

LTH-101

RS-485/Ethernet converter for AMR meter systems

The RS-LTH converter is designed for connecting devices equipped with an RS-485 port to an Ethernet network.

The structure of the device is oriented towards remote reading of electric energy meters in AMR systems and it enables mounting the converter on a terminal block cap of an electric energy meter. In AMR systems it operates as a gateway.

The converter may also applied when it is necessary to establish a connection between a LAN network and devices equipped with a serial port of the RS-485 type.

The device is equipped with separated communication channels, a serial RS-485 port and an Ethernet network interface. Configuration and parame-terization of the device is possible using a tool software which communicates with the converter by means of the Ethernet interface. After connecting and running the program the converter is automatically detected and its parameters are read.



Communication

Data incoming to the serial port is buffered. When a frame is completed it is sent to an Ethernet network port. Network ports continuously wait for a connection. When it is established, a "transparent" connection with a device connected to the serial port is set. All incoming TCP frames are immediately sent to the serial port and all signs coming to the serial port are sent to an appropriate network port. Such a structure of the device enables to obtain a direct connection between the SYNDIS ENERGY system and electric energy meters equipped with the RS-485 interface.

The below figure presents a diagram of exemplary communication and data transmission using a BPL network by PPC company.



50Hz

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Environmental conditions

- Iocalization: covered, class C according to PN-EN 60870-2-2
- atmosphere composition: without corrosive vapors and gases
- operation temperature: od -20°C do 55°C
- relative humidity: 5% to 95% without condensation
- voltage withstand: power supply 2.5kV; RMS 1 min, transmissions 1kV; RMS 1 min
- surge immunity: power supply 5kV; 1.2/50μs, transmissions 2kV; 1.2/50μs
- electromagnetic compatibility: compliant with PN-EN 60870-2-1 p. 5 for 4th level of endangerments

Technical data

SERIAL PORTS		NETWORK PORTS	
number and type	RS-485	number	1
max. transmission speed	1200÷230400 bps	type	10/100Mb UTP
data bits	7÷8	protocols	ТСР
stop bits	1	operation mode	klient lub serwer
parity	used, not used	power supply	110÷230V AC/DC
separation	present	current consumption	20mA (for 230V AC)
-	-	housing dimensions	120 x 80 x 41 mm