

K148

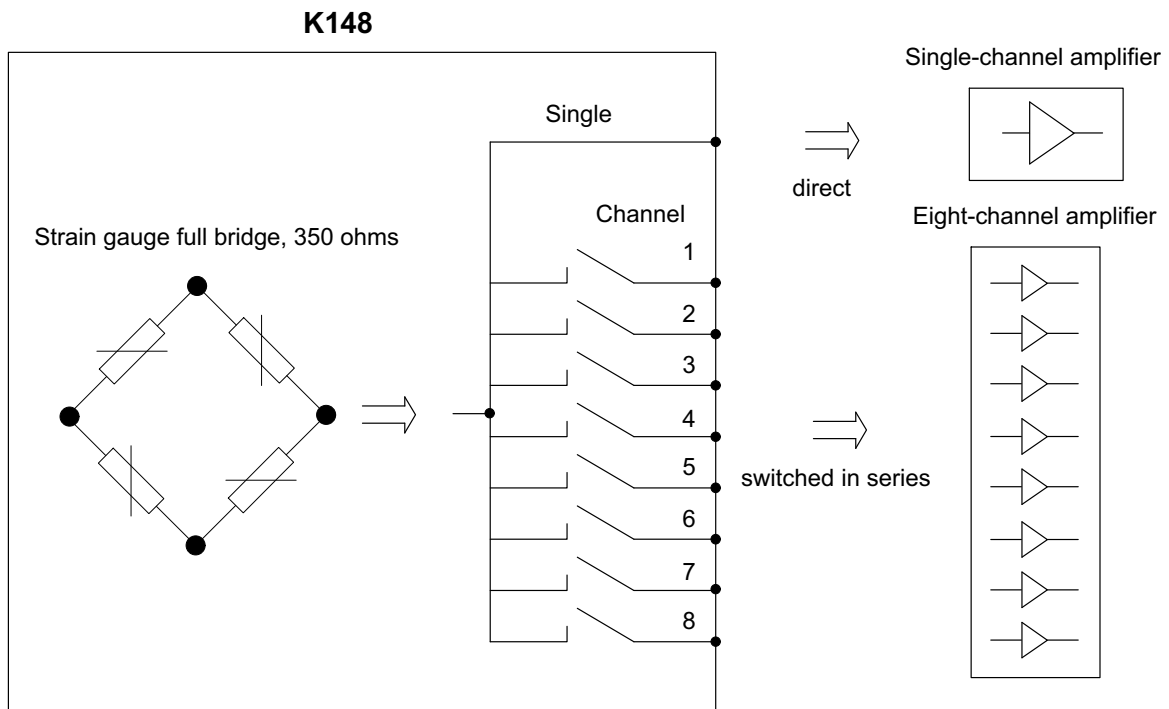
Calibration unit for strain gauge full bridge measuring amplifiers



Special features

- Simulation of the defined output signals of strain gauge full bridges
- 8 channels can be connected in series
- Computer control or manual operation
- For DC amplifiers and carrier frequency amplifiers up to 5 kHz
- Calibration values in 5 x 10 steps of ± 0.2 to ± 100 mV/V

Schematic diagram



Specifications

Type		K148	
Accuracy class ^{1), 2)}		0.0025	0.0100
Permissible frequency range of external excitation voltages	Hz	225...600	DC, > 600... 5000
Strain gauge equivalent resistance (full bridge)	Ω	350	
Nominal (rated) value of the excitation voltage	V	5	
Maximum permissible excitation voltage	V	10	
Calibration steps			
5 range steps	mV/V	±2; ±5; ±10; ±20; ±100	
11 percentage steps within the range steps	%	0; 10; 20; ...100	
Polarity switch		Positive ³⁾ or negative output signal	
Grading error of range steps relative to the full-scale value concerned	%	<±0.0025	<±0.0100
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Absolute zero error	mV/V	<±0.00005 ⁴⁾	<±0.0005 ⁴⁾
Linearity deviation relative to the full-scale value concerned	%	<±0.0025	<±0.0025
Influence of temperature on absolute calibration per 10K, in the nominal (rated) temperature range	%	<±0.0025	< ± 0.0100
Nominal (rated) temperature range	°C	+10...+40	
Operating temperature range	°C	0...+60	
Storage temperature range	°C	-25...+70	
Supply voltage ⁵⁾	V	+12	
Dimensions (H x W x D)			
K148 calibration unit	mm	75 x 330 x 270	
USB Power supply	mm	65 x 40 x 16	
Weight, approx.			
K148 calibration unit	kg	3	
USB power supply	kg	0.03	

1) For 6-wire circuit connection only

2) Accuracy class is traced back to the primary standard of the German national metrology institute PTB for sinusoidal excitation voltage

3) Positive means that measurement diagonal point 1 changes its potential towards diagonal point 3 and measurement diagonal point 4 changes its potential towards diagonal point 2 (1 ≙ PIN8, 2 ≙ PIN5 3 ≙ PIN13 and 4 ≙ PIN15 on the 15-pin SUB-D connector) in the case of unbalancing.

4) Signals for the 0% steps can vary by up to 0.0025% (225 Hz, 600 Hz) or 0.0250 % (>600...5000 Hz, DC) relative to 2 mV/V (0.00005 mV/V or 0.0005 mV/V). But this is not relevant to strain gauge technology and can be eliminated by a zero balance of the measuring device.

5) Supplied by USB power supply or external power supply (not included in scope of delivery).

Scope of supply

Connection cable, 3 m long, 6-wire, to connect to AP01i

1-KAB268-3

2 connection cables, 3 m long, 25-wire, to connect to AP815i and AP810i

1-KAB263-3

USB connection cable, 2 m long

Connection cable for the RS232 serial interface, 2 m long

USB power supply (Euro)

USB power supply (NEMA-1)

Accessories, to be ordered separately

DKD calibration certificate, steps -100/-0/0/10/20/...90/100%

K-CAL-VD2

Adapter cable, 15-pin / MS connector (male), 0.3 m long

1-KAB160-0.3

Subject to modifications.

All product descriptions are for general information only. They are not to be understood as a guarantee of quality or durability.

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