

## C7076A adjustable sensitivity ultraviolet flame detector

### OPERATING INSTRUCTIONS

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#### CONTENTS

1 Safety . . . . .	1
2 Application . . . . .	2
3 Checking the usage . . . . .	2
4 Features . . . . .	2
5 Technical data . . . . .	2
6 Accessories . . . . .	3
7 Replacement parts . . . . .	3
8 Installation . . . . .	3
9 Installing the detector . . . . .	5
10 Wiring . . . . .	6
11 Adjustments and checkout . . . . .	8
12 Sensitivity adjustments . . . . .	9
13 Troubleshooting . . . . .	10
14 Service and Maintenance . . . . .	11
15 Certification . . . . .	14
16 Disposal . . . . .	14

#### 1 SAFETY

##### 1.1 Please read and keep in a safe place



Please read through these instructions carefully before installing or operating. Following the installation, pass the instructions on to the operator. This unit must be installed and commissioned in accordance with the regulations and standards in force. These instructions can also be found at [www.docuthek.com](http://www.docuthek.com).

##### 1.2 Explanation of symbols

**1, 2, 3, a, b, c** = Action

**→** = Instruction

##### 1.3 Liability

We will not be held liable for damage resulting from non-observance of the instructions and non-compliant use.

##### 1.4 Safety instructions

Information that is relevant for safety is indicated in the instructions as follows:

#### **⚠ DANGER**

Indicates potentially fatal situations.

#### **⚠ WARNING**

Indicates possible danger to life and limb.

#### **⚠ CAUTION**

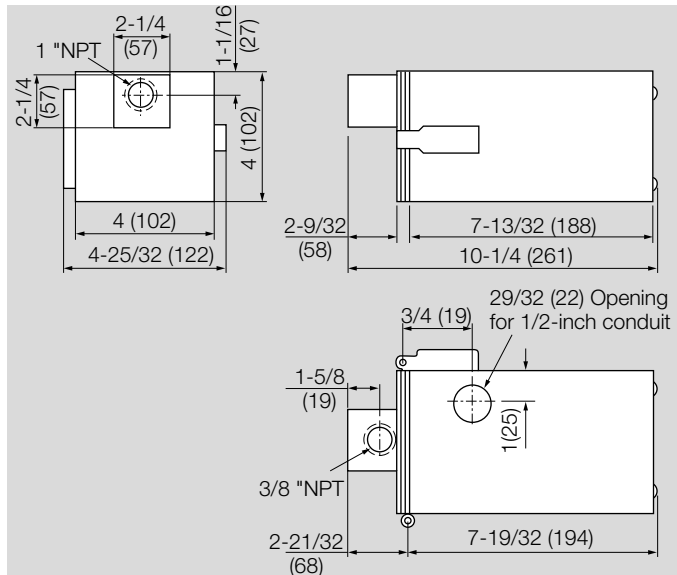
Indicates possible material damage.

All interventions may only be carried out by qualified gas technicians. Electrical interventions may only be carried out by qualified electricians.

##### 1.5 Conversion, spare parts

All technical changes are prohibited. Only use OEM spare parts.

## 5.1 Dimensions



## 6 ACCESSORIES

117053 Meter Connector Plug (for older W136A models).

## 7 REPLACEMENT PARTS

The web app PartDetective for selecting spare parts is available at [www.adlatus.org](http://www.adlatus.org).

- 191002B Plug-in Electronics Chassis (without UV sensing tube).
- 190971E Coil and Shutter Assembly (for all models except 100V model).
- 190971F Coil and Shutter Assembly (for 100V model).
- 191053 Ultraviolet Sensing Tube.
- 191050 Viewing Lens.

## 8 INSTALLATION

### 8.1 Planning the installation

- Proper flame detector application is the basis of a safe and reliable flame safeguard installation.
- Refer to the burner manufacturer instructions as well as to those included here.
- Follow all instructions carefully.

### 8.2 Determine the location

Before beginning the actual installation, estimate the best location for mounting the detector based upon the following factors:

#### Temperature

- Install the flame detector where the surrounding temperature will remain within the specified ambient operating temperature ratings.
- For the C7076A, to keep the detector temperature within specifications, the aspirator temperature must not exceed 225 °F (107 °C). If the aspirator temperature will exceed temperature ratings, the introduction of cooling-purging air will be required.

#### Vibration

- Do not install the detector where it could be subjected to excessive vibration; it shortens the life of the electronic components. Vibrations with a magnitude greater than 1g will require an antivibration mount to cushion the detector.

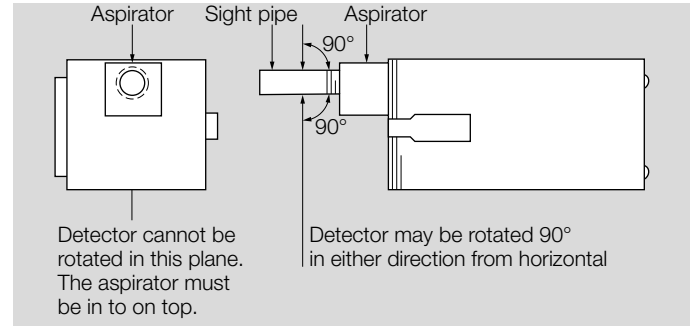
#### Clearance

- Make sure there will be enough room to swing out the detector for servicing. Refer to Fig. 2 as applicable.

### 8.3 Installation position

Aspirator has 1-inch NPT tapping for mounting onto sight pipe, and 3/8 inch NPT tapping for connecting to the air supply. Detector mounts on aspirator by means of a removable piano-type hinge.

#### Allowable mounting positions



Mounting position

### 8.4 Radiation sources other than flame

Examples of radiation sources, other than flame, which could actuate the detector system include:

#### Ultraviolet sources

- 1 Radiant surfaces above 2200 °F (1200 °C).
- 2 Sparks from ignition transformers and welding arcs.
- 3 Gas lasers.
- 4 Sun lamps.
- 5 Germicidal lamps.
- 6 Incandescent lamps held close to the sensing tube (filament above 2200 °F [1200 °C]).

#### Gamma ray and X-Ray sources

- 1 Diffraction analyzers.
- 2 Electron microscopes.
- 3 Radiographic x-ray machines.
- 4 High voltage vacuum switches.
- 5 High voltage condensers.
- 6 Radioisotopes.

Except under very unusual circumstances, none of these sources, except a radiant surface or ignition spark, would be present in or near the combustion chamber.

The detector may respond to a radiant surface at a temperature above 2200 °F (1200 °C) if both of these conditions are present:

- The detector sensitivity control is set at (or near) maximum, and
- the surface represents a significant percentage of the detector field of view.

If the temperature or a radiant surface causes the flame relay (in the flame safeguard control) to pull in, re-aim the sight pipe so the detector views a cooler area, or decreases the sensitivity of the detector. Ignition spark is a rich source of ultraviolet radiation. When installing the detector, make sure it does not respond to ignition spark.

### 8.5 Single burner requirements

The detector must have an unobstructed view of a steady part of the flame it is supervising. This requires a proper sighting angle and minimized ultraviolet radiation attenuation effects. However, when supervising only one burner, sighting requirements are simplified.