

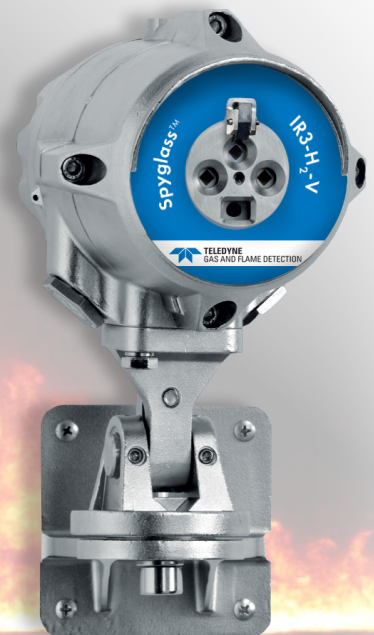
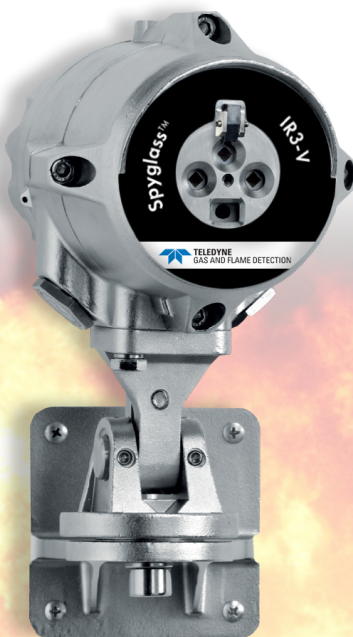


TELEDYNE GAS AND FLAME DETECTION
Everywhere you look™

Spyglass™ SG50-F Series

Flame Detectors

The Spyglass™ family of triple IR and UV-IR flame detectors provide top-tier optical flame detection with faster detection time and performance over long distances. Spyglass™ flame detectors also have industry leading false alarm immunity to several challenging environments while performing in adverse climates. All of the Spyglass™ family are available with the option to choose built in high definition video which allows users to make critical safety decisions from a distance.



Spyglass™ SG50-F Series

Flame Detectors

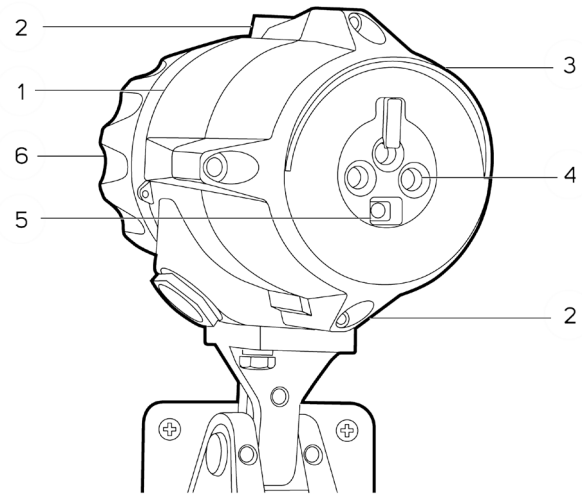
Spyglass™ SG50-F Series are designed to provide superior performance for a wide variety of fires in a rugged, durable housing.

The option of built-in video gives the ability to see and record fires without being on the scene.

Small size and affordable costs along with state of the art features make the Spyglass a desirable tool for anyone concerned about fires in their facilities.

Why Spyglass™ Flame Detectors

- Global approvals including FMus, FMc, ATEX, IECEx, and UKEX
- SIL2 Certified
- Long detection distances, low false alarms
- Ability to detect difficult fires including:
 - Alternate Energy Fuels
 - Munitions
 - Arcs/Sparks in windmills
 - Hot exhaust of engines such as helipads
 - NFPA33 standard
- Available with multiple outputs including:
 - 0 - 20mA
 - Modbus
 - HART
 - Fire, Fault, & Auxiliary relays



Mechanical Design

1. 316 Stainless Steel Housing with Electro-Polish finish
2. Easy retrofit to existing mounts
3. Precipitation lip
4. Individually machined Sensor Aperture for maximum signal accuracy reducing interference
5. Integrated HD Camera (only on -V models)
6. Integrated Terminal Connections separated and hermetically sealed from the main enclosure NEMA 4X/6P

Spyglass™ Flame Detectors with Integrated High-Definition video

High-Definition (HD) Camera allows clear imaging of fire at 100 ft. (30m) distance. Connecting to a video system allows remote verification of fire, allows the first responders to be aware of the exact situation before entering the hazardous area, and can be used for post-fire analysis of the cause of the fire. Video recording of 1 minute pre-event and up to 3 minutes post-event is captured by the detector.

Video units are available with either color or near-infrared video. Color is best for hydrocarbon fires and to give a realistic view. Some fires from fuels such as hydrogen and alcohol can be virtually invisible to the human eye, and also do not show up well on color video. Near-infrared video is best for these hard to see fires as it more clearly shows the extent of the flames.

High Definition Video

- Color or near-infrared
- Real-time Information
- Remote monitoring of un-manned locations
- Review fire causes and responses
- Remove uncertainty of releasing suppression systems



Image of the same hydrogen explosion taken from a near-infrared and a color video

Spyglass™ Triple IR (IR3) Flame Detector (with optional HD video)

Triple IR (IR3) Flame Detector detects hydrocarbon fuel and gas fires at long distances and provides the highest immunity to false alarms with its triple spectrum design.

- Optimized for hydrocarbon fires
- Long distance
- Fewest false alarms



SG50-F-IR3



SG50-F-IR3 -V



SG50-F-UV-IR



SG50-F-UV-IR-F-V

Spyglass™ UV-IR & UV-IR-F (with optional HD video) Flame Detector

UV-IR and UV-IR-F utilize an IR sensor along with a solar blind UV sensor to quickly detect fires. The UV-IR has the IR sensor set at a wavelength that allows detection of a variety of combustibles such as hydrogen and hydroxyl fires in addition to other gases like ammonia and silane. The UV sensor also allows the detection of metal fires. The UV-IR-F-V IR sensor is set to a wavelength that provides optimal detection of hydrocarbon fires but sacrifices the ability to see non-hydrocarbon fires such as ammonia.

- UV-IR-F fast response optimized for munitions
- UV-IR capable of seeing arc/spark fire issues in areas like windmills
- UV-IR for detection of metal fires

Spyglass™ IR3-H₂ Flame Detector (with optional HD video)

Detects 'invisible' hydrogen (H₂) gas fires at long distances and provides the highest immunity to false alarms with its triple spectrum design. The IR3-H₂ can also detect fires from other substances such as ammonia and silane, as well as fires from alternate energy / energy transition fuels.

- Best choice for hydrogen fires and alternate energy / energy transition fuels including hydrogen / methane blends
- Best choice for other non-hydrocarbons such as silane
- Not recommended for heavier hydrocarbons or arcs, sparks



SG50-F-IR3-H₂



SG50-F-IR3-H₂-V

Optional CO₂L Detector – Hot CO₂ Rejection

The CO₂L flame detector has been optimized to provide fast, robust detection for a wide range of hydrocarbon fires where combustion exhaust may be present. While detecting real fires, the detector will analyze and reject any false signal from a hot CO₂ exhaust.

Typical applications include: Aircraft hangars; Hardened Aircraft shelters; Helipads; Areas with high vehicle activity (such as tunnels or loading docks)

Optional NFPA33 Detector - Hi-Speed Detection

The NFPA33 range flame detectors have been optimized to provide extra-fast detection of fires in hi-speed production processes. The detector is designed to meet the NFPA33 standard which requires the detector to alarm on an event in less than 0.5secs. Performance tested and approved, the detector range is available in UVIR, IR3 and IR3-H₂ configurations.

Typical applications include: Automotive Spray Booths; High speed printing and coating; Fast moving conveyors and vehicles.

Spyglass™ SG50-F Series

Flame Detectors

Accessories



Flame Simulator

Flame simulators are available for the IR3, IR3-H₂, and UV-IR video and non-video flame detectors. These ATEX approved flame simulators mimic the radiation and flicker of an actual fire to test the flame detectors. All flame detectors also include a built-in-test (BIT) feature that allows self-testing by the detectors.



Air Shield Assembly

Optical flame detectors are often used in highly polluted or dirty areas, where maintenance personnel are forced to access the detector frequently to clean its optical window. The SP-F-AIRSHIELD-x air shield, has been specifically developed for Spyglass™ Flame Detector series of optical flame detectors, allowing the detector to be installed under tough environmental conditions, where they may be exposed to oil vapors, sand, dust, and other particulate matter.



Tilt Mount Assembly

Spyglass™ Flame Detector tilt mount adaptor enables wall or pole mounting of both Standard and HD Flame Detectors. Wall mount option gives >90° lateral movement and 75° Vertical movement for exceptional mounting flexibility.



Weather Cover Assembly

Weather shield provides additional environmental protection against rain, snow and sun. Mounts directly to the top of the detector. 316 stainless Steel construction for long life in all environments.



Pole Mount Assembly

The pole mount enables installing the detector with its mounting bracket. Stainless Steel construction for long life in all environments.



USB Adapter

USB/RS485 converter kit for connection of detector RS485 output to PC/Laptop for use with Communicator Software.

Approvals

Explosion proof

ATEX, IECEx, UKEX: II 2 G D

FMus & FMc
Class I, Div. 1, Groups B, C & D; T4

Please contact us for other certifications including INMETRO and PESO.

*not available on all options

Performance

ANSI FM 3260 / EN54-10*

Functional safety

Certified to SIL2, per IEC 61508

We are committed to ensuring the quality and continuous improvement of our products. The information contained in this brochure is therefore subject to change without notice, only the technical data contained in the manual is binding. For more information, please contact us or our distributor.