

## Introduction

The FlameVision flame detectors use triple infrared (IR) flame detection technology to provide fire detection solutions. These detectors work in all weather conditions and all lighting situations.

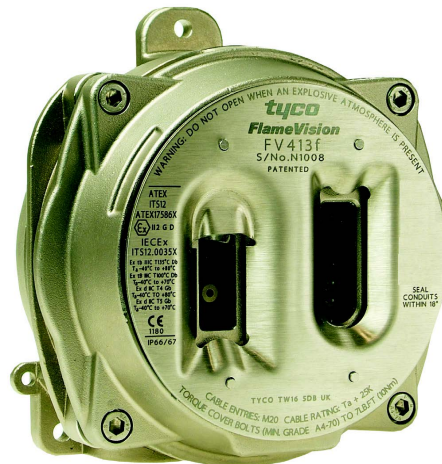
FlameVision protects against all hydrocarbon risks in hazardous and non-hazardous atmospheres. The system design options include monitoring, control interfaces, and a video camera for verification purposes.

For more information on the FlameVision flame detectors, refer to the following documentation:

- *FlameVision FV400 Series Triple IR Flame Detectors Product Application and Design Information (120.515.123\_FV-D-400-A)*
- *FV400 Series Triple IR Flame Detectors Fixing Guide (120.515.124\_FV-D-400-F)*
- *FlameVision FV421i Intrinsically Safe Flame Detector Product Application and Design Information (120.515.203\_FV-D-421i-A)*
- *FV421i FlameVision Flame Detector Fixing Guide (120.515.204\_FV-D-421i-F)*

## FlameVision FV400 features

Figure 1: FlameVision FV400



- Triple IR flame detection technology
- Multiple field interfaces
- Detection range of up to 65 m for a 0.1 m<sup>2</sup> n-heptane pan fire
- Automatic optical path monitoring
- Integral flame simulation and a remote walk test reduces system maintenance costs
- Video verification with an optional flameproof camera

# Technical specifications

**Table 1: Mechanical - Detector**

Item	Description
Dimensions	156 mm x 155 mm x 99 mm (H x W x D)
Weight	4 kg
Gland entry	2 x M20
Material	Stainless steel 316L, ANC4BF CLC to BS3146: Part 2
Guard or label plate	Stainless steel 316S16 to BS 1449: Part 2
External screws	Stainless steel 316 A4
Detection window	Sapphire
Camera window	Toughened glass

**Table 2: Mechanical - Bracket**

Item	Description
Dimensions	181 mm x 125 mm x 95 mm (H x W x D)
Material	Stainless steel 316S16 to BS 1449: Part 2
Weight	1.54 kg

**Table 3: Environmental**

Item	Description
Operating temperature	-40°C to 80°C
	With camera: -10°C to 50°C
Storage temperature	-40°C to 80°C
	With camera: -20°C to 70°C
Relative humidity	99% non-condensing
Enclosure	IP 66
Flameproof certification	ATEX Ex II 2 G D, IECEx, and FM

**Table 4: Camera**

Item	Description
Composite video	1 V p-p into 75 ohm through a twisted pair balun
Horizontal resolution	Standard 450 TVL
Light sensitivity	-30 IRE: 0.3 Lux

**Table 5: Detector performance**

Item	Description
Max range, 0.1 m <sup>2</sup> n-heptane	65 m
Field of view	90° horizontal, 85° vertical

**Table 6: Interfaces**

Item	Description
FV400	Modbus
	4-20 mA sink or source
	Conventional detector interface
	MZX Digital
	Fire and fault relay contacts, NO or NC
	Composite video output, camera option only
	HART interface
The FV421i detector does not include features such as a relay output, camera, and heater options.	

**Table 7: Electrical - FV400**

Item	Description
Supply voltage	18 VDC to 30 VDC
Current consumption	8 mA quiescent, 20 mA alarm, 24 VDC: interface dependent
Camera	85 mA at 24 V
Window heater	245 mA at 24 V
Connections	2.5 mm <sup>2</sup> 14 AWG terminals
External supply is only required for the camera, heater, and Modbus options.	

**Table 8: Electrical - FV421i**

Item	Description
Supply voltage	18 V to 28 V
Current consumption	1.5 mA quiescent, 6 mA alarm, 24 V: interface dependent

## Order information

**Table 9: Order information for the FlameVision flame detector range**

SKU	Product
516.300.411	FV411f Triple IR Flame Detector
516.300.412	FV412f Triple IR Flame Detector with PAL camera
516.300.413	FV413f Triple IR Flame Detector with NTSC camera
516.300.421	FV421i Triple IR Intrinsically Safe (I.S.) Flame Detector

**Table 10: Order information for the FlameVision flame detector ancillaries**

SKU	Product
517.300.001	MB300 FlameVision Mounting Bracket
517.300.002	WH300 FlameVision Weather Hood
517.300.021	WT300 FlameVision Walk Test Tool
517.300.022	CTI300 FlameVision Offline Configuration Tool
517.300.024	CTI400 FlameVision Offline Configuration Tool
517.300.006	MK300 FlameVision Field Spares Kit
517.300.025	CTI420 FlameVision Configuration Tool Kit

## Approvals

- EN 54
- FMRC 3260/3600/3615
- ATEX
- IECEX