

# Dräger Polytron<sup>®</sup> 5310 IR Detector for flammable gases and vapours

The Dräger Polytron<sup>®</sup> 5310 IR is a cost effective explosion-proof transmitter for the detection of flammable gases in the lower explosion limit (LEL). It uses an infrared DrägerSensor<sup>®</sup> IR that can be configured for methane, propane, or ethylene. A 3-wire 4 to 20-mA analogue output with relays makes it compatible with most control systems.



### **Benefits**

#### Poison-resistant and fail-safe – the DrägerSensor IR

DrägerSensor IR is a cost-effective alternative to catalytic bead sensors and offers a number of benefits. It is resistant to poisonous chemicals that can shorten a catalytic pellistor's life. Long life optics have lower maintenance costs compared to pellistors. IR technology is inherently fail-safe without any undisclosed drawbacks. These benefits provide improved performance with excellent long-term stability and fast response times.

### Same design, same operating principles

Polytron 5310 belongs to the Dräger Polytron 5000 series. All transmitters in this series have the same design and user interface. This allows for uniform operation with reduced training and maintenance requirements. The backlit display shows status information clearly with quick access to functions using a non-intrusive magnetic wand. The gas concentration and measurement unit are displayed during normal operation. Coloured LEDs (green, yellow and red) provide additional alarm and status information.

### Three relays for controlling external equipment

The Dräger Polytron 5310 can also be supplied with three integrated relays upon request. This enables you to use it as an independent gas detection system with two adjustable concentration alarms and one fault alarm. Audible alarms, signal lights, or similar devices can thus be controlled locally without an additional cable between the transmitter and central controller.

#### Safe, robust housing for every application

The Polytron 5310 features a Class I, Div. 1 rated explosion proof enclosure made from aluminum or stainless steel, making it suitable for a wide range of environmental conditions. A protection type "e" version includes a convenient docking station that allows installation in hazardous atmospheres without running conduit (where approved) and this also facilitates pre-assembly.

#### Make the impossible possible with the remote sensor

An available remote sensor condulet housing allows the sensor to be installed up to 30 metres away from the Polytron transmitter. The sensor splash guard with integrated tubing nipple enables one person to perform the full calibration of a remote mounted sensor from the transmitter.

## System Components







### Duct mount kit

The duct mount kit enables gas monitoring inside ventilation ducts while keeping the transmitter outside.

## Accessories



### **Related Products**



Place You Put Your Faith

# Technical Data

| Туре   | Explosion proof / flameproof enclosed transmitter ("d") or combined with increased safety ("d/e") |   |                                    |  |
|--|---|---|------------------------------------|--|
| Gases  | Flammable gases and vapours   |   |                                    |  |
| Measuring range                              | 0 to 100% LEL   |   |                                    |  |
| Display                                      | Backlit 4 digit LCD; 3 Status LEDs (green/yellow/red)   |   |                                    |  |
| Performance Characteristics                  | Accuracy/repeatability  | Sensitivity   | ≤± 2 % LEL                         |  |
|  | Response time   | Т90   | 30 seconds (with splash guard      |  |
| Electrical data                              | Signal output analogue  | Normal operation  | 4 to 20-mA                         |  |
|  |   | Maintenance   | Constant 3.4-mA or 4-mA            |  |
|  |   |   | ±1 mA 1 Hz modulation;             |  |
|  |   |   | (adjustable)                       |  |
|  |   | Fault   | < 1.2 mA                           |  |
|  | Power supply  | 10 to 30 V DC, 3-wire   |                                    |  |
|  | Relay specification (optional)  | 2 alarm relays and 1 fault relay, single-pole two-way contact 5 A |                                    |  |
|  |   | @ 230 VAC, 5 A @ 30 VDC, resistance-bound                         |                                    |  |
| Environmental c <mark>o</mark> nditions (see | Temperature   | -40 to 65 °C (-40 to 149 °F) without relay                        |                                    |  |
| sensor data sheet)                           |   | -40 to 65 °C (-40 to 149 °F) with relay                           |                                    |  |
|  | Pressure  | 20.7 to 38.4 inch Hg / 700 to 1,300 mbar                          |                                    |  |
|  | Humidity  | 0 to 100 % r. h., non-condensing                                  |                                    |  |
| Housing                                      | Transmitter housing   | Epoxy coated copper-free aluminum or stainless steel SS316 L      |                                    |  |
|  | Sensor housing  | Stainless steel SS316 L   |                                    |  |
|  | Enclosure protection type   | NEMA 4X & 7, IP65/66/67   |                                    |  |
| Approvals*                                   | Cable entry point   | 3/4 NPT threads or M20 cable gland                                |                                    |  |
|  | Dimensions (H x W x D),   | w/o docking station   | 11.0" x 5.9" x 5.1" /              |  |
|  | approx.   |   | 280 x 150 x 130 <mark>m</mark> m   |  |
|  |   | w/ docking station  | 11.0" x 7.1" x 7.5" <mark>/</mark> |  |
|  |   |   | 280 x 180 x 190 <mark>m</mark> m   |  |
|  | Weight, approx.   | Aluminium w/o docking station                                     | 4.9 lbs / 2.2 kg                   |  |
|  |   | SS316 L w/o docking station                                       | 8.8 lbs / 4.0 kg                   |  |
|  |   | Aluminium w/ docking station                                      | 7.7 lbs / 3.5 kg                   |  |
|  |   | SS316 L w/ docking station  | 11.0 lbs / 5.4 kg                  |  |
|  | Mou P   | Class I, Div 1, Groups A, B, C, I                                 | D;                                 |  |
|  |   | Class II, Div 1, Groups E, F, G;                                  |                                    |  |
|  |   | Class I, Zone 1, Group IIC;T-Code T6/T4                           |                                    |  |
|  | CSA   | Class I, Div 1, Groups A, B, C, D;                                |                                    |  |
|  |   | Class I, Zone 1, Group IIC;                                       |                                    |  |
|  |   | T-Code T6/T4 CSA C22.2 No. 152                                    |                                    |  |
|  | IECEx   | Ex db IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+65 °C; >d version             |                                    |  |
|  |   | Ex db eb IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+65 °C; ∍e version          |                                    |  |
|  |   | Ex tb IIIC T80/130 °C Db  |                                    |  |
|  | ATEX  | II 2G Ex db IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+65 °C; ›d‹ version      |                                    |  |
|  |   | II 2G Ex db eb IIC T6/T4 Gb, -40 ≤ Ta ≤ +40/+65 °C; ∍e version    |                                    |  |
|  |   | II 2D Ex tb IIIC T80/130 °C Db                                    |                                    |  |
|  | CE markings   | ATEX (Directive 2014/34/EU)                                       |                                    |  |
|  |   | Electromagnetic Compatibility (Directive 2014/30/EU)              |                                    |  |
|  |   | Low Voltage (Directive 2014/35/EU)                                |                                    |  |
|  | Performance approval  | TÜV 19 ATEX 8435X   |                                    |  |

# **Ordering Information**

| Dräger Polytron <sup>®</sup> 5310 IR  | Approval Code | Order Number |
|---|---------------|--------------|
| Dräger Polytron <sup>®</sup> 5310 IR d A                                    | XTR 0200      | 83 44 370    |
| Dräger Polytron <sup>®</sup> 5310 IR d A relay                              | XTR 0201      | 83 44 371    |
| Polytron <sup>®</sup> 5xx0 Kit  |               | 83 44 500    |
| (Custom configuration e.g. stainless steel housing)                         |               |              |
| Accessories   |               | Order Number |
| Magnetic wand   |               | 45 44 101    |
| Pipe mount bracket  |               | 45 44 198    |
| Duct mount kit  |               | 68 12 725    |
| IR Connection Kit Polytron <sup>®</sup> 5000/8000                           | 45 44 197     |              |
| PolySoft licence (1 year)   |               | 83 28 600    |
| PolySoft licence (subscription)   |               | 83 28 601    |
| Process adapto <mark>r</mark>   |               | 68 11 330    |
| Splash guard (s <mark>p</mark> are part)                                    |               | 68 10 796    |
| Weather protec <mark>tio</mark> n kit Dräger Polytron <sup>®</sup> 5/6/8xxx |               | 37 02 198    |
| Weather guard   |               | 68 11 135    |
| HART <sup>®</sup> is a registered trademark of the HART Communication       | Foundation.   |              |
| Windows <sup>®</sup> is a registered trademark of Microsoft Corporation.    |               |              |
|   |               |              |

Place You Put Your Faith

### Notes



Not all products, features, or services are for sale in all countries. Mentioned Trademarks are only registered in certain countries and not necessarily in the country in which this material is released. Go to www.draeger.com/trademarks to find the current status.

### CORPORATE HEADQUARTERS

Drägerwerk AG & Co. KGaA Moislinger Allee 53-55 23558 Lübeck, Germany www.draeger.com

#### REGION EUROPE Dräger Safety AG & Co. KGaA Revalstraße 1 23560 Lübeck, Germany Tel +49 451 882 0 Fax +49 451 882 2080

info@draeger.com

### **REGION MIDDLE EAST, AFRICA**

Dräger Safety AG & Co. KGaA Branch Office P.O. Box 505108 Dubai, United Arab Emirates Tel +971 4 4294 600 Fax +971 4 4294 699 contactuae@draeger.com

#### REGION ASIA PACIFIC

Draeger Singapore Pte. Ltd. 61 Science Park Road The Galen #04-01 Singapore 117525 Tel: +65 6872 9288 Fax: +65 6259 0398 asia.pacific@draeger.com

### **REGION CENTRAL**

AND SOUTH AMERICA Dräger Indústria e Comércio Ltda. Al. Pucurui - 51 - Tamboré 06406-100 - Barueri - SP Tel. +55 (11) 4689-4900 relacionamento@draeger.com

ith

Locate your Regional Sales Representative at: www.draeger.com/contact www.genghis.a

