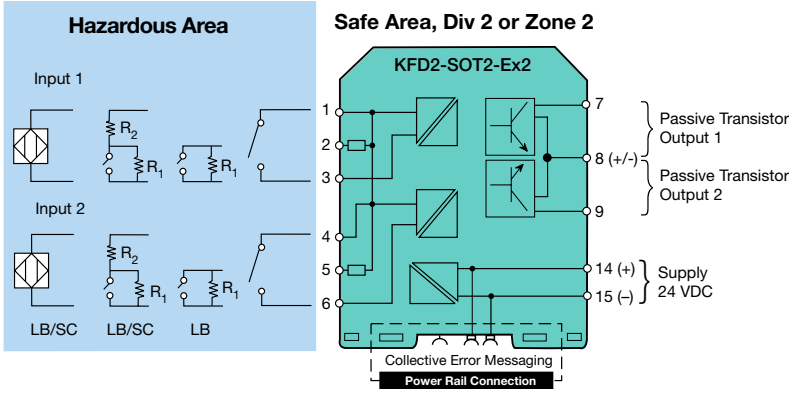
Technical Data

POWER SUPPLY		Power Rail or terminals 14+, 15-
Nominal voltage		20-30 VDC
Rated current		≤ 50 mA
INPUT 1, 2 (intrinsically safe)		Terminals 1+, 2+, 3-; 4+, 5+, 6-
Nominal Data		≈ 8 VDC / ≈ 8 mA
Switching point/Switching hysteresis		1.2-2.1 mA / ≈ 0.2 mA
Lead Breakage (LB) Monitoring		Breakage I ≤ 0.1 mA, short-circuit I > 6 mA
OUTPUT (not intrinsically safe)		
Output 1		Terminal 7, 8
Output 2		Terminal 8, 9
Logic 1		(L+) - 2.5 V max. for 10 mA or 3 V max. for 100 mA (100 mA, short-circuit proof) @ 40 VDC
Logic 0		Switched off (off-state current ≤10 µA)
TRANSFER CHARACTERISTICS		
Switching Frequency		< 5 kHz
CERTIFICATES		See page 127 for entity parameters
CE	FM	No. 116-0035
		No. 116-0047
	Zone 0, 1, 2	PTB 00 ATEX 2035, ⟨Ex⟩ II (1) G D [EEx ia] IIC
	Zone 2	TÜV 99 ATEX 1499X, ⟨Ex⟩ II 3 G EEx nAC IIC T4
	Exida	P+F 01/09-02D R002
MECHANICAL		
Housing		Type C see page 454
Dimensions		4.65" x 0.79" x 4.53" (118 x 20 x 115 mm)
Weight		5.3 oz. (≈ 150 g)
AMBIENT TEMPERATURE		-4°F to +140°F (-20°C to +60°C)

Engineer's Guide *(page 7)*
Accessories *(page 443)*
Power Supplies *(page 401)*
Surge Suppression *(page 413)*
Lastest Info. Avail. Online

Connection Diagram

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



2-Channel with Passive Transistor Output

Model Number

KFD2-SOT2-Ex2

- **2-channel**
- **24 VDC supply/Power Rail compatible**
- **1 signal output with 1 passive transistor per channel**
- **Suitable for Division 2/Zone 2 mounting**
- **Optional lead breakage (LB) and short circuit (SC) monitoring**
- **LB/SC collective error messaging via Power Rail**
- **SIL 2 according to IEC 61508; SIL 3 in a redundant structure**

This device is a dual-channel, galvanically isolated intrinsic safety barrier with a built-in amplifier that transfers discrete signals (NAMUR sensors/mechanical contacts) from a hazardous area to a safe area. Each proximity sensor or switch controls a passive transistor output. The barrier output changes state when the input signal changes state. The normal output state can be reversed through the mode of operation switches S1 and S2.

For a mechanical contact, LB monitoring can be selected by placing a 10 kΩ resistor across the mechanical contact in the field and moving switch S3 to position I on the barrier. SC monitoring is added by placing a 400Ω-2 kΩ resistor in series with the mechanical contact. NAMUR proximity sensors, however, are designed with the LB and SC functions, making external resistors unnecessary. In case of a LB/SC fault, the signal output relay reverts to the deenergized state. LB/SC monitoring can be disabled with S3 in position II. If used in conjunction with P+F's Power Rail system, the unique collective error messaging feature can be utilized.