



UV/IR Flame Detectors

The OGGIONI UV/IR-210/1 UV/IR flame detector is a combination of a UV- and IR- flame detector which utilizes a microprocessor for sophisticated electronic signal analysis. The IR part of the flame detector has an additional alarm criterion: the analysis of the flame flicker-frequency. The UV and the IR sensor must both exceed their alarm threshold to initiate a fire alarm. The UV/IR flame detector has a good false alarms rejection since the UV and the IR sensor do not share false alarm sources. The UV/IR-210/1 flame detector can thus be applied in areas where single UV or IR flame detectors could potentially cause false and/or unwanted alarms.

The applications in which the UV/IR-210/1 flame detector can be used are:

- Hydrocarbons storage and processing including tank farms
- Hydrogen storage and processing
- Chemical storages, fuels, paint and solvent storage
- Oil and Gas pipe line and pumping stations
- Fuel service stations
- Engine rooms
- Monitoring of machinery
- Aircraft hangars
- Car, bus, tram and train parking's
- Paint spray booth's
- Recycling and waste processing plants
- Electric power transformers
- Atriums
- Bio gas setups and stables

Features

- Monitors higher hydrocarbons flames (wood, paper, petrol) but also hydrogen and lower hydrocarbons such as methanol and methane.
- 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 electric welding provided that the electric welding takes place at a distance more than 3 meters from the flame detector (a welding rod contains organic compounds which show flame phenomena).
- Less suitable for very smoky fires. This inhibitor of both the UV-sensor and the IR-sensor affects the flame detector performance.
- Automatic Sensor Test (Built-in Self-Test) which monitors the sensors and the electronics of the flame detector for its proper operation.
- DIP-switches to set the sensitivity and latching/non-latching alarm relay outputs to adjust the flame detector to the application (not active in EN54-10 models).

Benefits

- Rugged UV sensor and IR sensor 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.
- A Pressure Compensating Element avoids additional cost of maintenance caused by moisture build up and increases the life time.
- Non-sparking design enhances the reliability and the availability and with a reasonable add on price for an ATEX declaration it is suitable for use in zone 2/22.
- Warranty: whichever comes first: 36 months after installation or 42 months after supply.

Specifications

Flame Detector UV/IR-210/1

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 and EN54-10 setting: latching <ul style="list-style-type: none"> • 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
Connectability	
End of line and alarm resistor	To be adjusted to the fire control panel, free terminals dedicated for the resistors are available. Remark: the value of the alarm- and EOL resistor combination must be >500 Ohm.
Relay outputs:	De-energized during normal operation, no alarm, SPDT, 30 Vdc – 2 A, 60 W Energized during normal operation, no fault, SPDT, 30 Vdc – 2 A, 60 W
<ul style="list-style-type: none"> • alarm relay • fault relay 	
Current output	Standard available 0-20 mA (stepped, sinking, non-isolated)
Alarm response time	>8 s, <30 s. See appendices
Cone of vision	90 ⁰
Housing	Glass Reinforced Polyester (GRP)
Ingress protection	IP65
Temperature (operating)	-25 ⁰ C tot +70 ⁰ C (-13 ⁰ F tot +158 ⁰ F)
Automatic and manual Self-Test	Automatic Sensor Test (Built in Self Test) and manual sensor self-test
Sensitivity settings	Selectable: very high, high, medium, low (factory setting: high, standard for EN54-10 certified models)
Dimensions	125 x 80 x 57 mm (4.9 x 3.15 x 2.25 inch)
Weight	492 gram (1.09 lbs)

Cable gland	M20 (cable conduit diameter 5.5-13 mm in 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 0.6 to 1.5 mm ² (24 to 16 AWG)
CE marking	
EN54-10 Certificate	Only for model UV/IR-210/1C and UV/IR-210/1CZ
ATEX Declaration of Conformity	Only for model UV/IR-210/1Z and UV/IR-210/1CZ, suitable for use in ATEX zone 2/22
FM3260 approval	Only for model UV/IR-210/1F and UV/IR-210/1FN, (pending)
FM3611 approval	Only for model UV/IR-210/1FN, suitable for use in Class I and II, Div 2. Class III, Div 1 and 2 (pending)
Optional Swivel MountSM21	
Material	POM
Weight	325 gram (0.7 lbs)

Options:

Catalog Code Part # Description

UV/IR-210/1	SW1096	UV/IR flame detector, with variable sensitivity settings and selectable latching/unlatching alarm
UV/IR-210/1C	SW1097	UV/IR flame detector, one sensitivity and latching alarm, EN54-10 certificate
UV/IR-210/1Z	SW1105	UV/IR flame detector, with variable sensitivity settings and selectable latching/unlatching alarm, suitable for ATEX zone 2/22

UV/IR-210/1CZ	SW1106	UV/IR flame detector, one sensitivity and latching alarm, EN54-10 certificate, suitable for ATEX zone 2/22
UV/IR-210/1F	SW.....	UV/IR flame detector, two sensitivity settings and selectable latching/ non latching alarm, FM3260 approval (pending)
UV/IR-210/1FN	SW.....	UV/IR flame detector, two sensitivity settings and selectable latching/ non latching alarm, FM3260 approval (pending) and FM3611 approval (pending)
SM21	SW1098	SM21 swivel mount
T-229/4P	SW1067	T-229/4P universal UV/IR test lamp for flame detectors, incl. universal charger
TC-229/4P	SW1082	TC-229/4P universal UV/IR test lamp for flame detectors, incl. universal charger and carrying case
C-430/1	SW1069	C-430/1 carrying case for T-229/4P test lamp
UE-458/2	SW1020	UE-458/2 Mini Fire Card, with 11 pins relay base
JB1	SW1100	At request: Junction box with 2 glands, for address unit (excl. address-unit)
JB2	SW1101	At request: Junction box with 2 glands, incl. sourcing 0-20 mA output and bus-protocols
CLN	SW1102	Microfiber cleaning cloth for flame detector windows, set of 10 pieces