



# 3-WIRE EXPLOSION PROOF TRANSMITTER

Gas Detection For Life

**T3A**



## Features

- Electrochemical, Infrared or catalytic bead sensors
- Wire powered (3-Wire), 12 to 35 VDC operating voltage
- Operating temperature range -40°C to +54°C
- LCD display with LED back-light
- 3 Push-button interface (ADD, MENU, SUB)
- Non-intrusive buttons using magnetic wand
- 2 Individually configurable alarms
- 2 Front panel LED indicators (amber and red)
- 2 Optional fully programmable alarm relays (dry contacts)
- Output options: 4-20mA (3-wire) analog, RS-485 Modbus, both standard

## Industry Applications

- Petrochemical plants, Refineries
- Water & wastewater treatment plants
- Pulp & paper mills
- Manufacturing facilities
- Chemical plants

The T3A Series Gas Detector ambient air hazardous gas detector is a versatile assembly that uses an electrochemical, infrared, catalytic bead sensor element to detect a variety of gases. Wired power (12 to 35 VDC) with 4-20 mA analog and RS-485 Modbus outputs standard. Magnetic switches allow for non-intrusive calibration while in the field as well as full system settings and diagnostics.

| Gas Type      | Range                | T <sub>90</sub> | Hazard Classification |
|---------------|----------------------|-----------------|-----------------------|
| LEL Catalytic | 0 - 100% (0-5% Vol.) | < 90 sec.       | Class 1, Div 1        |
| CL2           | 0 - 10 ppm           | < 60 sec.       | Class 1, Div 2        |
| CLO2          | 0 - 1 ppm            | < 120 sec.      | Class 1, Div 2        |
| CO            | 0 - 300 ppm          | < 30 sec.       | Class 1, Div 1        |
| CO2           | 0 - 5% vol.          | < 30 sec.       | Class 1, Div 1        |
| ETO           | 0 - 10 ppm           | < 120 sec.      | Class 1, Div 2        |
| H2S           | 0 - 100 ppm          | < 30 sec.       | Class 1, Div 1        |
| H2S 2K        | 0 - 2000 ppm         | < 25 sec.       | Class 1, Div 1        |
| HCL           | 0 - 30 ppm           | < 300 sec.      | Class 1, Div 2        |
| HCN           | 0 - 30 ppm           | < 70 sec.       | Class 1, Div 2        |
| HF            | 0 - 10 ppm           | < 90 sec.       | Class 1, Div 2        |
| LEL-IR        | 0 - 100% (0-5% Vol.) | < 30 sec.       | Class 1, Div 1        |
| LEL-IR-HC     | 0 - 100% LEL         | < 30 sec.       | Class 1, Div 1        |
| NH3           | 0 - 100 ppm          | < 90 sec.       | Class 1, Div 2        |
| NH3 300       | 0 - 300 ppm          | < 120 sec.      | Class 1, Div 2        |
| NH3 A         | 0 - 1000 ppm         | < 120 sec.      | Class 1, Div 2        |
| NO2           | 0 - 20 ppm           | < 25 sec.       | Class 1, Div 2        |
| O2            | 0 - 25 Vol.          | < 15 sec.       | Class 1, Div 1        |
| O3            | 0 - 5.0/100 ppm      | < 30 sec.       | Class 1, Div 2        |
| PH3           | 0 - 5 ppm            | < 30 sec.       | Class 1, Div 2        |
| SO2           | 0 - 20 ppm           | < 35 sec.       | Class 1, Div 1        |

| Product Specifications                             |                |                                                                                                                                                                                                                                                                                                    |
|----------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sensor Type                                        |                | Electrochemical, infrared, catalytic bead                                                                                                                                                                                                                                                          |
| Operating Voltage                                  |                | Wired power (3-Wire) 12 to 35 VDC                                                                                                                                                                                                                                                                  |
| Power Draw                                         |                | 2 Watts maximum                                                                                                                                                                                                                                                                                    |
| Protection                                         |                | Power electromagnetic interference (EMI) filter<br>4-20 mA surge suppression<br>RS-485 surge suppression                                                                                                                                                                                           |
| Display Screen                                     |                | 102x64 Resolution graphical LCD screen transfective (sunlight readable) with white LED backlight                                                                                                                                                                                                   |
| Interface                                          |                | 3 Push-buttons (MENU, ADD and SUB)<br>3 Magnetic non-intrusive switches for calibration                                                                                                                                                                                                            |
| Customizable Settings                              |                | 2 Individual-configurable alarm LED/relay set-points                                                                                                                                                                                                                                               |
| Temperature Range                                  |                | -40°C to +54°C (-40°F to +129°F)                                                                                                                                                                                                                                                                   |
| Output (digital)                                   |                | RS-485 modbus                                                                                                                                                                                                                                                                                      |
| Wired (Analog) Output                              |                | 4-20 mA (3-Wire)<br>Fault terminal, wet relay contact. Has it's own power.<br>Optional 2 dry-contact relays with replaceable 4 amp fuses                                                                                                                                                           |
| Product Dimensions                                 |                | 5.5 in. L x 6 in. W x 7 in. H (8 in. W x 17 in. H Max. dimensions with attachments)                                                                                                                                                                                                                |
| Total Weight                                       |                | 6 lbs.                                                                                                                                                                                                                                                                                             |
| Remote Sensor Kit<br>(Optional Additional Feature) |                | Remote sensor kit with enclosure (5 pin)<br>• Electrochemical sensor max. length: 250 feet<br>• Infrared sensor max. length: 40 feet<br>• Catalytic bead sensor max. length: 15 feet                                                                                                               |
| Hazardous Location<br>Approvals                    | Main Enclosure | Certified explosion / flame proof CQPS <sub>US</sub><br>Class I, Division 1 & 2, Groups B, C & D<br>Nema 3, 4, 4X, 7 (B, C, D) 9 (E, F, G)<br>Temp.= -20°C to +60°C                                                                                                                                |
|                                                    | Sensor Housing | Certified explosion / flame proof CQPS <sub>US</sub><br>Class I, Division 1 & 2, Groups B, C & D<br>Temp.= -40°C to +60°C<br>Note: Certification only applies to some gases. Toxic gases not certified for Div. 1 locations are suitable for Div. 2 applications but have no third party approval. |
| Controllers                                        |                | Controllers compatible with all RKI Beacon controllers, as well as most DCS / PLC systems:<br>Beacon 110, Beacon 200, Beacon 410A, Beacon 800, and MC-6400                                                                                                                                         |
| Warranty                                           |                | 1-Year warranty for electronics and sensor                                                                                                                                                                                                                                                         |

Specifications subject to change without notice.

Made in the USA



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## Authorized Distributor: