Analog strain gauge amplifier ALM-HD

Characteristics

- Input strain gauge:	up to 4 full bridges (350 Ω)
- Sensitivity strain gauge:	0,1...4 mV/V (by steps)
- Output:	2...10 V and 4...20 mA,
	0...10 V and 0...20 mA
- Voltage supply:	115 VAC / 230 VAC / 24 VAC/DC
	24 VDC galvanically insulated
- Limit value:	without
- Bridge supply:	4...14 V adjustable
- Linearity:	± 0,02% of end scale value
- Mounting:	covered screw channels
- Measurement monitoring:	sensor break
- Protection:	IP65

Technical data

Input		
Strain gauge:	full bridges:	up to 4, 350 Ω (sum signal) overall >80 Ω
	sensitivity:	0,1 / 0,25 / 0,75 / 1 / 1,5 / 2 / 2,5 / 3 / 4 mV/V
Precise adjustment:	continuously about:	±20%
Zero point:	offset:	±40% / ±80% (range selectable with jumper)
Filter:	active low-pass:	20 dB/Octave, 5 Hz
Output		
Current and voltage:	2...±10 V and 4...±20 mA 0...±10 V and 0...±20 mA selectable with DIP switches	
Working resistance:	>600 Ω	
Loading resistance:	<500 Ω	
Bridge supply:	4...14 VDC (continuously adjustable with potentiometer)	
	Standard:	10 V
	bridge resistance:	>80 Ω
Sensor break:	output signal upscale output signal downscale (Selectable with jumper)	

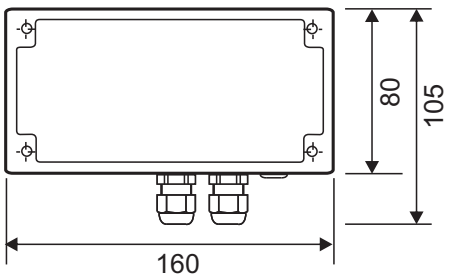
Applications

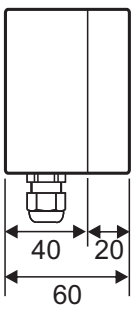
The strain gauge amplifier is usable in all ranges where, with the matching sensors, a measuring of forces is necessary. With the possibilities to adjust the amplifier is easily to fit for the application. The output signal can be processed with eg a SPS.

Technical data (continued)

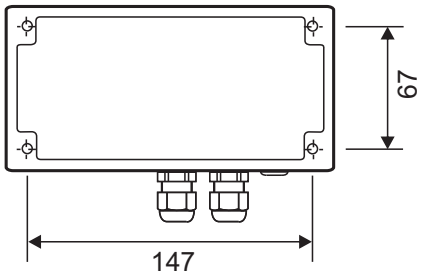
Power supply		
Voltage:	24 V AC/DC / 115 VAC / 230 VAC / 24 VDC galvanically insulated	
Power consumption:	1,5...4 VA (depend on model)	
Accuracy		
Linearity:	<0,02% of end scale value	
Temperature coefficient:	<50 ppm / K	
Ambient conditions		
Operating temperature:	-10...+60°C	
Storing temperature:	-20...+70°C	
Mechanics		
Enclosure:	Material:	diecast aluminium
	Dimensions:	160 x 80 x 608 mm
	Colour:	Bottom part: light grey
		Front: anthracite
	Connection:	Terminals: up to 2,5 mm²
	Mounting:	covered screw channels
	Protection:	64
Weight:	approx. 1000 g	
Adjustable parameter		
Sensitivity Input:	DIP switches (see input)	
Type of output signal:	DIP switches (see output)	
Offset zero point:	Jumper (40% / 80%)	
Low-pass filter:	Jumper (12 / 24 dB / oktave)	
Limit frequency:	DIP switches (1 / 10 / 100 Hz)	
Limit values:	adjustment with potentiometer (0...100%)	
Behaviour on probe break:	Jumper (upscale / downscale)	
Sensor supply:	potentiometer (4...14 V)	

Dimensions (in mm)

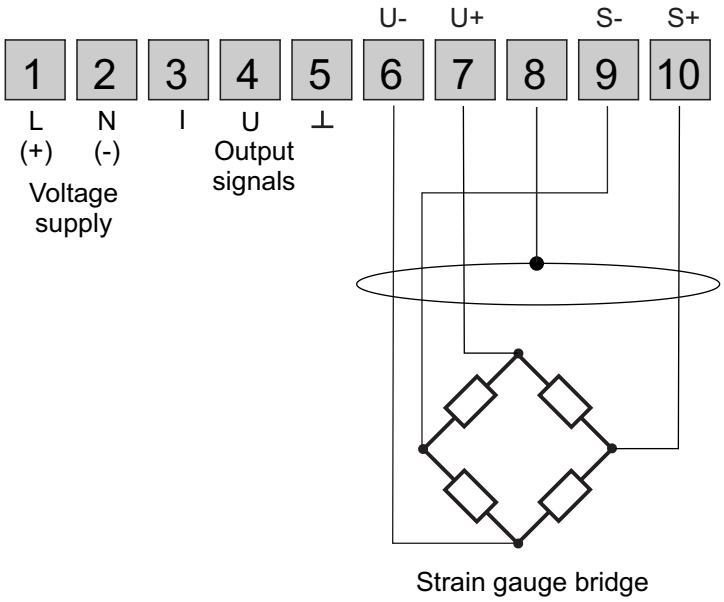




Dimensions (in mm)



Connection


U-
U+
S-
S+
1
2
3
4
5
6
7
8
9
10
L
(+)
N
(-)
Voltage
supply
I
U
Output
signals
⊥
Strain gauge bridge

Order code

A	H	X	X	X	X	X	X	-	X	X	X

Input:	0,1...4 mV / V (to specify)	0
Analogue output:	2...10 V, 4...20 mA	0
	0...10 V, 0...20 mA	1
Vibration protection:	Without	0
	With (electronics potted)	1
Supply:	230 VAC	0
	115 VAC	1
	24 VAC / VDC	2
	24 VDC galvanically isolated	3
Bridge supply:	10 VDC	0
	Different value (to specify)	1
Connection:	up to 2,5 mm²	0
	Plug, Binder	1
Configuration:	Factory set[1)]	0
	Customized (please indicate)	1
Other:	Special model (on request)	0

1) Factory set: behaviour on probe break: upscale
low-pass filter: 12 dB / oktave
Zero offset: 40%
limit frequency: 1 Hz