

DC-9101(IS)

Intrinsically Safe Conventional Combination Heat Photoelectric Smoke Detector



Ex

Description

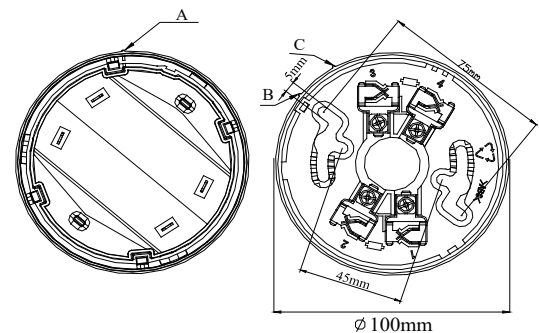
DC-9101 (IS) Intrinsically Safe Conventional Combination Heat Photoelectric Smoke Detector is a kind of combination detector consisting of smoke sensing parts and semi-conductor heat sensing parts. It's applicable to Zone 1 and Zone 2 of areas with explosion-proof requirement in petroleum and chemical industries. By combination of smoke detection and heat detection, it overcomes the non-sensitivity to dark smoke particles of ordinary scattering photoelectric detectors. It can also pick up fire with obvious rise of temperature such as alcohol flame, thus extending the application range.

Features and Benefits

- Drift compensation enables strong environmental adaptability
- Integrated algorithm for analyzing fire, improving the sensitivity highly
- Self-diagnostic
- Reed switch test
- Removable innovative sensing chamber, easy for maintenance
- Reporting dirt fault for contaminated chamber
- Fire LED allows 360°viewing
- 3-level sensitivities and fixed temperature or rate of rise programmable

Terminals and Installation Holes

Below figures show the detector bottom and terminals of the base.



- 1: Detection zone positive IN
- 2: Detection zone positive OUT
- 3: Detection zone negative IN and OUT
- 4: Physical fix only

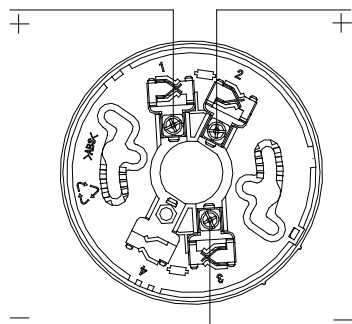
Recommended Cabling

1.0mm² or above fire cable is recommended, laid through metal or flame-retardant conduit, but subject to local codes.

The capacitance distributed among cables should not be over 0.083μF, and the inductance distributed should not be over 4.1mH

Application

The wiring diagram is shown below



Working mode of the detector can be set through P-9910B programmer. Below table shows the setting codes and working modes. Factory defaults at Level 1 + Rate of Rise Temperature.

Detector Code	Smoke Sensitivity	Heat Detection
1	Level 1	Rate of rise
2	Level 2	Rate of rise
3	Level 3	Rate of rise
11	Level 1	Fixed temperature
12	Level 2	Fixed temperature
13	Level 3	Fixed temperature

Certificates and Compliance

- Explosion-proof Mark: Ex ib IIC T6 Gb
- Explosion-proof Certificate: CE16.2247

Order Information

Part No.	DC-9101(IS)
Device Name	Intrinsically Safe Conventional Combination Heat Photoelectric Smoke Detector
Product No.	10104486
Compatible Products	I-9332 Flame Proof Zone Monitor Interface

Technical Specification

Operating Voltage	24V (16V ~ 28V)
Standby Current	≤60uA
Alarm Current	10mA≤I≤30mA
Indicator	Red. Flashes in polling, and illuminates in alarm
Explosion-proof Mark	Ex ib IIC T6 Gb
Explosion-proof Certificate	CE16.2247
Zener Barrier	Uo=28V, Io=93mA, C0=0.083uF, L0=4mH, P0=651mW
Alarm Clear	Instantaneous Power-off (2s Min., 1.0VDC MAX.)
Smoke Sensitivity Level	3
Heat Sensitivity	Action Temperature: 135°F (57.2°C) Response Velocity: 15°F /min (8.3°C /min)
Environment Temperature	0°C ~ 37.8°C
Relative Humidity	≤95%, non condensing
Material of Enclosure	ABS
Dimensions	Diameter: 100mm Height: 54.5mm (with base)
Mounting Hole Distance	45mm ~ 75mm
Weight	About 110g

Accessories and Tools



Part No.: DB-01(IS)
Device name: Detector Base
Product No.: 30205765



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