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LogicMachine5 Reactor GSM

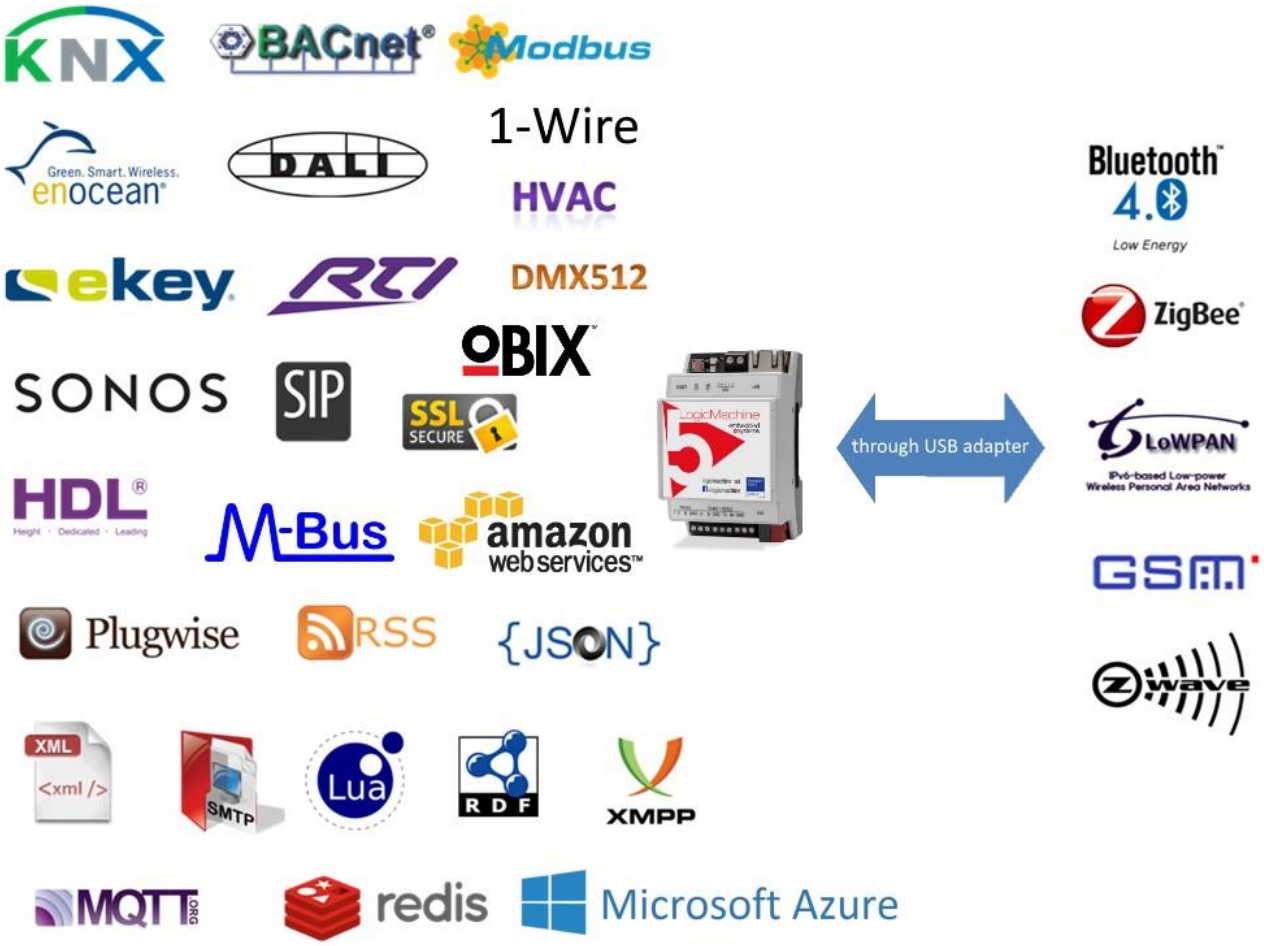
LogicMachine (LM) is your easiest way to program complex logic in KNX/EIB, Modbus, BACnet, EnOcean and other networks. LM will enable you to efficiently customize building automation processes, easily delivering unlimited flexibility benefit to end users in a cost-effective way.

LM5p-GSM is an embedded platform with integrated Ethernet, USB, GSM, Serial interfaces and I/O ports, CAN FT. 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

LogicMachine5 Reactor GSM Power CANx	LM5p2-GSMC
LogicMachine5 Reactor GSM Power KNX	LM5p2-GSM

Standards and norms compliance

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

Technical data:

Power supply:	2 x 24V DC on terminal connectors (1 for LM powering, 1 for external relay powering) or 24V DC Passive Power-over-Ethernet	
Power consummation:	1.3W	
Interface:	GSM module with Antenna	1
	Push-push micro-SIM connector	1
	10BaseT/100BaseTX	1
	RS-485	1
	RS-485/RS-232 (switchable in software – full-duplex=RS232, half-duplex=RS485)	1
	USB2.0	1
	Analog input/Digital output	16
	Analog input 0-10V	1
	Analog inputs for current Measurement clamps	3 (sensor specification)
	1-Wire	1
	CAN FT	1 (protocol features)
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

Connections:	CAN bus:	Bus Connection Terminal 0.8mm2
	Power supply:	Screw, 5 mm2
	Serial:	Screw, 3.5 mm2
	I/O:	Screw, 3.5 mm2
	1-wire	Screw, 3.5 mm2
Operating elements	LED	1 – CPU load 1 - Activity
Enclosure:	Material:	Polyamide
	Color:	Gray
	Dimensions:	61(W)x90(H)x108(L) mm

Usage temperature:	0C ... +45C
Storage temperature:	-15C ... +55C
Weight:	150g
Warranty:	2 years
Relative Humidity:	10...95 % without condensation

Caution
Security advice

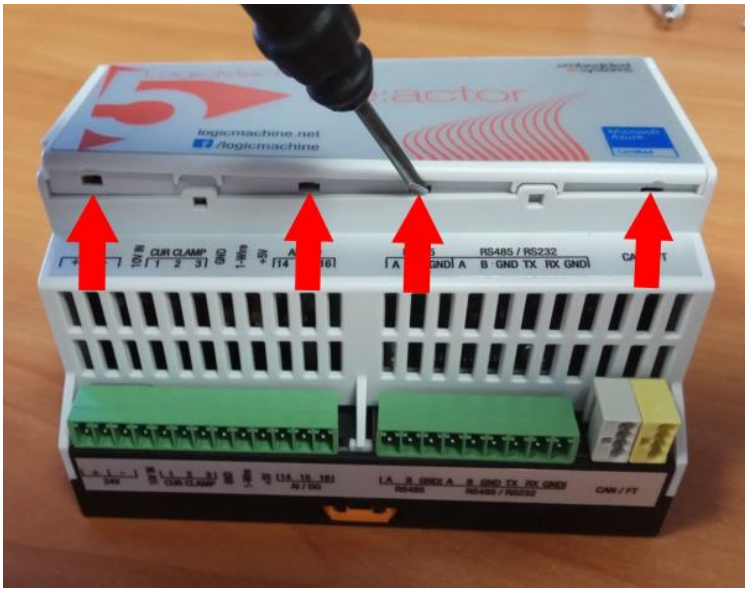
The installation and assembly of electrical equipment may only be performed by skilled electrician. The devices must not be used in any relation with equipment that supports, directly or indirectly, human health or life or with application that can result danger of people, animals or real value

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

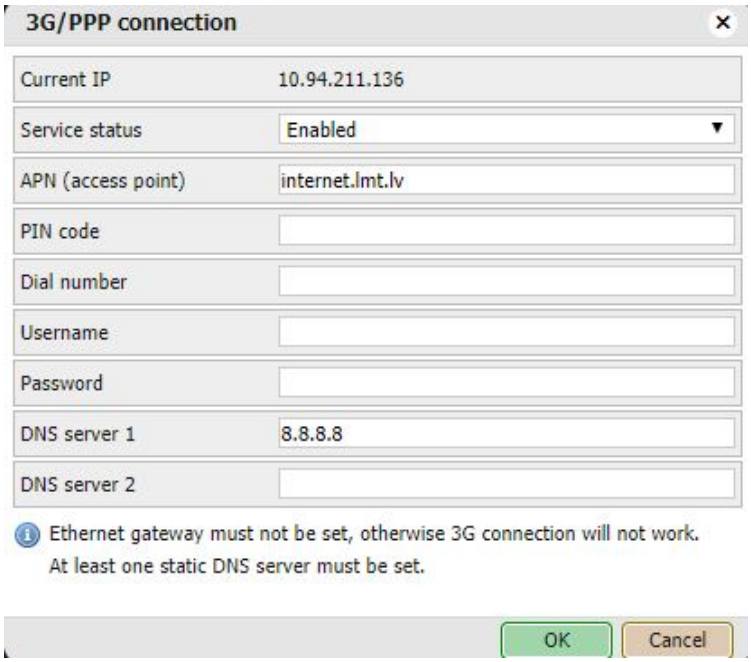
4) Connect 3G antenna

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

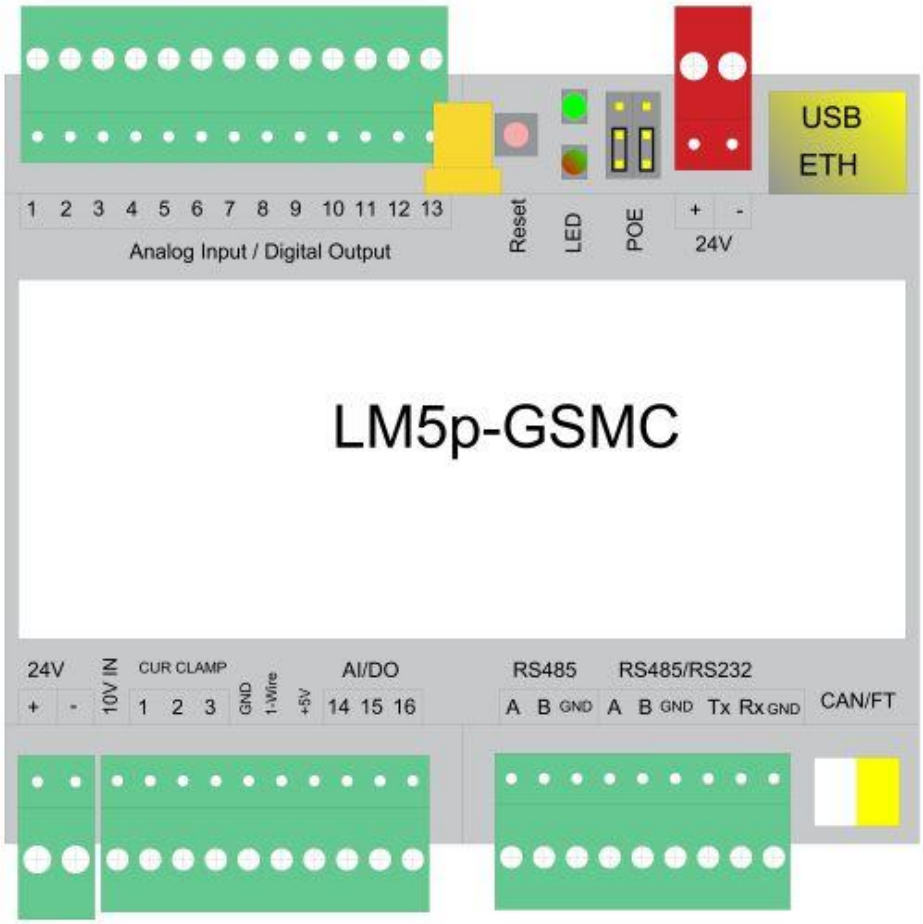
Reset device

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

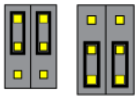
Terminal connection schemes

Model

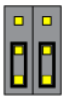


Powering over Ethernet

LM5 supports two powering modes:

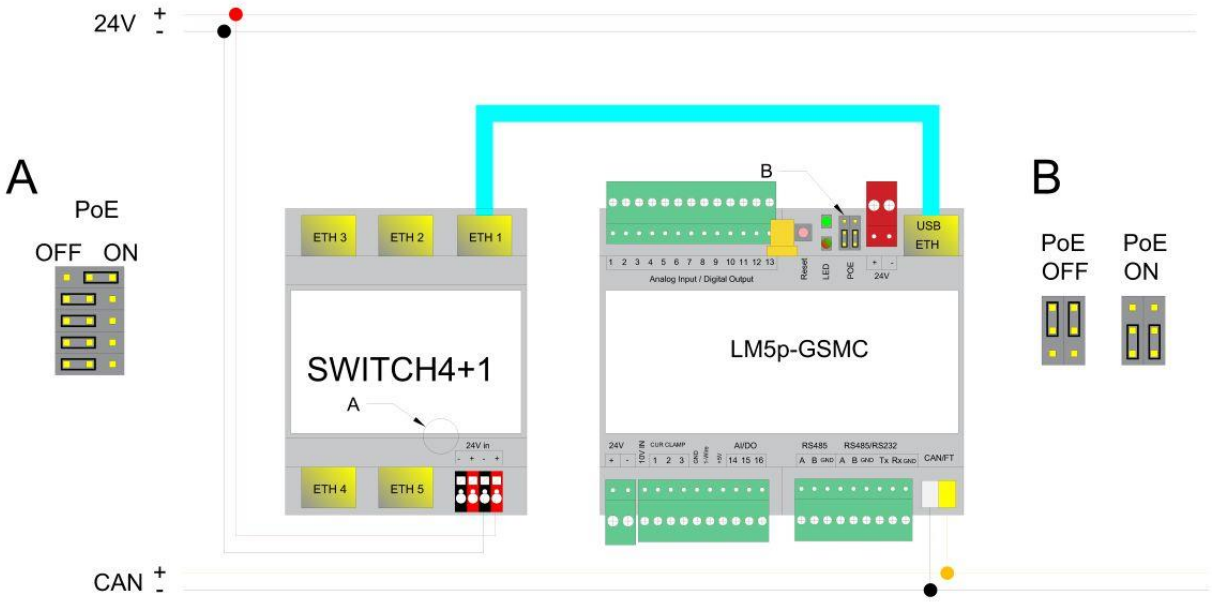


- regular powering over screw terminals (Jumpers up or down)

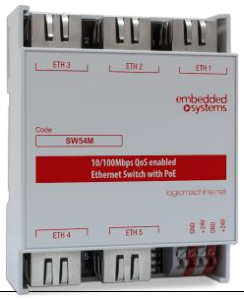


- passive PoE powering over 24V DC (Jumpers down)
- when using active PoE 48V, jumpers have to be UP or the product will be damaged!

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

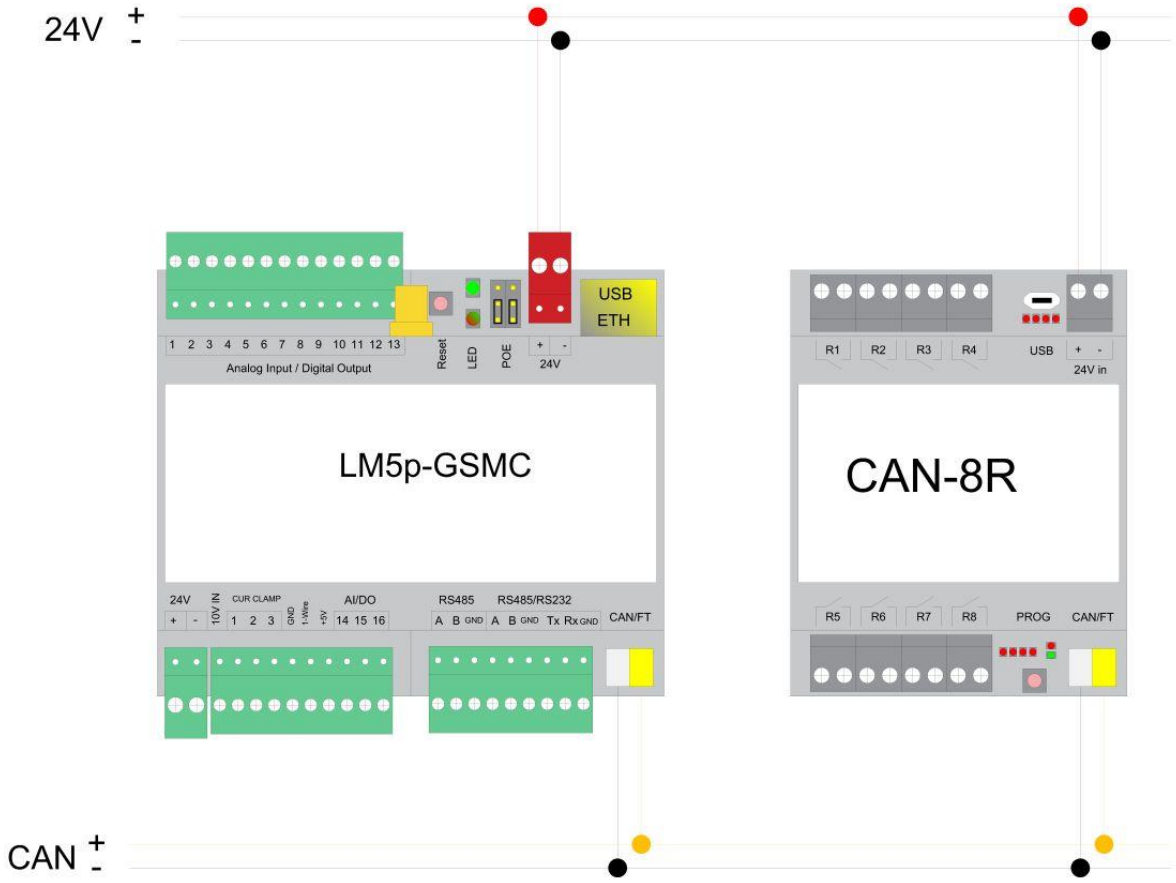


Passive PoE switch



Passive PoE adapters

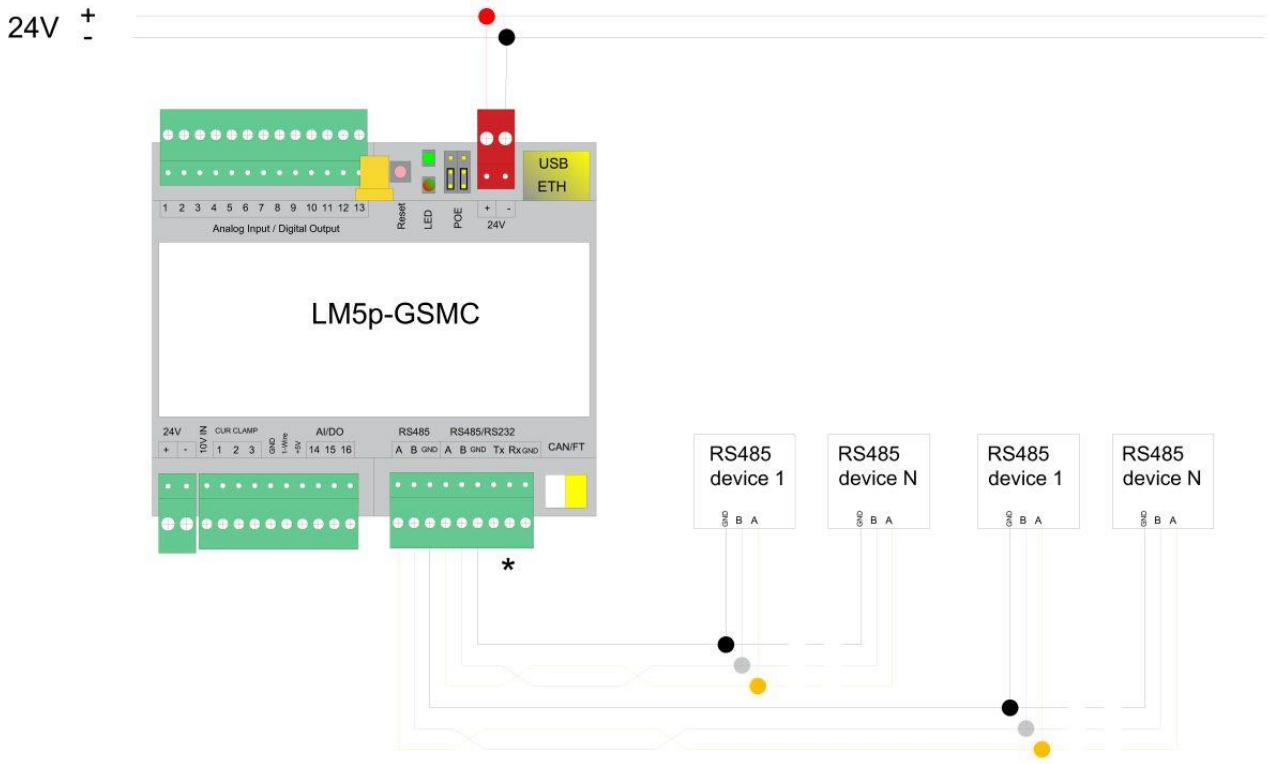
canX connection / Powering over 24V terminals



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 :

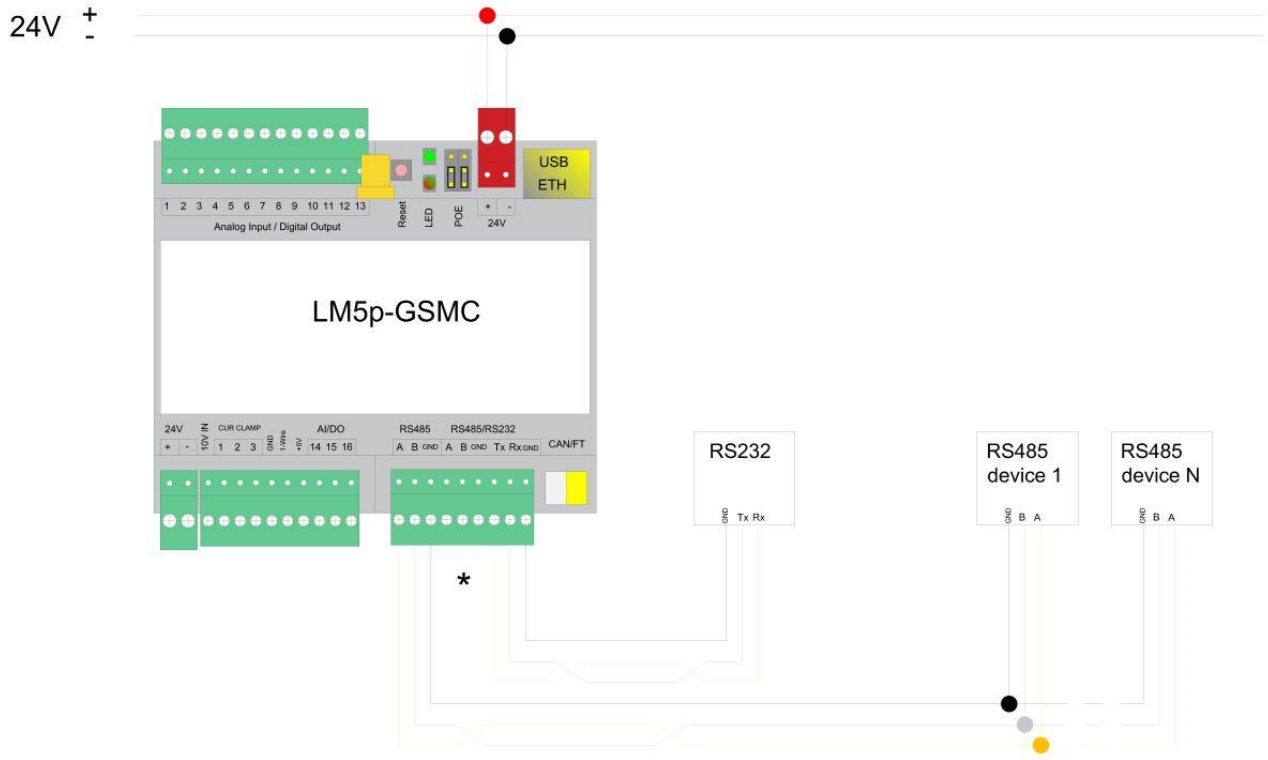
- If it is set up as full-duplex it will operate as RS-232 and respective TX/RX/GND screw terminals should be used
- If it is set up as half-duplex (*) it will operate as RS-485 and respective A/B/GND screw terminals should be used



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

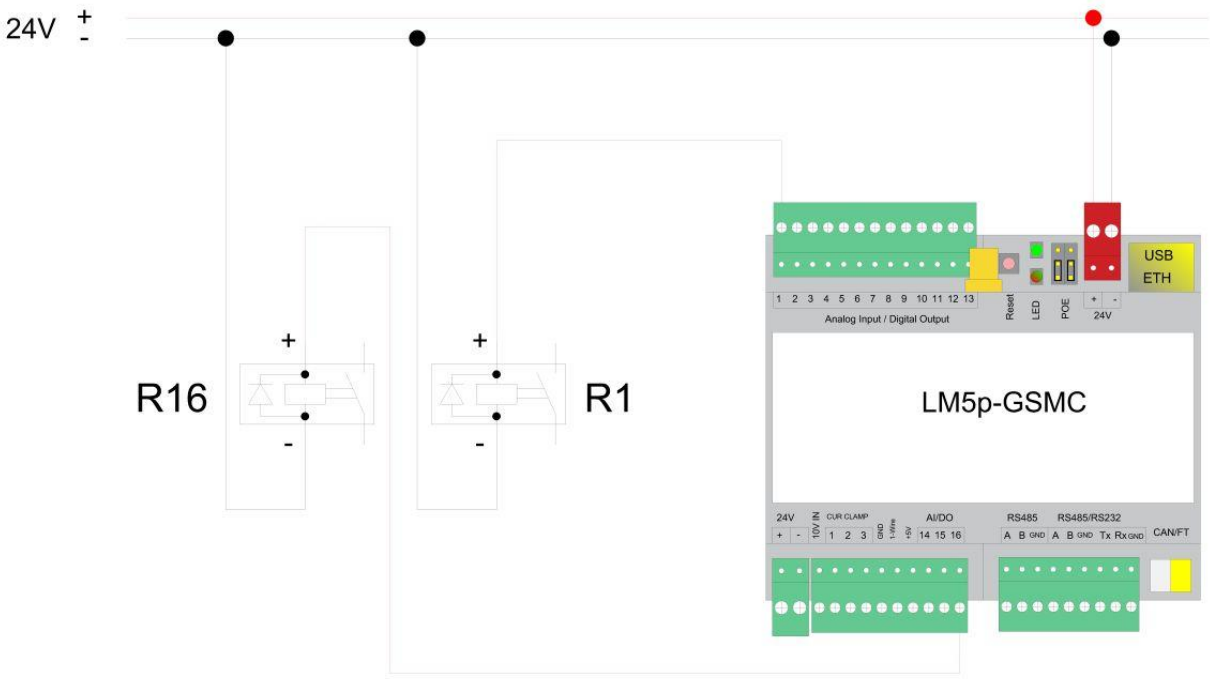
RS-485/RS-232 connection

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.

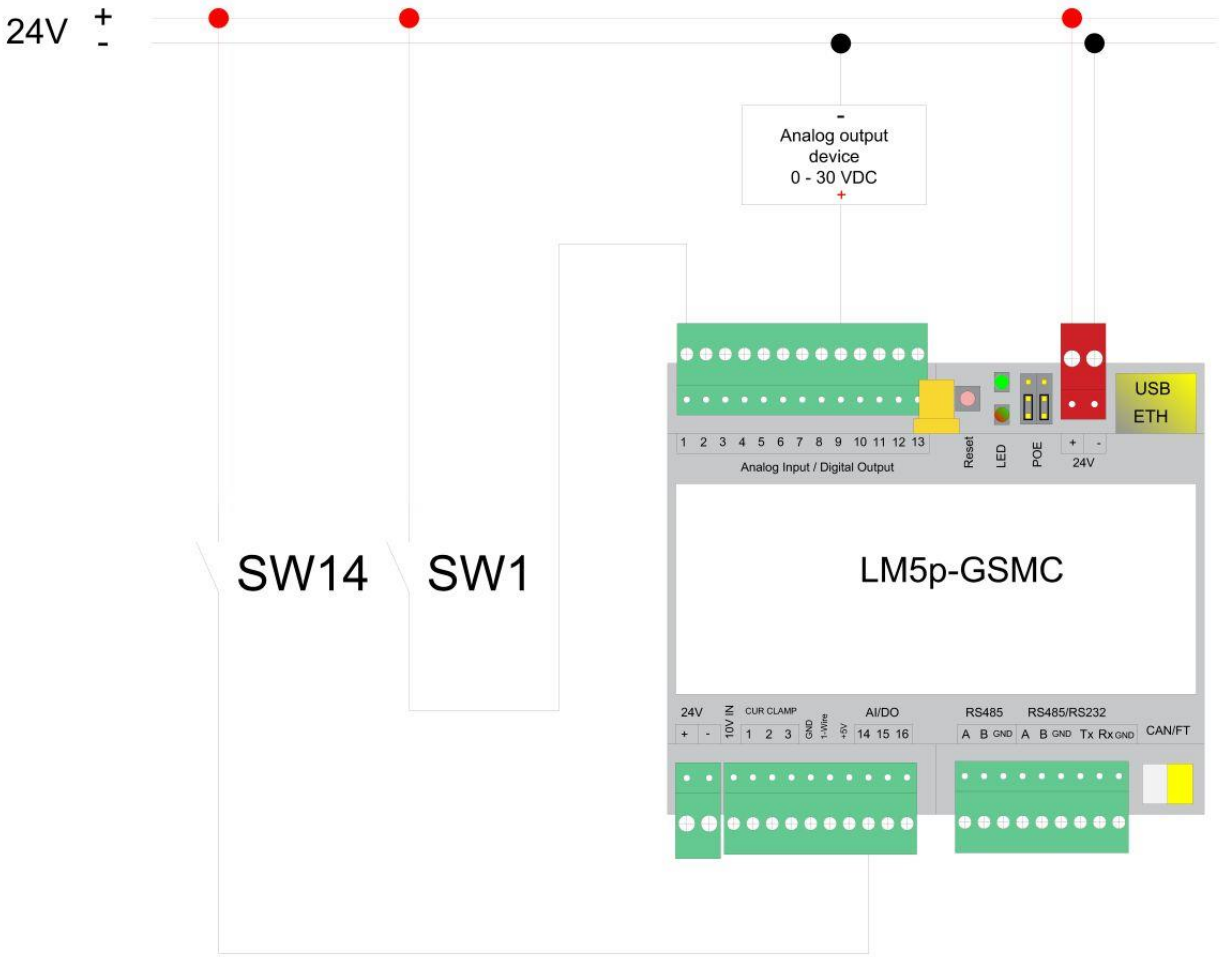


*RS-232 is chosen in this case, RS-485 is not activated

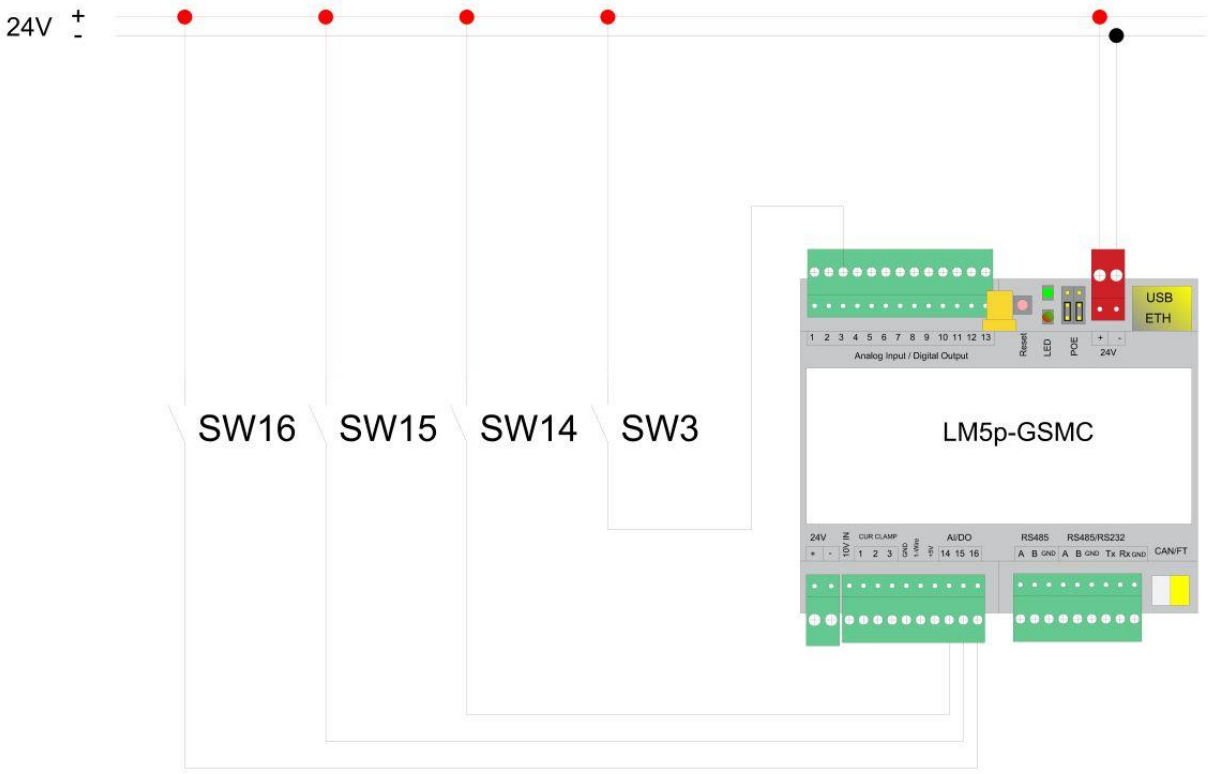
Digital output (e.g. relay/contactor)



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



Digital input (e.g. pushbutton)



1-wire connection