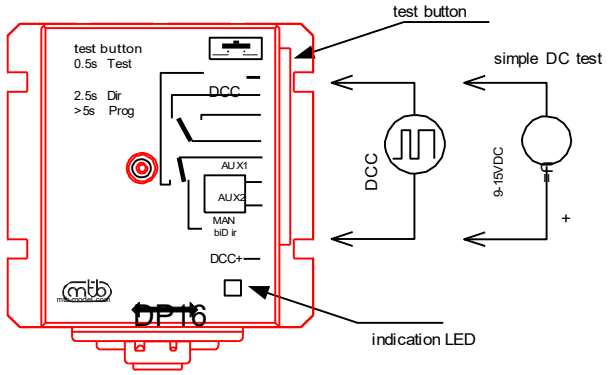
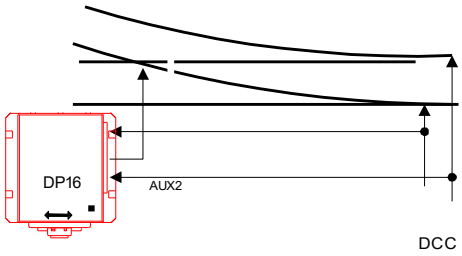
# Function and setting of DP16 switches

DP16 Switch Motors are equipped with a DCC interface and manual DC control inputs. They have one independent auxiliary contact AUX1. The second contact, AUX2, supplies switched DCC from the inputs to the frog.

When the DCC signal is turned On, the LED flashes one time to indicate that it's working.

DP16 connection diagram

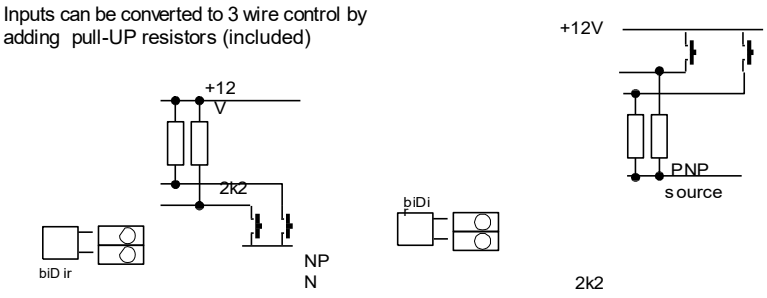



Connection of AUX2 for powering frog

For manual control there are two bidirectional inputs MAN biDir, which are galvanically isolated from DCC signal. They can be used for manual operation.
Logic level of inputs is 5-15V/ with sourcing current 7mA ($U_{biDir}$=15V). This is suitable for logic level devices such as Arduinos or manual switches.

Connection of biDir signals for manual control.

0V 0V

DCC commands have priority over manual inputs. If the DP receives a DCC command during manual movement, after finishing the "manually initiated" movement, it will start to move to the DCC commanded position.

For the purposes of DP16 switch basic function testing, a DC power supply of 9-16V, with marked polarity (+/-), can also be used. This is only for functional test using the button, or using the biDir inputs.

LED indicator function:

1 Short flash:
- When turning on the power or DCC signal (verification that DP it is alive)
- After receiving a DCC command for switching position (or the versatile DCC command RESET)
- While pressing the button for >2.5sec, that is, changing the definition of NORMAL and

REVERSE

2 Fast flash

(When button is pressed >5sec) – entry of configuration mode

button function:

short press (0.1- 1 sec) run test, the switch changes position. This also works with DC power

medium time press (2.5-max 4 sec) – change of command polarity. the switch will respond to DCC commands in the opposite direction. The new polarity is immediately permanently stored in memory.

long time press >5 sec-

Setting New DCC Accessory Address:

The LED will flash and DCC address is set to the default value (ex LENZ ADR=9). As soon as it receives the first accessory decoder command via DCC (sent to any switch), it store the address of this command and accept it as its permanent one. During learning mode , it only responds to accessory/turnout DCC commands, not DCC commands for loco decoders.
After saving the address, the LED stops flashing and the address learning mode is finished.

Addresing of inital addres:
RocoMouse, Roco Z21 etc : addr = 9
LENZ, DigiKeys, Digitrax : addr= 5