D-9107REXd
Digital Flame Proof Dual IR Flame Detector

Description

The detector uses two pyroelectric infrared sensors to detect the change of light signal of flame and background light signal at two bands of infrared spectrum through individual processing channels. The microprocessor analyzes the signal through the flame channel and background channel to judge if there is flame. The detector is applicable to either commercial or hazardous industrial areas, such as explosive Zone 1 and 2, and Zone 21 or 22 with flammable dust.

Features and Benefits

- Dual band Infrared flame detection
- Sensitive to flame from material containing carbon. Suitable for fire starting from flame in large indoor or outdoor areas.
- Immune to sunlight, artificial light, heat radiation, providing a means of reliable operation
- Integrated functions of both addressable and conventional
- Electronically address by handheld programmer

Terminals and Installation Holes

Below figures show the terminals of the detector.

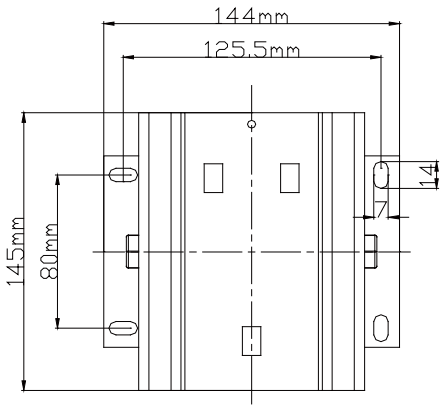
D1 & D2: 24VDC power supply, non-polarized

AL1 & AL2: Fire signal output, normally-open

FT1 & FT2: Fault signal output, normally-closed

Z1 & Z2: Loop connection, non-polarized, connects with GST addressable panel in addressable mode, parallels to D1 & D2 in conventional mode.

The dimension of the mounting frame is shown below.

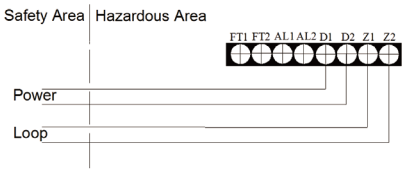


Recommended Cabling

1.0mm² or above fire cable are recommended, but subject to local codes, outer diameter ☒8mm~☒10mm is required. The joint washer matches with the cable diameter.
When only one cable entry pipe is used, the spare pipe should be well sealed by end cap.

Application

Below figure shows the connection of the detector with GST loop.



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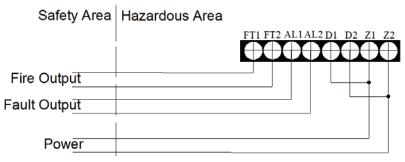

TThe detector should be installed by specialist engineer. Be sure that cable is well connected, detector house is well fastened and with good insulation conditions. Be sure all earth terminals inside and outside the housing are well connected.

Cautions

Installation and maintenance should strictly comply with relative codes for explosive and hazardous areas.
Never open the cover for maintenance in field.
The enclosure must be earthed.
The detector is not suitable for the following places

- Where flameless fires are to be expected
- Where intensive smoke spreads before flames
- Where the "view" of the detector is easy to be obscured.
- Where the sun can directly shine the detection window
- Where the detector may encounter frequent vibration

Technical Specification

Operating Voltage	24VDC (20VDC ~ 28VDC)
Operating Current	Loop: ≤ 1mA
	24VDC: Standby current ≤ 20mA Alarm current ≤ 30mA
Indicator	Red LED: Flashes periodically in standby state, and steadily illuminates in fire alarm. Yellow LED: Off in standby state, and steadily illuminates in fault.
Programming Mode	Electronically programming, 1 ~ 242
Sensitivity Levels	Level I: 25m Level II: 17m Level III: 12m
Test Fire	33cm×33cm n-heptane fire
Output relay	1A/25VDC
Ingress Protection	IP65
Material and Color	Stainless steel, metallic grey
Ambient Temperature	-20°C ~ +55°C
Relative Humidity	≤95%RH, non-condensing
Dimensions	166mm × 235mm × 199mm
Weight	Detector: 4.8kg, Adjustment frame: 1.3kg

Certificates and Compliance

- Explosion-proof Mark: Ex db IIC T6 Gb/Ex tb IIIC T80℃ Db
- ATEX Certificate: Presafe 14 ATEX 5548X

Ordering Information and Compatible Products

Part No.	D-9107RExd
Device Name	Digital Flame Proof Dual IR Flame Detector
Product No.	10103050
Compatible Products	GST Intelligent Fire Alarm Control Panel

Accessories and Tools

Part No.: P-9910B
Device name: Handheld Programmer
Product No.: 10104894