

CONVERTERS Mesh-gateway/USB **AMCV MU-x8xG**

Application

Converters Mesh-gateway/USB of **AMCV MU-x8xG** are designed for collection of data from electricity meters in the distribution network, mainly in case of creating of small local networks within AMR systems. The converters are manufactured in accordance with the standards IEC/EN 300220, IEC/EN 301489, IEC/EN 60950, IEC/EN 62056-21, IEC/EN 62056-61 and according to requirements of EU Directive for R&TTE.

Description

AMCV MU-x8xG converters are designed for duplex RF transmission of data between electricity meters equipped with a Mesh radio module and the converter itself in the small local networks within AMR system.

Mesh receiver/transmitter module can be in the LP version (Low Power) with an output transmitting power up to 10 mW (10 dBm) or in HP version (High Power) with an output transmitting power up to 500 mW (27 dBm). Modules with higher power are used for increasing of the transmission range.

Mesh module of the converter works in Gateway function and it enables concentration of data from the electricity meters in a PC.

Converters are connected to the PC via USB interface. Supply of +5 Vdc is acquired through USB interface, which is stabilized on a board and adapted for feeding the USB/UART converter and the Mesh module.

Properties

- Converters enable cheap and simple solution of AMR system;
- Possibility to deliver the converters in LP (max. 10 mW) or HP (max. 500 mW) version regarding required range;
- Converters work as a gateway and enable to concentrate data from electricity meters in the PC;
- Small dimensions;
- Does not need its own supply source.

Technical data

Nominal voltage [V]	+5 Vdc \pm 10 %	Supply from USB port in PC
USB communication [bps]	9600 or 19200	In accordance with EN 62056-21
ISM – Mesh communication [MHz]	868 - 870	In accordance with EN 300 220
Number of frequency channels	max. 16	Optional
Output power [mW] for LP	10	Internal antenna
Output power [mW] for HP	500	External antenna (delivered with converter)
Sensitivity [dBm]	- 106 (typical)	At 4800 bps at RF side
Range for ISM Mesh [m]		
<i>For direct connection LP/HP</i>	typ. 100 / 2 000	
<i>In buildings with obstacles LP/HP</i>	typ. 30 / 100	
Antenna [ohm]	50	SMD-chip or SMA female
Dimensions w x h x d [mm] LP	78 x 15 x 22	
Dimensions w x h x d [mm] HP	105 x 21 x 27	
Temperature range [°C]	0 to 65	
Relative humidity [%]	5 – 75	
Weight [kg]	0.05	



Converter AMCV MU-I8LG



Converter AMCV MU-C8HG

Marking of the converters

AMCV MU - x4 8 x6 G

AMCV..... designation of a type

MU interfaces: **M** – Mesh interface – wireless, **U** – USB interfaces

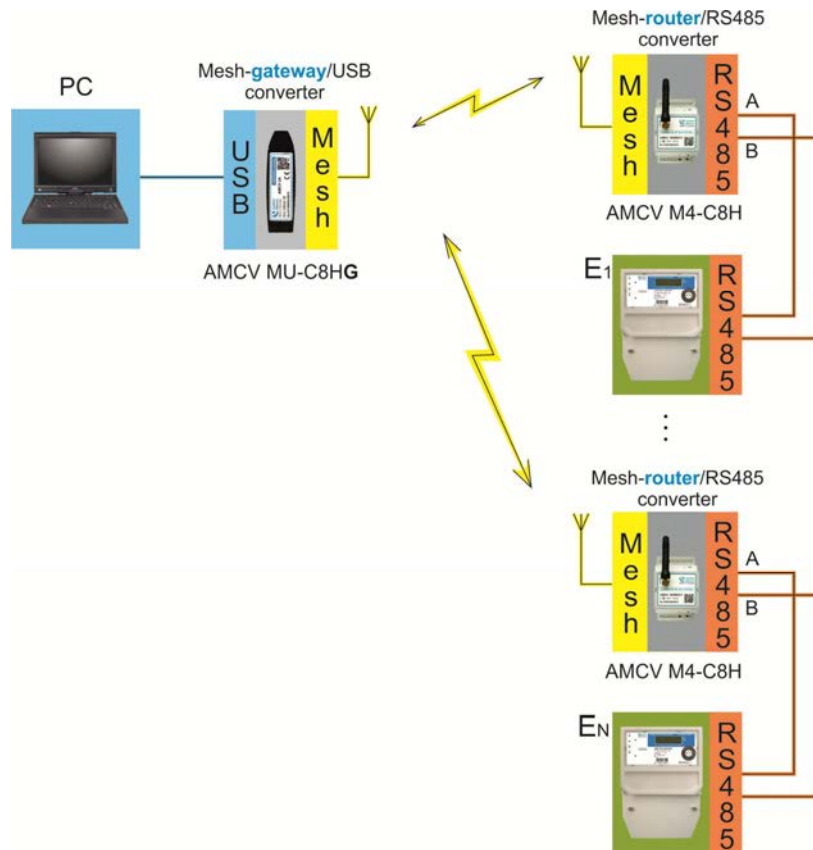
x4 antennae: **C** – external antenna with cable and SMA connector (wall mount), **E** – external antenna without cable with SMA 90° connector (telematic), **I** – internal antenna (chip, PCB, helical, ¼ wave)

8 frequency band: 868 MHz

x6 output power of the transmitter: **L** – low power (10 mW, or 10 dBm), **H** – high power (10 - 500 mW, or 10 - 27 dBm)

G parametrization: gateway

AMR Flow chart – example of converter´s usage



Ordering data

Specification of type and version, number of pieces.