

### Rules for mounting, starting, testing, maintenance, repairs and hints on troubles

#### 1. Mounting

When mounting the flame detector the optical location angle has to be observed. The location angle is

- ◆ vertical approx. 90° to 100°
- ◆ horizontal approx. 160° to 180°

The sensitivity will decrease to the sides. Therefore adjust the flame detector directly to the project to be monitored. The flame detection is depending of the intensity of the flame, the distance between flame and flame detector. Due to this fact, the flame detector has to be mounted close to the project. For monitoring of a room the optical location angle of the detector has to be observed.

In room with contaminated air (dusty or greasy air) the detector has to be mounted so, that it is ventilated with fresh air to avoid depositing of dust or oil on the inspection glass.

#### 2. Commissioning

Connect the detector corresponding to the cable marks of the terminal box and adjust to the object to be monitored.  
 Check 24 VDC power supply and signal lines.

#### 3. Functional Test

##### 3.1 Voltage Monitoring

After connection of the 24 VDC corresponding to the connection diagram gets the failure relay K2 energized in the undisturbed state. The change-over contact opens the connection terminal 3 - 4 (6 - 7) and closes 3 - 5 (6 - 8).

Upon failure of the internal operating voltage generation, the fuse F1 or supply voltage (stress-free state of the device) drops K2, the connection terminal 3 - 5 results (6 - 8) opens and 3 - 4 (6 - 7) closes.

##### 3.2 Fire Alarm

Flame detector tested by use of our UV-Tester of type: UVG 93 or an open flame can be used for testing (matches, gas lighter etc.).

The time till giving alarm is depending of the intensity of the UV-radiation (tester or flame), the distance between radiation source and detector, the response sensibility of the detector (delay of fire alarm signal) and the contamination of the optic (if necessary clean before test)

The relay K1 will be actuated in case of fire alarm.  
 The change-over contact opens terminal 6 - 7 (3 - 4) and closes terminal 6 - 8 (3 - 5). Simultaneously the red LED of the detector lights up.

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### 3.2.1 Continuous Alarm

If the alarm of the detector is according to vote with the manufacturer set on continuous alarm, reset can be effected only by short disconnection of the 24 VDC power supply (e.g. by an external reset push button). As long as this reset will be actuated, there will be given a failure signal.

### 3.2.2 Time limited Alarm

If the alarm of the detector is according to vote with the manufacture set on time-limited alarm, reset of the alarm will be automatically after run down of the adjusted time.

## 4. Important notes

Be careful at test or repairs on the opened and connected detector, because the terminal for the detector tube and the DC/DC transformer module DC 880 have a voltage of approx. 600 VDC.

## 5. Maintenance

### a) In dusty atmosphere

The quartz glass head should be clean, so that at optical check the UV-vacuum tube are visible. Otherwise clean the inspection glass by means of a soft grease-free cloth.

### b) In greasy atmosphere

No oil may be deposit on the head. A thinn gil film can influence the sensibility of the detector. Therefore clean the glass more often by means of a soft and grease-free cloth, respect. Clean the glass by means of a grease solvent.

### c) Electronic

The evaluation electronic is generally maintenance -free.

The UV-vacuum tubs UVN 81 should be checked at least every 2 years, and it is recommended to replace the tube every 4 years.

If the detectors are mounted that a visual check can not be carried out the functional test should be done by means of an ultra-violet tester (refer also to starting instructions).

The response sensibility of a detector is depending from the contamination of the inspection glass. Condensed water on the inspection glass has nearly no influence to the response sensibility.

For safety reasons we recommend to check the detector every 14 days by means of an ultra-violet tester.

### 6. Repairs

De-energize the device and loosen cover screws.  
After opening, the signal processing unit can be pulled out with the mirror board.  
Generally a defective unit should be sent to the manufacturer (generally during guarantee).

#### 6.1 Replacement of Component/Order of Spare Parts

In order to ensure that the correct spare parts are supplied, are in the order always type of device and the serial numbers of the flame detector.

Even repairs carried out should be limited only to the replacement of the following parts:

- ◆ Fuse Type T 125 mA, 250 V, TR 5 on the Relais-circuit board,
- ◆ Evaluation board Type U-880-A.F FLD 880 (signal unit complete)
- ◆ Relay board of type: U-884-B or U-880-b (relay board)
- ◆ Reflector board of type: da-gp-880
- ◆ Sight glass of type: HQF 504

After a repair the functional check must be done. Clean optics of grease and dust, and perform functional check with the UV-tester or a flame.

