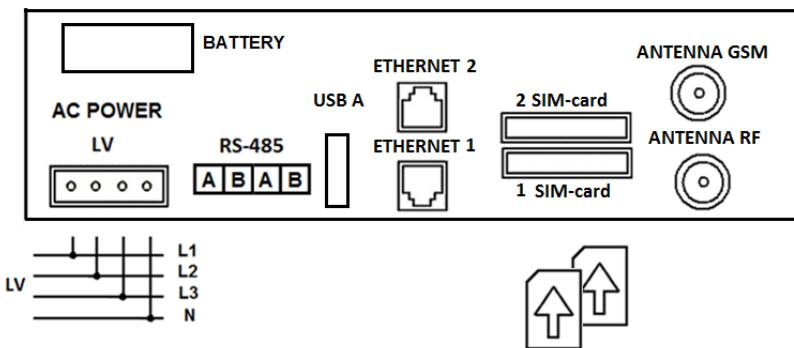
## DCG8A.L-1-1

### DATA CONCENTRATOR FOR LV PL AND 3GPP COMMUNICATION

#### OVERALL VIEW



#### COMMUNICATION INTERFACES



	Automatic detection, registration and support of end-point devices within the network
	Full 2-way communication
<b>PLC</b>	Built-in LV PLC modem
	3GPP modem
	RF mesh modem
<b>E</b>	2 Ethernet interfaces
	USB interface
	RS-485 interface
	2 SIM-cards
	Software update
<b>DHCP</b>	DHCP support
	Built-in real-time clock
	Scheduled data collection
<b>IPSec</b>	Secure data transmission
	Data storage in non-volatile memory
<b>IP54</b>	Protection level
	Optical port
	Backup power supply

## FUNCTIONALITY

### NETWORK DEVICES SUPPORT

- Automatic detection, registration and support of network devices
- Support of up to 1000 end-point devices

### ADDRESSING MODE

- Unicast mode to send and receive data from slave devices
- Broadcast mode to send data to slave devices without obligatory confirmation

### DATA COLLECTION

- On request
- By preliminary set schedule
- On event occurred

### EVENTS REGISTRATION

- Timestamps
- Installation/deinstallation of slave devices
- Discovery history
- History of firmware updates
- DC logs delivery option

### FAN COMMUNICATION

- LV PLC interface:
  - PRIME - ITU-T G.9904 standard compliance
  - G3-PLC - ITU-T G.9903 standard compliance
- RF mesh interface:
  - IEEE 802.15.4g (PHY) compliance
- RS-485 interface:
  - TIA/EIA 485-A specifications compliance

### WAN COMMUNICATION

- Built-in 3GPP modem
  - 2 SIM-cards support
- USB 2.0 full speed host port to connect optional devices
- Ethernet interface:
  - 10/100 BASE-TX Ethernet IEEE 802.3 standard compliance
- Support of VPN-tunneling (IPSec protocol)

### CONTROL AND MONITORING

- Control of LV-grid phases presence
- SNMP support
- Control of local devices, connected via Ethernet (e.g. 3<sup>rd</sup> party modems)

### MEMORY

- Long term data storage in non-volatile memory. For example:
  - Billing profile for 1000 meters is stored for 400 days

### INDICATION LEDS

- LEDs state is related to the DC working mode and state of its functional components

### REAL TIME CLOCK

- Network Time Protocol (NTP) for clock synchronization
- Clock accuracy 0.5s /24h.
- Built-in clock and calendar provide timestamp for data and events
- Clock operation in case of power outages is supported by the backup power supply

### PROTECTIVE FEATURES

- Protection seal of manufacturer at the DC basic cover
- Protection seal of power authority at the communication interface cover
- Protection seal at the SIM card compartment

### MAINTENANCE INTERFACES

- Optical port
  - IEC 62056-21 standard compliance
  - Data transmission rate up to 115200 baud
- Ethernet interface
  - 10 BASE-T Ethernet IEEE 802.3 standard compliance

### CONFIGURING & SOFTWARE UPDATE

- Locally or remotely (via Ethernet or 3GPP channel)
- Web-interface for configuration and update

### HOUSING

- Light-tone non-flammable polycarbonate of class V2 (UL94 standard)
- Transparent basic DC cover (material class V2)
- IP 54 protection against water and dust

### MOUNTING

- Fastening in three points in vertical position

### AVAILABLE ACCESSORIES

- Software for local or remote configuring using PC
- Software for DC logging
- IR optical probe for technological use

### BACKUP POWER SUPPLY

- 2 backup power sources:
  - integrated replaceable battery to supply RTC
  - rechargeable batteries, placed in a separate compartment closed with a cover.

## TECHNICAL SPECIFICATIONS

Reference voltage, Un	3×230/400 V
Reference frequency	50 Hz
Inherent power consumption: • active power, not more	12 W (including communication via PL and 3GPP)
• apparent power, not more	30 VA
Clock accuracy (at 25°C)	≤0.5 s /24 h
Data transmission rate via PLC: • on physical layer, with coding	21-64 kbps (PRIME) 5-33 kbps (G3)
Data transmission rate via RF mesh, on physical layer	50 kbps
Temperature range (operation, transportation and storage)	-40°C ... +70°C
Relative humidity	up to 95%
Mean total lifetime, not less	20 years
IP rating	IP54
Dimensions	295 x 180 x 57 mm
Mass, not more	1.25 kg

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