SharpEye Flame Detectors

Electro-Optical Fire and Flame Detection

SharpEye delivers the highest level of protection from unwanted fires and flames. This series of flame detectors incorporates the latest technologies for absolute performance in critical safety applications.

- **Maximum Performance**
  - Third party performance approvals (EN54-10, FM, DNV)
  - Safety Integrity Level (SIL-3) certified for long-term reliability
  - Rapid detection of unwanted fires and flames
  - High false alarm immunity
  - Detection of hydrocarbon and non-hydrocarbon flames

- **Designed for Critical Safety Applications**
  - Certified for Division 1 and Division 2 hazardous classified areas
  - Detector technology configurations specific to flame source
  - Three relays for Alarm, Fault, and Auxiliary conditions
  - Heated window for assured operation in harsh weather conditions

- **Easy to Use and Maintain**
  - HART communication for lower power requirements and easy maintenance
  - Lower profile design for ease of installation
  - Pivot and tilt mount providing easy adjustment of the detector orientation
  - Available long-range simulators for verifiable detector operation
  - Built-In-Testing (BIT) for manual and automated operation tests

SharpEye Electro-Optical Fire and Flame Detectors

SharpEye consistently delivers the highest level of protection and early notification of the presence of unwanted fires and flames. These flame detectors incorporate the latest technologies in unique sets of multi-spectrum electro-optics to provide absolute performance matched to the application.

Quality and performance are key traits to the success of SharpEye. Third party performance approvals provide the assurance that the product will repeatedly deliver performance matching its specifications while Safety Integrity Level (SIL-2) certification assures the flame detector will continue to perform long after installation. Supporting the reliability and commitment to customer satisfaction, each SharpEye comes with a 5-year manufacturer's warranty.

SPECTREX INC.

SharpEye™

Electro-Optical Fire and Flame Detection

SharpEye 40/40 Models

D-Series: 40/40D-I
Multispectrum Quad-Sense IR3 for an exceptional ultra fast detection of hydrocarbon fires at up to 300 ft. (90 m) in under 50 msec

D-Series: 40/40D-M
Multispectrum Quad-Sense IR3 for an exceptional ultra fast detection of hydrogen at up to 165 ft. (50 m) and hydrocarbon fires at up to 300 ft. (90 m) in under 50 msec

D-Series: 40/40D-LB
Integrated UV/IR channels for an ultra fast detection of hydrocarbon-based fuel and gas, hydroxyl, hydrogen, metal, inorganic fires in under 20 msec

D-Series: 40/40D-L4B
Integrated UV/IR channels for an ultra fast detection of hydrocarbon-based fuel and gas fires in under 20 msec

C-Series: 40/40C-I
Multispectrum Quad-Sense IR3 detection of hydrocarbon-based fuel and gas fires at up to 215 ft. (65 m).

C-Series: 40/40C-M
Multispectrum Quad-Sense IR3 detection of hydrocarbon fires and hydrogen flames at up to 215 ft. (65 m).

.
C-Series: 40/40C-LB
Integrated UV/IR channels for a fast detection of hydrocarbon and hydrogen flames in under five seconds.

C-Series: 40/40C-L4B
Integrated UV/IR channels for a fast detection of hydrocarbon-based fuel and gas, hydroxyl, hydrogen, metal and inorganic fires in under five seconds.

SharpEye 20/20 Models - mini

The 20/20 models are mini triple spectrum infrared flame detectors (IR3) with high performance and high reliability in a compact size for when space is at a premium. Lightweight and cost effective, there's an indoor model perfect for retail (20/20MPI) and an outdoor model suitable for more harsh conditions (20/20MI).

SharpEyeOverview_122922

Technical Specifications

Detectors
Vary by model - see individual spec sheets

Performance
Response Time .... Typically 5 seconds
Adjustable Time Delay .... Up to 30 seconds
Sensitivity Range........................Selectable - see datasheet
Field of View .... Horizontal up to 100°, Vertical up to 95°
Built-in-Test (BIT)..............................Automatic (and Manual)

Environmental
Temperature Range
Operating:......................... -67°F to +167°F (-55°C to +75°C)
Option: ....-67°F to +185°F (-55°C to +85°C)
Storage: ....-67°F to +185°F (-55°C to +85°C)
Humidity ....Up to 95% non-condensing;
    withstands up to 100% RH for short periods
Heated Optics ....Eliminate condensation and
    icing on the window

Electrical
Operating Voltage .... 24 VDC nominal (18-32 VDC)
Power Consumption .... Standby: Max. 90mA
    (110mA with heated window)
Alarm: Max. ....130mA (160mA with heated window)
Cable Entries ....2 × 3/4" - 14NPT conduits or
    2 × M25 × 1.5 mm ISO
Wiring .... 12 - 22AWG (2.5mm2 - 0.3mm2)
Electrical Input
    Protection .... According to MIL-STD-1275B
Electromagnetic Compatibility ....EMI/RFI protected to
    EN61326-3 and EN61000-6-3
Electrical Interface ......The detector includes twelve (12)
    terminals with five (5) wiring options (factory set)

Outputs
Relays ....Alarm, Fault and Auxiliary
    SPST volt-free contacts rated 2A at 30 VDC
    0-20mA (stepped) ....

Sink (source option) .... configuration
Fault: ...0 +1mA Normal: 4mA ± 10% Alarm: 20mA ± 5%
BIT Fault: .2mA ± 10% Warning: 16mA ± 5% Resistance
    Loop: 100-600 Ω
HART Protocol .... Optional HART
    communications on the 0-20mA analog current
    (FSK) - used for maintenance, configuration changes
    and asset management, available in mA source
    output wiring options
RS-485 ....RS-485
    Modbus compatible communication link that can be
    used in computer controlled installations

Mechanical
Materials .....Stainless Steel 316L w/ electro polish finish
Dimensions ....Detector 4" × 4.6" × 6.18"
    (101.6 × 117 × 157 mm)
Weight ....Detector (St.St.) 6.1 lb (2.8 kg)
    Tilt mount 2.2 lb (1.0 kg)
Environmental Standards ....Meets MIL-STD-810C for
    Humidity, Salt & Fog, Vibration, Mechanical Shock,
    High Temp, Low Temp
Water and Dust ....IP66 and IP67 per EN60529,
    NEMA 250 6P

Approval Ratings
Hazardous Area
    ATEX and IECEx
        Ex II 2 GD
        Ex de IIC T5 (Ta -55°C to +75°C)
        Ex de IIC T4 (Ta -55°C to +85°C)
        Ex tD A21 IP66/X7 T 95°C
        Ex tD A21 IP66/X7 T 105°C
    FM/FMC/CSA
        Class I Div. 1, Groups B, C & D
        Class II/III Div. 1, Groups E, F & G

Performance
    EN54-10 (VdS); FM3260
Reliability
    IEC61508 - SIL3 (TUV)

Sensidyne, LP | 1000 112th Circle North, Suite 100 | St. Petersburg, Florida 33716
Tel: 800-451-9444 / +1 727-530-3602 | E-mail: info@Sensidyne.com | Web: www.Sensidyne.com

A company of the SCHAUENBURG International Group