

# K148

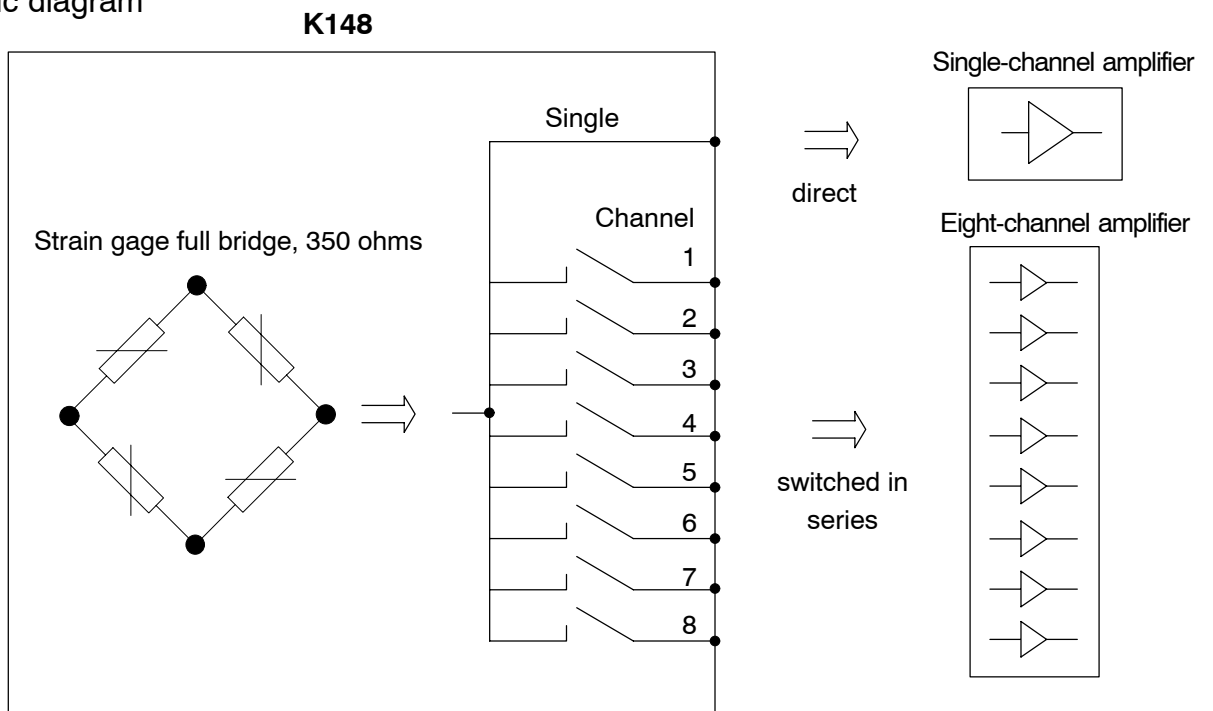
Calibration unit for strain gage full bridge measuring amplifiers



## Special features

- Simulation of the defined output signals of strain gage 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  $\pm 0.2$  to  $\pm 100$  mV/V

## Schematic diagram



# Specifications

Type		K148	
Accuracy class <sup>1)</sup>		0.0025	0.01
Permissible frequency range of external excitation voltages	Hz	225...600	DC, > 600... 5000
Strain gage equivalent resistance (full bridge)	Ω	350	
Nominal (rated) value of the excitation voltage	V	5	
Maximum permissible excitation voltage	V	10	
Calibration steps		±2; ±5; ±10; ±20; ±100	
5 range steps	mV/V	0; 10; 20; ...100	
11 percentage steps within the range steps	%	Positive <sup>2)</sup> or negative output signal	
Polarity switch			
Absolute calibration of range span <sup>3)</sup>			
of range step 2 mV/V at 23 °C	%	< ±0.0025	< ±0.01
Grading error of range steps			
relative to the full-scale value concerned	%	< ±0.0025	< ±0.01
Grading error of percentage steps (linearity deviation)			
relative to the full-scale value concerned	%	< ±0.0025	< ±0.01
Influence of temperature on absolute calibration per 10K,			
in the nominal (rated) temperature range	%	< ±0.0025	< ±0.01
Nominal (rated) temperature range	°C	+10...+40	
Operating temperature range	°C	0...+60	
Storage temperature range	°C	-25...+70	
Supply voltage <sup>4)</sup>	V	+12	
Dimensions (H x W x D)			
K148 calibration unit	mm	75 x 330 x 270	
Power supply unit	mm	60 x 120 x 69	
Weight, approx.			
K148 calibration unit	kg	3	
Power supply unit	kg	0.5	

1) For 6-wire circuit connection only

2) 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.

3) Signals for the 0% steps can vary by up to 0.01 % or 0.025% of the respective full-scale value, depending on the accuracy class. But this is not relevant to strain gage technology and can be eliminated by a zero balance of the measuring device.

4) Supplied by external power supply unit or USB (see accessories)

## 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 AP810	1-KAB263-3
USB connection cable, 2 m long,	3-3301.0127
Connection cable for the RS232 serial interface, 2 m long	3-3301.0111
Power supply unit 110 – 250 V AC, 50 Hz	3-3318.0021
Mains cable	3-3134.0020

## Accessories, to be ordered separately:

DKD calibration certificate,	steps -100/-0/0/10/20/...90/100%	K-CAL-VD2
	steps -100/-90/...-20/-10/-0/0/10/20...90/100%	K-CAL-VZ2
Adapter cable, 15-pin / MS connector (male), 0.3 m long		1-KAB160-0.3

© Hottinger Baldwin Messtechnik GmbH.  
Modifications reserved. All details describe our products in general form only. They are not to be understood as express warranty and do not constitute any liability whatsoever.

## Hottinger Baldwin Messtechnik GmbH

Im Tiefen See 45 · 64293 Darmstadt · Germany  
Tel. +49 6151 803-0 · Fax: +49 6151 803-9100  
Email: info@hbm.com · www.hbm.com

measure and predict with confidence

