

# Terminal Module F-KDR-Ex2



- 2-channel
- Dry contact input
- Reduces field wiring by 50%
- Supports 2:1 technology

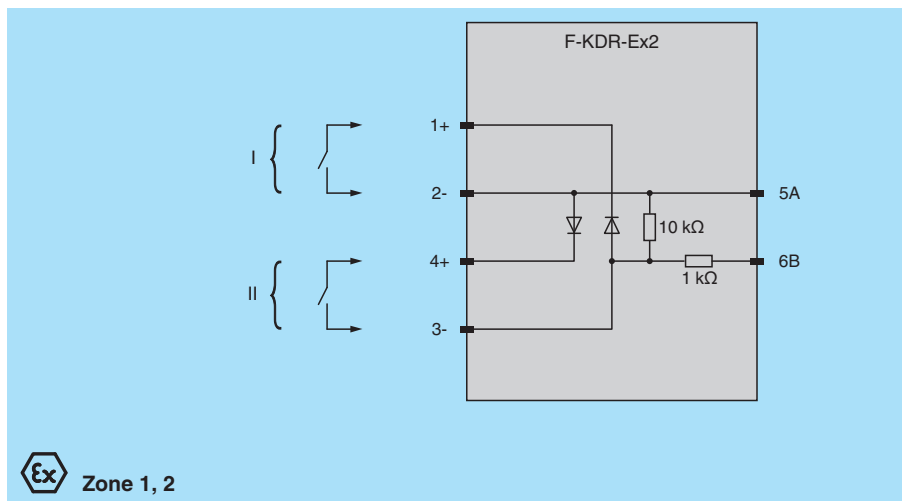
Terminal module for mechanical contacts



## Function

This terminal block module is equipped with a diode/resistor network and is designed for use with the KFD2-SRAEx4 barrier with its exclusive 2:1 operating mode. Built with diodes for polarity protection together with lead breakage and short circuit monitoring resistors, this terminal block is ideal for use with dry contacts located in the hazardous area.

## Connection



## Technical Data

<b>Conformity</b>	
Degree of protection	IEC 60529:2001
<b>Mechanical specifications</b>	
Degree of protection	IP20
Connection	spring terminals
Core cross section	0.08 ... 2.5 mm <sup>2</sup>
Mass	approx. 100 g
Dimensions	6.5 x 90.5 x 68.5 mm (0.2 x 3.6 x 2.7 inch) (W x H x D)
Height	90.5 mm
Width	6.5 mm
Depth	68.5 mm
Mounting	on 35 mm DIN mounting rail acc. to EN 60715:2001

Release date: 2024-01-15 Date of issue: 2024-01-15 Filename: 112693\_eng.pdf

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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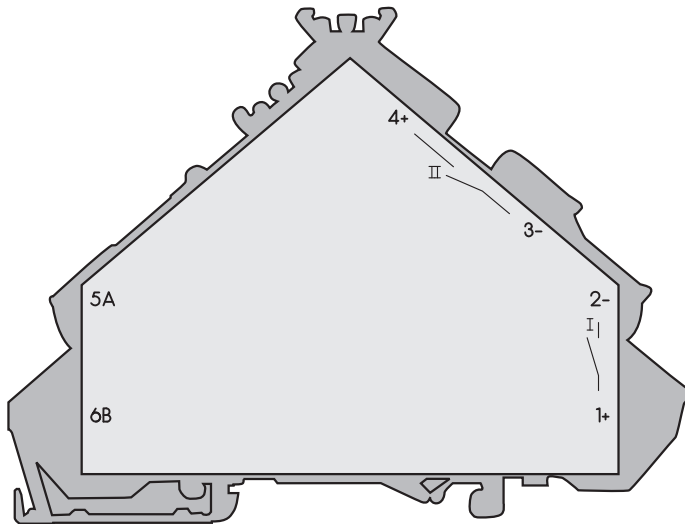
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## Technical Data

Data for application in connection with hazardous areas					
Certificate	DOC-0097 , see instruction manuals				
Temperature class		T6	T6	T4	
Voltage	$U_i$	$\leq 16 \text{ V}$	$\leq 16 \text{ V}$	$\leq 16 \text{ V}$	
Current	$I_i$	$\leq 14 \text{ mA}$	$\leq 21 \text{ mA}$	$\leq 52 \text{ mA}$	
Power	$P_i$	$\leq 35 \text{ mW}$	$\leq 66 \text{ mW}$	$\leq 169 \text{ mW}$	
Ambient temperature		72 °C	66 °C	80 °C	
Internal capacitance	$C_i$	0 F			
Internal inductance	$L_i$	0 H			
General information					
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .				

## Assembly

### Side view

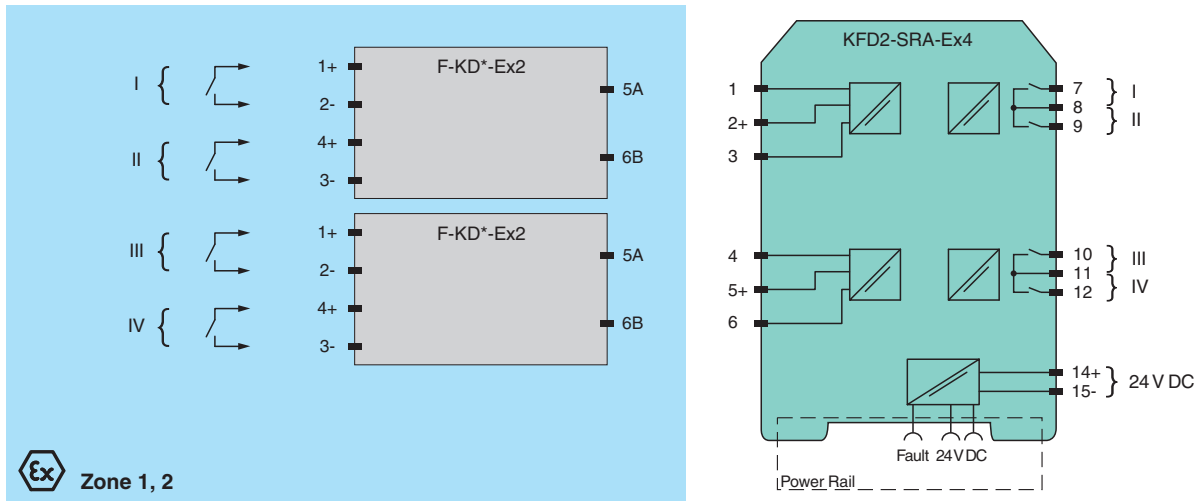


## Application

### Requirements for using the 2:1-transfer method

In the 2:1-transfer method the switch amplifier transfers digital signals from the hazardous area by means of the patented new 2:1-transfer method. This method allows to transfer two independent digital signals by means of a single pair of conductors.

The prerequisite for the use of the 2:1-transfer method is that sensors with reverse polarity protected diode are used. Pepperl+Fuchs offers suitable sensors for alternating polarity. When using sensors without integrated reverse polarity protection diode, clamp modules F-KD-Ex2 or F-KDR-Ex2 (with diode network) have to be fitted. In case of F-KDR-Ex2, a resistor combination has been fitted in addition for line fault detection of mechanical switches.



### Comments

When installing a serial diode, it has to be assured that the current in reverse direction is below a value of 0.15 mA in order to enable the line fault detection.