Communication

Industrial and Commercial

CU-P40, P41, P42

E65C

Technical Data

E65C CU-P40, P41, P42 communication units provide GSM/GPRS communication between E650 or E850 meters and a central system.

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Revision history

Version	Date	Comments
a	15.03.2012	First edition (derived from technical data E65C CU-P30, P31, P32 D000011687)
b	01.03.2013	Replaced cover picture.
c	12.03.2013	Synchronized document versions in all languages.

E65C CU-P40, P41, P42 – Technical specifications

Design

Type Survey

Type	GSM/GPRS Modem	RS232	RS485	CS+
CU-P40	●			
CU-P41	●	●		●
CU-P42	●		●	●

Supported communication protocols

- IEC 62056-21 and *dlms*
- TCP/IP
- IPT (according to DIN 43863)

Fitting

Directly in meter (E650 ZxD300/400xT or E850 ZxQ)
In CU adapter CU-ADP2 (for other meters)

Features

- EMC conformance for meter and modem together for electrical metering equipment and industrial environments
- Two independent channels to access meter
- Configuration without additional software tools other than MAP
- Configuration using only an optical head.
- Remote upgradable firmware for the micro-controller
- Large 10 kByte buffer to enable IEC readouts of serial attached meter(s) at transmission rates of up to 19,200 bps
- Password protection system for parameters

Power consumption

Maximum active/apparent power	3.0 W/5.5 VA

GSM/GPRS Modem

Operating modes	GSM or GPRS

Standards and approvals

- ETSI EN 301 511 V9.0.2
- 3GPP Release 4 compliant
- Full GCF and PTCRB approvals
- GPRS class 8 (recommended), 10 (maximum)

Functions

Time window and time master functions
SMS-forwarding of alarm messages
(only if fitted in meter)
Modem initialization and data flow control
Automatic modem reset
Communication monitoring
Receive CSD while listening in GPRS mode

GSM/GPRS module

Type	Telit GE865-QUAD

Frequency bands
quad-band 850, 900, 1800 and 1900 MHz

Output power

- 2 W/class 4 at GSM 850 MHz
- 2 W/class 4 at EGSM 900 MHz
- 1 W/class 1 at GSM 1800 MHz
- 1 W/class 1 at GSM 1900 MHz

SIM-card

SIM 1.8/3 V	exchangeable from outside

RS232 interface

Only present on type CU-P41

Asymmetric, serial, asynchronous, bi-directional interface (3-wire design)

Standard	EIA RS232-C/CCITT V.24
Maximum transmission rate	57,600 bps
Maximum line length	15 m

RS485 interface

Only present on type CU-P42

Symmetric, serial, asynchr., bi-directional interface (master or slave depending on parameterisation)

Standard	ISO-8482
Maximum number of slaves	31
Maximum transmission rate	57,600 bps

Maximum line length

- up to 250 m at max. 57,600 bps, max. 31 Slaves
- up to 550 m at max. 38,400 bps, max. 31 Slaves
- up to 1000 m at max. 19,200 bps, max. 15 Slaves

CS interface

Only present on types CU-P41 and CU-P42

Serial, bi-directional current interface
active or passive

Standard	IEC 62056-21/DIN 66258
Maximum number of slaves	4
Maximum transmission rate	19,200 bps

LED displays

LEDs RX and TX

Indication of data flow and field strength level

LED CON

Indication of connection status and number of base stations received

LED GSM

Indication of GSM data transfer or CSD call setup

Environmental influences

Temperature range	to IEC 62052-11
Operation	-40 °C to +70 °C
Storage	-40 °C to +85 °C

Insulation strength to meter

Insulation strength	4 kV at 50 Hz for 1 min
Insulation spacing	at least 6.3 mm

Weight and dimensions

Weight	approx. 100 g
Width / Height / Depth	65 / 103 / 38 mm

Connections

Connection to meter or CU adapter

10-pin connector at rear of CU

External 5 V power supply (only for E650 meters)

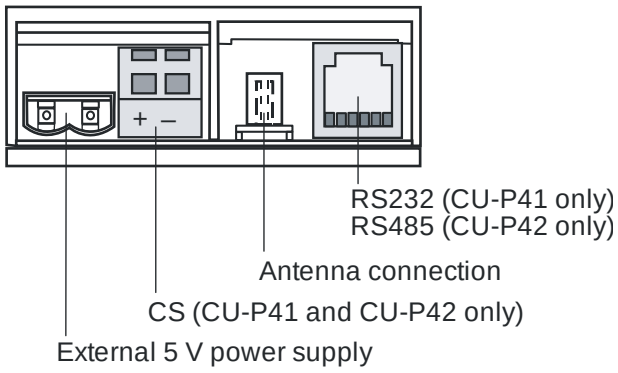
2-pin connector; recommended for a reliable modem operation for M circuits and the supply voltage phase – neutral is 58 V nominal and 64 V nominal where there is only one phase present.

Landis+Gyr should be consulted if supply voltage is between 100 V nominal and 115 V nominal where there are only one or two phases present.

The statements above apply to E650 series 3 meters (firmware version B31 or higher). Information on previous versions can be found in the user manual.

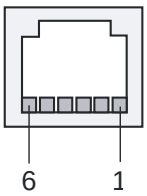
CS interface	screwless spring-type terminals
Antenna connection	MCX socket
Tear-off strength	< 390 N

Terminal layout



RS232 or RS485 interface	RJ12 socket

Pin allocation:



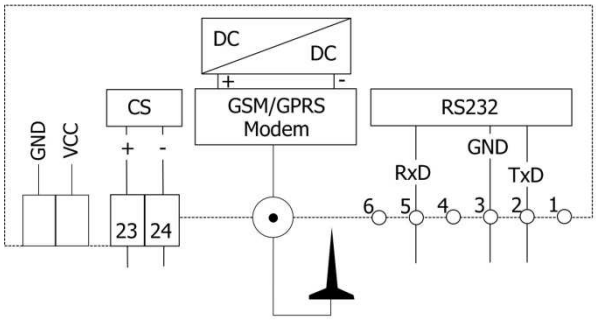
RS232:	RS485:
1 not used	1 GND
2 TxD	2 UP (Data a)
3 GND	3 UN (Data b)
4 not used	4 UN (Data b)
5 RxD	5 UP (Data a)
6 not used	6 GND

Material

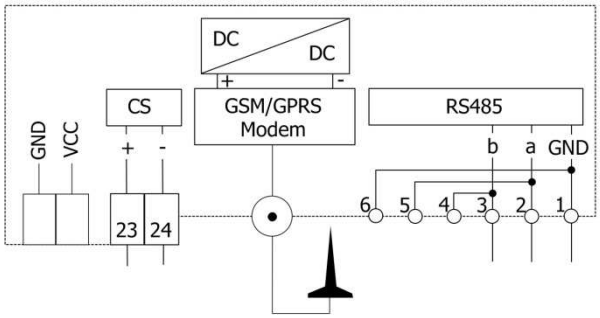
Case	polycarbonate

Connection diagram

Example CU-P41



Example CU-P42



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