

# RED LINE PRIME XDI-F1 Hydrocarbon Infra Red Gas Sensor

Specification sheet ref C1619 Av3



## KEY FEATURES

- ATEX/IECEX explosion proof
- CANbus/ 4~20mA output
- Addressable or standalone
- Robust and weatherproof
- Automatic diagnostic system surveillance and fault monitoring
- 3 alarm points
- Data logging
- Hyperterminal communications RS232
- Optional 2 alarm relays plus fault relay or 3 alarm relays

The Red Line Prime sensor uses proven non-dispersive single beam dual-wave length infrared principles to detect and monitor the presence of gases. This non-poisoning sensing technique relies on the target gas having a unique well-defined absorption signature. This is used to identify the presence of the target gas and is highly specific. Using a suitable infrared source, an analysis of the optical absorption through the gas allows the concentration of the target gas to be determined. All sensor driving is internal to the transmitter and full fault monitoring of the sensor and transmitter is continuous.

This information relates to the device operating continuously. The device may be calibrated for other gases.

<b>CARBON DIOXIDE SENSOR</b>	
Operation – continuous diffusion	NDIR (dual wave-length)
Gases	Most flammable hydrocarbon gases
Measuring Range	0~100% LEL 0~100% Vol
Accuracy	± 5% F.S.D
Warm up time to zero	< 30 seconds
Response time to target gas T90	< 25 seconds
Long term zero drift	± 5% F.S.D
The 4~20mA output provides a fault indication by reducing the output to below 2mA, with the recovery from fault condition being automatic.	

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## Carbon dioxide infra red gas sensor



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ELECTRICAL DATA	
INPUT VOLTAGE – 3 WIRE DEVICE	18 to 35v DC – 24v DC nominal (polarity protected)
OUTPUT	4~20mA (Link selectable as sink or source)
MAXIMUM CURRENT CONSUMPTION	130mA
OVER-RANGE OUTPUT	21.3mA (typical)
FAIL SIGNAL	4~20mA reduced to 2mA
FAIL INDICATOR	Open collector output to 0V
MAXIMUM LOOP RESISTANCE IN SOURCE MODE	250R
RESOLUTION	0.15% of span
OUTPUT RESOLUTION	0.02mA
MAXIMUM OFFSET DRIFT	± 20uA
RELAYS – OPTIONAL	Low / high / fault alarms S.P.C.O. 0.5A @30v DC
LOGGING	Intervals – variable time Rollover/stop Storage – 2880 readings
EMC	EN 50270
MECHANICAL DATA	
CERTIFICATION	Explosion proof ATEX-IECEX II 2G Ex db IIC T6...T4 Gb II 2D Ex tb IIIC T85°C...T135°C Db
REPLACEABLE PLUG IN SENSOR	In-situ
SENSOR ACCESSORY MOUNTING THREAD	33mm ø 1.25 pitch – 6 full threads
ENCLOSURE – TYPE XDI	Aluminium alloy - optional stainless steel
GAS SENSOR – TYPE F1	Stainless steel – 316 S16
WEIGHT	3.95 Kg
CABLE ENTRY	Two – 20 mm 1.5 pitch Options 25 mm – 3/4 NPT
MOUNTING DETAIL	Two M5 (126 mm CRS)
APPROXIMATE DIMENSIONS-TERMINAL ENCLOSURE	126 mm dia. 83 mm deep

# RED LINE PRIME XDI-F1

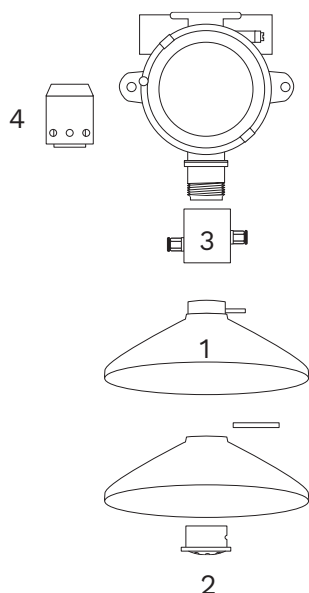
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ENVIRONMENTAL DATA	
IP64 + water shield IP65 with hydrophobic screen IP66	
OPERATING CONDITIONS	5 to 95% RH non-condensing
TEMPERATURE	-15 ~ +55°C - safe area use <b>for hazardous area use see temperature ranges on C1227 (Ex certification summary)</b>
STORAGE CONDITIONS	0~99% RH non-condensing -20 ~ +60°C

## ACCESSORIES



1. Collector Cone + universal fitting
  2. Universal Fitting (Test gas applicator spray deflector)
  3. Flow Block - nylatron
  3. Flow Block - stainless steel
  4. Water Shield - stainless steel
- Duct Mount Kit  
--- Detector head Weather Shield  
--- F1 sensor Thermal Jacket



### FOR MORE INFORMATION

[www.watchgas.com](http://www.watchgas.com)  
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