UV-Flame Detector

Type: 800/24 VST-K-…

EGON HARIG flamtron®
Electronic systems Fire alarm systems

- Directions for assembly, setting to work for the first time, and testing of functions
- Alarm types and important warnings.
- Directions for maintenance work and test procedures
- Repairs, replacements of parts

1. Assembly

When the flame detector is being assembled, due consideration should be given to the device's field-of-view angle.

The response sensitivity of the device decreases towards the peripheries of its field of view. For this reason, the flame detector should be aligned so that it is directly facing the object being monitored. Since the flame-detection function is dependent on the intensity of the flame, and on the distance of the flame from the detecting device, the flame detector must be installed as close as possible to the object being monitored. If the object being monitored is a room, care should be taken to ensure that the flame detector has a sufficiently wide field of view. The field-of-view angle will depend on which of the three UV- pipes supplied by the manufacturer is used in the flame detector.

In rooms where there is a high degree of air pollution (caused, for example, by dust or oil vapor), the detector should be mounted in a position where as much fresh air as possible can circulate around it, so that no deposits of dust or oil can form on the UV tube.
Dimensions for mounting: see D.-No: 4.3125.3-1

2. Setting to Work for the First Time

Connect up the detector in accordance with the terminal- and wire-connection diagram, and line up so that it is facing the object to be monitored.
Check the 24 V DC power supply and the alarm connections.
Ensure that the field-of-view angle is appropriate for the object being monitored.

3. Testing of Functions

3.1 Voltage Monitoring

After the 24 V DC power supply has been fed in (as per the connection diagram), fault-report relay K2 (operated by closed-circuit current) is switched into circuit if no fault has been detected.
The floating contact closes the connection from terminal 6 to terminal 7.
If the internal operating voltage fails, or if the supply voltage is interrupted (i.e. if the device is "dead"), K2 drops out and closes the contact between connection terminals 6 and 8.

3.2 Fire Alarm

The flame detector can be tested with our UVG 93 ultraviolet test device, or by means of a naked flame (provided, for example, by striking a match or igniting a lighter).
The light source is positioned so that it can activate the flame detector. The time required for the release of an alarm will depend on the intensity of light emitted by the light source, on the distance of the light source from the detector, and on the response sensitivity of the detector.
The optical components in the detector must be cleaned before testing begins.
When a fire alarm is signaled, relay K1 is attracted (by the operating current).
The floating contact closes the connection from 3 to 4.
At the same time, the red LED on the detector (individual display) lights up.

EGON HARIG GmbH
Gewerbering 4 • D-22113 Oststeinbek
Tel./Phone: +49 (0)40 713752-0
Telefax: +49 (0)40 713752-24
E-Mail: egonharig@egonharig.de
www.egonharig.de www.flamtron.de

3.2.1 Continuous Alarm

Once a continuous alarm has been released, the flame detector can only be reset by interrupting the 24 V DC power supply (e.g. by means of an external "Acknowledge" button. A fault report will be generated for as long as the acknowledgement remains activated.

3.2.2 Time-limited Alarm

The alarm will be generated for the duration of a preset alarm time, and will then be repeated for as long as the light source (naked flame or test device) is detected.
Continuous alarms and time-limited alarms can only be set by the manufacturer.

4. Important Warning

Repairs can **not** be performed on the detector.

DANGER !

Voltages of up to 600 V DC are generated in the detector, so **it must not be opened up!**

5. Maintenance and Testing

a) In a Dusty Atmosphere

The UV tube must be clean enough to be clearly visible when visual checks are performed. If this is not the case, clean the UV tube with a soft cloth which is free from oil and grease.

b) In an atmosphere containing particles of oil, grease or fat

There must not be a film of oil on the UV tube, because even the thinnest film could considerably reduce the response sensitivity of the flame detector.
For this reason, the UV tube should be frequently cleaned with a soft cloth and a degreasing / deoiling agent.

c) Electronics

Generally speaking, the evaluation electronics require no maintenance. However, the UV tube should be tested every 2 years, and we further recommend that the tube be returned to the factory every 4 years, so that tests can be performed to ensure it is still functioning properly.

Flame detectors installed in locations where visual checks can only be performed with difficulty should be tested frequently with a UV-light emitter (see instructions for setting to work for the first time).

The response sensitivity of the detector will always depend on the amount of dirt on the UV tube. However, condensation on the UV tube will impair the response sensitivity of the detector only minimally.

For safety reasons, we recommend that the proper functioning of the flame detector be tested with a UV test device at regular intervals of 14 days.

Important Warning

The UV flame detector **must not be opened up!**

6. Repairs etc.

The detector should be returned to the manufacturer for repair, especially (and under all circumstances) if it is still under guarantee.

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