RAEGuard 2 PID

Honeywell

**RAEGuard 2 PID
Fixed photoionisation detector (PID)**

RAEGuard 2 PID

Reduced maintenance costs
- Easy to remove sensor module in hazardous locations without use of tools

No false alarms
- Large UV lamp and better sealing allows greater sensitivity, faster response times and better resolution which results in a greater reliability

Reduced life costs
- Unique lamp design makes the product more robust and enables longer life time

Availability
- Continuous VOC monitoring in hazardous and non-hazardous locations

Provides faster response times
- The sample flow-through design powered by an internal diaphragm pump provides faster response times

Accurate readings
- Guaranteed by humidity compensation even in humid environments

Suitable for a wide range of applications
- Over 200 correction factors[1] are pre-programmed and allow users to display readings of specific target gas

Key applications and their VOCs
- Benzene in refinery analyser shelters
- Ammonia in industry
- Vinyl Chloride in chemical manufacturing
- Toluene or Ammonia in semi-conductor plants
- Chlorine Dioxide, Hydrogen Peroxide, Ozone in pulp and paper
- Solvent and chemicals storage
- Phenol and DME in pharmaceutical
- Toluene in printing
- Air quality
- Methyl Ethyl Ketone in paint spray booths
- Heat transfer fluids
- Acetone, Xylene, Phenol in medical, pathology, histology lab

Status at a glance

The RAEGuard 2 PID operates on 10 to 28 VDC and provides an analogue (4-20mA) three-wire signal output, and RS-485 Modbus digital signal output.

Calibration and maintenance have been greatly simplified as the digital PID module can be easily removed in hazardous locations for calibration or maintenance.

The RAEGuard 2 PID has a graphic display and LED light status indicator for fault and alarm conditions. In addition, low, high, and fault relays* can be configured to trigger external alarms or process controls.

A magnetic key interface enables the detector to be calibrated and operational parameters adjusted with the explosion-proof enclosure in place.

[1]Relays and Correction factors are disabled when using the 1 to 1000 ppm DigiPID

General Specifications

RAEGuard 2 Fixed Sensor Head

DigiPID Sensor Module

RAEGuard 2 Fixed Sensor Head Specifications

Basic parameters

Working current	DC 10 to 28V, 210mA at 24V
Power	<5W
Output	• 4-20mA • Three-level programmable alarm relays (30 VDC, 2A) • RS-485 (Supports Modbus)
Sampling	Internal diaphragm pump, up to 500cc/min
IP rating	IP-65
Mechanical interface	3/4" NPT Male
Installation	50.8 mm (2") pipe-holding or wall mounting
User interface	Three-key magnetic bar adjustment
Calibration	Two points
Warranty	1 year for the pump, 2 years for the housing and electronics

Environmental parameters

Temperature	-20°C to +55°C (-4°F to 131°F)
Humidity	0 to 95% relative humidity, non-condensing
Pressure	90 to 110kPa

Display

Display	128 x 64 matrix backlit LCD, supports graphic display

Physical parameters

Size	10.1" L x 7.9" W x 4.2"H (257 x 201 x 107 mm)
Weight	3.5 kg (7.7 lbs)
Material	316 stainless steel

Certification

ATEX	Ex II 2(1)G, Ex d [ia Ga] IIC T4 Gb
UL/CSA	Class 1, Div. 1, Groups ABCD T4
IECEx	Ex d [ia Ga] IIC T4, Gb

DigiPID Sensor Module Specifications

Power supply	5V ±0.25V DC
Current	110mA max
Power consumption	< 0.6W
Measuring range	0.01 to 100 ppm 0.1 to 1000 ppm 1 to 1000 ppm (No relays or correction factors)
Resolution	10 ppb, 1 ppm (depends on model)
Response time	Pumped (T90): <30 s
Calibration	Two-point off-line and field calibration Optional three-point calibration
Accuracy	±2% for calibration point
Analogue output	0.5 - 2.5V (ro=1.0k)
Digital interface	Serial Interface (UART) Transmit (Tx): 3.3V TTL Receive (Rx): 3.3V TTL
Warranty	2 years for the lamp, 1 year for the sensor, pump, electronics and housing
Operating temperature	-20ºC to +55ºC (-4ºF to +131ºF)
Humidity	0 to 95% RH non-condensing
EMI/RFI	Highly resistant to EMI/RFI compliant with EMC directive 2004/108/EC
Package	316 stainless steel Spray watertight for IP-65 rating Dust membrane for sensor front protection
Size	49 mm x 150.8 mm (1.92" D x 5.94" L)
Weight	< 550g (19.4 oz)

Certification

ATEX	II 1 G EX ia IIC T4 and 1M1 Ex ia I
UL/CSA	Class I, Div. 1, Groups A B C D T4
IECEx	Ex ia IIC T4 Ga and Ex ia I

RAEGuard Ordering Options

RAEGuard 2 Fixed Sensor Head Includes:	• Explosion-proof stainless steel enclosure with LCD display, integrated sampling pump and relays, digital connector for external sensors • Magnetic key
DigiPID Sensor Module Includes:	• Complete stainless steel PID sensor module with UV lamp and digital connector output for use with RAEGuard 2 • Choice of detection range 0.01 to 100 ppm, 0.1 to 1000 ppm or 1 to 1000 ppm • DigiPID maintenance kit
RAEGuard 2 PID Kits Includes:	• All RAEGuard 2 Fixed Sensor Head contents and all DigiPID contents as stated above

Honeywell Gas Detection

Honeywell is able to provide gas detection solutions to meet the requirements of all applications and industries. Contact Honeywell in the following ways.

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