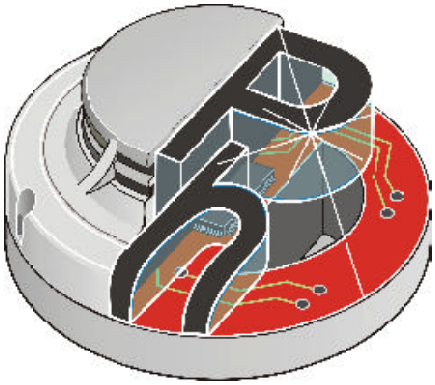
SD-851E

Conventional Photoelectric Smoke Detector

Section: Conventional Devices

FEATURES

- **Low profile design**
- **Low current draw**
- **Wide operating voltage 8 to 30VDC**
- **Bi-colour LED detector status indicator**
- **Automatic drift compenstation**
- **Programmable Sensitivity**
- **Addressable Feature**
- **Advanced maintenance features via remote hand-held test unit**
- **Range of detector bases available**
- **Approved to EN54 part 7 (2000)**
- **3 Year warranty**



GENERAL

The SD-851E forms part of the ***P***rocessor en***h***anced ***D***etection series of conventional detectors. These detectors have been produced using the latest in manufacturing and design techniques, pushing out the boundaries of existing conventional detector technology. With an on board microprocessor, it's multitude of enhanced features including drift compensation, provides the best in conventional detection.

The SD-851E photoelectric smoke detector incorporates an optical chamber which is continually monitored by an on board processor which uses algorithms developed specifically for the unit. An alarm signal is only enabled in the detector once the processor is satisfied that an incipient fire has been detected therby reducing the incidence of nuisance alarms.

'Drift compensation' algorithms are one of the key features of the SD-851E detector. These internal algorithms ensure a consistent alarm sensitivity threshold for periods between service intervals. This provides the user with maintenance savings by extending the period before cleaning of the detector chamber is required whilst minimising the risk of nuisance alarms.

The sensitivity of a smoke detector is critical to its overall performance, this is reflected in both its ability to detect real fire conditions and its resilience to non-fire stimuli. The SD-851E's performance can be optimised for it's application by selecting from one of three preset alarm thresholds - Low, Medium and High, offering greater stability and optimum performance within the environment in which it has been installed. The selection is easily achieved through the use of a remote hand-held tool.

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The remote hand-held programming tool can also be used in conjunction with the ***PhD*** series of detectors to gain access to other enhanced features. The features available include: read/write last maintenance date, read chamber contamination level, read value of thermal element and perform an alarm test.

INSTALLATION

Each detector can be given a unique address. When used in conjunction with the S300ZDU Zone Display Unit the address will be displayed whenever the detector is in alarm.

All the features via the hand-held programming unit are achieved effectively and effortlessly without the need to remove the detector or having to gain direct physical access (other than by the use of servicing poles in conjunction with the S300SAT), saving valuable commissioning/maintenance time.

They provide the end user with the confidence to know that the system is being regularly serviced and that it is operating at it's optimum level, with minimum disruption to business activities.

In addition to the comprehensive programming tool, a simple laser based alarm test unit is also available. The coded signal transmitted by this device can instruct the detector to generate a full alarm condition at a range of up to 5 metres from the detector, and is an ideal tool for initial commissioning and routine system testing.

The ***PhD*** series detectors incorporate a bi-colour LED indicator. The integral LED changes colour according to the detector's status: Green = Normal, Red = Alarm. This benefits the user by providing clear, instant visual indication of the detector's condition. The Green LED can be programmed for blink/no blink operation.

A variety of detector bases are available providing compatibility with a wide range of Fire Alarm Control Panels making it ideal for expansions and retrofit applications. All bases are fitted with a shorting spring to permit circuit testing prior to fitting the detector and have a tamper resistant feature, which when activated prevents removal of the detector without the use of a tool.

SPECIFICATIONS

- **Dimensions**
  - ✓ Height: 43 mm
  - ✓ Diameter: 102 mm
  - ✓ Weight: 75g
- **Current Consumption**
  - ✓ Alarm :50 mA at 24 VDC (limited by panel)
  - ✓ Standby:120µA at 24 VDC
- **Operating Voltage**
  - ✓ 8 to 30 VDC (Nominal 12/24VDC)
- **Environmental Limits**
  - ✓ -30°C to +70°C
  - ✓ Humidity 5 to 95% (non-condensing)

ORDERING INFORMATION

Part No.	Description
SD-851E	Conventional Photoelectric Smoke Detector
Base:	
B401	Standard Base
B401D	Standard Base with schotty diode
B401R	Resistor base with 470 ohm resistor
B312NL	12V non-latching relay base
B312RL	12V latching relay base
B324RL	24V latching relay base
Accessories:	
S300RPTU	Remote Programming and Test Unit Accessories
S300RTU	Remote Test Unit
S300SAT	Remote Programming Interface Unit
S300ZDU	Zonal Display Unit

Wiring Diagram (Diode Base)