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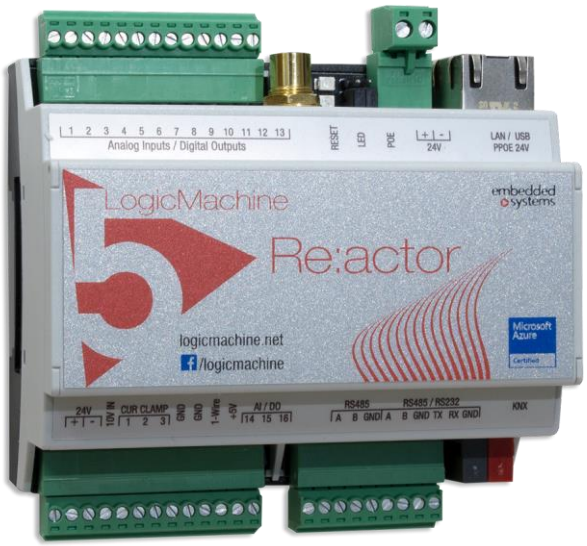
LogicMachine5 Reactor GSM

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

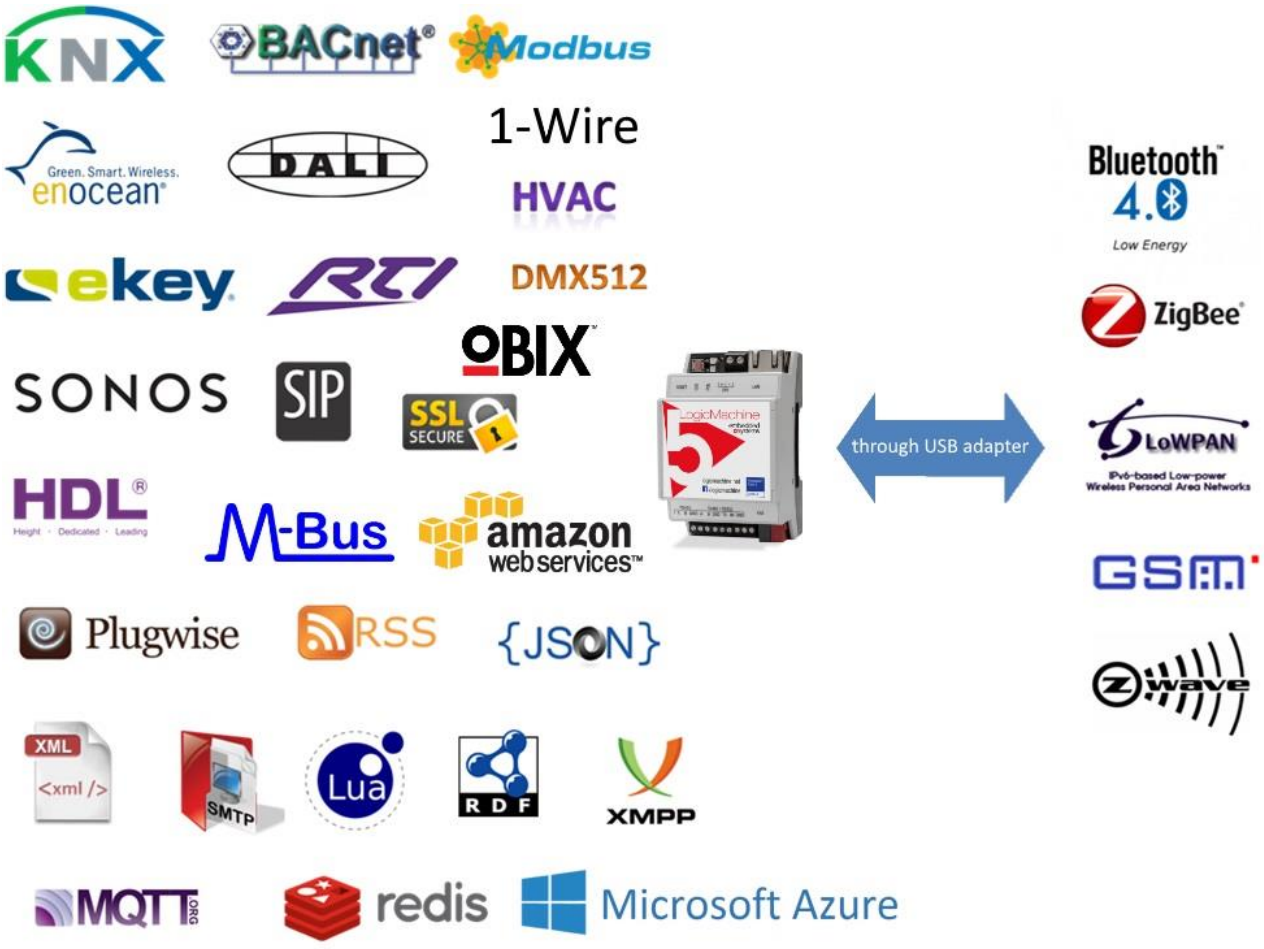


LM5p-GSM is an embedded platform with integrated Ethernet, USB, GSM, Serial interfaces and I/O ports, KNX TP1. LM allows using it as cross-standard gateway, logic engine, visualization platform, IP Router. Scripting templates provides user-friendly, flexible configuration interface and integration with 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.

ENG - Data sheet
Issue date 26.11.2021

Application

- 3G gateway for Internet access
- 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
- Presence monitoring
- Lighting regulation
- Universal controller (lighting, shutter etc.)
- Health/activity monitoring
- Internet-of-Things
- Cloud server/client
- Energy metering
- …



Types of product	
LM5p2-GSM	LogicMachine5 Reactor GSM Power
Technical data	
Power supply	12-32V DC terminal connector or Passive PoE
Power consumption (at 24 V)	1.3 W
DC overvoltage protection:	50 V
Wrong wiring polarity protection	Yes
Interfaces and operating elements	
KNX TP1	1
GSM module with antenna (LTE optional)	1
Push-push micro-SIM connector	1
Analog input 0-10V	1
Analog input / Digital output	16 - configurable, 380mA continuous current on output
Analog inputs for current measurement clamps	3, specs here
1-Wire	1
10BaseT/100BaseTX	1
RS-485	1
RS-485/RS-232	1 – CPU load, 1 - Activity
USB2.0	1
Programming/reset button	1
Reset button	1
GSM modem	
GSM module type	Quectel UG95
Frequencies	900/2100MHz @UMTS 900/1800MHz @GSM
Worldwide UMTS/HSPA and GSM/GPRS/EDGE coverage	
Maximum data rate	7.2Mbps downlink 5.76Mbps uplink
Clamps and enclosure	
KNX TP1 Terminal	0.8mm2
Power supply	5 mm2
Serial / IO / 1-Wire	3.5 mm2
Color	Gray
Dimensions	61(W)x90(H)x108(L) mm
Protection	IP20 according to EN 60529
Usage temperature	0C ... +45C
Storage temperature	-15C ... +55C
Net weight:	150 g
Gross weight	170 g
Standards and norms compliance	
CE conformity	EMBS-CE-190717/06 Electromagnetic

	compatibility
EMC	EN61000-6-1, EN61000-6-3

Caution
Security advice

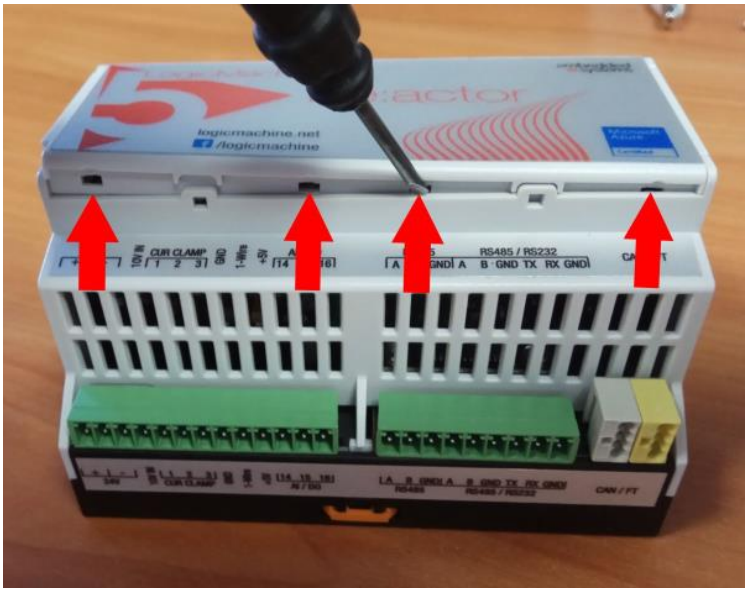
The installation and assembly of electrical equipment may only be performed by skilled electrician. The devices must not be used in any relation with equipment that supports, directly or indirectly, human health or life or with application that can result danger of people, animals or real value

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.

Insert SIM card

1) Open front cover of the enclosure with help of screwdriver (by pushing to yourself the side edge of base cover)



2) Open MicroSIM holder by moving down the top part and lifting up

3) Insert SIM card and close the holder. Close the front cover

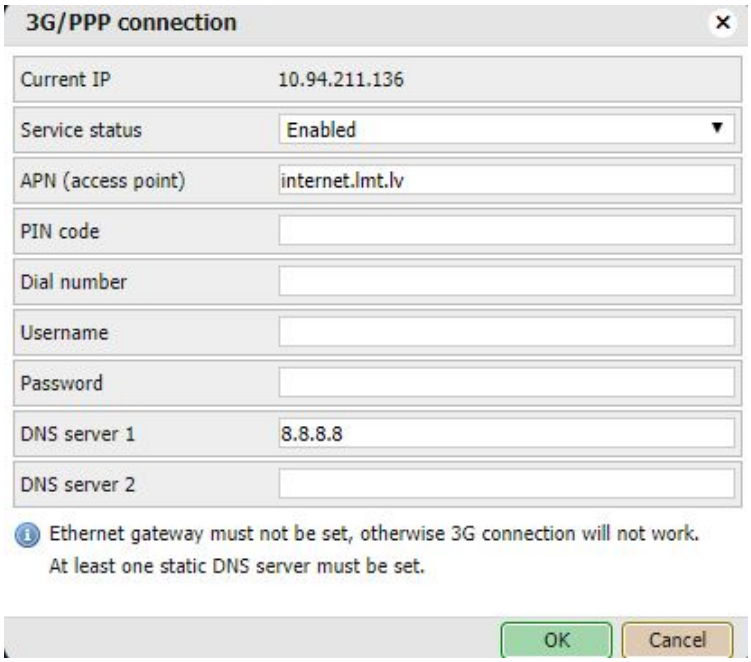
4) Connect 3G antenna

Quick startup guide

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

Setting up 3G modem

In *System configuration* go to *Network → 3G/PPP connection*.
Fill required fields depending on your 3G operator settings, apply settings.



Default IP configuration of the LM5

Login name	admin
Password	admin
IP address	192.168.0.10
Network mask	255.255.255.0

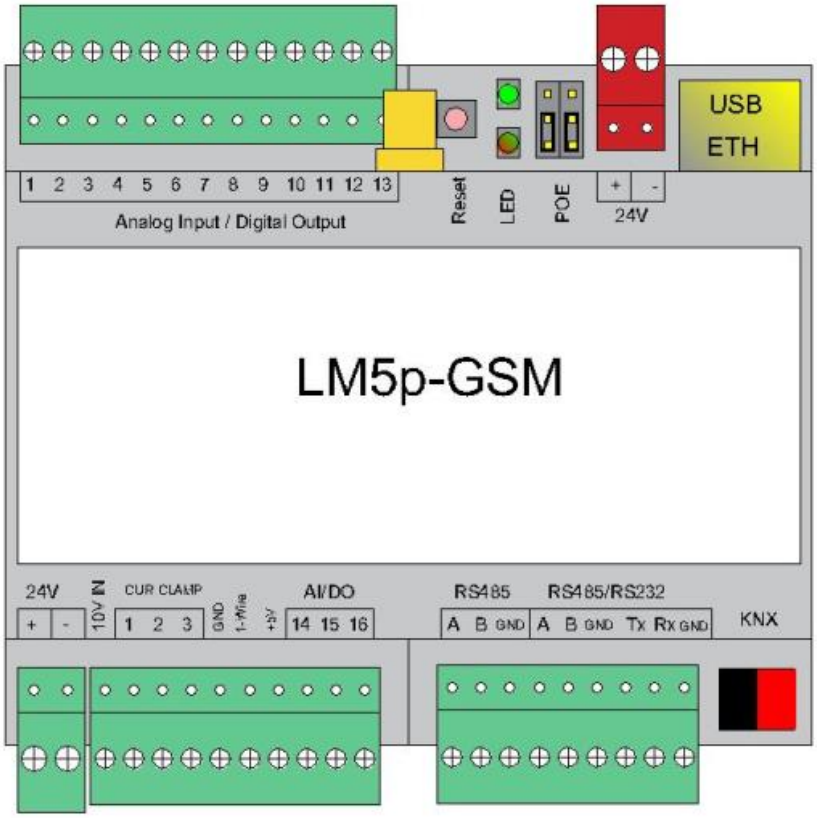
Reset device

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

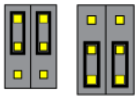
Terminal connection schemes

Model

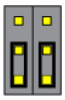


Powering over Ethernet

LM5 supports two powering modes:

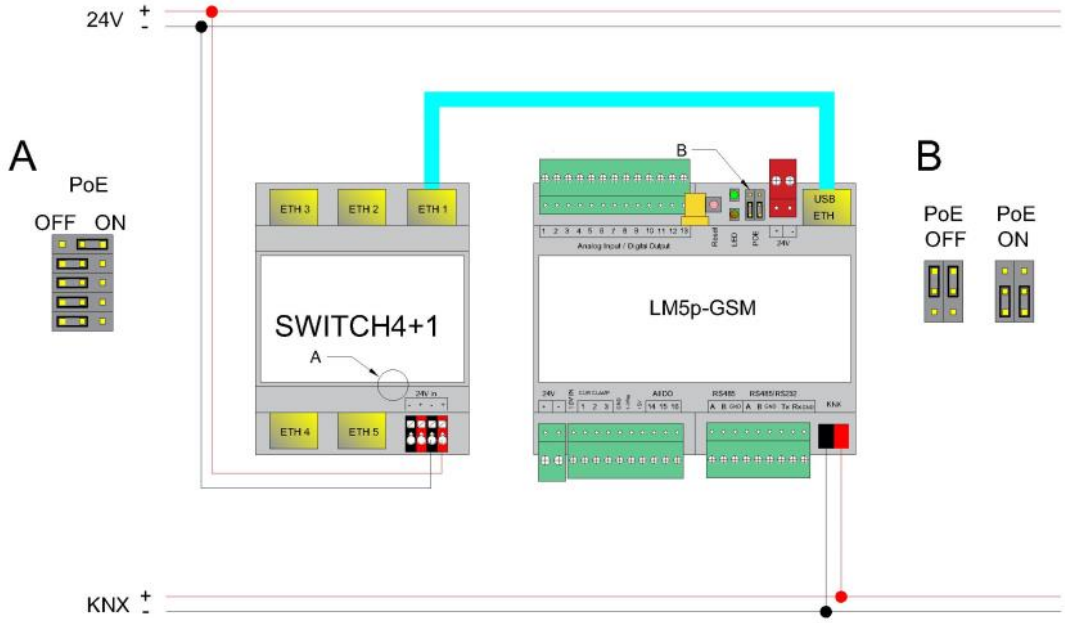


- regular powering over screw terminals (Jumpers up or down)

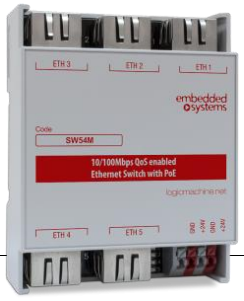


- passive PoE powering over 24V DC (Jumpers down)
- when using active PoE 48V, jumpers have to be UP or the product will be damaged!

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.

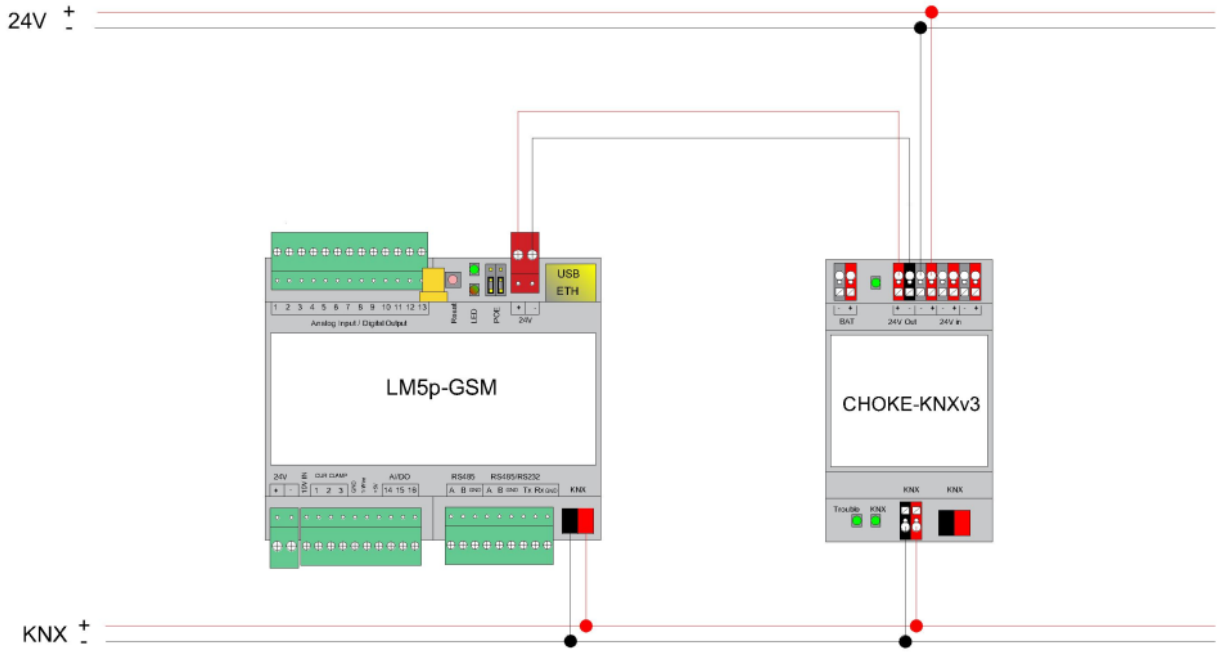


Passive PoE switch



Passive PoE adapters

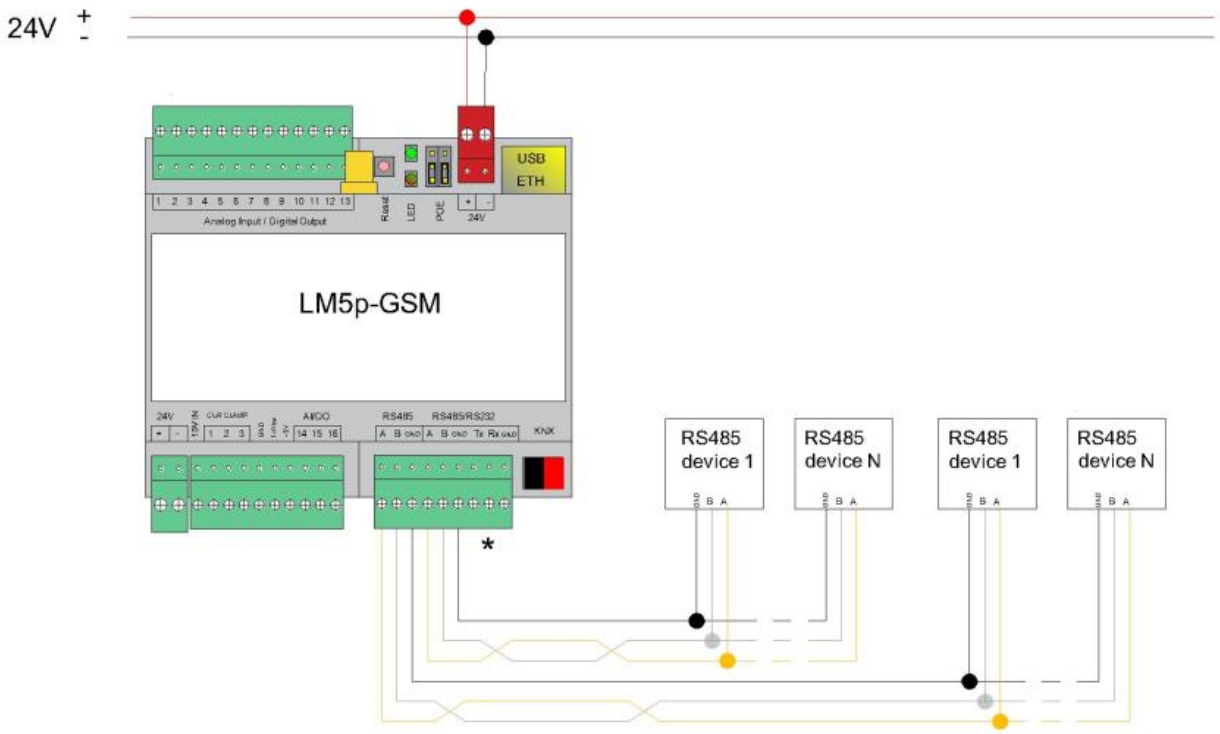
KNX TP1 connection / Powering over 24V terminals



RS-485 connection

There can be used max two RS-485 on LM5 Lite. First one is definitive, second one is software switchable – either it works as RS-485 or as RS-232 :

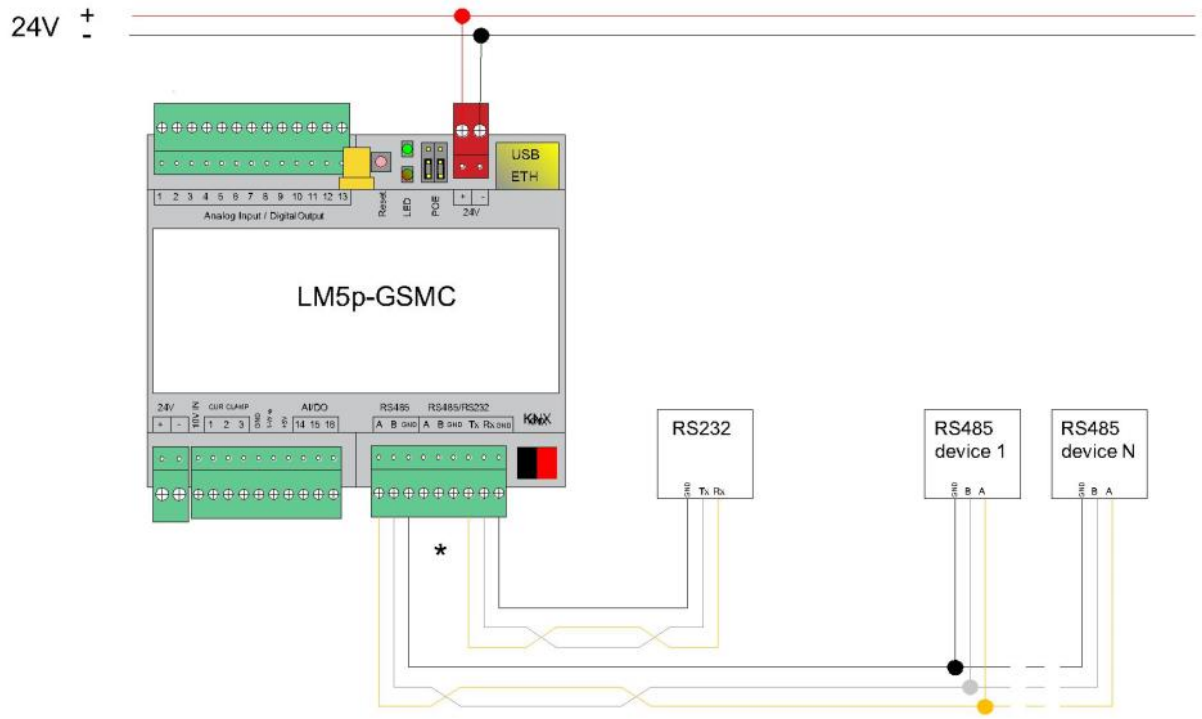
- If it is set up as full-duplex it will operate as RS-232 and respective TX/RX/GND screw terminals should be used
- If it is set up as half-duplex (*) it will operate as RS-485 and respective A/B/GND screw terminals should be used



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

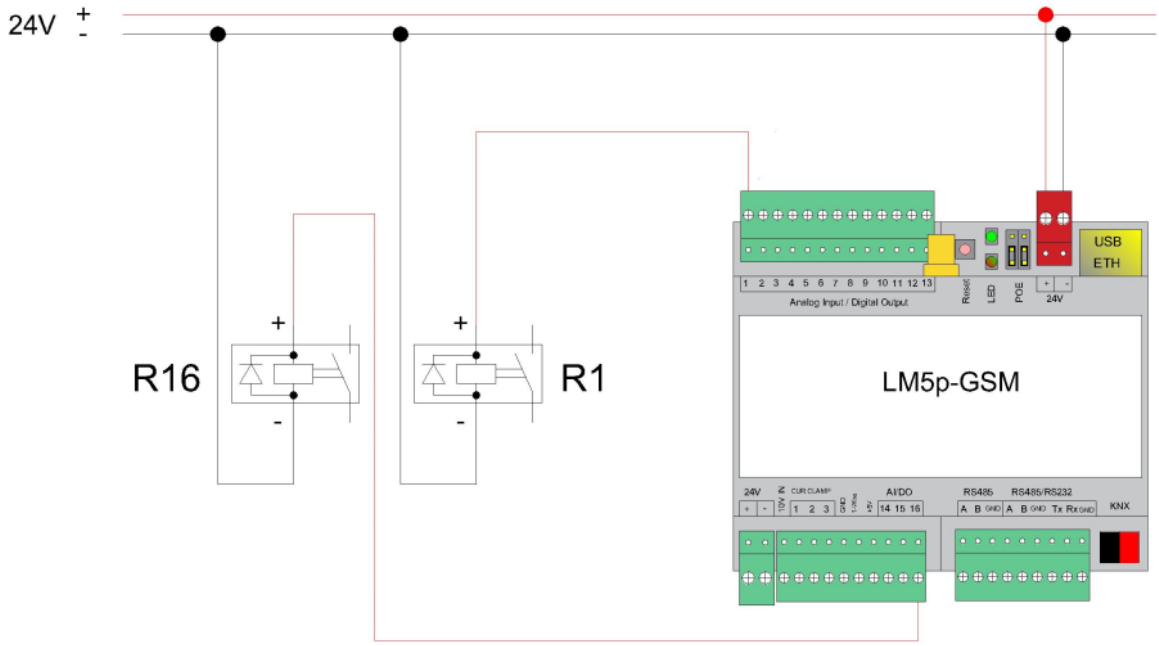
RS-485/RS-232 connection

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.

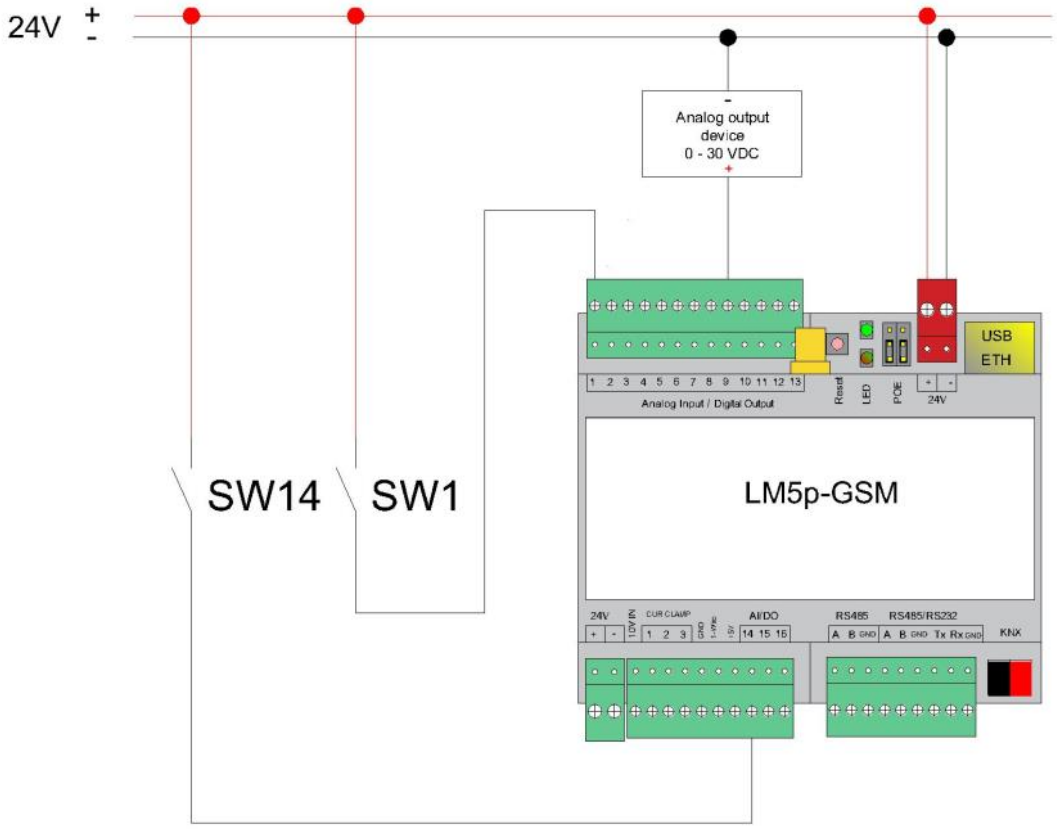


*RS-232 is chosen in this case, RS-485 is not activated

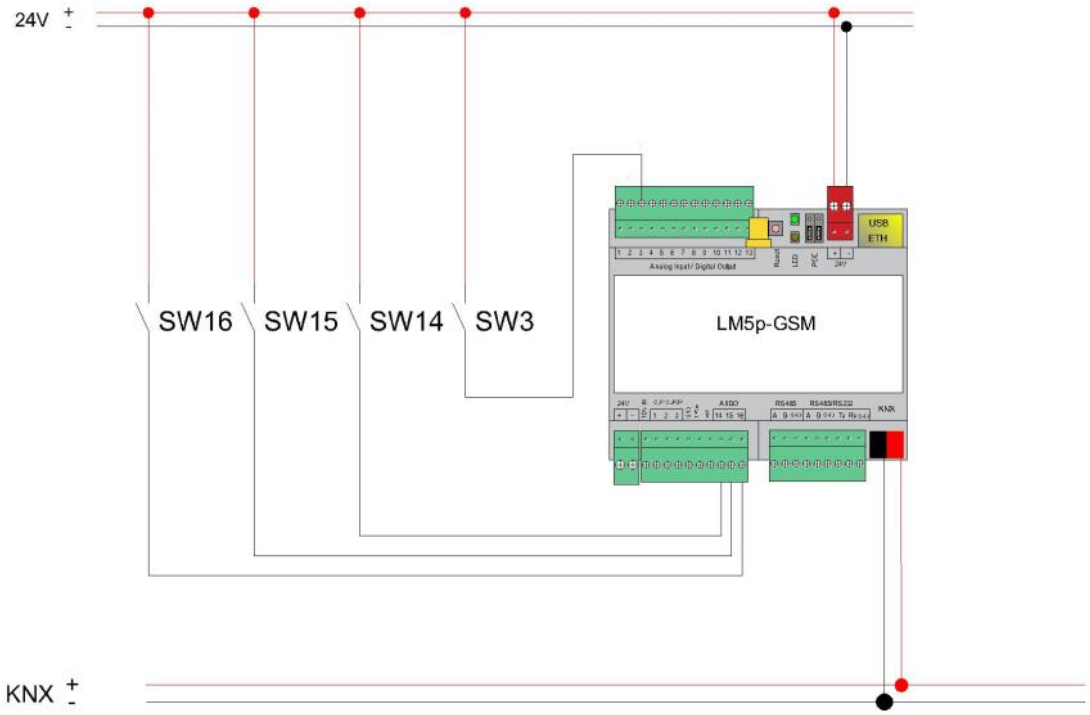
Digital output (e.g. relay/contactor)



Digital or Analog input (e.g. pushbutton or 0-5V current measurement sensor)



Digital input (e.g. pushbutton)



1-wire connection