

DIN Mounting Rail Strain Gauge Amplifier GM40



Performance Features

- High accuracy
- Voltage or current output
- Direct connection to PLC
- Long input lead possibility from GM40 to evaluation
- For switch cabinet assembly, width 23 mm, only
- Easy to operate

Application

- Research and development
- Process measuring and control technology
- Automotive engineering
- Energy and environmental technology
- Mechanical engineering

Description

The DIN mounting rail amplifier GM40 amplifies the signals of SG sensors to output signals conforming to standards.

The narrow housing shape allows spacesaving mounting near the sensors in switch cabinets on standardized DIN mounting rails.

A galvanically separated supply voltage range of 10 .. 30VDC and the analog outputs of $\pm 5V/\pm 10V$ resp. optional current output allow the direct signal processing with a PLC-Control.

All control elements are reachable behind a detachable plexiglas panel on the front side.

The sensitivity adaption of the sensor takes place on-site by a DIL-switch. Preload (tara) can be adjusted.

A control signal switch allows to activate the control signal in the sensor (if available). By this, the adjustment and the subsequent evaluation can be checked at any time.

Interference signals and transient conditions of the measured signal can be decreased by the input filter.

The fine adjustment of the amplification and the zero point as well as the filter occurs through potentiometers.

Technical Data

Strain Gauge Amplifier GM40

Type	GM40		
Article-No.	105702		
Evaluation Side			
Output signal	U-Out		I-Out
	$\pm 5V \leq 2 \text{ mA}$	$\pm 10V \leq 2 \text{ mA}$	4 ... 20 mA
Ripple	<20 mV		
Gain drift	<0.02 %/10 K		<0.04 %/10 K
Zero point drift	<0.02 %/10 K		<0.04 %/10 K
Linearity	<0.02 %		
Output resistance	<10 Ω		-
Rated burden	-		max. 500 Ω
Supply voltage	10 .. 30VDC		
Ripple of supply voltage	<10 %		
Current consumption	10VDC \leq 200 mA / 24VDC \leq 120 mA		
Cable length GM40 - evaluation	U5/U10: 3 m (max.10 m)		
	I0/I4/I10/I12: 3 m (max.100 m)		
Sensor Side			
Sensor excitation	10V \leq 90 mA (option 5V \leq 60 mA)		
Temperature coefficient of the excitation voltage	25 ppm/K		
Input range	0.3 ... 3.5 mV/V		
Input resistance	$10^9 \Omega$		
Cable length GM40 - sensor	1 m (max. 3 m)		
Miscellaneous			
Cut-off frequency	1 kHz -3 dB		
Rated temperature range	10 ... 40 °C		
Operating temperature range	0 ... 60 °C		
Storage temperature range	-10 ... 70 °C		
Dimensions (W x H x L)	23 x 111 x 76 mm		
Clamping range of feeder clip	0.14 ... 1.5 mm ²		
DIN mounting rail	DIN EN 50022		
Level of protection	IP20		
Weight	0.1 kg		

Options

Article-No.	Description	Type
110564	mV/V adjusted sensitivity	mV/V
113512	Output signal 2.5 \pm 2.5V	2.5 \pm 2.5V
110651	Output signal 5 \pm 5V	5 \pm 5V
105706	Sensor supply 5V, 60 mA	GM40/S5
105703	Current output 0 ... 20 mA	GM40/I0
105769	Current output 4 ... 20 mA	GM40/I4
105705	Current output 10 \pm 10 mA	GM40/I10
105704	Current output 12 \pm 8 mA	GM40/I12
108200	Increased dynamics 5 kHz -3 dB	5 kHz -3 dB
108533	Increased dynamics 10 kHz -3 dB	10 kHz -3 dB
115658	Mains adapter	GM41-NT