Measuring Amplifier AME3

Scope of Supply
Amplifier in DIN Rail Mount enclosure
Standard (option U):
2 voltage outputs (direct / filtered),
Strain gauge excitation supply 10 V

Variants

C: 1 current output 4…20 mA, direct + option U
N: 1 current output 0…20 mA, direct + option U
CD: 1 current output 4…20 mA, filtered + option U
ND: 1 current output 0…20 mA, filtered + option U

Additional Options

E: Enlarged excitation supply 160 mA
F: (Potentially explosive atmospheres): Use with safety barriers

Special Features

- Rise time of the filter can be infinitely adjusted
- Reverse polarity isolated
- Plug-in terminal blocks
- All adjustments front panel accessible
- Power supply and signal outputs galvanically isolated

The amplifier AME3 has been designed for amplifying small sensor signals of full bridge strain gauges to standardized voltage and current levels. The narrow design of the AME3 amplifier is exceptionally well suited for DIN rail mounting in electrical cabinets. The favourable price / performance ratio makes the unit a good choice for cost sensitive applications.

AME3 has two pots with 22 turns each (coarse and fine) are available for the zero adjust and gain adjustment.

In addition to the direct voltage output with fast reaction times a filtered output is available, e.g. for display purposes. The rise time of the filter can be infinitely adjusted between 50 milliseconds and two seconds with the potentiometer accessible on the front panel.

With the option C and N a current output is available which is associated with the direct fast voltage output. In case of the options CD and ND the current output is adjustable via the filtered voltage output.

The connection of the power supply is reverse polarity protected. The outputs are potential isolated from the auxiliary power. Plug-in terminal blocks enable pre-wiring and simple trouble shooting.

Ordering example

AME3-C
Type
Variants/Options

Odering example option F:
Indicate the total resistance from measuring chain for option F (e. g. 350 Ohm):

AME3-UF350

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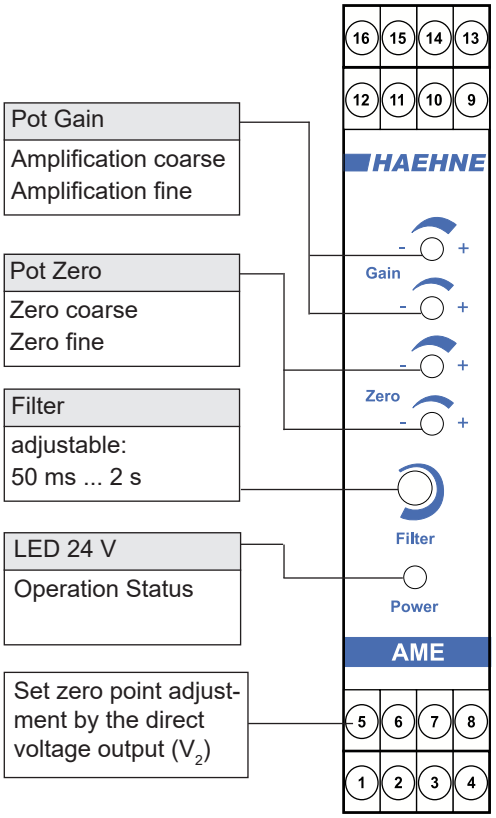
Technical Data		
Strain gauge excitation supply	Voltage (V_4):	10 V
	Current max.:	60 mA
	Option E / Option F:	160 mA
Zero adjust compensation voltage (in relation to voltage input)		-25…0…+25 mV
Amplification	Adjustment range	400…3200 V/V
	Factory adjustment at 1,5 mV/V at 1 mV/V at 0,75 mV/V	 667 V/V 1000 V/V 1333 V/V
Signal output	Voltage (V_2, V_3)	-10…0…+10 V
	min. load resistance	5 kΩ
	Signal rise time (10…90 %)	V_2 direct: < 2 ms V_3 : 50 ms - 2 s (infinitely steppless with pot)
	Voltage (I_1) Option C Option N	 4...20 mA 0...20 mA
	Max. load resistance	600 Ω
Auxiliary power	Voltage (V_5)	24 V DC, ± 4 V
	Typical current requirements with standard wiring	– approx. 75 mA
Linearity deviation		< 0,1 %
Temperature drift		25 ppm / °C
Temperature range		0…60° C / 32°… 140° F
Terminal cross-section		AWG 24-12
Standard enclosure protection		IP20



Dimensions

- DIN rail mount enclosure
99 × 22,5 × 114,5 mm
(L × W × H)
- plug-in terminal blocks

Technical modifications reserved

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