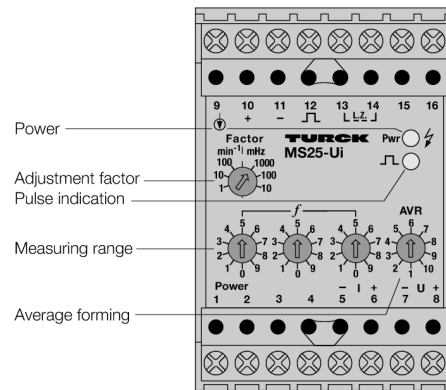
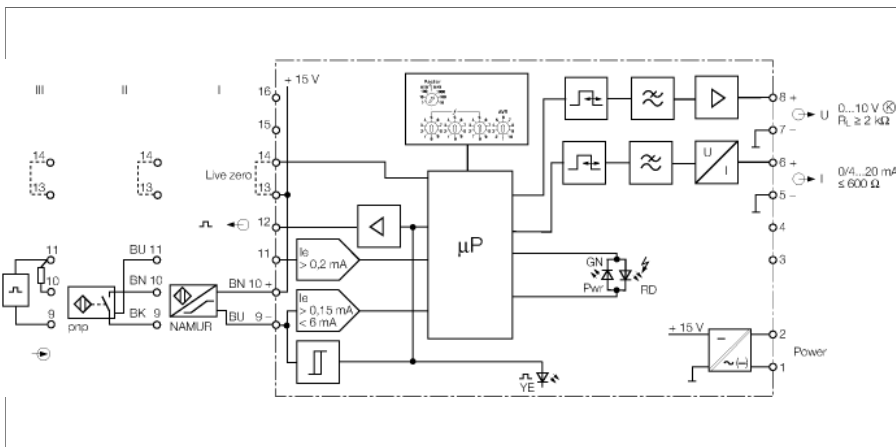


Rotation Speed Monitor

1-channel

MS25-UI



The rotation speed monitor MS25-UI converts the digital input frequency to analog current and voltage signals, relative to the adjusted measuring range.

The device is controlled via 3-wire pnp sensors, sensors acc. to EN 60947-5-6 or signal sources with pulse levels of 5...30 VDC.

The measuring range is set digitally with four thumb wheel switches in a range between 0.6...100,000 min⁻¹ or 0.01...1660 Hz. This range corresponds to an output signal of 20 mA or 10 V. Speed rates lower than 0.6 min⁻¹ / 0.01 Hz lead to an output signal of 0/4 mA or 0 V.

A 0...10 V signal is available at the voltage output and a 0/4...20 mA signal at the current output. The output current can be changed from 0...20 mA to 4...20 mA by bridging the clamps 13/14.

If NAMUR sensors are connected, the input circuits are monitored for wire-break and short-circuit. In the event of errors, the dual color LED changes from green to red and the output current is reset to 0 mA (also in live-zero mode) resp. 0 V. The yellow LED for input pulses indicates wire-break and short circuit (wire-break: LED off). In case 3-wire sensors are used, only the wire-break function for the power cable is active.

Wire-break and short-circuit at the sensor output cable are not detected.

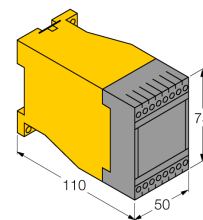
To connect external signal sources use terminals 11 and 9. To suppress error messages, a 1...10 kΩ resistor must be connected between terminals 10 and 11.

Signal steadying is achieved with an attenuation factor between 1 and 10. Factor 1 (1 period) means - no attenuation. The principle of attenuation is based on a floating average resulting from the adjusted number of pulses.

- Frequency to current/voltage conversion
- Monitoring range: 10 mHz... 1 660 Hz (0.6...100 000 min⁻¹)
- Line monitored for wire-break/short-circuit
- Removable terminal blocks
- Excellent temperature stability
- Pulse output
- Floating averaging for signal steadying
- Complete galvanic isolation
- Input reverse-polarity protected

Dimensions

Type	MS25-UI
ID	0508220
Nominal voltage	Universal voltage supply unit
Operating voltage	20...250 VAC
Frequency	40...70 Hz
Operating voltage U_s	20...250 VDC
Power consumption	$\leq 3 \text{ W}$
Monitoring range/Setting range	0.06...100,000 rpm
Max. input frequency	150000 min ⁻¹
Pulse time	$\geq 0.02 \text{ ms}$
Pulse pause	$\geq 0.02 \text{ ms}$
NAMUR input	
NAMUR	EN 60947-5-6
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	$\geq 6.4 \text{ mA}$
3-wire input	
Current	$\leq 15 \text{ mA}$
0-signal	0...3VDC
1-signal	5...30 VDC
External signal source	
0-signal	0...3 VDC
1-signal	5...30 VDC
Input resistance	26000 Ω
Output circuits	
Output current	0/4...20 mA
Output voltage	0...10 V
Load resistance voltage output	$\geq 2 \text{ k}\Omega$
Load resistance current output	$\leq 0.6 \text{ k}\Omega$
Semiconductor output circuits	
Feed-forward pulse output	
Voltage	$\leq 14 \text{ V}$
Current	$\leq 10 \text{ mA}$
Response characteristic	
Temperature drift	$\leq 0.005 \text{ \% of full scale/K}$
Galvanic isolation	
Test voltage	2.5 kV RMS
Displays/Operating elements	
Operational readiness	Green
Pulse input	Yellow



Mechanical data	
Protection class	IP20
Ambient temperature	-25...+60 °C
Dimensions	75 x 50 x 110 mm
Weight	238 g
Mounting instructions	DIN rail (NS35) or panel
Housing material	Plastic, Polycarbonate/ABS
Electrical connection	2 × 8-pin removable terminal blocks, reverse polarity protected, screw terminal
Terminal cross-section	1 × 2.5 mm ² /2 × 1.5 mm ²

Accessories

Type code	Ident-No.		Dimension drawing
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.	