

# FALCO

FIXED VOC DETECTOR



DESIGNED FOR CONDENSING ATMOSPHERES  
AND EXTREME WEATHER.

[ionscience-usa.com](http://ionscience-usa.com)

Unrivalled Gas Detection.





# WORLD'S SAFEST PID TECHNOLOGY IS NOW EVEN SAFER! FALCO EVEN WORKS WITHIN CONDENSING ATMOSPHERES AND EXTREME WEATHER.

## Ultimate performance

- The only VOC detector specifically designed for extreme weather
- Typhoon Technology stops condensation forming within the PID
- Cutting-edge sensor performance minimizes drift & downtime

## Ultimate safety

- Eliminates false readings found with other PIDs
- Multi-colored status display seen from 20 meters in sunlight
- Fitted with long-life lamp for one year of continuous use
- Exd approved
- Intrinsically Safe; meets ATEX, IECEx, North American and Canadian standards

## Ultimate flexibility

- Pumped or diffused models available
- Pumped unit ideal for difficult to access locations
- Diffused model reduces servicing costs
- Four detection ranges available
- Selectable response factor for varying VOC selection

...PID detection you can trust!



Diffused 10.6eV model

FALCO is the latest generation of fixed photoionization detectors (PIDs) from ION Science that continuously detect a wide range of volatile organic compounds (VOCs).

Unique to FALCO is its revolutionary Typhoon Technology safeguarding the sensor from condensing moisture for added reliability in severe weather conditions. In addition FALCO incorporates patented Fence Electrode Technology, which negates the effects of airborne humidity.

FALCO gives you cutting-edge performance; reliability, accuracy and results you can trust so you can be sure workforce and plant receive on-going maximum protection. With its humidity resistance and anti-contamination design drift is minimized and run-time extended, saving both time and cost to your business.



Pumped TAC  
(10.0eV) model



Offering the ultimate in safety FALCO overcomes false readings found with other PIDs. Its multi-colored LED status display can be seen from a distance of twenty meters in direct sunlight ensuring you are clearly alerted to hazards present.

FALCO has an externally located Intrinsically Safe sensor for quick and easy servicing without the need for a hot work permit. Dual certification allows FALCO to be serviced in a hazardous environment without having to remove power.

Simple to operate FALCO has an intuitive user interface. It has five magnetic switches with LED confirmation, a high contrast OLED screen and graphical interface ensuring installation and servicing are both quick and easy. RS485 (Modbus®), 4-20 mA and Relay outputs are standard for all models. The Relay outputs are configurable for either high and low alarms, fault conditions

or test cycle synchronization. FALCO offers the ultimate in flexibility and can be purchased as one of four detection ranges in either a pumped or diffused variant. With a diffused model servicing costs are kept to a minimum with no pump to maintain.

### Applications include:

- Manufacturing
- Processing
- Refineries & Petrochemical
- Chemical
- Waster water treatment
- Pulp & paper
- Pharmaceutical
- IAQ
- Solvent recovery systems
- Industrial painting & coating
- Fenceline monitoring
- Outdoor air quality
- Tankfarms
- Bunkering

FALCO with 10.6eV lamps				
Range	0-10 ppm	0-50.0 ppm	0-1000 ppm	0-3000 ppm
Sensitivity	0.001 ppm	0.01 ppm	0.1 ppm	1 ppm
Pumped	✓	✓	✓	✓
Diffused	✓	✓	✓	✓

FALCO TAC with 10.0eV electrode stack				
Range	0-10 ppm	0-50.0 ppm	0-1000 ppm	0-3000 ppm
Sensitivity	0.001 ppm	0.01 ppm	0.1 ppm	1 ppm
Pumped		✓		
Diffused		✓		

### Extend your FALCO instrument warranty

Registering your product online within one month of purchase will extend its warranty. Visit [www.ionscience-usa.com/instrument-registration](http://www.ionscience-usa.com/instrument-registration)

## Technical specifications

### Sensor

- Photoionization

### Detection ranges and sensitivity with 10.6eV lamp fitted

- 10.0 ppm\* 0.001 ppm
- 50.0 ppm\* 0.01 ppm
- 1000 ppm\* 0.1 ppm
- 3000 ppm\* 1 ppm

### Detection ranges and sensitivity with 10.0eV lamp fitted

- 50.0 ppm\* 0.01 ppm

### Detection time (T90)

- Diffused models: <30 seconds\*\*
- Pumped models: Variable

### User interface

- Display: OLED high contrast white on black: 128 (w) x 64 (h) pixels
- Screen size: 35 mm (w) x 17.5 mm (h)
- 5 magnetic switches with LED confirmation (up, down, left, right & enter). Magnetic actuator supplied.

### Status indicator

- Bright visible status indicator: RED, AMBER, GREEN

### Certification

- II 2G Exd ib IIC T4 Gb
- Class 1, Div 1 Groups ABCD T4
- ISO9001:2008

### Environmental specification

- Without pump: -40 °C to 60 °C (-40 °F to 140 °F)
- With pump: -20 °C to 60 °C (-4 °F to 140 °F)
- 0-100% RH and condensing humidity

### Mechanical interface

- 2 x cable entry points with 3/4" NPT threads (left and right)
- 2 x 3/4" NPT to M20 Stainless steel (supplied)

### Dimensions

- Without pump: 200 (h) x 190 (w) x 125 (d) mm
- With pump: 290 (h) x 190 (w) x 125 (d) mm

### Mounting points

- 2 x M8

### Input power

- Working voltage: 12 to 40 Vdc
- Max. power: 7 watts

FALCO V1.8 USA This publication is not intended to form the basis of a contract and specification can change without notice.

\* All specifications quoted are at calibration point and under the same ambient conditions. Specifications are based on isobutylene calibration at 20 °C and 1000 mBar.

\*\* When set to continuous measurement

Modbus® is a registered trademark of Schneider Electric

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