

# AC915-M12A Series

Nonincendive Intrinsically Safe Accelerometer, CSA North America Class I Div 1, Class II Div 1, Class III and IECEx/ATEX Zone 0,1,2 and 21,22 Approved Accelerometer, Top Exit 4 Pin M12 Connector, 100 mV/g, ±10%



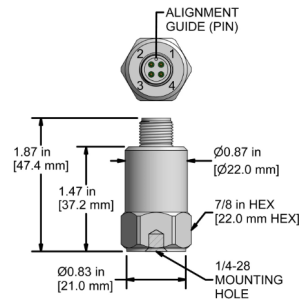
## Regulatory Information

|                                                 |                                         |
|-------------------------------------------------|-----------------------------------------|
| CSA 221421                                      | Ex ia I Ma                              |
| CSA 26CA80263367X                               | T3: Ta @ -40°C to +121°C                |
| CLI, DIV 1, GRP A, B, C and D                   | T4: Ta @ -40°C to +80°C                 |
| CLII, DIV 1, GRP E, F and G; CLIII              | Mining Group I: Ta @ -40°C to +121°C    |
| Ex ia IIC T3-T4 Ga                              | T147°C: Ta @ -40°C to +121°C            |
| Ex ib IIIC T135°C...T147°C Db                   | T135°C: Ta @ -40°C to +80°C             |
| CLI, ZN 0, AEx ia IIC T3-T4 Ga                  | Install per drawing INS10210            |
| ZN 21, AEx ib IIIC T135°C...T147°C Db           | Refer to product manual MNX10134        |
| T3: Ta = -40°C to +121°C                        |                                         |
| T4: Ta = -40°C to +80°C                         |                                         |
| T147°C: Ta = -40°C to +121°C                    | Sira 15ATEX2152X                        |
| T135°C: Ta = -40°C to +80°C                     | Ex ia IIC T3 -T4 Ga                     |
| Install per drawing INS10187                    | T3: Ta @ -40°C to +121°C                |
| Refer to product manual MNX10127                | T4: Ta @ -40°C to +80°C                 |
|                                                 | Ex ib IIIC T135°C ... T147°C Db         |
| 1600 ft (488 m) Maximum Allowable               | T147°C: Ta @ -40°C to +121°C            |
| Integral Cable Length                           | T135°C: Ta @ -40°C to +80°C             |
| Approved Cabling: CB102, CB103*, CB111, CB190*, | Ex ia I Ma                              |
| CB193*, CB206, CB296 (*Approved for Use in T4   | Ta @ -40°C to +121°C                    |
| Applications Only)                              | Install per drawing INS10211            |
| Requires one IS111-1B Intrinsic Safety Barrier  | Refer to product manual MNX10135        |
|                                                 | Connector Exit Entity Parameters:       |
| IECEx SIR 15.0060X                              | Ui = 28 Vdc, Ii = 120 mA, Pi = 1W, Ci = |
| Ex ia IIC T3-T4 Ga                              | 0nF, Li = 0µH                           |
| Ex ib IIIC T135°C ... T147°C Db                 |                                         |

## AC915-M12A

### 4 Pin Connector

| Connector Pin | Polarity         |
|---------------|------------------|
| 1             | (+) Signal/Power |
| 2             | (-) Common       |
| 3             | Not Used         |
| 4             | Not Used         |



### Stock Product

| Specifications              | Standard             | Metric         | Specifications              | Standard                 | Metric                       |
|-----------------------------|----------------------|----------------|-----------------------------|--------------------------|------------------------------|
| Part Number                 | AC915-M12A           | M/ or M8/AC915 | <b>Environmental</b>        |                          |                              |
| Sensitivity (±10%)          | 100 mV/g             |                | Operating Temperature Range | -40 to 250 °F            | -40 to 121 °C                |
| Frequency Response (±3dB)   | 30-900,000 CPM       | 0.5-15000 Hz   | Maximum Shock Protection    | 5,000 g, peak            |                              |
| Dynamic Range               | ± 80 g, peak         |                | Electromagnetic Sensitivity | CE                       |                              |
| Transverse Sensitivity      | ≤5%                  |                | Sealing                     | Welded, Hermetic         |                              |
| <b>Electrical</b>           |                      |                | Submersible Depth           | 200 ft.                  | 61 m                         |
| Settling Time               | <3 Seconds           |                | <b>Physical</b>             |                          |                              |
| Voltage Source              | 18-28 VDC            |                | Sensing Element             | PZT Ceramic              |                              |
| Constant Current Excitation | 2-10 mA              |                | Sensing Structure           | Shear Mode               |                              |
| Spectral Noise @ 10 Hz      | 6.5 µg/√Hz           |                | Weight                      | 3.2 oz                   | 90 grams                     |
| Spectral Noise @ 100 Hz     | 2 µg/√Hz             |                | Case Material               | 316L Stainless Steel     |                              |
| Spectral Noise @ 1000 Hz    | 1.8 µg/√Hz           |                | Mounting Thread             | 1/4-28 Blind Tapped Hole |                              |
| Output Impedance            | <100 ohm             |                | Connector (Non-Integral)    | 2 Pin MIL-C-5015         |                              |
| Bias Output Voltage         | 10-14 VDC            |                | Resonant Frequency          | 1,380,000 CPM            | 23000 Hz                     |
| Case Isolation              | >10 <sup>8</sup> ohm |                | Mounting Torque             | 2 to 5 ft. lbs.          | 2,7 to 6,8 Nm                |
|                             |                      |                | Mounting Hardware Supplied  | 1/4-28 Stud              | M6x1 or M8x1.25 Adapter Stud |
|                             |                      |                | Calibration Certificate     | CA10                     |                              |

## Typical Frequency Response

