Technical Data

POWER SUPPLY	Terminals 14, 15
Nominal voltage	115 VAC ± 10%
Power Consumption	1 W
INPUT (intrinsically safe)	Terminals 1+, 2+, 3-
Nominal Data	≈ 8 VDC/≈ 8 mA
Input pulse length/interval	≥ 20 ms/≥ 20 ms
Lead Breakage (LB) Monitoring	Breakage I ≤ 0.1 mA, short-circuit I > 6 mA
OUTPUT (not intrinsically safe)	
Output 1 (SPDT contacts)	Terminals 7, 8, 9
Contact load	253 VAC/2 A/cos ø > 0.7; 126.5 VAC/4 A/cos ø > 0.7; 40 VDC/2 A resistive load
Mechanical life	10^7 switching cycles
Energizing/de-energizing delay	≈ 20 ms/≈ 20 ms
TRANSFER CHARACTERISTICS	
Switching Frequency	< 10 Hz
CERTIFICATES	See page 127 for entity parameters
c UL us	No. 116-0145
FM	No. 116-0035
SP	No. 116-0047
Ex Zone 0, 1, 2	PTB 00 ATEX 2081, Ex II (1) G D [EEx ia] IIC
Exida	P+F 02/4-12 R007
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)

1-Channel with Relay Output

Model Number

KFA5-SR2-Ex1.W

- **1-channel**
- **120 VAC supply**
- **Suitable for Division 2 mounting**
- **1 signal output with 1 form C relay**
- **Optional lead breakage (LB) and short circuit (SC) monitoring**
- **SIL 2 according to IEC 61508; SIL 3 in a redundant structure**

This device is a single-channel, galvanically isolated intrinsic safety barrier that transfers discrete signals (NAMUR sensors/mechanical contacts) from a hazardous area to a safe area. The proximity sensor or switch controls a form C relay contact for the safe area load. The barrier output changes state when the input signal changes state. This output state can be reversed through the mode of operation switch S1.

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.

Engineer's Guide *(page 7)*
Accessories *(page 443)*
Surge Suppression *(page 413)*
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Connection Diagram

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