

## Features

- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- Input HART with transmitter supply
- 3 analog outputs 4 mA ... 20 mA
- Parameterization via control panel

## Function

At the HART Loop Converter can be connected HART compatible transmitter and positioner. The signals are transmitted only through the HART protocol.

The device analyzes up to 4 HART variables and converts them to analog current signals.

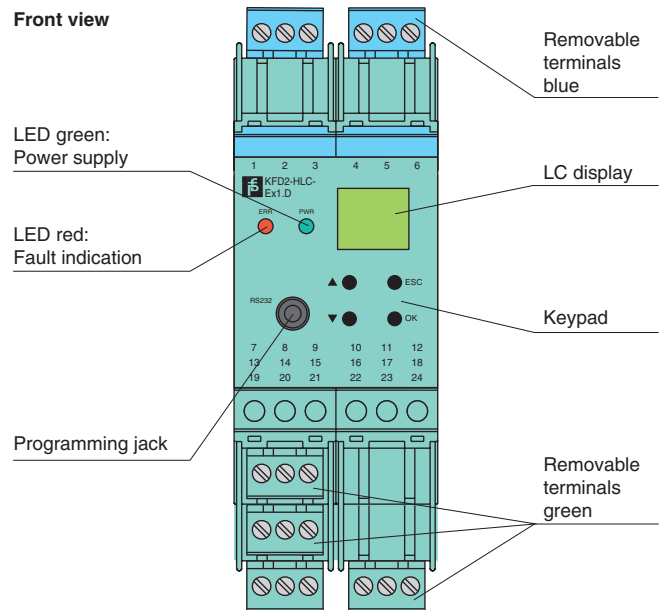
The device can supply 2-wire transmitter. For retrofitting the HART Loop Converter can be connected to existing field circuits.

The operation is performed via an operator panel on the front side of the device.

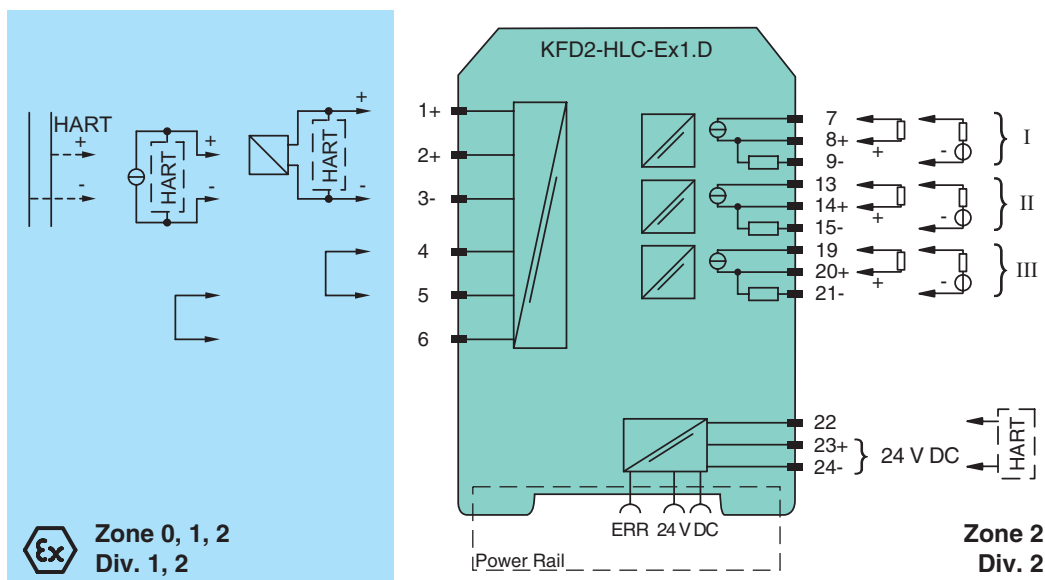
## Application


- Configurable as primary or secondary master
- Automatic HART burst supported
- Support for a HART handheld device connected on safe area side
- Can be configured to assign the same input variable to multiple outputs (signal splitting)

## Assembly



## Connection



<b>Supply</b>	
Connection	Power Rail or terminals 23+, 24-
Rated voltage	19 ... 30 V DC
Rated current	approx. 120 mA at 24 V DC
Power loss	2.3 W
Power consumption	2.9 W
<b>Input</b>	
Connection	terminals 1, 2, 3, 4, 5, 6
Input signal	HART communication, transmitter supply
Open-circuit voltage/short-circuit current	typ. 24 V / 28 mA
Input resistance	250 $\Omega$ , 5 % (terminals 2, 3 and with jumper on 5, 6)
Available voltage	$\geq 15.5$ V at 20 mA, short-circuit proof
<b>Output</b>	
Connection	output I: terminals 7, 8, 9 , output II: terminals 13, 14, 15 , output III: terminals 19, 20, 21
Current range	4 ... 20 mA , source or sink mode
Load	$\leq 650 \Omega$ , source mode
Voltage range	5 ... 30 V , sink mode from external supply
Collective error message	Power Rail and LED red
Fault signal	downscale $I \leq 2$ mA, upscale $I \geq 21.5$ mA (acc. NAMUR NE43) or hold measurement value
Other outputs	HART handheld device on terminals 22, 24
<b>Transfer characteristics</b>	
Output I, II, III	
Resolution	$\leq 2 \mu\text{A}$
Accuracy	$< 20 \mu\text{A}$ , $10 \mu\text{A}$ typ.
Influence of ambient temperature	$< \pm 2 \mu\text{A/K}$
Duration of measurement/Response delay	HART message acquisition time plus 100 ms
<b>Electrical isolation</b>	
Output I/II/III/power supply	function insulation acc. to IEC 62103, rated insulation voltage 50 V <sub>rms</sub>
<b>Directive conformity</b>	
Electromagnetic compatibility	
Directive 89/336/EC	EN 61326
Low voltage	
Directive 73/23/EEC	IEC 62103
<b>Conformity</b>	
Electromagnetic compatibility	
Protection degree	NE 21
Protection against electric shock	IEC 60664-1
<b>Ambient conditions</b>	
Ambient temperature	-20 ... 60 °C (253 ... 333 K)
<b>Mechanical specifications</b>	
Protection degree	IP20
Mass	300 g
Dimensions	40 x 119 x 115 mm (1.6 x 4.7 x 4.5 in) , housing type C3
<b>Data for application in conjunction with hazardous areas</b>	
EC-Type Examination Certificate	
Group, category, type of protection	BASEEFA 07 ATEX 0174 , for additional certificates see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a>
Input	 II (1)GD [Ex ia] IIC [Ex iaD]
Supply	Ex ia/Ex ia D
Equipment	
Safety maximum voltage U <sub>m</sub>	253 V AC (Attention! The rated voltage can be lower.)
Voltage U <sub>o</sub>	25.2 V
Current I <sub>o</sub>	104.9 mA
Power P <sub>o</sub>	0.661 W
Equipment	
Safety maximum voltage U <sub>m</sub>	253 V AC (Attention! The rated voltage can be lower.)
Voltage U <sub>i</sub>	$< 28$ V
Power P <sub>i</sub>	$< 1.33$ W
Voltage U <sub>o</sub>	1.1 V
Current I <sub>o</sub>	11.9 mA
Power P <sub>o</sub>	4 mW
Output I, II, III	
Safety maximum voltage U <sub>m</sub>	253 V (Attention! U <sub>m</sub> is no rated voltage.)
Statement of conformity	Pepperl+Fuchs

Group, category, type of protection, temperature classification	Ⓔ II 3G Ex nA II T4 X
Electrical isolation	
Input/other circuits	safe electrical isolation acc. to EN 60079-11, voltage peak value 375 V
Directive conformity	
Directive 94/9 EC	EN 60079-0 , EN 60079-11 , EN 61241-0 , EN 61241-11
<b>General information</b>	
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration 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> .

## Accessories

### Power feed modules 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.

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