

# UV, UV/IR, IR3 Flame Detectors

## Data Sheet



The OGGIONI flame detectors utilize a microprocessor for sophisticated electronic signal analysis. The sensors must exceed their alarm threshold to initiate a fire alarm. The UV/IR and IR flame detectors use as an additional alarm criterion: the analysis of the flame flicker-frequency. The UV/IR and IR3 flame detectors have a good false alarm rejection. The UV is insensitive to practically all false alarm sources, except for arc welding.

Common applications in which the three models 210-series flame detector can be used can be found in the table below. Visit the website [www.oggionisas.com](http://www.oggionisas.com) if your application is not mentioned in this list.

Application	UV	UV/IR	IR3
Aircraft hangars		✓	✓✓
Atriums		✓	✓✓
Bio gas setups and stables		✓	✓✓
Car, bus, tram and train parking's		✓	✓✓
Chemical storages, fuel and solvent storage, indoors	✓	✓✓	✓
Chemical storages, fuels, paint and solvent storage outdoors		✓	✓✓
Cold Storages	✓✓		
Electric power transformers		✓✓	✓
Engine rooms diesel		✓	✓✓
Engine rooms gas	✓	✓✓	✓✓
Fuel service stations and plug-in hybrid charging stations		✓✓	✓✓
Fume hoods	✓✓	✓	
Heating Rooms for chemicals	✓✓	✓	
Hydrocarbons storage and processing indoors	✓	✓	✓✓
Hydrogen storage and processing indoors	✓✓	✓✓	
Hydrogen storage and processing outdoors		✓✓	
Isolators for antennas	✓✓		
Laboratories	✓	✓✓	✓
Monitoring of machinery	✓	✓✓	✓✓
Oil and Gas pipe line and pumping stations		✓	✓✓
Paint spray booth's		✓	✓✓
Radio amplifier rooms	✓✓		
Recycling and waste processing plants		✓	✓✓

Modest suitability: ✓

good suitability: ✓✓

### Features

- Monitors higher hydrocarbons flames (wood, paper, petrol) but also and lower hydrocarbons such as methanol and methane.
- The UV and UV/IR flame detector detect hydrogen flames.
- Good resistance against the influences of:
  - direct and reflected sun light.
  - artificial light, such as fluorescent tubes and glass covered halogen lamps.
  - arcs and electric discharges (static or from e.g. electric motors).
  - the radiation from arc welding provided that the distance to the arc welding is > 3 m (UV/IR) or > 3 m (IR3) from the detector.
- IR3 flame detector is suitable for smokey fires.
- Automatic Sensor Test (Built-in Self-Test) which monitors the sensors and the electronics of the flame detector for its proper operation.
- DIL-switches to set latching/non-latching alarm relay output.

### Benefits

- Rugged sensors make the detector suitable for virtually all fire types.
- Sophisticated software enhances the reliability and availability of the detector.
- Design of the housing and the swivel mount avoid mounting errors with regards to grounding.
- Automatic Sensor Test (Built-in Self-Test) enhances the reliability and availability of the flame detector.



**OGGIONI S.a.s.**

Via dei Lavoratori Autobianchi, 1  
C/O Polo Tecnologico – Edificio 13/O  
20832 DESIO (MB) – ITALY  
Tel. +39 0362 62.91.35 – Fax. +39 0362 62.25.31  
www.oggionisas.com - e-mail: info@oggionisas.com

- A Pressure Compensating Element avoids additional cost of maintenance caused by moisture build up and increases the life time.
- Nonincendive (non-sparking) design enhances the reliability and the availability and with a reasonable add on price.
- Warranty: whichever comes first: 36 months after installation or 42 months after supply.

### Specifications

Power	12-24 Vdc (10-28 Vdc)
Current normal	25 mA at 24 Vdc
Current in alarm, at 24 Vdc	+/- 75 mA at 24 Vdc
Startup time	<10 sec
Alarm output setting	Selectable LEDs and relays latching/non latching, factory setting: latching
Connection to	-a fire control panel by means of end of line (EOL) and alarm resistor (current increase) -a device that can take relay outputs -a PLC with a 0-20 mA input
End of line and alarm resistor	To be adjusted to the fire control panel, free terminals dedicated for the resistors are available. <b>Remark:</b> the alarm- and EOL resistor must be rated 2 W minimum each and the total power dissipation of both alarm- and EOL resistor should not exceed 2 W.
Relay outputs: -alarm relay -fault relay	De-energized during normal operation, no alarm, SPDT, 30 Vdc – 2 A, 60 W max. Energized during normal operation, no fault, SPDT, 30 Vdc – 2 A, 60 W max.
Current output	Standard available 0-20 mA (stepped, sinking, non-isolated)
Alarm response time	< 8 s. See appendices.
Cone of vision	90° minimum
Housing	Glass Reinforced Polyester (GRP), Lid screw tightening torque 2 nm minimum.
Ingress protection	IP65
Temperature, operating	-40 °C to +70 °C (-40 °F to +158 °F)
Temperature, ambient	ATEX and FM class 3611: -25 °C to +70 °C (-13 °F to +158 °F), see appendixes
Automatic and manual Self-Test	Automatic Sensor Test (Built in Self-Test) and manual self-test
Dimensions	125 x 80 x 57 mm (4.9 x 3.15 x 2.25 inch)
Weight	465 gram (1.05 lbs.)
Cable gland	M20 (cable conduit diameter 5.5-13 mm, two steps 5.5-8 mm and 8-13 mm)
Pressure compensating Element	PCE (Pressure Compensating Element) avoids moisture build up in the detector housing, caused by pressures differences as a consequence of temperature fluctuations.
Terminals	Suitable for massive cores 0.5 to 1.5 mm <sup>2</sup> (24 to 16 AWG), tightening torque 0.4 nm minimum.
EN54-10 Certificate	UV-185/5CZ and UV/IR-210/1CZ: Class 2. IR3-109/1CZ: Class 1
ATEX/IECEx Certificate	(see appendix)
FM3260 approval (pending)	(see appendix)
FM3611 approval (pending)	Nonincendive (non-sparking), (see appendix)
Optional Swivel Mount SM21 material	PA66, 316SS nuts and bolts
Optional Swivel Mount SM21 weight	280 gram (0.62 lbs.)

### Ordering information

Catalog Code	Part #	Description
UV-185/5CZ	SW1110	UV/IR flame detector, EN54-10 certificate, suitable for ATEX zone 2/22, FM3260 approval (pending) and FM3611 approval (pending)
UV/IR-210/1CZ	SW1105	UV/IR flame detector, EN54-10 certificate, suitable for ATEX zone 2/22, FM3260 approval (pending) and FM3611 approval (pending)
IR3-109/1CZ	SW1138	UV/IR flame detector, EN54-10 certificate, suitable for ATEX zone 2/22, FM3260 approval (pending) and FM3611 approval (pending)
SM21	SW1098	SM21 swivel mount
TC-229/4PX	SW1119	TC-229/4PX test lamp for 210 series flame detectors, including univ. charger & carrying case, non EX
TC-940/1Z	SW1120	TC-940/1Z test lamp for 210 series flame detectors, including carrying case, intrinsically safe (pending)

Due to the policy of continued product development OGGIONI S.a.s. reserves the right to alter or amend information in their publications without prior notice and no responsibility can be accepted for errors or omissions.