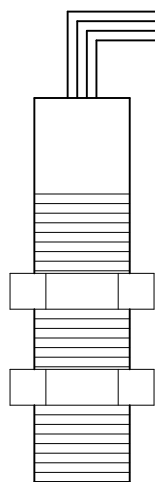


# Wiring for Intrinsically Safe Applications

## Hazardous Area



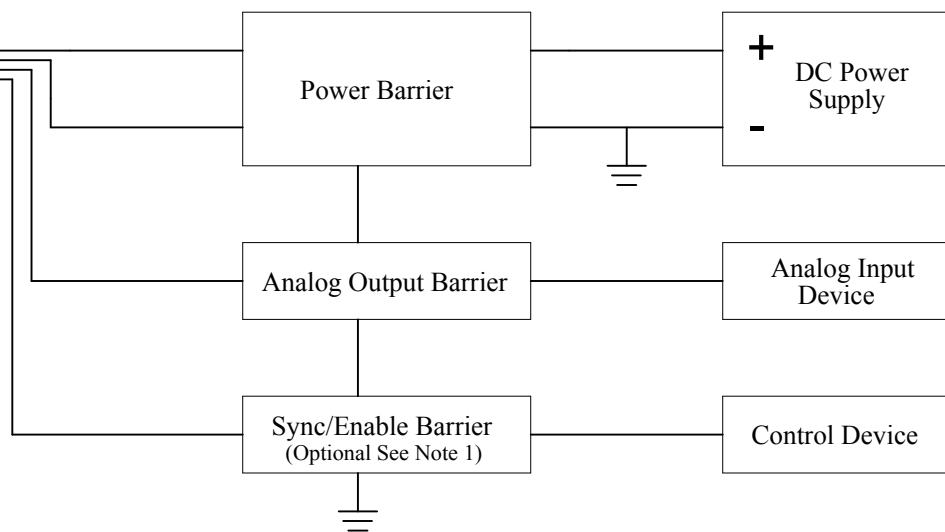
RPS-409A-IS  
Ultrasonic Sensor

Sensor Entity Parameters					
Circuit	Wire Color	V <sub>max</sub>	I <sub>max</sub>	C <sub>i</sub>	L <sub>i</sub>
Power	Brown	30V	100mA	0.0uF	0.28mH
	Blue				
Analog Output	White	16V	16mA	0.0uF	0.0mH
Sync/Enable	Black	16V	16mA	0.0uF	0.0mH

Notes:

- UL listed Intrinsically Safe for use in Hazardous (Classified) Locations when used with approved Intrinsically Safe Barriers.  
Class I, Division 1, Groups A, B, C, and D.  
Class II, Division 1, Groups E, F, and G.  
Class III, Division 1.
- Maximum Ambient Temperature 60 C.
- The installation must be in accordance with the National Electric Code, NFPA70, Article 504, and ANSI/ISA/RP12.06.01.

## Non-Hazardous Area



Barrier Entity Parameters				
Circuit	V <sub>oc</sub> ≤	I <sub>sc</sub> ≤	C <sub>a</sub> ≥	L <sub>a</sub> ≥
Power	30V	100mA	C <sub>i</sub> + C <sub>cable</sub>	L <sub>i</sub> + L <sub>cable</sub>
Analog Output	16V	16mA	C <sub>i</sub> + C <sub>cable</sub>	L <sub>i</sub> + L <sub>cable</sub>
Sync/Enable	16V	16mA	C <sub>i</sub> + C <sub>cable</sub>	L <sub>i</sub> + L <sub>cable</sub>

Notes:

- The Sync/Enable line is not required for operation of the sensor. If not used the Sync/Enable line may be left open, or tied to ground.
- Selected barriers must be installed in accordance with the barrier manufacturers' control drawing.
- If cable capacitance and inductance are unknown the following values may be used:  
C<sub>cable</sub> = 60pF/foot  
L<sub>cable</sub> = 0.2uH/foot

**Migatron Corp**

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Title: RPS-409A-IS Control Drawing

Size: A | Drawing No.: 02260209 | Rev.: A

Date: February 26, 2002 | Page 1 of 1