

Features

- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- HART field device input with transmitter power supply
- Usable as signal splitter (1 input and several outputs)
- 3 analog outputs 4 mA ... 20 mA
- Sink and source mode output
- Configurable by keypad

Function

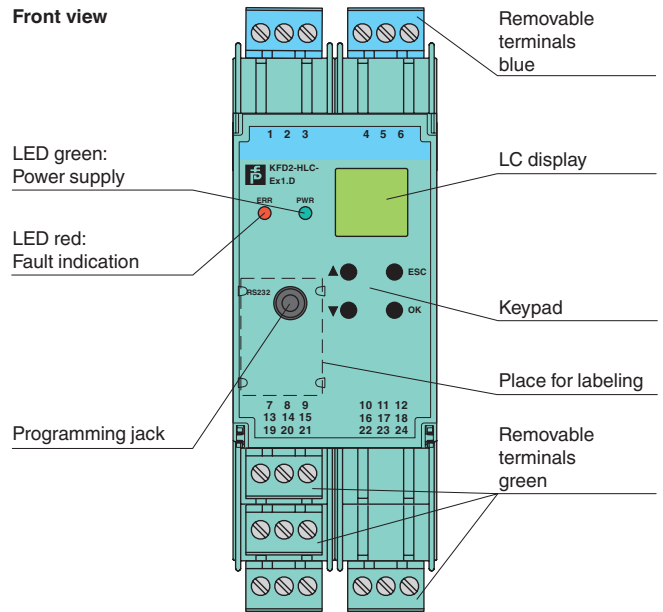
This isolated barrier is used for intrinsic safety applications. It is a HART loop converter that provides power to transmitters or can be connected to existing HART loops in parallel.

It is able to evaluate up to four HART variables (PV, SV, TV, QV). Of those four HART variables, the data contained in any three of them can be converted to three different 4 mA ... 20 mA current signals. These loop signals can be connected to display devices or analog inputs on the process control system/control system.

The unit is easily programmed by the use of a keypad located on the front of the unit or with the **PACTware™** configuration software.

n, refer to the manual and

Assembly

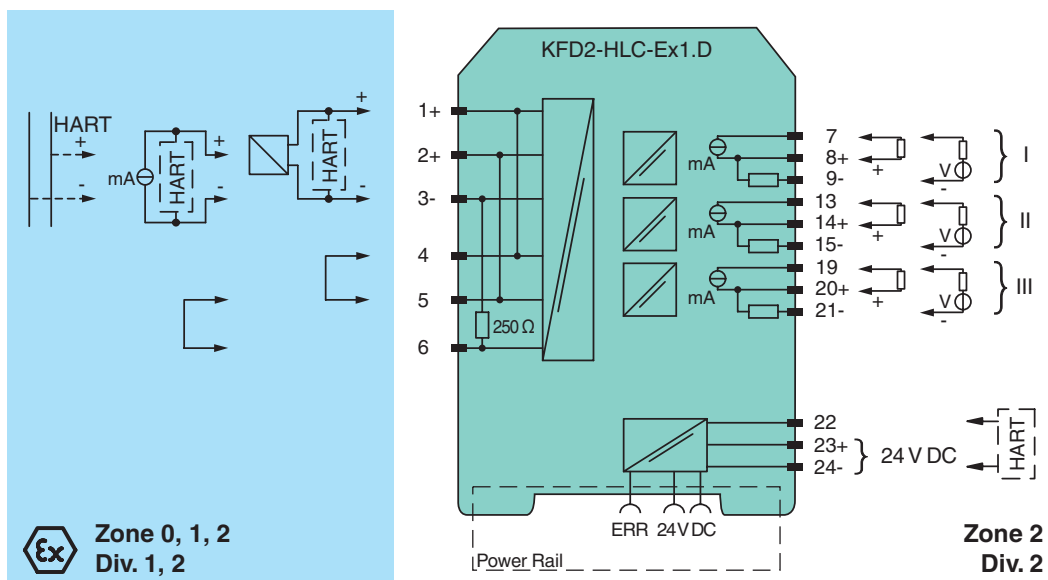


Application



- 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)



Connection



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| | | |
|--|-------|--|
| General specifications | | |
| Signal type | | Analog input |
| Supply | | |
| Connection | | Power Rail or terminals 23+, 24- |
| Rated voltage | U_r | 19 ... 30 V DC |
| Rated current | I_r | approx. 120 mA at 24 V DC |
| Power dissipation | | 2.3 W |
| Power consumption | | 2.9 W |
| HART signal channels (intrinsically safe) | | |
| Conformity | | HART field device input (revision 5 to 7) |
| Interface | | |
| Programming interface | | programming socket |
| Input | | |
| Connection side | | field side |
| Connection | | terminals 1, 2, 3, 4, 5, 6 |
| Open circuit voltage/short-circuit current | | typ. 24 V / 28 mA |
| Input resistance | | 250 Ω , 5 % (terminals 2, 3 and with jumper on 5, 6) |
| Available voltage | | ≥ 15.5 V at 20 mA, short-circuit protected |
| Output | | |
| Connection side | | control side |
| Connection | | output I: terminals 7, 8, 9 , output II: terminals 13, 14, 15 , output III: terminals 19, 20, 21 |
| Output signal | | analog |
| 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 |
| Fault signal | | downscale $I \leq 2$ mA, upscale $I \geq 21.5$ mA (acc. NAMUR NE43) or hold measurement value |
| Other outputs | | HART communicator on terminals 22, 24 |
| Collective error message | | Power Rail and LED red |
| Transfer characteristics | | |
| 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 |
| Galvanic isolation | | |
| Output I/II/III/power supply | | functional insulation acc. to IEC 62103, rated insulation voltage 50 V_{eff} |
| Indicators/settings | | |
| Display elements | | LEDs , display |
| Control elements | | Control panel |
| Configuration | | via operating buttons via PACTware |
| Labeling | | space for labeling at the front |
| Directive conformity | | |
| Electromagnetic compatibility | | |
| Directive 2014/30/EU | | EN 61326-1:2013 (industrial locations) |
| Low voltage | | |
| Directive 2014/35/EU | | EN 61010-1:2010 |
| Conformity | | |
| Electromagnetic compatibility | | NE 21:2006 |
| 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 | | 300 g |
| Dimensions | | 40 x 119 x 115 mm (1.6 x 4.7 x 4.5 inch) , housing type C3 |
| Mounting | | on 35 mm DIN mounting rail acc. to EN 60715:2001 |
| Data for application in connection with hazardous areas | | |
| EU-Type Examination Certificate | | BASEEFA 07 ATEX 0174 |
| Marking | |  II (1)G [Ex ia Ga] IIC  II (1)D [Ex ia Da] IIC |

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| | | |
|--|-------|---|
| Supply | | |
| Maximum safe voltage | U_m | 253 V AC (Attention! The rated voltage can be lower.) |
| Equipment | | |
| Voltage | U_o | 25.2 V |
| Current | I_o | 104.9 mA |
| Power | P_o | 0.661 W |
| Equipment | | |
| terminals 2, 5/3 | | |
| Voltage | U_i | < 28 V |
| Power | P_i | < 1.33 W |
| Voltage | U_o | 1.1 V |
| Current | I_o | 11.9 mA |
| Power | P_o | 4 mW |
| Output I, II, III | | |
| terminals 7, 8, 9; 13, 14, 15; 19, 20, 21 non-intrinsically safe | | |
| Maximum safe voltage | U_m | 253 V (Attention! U_m is no rated voltage.) |
| Certificate | | |
| PF 07 CERT 1142 X | | |
| Marking | | |
| Ⓔ II 3G Ex nA IIC T4 Gc | | |
| Galvanic isolation | | |
| Input/Other circuits | | |
| 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 | | |
| Control drawing | | |
| 116-0129 | | |
| IECEX approval | | |
| IECEX certificate | | |
| IECEX BAS 07.0047 | | |
| IECEX marking | | |
| [Ex ia Ga] IIC , [Ex ia Da] IIIC | | |
| General information | | |
| Supplementary information | | |
| Observe the cer conformity, instruction manuals, and manuals where applicable. For information see | | |
| Accessories | | |
| Optional accessories | | |
| - power feed module KFD2-EB2(.R4A.B)(.SP) | | |
| - universal power rail UPR-03(-M)(-S) | | |
| - profile rail K-DUCT-BU(-UPR-03) | | |