

Features

- 1-channel isolated barrier
- 24 V DC supply (loop powered)
- Current input/output 4 mA ... 20 mA
- HART I/P or transmitter power supply
- Low voltage drop
- Line fault detection (LFD)
- Up to SIL 2 acc. to IEC 61508

Function

This isolated barrier is used for intrinsic safety applications. It is loop powered and isolates a 4 mA ... 20 mA signal for transmitters and positioners and is HART compatible.

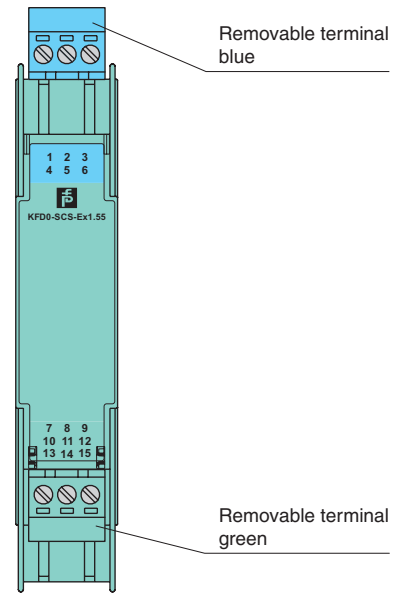
With a noticeably lower power loss compared to active isolator modules, the barriers 5 V drop makes it suitable for transmitter applications with unstable power sources between 20 V DC ... 30 V DC.

Line fault detection of the field circuit is possible if the control loop in the safe area is monitored for overscale or underscale conditions of the 4 mA ... 20 mA range.

The module can also be used for controlling solenoid valves and discrete outputs, such as LEDs. In this case, terminals 8- and 9+ are driven with a 24 V signal.

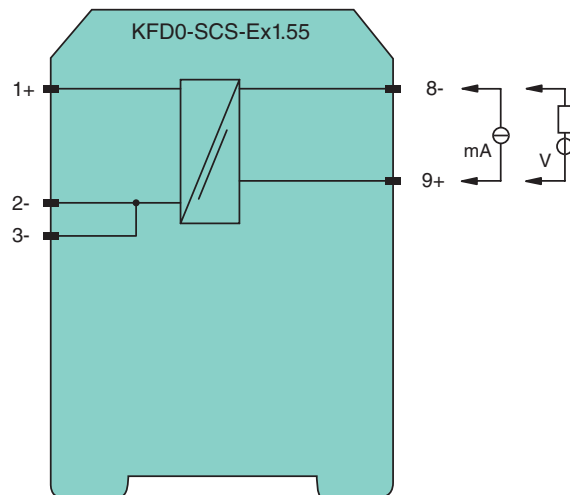
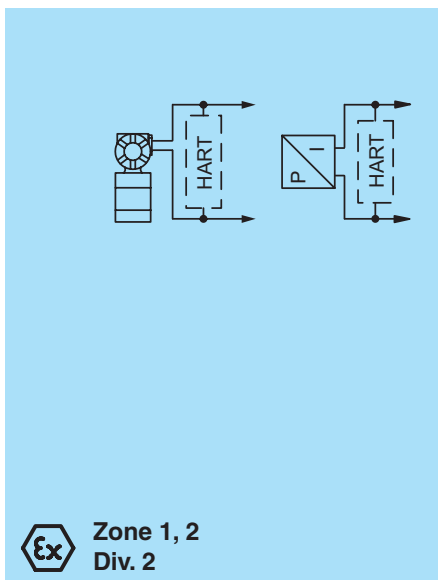
Assembly

Front view



SIL 2

Connection



**Zone 2
Div. 2**

Release date 2017-08-09 14:20 Date of issue 2017-08-09 240495_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

General specifications		
Signal type		Analog input/analog output
Functional safety related parameters		
Safety Integrity Level (SIL)		SIL 2
Supply		
Rated voltage	U_r	loop powered
Power dissipation		0.2 W
Control circuit		
Connection		terminals 8-, 9+
Voltage		≤ 30 V DC
Current		4 ... 20 mA (quiescent current < 0.5 mA)
Power dissipation		150 mW at 20 mA and $U_{in} < 24$ V
Field circuit		
Connection		terminals 1+, 2 / 3-
Voltage		≥ 16 V for supply voltage > 21 V
Current		4 ... 20 mA (linear transmission 1 ... 22 mA)
Load		$\leq 800 \Omega$ (at 20 mA)
Transfer characteristics		
Voltage drop		see note
Deviation		
After calibration		$\leq \pm 80 \mu\text{A}$ linearity, load and voltage dependence at 20 °C (68 °F)
Influence of ambient temperature		$< 0.5 \mu\text{A/K}$
Damping		approx. 3 dB
Rise time		$\leq 20 \mu\text{s}$ at 0 Ω , $\leq 600 \mu\text{s}$ with 800 Ω load
Galvanic isolation		
Input/Output		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Indicators/settings		
Labeling		space for labeling at the front
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013 (industrial locations)
Conformity		
Electromagnetic compatibility		NE 21:2007
Degree of protection		IEC 60529:2001
Ambient conditions		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications		
Degree of protection		IP20
Connection		screw terminals
Mass		approx. 120 g
Dimensions		20 x 124 x 115 mm (0.8 x 4.9 x 4.5 inch) , housing type B2
Mounting		on 35 mm DIN mounting rail acc. to EN 60715:2001
Data for application in connection with hazardous areas		
EU-Type Examination Certificate		PTB 02 ATEX 2064
Marking		 II (2)G [Ex ib] IIC
Voltage	U_o	23.1 V DC
Current	I_o	28 mA
Power	P_o	0.647 W
Supply		
Maximum safe voltage	U_m	253 V (Attention! The rated voltage can be lower.)
Certificate		PF 11 CERT 0902 X
Marking		 II 3G Ex nA IIC T4 Gc
Galvanic isolation		
Input/Output		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Directive conformity		
Directive 2014/34/EU		EN 60079-0:2012+A11:2013 , EN 60079-11:2012 , EN 60079-15:2010
International approvals		
FM approval		device with FM approval on request
General information		
Supplementary information		Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com .

Release date 2017-08-09 14:20 Date of issue 2017-08-09 240495_eng.xml

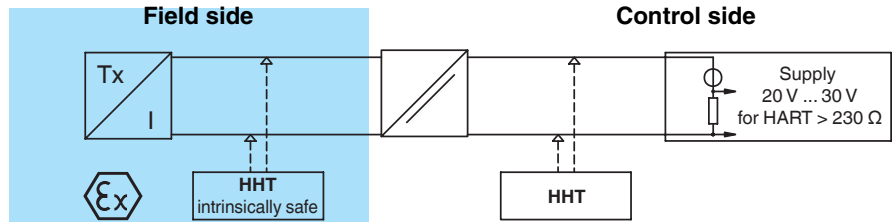
Additional information

In addition, the voltage drop across the resistance (load) of the active measurement input must be considered when calculating the field voltage (terminals 1+ and 2-).

Lead breakage monitoring is possible by means of the reaction of the field current signal to the control side, which means the control system must monitor whether the 4 mA ... 20 mA range was exceeded or fallen short of.

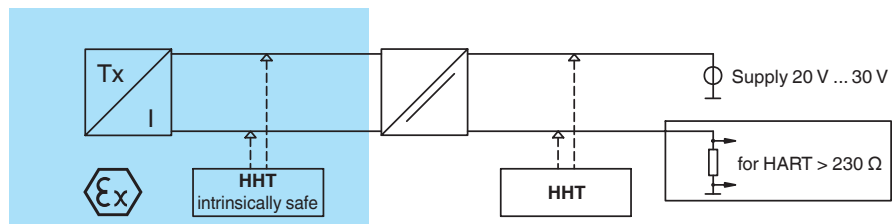
SMART repeater supply isolator for **active** interfaces
Transmitters with or without HART

Voltage drop in case of 20 mA:
max. 5 V



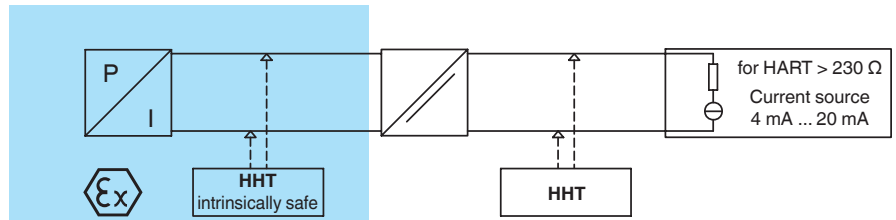
SMART repeater for **passive** interfaces
Transmitters with or without HART

Voltage drop in case of 20 mA:
max. 5 V



Current driver for positioners, I/P converters
Positioners with or without HART

Voltage drop in case of 20 mA:
5 V, 500 Ω ... 800 Ω load
6 V, 250 Ω load
8 V, 50 Ω load



Release date 2017-08-09 14:20 Date of issue 2017-08-09 240495_eng.xml



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