

Avtron XRB2 Intrinsic Safety Isolator



Isolator for Class/Div & Class/Zone Level 1 Applications of Avtron SMARTSafe™ Incremental Encoders

Avtron XRB2 Intrinsic Safety Isolator

XRB2

- | cULus Listed, Class I, Div 1, Groups A, B, C, D
- | cULus Listed, Class I, Zone 0
- | ATEX Rated for Zone 1 and Zone 21
- | IECEx Rated for Zone 1 and Zone 21
 - | Up to 1000' [300m] Cable Length
 - | Fully Potted Electronics
- | Compatible with All Major Drive Brands and Controllers
- | Protected Against Wiring Errors
- | Designed for Avtron SMARTSafe™ Incremental Encoders
 - | 3 Year No-Hassle Warranty

XRB2 intrinsic safety isolators are the key to providing complete Level 1 protection including: (cULus Class I, Div 1; Class I, Zone 0, ATEX Zone 1 & 21 "ia"; and IECEx Zone 1 & 21 "ia") for [SMARTSafe™ incremental encoders](#) with quadrature output.

The XRB2 ensures the SMARTSafe encoder system meets hazardous duty UL and CSA, ATEX & IECEx safety standards. Also available: a full range of SMARTSafe rotary encoders to meet your application needs, including the ultra-high-shock and vibration hollow shaft model (XR47), heavy duty hollow shaft (XR45), shafted models (XR4F, XR485), and no-bearing modular encoders (XR56, XR67, XR85, XR115, XR125, XR850), and stand-alone sensors (XR5, XR12, XR97).

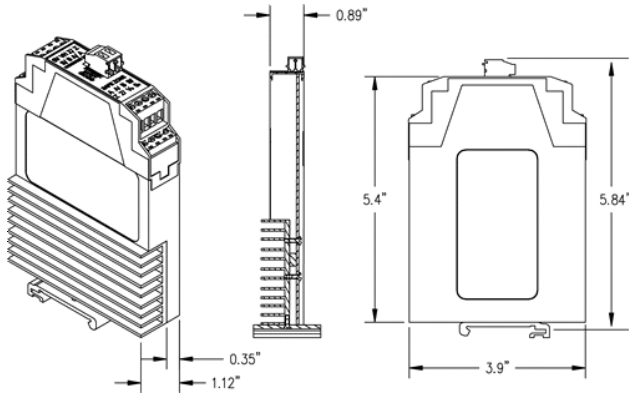
Unlike the competition, the Avtron SMARTSafe encoder systems including the XRB2 are fully protected against short circuits, power-to-output wiring, and output-to-ground faults at every point. Wiring errors won't harm this system!

Competitive intrinsic safety barriers for encoders often limit the available frequency throughput, or have undesirable voltage droop under load that limit cable length severely. The XRB2 has full throughput for Avtron quadrature encoders even at high PPRs, and the XRB2 allows the use of maximum cable lengths through its innovative stable-voltage design.

Select an Avtron SMARTSafe rotary encoder to eliminate encoder problems, and include the XRB2 as part of the system to meet UL and CSA system safety standards in your hazardous duty application!



OUTLINE DRAWING



Check out our website for more detailed specifications, drawings, and application installation instructions. www.avtronencoders.com

MORE XRB2 ADVANTAGES

- Provides Level 1 Encoder Protection
- Withstands direct short circuits in both safe zone and output connections

XRB2 SPECIFICATIONS

Operating Power: 12-24VDC, nom. 200mA (w/SMARTSafe™ encoder); max 440mA

Output Voltage: 12-24V, nom.

Output Format: Incremental A Quad B with marker (A,A-, B,B-, Z,Z- quadrature)

Frequency Range: 0 to 165 KHz

Maximum Cable Length: 1000' [300m] XRB2 to control; 500' [152m] XRB2 to encoder*

Temperature: -40°C to 80°C (Storage -40°C to 100°C)

Environmental: IP54, cabinet mount

Vibration: 5-2000Hz, 18Gs

Weight: 1.1 lbs. [0.5 kg]

*XRB2 to encoder allowable cable length may be affected by cable characteristics and gas group

Certifications:

Associated apparatus for installation in Unclassified locations.

Provides intrinsically safe circuits for use in metals, marine, and oil & gas applications

cULus Class I, Division 1 Listed, (Gas) Groups A, B, C, D

cULus Class I, Zone 0, Group IIC Listed [AEx ia Ga] IIC



ATEX/IECEx, Zone 1, Group IIC [Ex ia IIC Gb] [Ex ia IIC Db]



SELECTION GUIDE

Model
XRB2

Nidec

**AVTRON
ENCODERS**

Nidec-Avtron Makes the Most Reliable Encoders in the World

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All dimensions are in inches [millimeters].
Specifications and features are subject to change without notice.
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