ProDetec

Measure . Prevent . Protect . Control

MultiFlame FV-40

Flame detectors

MultiFlame FV-40 detector

Flame detectors

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. All Teledyne Gas & Flame Detection flame detectors are backed by the Teledyne Gas & Flame Detection team headquartered in Monroe, North Carolina, USA, with offices around the world.

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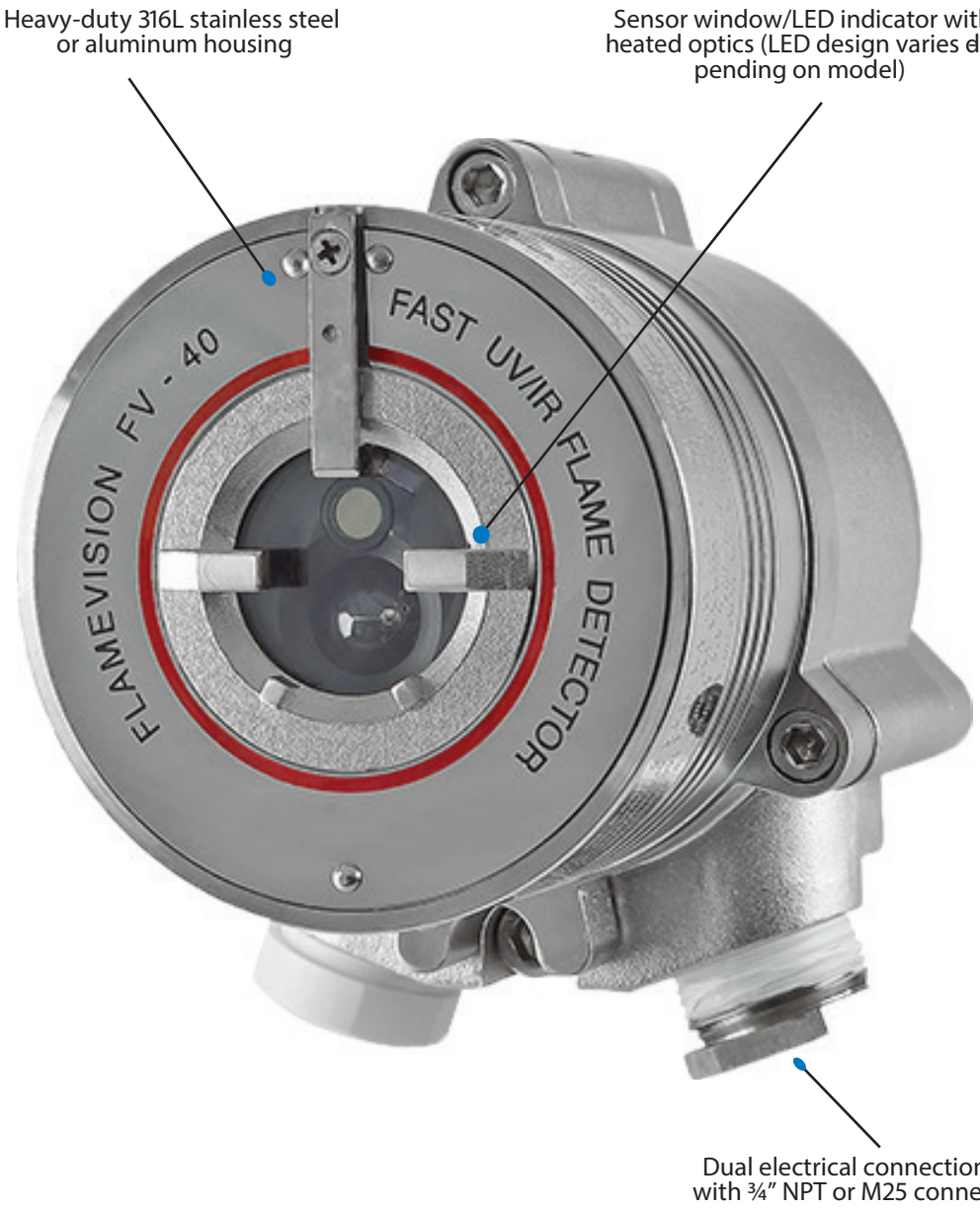

Key features

- Long range and wide field of view reduce the number of units required
- 316L stainless or alu minum housings for long life and durability
- Fully adjustable 316L stainless steel mounts included for flexible installation
- Fast responses (5 sec onds or less) mean quick alerts to hazards
- Low maintenance re quirements 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 2.5 µm and Combined UV/IR 4.5 µm models only)
INMETRO: Ex d e IIC T5 Gb (àld Ex d e 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	• Hydrocarbon, Hydrogen, Silane, Ammonia, other hydrogen-based fuel fires and Metal fires • Indoors	+ 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	• Hydrocarbon, Hydrogen, Silane, Ammonia, other hydrogen-based fuel fires and Metal fires • Indoors and outdoors	+ 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		
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	• Hydrocarbon fires • Indoors	+ Low cost
F4-I3	Triple IR	215 (65)	5 sec.	Long range detection with low false alarms	• Hydrocarbon fires • Indoors and outdoors	+ 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	• Hydrocarbon and Hydrogen fires • Indoors and outdoors	+ 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 m) gasoline/heptane pan fire. All detectors are "Solar-blind" and are not affected by solar radiation.

TELEDYNE
GAS AND FLAME DETECTION
Everywhereyoulook™

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