

**Features**

- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- Output 15.3 V DC at 17 mA
- 3 logic inputs with AND/OR logic
- Service port for isolator function test

**Function**

This isolated barrier is used for intrinsic safety applications. It supplies power to solenoids and other similar loads. It is controlled by two "OR" and one "AND" configured logic input.

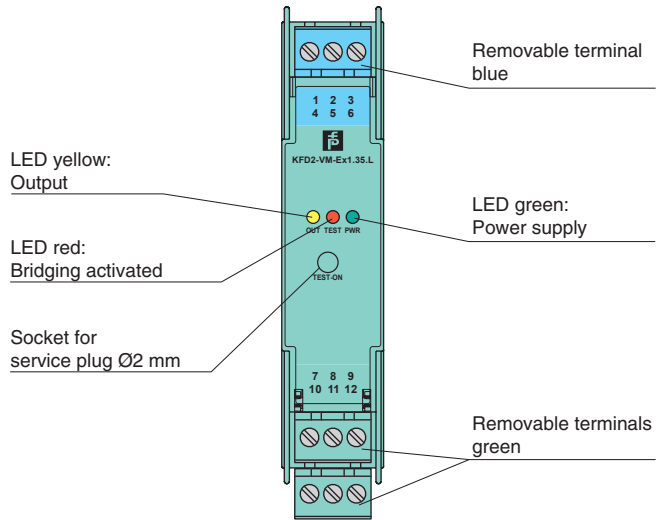
At full load, 15.3 V at 17 mA is available for the hazardous area load. The output signal has a resistive characteristic.

An override/test jack feature is available on the front plate of the device.

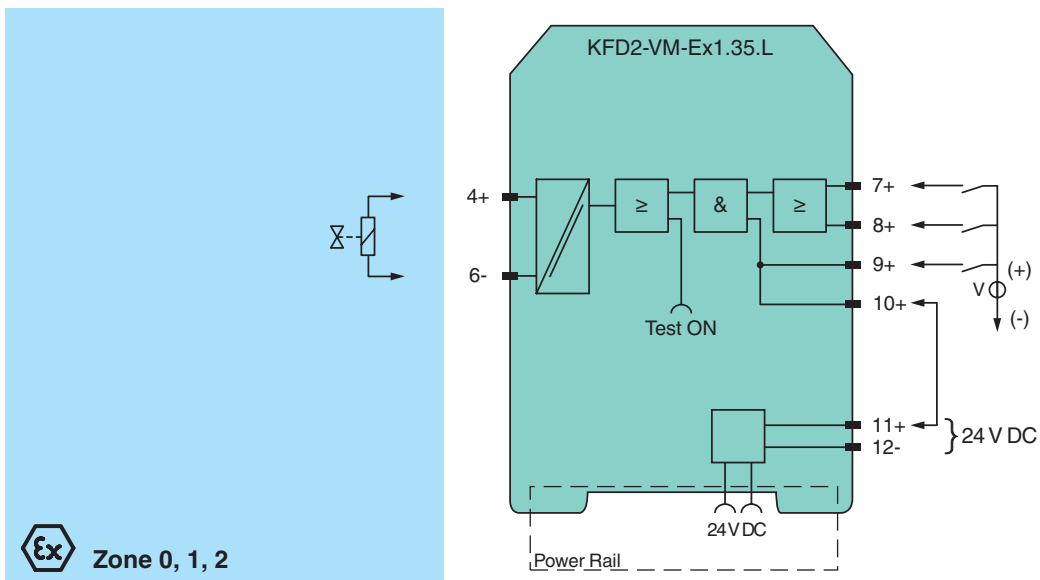
By engaging the service plug, the logic inputs are bypassed and the output is energized. The operation of this test feature is indicated by a red LED.

**Assembly**

Front view



**Connection**



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

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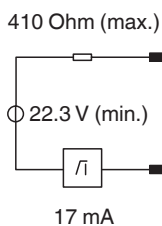
<b>General specifications</b>		
Signal type		Digital Output
<b>Supply</b>		
Connection		Power Rail or terminals 11+, 12-
Rated voltage	$U_n$	20 ... 30 V DC
Ripple		≤ 10 %
Rated current	$I_n$	≤ 52 mA
Power loss		typ. 1.2 W
Power consumption		< 1.5 W
<b>Input</b>		
Connection		terminals 7+, 8+, 9+
Signal level		1-signal: 15 ... 30 V DC ; input current: approx. 2.3 mA at 24 V DC 0-signal: 0 ... 5 V DC or open input
Response delay		5 ... 30 ms (typical 10 ms)
<b>Output</b>		
Internal resistor	$R_i$	≤ 410 Ω
Limit		current $I_E$ : ≥ 17 mA; typ. 18 mA voltage $U_E$ : ≥ 15.3 V; typ. 16 V
Open loop voltage	$U_s$	≥ 22.3 V
Connection		terminals 4+, 6-
Output rated operating current		17 mA
Output signal		These values are valid for the rated operating voltages from 20 ... 30 V DC.
<b>Transfer characteristics</b>		
Switching frequency		15 Hz
<b>Electrical isolation</b>		
Input/power supply		not available
<b>Directive conformity</b>		
Electromagnetic compatibility		
Directive 2004/108/EC		EN 61326-1:2006
<b>Conformity</b>		
Electromagnetic compatibility		NE 21
Degree of protection		IEC 60529
<b>Ambient conditions</b>		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
<b>Mechanical specifications</b>		
Degree of protection		IP20
Mass		approx. 150 g
Dimensions		20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in) , housing type B1
<b>Data for application in connection with Ex-areas</b>		
EC-Type Examination Certificate		PTB 00 ATEX 2132 , for additional certificates see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a>
Group, category, type of protection		 II (1)GD [EEEx ia] IIC [circuit(s) in zone 0/1/2]
Output		EEEx ia IIC
Voltage	$U_o$	25.2 V DC
Current	$I_o$	67.2 mA
Power	$P_o$	423.5 mW (linear characteristic)
<b>Supply</b>		
Maximum safe voltage	$U_m$	253 V AC/125 V DC without jumper 10-11, 60 V with jumper 10-11 (Attention! $U_m$ is no rated voltage.)
Type of protection [EEEx ia and EEx ib]		
<b>Input</b>		
Maximum safe voltage	$U_m$	60 V (Attention! $U_m$ is no rated voltage.)
<b>Electrical isolation</b>		
Input/Output		safe galvanic isolation acc. to EN 50020, voltage peak value 375 V
Output/power supply		safe galvanic isolation acc. to EN 50020, voltage peak value 375 V
<b>Directive conformity</b>		
Directive 94/9/EC		EN 50014, EN 50020
<b>General information</b>		
Supplementary information		EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

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**Note**

**Output circuit diagramm**

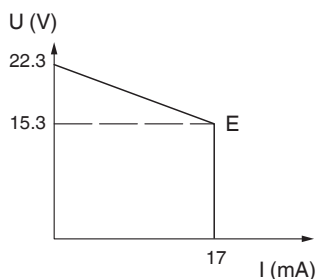
**KFD2-VM-Ex1.35.L**



**Output characteristic for input voltage**

20 V ... 30 V

E: Curve angle point ( $U_E, I_E$ )



**Accessories**

**Power feed module KFD2-EB2**

The power feed module is used to supply the devices with 24 V DC via the Power Rail. The fuse-protected power feed module can supply up to 100 individual devices depending on the power consumption of the devices. A galvanically isolated mechanical contact uses the Power Rail to transmit collective error messages.

**Power Rail UPR-03**

The Power Rail UPR-03 is a complete unit consisting of the electrical inset and an aluminium profile rail 35 mm x 15 mm. To make electrical contact, the devices are simply engaged.

**Profile Rail K-DUCT with Power Rail**

The profile rail K-DUCT is an aluminum profile rail with Power Rail insert and two integral cable ducts for system and field cables. Due to this assembly no additional cable guides are necessary.



Attention

*Power Rail and Profile Rail must not be fed via the device terminals of the individual devices!*