

# GD10P

## IR POINT GAS DETECTOR

**tyco**  
Gas & Flame Detection



**The GD10P detector is the benchmark for combustible gas detection on offshore installations. It has set the standard for gas detectors in the areas of safety, stability and low maintenance. The GD10P comes with a 5 year warranty.**



The GD10P has been designed with features that provide an effective response to the detection of gas hazards in a wide range of industrial environments from boiler rooms to offshore petrochemical installations.

These infrared gas detectors differ from all other models, because they utilize silicon based solid-state infrared sources. The complete optomechanical design and construction is so stable that an ultra fast speed of response can be achieved whilst providing unparalleled service life and detector stability, thus saving on maintenance and service costs.

We offer the longest combined detector and IR source warranty on the market.

For retrofit applications, a bridge interface is available allowing the detector to be connected directly to catalytic systems, using the existing cabling and control modules.

The GD10P is supplied with worldwide performance and hazardous area approvals and is suitable for use in SIL 2 and SIL 3 systems.

An industry standard HART® interface is used for configuration of the fast response time and special fault levels as well as access to extend maintenance data.

| FEATURES   | BENEFITS  |
|--|---|
| Solid state IR sources (SimSource™)                | Superior long term performance compared to filament lamps                       |
| High IR source flash rate                          | Improved stability and speed of response  |
| True dual path; double compensation optical design | No recalibration, monitors and accounts for all changes in optical path         |
| Selectable response rate                           | Fastest IR point detector on the market, ideal for speed critical applications  |
| Dual layer weather protector                       | No mesh, gauze, hydrophobic filters or sinters = No delay, no failure on demand |
| Early dirty optics warning                         | Improved preventative maintenance   |
| Integral termination compartment                   | Reduced installation time, the unit is ready out of the box                     |
| Low power consumption                              | Reduces load on UPS   |
| Independently heated mirror and lens               | High performance detection in rough environmental conditions                    |



*Better detection. Better protection.*

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### TECHNICAL DATA

#### GENERAL

|                  |   |
|------------------|---|
| Detection method | IR-absorption, dual wavelength, dual path                           |
| IR-Source        | Solid state IR source, 50Hz flash                                   |
| Gases detected   | Hydrocarbons, see separate data sheet for CO <sub>2</sub> detection |
| Self-test        | Continuous  |
| Calibration      | Factory set, no field recalibration needed                          |
| Configuration    | HART (response time, fault levels)                                  |

#### PERFORMANCE

|                     |  |               |
|---------------------|--|---------------|
| Lifetime stability* | ±5% of full scale (FS) reading                                 |               |
| Accuracy*           | ±3% FS between 0-50% reading<br>±5% FS between 50-100% reading |               |
| Response time       | Methane  | Other Gases   |
|                     | T20=0.3 sec  | T20 < 1.0 sec |
|                     | T50=0.7 sec  | T50 < 2.5 sec |
|                     | T90=1.4 sec  | T90 < 6.0 sec |
| Start-up time*      | Less than 60 sec.  |               |
|                     | * Refers to -20°C to 45°C                                      |               |

#### OUTPUT SIGNAL

|   |   |
|---|---|
| Standard                                | Current source 4 - 20 mA, max. load impedance 500 Ohm |
| Option                                  | Current sink 4 - 20 mA                                |
| HART®                                   | Maintenance and configuration (Default)               |
| Detector warnings:                      | (Default)   |
| -Early clean optics                     | Prewarning (2 mA)                                     |
| -Clean optics                           | Dirt accumulation too high (1 mA)                     |
| -Detector failure                       | Internal fault (0 mA)                                 |
| (Note: Warning levels are configurable) |   |

#### ELECTRICAL

|                   |  |
|-------------------|--|
| Power supply      | 24 V DC, range 18 - 32 V DC                        |
| Power consumption | Approx. 3.5 W                                      |
| Connection        | 3 wires (0.5mm <sup>2</sup> - 2.5mm <sup>2</sup> ) |
| Cable entry       | M20 EExe cable gland                               |

#### TEMPERATURE RANGE

|                      |                                    |
|----------------------|------------------------------------|
| Storage              | -40°C to + 70°C (-40°F to + 158°F) |
| Operating            | -40°C to + 65°C (-40°F to + 149°F) |
| Humidity (operation) | 100% RH                            |

#### EXPLOSION PROOF HOUSING

|                     |  |
|---------------------|--|
| Main compartment    | EExd IIC T6  |
| Terminal comp.      | EExe   |
| Protection category | IP66/IP67 DIN 40050                                  |
| Housing material    | Stainless steel SIS2343 (ASTM 316)                   |
| Weight              | Approx. 2.9 kg (6.4 Lbs)                             |
| Dimensions          | 264L x 104W x 106H (mm)<br>10.4 x 4.1 x 4.2 (inches) |

#### WARRANTY

5 year full warranty on complete instrument 15 year warranty on the IR-sources

#### APPROVALS

|         |                                     |
|---------|-------------------------------------|
| ATEX    | 07ATEX1438                          |
| CSA     | 1773527 (100% LEL Methane)          |
| IECEX   | NEM 07.0006                         |
| INMETRO | AEX-11698                           |
| MED     | B-5901                              |
| ABS     | # 04-LD444057-PDA                   |
| SIL     | Qualified for SIL2 and SIL3 systems |

#### VERSIONS

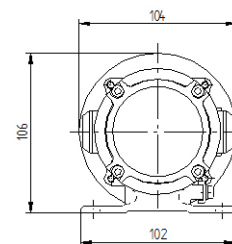
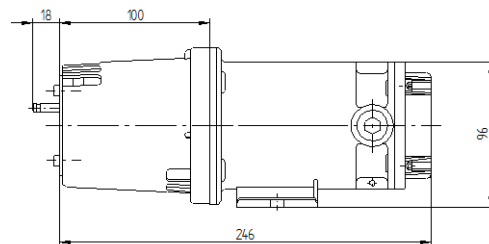
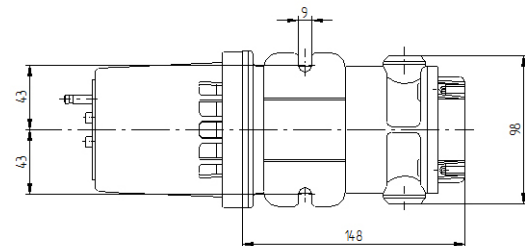
|   |                            |
|---|----------------------------|
| Gas   | Ranges                     |
| Methane   | 0 - 100% LEL, 0 - 100% Vol |
| Propane   | 0 - 100% LEL               |
| Other versions are available, please contact your dealer. |                            |

#### FRONT COVER

|                      |                                  |
|----------------------|----------------------------------|
| Required, select one |                                  |
| -Weather protection  | For standard point detector      |
| -Sample flow housing | For sampling systems and testing |
| -Duct mount kit      | Through wall installation        |

#### ACCESSORIES

|                   |  |
|-------------------|--|
| Mosquito net      | Extra insect protection                  |
| Sun shade         | Shielding for extreme radiation exposure |
| Handheld Terminal | For maintenance                          |



All dimensions  
in millimeters