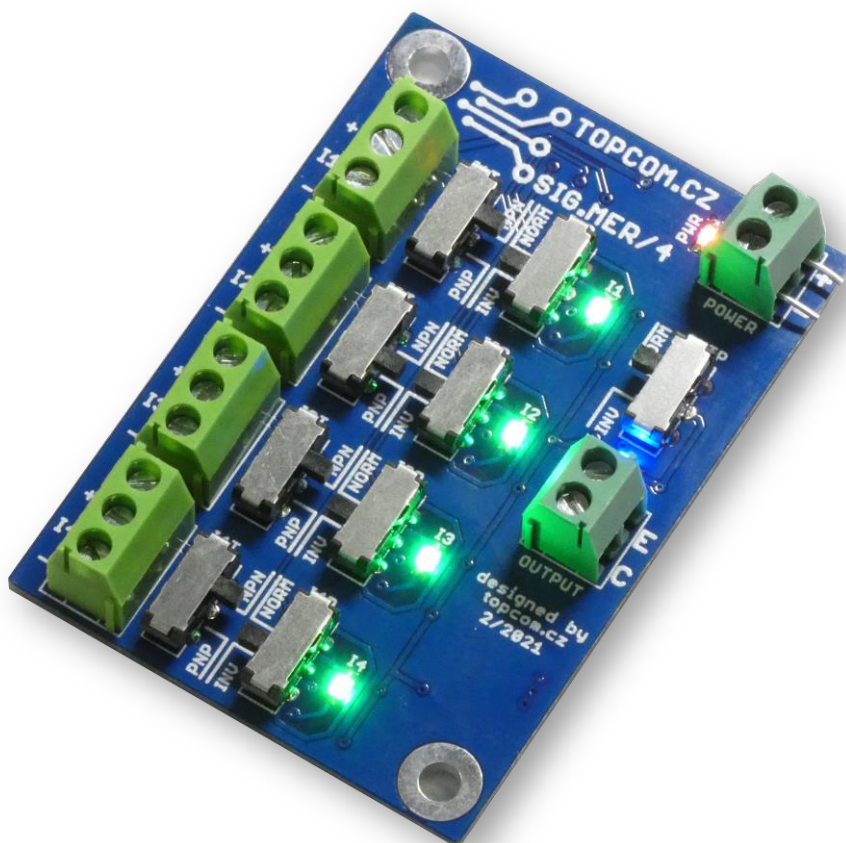


SIG.MER/4 – signal merger



Buy this item at:



<https://www.topcom.cz/sigmer4/>

--- or ---



...just search „SIG.MER“



Important: this device needs connection and installation. Seller does not take any responsibility for any damage or injury caused by using of this device. Read carefully documentation for your CNC machine and motion board.

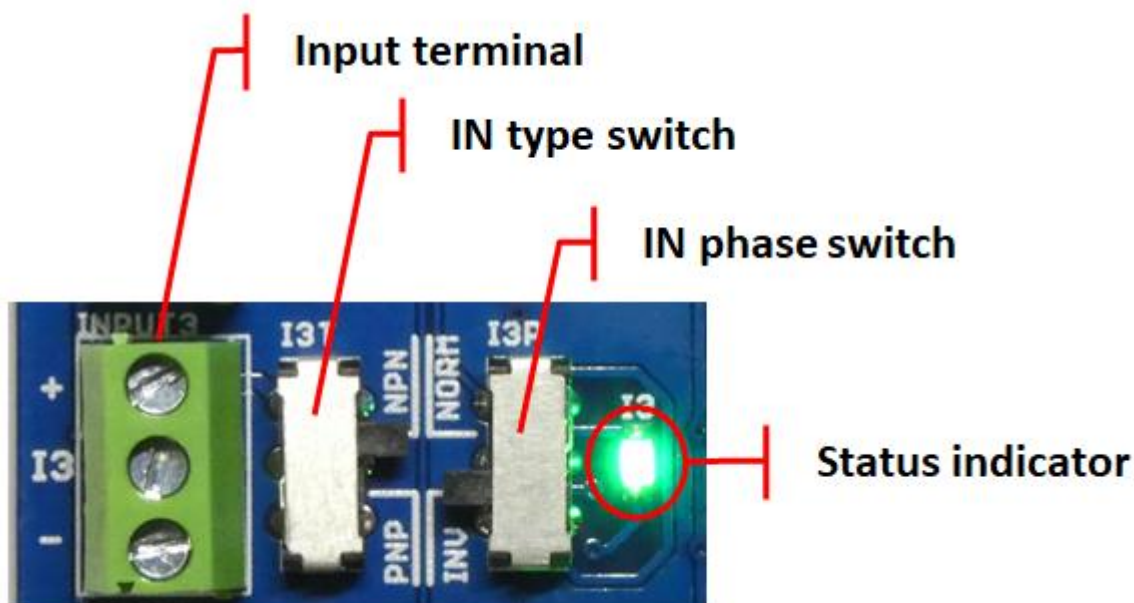
Description:

SIG.MER/4 is a device, allows to merge up to 4 different signals to one output signal. Input channels can be configured differently according the sensor type.

Main features:

POWER	
Power voltage (Vcc)	5-24V DC
Power consumption	<25mA
INPUTS	
Input current	1.6mA @ Vcc=5V
	4.5mA @ Vcc=12V
	9.5mA @ Vcc=24V
Input polarity	NPN/PNP
Input phase	NORMAL/INVERTed
FUNCTION	
Merging function	IN1 or IN2 or IN3 or IN4
OUTPUT	
Output type	Dry contact
Output voltage	24V max.
Output current	20mA max.
Output phase	NORMAL/INVERTed
Transitional ON time	<20us
Transitional OFF time	<500us
DIMENSION	
Width x Height	60x42mm

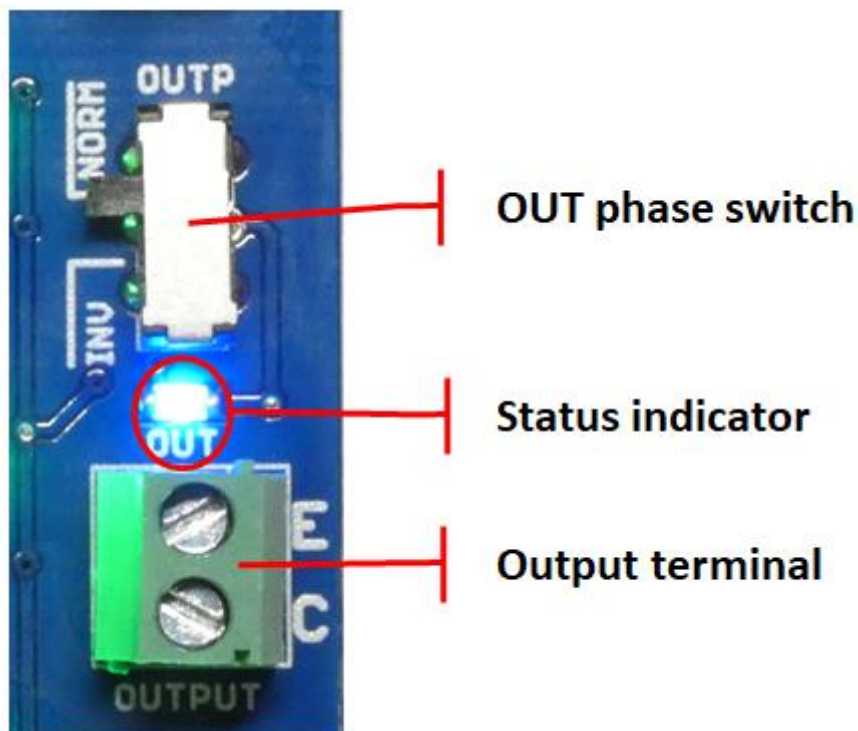
Input channels:



- **Input terminal:**
 - + ... sensor power
 - In ... input clamp
 - ... sensor GND
- **Input type switch:**
 - NPN** ... input is configured for NPN output from a sensor (switching to -)
 - PNP** ... input is configured for PNP output from a sensor (switching to +)
- **Input phase:**
 - NORM** ... channel is active, if input is activated (for NO sensors)
 - INV** ... channel is active, if input is inactive (for NC sensors)
- **Status indicator:**

LED is lighting, when channel is active.

Any active channel activates the output (OR function).

Output:

- **Output phase:**

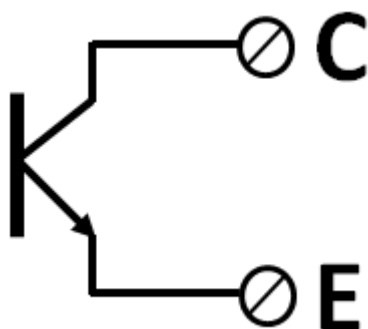
NORM ... output is active, if any input channel is activated

INV ... output is active, if all input channels are inactive

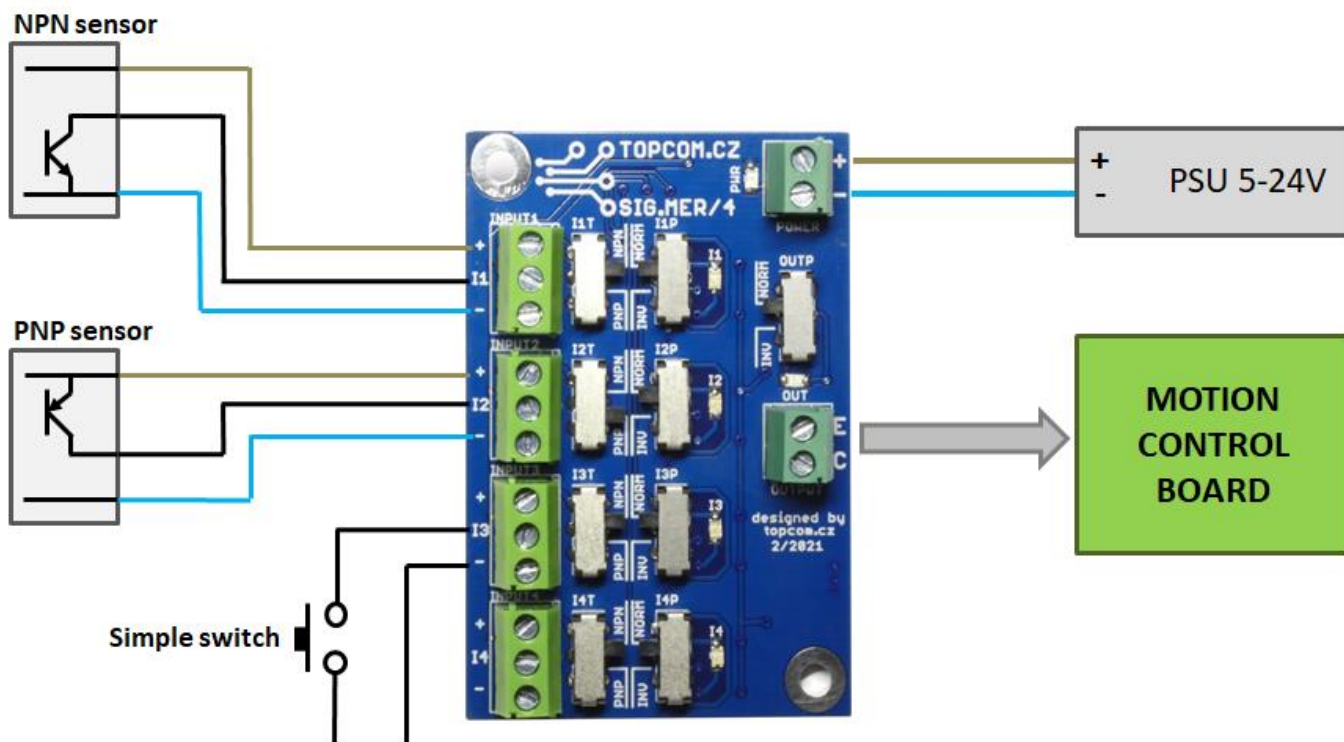
- **Status indicator:**

LED is lighting, when output is active.

- **Output terminal:**

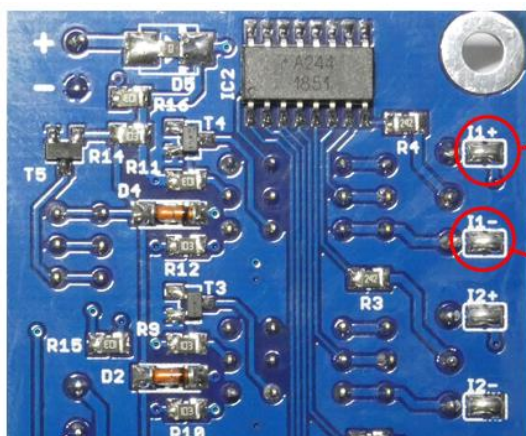


Input wiring:



Sensors are powered from the main power input (+ and -). It means that all sensors are sharing the same power voltage!

If the sensors must be powered from different power sources, solder switches on the bottom side must be open! Input channel is isolated from the rest of the board.

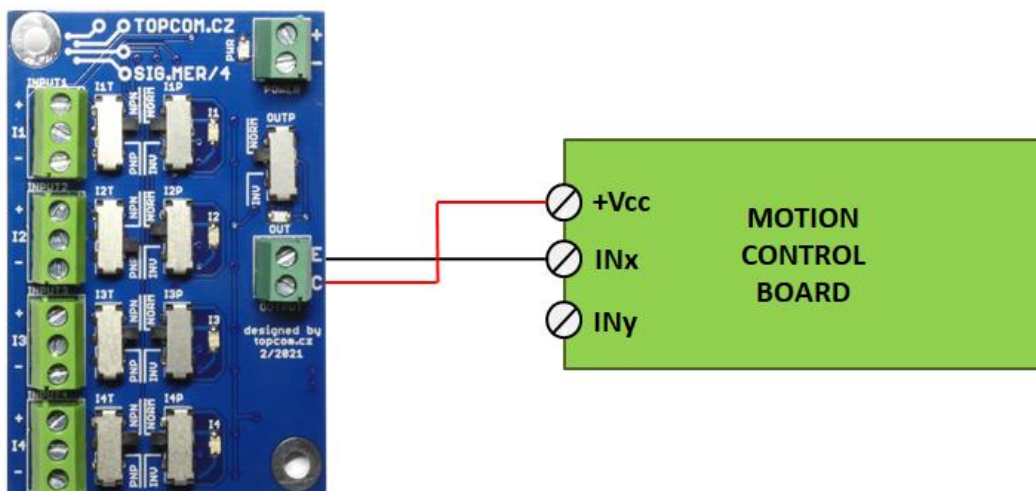


Solder switch connects positive terminal to input power

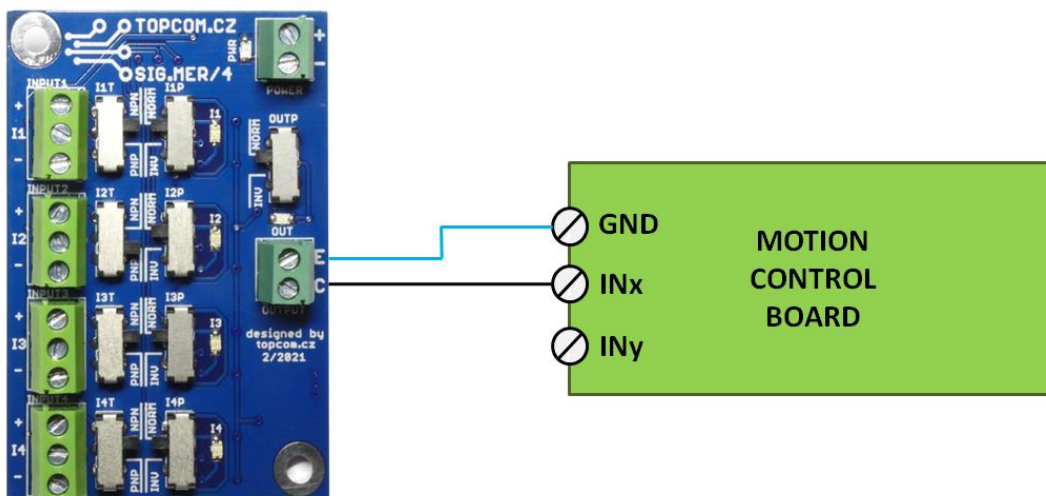
Solder switch connects negative terminal to GND

Output wiring:

Wiring to motion control board with PNP inputs (activated by positive voltage)



Wiring to motion control board with NPN inputs (activated by grounding)



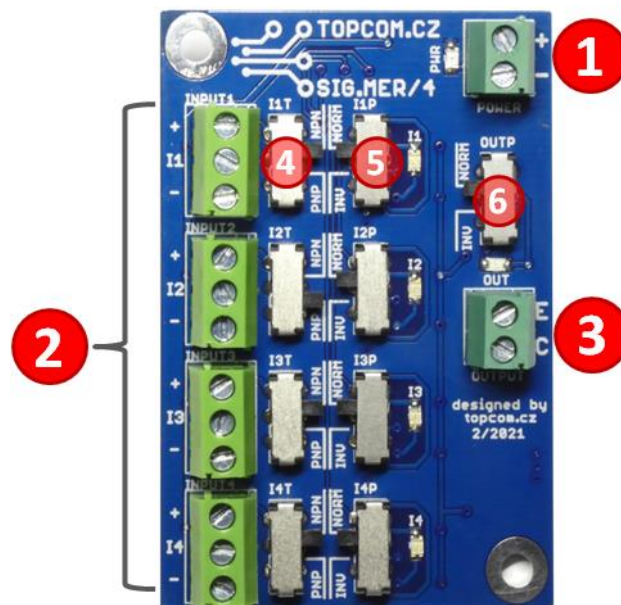
Output terminal is potential – free, isolated from the power supply and input channels also.



Do NOT exceed the maximum output current and voltage.

Board setup procedure:

1. Connect the power source.
2. Connect all sensors or switches to the inputs.
3. Connect the output to the motion control board.
4. Set the correct input type for all inputs (NPN/PNP) by IxT switch:
 - If the input type is set correctly, input channel reacts to the sensor triggering.
 - Input channel status is indicated by corresponding input LED.
5. Set the correct input signal phase by IxP switch:
 - Input signal phase is set correctly, if triggered sensor makes input channel active and vice versa.
 - Unused inputs have to be set to "NORM"
6. Set the output phase.



It is recommended to use the output in NORM output phase, because of faster reaction time to input activation.

Use the NORM output phase settings if possible.