RED LINE PRIME – XDIwin-F1

CARBON DIOXIDE GAS SENSOR

Specification Sheet
ref C1622 Av3

- ATEX/IECEx explosion proof
- CANbus/ 4~20mA output
- Addressable or standalone
- 3 alarm points
- Robust and weatherproof
- Automatic diagnostic system surveillance and fault monitoring
- 2 alarm relays plus fault relay
- Data logging
- Adjustments - non intrusive magnets
- Backlit alpha numeric full status display

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.

General Data

This information relates to the device operating continuously.

Carbon Dioxide Sensor

Operation – continuous diffusion		NDIR (dual wave-length)
Measuring Ranges	Prime 2	0~2000 ppm 0~5000 ppm 0~2% volume 0~5% volume 0~10% volume
	Prime 3	0~100% volume
Accuracy		± 5% F.S.D
Warm up time to zero		< 30 seconds
Response time to target gas T90		< 35 seconds
Long term zero drift		± 5% F.S.D

Indicators

Alarm – Red LED
Fault – Amber LED (flashing when in inhibit)

Transmitter Technical Data

Document C1884

ELECTRICAL DATA

Input voltage – 3 wire device
18 to 35V DC – 24v DC nominal
(polarity protected)

Output
4~20mA (selectable as sink or source)

Fail signal
4~20mA reduced to 2mA

Maximum current consumption
130mA

Maximum loop resistance in source mode
250R

Resolution
0.15% of span

Output resolution
0.02mA

Maximum offset drift
± 20uA

Relays
Low / high / fault alarms S.P.C.O. 0.5A @30v DC

Logging
Intervals - variable time
Rollover/stop
Storage - 2880 readings

Display
2 line alpha numeric backlit status display - gas type, concentration units, alarm levels, alarm status low/high/ overrange, inhibit, sensor ID.

ENVIRONMENTAL DATA

IP64 + water shield IP65
with hydrophobic screen IP66

Operating Conditions

5 to 95% RH non-condensing

Temperature
-15 ~ +55ºC – safe area use
for hazardous area use see temperature ranges on C1227 (Ex certification summary)

Storage Conditions

0~99% RH non-condensing
-20 ~ +60ºC

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
RAL 9003 – Signal White

Gas Sensor – Type F1
Stainless steel – 316 S16

Weight
3.95Kg

Cable Entry
One – 20 mm 1.5 pitch
Options 25 mm – 3/4 NPT

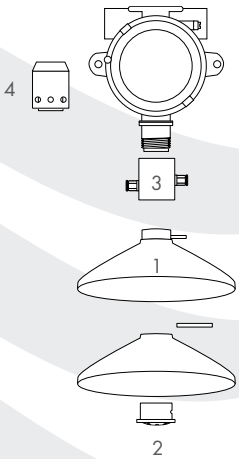
Mounting Detail
Two M5 (126 mm CRS)

Approximate dimensions-terminal enclosure
126 mm dia. 83 mm deep

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



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