

**Features**

- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- Output 45 mA at 10 V DC
- Logic input, non-polarized
- Fault indication output
- Line fault detection (LFD)
- Up to SIL 2 acc. to IEC 61508

**Function**

This isolated barrier is used for intrinsic safety applications. It supplies power to solenoids, LEDs, and audible alarms, located in a hazardous area.

It is controlled via a logic signal. The input has two defined states: 1- Signal = 16 V DC ... 30 V DC, 0- Signal = 0 V DC ... 5 V DC. The current consumption of the input is about 3 mA.

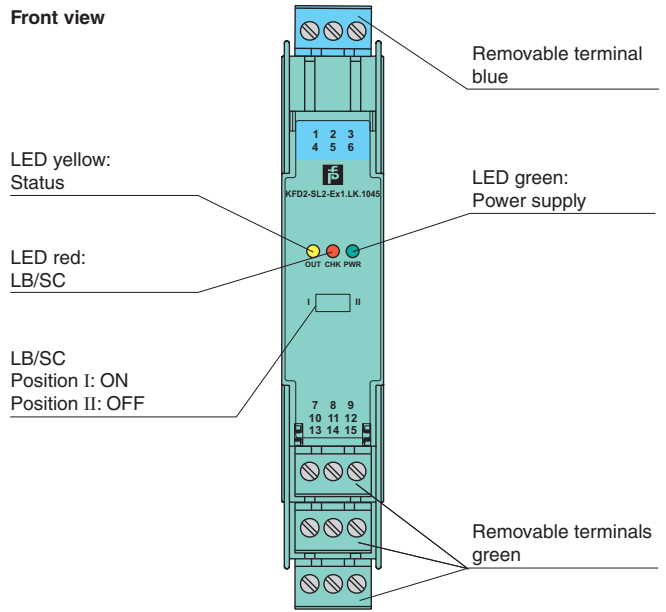
At full load, 10 V at 45 mA is available for the hazardous area application.

If the field impedance is > 10 kΩ for lead breakage or < 50 Ω for short circuits a line fault is detected.

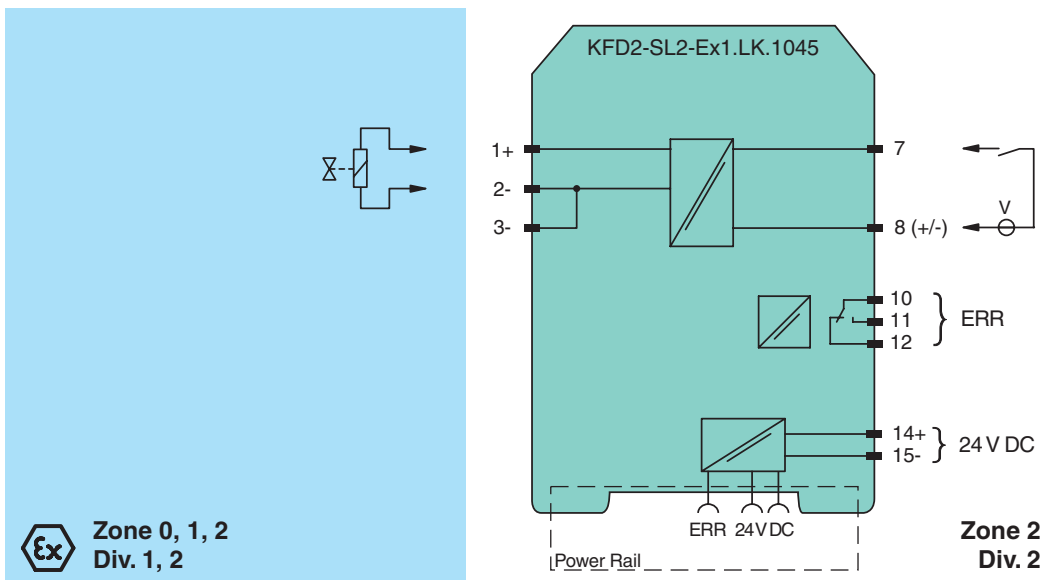
During an error condition, the fault indication output de-energizes.

A fault is signaled by LEDs acc. to NAMUR NE44 and a separate collective error message output.

**Assembly**



**Connection**



Release date 2019-01-25 09:38 Date of issue 2019-01-25 203284\_eng.xml

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

<b>General specifications</b>		
Signal type		Digital Output
<b>Functional safety related parameters</b>		
Safety Integrity Level (SIL)		SIL 2
<b>Supply</b>		
Connection		Power Rail or terminals 14+, 15-
Rated voltage	$U_r$	19 ... 30 V DC
Power dissipation		max. 1.5 W
Power consumption		≤ 2 W at 45 mA output current
<b>Input</b>		
Connection side		control side
Connection		terminals 7, 8
Input current		approx. 3 mA
Signal level		1-signal: 16 ... 30 V DC 0-signal: 0 ... 5 V DC
<b>Output</b>		
Connection side		field side
<b>Output I</b>		
Connection		terminals 1+, 2- or 3-
Internal resistor	$R_i$	300 Ω
Current	$I_e$	≤ 45 mA
Voltage	$U_e$	≥ 10 V
Open loop voltage	$U_s$	≥ 23.5 V
Output signal		These values are valid for the rated operating voltage 19 ... 30 V DC.
Energized/De-energized delay		≤ 20 ms / ≤ 20 ms
Line fault detection		signal at short-circuit $R_B < 50 \Omega$ , lead breakage $R_B > 10 \text{ k}\Omega$ ; test current < 650 μA
<b>Output II</b>		
Connection		terminals 10, 11, 12, non-intrinsically safe
Contact loading		253 V AC/2 A/cos φ > 0.7; 40 V DC/2 A resistive load
Mechanical life		2 x 10 <sup>7</sup> switching cycles
Energized/De-energized delay		≤ 20 ms / ≤ 20 ms
<b>Galvanic isolation</b>		
Input/power supply		basic insulation according to IEC/EN 61010-1, rated insulation voltage 50 V <sub>eff</sub>
Output I, II against each other		reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub>
Output II/power supply		reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub>
<b>Indicators/settings</b>		
Display elements		LEDs
Control elements		DIP-switch
Configuration		via DIP switches
Labeling		space for labeling at the front
<b>Directive conformity</b>		
<b>Electromagnetic compatibility</b>		
Directive 2014/30/EU		EN 61326-1:2013 (industrial locations)
<b>Low voltage</b>		
Directive 2014/35/EU		EN 61010-1:2010
<b>Conformity</b>		
Electromagnetic compatibility		NE 21:2007
Degree of protection		IEC 60529:2001
<b>Ambient conditions</b>		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
<b>Mechanical specifications</b>		
Degree of protection		IP20
Connection		screw terminals
Mass		approx. 150 g
Dimensions		20 x 119 x 115 mm (0.8 x 4.7 x 4.5 inch), housing type B2
Mounting		on 35 mm DIN mounting rail acc. to EN 60715:2001
<b>Data for application in connection with hazardous areas</b>		
<b>EU-Type Examination Certificate</b>		
EU-Type Examination Certificate		ZELM 99 ATEX 0015
Marking		⊕ II (1)G [Ex ia Ga] IIC ⊕ II (1)D [Ex ia Da] IIIC ⊕ I (M1) [Ex ia Ma] I
<b>Output I</b>		
Output I		Ex ia
Voltage	$U_o$	26 V
Current	$I_o$	93 mA

Release date 2019-01-25 09:38 Date of issue 2019-01-25 203284\_eng.xml

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0002  
pa-info@us.pepperl-fuchs.com

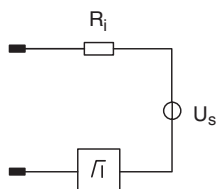
Germany: +49 621 776 2222  
pa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
pa-info@sg.pepperl-fuchs.com

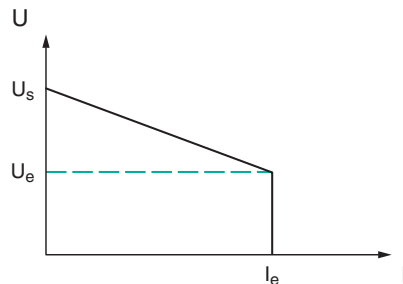
Power	$P_o$	607 mW (linear characteristic)
<b>Supply</b>		
Maximum safe voltage	$U_m$	40 V (Attention! The rated voltage can be lower.)
<b>Input</b>		
Maximum safe voltage	$U_m$	60 V (Attention! The rated voltage can be lower.)
<b>Collective error message</b>		
Maximum safe voltage	$U_m$	40 V (Attention! The rated voltage can be lower.)
<b>Certificate</b>		
Marking		TÜV 02 ATEX 1820 X
		⊕ II 3G Ex nA nC IIC T4 Gc
<b>Output II</b>		
Contact loading		50 V AC/2 A/cos $\phi > 0.7$ ; 40 V DC/2 A resistive load
<b>Galvanic isolation</b>		
Output I/other circuits		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
<b>Directive conformity</b>		
Directive 2014/34/EU		EN 60079-0:2012+A11:2013 , EN 60079-11:2012 , EN 60079-15:2010 , EN 60079-26:2007 , EN 50303:2000
<b>International approvals</b>		
<b>CSA approval</b>		
Control drawing		116-0362
<b>IECEx approval</b>		
IECEx certificate		IECEx ZLM 14.0001
IECEx marking		[Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I
<b>General information</b>		
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> .
<b>Accessories</b>		
Optional accessories		- power feed module KFD2-EB2(.R4A.B)(.SP) - universal power rail UPR-03(-M)(-S) - profile rail K-DUCT-BU(-UPR-03)

### Output characteristics

Output circuit diagram



Output characteristic





# SCATTERGOOD & JOHNSON LTD

ELECTRICAL ENGINEERING & FLUID CONTROL DISTRIBUTORS

Est.1899

At Scattergood & Johnson Ltd, we pride ourselves on being a technical distributor to specialist industries.

Working with a range of quality product suppliers across a number of specialist markets, we are not your average 'box shifter' - we are your technical and supply chain partner.

We fully support every product we sell - for free! Our internal team and external sales engineers can answer any product or application question, no matter the complexity.

Backing up this technical ability is a range of 50,000+ products available from stock for nationwide next day delivery (same day if required!), or you can collect what you need from any of our trade counters around the UK.

Select your specialist interest below to learn more about how we can help.



Online, In Branch and On the Road - Scattergood & Johnson Ltd, there when you need us.

# [www.scatts.co.uk](http://www.scatts.co.uk)