



without lead monitoring

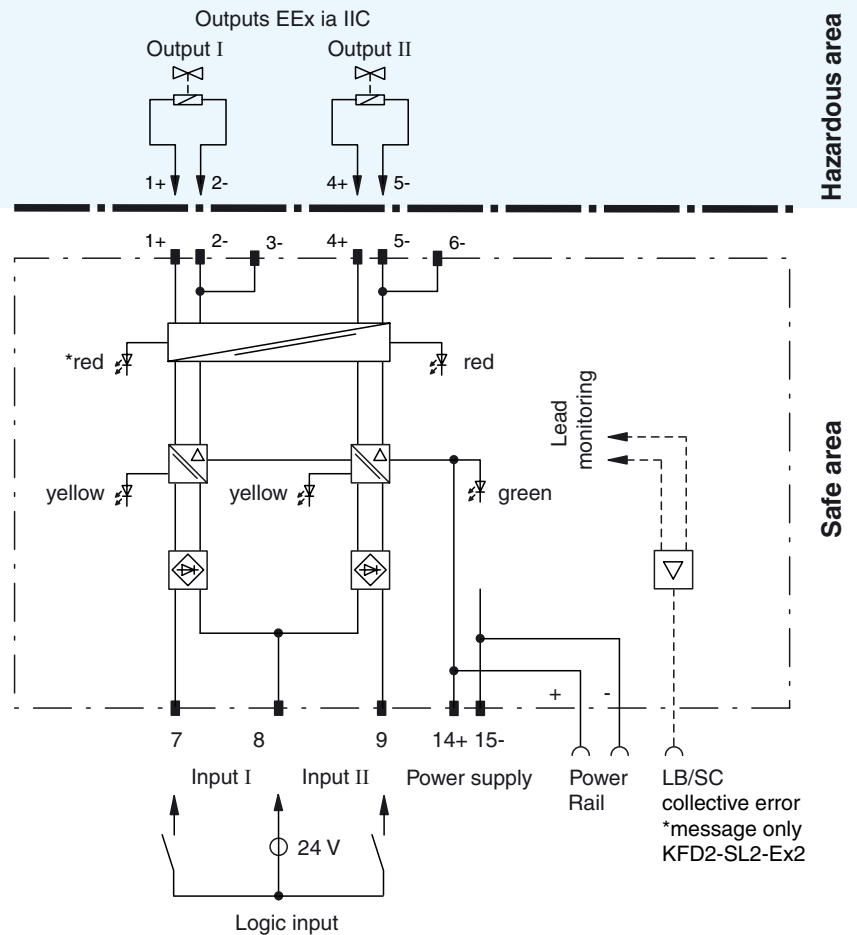
- 2-channel
- Output EEx ia IIC
- 24 V DC nominal supply voltage
- Output current max. 45 mA
- Logic inputs, non-polarised
- EMC acc. to NAMUR NE 21
- LED accord. to NAMUR NE 44
- Usable up to SIL 2 acc. to IEC 61508

Function

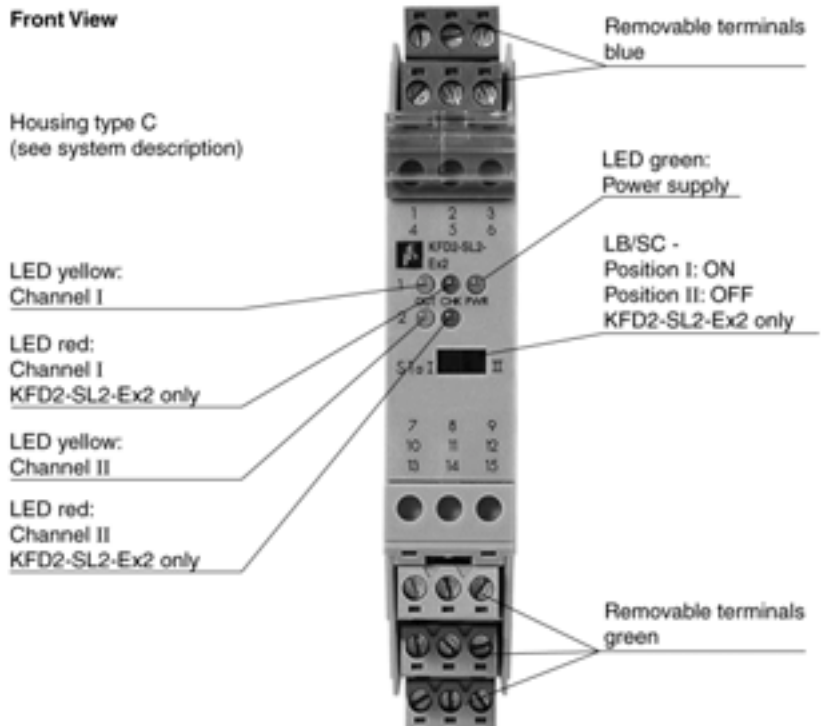
The devices each have a logic input that is isolated from the power supply. The field devices are controlled by means of these logic inputs. Voltage signals in a range of 16 V DC 30 V DC are accepted as 1-signals. The 0-signal must be within a range of DC 0 V... 5 V. The current consumption of the logic inputs is about 3 mA each. The outputs have the characteristics of a voltage supply with 24 V and 270 Ohm. The output current is limited to 45 mA.



Application

Control/supply for intrinsically safe valves, audible alarms, indicators etc. Supply of semiconductor in case of evaluation of lead breakage. If semiconductors (e. g. LED or LCD-units) are controlled, a parallel resistance of approx. 10 kOhm directly at the consumer may be necessary.



Composition



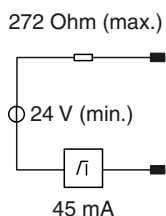
Supply	
Connection	Power Rail or terminals 14+, 15-
Rated voltage	20 ... 30 V DC
Power consumption	≤ 3,3 W at 45 mA output current
Input	
Connection	terminals 7, 8, 9
Input current	approx. 3 mA at 24 V DC
Signal level	1-signal: 16 ... 30 V DC 0-signal: 0 ... 5 V DC
Output	
Internal resistor	272 Ohm
Limit	current I_E : 45 mA voltage U_E : 11,7 V
Open loop voltage	≥ 24 V
Connection	terminals 1+, 2- or 3- channel 1; terminals 4+, 6- channel 2
Output rated operating current	45 mA
Output signal	these values are valid for rated operational voltages from 20 ... 30 V DC
Electrical isolation	
Input/Power supply	function insulation acc. to DIN EN 50178, rated insulation voltage 50 V _{eff}
Input/Input	not available
Output/Output	not available
Directive conformity	
Electromagnetic compatibility	standards
Directive 89/336/EC	EN 61326, EN 50081-2, NE 21
Standard conformity	
Climatic conditions	acc. to DIN IEC 721
Ambient conditions	
Ambient temperature	-20 ... 50 °C (253 ... 323 K)
Mechanical specifications	
Protection degree	IP20
Mass	approx. 150 g
Data for application in conjunction with hazardous areas	
EC-Type Examination Certificate	ZELM 00 ATEX 0024 , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection	 II (1) G D [Ex ia] IIC [circuit(s) in zone 0/1/2]
Output	EEx ia IIC
Voltage U_0	28 V
Current I_0	110 mA
Power P_0	770 mW (linear characteristic)
Supply	
Safety maximum voltage U_m	40 V (Attention! The rated voltage can be lower)
Type of protection [EEx ia and EEx ib]	
Explosion group	IIA IIB IIC
External capacitance	2150 nF 650 nF 83 nF
External inductance	23 mH 12 mH 3 mH
Input	
Safety maximum voltage U_m	60 V (Attention! The rated voltage can be lower)
Combined fault indication	
Safety maximum voltage U_m	40 V (Attention! The rated voltage can be lower)
Statement of conformity	
Group, category, type of protection, Temperature classification	TÜV 02 ATEX 1820 X , observe statement of conformity  II 3 G EEx nA II T4 bzw. EEx nAC IIC T4 [device in zone 2]
Electrical isolation	
Input/Output	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
Output/Power supply	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
Directive conformity	
Directive 94/9 EC	EN 50014, EN 50020, EN 50021

Notes

Lead monitoring (only KFD2-SL2-Ex2)

A fault signal is activated across the Power Rail (UPR-03) in the case of an error (lead breakage $> 15 \text{ k}\Omega$ or lead short circuit $< 50 \text{ }\Omega$). The power feed module evaluates and passes on the fault signal by means of a potentially free contact.

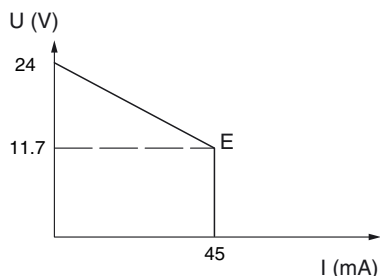
Output circuit diagramm



Output characteristic for input voltage

20 V ... 30 V

E: Curve angle point (U_E , I_E)



Supplementary information

EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity and instructions have to be observed. For information see www.pepperl-fuchs.com.

Accessories

PR-03 Power Rail

UPR-03 Power Rail

KFD2-EB2 power feed module

The devices are supplied with 24 V DC through the KFD2-EB2 power feed module and the PR-03 or the UPR-03 Power Rail. Each power feed module monitors and provides protection for groups of as many as 100 individual devices. The PR-03 Power Rail is an insert component for the DIN rail. The UPR-03 Power Rail is a complete unit consisting of an electrical insert and an aluminium DIN rail measuring 35 mm x 15 mm x 2000 mm. The devices are simply snapped in place to make electrical contact.

If a Power Rail is not being used, power can be supplied to the devices directly through the device terminals.