

PRODUCT DESCRIPTION

SPECTEC's Intrinsically Safe frequency to voltage converter and preamplifier for passive magnetic VRS sensors is designed for installation in hazardous locations. The 'ELBY' housing type will fit in ELBY50 and ELBY75 explosion proof junction boxes. The 'A' housing type will fit in a GAUL-16 or similar standard explosion proof junction box.

INSTALLATION

CAUTION: This sensor **MUST** be installed with an FM approved barrier and following the details specified in the Installation Instruction Document #85049.

SPECIFICATIONS

- Supply Voltage:** 12 to 30 Vdc @ ≤ 5 mA
- Frequency Range:** Low Frequency: 75 Hz to > 1100 Hz
 High Frequency: 1100 Hz to ~10kHz
- Input Sensitivity:** 50 mVpp or 12 mVpp
- Linearity:** 0.15% Typical (0.5% Max)
- Output Settling:** 100ms to 3 sec to reach 95% of final value from full scale change
- Temp Coefficient:** between 25° and 40°C, 0.13%/°C
- Output Voltage:** 30mV to 12V for 0-10V out
 20mV to 6V for 0-5V out
 (Full scale, min cal, zero cal @ ZeroV)
- Temperature Range:** T4 Ta = -40° to 85°C
 T5 Ta = -40° to 80°C
 T6 Ta = -40° to 60°C
- Construction:** Plastic housing
 Solid Epoxy Encapsulation

TERMINAL CONNECTIONS

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

ORDERING INFORMATION

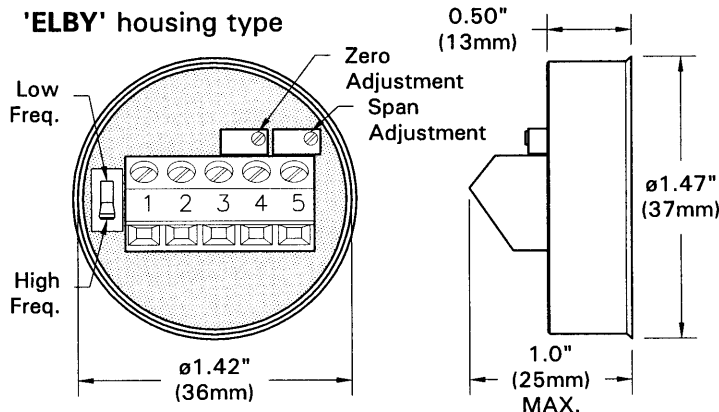
- IS4028-01 Mag Preamp 12mV 0-10V (US & C cert.)
- IS4028-02 Mag Preamp 12mV 0-5V (US & C cert.)
- IS4028-05 Mag Preamp 50mV 0-10V (US & C cert.)
- IS4028-06 Mag Preamp 50mV 0-5V (US & C cert.)
- IS4028A-01 Mag Preamp 12mV 0-10V (ATEX cert.)
- IS4028A-02 Mag Preamp 12mV 0-5V (ATEX cert.)
- IS4028A-05 Mag Preamp 50mV 0-10V (ATEX cert.)
- IS4028A-06 Mag Preamp 50mV 0-5V (ATEX cert.)

For 'A' housing type, P/N is IS4028-Axx
 or for ATEX version P/N is IS4028A-Axx

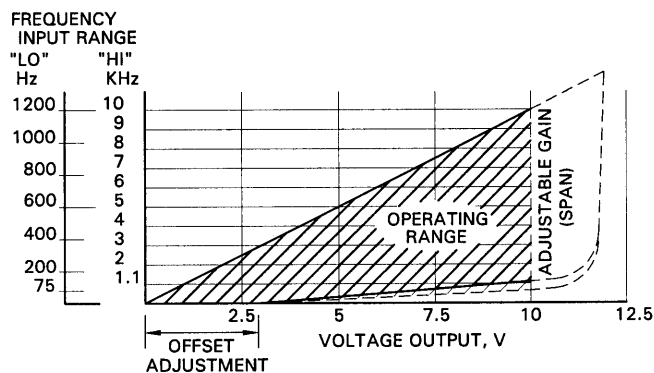
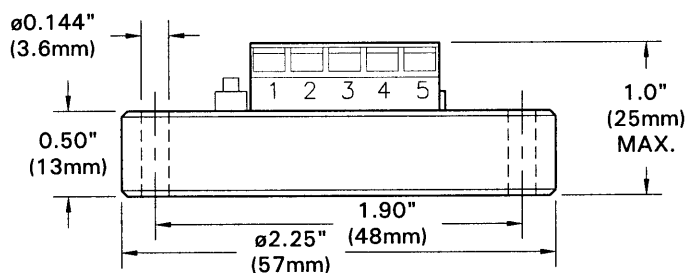
For explosion proof junction box refer to bulletin 4001.

For wiring options see page 2.

'ELBY' housing type



'A' housing type



CERTIFICATIONS for IS4028

USA: Intrinsically Safe
 Class I, II, III, Division 1
 GROUP ABCDEFG
 Class I, Zone 0, AEx ia IIC

Canada: Intrinsically Safe
 Class I, II, III, Division 1
 GROUP ABCD
 Class I, Zone 0, Ex ia IIC

CERTIFICATIONS for IS4028A

ATEX: II 1 G Ex ia IIC
 FM08ATEX0068X

CE: Compliance with
 EN55011, EN50022-2

IS4028 & IS4028A FTV Converter

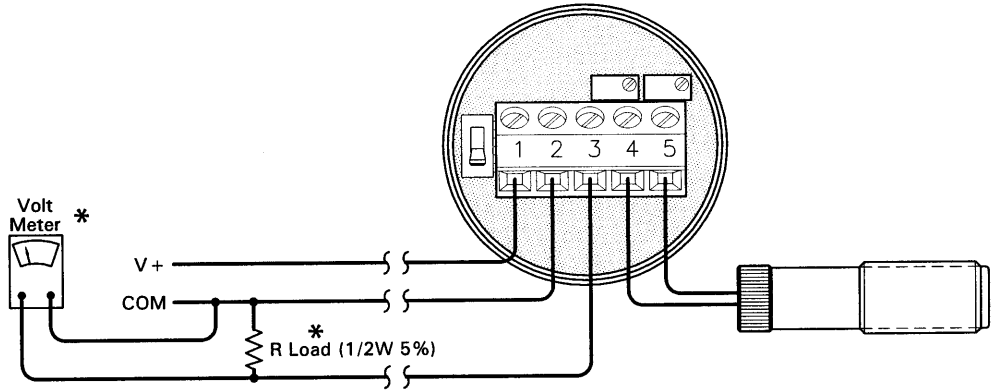
Wiring Options

Voltage Mode (3 wire)

For use with long wire runs
Resistant to line losses & EMI

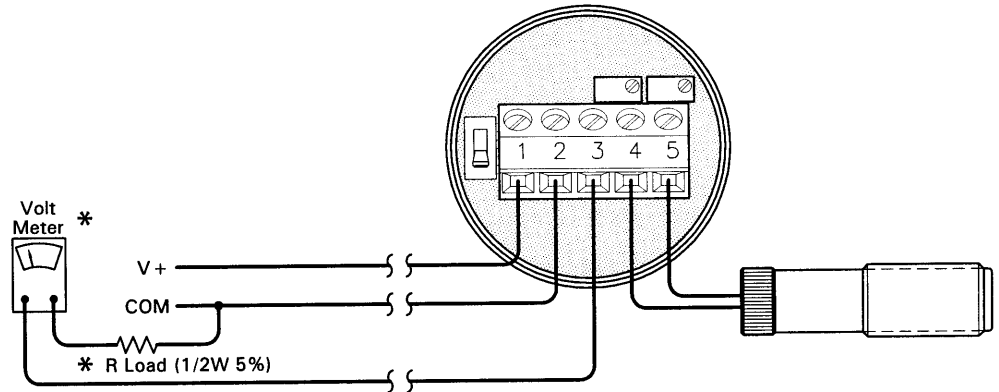
$$R \text{ Load} \geq \frac{V_s - 2 \text{ V}}{0.05 \text{ A}}$$

V_s	R Load
12 V	$\geq 200 \Omega$
24 V	$\geq 440 \Omega$



Current Mode (3 wire)

V_{out}	R Load
0-5V	$= 250 \Omega$
0-10V	$= 500 \Omega$



- * Note:
1. Load resistor to be installed outside the hazardous area.
 2. Conduct measurements outside the hazardous area.