

# RED LINE PRIME-2 15/30J (win)

## CARBON DIOXIDE INFRA RED GAS SENSOR

Safe Area Detector Head / offering local control and display

Specification Sheet C1812A v2

Doc No. 296 D12C

- Robust and weatherproof
- CANbus, 4~20mA output
- Addressable or stand alone
- Data logging
- Optional back lit alpha numeric full status display
- Optional 3 selectable alarm relays
- Optional sounder/relay
- Optional pumped aspirated sensor



The Red Line Prime sensor uses proven NDIR 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 product is available with a range of options.

### 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 | < 30 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.

### Display (optional)

2 line alpha numeric back lit status display:

- gas type
- concentration units
- alarm levels
- alarm status (low/high/over range/fault)
- sensor ID

### Indicators

Alarm – Red L.E.D

Fault / Inhibit – Amber L.E.D

### Relays 1,2,3 (optional)

Selectable – Low, High, Overrange, Fault

Default settings:

- 1 Low alarm
- 2 High alarm
- 3 Fault alarm

Rating 3A @30vDC S.P.C.O

Inhibit option during servicing

### Sounder/Relay (optional)

Single relay – low/high alarm selectable.

S.P.C.O 0.5A @30vDC

Sounder – not less than 85dB @ 30 cm

## 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

500R

### Resolution

< 2% of range

### Output resolution

0.02mA

### Logging

Intervals – variable time

Rollover/stop

Storage – 2880 readings

## JUNCTION BOX

Type – 15/30J safe area use only

15J – shallow box (S) basic model

30J – deep box (D) + options

### Ingress Protection

IP65

### Material

ABS Flame retardant FR40

Lid Screws M4SS

### Finish

Signal White RAL 9003

### Weight

380gms

### Entries

Rear 5-20mm knock outs

Sides, Top, Bottom – not specified

### Mounting

Standoffs – M4 or No 8 screws

Drill at (C) when standoffs removed

Conduit box – drill at (A) 4.5mm

Surface mount box – drill at (B) 4.5mm

### EU Design No.

01359723-000

## ENVIRONMENTAL DATA

IP64 + Weather Shield IP65

### Operating Conditions

0 ~ 99% RH (non-condensing)

-20 ~ +55°C

### Storage Conditions

0~99% RH non-condensing

-20 ~ +60°C

### Accessories – Optional

Collector Cone + Universal Fitting

Flow Block

Duct Mount Kit

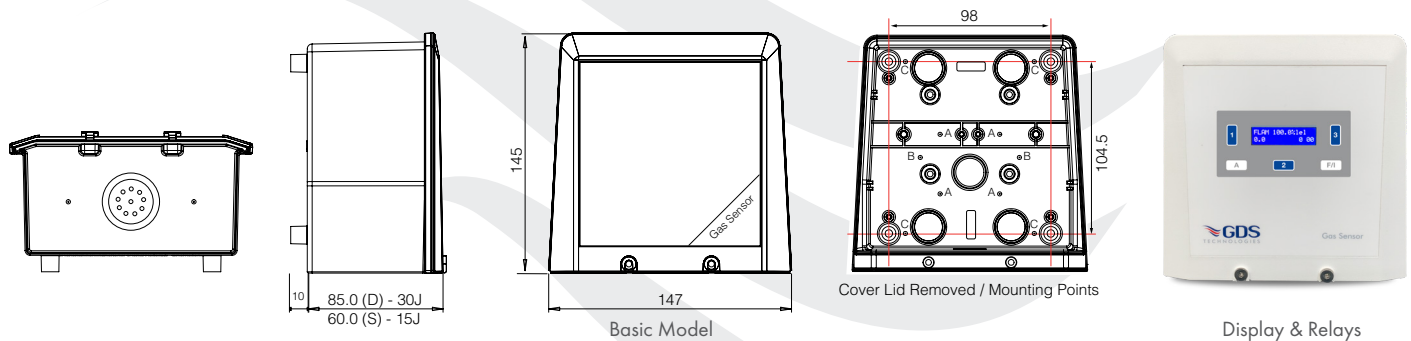
Detector Head Weather Shield

Aspirated Sensor (pump)

## TRANSMITTER TECHNICAL DATA

### Documents

Prime – C1884



This document is not contractual and the specification/detail may be modified at any time without prior notice.

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