

Description

The **FIRE KILL™** 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,

Technical data

Technical data		
Material	Housing	ANSI 316 L
	Gasket	EPDM
	Lens	Clear Fused Quartz
Weight	Net	0,35 Kg
	Gross	0,50 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 no. 2	
Electrical data		
Power supply	Min	21 VDC
	Max	27 VDC
	Nominal	24 VDC
Power consumption	Standby	62 mA@24 VDC
	Alarm	90 mA@24 VDC
Output signals		
Relay	Max	100 mA/50 VDC
Voltage free	NO / NC	



Voltage free outputs			
Version	Normally open		
	Alarm contact	Lens test contact	Fault contact
Detector de-energized	Open	Open	Open
Detector energized	Open	Open	Closed
Alarm activated	Closed	Open	Closed
Lens test activated	Open	Closed	Closed
Detector fault	Open	Open	Open
Power loss	Open	Open	Open

Version	Normally closed		
	Alarm contact	Lens test contact	Fault contact
Detector de-energized	Open	Open	Open
Detector energized	Closed	Closed	Closed
Alarm activated	Open	Closed	Closed
Lens test activated	Closed	Open	Closed
Detector fault	Closed	Closed	Open
Power loss	Open	Open	Open

Application

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:

Type of detector match the requested type and that the detector no damage to the unit.

Detectors which have been dropped or damaged in any way should not be installed.

Only detectors with intact factory seals should be installed.

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

Table 2

LED Color	Detector response			
Green (flashing)	Power ok			
Green (constant)	Ongoing test by Incandescent light (Lens check)			
Yellow	Fire detected, pre-warning			
Red	Fire detected, alarm relay activated			
Sensitivity				
Version	No of pulses	Seconds	Dip switch	Model
1	50	5	1 on / 2 off	1
2	100	5	1 off / 2 on	2
3	5	1	1 off / 2 off	3
4	50	30	1 on / 2 on	4

Installation and Maintenance:

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 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 repair.

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

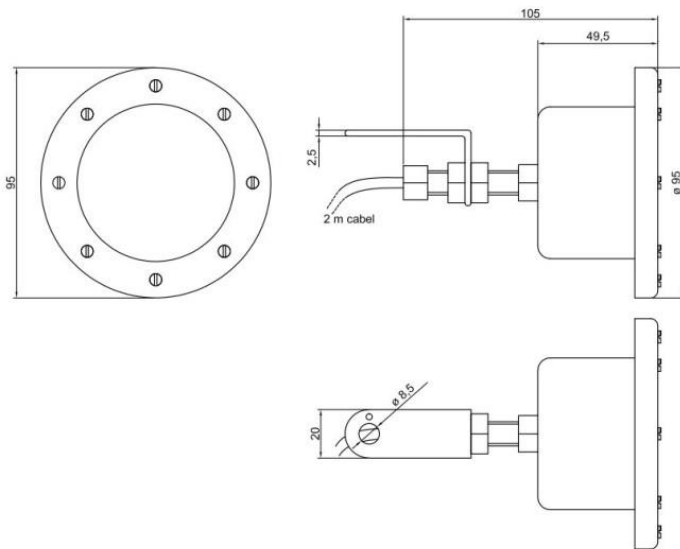
Quality check:

All DeFlameTec detectors are after final assembly 100% quality tested with a propan+butan flame (7cm x 30cm) at 22m distance and $130^{\circ} \pm 10\%$ detection angle.

Contact

For further information on **FIRE KILL™** products, please contact our sales department at Sales@vidaps.dk

Dimension (Fig 1)



Electric wiring (Fig 2)



Field of view (Fig 3)

