

Analogue cable amplifier For strain gauge measuring bridges Model B1940

WIKA data sheet AC 50.09

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.

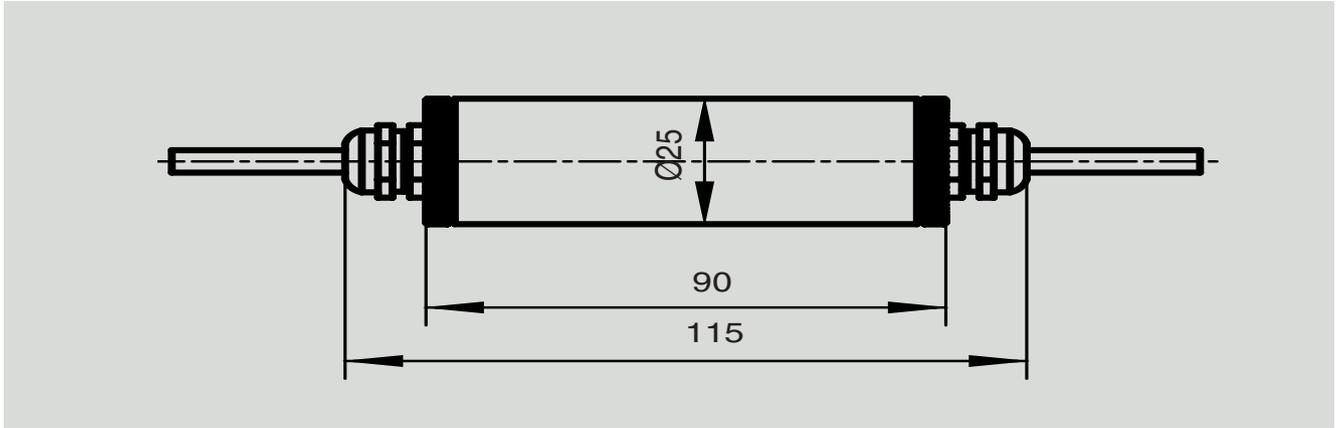
Through the compact form of its case, it can be fastened almost anywhere with a simple screw clamp. The case corresponds to IP67 ingress protection and is thus suitable for use in harsh environments.

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.

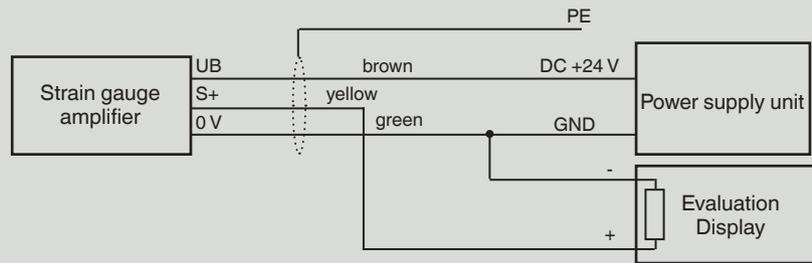
Model B1940	Version 0/4 ... 20 mA	Version DC 0 ... 10 V
Input signal	4 x 350 Ω sensor, 4- or 6-wire	
Sensitivity	0.35 ... 3 mV/V	
Linearity	< 0.01 % FS	
Output signal	0/4 ... 20 mA, 3-wire	DC ± 5 V / ± 10 V, 3-wire
Residual ripple	< 10 mV at 400 Ω	< 10 mV
Max. load	Load < 400 Ω	-
Output resistance	-	< 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 TK₀	± 0.1 μ V / $^{\circ}$ C	
Temperature effect on characteristic value TK_c	± 5 ppm / $^{\circ}$ C	
Rated temperature range	10 ... 50 $^{\circ}$ C	
Service temperature range	0 ... 60 $^{\circ}$ C	
Storage temperature range	-30 ... +80 $^{\circ}$ C	
Insulation resistance	DC 100 V, 1 G Ω	
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 (\varnothing 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.

© 04/2021 WIKA Alexander Wiegand SE & Co. KG, all rights reserved.
The specifications given in this document represent the state of engineering at the time of publishing.
We reserve the right to make modifications to the specifications and materials.