

SP08M

Applications

The spark detector was specifically designed to detect infrared light radiated by red-hot objects, arcing or flames.

The incorporated lens system provides focused long distance sensing and thus accurate location of an infrared light source. The spark detector offers reliable yet cost efficient solutions for a variety of applications, including:

- arc detection on commutator rings of DC motors
- remote sensing of red-hot iron in steel works
- flame detection in burners, boilers or fire detection equipment
- in conjunction with a suitable infrared light source, a high speed opto-barrier system



SP-08 Spark Detector System:

The spark detector system consists of a control unit SP-08M and one or more sensor heads SP-08S.

The system is designed to detect arcing of commutators on DC motors and to initiate power shutdown before permanent damage is caused.

The sensor heads are to be mounted at strategic points and are connected in parallel. Any sensor detecting an arc will trigger the relay output of the control module.

The module can be configured to latch when arcing is sensed.

Description of Operation:

The unit is ready to operate when the sensors are connected to pin 5 (+) and pin 6 (-) of the control module and power is applied to pins 2 and 10.

Under normal operating conditions (i.e. no arcing) the relay of the control module is de-energised and the red pilot light is off. As soon as arcing is detected, the relay energises and the pilot light on the module illuminates. If latching is enabled (interconnection of pin 5 and pin 8), the relay will remain energised until reset (push to open contact between pin 5 and pin 8).

Sensitivity of the sensors can be adjusted by turning the potentiometer on the sensor head.

NOTE:

The sensor heads should be aimed at the commutators and should not be exposed to direct sunlight during operation, since this may cause false alarms.

Technical Specifications:

AC: Supply voltage: 12, 24, 110, 240, 380 V
± 15%
Isolation (voltage input to power supply)
2kV
Power consumption: 3VA approx.

DC: Supply voltage: 12, 24, 48, 60, 110 V
± 10%
Isolation: No galvanic isolation
Power consumption:
100mA for 12V, 24V
30mA for 48V and higher

BRANCH CONTACT DETAILS

Johannesburg 010 202 3300
Germiston 011 418 9600
Cape Town 021 510 0710
Pinetown 031 700 4215
Riverhorse 031 492 4800

NATIONAL CALL CENTRE

Sales 010 202 3400
Technical 010 202 3500

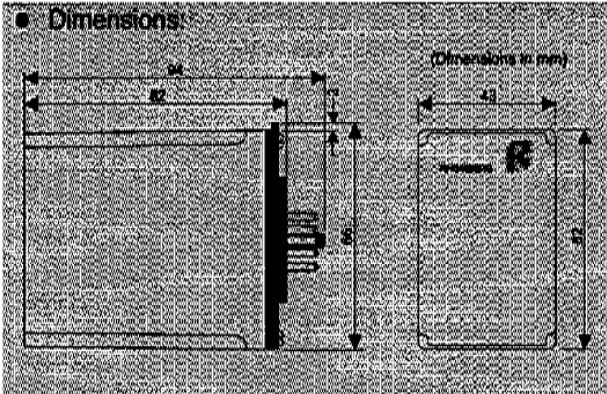
www.acdc.co.za

SP08M

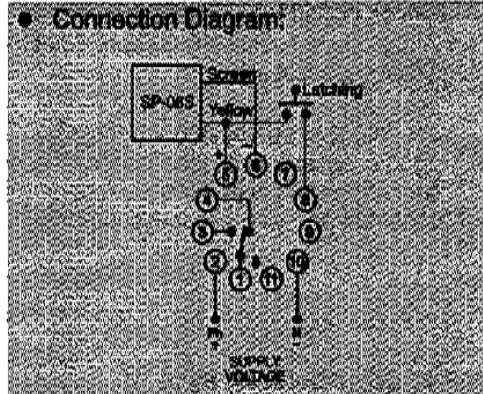
SP-08M:

- **Indication:** A LED is provided on the control unit to indicate status of relay. The LED is illuminated to indicate relay ON.
- **Latching:** Latching is provided by using a "push to open contact" push button between pins 5 and 8.
- **Output:** A 10A single pole double throw (SPDT) relay is provided in the control unit.

● **Dimensions:**

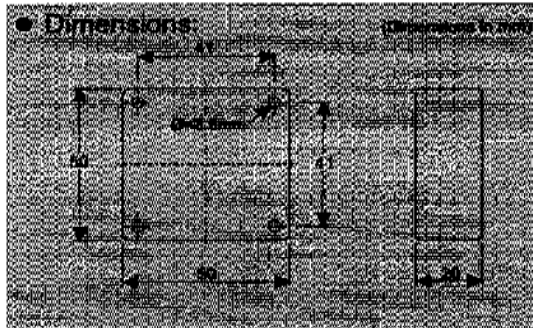
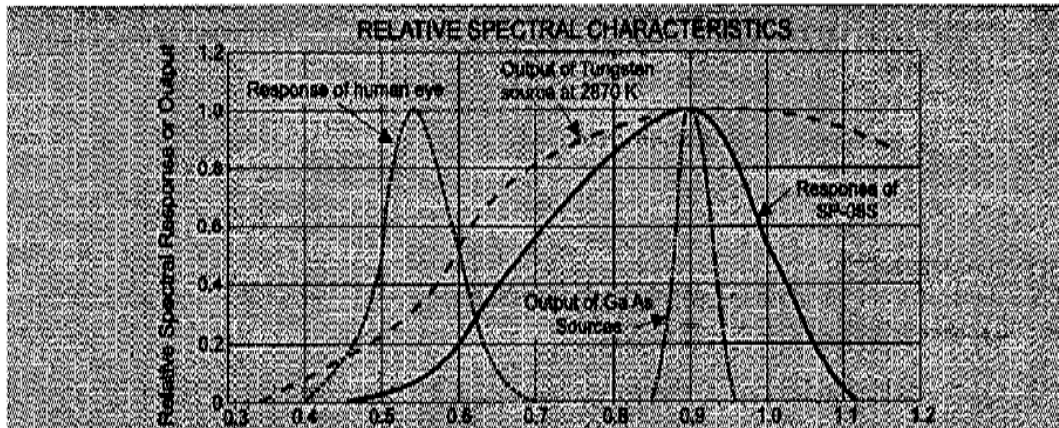


● **Connection Diagram:**



SP-08S:

- **Sensitivity:** The sensitivity to an infrared source is adjustable on the sensor head (SP-08S)
- **Latching:** Optical characteristics



BRANCH CONTACT DETAILS
 Johannesburg 010 202 3300
 Germiston 011 418 9600
 Cape Town 021 510 0710
 Pinetown 031 700 4215
 Riverhorse 031 492 4800

NATIONAL CALL CENTRE
 Sales 010 202 3400
 Technical 010 202 3500
 www.acdc.co.za