Analogue cable amplifier
For strain gauge measuring bridges
Model B1940

Applications

- Machine building and plant construction
- Manufacturing automation
- Industrial weighing technology

Special features

- High accuracy
- Input signal: strain gauge measuring bridge; Output signal: 0/4 … 20 mA or DC 0 … 10 V
- Cable length between amplifier and read-out unit: up to 100 m are possible
- Compact design
- Ingress protection IP67

Analogue cable amplifier, model B1940

Description

The B1940 analogue cable amplifier is used to adapt the output signal of strain gauge force transducers to indicators or to a downstream controller.

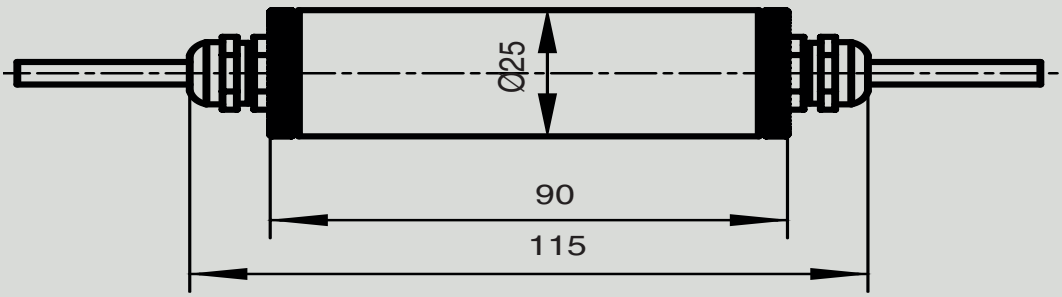
Through the compact form of its case, it can be fastened almost anywhere with a simple screw clamp. The case corresponds to IP67 ingress protection and is thus suitable for use in harsh environments.

All strain gauge force transducers that can be operated with a DC voltage can be connected. With the combination of the cable amplifier with a force transducer, this force unit can be adjusted in line with customer wishes.

The supply voltage of DC 18 ... 30 V ensures a direct connection to a PLC. This usually features a 24-volt supply voltage. The analogue output enables the direct signal processing in the PLC.

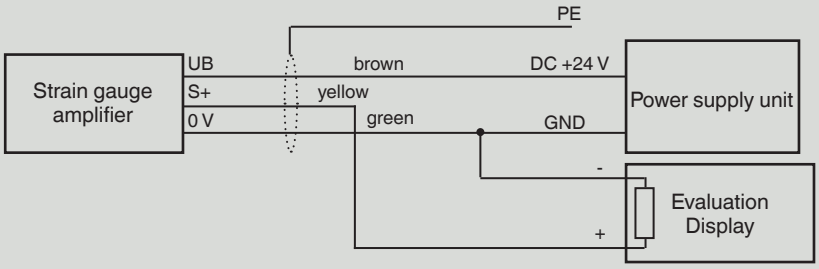
Model B1940	Version 0/4 ... 20 mA	Version DC 0 ... 10 V
Input signal	4 x 350 Ω sensor, 4- or 6-wire	
Sensitivity	0.35 ... 3 mV/V	
Linearity	< 0.01 % FS	
Output signal	0/4 ... 20 mA, 3-wire	DC ±5 V / ±10 V, 3-wire
Residual ripple	< 10 mV at 400 Ω	< 10 mV
Max. load	Load < 400 Ω	-
Output resistance	-	< 1 Ω
Sensor supply	Short-circuit-proof to DC 10 V (max. 20 mA)	
Temperature effect on supply voltage	< 25 ppm / K	
Temperature effect on zero signal TK_0	±0.1 µV / °C	
Temperature effect on characteristic value TK_c	±5 ppm / °C	
Rated temperature range	10 ... 50 °C	
Service temperature range	0 ... 60 ° C	
Storage temperature range	-30 ... +80 °C	
Insulation resistance	DC 100 V, 1 GΩ	
Supply voltage	DC 18 ... 30 V	
Residual ripple	≤ 100 mV RMS	
Current supply	< 70 mA	
Limit frequency	1 kHz - 3 dB others on request	
Ingress protection	IP67	
Electromagnetic compatibility	EN 61326-1:2013 EN 61236-2-1:2013 CISPR 11:2009 + A1:2010	
Dimensions (Ø x L)	28 x 118 mm (incl. threaded connection)	
Cable length		
Sensor side	1 m (max. 3 m)	
Output side	3 m (max. 100 m)	3 m (max. 10 m)
Weight	approx. 100 g	

Dimensions in mm



Electrical connection

Amplifier output, flying leads, unfinished



Ordering information
Model / Output signal

The specification B1940 is the only requirement for this order.

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