1-Channel Current Repeater/Driver

Model Number
KFD0-CS-Ex1.51P

- 1-channel
- Loop powered
- Suitable for Division 2/Zone 2 mounting
- Reverse polarity protection
- Accuracy 1%
- SIL 2 according to IEC 61508; SIL 3 in a redundant structure

This is a loop-powered isolator that transfers DC signals from fire alarms, smoke alarms and temperature sensors in hazardous areas. It can also be used to control I/P converters, power solenoids, LEDs and audible alarms. Reverse polarity protection prevents the isolator from damage caused by faulty wiring. Since this isolator is loop-powered, use the technical data on this page to verify that proper voltage is available to the field devices.

**Technical Data**

| INPUT/OUTPUT (not intrinsically safe) | Terminals 12-, 11+ |
| Voltage range | 4-35 VDC |
| Current range | 0-40 mA |
| Power loss | 700 mW per channel at 40 mA and $V_{in} < 22$ V  
1.2 W per channel at 40 mA and $V_{in} > 22$ V |

| OUTPUT/INPUT (intrinsically safe) | Terminals 1+, 2- |
| Minimum output voltage | for $4V < V_{in} < 24$: $0.9 \times V_{in} - (0.37 \times \text{current in mA}) - 1.0$  
for $V_{in} > 24$: $\geq 21 \text{ V} - (0.36 \times \text{current in mA}$) |
| Maximum short circuit current | 65 mA at $V_{in} > 24$ |
| Maximum transfer current | 40 mA |

**TRANSFER CHARACTERISTICS**

- Calibrated accuracy: $\leq 200 \mu$A
- Temperature drift: $\leq 2 \mu$A/°C at $V_{in} \leq 20$ V; $\leq 5 \mu$A/°C at $V_{in} > 20$ V
- Rise time: $\leq 5 \text{ ms at 4-20 mA step and } V_{in} < 24$ V

**CERTIFICATES**

- Zone 0, 1, 2
- Zone 2
- Exida
- TÜV 99 ATEX 1499X, II 3 G EEx nA II T4
- BAS 98 ATEX 7343, II (1) G D [Ex ia] IIC

**MECHANICAL**

- Housing Type A4 see page 454
- Dimensions $4.21 \times 0.79 \times 4.53$" (107 x 20 x 115 mm)
- Weight 3.5 oz. (~100 g)

**AMBIENT TEMPERATURE**

- -4°F to +140°F (-20°C to +60°C)

**Connection Diagram**

- Class I; Div 1, 2  
Zone 0, 1, 2

- Hazardous Area

- Safe Area, Div 2 or Zone 2

- KFD0-CS-Ex1.51P