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**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.

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| **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 |
| Connectability | * 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. **Remark:** the value of the alarm- and EOL resistor combination must be >500 Ohm. |
| Relay outputs:   * alarm relay * fault relay | 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 |
| Current output | Standard available 0-20 mA (stepped, sinking, non-isolated) |
| Alarm response time | >8 s, <30 s. See appendices |
| Cone of vision | 900 |
| Housing | Glass Reinforced Polyester (GRP) |
| Ingress protection | IP65 |
| Temperature (operating) | -250 C tot +700C (-130 F tot +1580 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 mm2 (24 to 16 AWG) |
| CE marking | See [www.oggionisas.com](http://www.oggionisas.com/) for Declaration(s) of Conformity |
| 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:**

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| **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 | | | |