

ZSB-409A 3-Channel Zener Diode Safety Barrier



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

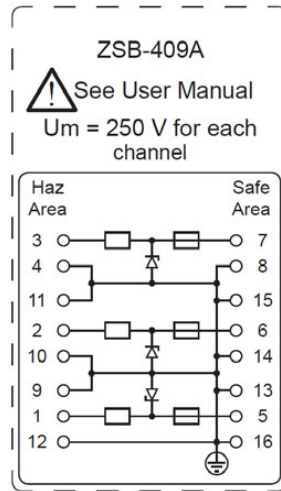
Features

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

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 or making the ground connection. Refer to Control Drawing No. Ex05121109 for further information on installation.

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Specifications

Safe Area Terminal Connections

Channel #	Terminals	Supply Voltage maximum	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.

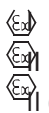
Mounting: DIN-Rail

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Weight: approximate 270 g (9.5 oz.)

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

Explosion Protection and Approvals

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

Ordering Codes

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.

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