

DC-9101(IS)

Intrinsically Safe Conventional Combination Heat Photoelectric Smoke Detector



Ex

Description

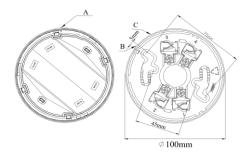
DC-9101 (IS) Intrinsically Safe Conventional Combination Heat Photoelectric Smoke Detector is a kind of combination detector consisting of smoke sensing parts and semi-conductor heat sensing parts. It's applicable to Zone 1 and Zone 2 of areas with explosion-proof requirement in petroleum and chemical 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

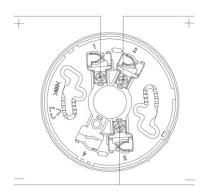
 1.0mm^2 or above fire cable is recommended, laid through metal or flame-retardant conduit, but subject to local codes. The capacitance distributed among cables should not be over $0.083 \mu \text{F}$, and the inductance distributed should not be over 4.1 mH.

IMPORTANT: This publication is a generic version in which product information is shown for informational purposes only and does not constitute a specific commitment or guarantee. We are constantly pursuing the improvement of product technology to improve product performance, for which we reserve the right to adjust the configuration and technical information of the related products without notice. In addition, the description of system performance in this publication applies only to the usual situation. As a result, there may be a variety of unpredictable special circumstances in the real world, so the realization of the relevant product performance will depend on the professional investigation and analysis and the design plan. Please contact us and we will be happy to provide you with professional advice.



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

Terminals and Installation Holes

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 ibIIC T6 Gb
Explosion-proof Certificate	CE21.0155
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
Heat Sensitivity Environment Temperature Relative Humidity Material of Enclosure Dimensions Mounting Hole Distance	Action Temperature: 135°F (57.2°C) Response Velocity: 15°F /min (8.3°C /min) 0°C ~ 37.8°C ≤95%, non condensing ABS Diameter: 100mm Height: 54.5mm (with base) 45mm ~ 75mm

Certificates and Compliance

Explosion-proof Mark: Ex ib II C T6 GbExplosion-proof Certificate: CE21.0155

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

Accessories and Tools



Part No.: DB-01(IS)

Device name: Detector Base Product No.: 30205765



Part No.: P-9910B

Device name: Handhold Programme

Product No.: 10104894

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