

Datasheet

DeFlameTec model no. VFK-FD1 Flame Detector

Brief Description:

The DeFlameTec model no. VFK-FD1 is a series of patented, robust and reliable flame detectors. DeFlameTec detectors provide the means of reducing risks of false alarms to a minimum. DeFlameTec detects fires exclusively from the narrow spectral range, which equals the light radiated from carbon oxidation. DeFlameTec flame detectors are patented by VID Fire-Kill.

- EN54-10:2002, Class 1 flame detector,
- CE Electronics,
- IP 67.7 stainless steel ANSI 316L housing,
- Ex II 3G/D nA T4
- Flame detection in large areas, (30 m),
- Fire detection insensitive to hot surfaces,
- Fire detector insensitive to minor blurring of the lens,
- Custom set time delays, with LED indication on detector, available,
- Indoor and outdoor use,
- Potential free alarm relays (NO/NC) suitable connection to alarm panel,
- Built-in Lens check for easy check of blurring of the lens, with LED indication on detector,
- Independent signal circuit,
- Simple installation and enclosed stainless steel installation bracket,
- 2 meter flying wire connection,
- Low maintenance,

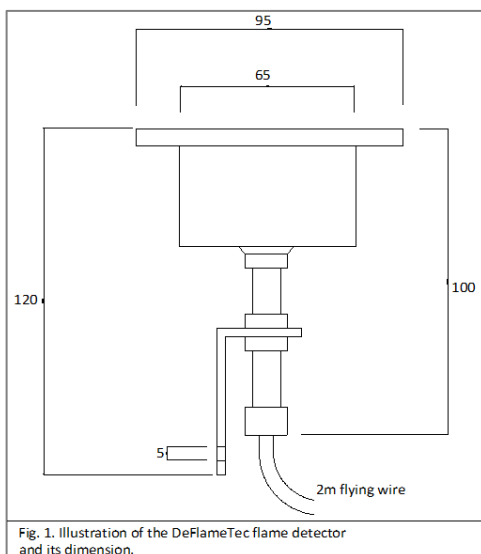


Fig. 1. Illustration of the DeFlameTec flame detector and its dimension.

Technical Data		
Dimensions		See fig. 1.
Materials	Housing	Stainless Steel ANSI 316L
	Gaskets	EPDM
	Lens	Clear Fused Quartz
Weight	Net	0.35 kg
	Brute	0.5 kg
Storage Temperature		-20°C to 95°C
Operating Temperature		-10°C to 55°C
Spectral detection range		185 nm – 260 nm.
Field of View		See fig. 3
LED Signals		See table p. 2
Electrical Data		
Power Supply	Min	21 Vdc
	Max	27 Vdc
	Suggested	24 Vdc
Output Signals		
Relay Parameters	Max	50 Vdc & 100 mA
Potential Free Relay Signal		NO/NC
Connections		
Mechanical		Use enclosed installation brackets w/ ø10 mm bolt
Electrical		See fig. 2

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Applications:

The DeFlameTec flame detector provides the means of reliable fire detection in most areas, with a simple installation, low maintenance and easy test of performance.

Typical applications are as follows:

- Useful in both indoor and outdoor applications,
- Process areas, machinery spaces, production lines,
- Inventories, storages,
- Infrastructure tunnels, cable tunnels,
- Areas with equipment prone to have hot surfaces,
- Areas divided into fire zones, etc.
- Onshore applications,
- Offshore applications,
- Maritime applications.
- Areas containing explosive atmospheres

Certification:

DeFlameTec flame detector:

EN 54-10:2002, class 1.

Detector electronics:

CE to EN 50130, EN 61000-6-3

Housing:

IP 67

ATEX

EX II 3G/D nA T4

This means that the detector is certified for the protection all applications, except mining ducts, of which hazardous gas or dust rich atmospheres may occur. The detector will not create sparks and will not overheat, diminishing the chance of the detector causing a rapid combustion.

Check:

Prior to the installation:

- It is to be checked that the type of detector match the requested type and that the detector is intact.
- Detectors which have been dropped or damaged in any way should not be installed.
- Only detectors with intact factory seals

LED color	Detector response:
Green (flashing)	Booted and supplied with sufficient power.
Green (constant)	Incandescent light detected (Lens check)
Yellow	Fire detected, no alarm
Red	Alarm relay activated

should be installed.

- It is to be checked that the factory seal is complete and not broken or in any way tampered with.

After installation:

- See the *Commission section*.

Installation and Maintenance:

Sensitivity	
Delay Time	3 impulses/30 seconds
	Customization available per request

DeFlameTec detectors shall be installed in locations where the detector lens is protected from debris and possible collection of water on the lens surface.

DeFlameTec detector shall be installed on steady vibration free construction elements using an 8mm stainless steel bolt.

The DeFlameTec detectors shall be secured in a

Table 2:

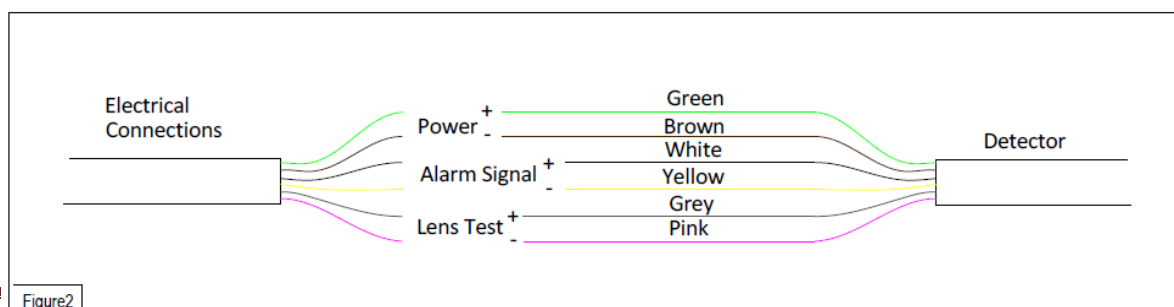


Figure 2

position from where the detector lens has a free view of the designated area.

The designated monitoring area shall be within the full sensitivity area (Fig. 3.) of the detector.

The flying wire should be terminated in a sealed connection box which match the requirements of the location and further connected to an explosion proof safety barrier for installations in Ex areas.

Commissioning:

The sensitivity to fire is checked using a flame, representing the flame sensitivity which are required for the location.

Alarms and time delays are checked with the flame in all border areas of the flame detectors detection area.

Lens check alarm are to be checked with an incandescent lightsource aimed at the detector lense from a location in the designated area.

Maintenance:

DeFlameTec detectors has an expected lifetime of five years under standard conditions.

DeFlameTec detectors should have their lens regularly checked for debris, blurring and

collection of water, oil and other liquids, on the lens, which reduces the sensitivity of the flame detection of the detector.

DeFlameTec detectors should regularly be checked in accordance with the *Commissioning section* of this datasheet, to secure future alarm signals.

The DeFlameTec detectors are supplied from factory with all screws and nuts sealed. Detectors should not be attempted repaired on site. Compromised detectors should be returned to VID Fire-Kill for repairs.

VID Fire-Kill denounces all responsibilities on detectors which have been attempted repaired on site, or where factory seals are broken.

Quality check:

All DeFlameTec detectors are after final assembly 100% quality tested with a propan+butan flame (7cm x 30cm) at 22m distance and 130°±10% detection angle.

Contact:

For further information on the DeFlameTec product series or any other product, please contact our sales department at: Sales@vidaps.dk

