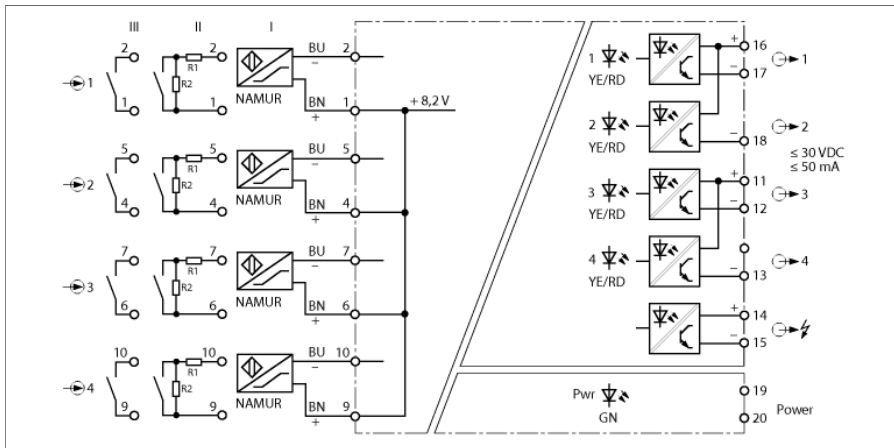


Isolating switching amplifier 4-channel IM1-451-T



Sensors according to EN 60947-5-6 (NAMUR) or potential-free contacts can be connected to the 4-channel IM1-451-T isolating switching amplifier.

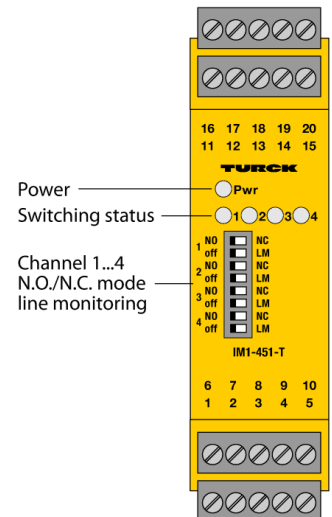
The output circuits each feature a potential-free and short-circuit proof transistor and the device also has a common alarm output.

Via eight switches on the front, the output mode (work or quiescent current behavior, i.e. NO/NC) can be switched on and off separately for each channel as well as wire-break (WB) and short-circuit monitoring (SC).

When using mechanical contacts, wire-break and short-circuit monitoring must be switched off or the contacts must be wired with resistors (II) (see circuit diagram).

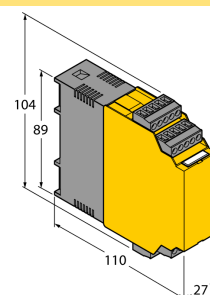
The Pwr LED lights green to indicate operational readiness. The 2-color LED 1 lights yellow to indicate the switching status of the output. In the event of an input circuit error, the 2-color LED turns red, with the input circuit monitoring switched on. Thereupon the output and the alarm transistor are blocked.

- 5 transistor outputs, short-circuit proof, potential-free and reverse-polarity protected
- Output mode adjustable (NO/NC mode)
- Input circuits monitored for wire-break/short-circuit (ON/OFF switchable)
- Common alarm output
- Complete galvanic isolation
- Input reverse-polarity protected
- TR CU

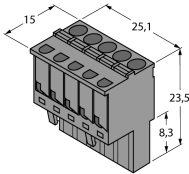


Dimensions

Type	IM1-451-T
ID	7520721
Nominal voltage	Universal voltage supply unit
Operating voltage	20...250 VAC
Frequency	40...70 Hz
Operating voltage U_o	20...250 VDC
Power consumption	$\leq 3 \text{ W}$
NAMUR input	
NAMUR	EN 60947-5-6
Input circuit monitoring	on/off switchable
No-load voltage	8.2 VDC
Short-circuit current	8.2 mA
Input resistance	1 k Ω
Cable resistance	$\leq 50 \text{ } \Omega$
Switch-on threshold	1.75 mA
Switch-off threshold	1.55 mA
Wire breakage threshold	$\leq 0.06 \text{ mA}$
Short-circuit threshold	$\geq 6.4 \text{ mA}$
Output circuits	
Semiconductor output circuits	
Output circuits (digital)	5 x transistor (potential-free, short-circuit proof)
Switching voltage	$\leq 30 \text{ VDC}$
Switching current per output	$\leq 0.05 \text{ A}$
Switching frequency	$\leq 5000 \text{ Hz}$
Voltage drop	$\leq 2.5 \text{ V}$
Galvanic isolation	
Test voltage	2.5 kV RMS
Displays/Operating elements	
Operational readiness	Green
Switching state	Yellow
Error indication	red
Mechanical data	
Protection class	IP20
Flammability class acc. to UL 94	V-0
Ambient temperature	-25...+70 °C
Storage temperature	-40...+80 °C
Dimensions	104 x 27 x 110 mm
Weight	188 g
Mounting instructions	DIN rail (NS35) or panel
Housing material	Plastic, Polycarbonate/ABS
Electrical connection	4 x 5-pin removable terminal blocks, reverse polarity protected, screw terminal
Terminal cross-section	1 x 2.5 mm ² /2 x 1.5 mm ²
Tightening torque	0.5 Nm



Accessories

Type code	Ident-No.		Dimension drawing
IM-CC-5X2BK/2BK	7541219	Cage clamp terminals for IM modules (Ex-devices with 27 mm overall width); includes: 4 pcs. of 5-pin black terminals	
WM1 WIDER-STANDSMODUL	0912101	The resistor module WM1 meets the requirements for line monitoring between a mechanical contact and a TURCK signal processor. The input circuit of the signal processor is designed for sensors acc. to EN60947-5-6 (NAMUR) and equipped with a wire-break and short-circuit monitoring function.	