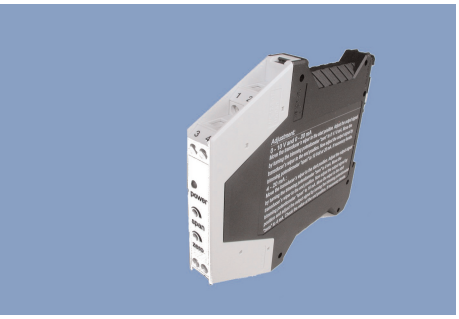
novotechnik
Siedle Group

Signal Conditioners for Position Measurement

Series MUP110/160 adjustable zero and span



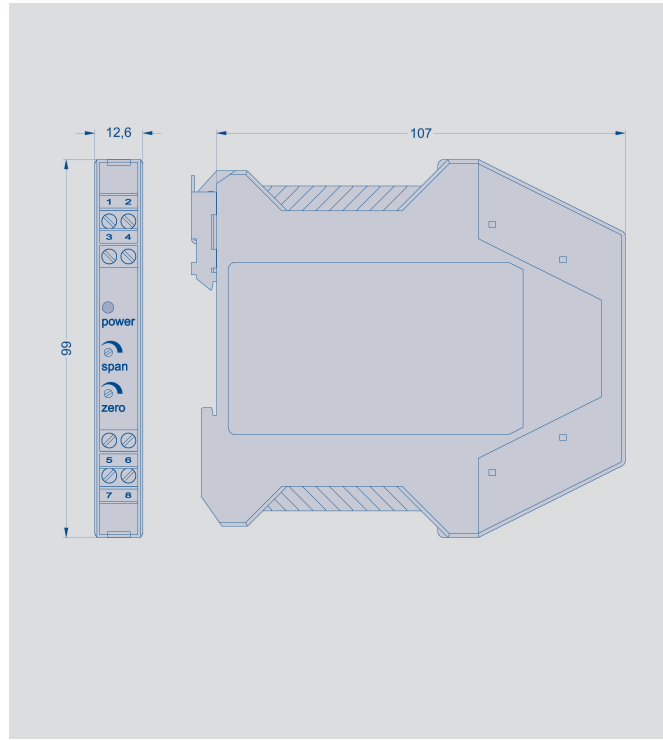
Special features

- Interface module for position sensors
- available with electrical isolation (DC/DC transformer) as an option
- standardized output signals
  0… 10 V
  0… 20 mA
  4… 20 mA
- outstanding linearity
- extremely low temperature drift 20 ppm/K (typical value)
- designed for standard DIN EN 60175 mounting rail fixture
- compact size-housing only 12.6 mm wide

The signal conditioner supplies the potentiometric sensors with a highly stable constant voltage. The wiper signal is picked up without load via a high-impedance input circuit and transformed into a proportional standardized output signal.

The excellent linearity and low temperature drift ensure full utilization of the outstanding benefits of conductive plastic potentiometers, guaranteeing the reliable, interference-free transmission of signals in installations with close sensor proximity even over long distances.
The zero point and range can be adjusted independently of each other within wide limits using spindle trimmers. This facility permits standardized output signals to be adjusted even if the maximum path of the sensors is not completely utilized. The electronic circuitry is accommodated in a polyamide housing designed for snapping on a standard DIN EN 60175 mounting rail. The wide operating voltage range allows the use of an non-stabilized direct voltage sources.

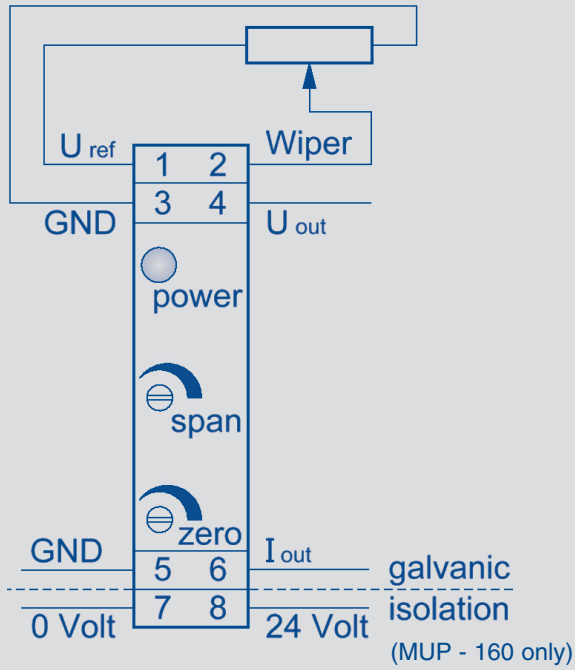
High-grade DC/DC transformers are used in the models with electrically isolated supply voltage and signal conditioning.



Mechanical data		
Dimensions	see drawing	
Protection class	IP 50 / IP 00 (clamps)	
Screw-type terminals	up to 2.5	mm^2
Mounting rail fixture	35 (DIN EN 60175)	mm
Weight	appr. 110	g
Electrical data		
Operating voltage	24 ±20 %	VDC
Input resistance	> 10	MΩ
Reverse voltage protection	integrated	
Current consumption max. (without load)	70	mA
Internal reference voltage for the position transducer, highly stable and short circuit-proof	10	V DC
Permitted connection resistance of the position transducer	≥ 700	Ω
Current output load	0 ... 500	Ω
Max. current voltage output	2	mA
Adjustment range Zero point Gain	 -30...+20 0.65...2	 %
Linearity	0.01 (typical), 0.05 (max.)	%
Temperature coefficient*	20 (typical)	ppm/K
Temperature range	+5 ... +70	°C

*The TC applies for current and voltage outputs. If, at current outputs, the voltage is picked off at the load resistor, the TC of the resistor must also be taken into consideration.

Connection diagram



Order designation

M U P - 1 1 0 - 0

	Type	Output	Art.No.
Series	110: without galvanic isolation	0: 0 ... 20 mA	054010
		1: 0 ... 10 V	054011
		4: 4 ... 20 mA	054014
	160: with galvanic isolation	0: 0 ... 20 mA	054060
		1: 0 ... 10 V	054061
		4: 4 ... 20 mA	054064

Available on request:

- other output signals
- extended adjustment ranges