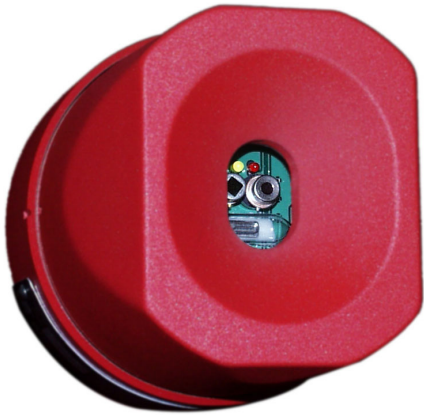


ENGINEERING QUALITY AND RELIABILITY

# F120-R30 UV/IR

## HIGH SPEED FLAME DETECTOR

FOR POWDER COATING APPLICATIONS



The SST Model F120-R30 UV/IR optical flame detector uses the latest state of the art processor and circuitry and specially designed to provide fast and reliable fire detection for powder spray booth operations. The flame detector will detect a fire within half a second in compliance with NFPA 33 and has built-in relays to trigger the automatic shutdown of a powder coating system and/or sound an alarm. To insure reliable operation, the detector is equipped with an automatic Optical Self-Checking feature which continuously checks the optical viewing window for cleanliness and confirms operation of the detection circuits.

The Model F120-R30 is self-contained in a two-piece explosion proof copper-free aluminum housing finished in a deep red color for rapid identification as a flame detector and is suitable for use in "classified" areas where ignitable concentrations of flammable gas normally exists. An optional stainless steel housing is also available.

### FEATURES & BENEFITS

- High-speed flame detector for powder coating applications
- Flame Sensor and Control Electronics self-contained in explosion-proof enclosure
- Automatic and Manual Optical Path Checking
- Automatic Self Test Diagnostics for electronics and sensor elements
- Analog and Discrete Outputs
- Half a second shutdown response time
- High current relays for control or shutdown of external equipment
- 24 volt DC nominal operating voltage
- Explosion-proof enclosure suitable for Class I Division 1 Groups B, C, D and EEx dIIB T6 + Hydrogen locations
- 5 Year Warranty
- Made in the USA

### APPLICATIONS

- Specifically designed for powder coating booths and other industries requiring high-speed flame detection
- Air bag manufacturing
- Auto manufacturing
- EDM machines
- Equipment monitoring



23282 MILL CREEK DRIVE | STE. 215 | LAGUNA HILLS | CA 92653 | USA  
TEL: 1-949-583-1857 | FAX: 1-949-340-6643  
EMAIL: SALES@SAFETYSYS.COM | WWW.SAFETYSYS.COM

## GENERAL SPECIFICATIONS

<b>FLAME SENSITIVITY:</b>	Response to radiation detected in less than half a second in compliance with NFPA 33
<b>CONE OF VISION:</b>	90 degrees
<b>SPECTRAL SENSITIVITY:</b>	UV: 1850 to 2450 Angstrom   IR: 4.3 Microns (Hydrocarbon CO <sub>2</sub> spike)
<b>DETECTION MODES:</b>	UV only, IR flicker only, IR flicker and Temperature UV/IR (voted any two out of three detectors) Alarm (instantaneous, non-latching) Delayed Alarm (latching or non-latching, 3 or 6 seconds, selectable by internal switch)
<b>DETECTOR SELF-TEST:</b>	Automatically performed every 10 seconds
<b>RELAY OUTPUTS:</b>	Alarm, Delayed Alarm, Malfunction
<b>RELAY CONTACT RATINGS:</b>	6 amps @ 28 VDC or 300 VAC resistive   1/8 HP @ 120/240 VAC
<b>ANALOG OUTPUT:</b>	Standard 0 to 20 mA, self-powered 0-2 mA = Malfunction 4 mA = Ready 8 mA = UV Alarm (available on special order) 12 mA = Alarm (radiation detected) 20 mA = Delayed Alarm
<b>ALARM RESET:</b>	Latched alarms are reset by either activating the Test/Reset Input or interrupting power to the unit.
<b>VISUAL INDICATORS:</b>	Detector Ready (Green)   Malfunction (Yellow)   Alarm/Delayed Alarm (Red)
<b>ENCLOSURE RATINGS:</b>	Explosion-proof; NEMA 4X, Class I, Division 1, Groups B, C or D areas or Class II Groups E, F, G EEx dIIB T6 per EN50018 for Group I, IIB+H <sub>2</sub> and EN50014
<b>OPERATING TEMPERATURE:</b>	-40 to +85°C, -40 to +185°F
<b>POWER REQUIREMENTS:</b>	20 to 35 Volts DC   125 mA standby, 230 mA alarm at 24 VDC
<b>AGENCY APPROVALS:</b>	UL File E126501(N), C-UL File E126501(N)
<b>SIZE AND WEIGHT:</b>	4.40 in X 5.25 in (111.76 mm X 133.35 mm)   4 lbs (1.81 kg)
<b>WARRANTY:</b>	5 Years

## ORDERING INFORMATION

PART NO.	DESCRIPTION
120-01-R30	Model F120 Triple-Mode UV/IR Flame Detector, red aluminum housing
120-01-R30-SS	Model F120 Triple-Mode UV/IR Flame Detector, stainless steel housing
190-01	Swivel Mount Assembly for use with 3/4 inch conduit
191-01	Swivel Bracket Assembly for non-conduit installations
194-2	Portable UV/IR Flame Detector Test Lamp, standard D cell batteries