

## Isolation Switching Amplifier for NAMUR or mechanical contacts



measuring  
•  
monitoring  
•  
analyzing

KFD2 KFA5



- Single or Dual Channel
- Control Circuit EEx ia IIC
- Narrow Design
- Standard Rail Mounting
- Protection: IP 20
- 24 V<sub>DC</sub> or 110 V<sub>AC</sub> Power
- NAMUR or Dry Contact Inputs
- SPDT Relay Output



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### Description

The KFD2 and KFA5 isolation switching amplifiers are typically used to transmit signals from hazardous to non-hazardous areas. Sensors in accordance with NAMUR or mechanical contacts can be used as signal inputs. The control circuit is monitored for line interruption (LB) and line short-circuit (LK). The input signal is isolated from both the output and the input power, according to DIN EN 60947-5-6 (NAMUR). Both the output and input power are isolated from each other according to IEC 60529:2001. Both models are fitted with detachable terminals, allowing for a simple installation.



### Technical Details

**Input** (Intrinsically safe according to NAMUR and EN 60947-5-6)

<b>Floating Voltage:</b>	appx. 8 V <sub>DC</sub>
<b>Short-Circuit Current:</b>	appx. 8 mA
<b>Switch Point:</b>	1.2...2.1 mA
<b>Switching Hysteresis:</b>	appx. 0.2 mA
<b>Input Pulse Length:</b>	≥ 20 ms
<b>Input Interpulse Period:</b>	≥ 20 ms
<b>Power Monitoring:</b>	rupture I ≤ 0.1 mA short-circuit I > 6 mA
<b>Ex-Protection:</b>	II (1) G [Ex ia] IIC, II (1) D [Ex ia] IIIC

**Maximum Values** (According to Certificate of Conformity)

<b>Voltage U<sub>0</sub>:</b>	10.6 V (KFA5) 10.5 V (KFD2)
<b>Current I<sub>0</sub>:</b>	19.1 mA (KFA5) 13 mA (KFD2)
<b>Power P<sub>0</sub>:</b>	51 mW (KFA5) 34 mW (KFD2)
<b>Protection Type:</b>	EEx ia and EEx ib

**Output** (SPDT contact, not intrinsically safe)

<b>Max. Contact Loading:</b>	253 V <sub>AC</sub> / 2 A / cos φ > 0.7 40 V <sub>DC</sub> / 2 A resistive load
<b>Service Life:</b>	10 <sup>7</sup> switching cycles
<b>Delay:</b>	appx. 20 ms
<b>Switching Frequency:</b>	< 10 Hz

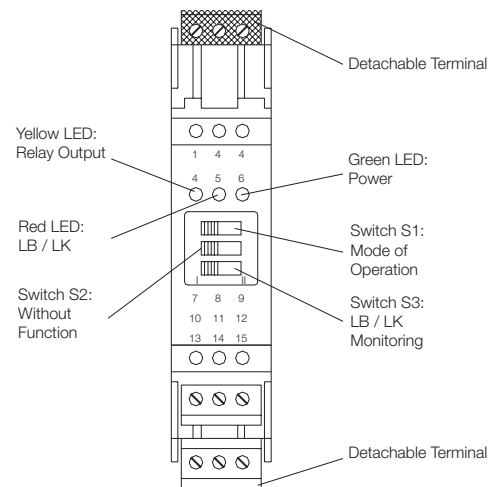
**Electrical Isolation:** According to IEC/EN 61010-1  
Rated insulation voltage 300 V<sub>eff</sub>

### Directive Conformity

<b>Electromagnetic:</b>	2004/108/EC, EN 61326-1:2006
<b>Low Voltage:</b>	2006/95/EC, EN 6101091:2010

### Conformity

<b>Electromagnetic:</b>	NE 21:2006
<b>Protection Degree:</b>	IEC 60529:2001
<b>Input:</b>	EN 60947-5-6:2000



### Technical Details

#### Input Power

<b>Nominal Voltage:</b>	115 V <sub>AC</sub> ±10%, 60 Hz or 24 V <sub>DC</sub>
<b>Power Consumption:</b>	≤ 1 W (KFA5), ≤ 0.9 W (KFD2)
<b>Ripple Factor:</b>	≤ 10% (KFD2)

<b>Case Material:</b>	Macrolon®
<b>Dimensions:</b>	119 x 20 x 115 mm
<b>Protection:</b>	IP 20
<b>Ambient Temperature:</b>	-4...140 °F
<b>Weight:</b>	0.33 lb

#### Order Details

Description	24 V <sub>DC</sub> Supply	110 V <sub>AC</sub> Supply
Isolation Switching Amplifier, 1-Channel	KFD2-SR2-Ex1.W	KFA5-SR2-Ex1.W
Isolation Switching Amplifier, 2-Channels	KFD2-SR2-Ex2.W	KFA5-SR2-Ex2.W