

Dräger Polytron IR Fixed gas detector

The Dräger Polytron IR is an explosion proof infrared gas detector for continuous monitoring of combustible gases and vapors. With its stainless steel body and drift free optics this gas detector is built for harsh offshore environments.



Two models working with different wavelengths cover a broad range of detectable substances.

TECHNICAL INNOVATION

The model type 340 extends the area of applications for the Dräger Polytron IR product line. The different wavelength of the Dräger Polytron IR type 340 offers detection of alkanes at an even higher sensitivity. The possible monitoring of cyclohexane presents one of various options for gas detection resulting from this innovation.

With both transmitter models Dräger Polytron IR type 340 and type 334, Dräger defines the status quo of measurement technology for continuous monitoring of ambient air regarding combustible gases and vapors. The Dräger Polytron IR works based on the physical principle of infrared absorption. The innovative double compensating and non-focussing optics effectively compensates temperature and ageing effects. With its many field proved components it sets the standard for safety relevant measurement requirements. It is approved by certification that the Dräger Polytron IR can be used for SIL 2 (safety integrity level) safety functions.

CONFIGURATION

Flexible is the configurable measuring range for the Dräger Polytron IR: Type 334 offers 0 to 20 %LEL and up to 100 %LEL, alternatively 0 to 100 %v/v for methane. For the type 340, the full scale is configurable from 5 to 100 %LEL. Configuration is menu guided and easy to perform, using a HART® handheld terminal.

CALIBRATION

For the easy calibration of the Dräger Polytron IR, one gas needs to be selected from an internal list, and this gas can differ from the gas to be measured. All data will be converted automatically to the substance to be monitored. So, the intricate use of factors for cross sensitivity calibration is no longer necessary. Thus for all Dräger Polytron IR transmitters there is only one calibration gas required, independent of the substance to be monitored.



Dräger Polytron IR

Gas detector for reliable detection of combustible gases and vapors.

Body of SS 316 stainless steel

Accessories bump test adapter / flowcell

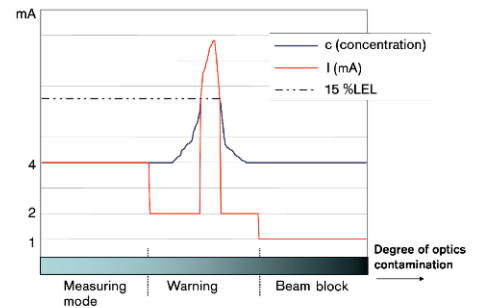
Heated optics

Connector for handheld terminal



**STAND-BY MODE
(PREVENTIVE MAINTENANCE FUNCTION)**

Using a preventive maintenance function – stand-by mode – the Dräger Polytron IR does not immediately shutdown in case of dirty optics. Prior to providing a beam block fault signal, there will be a warning transmitted to the control system. The measurement continues in the background, and it will be switched back to normal operation when measuring gas concentrations of more than 15 %LEL. Alarming in a hazardous situation and with it the complete safety functionality will be maintained.



Stand-by mode
A special warning signal informs about the degree of optics contamination.

TECHNICAL DATA

Type	Explosion proof gas detector with infrared sensor technology
Gases and ranges	Combustible gases 0 to 5 ... 100 %LEL (depending on substance) and vapors 0 to 350 ... ppm (depending on substance)
	Methane 0 to 100 %v/v (type 334 only)
Longterm stability (drift)	< 2 %LEL (measuring range 0 to 100 %LEL methane) / 2 years
Repeatability	< 2 %LEL (measuring range 0 to 100 %LEL methane)
Response time $t_{0..90}$	< 5 seconds
Output signal analog	4 to 20 mA
Output signals digital	HART®, RS 485
Preventive maintenance function	2 mA in case of dirty optics
Fault signal	< 1.2 mA
	Signals for warning and maintenance configurable
Power supply	15 to 30 VDC, < 5 W, 3-wire
Ambient conditions	Temperature - 40 to +65 °C / - 40 to +150 °F (UL variants) - 40 to +60 °C / - 40 to +140 °F (IECEx variants)
	Pressure 700 to 1300 hPa / 23.6 to 32.5 inch Hg
	Humidity 0 to 100 %RH, non-condensing
Enclosure	IP 66 and IP 67, NEMA 4 and 7
Size	125 mm x 180 mm x 155 mm / 4.9" x 7.1" x 6.1" (W x H x D)
Weight	3.1 kg
Approvals	UL, CSA Class 1, Div 1, Groups B, C, D ATEX II 2G EEx de [ia] IIC T5, II 2D IP 6X T100°C EN 50281-1-1 IECEx Ex de [ia] IIC T5, Ex tD A21 IP6X T100°C Explosion protection and performance approval EN 61779-1 EN 61779-4 EN 50271 CE-mark: electromagnetic compatibility (directive 2004/108/EC) SIL 2 (safety integrity level) certified



ST-5763-2004

HART® handheld terminal ABB 691
Convenient operation with control keys for direct access to submenus.

THE DRÄGER POLYTRON IR OFFERS:

- Library including up to 38 substances
- SIL 2 (safety integrity level) certified
- Configurable measuring range
- Precise measurement
- No moving parts
- Fast, accurate response
- Dirty optics warning
- Long maintenance intervals
- Double compensating, non-focussing optics (4 beams)
- Hermetically sealed SS 316 body
- Ex-approvals for worldwide use
- Dust-approval for zone 21, 22
- Multidrop capability HART®, 4 to 20 mA, RS 485

ORDER INFORMATION

Dräger Polytron IR UL	Type 334	68 10 098
Dräger Polytron IR IECEX	Type 334	68 11 650
Dräger Polytron IR IECEX	Type 334 complete set*	68 11 635
Dräger Polytron IR UL	Type 340	68 10 820
Dräger Polytron IR IECEX	Type 340	68 11 640
Dräger Polytron IR IECEX	Type 340 complete set*	68 11 645

*The complete set contains an EEx e junction box, splash guard and mounting set, already pre-assembled.

Accessories

Dräger Polytron IR splash guard	68 09 750
Dräger Polytron IR calibration adapter	68 09 780
Dräger Polytron IR flowcell	68 09 450
Dräger Polytron IR gassing adapter	68 09 946
Dräger Polytron IR process cuvette	68 10 780
Dräger PRC 3000, remote control software	83 18 906
Dräger Polytron IR bump test adapter	68 10 985
Dräger Polytron IR insect guard	68 10 162
Dräger Polytron IR hydrophobic filter	68 10 519
Mounting set	68 09 951
HART® handheld terminal ABB 691 (FM approval)	83 17 616
HART® handheld terminal ABB 691 (ATEX approval)	83 17 531
Charger HHT ABB 691	83 17 532
Accu pack HHT ABB 691	83 17 533
Adapter cable HHT ABB 691	83 15 437

HART® is a registered trademark of the HCF, Austin, TX.



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