

VELOMAT

MESSELEKTRONIK GmbH



Analog measuring amplifier VMV-0025



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The use of the module amplifier enables greater distances between the measuring location and the measured value processing.

All sensors that use strain sensors as sensors and must be operated with a high-precision voltage can be connected.

The sensor is adjusted at the factory according to its sensitivity, and the analog output is configured as a current or voltage output at the same time. Reverse polarity protection and a calibration test are integrated.

The measuring amplifier is delivered pre-calibrated and can be finely calibrated on site if necessary.

Application:

The high-precision direct voltage required to operate the sensor is obtained from the unregulated DC supply voltage. The coarse adjustment of the offset voltage of the sensor measuring bridge, the gain, the zero point shift of the amplifier and the calibration check are carried out at the factory according to customer specifications.

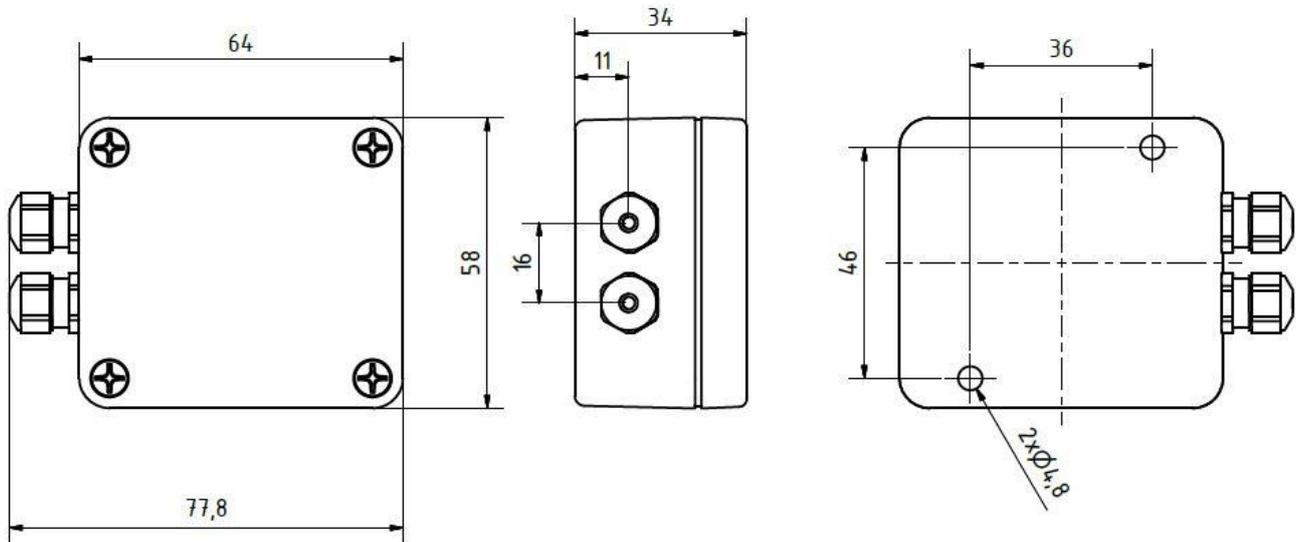
Four potentiometers are available for fine adjustment on site, which are accessible after opening the housing cover.

The amplifier delivers a measuring signal of 4 ... 20 mA or 0 ... 10 V. Special adjustments according to customer requirements are also possible.

The strain gauge force transducers can therefore be connected directly to controls, controllers, data loggers and much more.

Operating voltage +U _b :	12 V DC ±10 % / 24 V DC ±20 % (depending on the version)
Operating temperature:	-15 ... +60 °C
Input resistance:	> 10 MΩ
Power consumption:	< 50 mA
Output as a power source:	I _{out} = 4 ... 20 mA (optional: I _{out} = 1 ... 9 mA or customer request) R _B = 0 ... 250 Ω (12 V) R _B = 0 ... 500 Ω (24 V)
Output as a voltage source:	U _{out} = 0 ... 10 V (optional: customer request) R _L = 1 k Ω
Sensitivity levels:	> 0,1 mV / V (customer-specific, depending on the version)
Linearity:	0,005 %
Temperature coefficient for zero point / gain:	20 ppm / K
Common-mode voltage:	max. ±4,5 V
Common-mode rejection:	> 115 dB
Cutoff frequency (-3 dB):	10 Hz
Options for fine-tuning:	Bridge offset, calibration check (CC), gain, zero point shift
Data for connectable sensor:	
U _s :	5 V DC
Temperature coefficient from U _s :	10 ppm / K
Supply current:	< 45 mA
Bridge resistance:	> 120 Ω
General:	
Connection:	Solder joint
Housing:	die-cast aluminum IP65 (uncast)
Dimensions (L x B x H):	64 mm x 58 mm x 36 mm)
Weight:	approx. 100 g

Installation dimensions



PIN assignment

