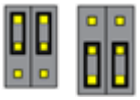
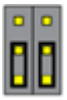
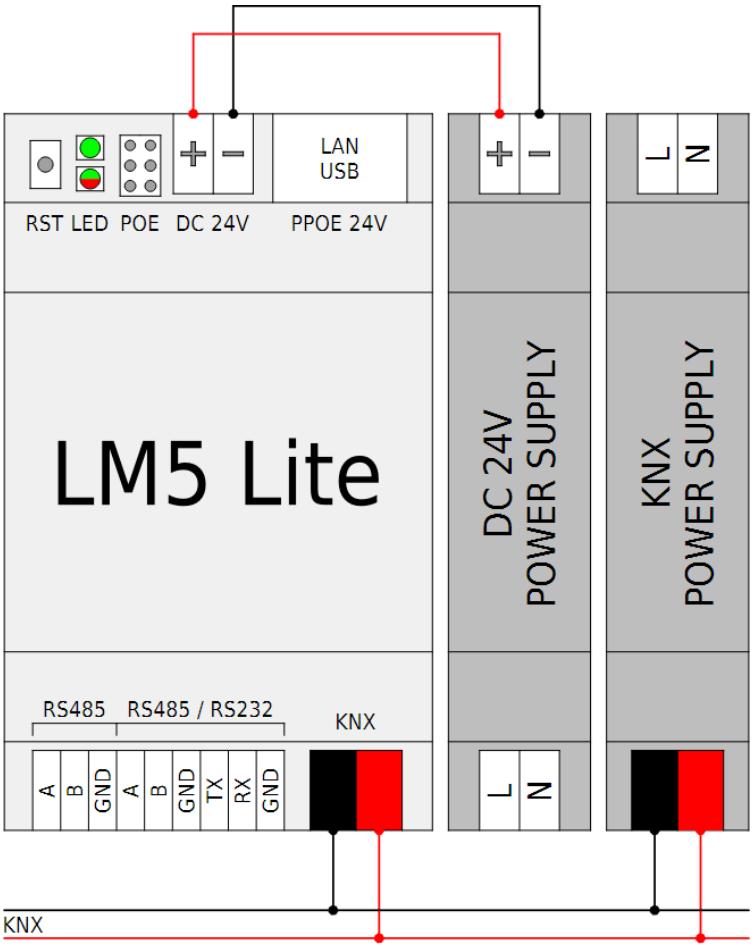
# LogicMachine wiring connection diagrams

# Power / KNX

LM can be powered by either DC 24V or passive Power-over-Ethernet. Passive PoE is enabled by default. Make sure **not to connect LM** to an **active 48V PoE** switch or **change jumper position** accordingly before connecting.

| Powering mode | Jumper position |
|---|---|
| Regular DC 24V power supply or KNX power supply auxiliary output connected to screw terminals | UP or DOWN  |
| Passive PoE (DC 24V)<br>**Active 48V PoE is not supported, LM will be damaged if Active 48V PoE is connected** | DOWN  |



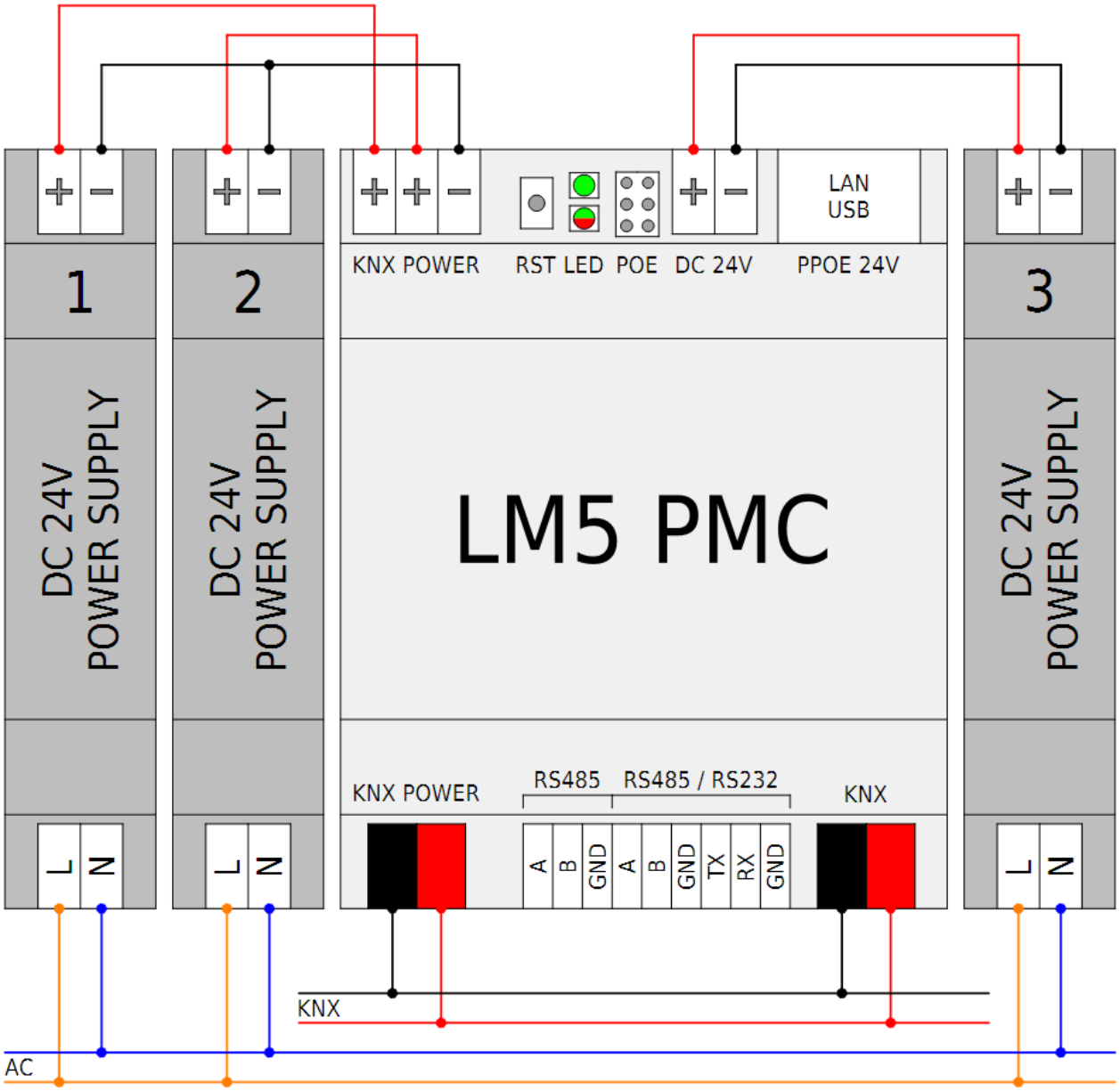
# KNX bus power

Applicable model: LM5p2-PMC

The device has 3 power supply inputs:

1. Power supply for LM5 + KNX line
2. Power supply for LM5 + KNX line (backup)
3. Power supply for LM5 itself (main/backup)

All three power supplies should be on the same AC phase except if you are using galvanically isolated power supplies (for example, transformer-based). If there is no necessity to power the KNX line, you can use power supply Nr. 3 only.



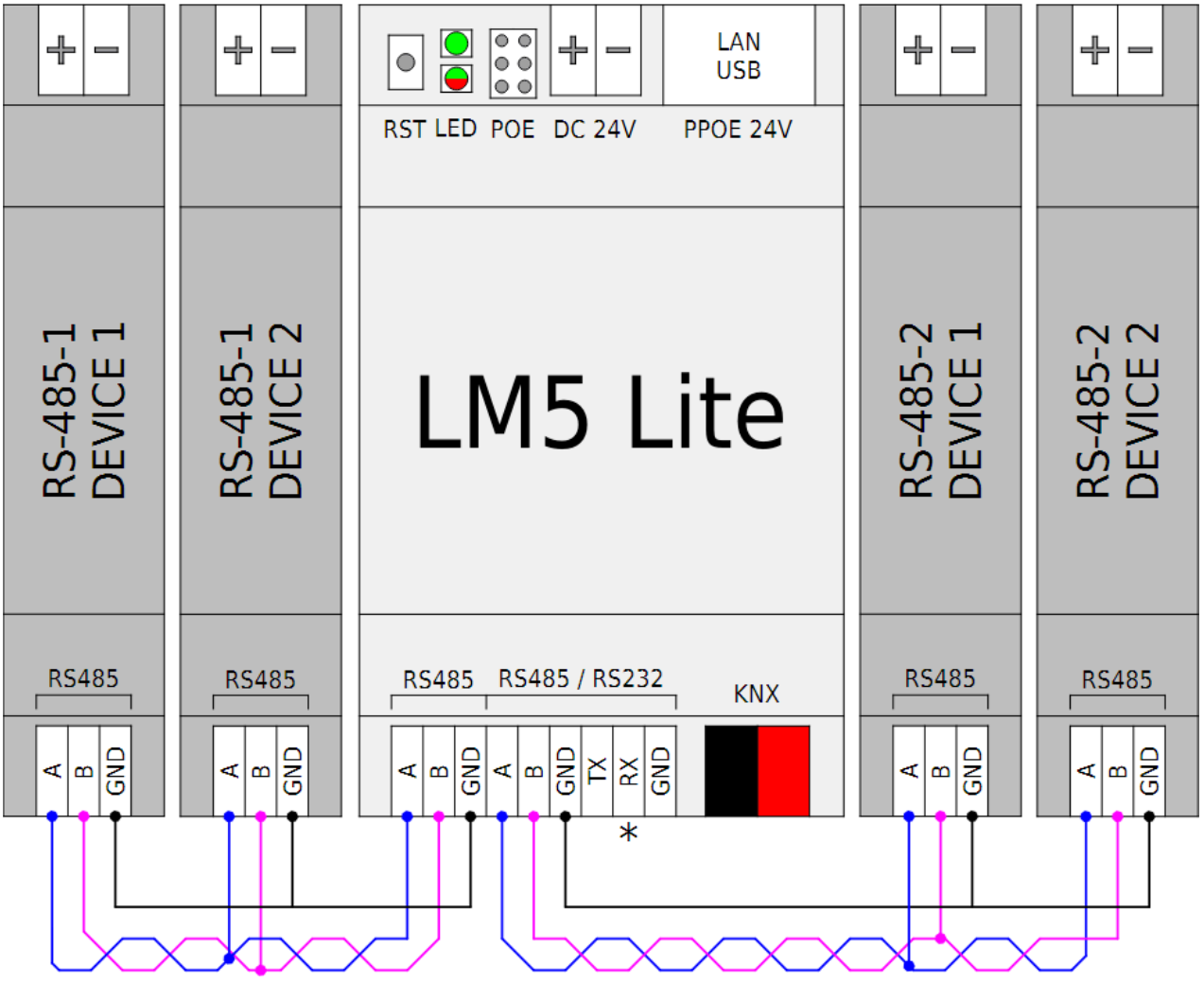
# RS-485

Use twisted pair cable to connect A (D1/+) and B (D0/-) between all RS-485 devices. Daisy chain topology is preferable. Bus topology can be used while keeping stubs as short as possible.

All RS-485 devices on the same bus should have a common GND connection.

The second port operates either as RS-485 or RS-232 depending on the software configuration:

- Full-duplex: operates as RS-232 and respective TX/RX/GND screw terminals should be used
- Half-duplex: operates as RS-485 and respective A/B/GND screw terminals should be used

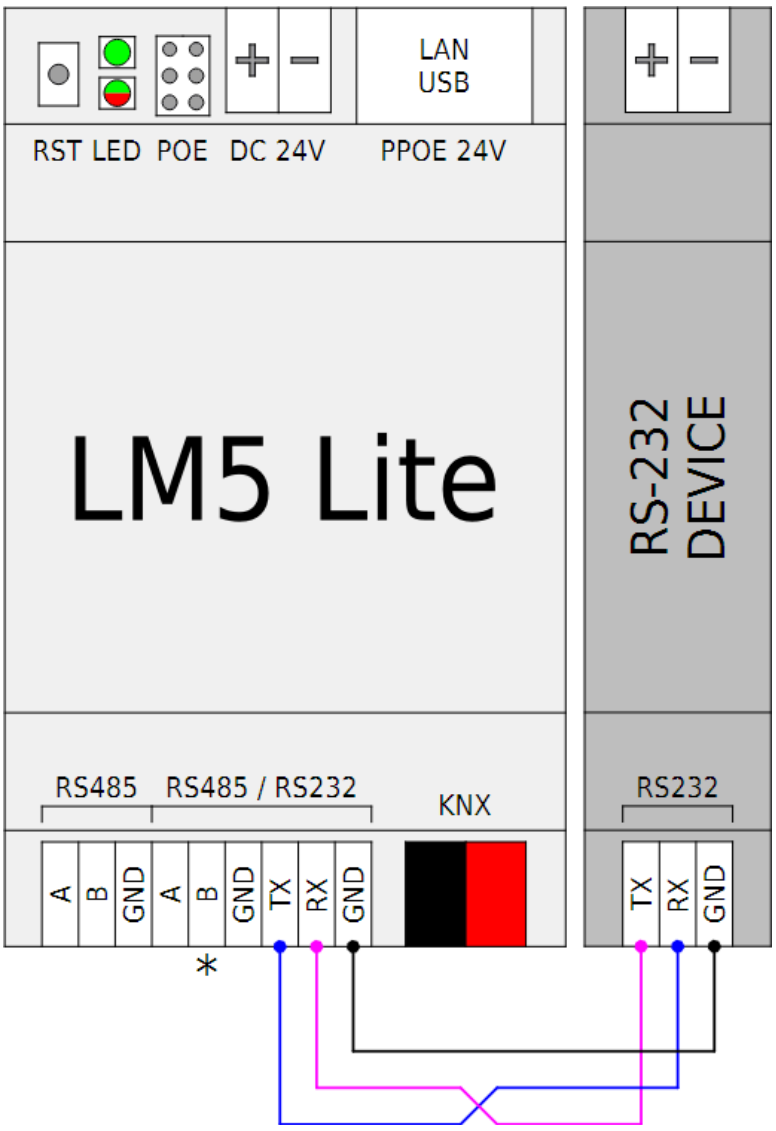



*RS-232 cannot be used while RS-485-2 is active

# RS-232

Connect RX to TX and TX to RX between two RS-232 devices.

The second serial port must be configured in full-duplex mode in order to operate in RS-232 mode.

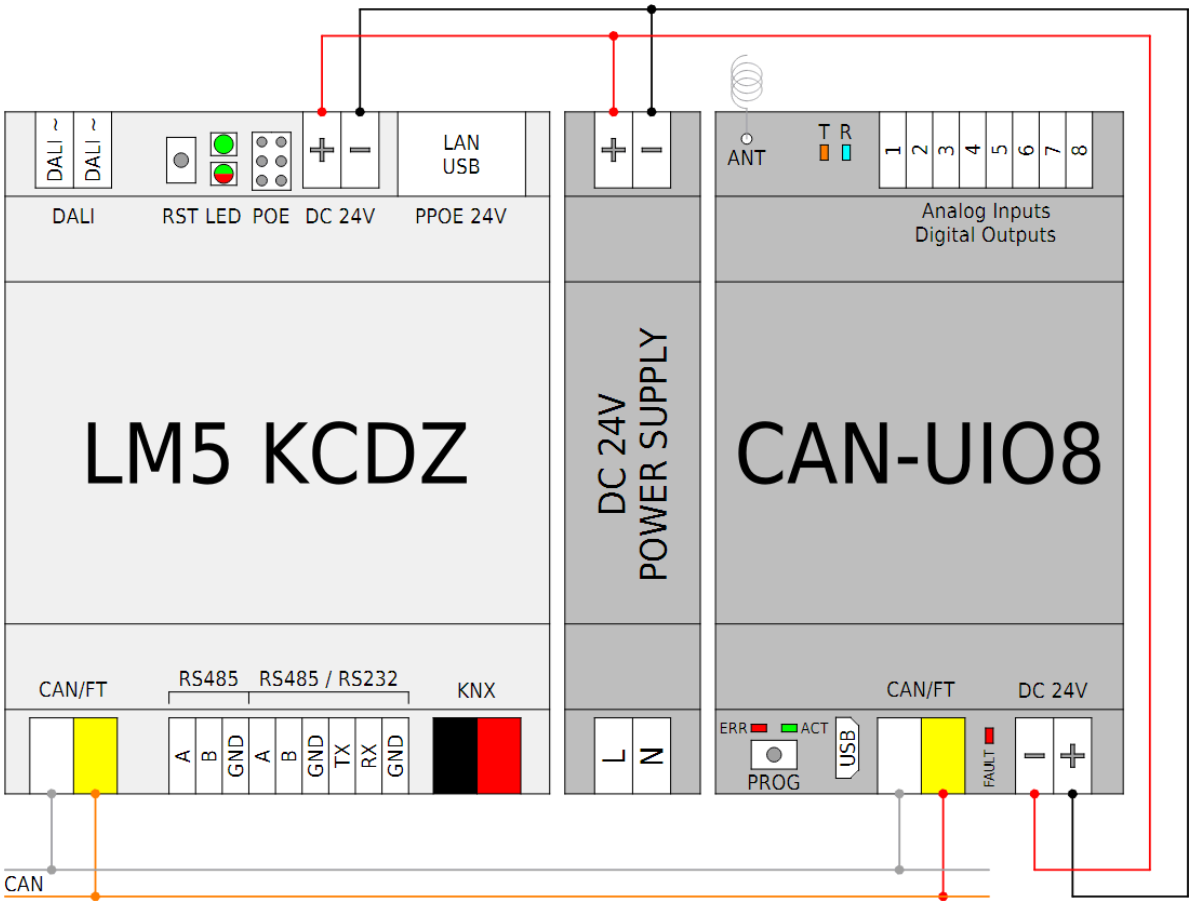



* RS-485-2 cannot be used while RS232 is active

# CANx bus

Applicable models: all LM5 models with CAN FT port.

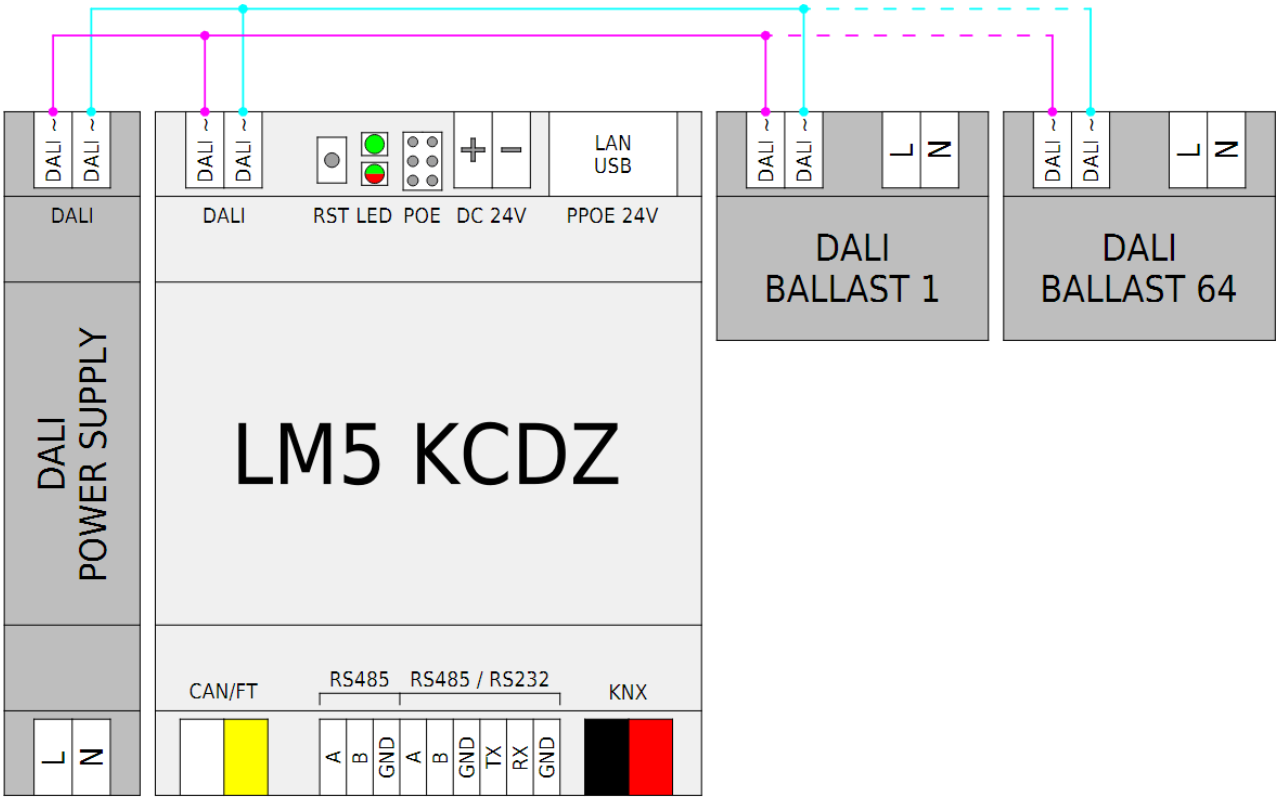
All CANx devices on the same bus must have a common GND connection.



# DALI

Applicable models: LM5p2-KCDZ, LM5p2-DW1, LM5p2-DR,  LM5Cp2-DW1, LM5Cp2-DR

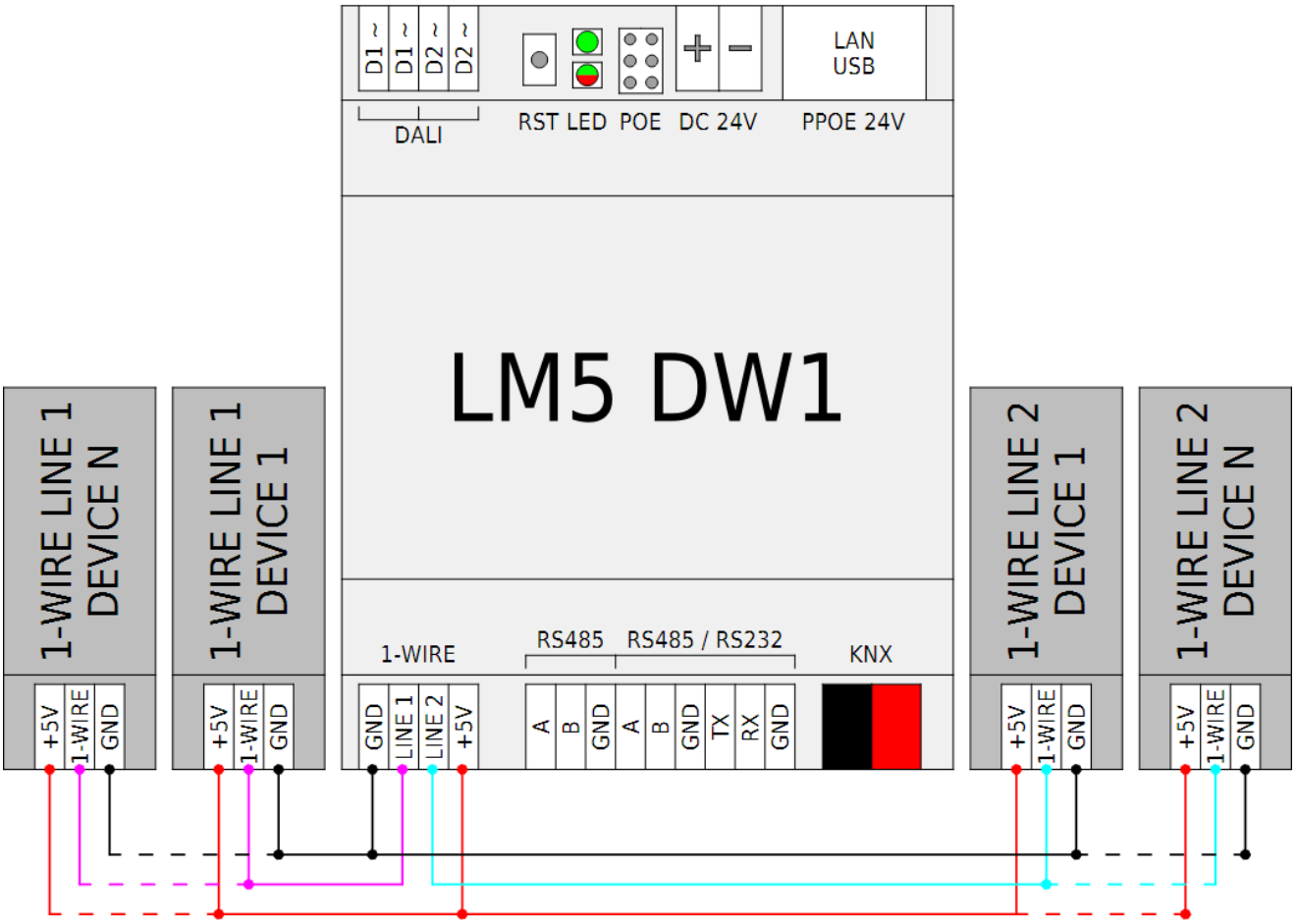
A separate DALI power supply is required for operation. All DALI devices are polarity-insensitive.



# 1-Wire

Applicable models: LM5p2-DW1, LM5Cp2-DW1, LM5p2-RIO2, LM5Cp2-RIO2

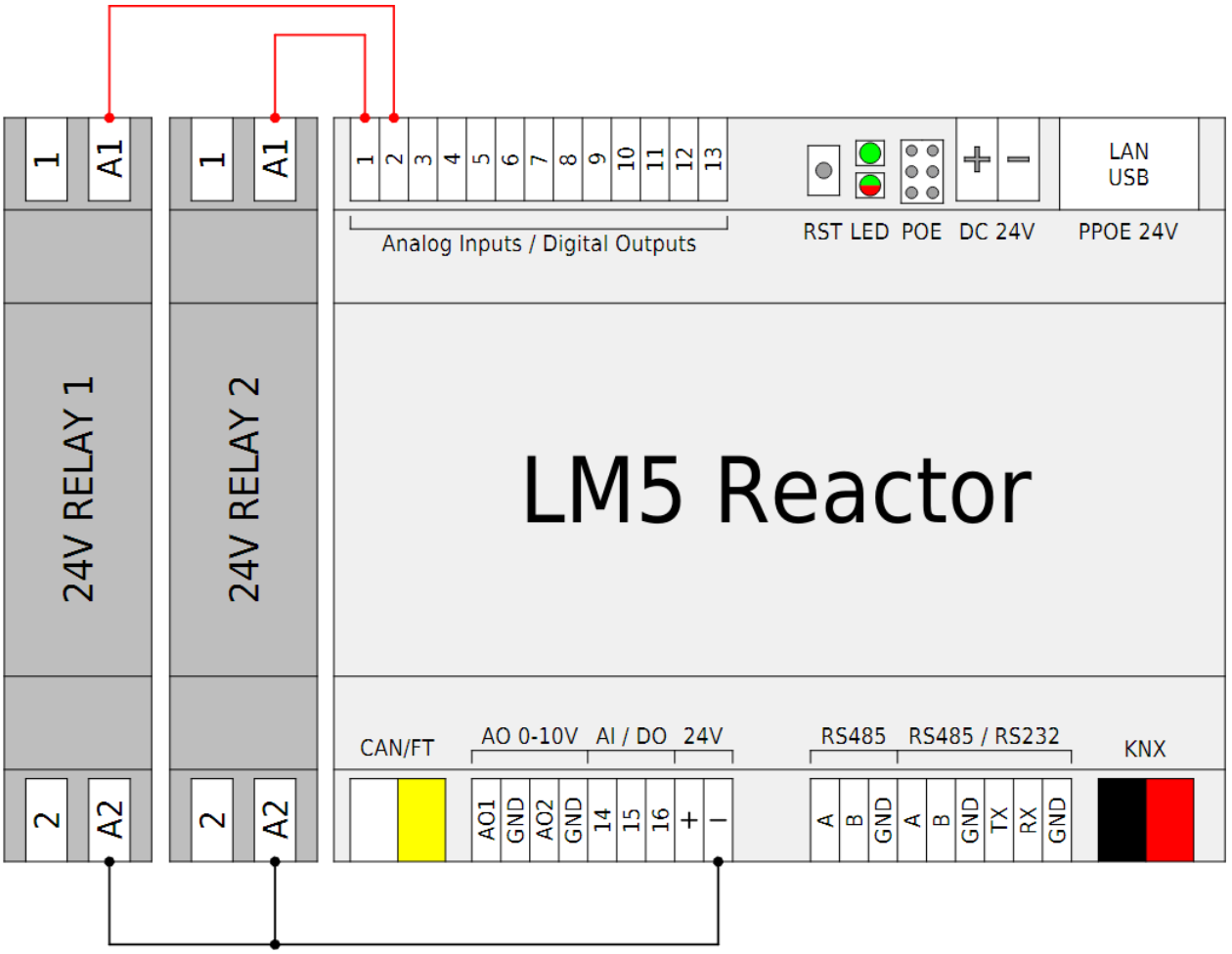
While 2-wire operation is possible, it is strongly recommended to provide 5V power to all 1-Wire devices on the bus.



# Reactor digital output (e.g. relay/contactor)

Applicable models: all LM5 Reactor series devices (LM5p2-RIO*, LM5Cp2-RIO*)

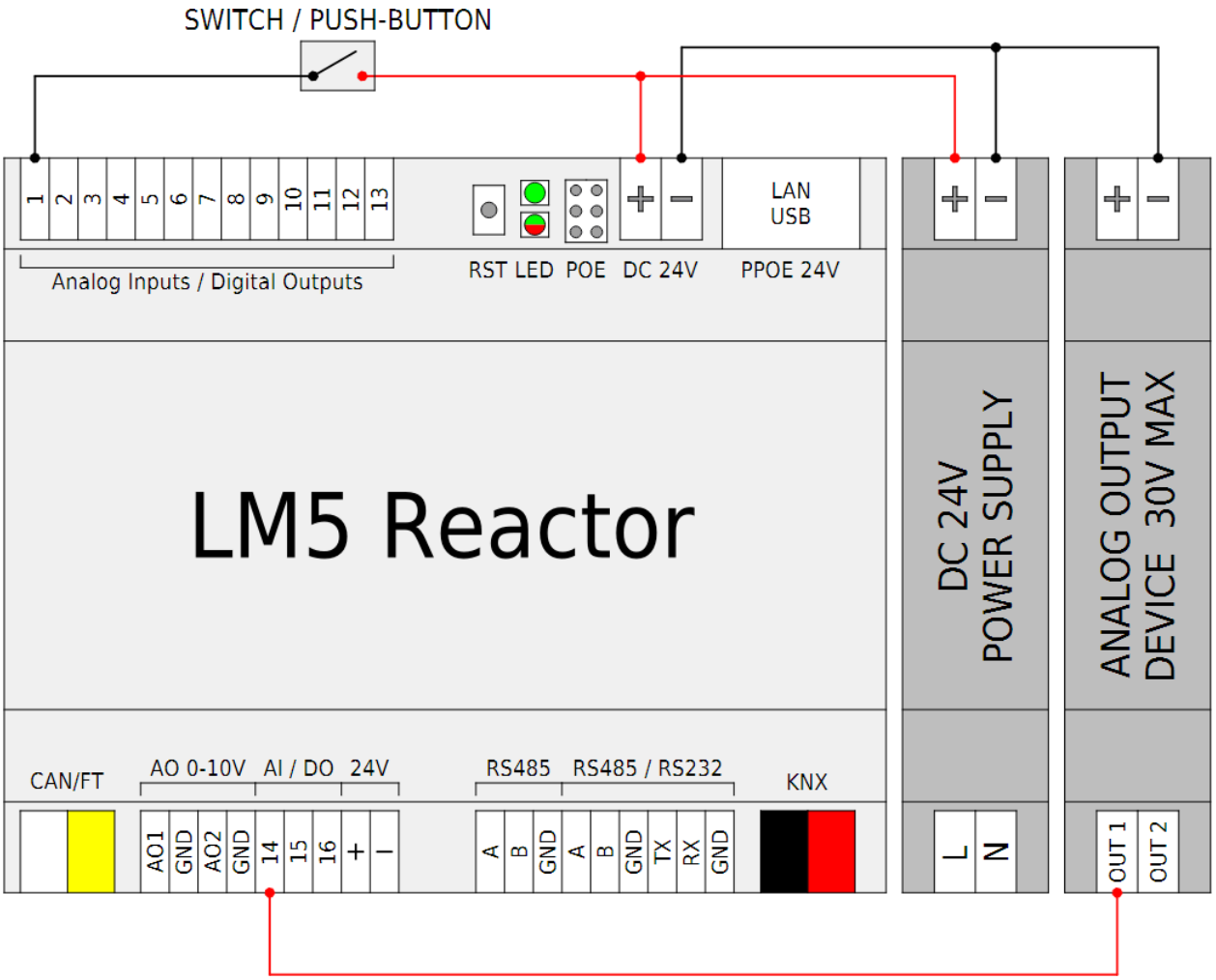
Connect the Reactor Digital output port to Relay A1 (positive pole) and Relay A2 (negative pole) to Reactor GND or power supply negative pole.



# Reactor binary input (e.g. push-button) or analog input

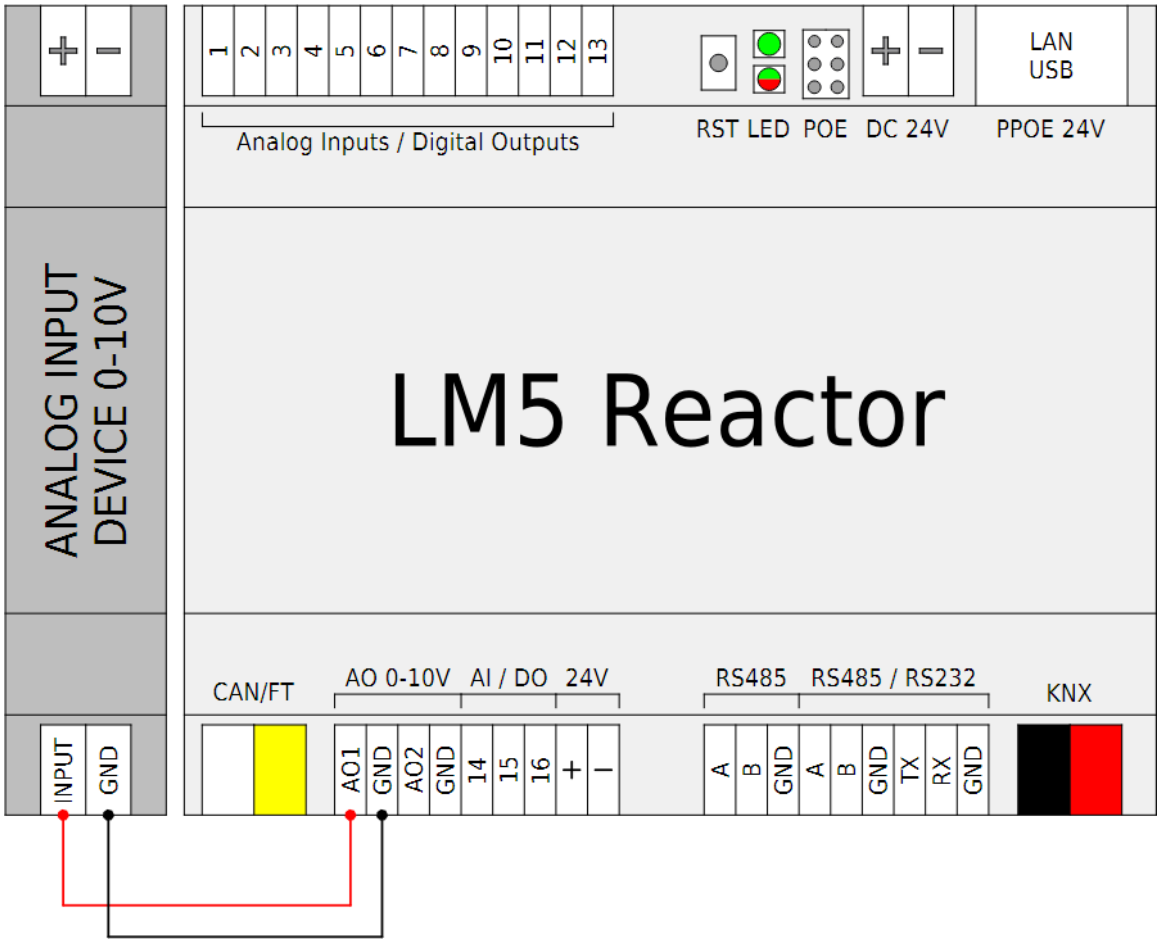
Applicable models: all LM5 Reactor series devices (LM5p2-RIO*, LM5Cp2-RIO*)

Connect one pole of a push-button to +24V (power supply positive pole) and the second pole to Reactor Analog input port.



# Reactor analog output (0-10 V)

Applicable models: all LM5 Reactor series devices (LM5p2-RIO*, LM5Cp2-RIO*)



# ZigBee gateway

1. Connect gateway RS-232 port to LM RS-232 port (RX to TX, TX to RX, GND to GND).
2. Power both LM and ZigBee gateway with a 24 V power supply.
3. Open the ZigBee app in the LM user interface. If needed, install the app from the app store.
4. Open the ZigBee appMenu (≡) > Configuration and set Connection mode to RS-232.
5. The status dot icon should turn green meaning that the ZigBee gateway is connected.