

#### PRODUCT DESCRIPTION

SPECTEC's Intrinsically Safe preamplifier for passive magnetic VRS sensors is designed for installation in hazardous locations and to fit a Crouse-Hinds GUAL16 or similar standard explosion proof junction box. Standard and NC (with expanded noise filtering) models are offered.

#### INSTALLATION

**CAUTION: This sensor MUST be installed with an FM approved barrier and following the details specified in the Installation Instruction Document #85051.**

#### SPECIFICATIONS

**Supply Voltage & Current:** 7.5-30Vdc @  $\leq 3\text{mA}$  for 0-5Vo  
13-30Vdc @  $\leq 12\text{mA}$  for 0-12Vo  
3.6-30Vdc @  $\leq 20\text{mA}$  for 0-Vs  
**NC Model: 25Vdc Maximum**

**Output Voltage:** See below (R Load  $>20\text{k}\Omega$ )

**Frequency Range:** ~5 Hz to 10 kHz  
Up to 40 kHz with increased signal  
**NC Model: ~5 Hz to 5 kHz**

**Input Sensitivity:** See below

**Construction:** Plastic housing  
Solid Epoxy Encapsulation

#### TERMINAL CONNECTIONS

- |                                |                          |
|--------------------------------|--------------------------|
| 1 - Supply Voltage             | 5 - Mag Sensor (IS only) |
| 2 - Common                     | 6 - Mag Sensor (IS only) |
| 3 - Output Signal (half freq.) | (see IS40 & IS41)        |
| 4 - Output Signal              |                          |

#### FEATURE SELECTION

**IS4021 -** ☐ ☐ Mag Preamplifier (US & Canada)  
**IS4021A -** ☐ ☐ Mag Preamplifier (ATEX, UKEX, & IECEx)

Output Signal 1 - 0-5V, NPN/PNP (push-pull)  
2 - 0-12V, NPN/PNP (push-pull)

Input Sensitivity 0 - 60 mVpp  
1 - 12 mVpp

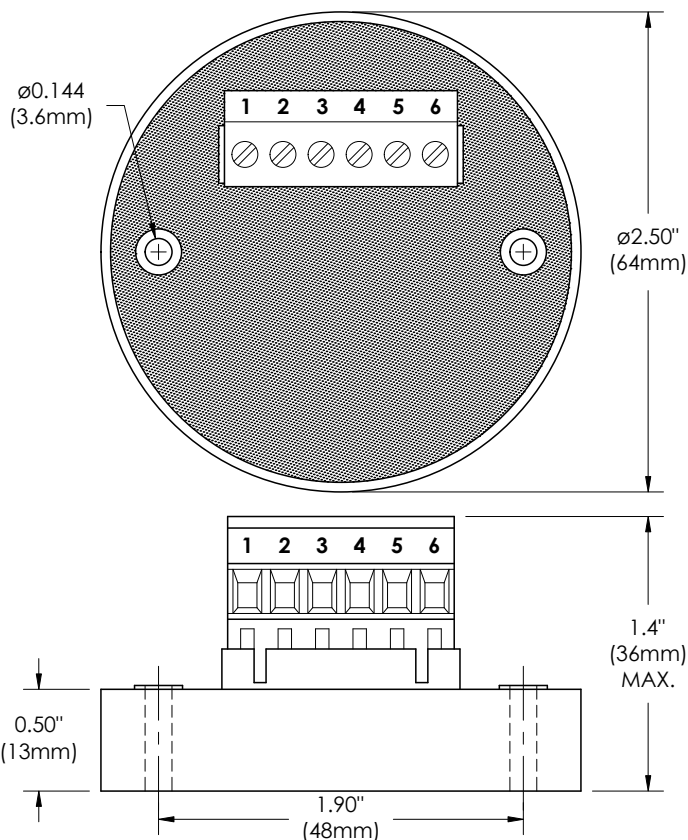
For NC model add 'NC' as a suffix:

(e.g. IS4021-xxNC)

Similarly for the ATEX, UKEX, & IECEx version:

(e.g. IS4021A-xxNC)

For explosion proof junction box refer to bulletin 4001



#### CERTIFICATIONS for IS4021

USA:

**Intrinsically Safe**  
Class I, II, III, Division 1  
GROUP ABCDEFG T6...T4  
Class I, Zone 0, AEx ia IIC T6...T4



Canada:

**Intrinsically Safe**  
Class I, Division 1  
GROUP ABCD T6...T4  
Class I, Zone 0, Ex ia IIC T6...T4

T4 @  $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +85^{\circ}\text{C}$   
T5 @  $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +80^{\circ}\text{C}$   
T6 @  $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +60^{\circ}\text{C}$

#### CERTIFICATIONS for IS4021A

ATEX & UKEX:



II 1 G Ex ia IIC T6...T4 Ga  
FM08ATEX0068X  
FM22UKEX0110X

CE:



Compliance with  
EN50081-1, EN50082-1

IECEx:



Ex ia IIC T6...T4 Ga  
IECEx FMG 16.0003X  
T4 @  $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +85^{\circ}\text{C}$   
T5 @  $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +80^{\circ}\text{C}$   
T6 @  $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +60^{\circ}\text{C}$

