



MultiFlame FV-40

Flame detectors



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The reliable choice for optimum performance

The Teledyne Gas & Flame Detection MultiFlame Detectors are a portfolio of smart, flexible flame detection solutions designed to sense multiple types of flame and operate reliably even in the harshest environments. The MultiFlame meets the needs of multiple industries and environments where the presence of flame poses a hazard.



A wide range of detector types to best suit a wide range of applications

Depending on the application and the types of flames most likely to be encountered in a facility, personnel can choose from a wide range of detector offerings to meet the facility's detection needs. Detectors include Single IR, Triple IR (IR3), Multi IR, UV, UV/IR2.5µm, UV/IR4.5µm and Ultra-Fast UV/IR detectors. As an additional option, detectors can be ordered with or without built-in test (BIT) capability.

The latest technology and installation options for the best detection

The MultiFlame FV-40 includes the latest technology for the best detection and resistance to false alarms, while keeping budgets in mind. All units feature heated sensor windows to eliminate condensation and icing, sensitivity selection, multiple regulatory approvals and flexible communication options, including 3-color LED, 0-20mA, HART® and MODBUS® protocols. Three built-in relays also provide triggering of external systems.

Handle challenging environments with ease

Robustly designed to handle tough work environments, MultiFlame FV-40 Flame Detectors showcase long-life and high-reliability features. A MultiFlame FV-40 can be ordered with aluminum or 316L stainless steel casings/mounts and all circuit boards are epoxy-coated for protection. All units meet MIL-C-810C standards for humidity, salt, fog, vibration, mechanical shock and temperature extremes, while the housings meet IP66, IP67 and NEMA 250 6P water and dust ingress standards. The SIL-2 approval per IEC61508 is a final statement in reliability.

Reliability and quality service protect the most Valuable assets

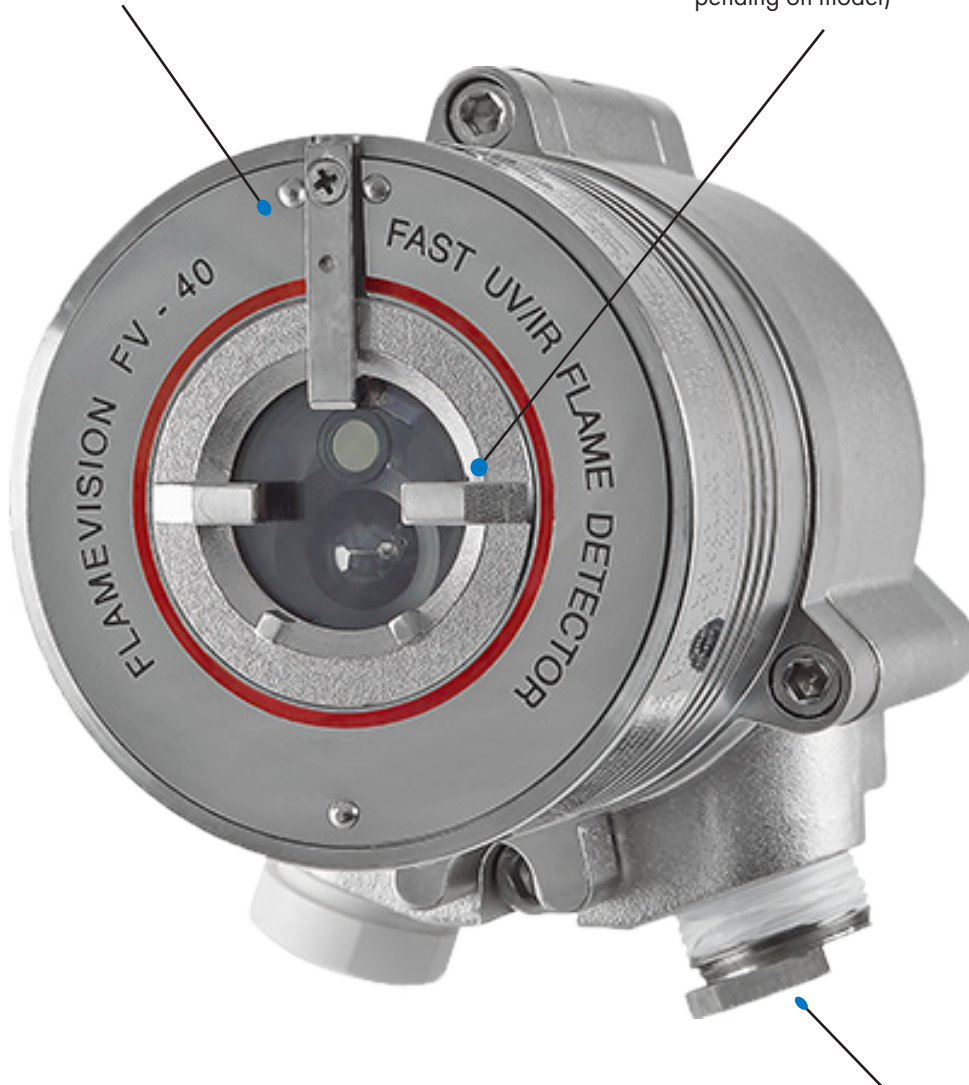
For over 80 years, Teledyne Gas & Flame Detection has built a strong reputation for innovation and high reliability. These same qualities are evident in the development and success of the Teledyne Gas & Flame Detection line of gas and flame detection.

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Heavy-duty 316L stainless steel or aluminum housing

Sensor window/LED indicator with heated optics (LED design varies depending on model)



Dual electrical connection ports with $\frac{3}{4}$ " NPT or M25 connections

Key features

- Long range and wide field of view reduce the number of units required
- 316L stainless or aluminum housings for long life and durability
- Fully adjustable 316L stainless steel mounts included for flexible installation
- Fast responses (5 seconds or less) mean quick alerts to hazards
- Low maintenance requirements save time and money
- Easily connect to your existing systems
- User-programmable functions allow for customization to meet individual needs
- Teledyne reliability and 5-year warranty provide peace of mind

Accessories



USB/RS-485 Connection Kit

Connect to a PC to adjust detector settings. For use in safe areas only



HART® Hand-Held Communicator Kit

Connect to the detector to view, change and maintain settings



Flame Simulator

Test flame detectors from a distance

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Specifications

Detector Dimensions

4.0 x 4.6 x 6.18 inch
(101.6 x 117 x 157 mm)

Detector Weight

6.1 lbs (2.8 kg) Stainless Steel
2.8 lbs (1.3 kg) Aluminum
2.2 lbs (1.0 kg) Tilt Mount

Detector Material

Aluminum or optional 316L
Stainless Steel*
*stainless steel standard on tilt mount

Operating Temperature Range/Humidity

-67°F to 167°F
-55°C to 75°C
0-95% RH non-condensing

Detector Range

See Model Selection Guide

Communication

3 relays, 3-color LED, 0-20 mA,
MODBUS, HART

Enclosure Ingress Protection

NEMA 250 6P, IP66/IP67

Electrical Connections

3- or 4-wire connections
18 – 32 VDC 4 watts max per unit

Electromagnetic Compatibility

EMI/RFI protected per EN61326-3
and
EN61000-6-3

Approvals

ATEX/IECEx: II 2 G D, Ex de IIC
T5 Ta = -55°C to +75°C, Ex tD A21
IP66/X7 T95°C
FM/FMC/CSA: Class I Div 1
Group BCD, Class II, Class III Div 1
Groups EFG
DNV: MED 'Wheelmark'
approval for marine
applications (Triple IR, Combined
UV/IR 2.5µm and Combined UV/IR
4.5µm models only)
INMETRO: Ex de IIC T5 Gb (old Ex
de IIC / T5 Gb) Ex tb IIIC T96°C
Db Ta = -55°C to +75°C
SIL2 (TUV): approved to
IEC 61508

Model selection chart

| Base Model Number | Detector Type UV | Max. Detection Range** ft (m) | Response Time (Typical) | Description | Application | Advantages |
|-------------------|------------------|-------------------------------|---------------------------------|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| F4-UB F4-UV* | UV | 50 (15) | 3 sec. | UV detector for organic and inorganic flames | <ul style="list-style-type: none">Hydrocarbon, Hydrogen, Silane, Ammonia, other hydrogen-based fuel fires and Metal firesIndoors | <ul style="list-style-type: none">+ High speed+ Unaffected by solar radiation+ Low cost |
| F4-2B F4-2V* | Combined UV/IR | 50 (15) | 5 sec. | UV/IR 2.5 µm detection of organic and inorganic flames | <ul style="list-style-type: none">Hydrocarbon, Hydrogen, Silane, Ammonia, other hydrogen-based fuel fires and Metal fires | <ul style="list-style-type: none">+ Low false alarm rate |
| F4-UF | Ultra Fast UV/IR | 65 (20) | 3 sec. / 20 msec. to flash fire | UV/IR 2.5 µm plus explosive flame detection | <ul style="list-style-type: none">Indoors and outdoors | |
| F4-4B F4-4V* | Combined UV/IR | 50 (15) | 5 sec. | UV/IR 4.5 µm for detection of hydrocarbon fires | | |
| F4-IR | IR | 50 (15) | 5 sec. | IR detector for hydrocarbon fires | <ul style="list-style-type: none">Hydrocarbon firesIndoors | <ul style="list-style-type: none">+ Low cost |
| F4-I3 | Triple IR | 215 (65) | 5 sec. | Long range detection with low false alarms | <ul style="list-style-type: none">Hydrocarbon firesIndoors and outdoors | <ul style="list-style-type: none">+ Highest sensitivity+ High immunity to false alarms+ Longer detection range |
| F4-MM | Multi IR | HCs 215 (65) H2 100 (30) | 5 sec. | Detects invisible hydrogen flames and hydrocarbon fires | <ul style="list-style-type: none">Hydrocarbon and Hydrogen firesIndoors and outdoors | <ul style="list-style-type: none">+ Highest sensitivity+ High immunity to false alarms+ Longer detection range |

*Units without BIT (Built in Test). **Max detection range based upon a 1ft 2 (0.1 m²) gasoline/heptane pan fire. All detectors are "Solar-blind" and are not affected by solar radiation.



TELEDYNE
GAS AND FLAME DETECTION
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