Dräger

Polytron Pulsar
Duct Mount

The Polytron Pulsar Duct Mount gas detector offers the latest infrared technology for monitoring ducts and enclosed paths for a wide range of gaseous hydrocarbons. These include the alkane series from methane to hexane, propylene, methanol, ethanol and ethylene.

Polytron Pulsar
Open Path Gas Detector for gaseous hydrocarbons in ducts.

SIMPLE, ALIGNMENT AND COMMISSIONING

One person can easily align and commission the system without the need for special training or skills. A hand held terminal provides separate "radar" display of the transmitter and receiver alignments. This makes it easy to optimise the adjustment for maximum signal strength.

The built-in calibration of the Polytron Pulsar Duct Mount does not need any manual adjustment or standard test gas. After the alignment procedure is finished a self-zeroing sequence is started to complete the commissioning of the system. The parameters about alignment and signal strength are logged and will be used to determine any future misalignment or build up of deposits on the optical lenses.

INCREASED PERFORMANCE

Continuous communication between Receiver and Transmitter across a signal line ensures the highest availability. The high power xenon lamps are combined with a sophisticated algorithm which varies their intensity and frequency. This enables a higher flash rate to be triggered by the first indication of gas, allowing a fully validated gas reading along with a greatly reduced response time of less than 1 second.

FAILSAFE

The detector is designed so that no fault can go undetected. In normal operation the output signal is 4 to 20 mA, depending on the gas concentration measured. Whereas a signal of < 1 mA indicates a fault and a signal of 2 mA indicates a beam blockage. In addition a continuous self-test of the Polytron Pulsar Duct Mount will issue a prewarning signal of 3.5 mA where the detector is still operational but requires some attention – for example when there is a build up of deposits on the optics, or misalignment of the transmitter or receiver. This way maintenance can be scheduled without downtime. The Polytron Pulsar Duct Mount carries a Safety Integrity Level rating of 2 (SIL 2).

BUILT-IN DATA LOGGER

An internal data-logger keeps a detailed record for the previous 7 days of operation, and consolidated records for the previous 32 weeks. These logs include such essential information as actual readings, events like "beam block" and gas alarms, warning flags, signal strength, alignment, supply voltage and internal temperature.

GAS LIBRARY

The detector can be pre-calibrated for up to four gases. Each detector is supplied with methane and propane calibration as standard which are field selectable by the user.
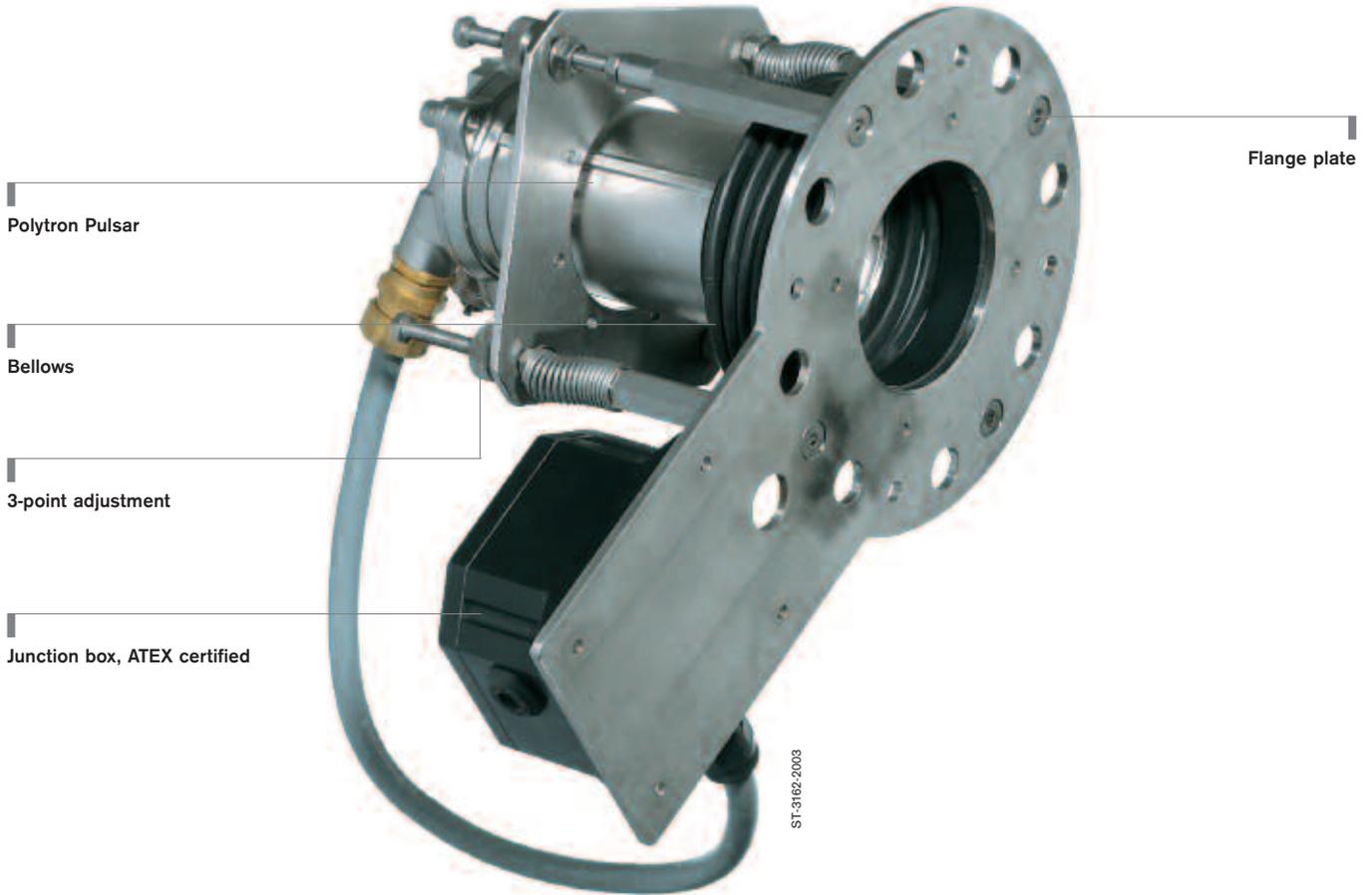
WORLDWIDE APPROVALS

The Polytron Pulsar Duct Mount can be used worldwide with the following approvals: ATEX, IECEx, UL, CSA, FM and GOST.

THE HAND HELD TERMINAL

The hand held terminal (HHT) is a robustweatherproof unit, certified for use in a hazardous, classified area. The terminal is used to align and zero the Polytron Pulsar Duct Mount transmitter and receiver, and to provide configuration and diagnostic functions. More comprehensive diagnostics are provided in conjunction with Polytron Pulsar PC software and a personal computer located in the non-hazardous area, when using the AI500 digital interface.

Flange plate

Polytron Pulsar

Bellows

3-point adjustment

Junction box, ATEX certified

ST-3162-2003

ORDER INFORMATION

Type	Order Code
Polytron Pulsar Duct Mount, ATEX certified	23 50 419
Polytron Pulsar Duct Mount, UL certified	23 50 420
Polytron Pulsar Duct Mount, CSA certified	23 50 421

Accessories	
Remote Junction Box Kit	23 50 322
Junction Box, ATEX certified	23 50 298
AI500 digital interface	23 50 306
Alignment Kit with HHT, test cards and ball driver with case	23 50 325
Adapter AI500 to HHT or PC	23 50 326
Polytron Pulsar PC Software with cable (supports Polytron Pulsar, AI500 and HHT)	23 50 327
Data wand for AI500	23 50 238
HART configuration	23 50 446
Polytron Pulsar Duct Wall mounting plate kit	23 50 450
Polytron Pulsar Duct Mount gas test sheets	23 50 451

ST-3531-2003

ST-977-2001

AI500 and Adapter Cable
Digital interface to HHT
or a PC.

Hand Held Terminal (HHT)
For easy alignment.

TECHNICAL DATA

Type	Explosion proof Duct Mount gas detector utilizing dual wavelength infrared absorption technique		
Gases	Wide range of hydrocarbons including the alkane series from methane to hexane, propylene, ethanol and methanol.		
Range	0 to 100 %LEL		
Factory calibration	Methane or propane, selectable. Other hydrocarbon gases on request		
Operating distance	1 to 8 m, 3.3 to 26.2 ft separation of transmitter and receiver		
Signal output	Analog	Measuring	4 to 20 mA
		Pre-warning	3.5 mA, dirty optics or misalignment
		Beam block	2 mA
		Fault	< 1 mA
	Digital	HART	
Supply Voltage	ATEX	18 to 30 VDC	
	UL, CSA	18 to 27 VDC	
Power Consumption	Max. 0.95 A @ 24 V, with full heating and all source lamps operating		
Response time t95	< 1 s		
Ambient conditions	Temperature	- 40 to + 60 °C, - 40 to + 140 °F	
	Pressure	800 to 1100 hPa, 23.6 to 32.5 inch Hg	
	Humidity	0 to 100 %RH, non-condensing	
Enclosure	IP 66, stainless steel		
Size (W x H x D, approx.)	350 x 300 x 170 mm, 13.8" x 11.8" x 6.7", each		
Weight (approx.)	9 kg, 19,8 lbs, each, including back plate		
Approvals	ATEX	II 2GD Ex d [ia] IIC T6/T5, -40 to + 40 / + 60 °C	
	IECEx	Ex d [ia] IIC T6/T5, -40 to + 40 / + 60 °C	
	FM/ANSI	FM ANSI/FM 6325, ANSI/ISA-12. 13-04	
	IEC 60079-29-4	Tested to by FM Approvals	
	UL	Class I, Div 1, Group C, D	
	CSA, NRTL/C	Class I, Div 1, Group C, D	