

SBC isolating amplifiers DC/DC KFD1x

The SBC isolating amplifiers KFD1x isolate individual analog channels not only from input to output, but also from the supply and from frame ground potential. This electrical separation is particularly recommended for long lines in large installations. However, the SBC KFD1 can also be used to amplify a weak signal and convert it into a noise-proof current signal.

System properties

- ▶ Available in two versions with different input ranges
- ▶ Conversion time 20 ms
- ▶ 0.5% accuracy at full scale
- ▶ Output electrically isolated from input with optical isolating amplifier

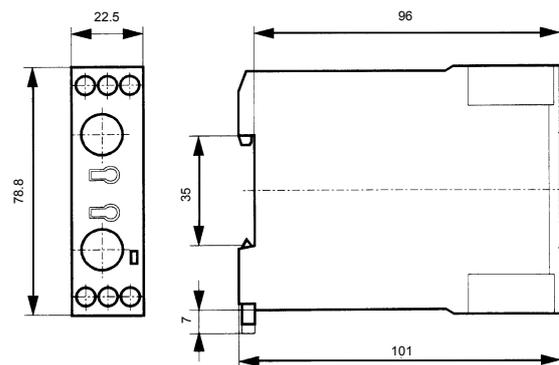


Technical data for isolating amplifiers DC/DC KFD11 and KFD12

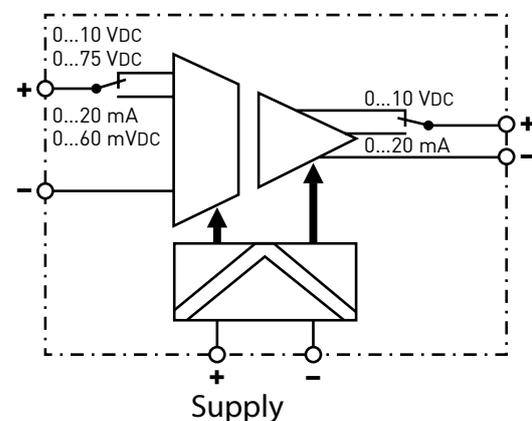
Input ranges ¹⁾	
KFD11	0...10 VDC, input impedance 200 kΩ or 0...20 mA, load 47 Ω ²⁾
KFD12	0...75 VDC, input current 0...20 mA or 0...60 mV, input current 0...60 μA ³⁾
Output ranges ¹⁾	0...10 VDC, load (≥3 kΩ); 0...20 mA, load (≤500 Ω)
Input/output	electrically isolated with optical isolating amplifier
Conversion time	20ms
Short-circuit proof:	yes, 1 minute, fault current <100 mA
Status display	LED green: supply voltage present
Isolating characteristics	800 VDC between supply, input and output
Accuracy	0.5% of final value
Supply voltage	19...70 VDC or 24 V ±20% full-wave rectified
Power consumption	1.0...2.4 W depending on voltage and load
Duty cycle	100%
Terminals	screw terminals for 1 × 0.5 mm ² to 2 × 2.5 mm ²
Mounting	surface mounting; snap-on mounting onto top-hat rail according to DIN EN60715 TH35 (formerly DIN EN50022) (1 × 35mm) or screw fixing by adapter (accessory) and 2 screws M4
Ambient temperature	
Operation	0...50 °C
Storage	-25...+70 °C
Humidity	95% RH with no condensation
EMC/interference immunity	EN61000-4-4 (2 kV) at input and output EN61000-4-4 (4 kV) at supply
EMC/emissions	EN55022, class B

¹⁾ 2 input ranges/2 output ranges selectable with 2 slide switches on front panel
²⁾ Overvoltage protection by stress limiter, 27 V max.
³⁾ Overcurrent or overvoltage protection by stress limiter

Dimensions



Block diagram



Ordering information Isolating amplifiers DC/DC KFD11 and KFD12

KFD11JVTN	Isolating amplifier DC/DC with input and output ranges 0...10 VDC or 0...20 mA
KFD12JVTN	Isolating amplifier DC/DC with input ranges 0...75 VDC or 0...60 mA and output ranges 0...10 VDC or 0...20 mA

Saia-Burgess Controls AG

Bahnhofstrasse 18 | 3280 Murten, Switzerland
 T +41 26 580 30 00 | F +41 26 580 34 99
 www.saia-pcd.com

support@saia-pcd.com | www.sbc-support.com