

G003443

Addressable/Conventional IR Flame Detector

Salwico AC-IR-3Fq

Part no. 5200236-00A

System: Depends on base. See Datasheet for: 5200235-00A Salwico AC-IR-3Fq Conventional Base and 5200237-00A Salwico AC-IR-3Fq Addressable Base

General Description

The AC-IR-3Fq is a triple frequency conventional infrared flame detector produced using the latest in manufacturing technology. It is supplied with an array of advanced features, making it 'better by design'.

The Detector is using infrared elements suitable for the detection of smokeless combustible liquid and gas fires, as well as smoke-forming open fire involving carbonaceous materials as contained in wood, plastics, gases, oil products etc.

The Fire evaluation process is done by triple Infrared (3Fq) sensor, protected by a sapphire glass filtering >6.0µm wavelength radiation.

Sensor measures the hot carbon dioxide in a specific flame wavelength; the B and C sensors simultaneously measure the interference radiation in near wavelengths.

This technique together with intelligent signal processing through microprocessor and custom algorithms, achieves excellent detection reliability while maintaining the highest immunity to interference radiation and sunlight.

Testing

For functional test, use Salwico IR Test lamp, part no. 001156. Due to the detectors high immunity to unwanted alarms, it is difficult to test the detector without the IR test lamp.

Features

- Triple Frequency IR Detector
- Low current draw
- Suitable for installation in damp environment
- Easy Maintenance
- Remote LED Option
- Approved to UNI EN54-10 Ed. 2002

Data

Electrical Specifications

Operating Voltage Range	24 V DC
Supply Voltage	24 V DC
Max Current (Normal)	450 µA
Max Current Detector	700 µA (Alarm)
Addressable Mode	1 mA (Alarm incl. Base)
Conventional Mode	30 mA (Alarm Incl. Base)

Environmental Specifications

Application Temperature Range	-25 °C to +75 °C
Humidity	Up to 95%

Mechanical Information

Height	69 mm (including base)
Diameter	103 mm
Weight	250 g
Weight with IP65 Base	380 g
Wire Gauge for Terminals	2.5 mm^2
Colour	White RAL9010
Material	Polycarbonate Flame Retarded Cl. UL94V0
IP Rating	IP65 (**IP67 with locking screws**)
Certified according to	0474/yy yy = year of production

Detector Base

5200235-00A Salwico AC-IR-3Fq Conventional Base

5200237-00A Salwico AC-IR-3Fq Addressable Base

Test Equipment

001156 Salwico IR Test lamp

Installation

For featured wiring the detector is installed on a base, provided in IP65 proof version.

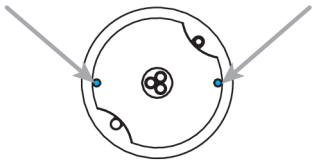
The detector is connected to the base through a fast bayonet clutching and a flying connector.

Certain factors need to be considered when designing an installation:

- The sensors should be mounted so that objects do not block their field-of-view (FOV). This includes glass, Plexiglas and other visibly transparent materials. Contact Consilium for more information.
- Whenever possible, sensors should be mounted so their ranges and fields-of-view overlap.
- Sensors should be mounted so their FOV cannot be choppered by moving machinery or human operators during normal operations within the area. Therefore they should be installed as high as possible or on the ceiling.
- Detector window should not be exposed to hot or cold intermittent airflow which could change the temperature of the detector itself or detector FOV background.
- To ensure optimum sensitivity and performance, sensors should be mounted so they do not look at hot surfaces: if this is necessary first follow procedure to ensure no chopper is present.
- The sensors should be mounted so that they are easily and safely accessible for inspection and maintenance.
- If mechanical, high-temperature damage, or window contamination is likely to occur in the installed location, then the sensor should be protected. However the protection method cannot obstruct the sensors FOV with any material, including visibly transparent materials, such as glass and Plexiglas.
- The sensor can be mounted in any orientation, as long as captive screws are removed or can be removed.
- Mounting the sensor so that it points downwards is recommended as this generally results in minimal window contamination.
- Care must be taken to avoid that sensor installation exceeds environmental approvals such as temperature, shocks, vibrations.
- Care must be taken to avoid that sensor installation exceeds electromagnetic interference approval: in particular install detectors in places out-of-reach of personnel (including contractors and crew members).
- It is important **NOT** to leave any extra cable slack when installing this detector.
- Cable shield shall be connected to the ground on one side only.
- The DIP-Switch Setting recommended by Consilium is to turn Sw.No.2 ON for the highest sensitivity. For more details, see Settings.

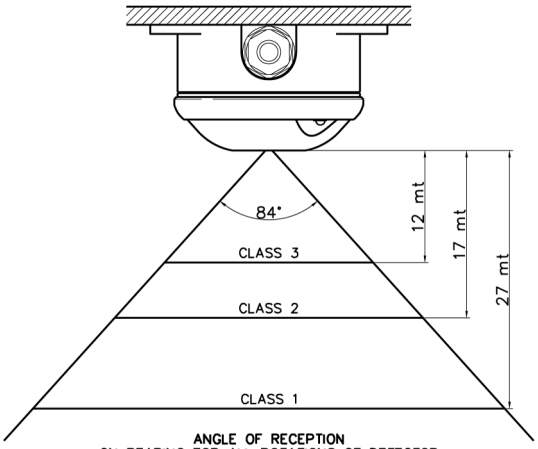
For more details, see Flame Detector Installation manual 5100512.

Hint!
For outdoor mounting: Fit the detector screws on the base to ensure IP67 Protection Index.



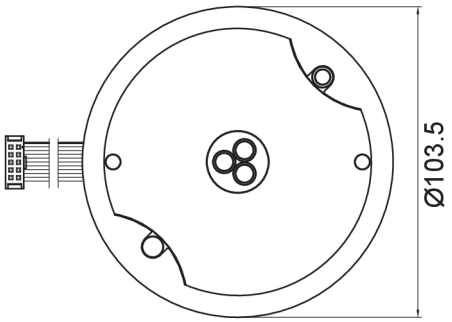
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Angle of Reception

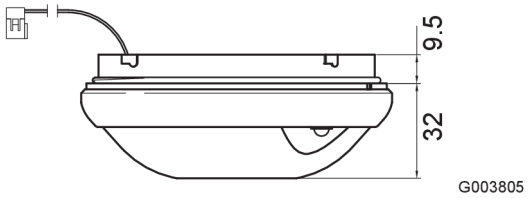


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Dimensions (mm)



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Settings

S1 DIP-Switch setup

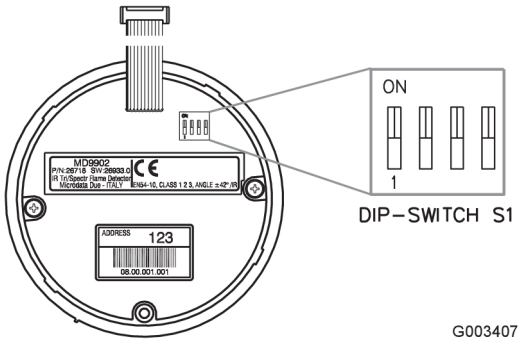


Figure 1. DIP-Switch Setting.

Use the 4-ways Dip-switch S1 to set the detector as Conventional or Addressable and preset sensitivity threshold (Class):

Table 1. DIP-Switch Setting

Sensitivity class	Sw.No.1	Sw.No.2	Sensitivity
Class 1*	OFF	ON	High up to 27 m
Class 2	ON	OFF	Medium up to 17 m
Class 3**	OFF	OFF	Low up to 12 m

Table 2. Conventional Mode

Mode	Sw.No.3	Sw.No.4
Conventional	ON	ON

Only when used with Base 5200235-00A.

Table 3. Addressable Mode

Mode	Sw.No.3	Sw.No.4
Addressable**	OFF	OFF

Only when used with Base 5200237-00A.

* Recommended setting by Consilium

** Default factory setting