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 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 Analytics Gas Detection

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