

# HONEYWELL FS24X PLUS

## Advanced Flame Detector

### The FS24X Plus IR3 Flame Detector delivers robust flame and fire detection even in challenging environments



Honeywell's FS24X Plus flame detector responds to hydrocarbon and hydrogen fires in a solid field of view providing fast and reliable protection against a wide range of fires. Enhance your overall fire and gas safety by deploying reliable flame detection that can see through rain, fog and smoke better than other technologies. Designed for demanding industrial applications, the FS24X Plus helps businesses protect people, plants, and processes should a detectable fire occur.

- **Reliable flame detection**

Rapid detection of a wide range of hydrocarbon and hydrogen fires with advanced diagnostics including window clarity and performance.

- **Maintains coverage while operating in challenging environments**

The use of solid state, wide band sensors means that operation can continue in poor visibility.

- **At-a-glance instrument status**

FSX24 Plus has a high visibility LED Halo ring that can be seen from a distance to show instrument status.

- **Simplified installation using lightweight graduated mount**

FS24X Plus includes the SM4 mount as standard, which enables easy mechanical installation. A marine version mount (SM4-M) is also available.

- **Simplified Maintenance**

FS24X Plus is supported by a PC App (Flame Manager) and HART® for set-up. Flame Manager includes post event analysis with Honeywell's powerful FirePic™ tool. The internal opto-electronics module can be quickly swapped in the field if needed.

- **Global hazardous area and performance approvals**

ATEX, IECEx; cFMus; INMETRO, CCC\*, SIL2, FM3260, EN54-10

- **Marine Certification\***

ABS, Lloyds, BV, DNV

## FEATURES & BENEFITS

### RELIABLE DETECTION

Fast response to a wide range of hydrocarbon and hydrogen fires even in low visibility conditions. Advanced diagnostics including window clarity to maintain site protection.

### ROBUST

Operates in challenging environments to maintain safety coverage. Advanced solid state, wide band sensors enable detection through certain conditions like rain, fog and smoke.

### EASY TO USE

Low maintenance and calibration free. Light-weight, compact, graduated mount available to enable simple mechanical installation. Two cable inlets and plug in connections aids electrical installation.

### AT A GLANCE INSTRUMENT STATUS

High visibility LED HALO ring provides clear indication of device status. LED HALO: Green (Normal), Yellow (Fault/Warning), Red (Alarm)

### MULTIPLE OUTPUTS

Multiple outputs including 4-20mA, Relays, HART® and Modbus. Easily integrate FS24X Plus into your systems.

### SIMPLE MAINTENANCE

Internal diagnostics and warnings drive maintenance. Simple test lamp allows quick and easy testing at distance, no need to climb to the instrument. Replaceable electro-optics modules enable convenient field replacement.

| Technical Specifications          |                                                                                                                                                                                                                                           |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Field of View                     | 90° Cone of vision<br>120° Cone of vision (50% on axis range)                                                                                                                                                                             |
| Sensitivity                       | Low 50 ft (15m), Medium 100 ft (30m), High 150 ft (45m), Very High 200 ft (60m) to 1 ft² (0.1 m²) n-Heptane fire - Configurable via Flame Manager                                                                                         |
| Response Time                     | Typically , 5 seconds and a maximum of 10 seconds (FM witnessed).<br>Under specific conditions, ~3-5 seconds is possible. Contact factory for details                                                                                     |
| Operating Voltage                 | 24 VDC nominal (18-32 VDC) - Regulated                                                                                                                                                                                                    |
| Power Consumption                 | 1.8 Watts (Nominal)<br>2.4 Watts (Alarm)<br>12 Watts (max) = with heater ON 100% duty cycle.                                                                                                                                              |
| Output Relays                     | Alarm, Fault, and Auxiliary: SPDT¹ (NO²/NC³) – De-Energized/Energized, Latching/Non-Latching<br>Rating: 2 A @ 32 VDC                                                                                                                      |
| Analog Output                     | 4-20 mA - Source, Sink or Isolated<br>(Refer Technical Manual for Wiring Configuration)                                                                                                                                                   |
| Digital Communications            | RS-485: Modbus and FP2<br>USB: FP2<br>HART® with handheld communicator or hardwired.                                                                                                                                                      |
| Operating Temperature             | -55°C to +75°C (-67°F to +167°F)<br>North America -50°C to +75°C (-58°F to 167°F)                                                                                                                                                         |
| Storage Temperature               | -55° C to +85° C (-67°F to +185° F)<br>North America -50° C to +85° C (-58°F to +185° F)                                                                                                                                                  |
| Humidity Range                    | 0 to 99% relative humidity or 100% condensing humidity for short periods of time                                                                                                                                                          |
| Cable/Conduit Entries             | 2 x M25 or 2 x ¾" NPT                                                                                                                                                                                                                     |
| Enclosure Materials               | Low Copper Aluminum with Marine Grade Paint or 316 Stainless Steel                                                                                                                                                                        |
| Enclosure Type                    | IP 66 / 67 (Type 4X)                                                                                                                                                                                                                      |
| Tested Fuels                      | n-Heptane, IPA, Methane, Butane, Propane, Ethanol, Methanol, Hydrogen, Diesel, Kerosene, JP-4                                                                                                                                             |
| Hazardous Location Certifications | ATEX: II 2 G Ex db IIC T5 Gb; II 2 D Ex tb IIIC T135° C Db IP66/67;<br>IECEX: Ex db IIC T5 Gb; Ex tb IIIC T135° C Db IP66/67;<br>cFMus: Class I, Div 1, Grps A,B,C,D; Class II/III, Div 1, Grps E,F,G NEMA 4X<br>INMETRO<br>CUTR*<br>CCC* |
| Performance Certifications        | FM3260<br>EN54-10: Class1 (Medium, High, Very High Sensitivities), Class 2 (Low Sensitivity)                                                                                                                                              |
| Safety Certification              | IEC61508 SIL 2 Certified by TUV Sud                                                                                                                                                                                                       |
| Marine Certifications*            | Maritime Type approved to ABS, Lloyds, BV, DNV                                                                                                                                                                                            |

1. Single Pole Double Throw 2. Normally Open 3. Normally Closed

\*Pending

| System Part Numbers |                                     |                         |            |              |                                                              |
|---------------------|-------------------------------------|-------------------------|------------|--------------|--------------------------------------------------------------|
| PART NUMBER         | MATERIAL                            | ENTRIES                 | APPROVALS  | RESERVED     | INSTALLATION                                                 |
| FS24XP-             | S = Stainless Steel<br>A = Aluminum | M = M25<br>N = 3/4" NPT | G = Global | X = Standard | X = Standard Mount + Sunshade<br>M = Marine Mount + Sunshade |

For more information

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THE  
FUTURE  
IS  
WHAT  
WE  
MAKE IT