LogicMachine5 Power (LM5p-PMU)

LogicMachine (LM) is your easiest way to program complex logic in KNX/EIB, Modbus, BACnet networks. LM will enable you to efficiently customize building automation processes, easily delivering unlimited flexibility benefit to end users in a cost-effective way.

LM5 Power is an embedded platform with integrated Ethernet, USB, KNX/EIB, Serial interfaces. LM allows to use it as cross-standard gateway, logic engine, visualization platform, IP Router. Scripting templates provides user-friendly, flexible configuration interface and integration with cloud/web services, 3rd party devices. Via applying custom scripts LM can simultaneously act as thermostat, security panel, lighting controller, etc. LogicMachine application store and external app development possibility allows to extend device functionality and adjust to a specific market segment
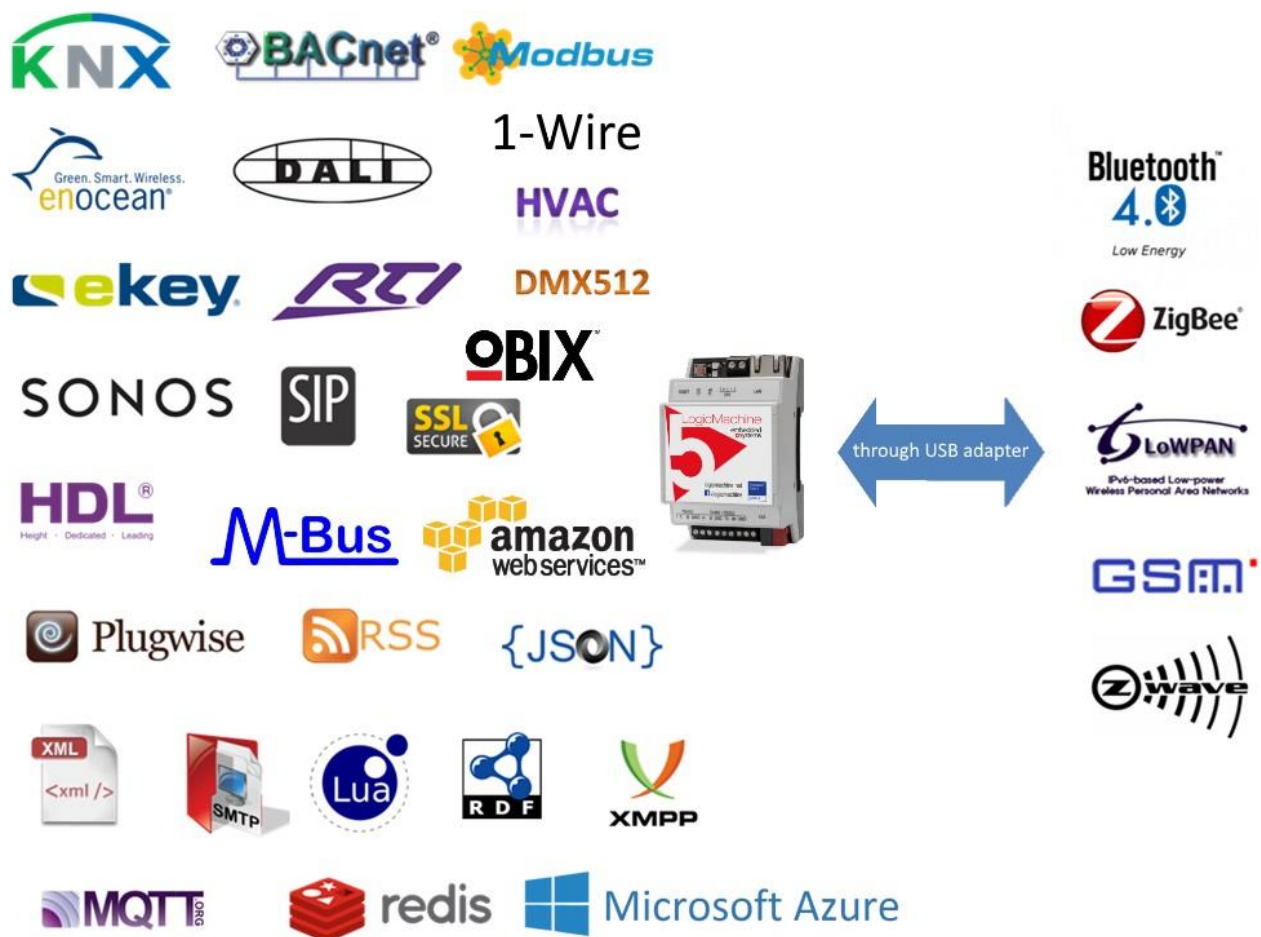
LM5 Power has 24V DC output with voltage and current monitoring possibility and Power-over-Ethernet support. Further, LM5 Power is 3x more powerful than all previous LogicMachine versions due to more powerful CPU and RAM.

ENG - Data sheet
Issue date 1.12.2016

Application

- Logical functions
- WEB SCADA visualization for PC and touch-devices
- cross-standard gateway
- integration with third party devices over USB, RS485 serial port, Ethernet – AV, IR, HVAC
- Data logger with trends
- KNX IP Router
- Presence monitoring
- Lighting regulation
- Universal controller (lighting, shutter etc.)
- Health/activity monitoring
- Internet-of-Things
- Cloud server/client
- …

Types of product

LogiMachine5 Power	LM5p-PMU

Standards and norms compliance

EMC:	EN61000-6-1
	EN61000-6-3
PCT	Certificate

Technical data:

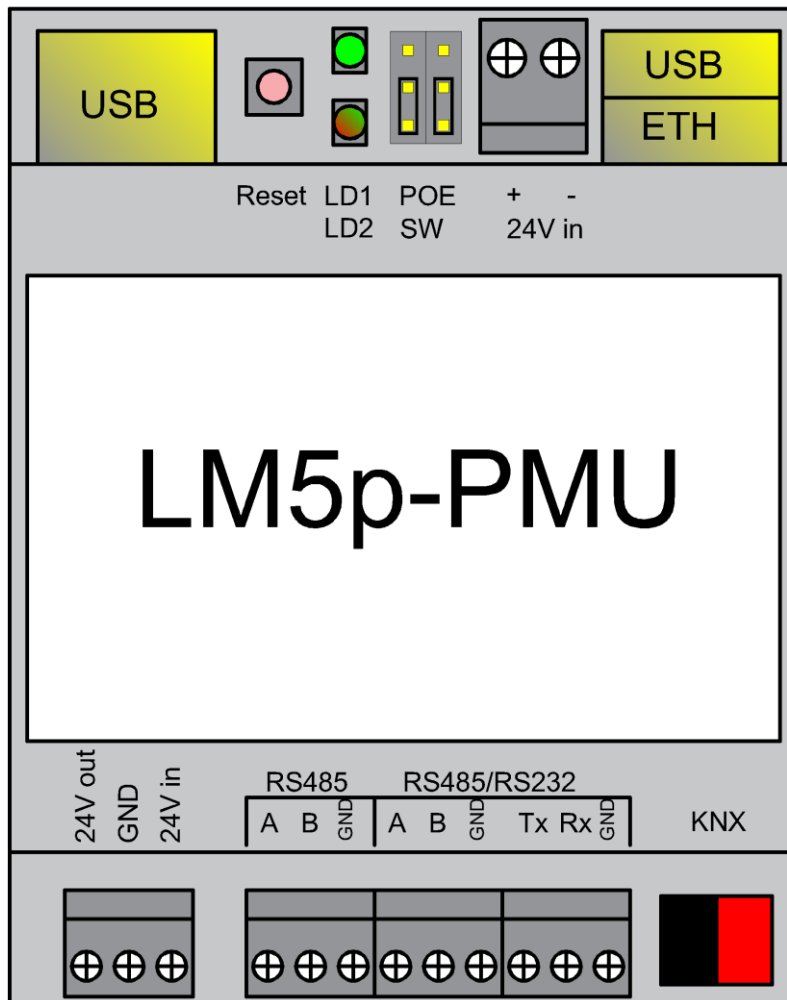|		
Power supply:	12V-30V DC on terminal connectors or	
	12V-30V DC Passive Power-over-Ethernet	
Power consummation:	1.3W	
Interface:	KNX/EIB TP1	1
	10BaseT/100BaseTX	1
	RS-485	1
	RS-485/RS-232	1
	(switchable in software – full-duplex=RS232, half-duplex=RS485)	
	USB2.0	1
	24V OUT for voltage and current measurement, max 1 A	
Connections:	KNX bus:	Bus Connection Terminal 0.8 mm2
	Power supply	Screw, 1.5 mm2
	Serial	Screw, 1 mm2
	24V output	Screw, 1.5 mm2
Operating elements	LED	1 – CPU load
		1 - Activity
Enclosure:	Material:	Polyamide
	Color:	Gray
	Dimensions:	71(W)x90(H)x61(L) mm
Usage temperature:	0C ... +45C	
Storage temperature:	-15C ... +55C	
Net Weight:	119g	

Gross Weight: 137g
Warranty: 2 years
Relative Humidity: 10...95 % without condensation

Note! In first batch of LM5 devices, the 24V DC clamp powering ports are placed vice versa rather than showed on diagrams!

⚠ Caution
Security advice

The installation and assembly of electrical equipment may only be performed by skilled electrician. The devices must not be used in any relation with equipment that supports, directly or indirectly, human health or life or with application that can result danger of people, animals or real value
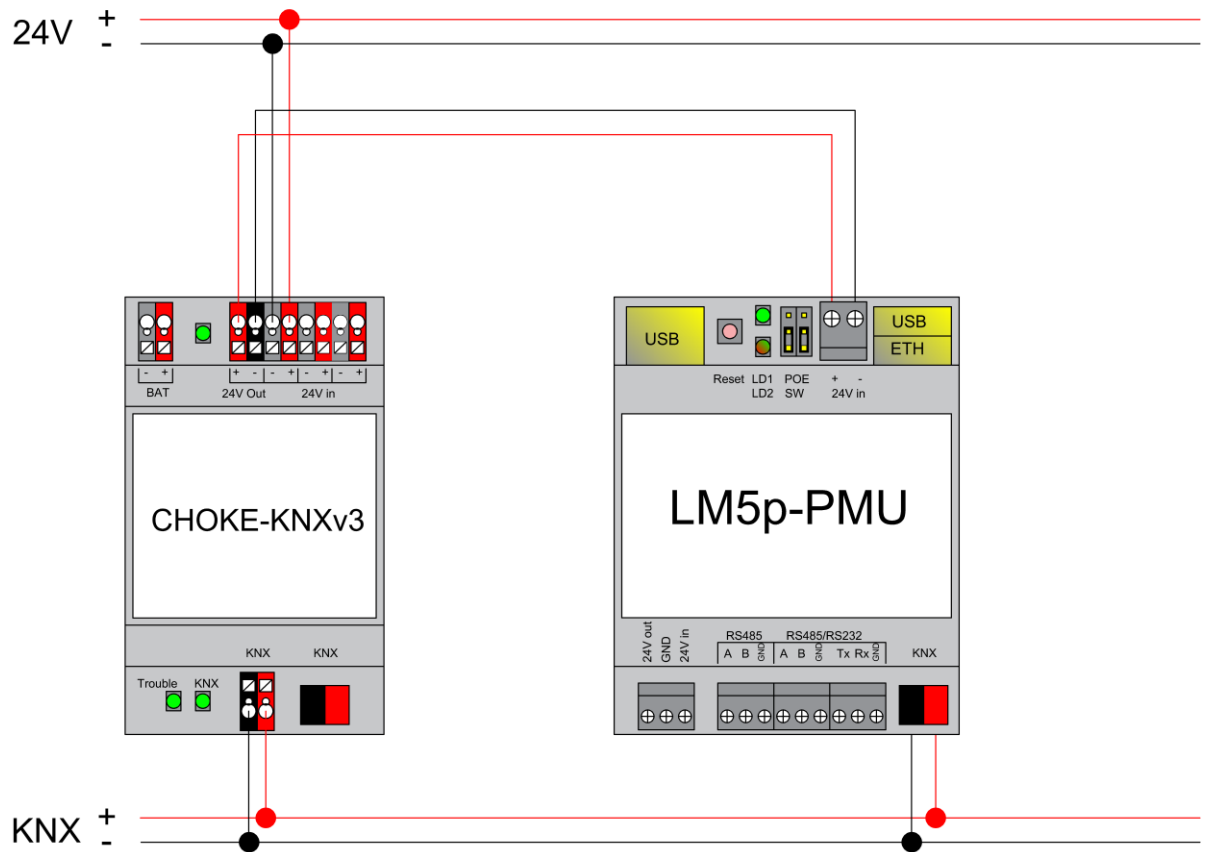
Mounting advice

The devices are supplied in operational status. The cables connections included can be clamped to the housing if required.

Electrical connection

The devices are constructed for the operation of protective low voltage (SELV). Grounding of device is not needed. When switching the power supply on or off, power surges must be avoided.
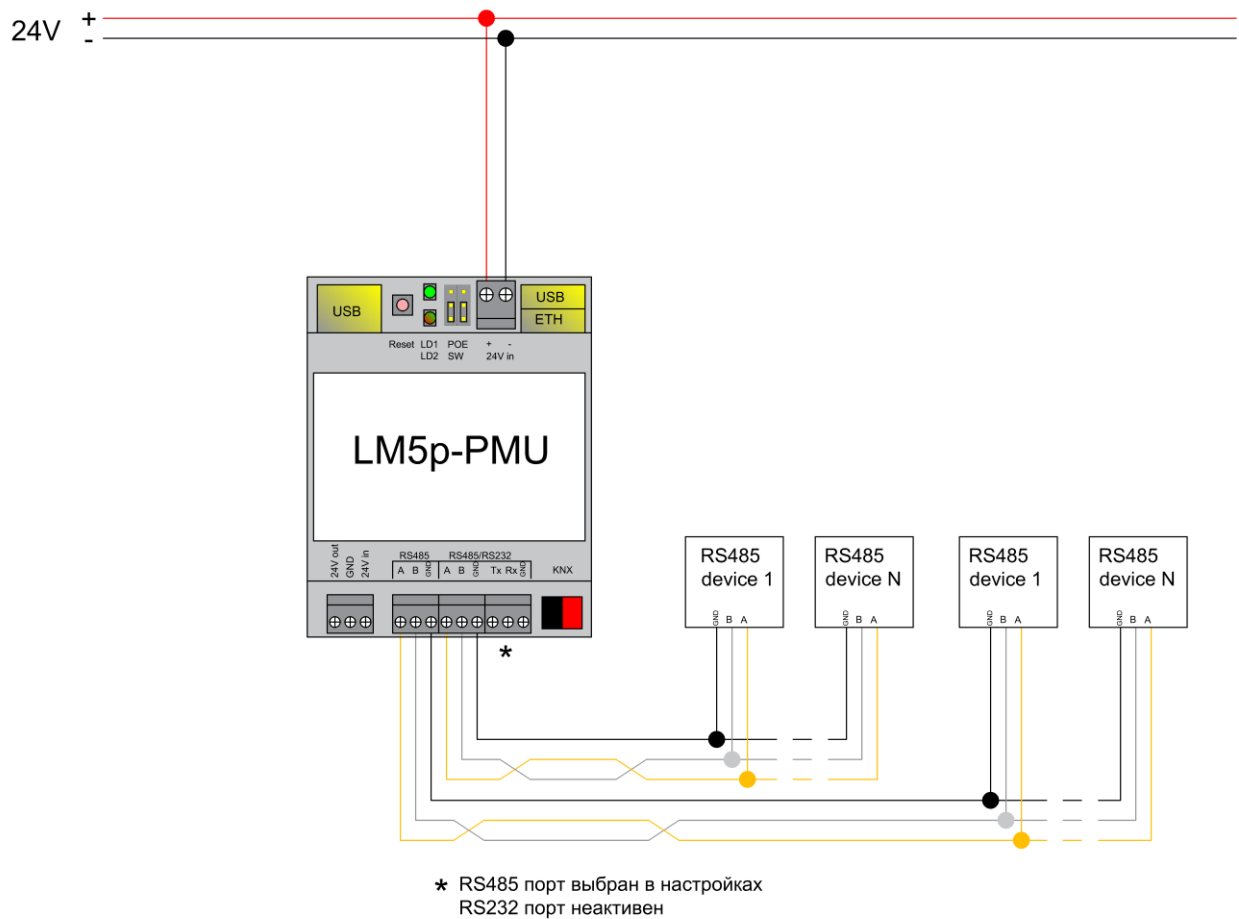
Terminal connection schemes

KNX connection

RS-485 connection

There can be used max two RS-485 on LM5p Power. First one is definitive, second one is software switchable – either it works as RS-485 or as RS-232 :
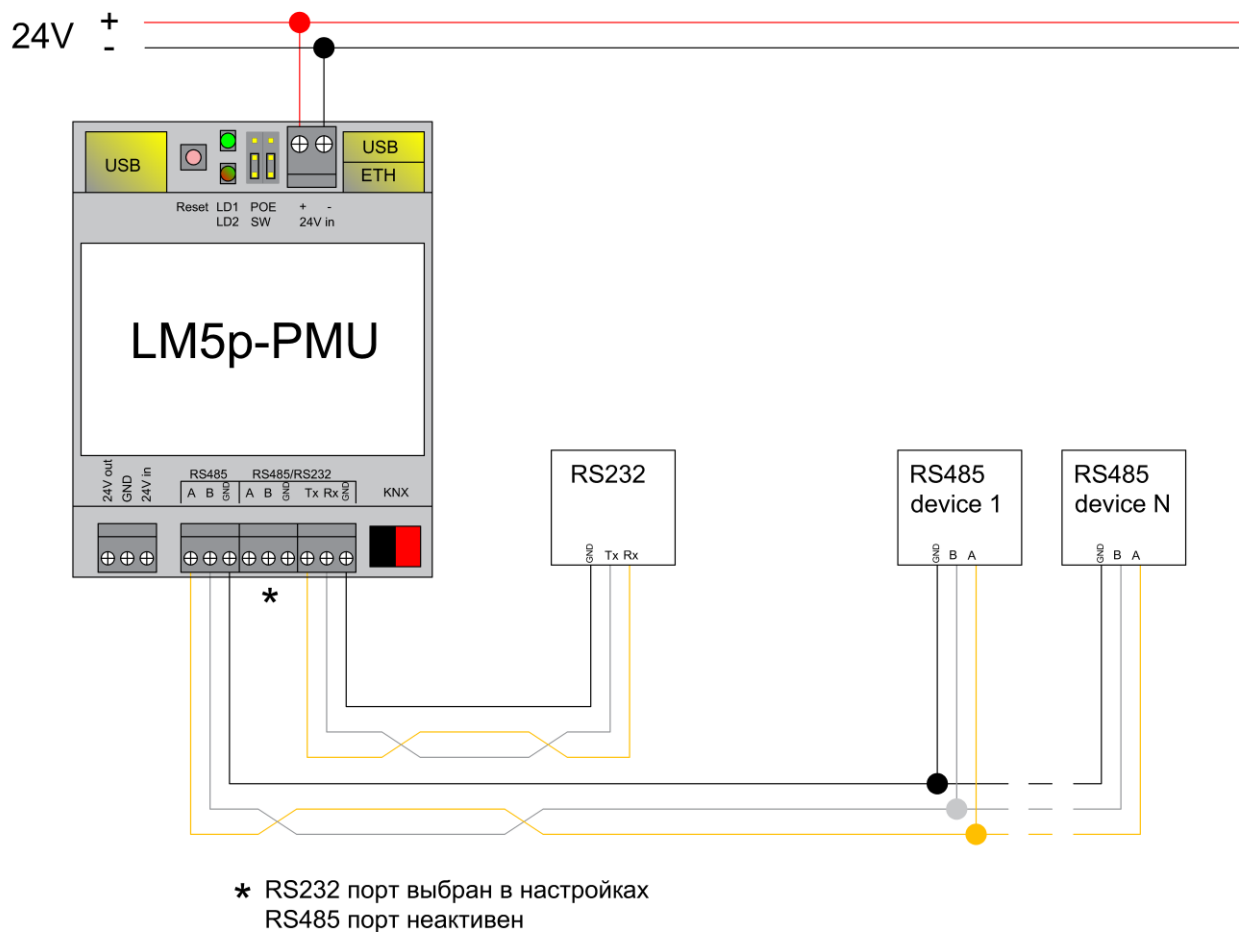
- If it is set up as full-duplex it will operate as RS-232 and respective TX/RX/GND screw terminals should be used
- If it is set up as half-duplex (*) it will operate as RS-485 and respective A/B/GND screw terminals should be used

*RS-485 is chosen in this case, RS-232 is not activated

RS-232 connection

If second serial port is set as full-duplex in LogicMachine configuration, it will operate as RS-232 and respective TX/RX/GND screw terminals should be used.
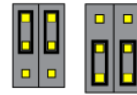

★ RS232 порт выбран в настройках
RS485 порт неактивен

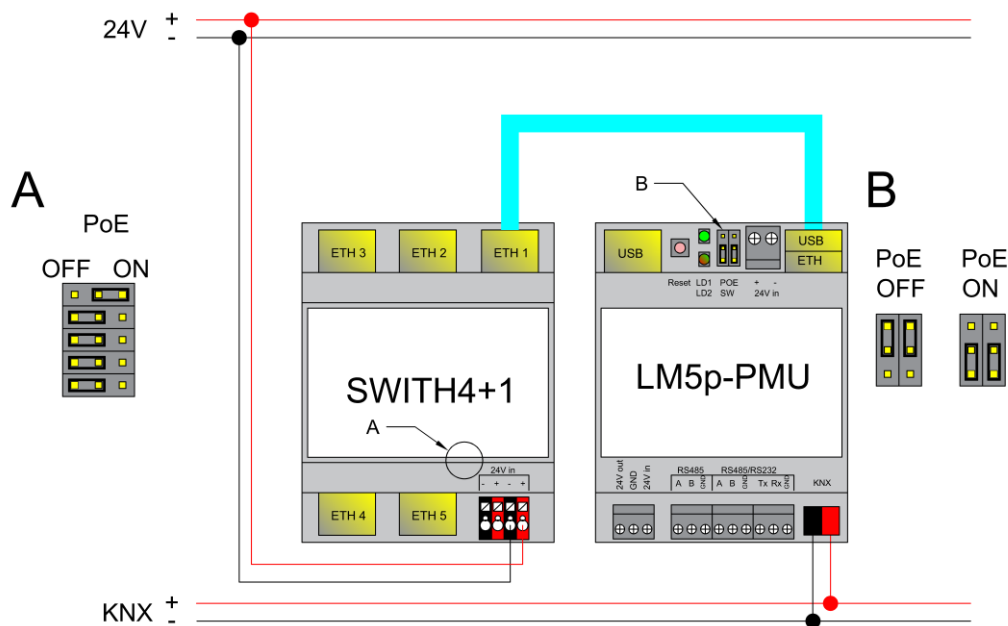*RS-232 is chosen in this case, RS-485 is not activated

Powering

LM5 supports two powering modes:

- regular powering over screw terminals (Jumpers up or down)

- passive PoE powering over 24V DC (Jumpers down)

Please note that there are two PoE types of PoE switches/adapters – passive and active (802.3af). In passive mode 4 Ethernet cable wires are used for data and 4 are used for power. In active PoE mode data and power goes together.

Note! In first batch of LM5 devices, the 24V DC clamp powering ports are placed vice versa rather than showed on diagrams!
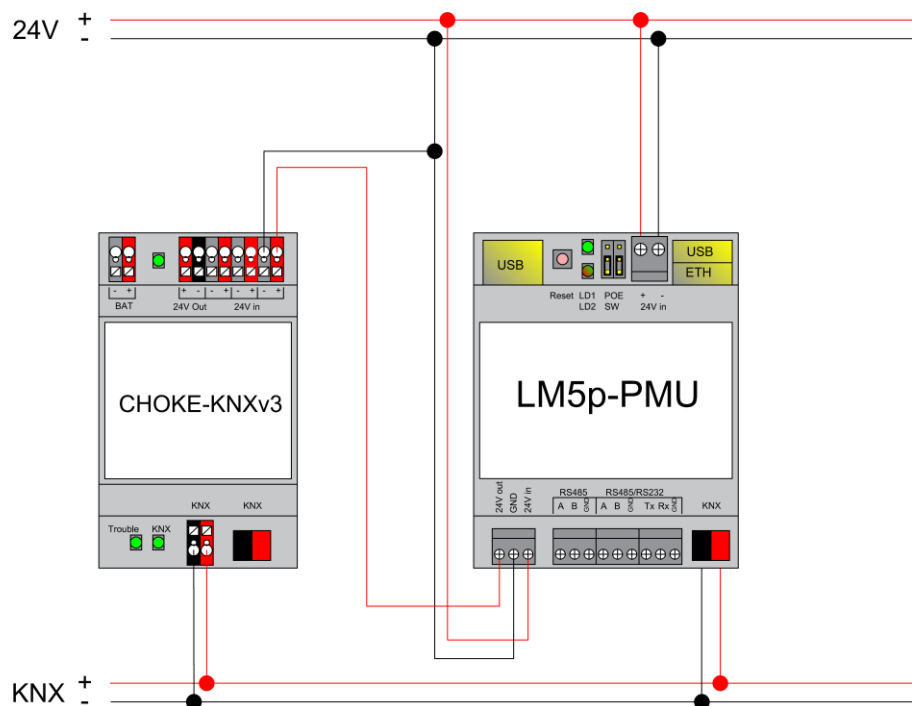
Passive PoE switch

Passive PoE adapters

24V DC power output

24V DC output can be used to interconnect specific loads which need to be monitored. For example, if we connect KNX Choke with KNX devices on it, in LM5 visualization we can see how much V/mA/W the KNX line consumes.

Quick startup guide

1) Mounting the device on DIN rail
2) Connect the KNX bus cable
3) Connect 24V power supply to the device (either through separate 24V screw terminals or through Passive 24V DC Power-Over-Ethernet)
4) Connect Ethernet/LAN cable coming from the PC

Default IP configuration

Login name	admin
Password	admin
IP address	192.168.0.10
Network mask	255.255.255.0

Reset device

You can either reboot the device by pressing RESET button or reset the configuration to factory defaults:

- *Press and hold for <10 sec* – reboot the device
- *Press and hold for >10 sec* – reset networking with IP to factory default
- *Press and hold for >10 sec and again press and hold for >10 sec* – full reset of configuration to factory defaults