

Data concentrator
DC450
Technical Data



The DC450 is a smart data concentrator for Landis+Gyr Gridstream AIM metering system.

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Version	Date	Comments
a	28.05.2010	First edition

DC450 handles the communication between the head end system (HES) and the metering PLC device. DC450 reads metering data automatically and can send data to the system or store data for later retrieval by HES.

The DC450 communicates with the device using PLC communication (PLAN protocol on CENELEC A-band). The DC450 transfers messages to and from the head end system using the standard TCP/IP communication protocol over Ethernet connection or with its pluggable 2G modem.

DC450 Technical specifications

Power supply

- Operating voltage 1x230 V or 3x230/400 V
- Voltage range: 0.8 U_n to 1.15 U_n
- Frequency 50 Hz
- Power consumption after super capacitor is loaded):
Without communication: 6.5 W / 23 VA
While communicating over LAN: 7 W / 24 VA
While communicating over GPRS: 7.5 W / 26 VA
- Back up time (super cap) when fully charged: 7 days

External connections

- RS-485 (RJ45) SELV, max. 24 V
- TP SELV, max. 230. Impulse voltage protection 6 kV
- Standard USB-A connector
- 2 x LAN (RJ45) interface. LAN1 to connect to the head end system, LAN2 for local web interface access

2G modem characteristics

- Pluggable GSM/GPRS modem
- Quad-Band GSM 850/900/1800/1900 MHz
- GPRS multi-slot class 10
- Compliant to GSM phase 2/2+
- SIM-card holder
- SIM card interface 1.8 V and 3 V
- SMA connector for the antenna

PLC interface:

- Spread-FSK Modulation IEC 61334-5-1
- Link layer IEC 61334-4-32
- Power line communication on CENELEC A-band
- Baud rate 1200 and 2400 bps
- plug and play installation according to IEC 61334-4-511/512

Electromagnetic Compatibility

- Dielectric strength: 4 kV, 50 Hz, (IEC 610-0-4-5)
- Electrostatic discharge: 15 kV (IEC 610-0-4-2)
- Burst: 4 kV (IEC 610-0-4-4)
- Impulse voltage 12kV, 1,2/50 μ s (IEC 62052-11)
- High frequency electromagnetic field 10 V/m and 30 V/m (IEC 610-0-4-3)

Environmental Influences

Temperature Range

- Operation -25 to $+60$ °C
- Other temperatures possible with external housing with warming/cooling.
- Storage -40 to $+70$ °C
- Protection class to IEC 60529: IP 51

Case

- Material: Polycarbonate (PC) with 10% glass fibre filler
- Installation: On wall or equivalent

Dimensions

- Height 184 mm
- Width 175 mm
- Depth 72 mm (without sealing)

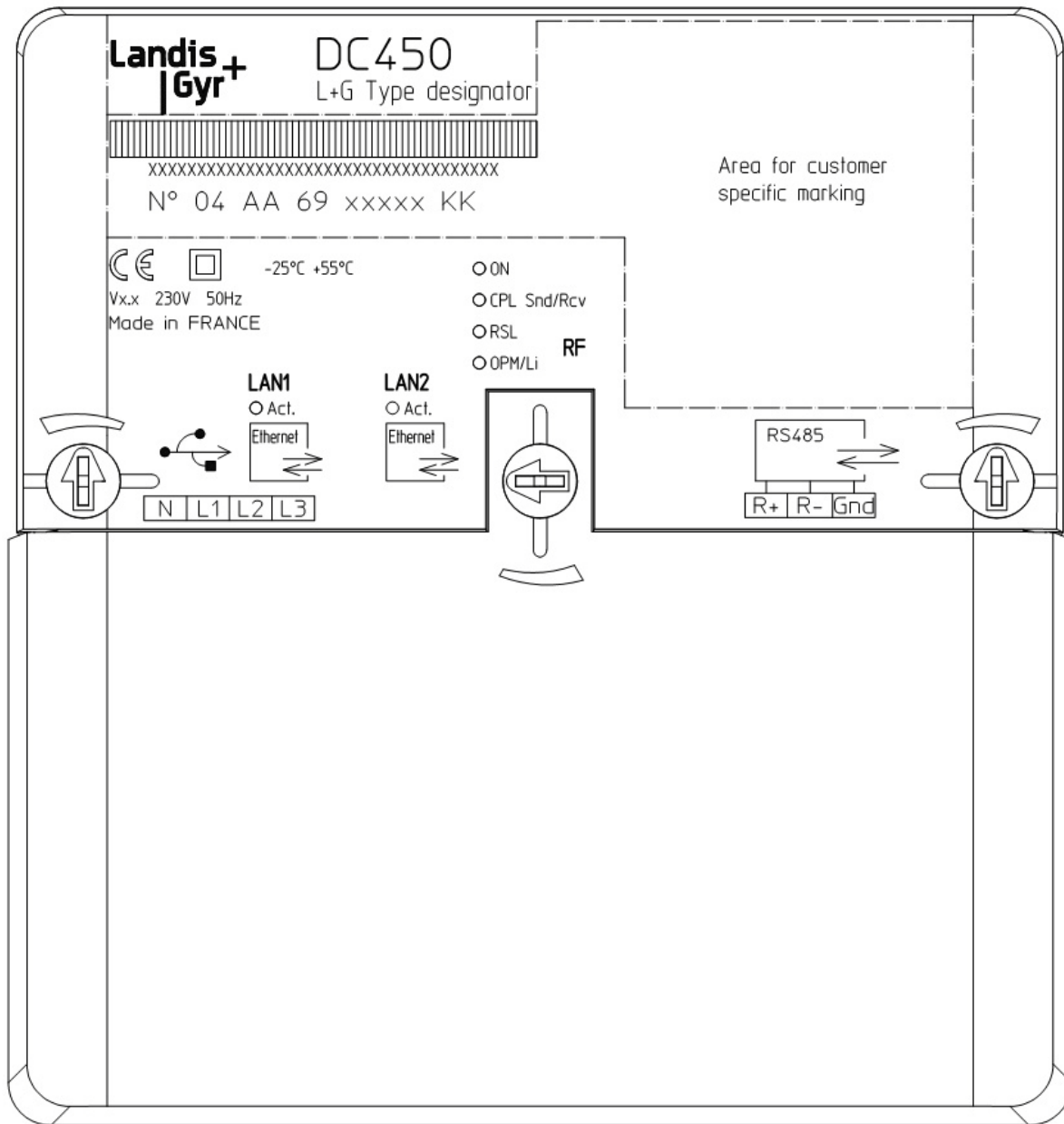


Figure 1. DC450 faceplate

DC450 Type Designation

A B C D E

A: PLC technology

P PLAN
L reserved
E reserved
G reserved

B: Interface to central system (fixed line)

0 none
P reserved
E Ethernet
F reserved

C: Interface to central system (RF interface)

0 none
G GSM / 2G / 2.5G
U reserved

D: Type of central system attached to the DC

0 open / not defined
A AIM
C reserved
J reserved

E: Open for future use

0 None

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Landis+Gyr
Feldstrasse 1
CH-6301 Zug
Switzerland
Phone: +41 41 935 6000
www.landisgyr.com