

The **DEETER** Group®

ZSB-409A

3-Channel Zener Diode Safety Barrier



Note: DIN-Rail and DIN-Rail Grounding Block are sold separately.

Features

- DIN Rail Mounting
- Space Saving 3-Channel Design
- Compatible with RPS-409A-IS and RPS-409A-IS2 Ultrasonic Sensors
- ATEX, IECEx, & UL/cUL Approvals



**THORNE &
DERRICK
INTERNATIONAL**

Thorne & Derrick
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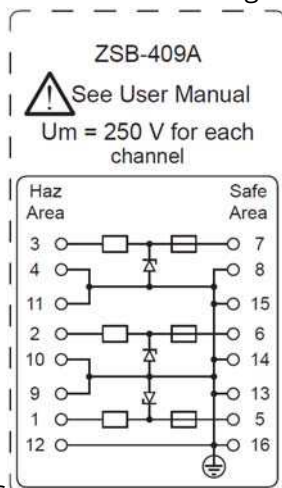
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The ZSB-409A is a 3-channel dc positive polarity zener safety barrier for use in intrinsic safety applications. The 3-channel design has one 24 V dc channel and two 10 V dc channels. The ZSB-409A is compatible with our RPS-409A-IS and RPS-409A-IS2 ultrasonic sensors, and combines all of the connections into one convenient package. The ZSB-409A provides for the safe operation of an intrinsically safe electrical apparatus installed in a hazardous gas or dust environment classified as Zone 0, 1, 2, 20, 21, or 22 for ATEX/IECEX, and Class I, II, or III for UL/cUL.

The ZSB-409A safety barrier is intended for indoor or outdoor use in locations where the temperature does not exceed the specified range (T_a) of the safety barrier. The safety barrier must be installed in a safe area; typically in racks or control cabinets with an appropriate level of protection from dust and liquids. The ZSB-409A is designed for easy installation onto standard 35 mm DIN-Rail, and is fitted with an insulated wire for making the ground connection. Refer to Control Drawing No. Ex05121109 for further information



on installation.Specifications

Safe Area Terminal Connections

Deeter House
Valley Road
Hughenden Valley
Bucks HP14 4LW

Tel: +44 (0)1494 566 046
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Channel #	Terminals	Supply Voltage maximum (V dc)	Fuse Rating (mA)	Nominal Resistance (Ω)
1	7 & GND	25.5	50	320 (terminals 7 to 3)
2	5 & GND	10.4	50	2718 (terminals 5 to 1)
3	6 & GND	10.4	50	2718 (terminals 6 to 2)

GND = Safe Area ground terminals are 8, 13, 14, 15, & 16

The maximum voltage U_m applied to a non-intrinsically safe apparatus or an intrinsically safe associated apparatus/equipment is 250 V rms or dc.

Entity Parameters: See Control Drawing No. Ex05121109

Connections: Cage terminals, each maximum 12 AWG solid/stranded wire type
Cu, torque 5-7 Lb. In. (0.6-0.8 Nm)

Ambient Temperature: $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$ ($-40^{\circ}\text{F} \leq T_a \leq +140^{\circ}\text{F}$)

Humidity: 0 – 95% Non-Condensing

Housing Material: Polyamide

Protection: Model ZSB-409A must be installed inside an end-use enclosure with suitable ratings for the environment, with at least an ingress protection rating of IP20.

Mounting: DIN-Rail

Weight: approximate 270 g (9.5 oz.)

Dimensions: Length = 99 mm (3.9"), Width = 22.5 mm (0.9"), Height = 114.5 mm (4.5")

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


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Explosion Protection and Approvals:

(ATEX) DEMKO 13 ATEX 1214149X	(IECEX) IECEX UL 13.0030X	(UL/cUL) File # E226209
 I M(1) [Ex ia Ma] I  II(1) G [Ex ia Ga] IIC  II (1) D [Ex ia Da] IIIC	[Ex ia Ma] I [Ex ia Ga] IIC [Ex ia Da] IIIC	Class I, Division 1, Groups A, B, C, and D; Class II, Division 1, Groups E, F, and G; and Class III, Division 1

PART NUMBER	DESCRIPTION
ZSB-409A	3-Channel DC Positive Polarity Zener Safety Barrier
F24-7942744	DIN-Rail (6" section) - Sold Separately
F33-5441504	DIN-Rail Grounding Block - Sold Separately

All electrical equipment should be installed by a qualified/certified electrician.

The Deeter Group follows a policy of continual development of its products and reserves the right to change specifications and/or features without notice



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