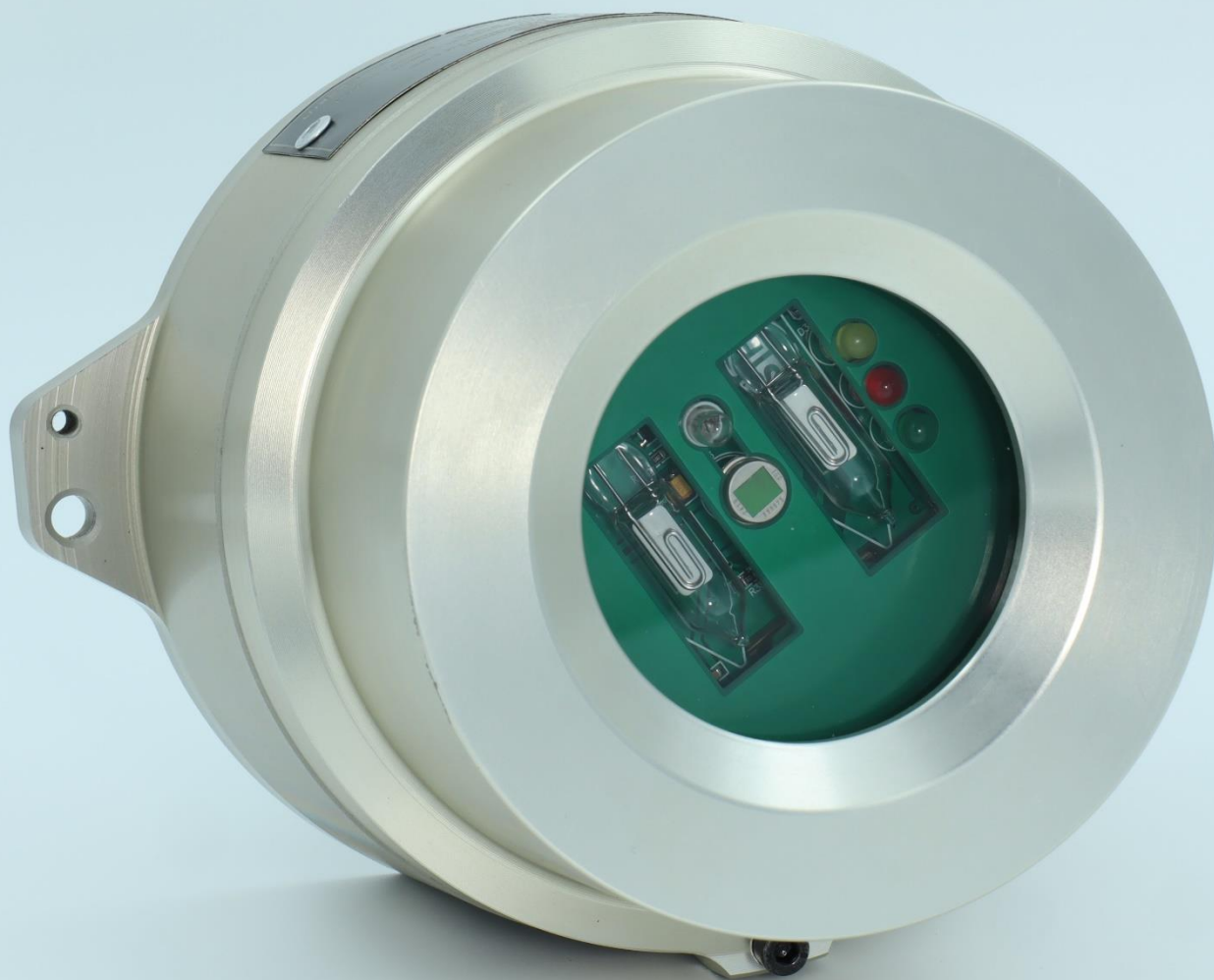


SFD 100 Series Flame Detector



SFD 100-UI Flame Detector **UV-IR**

Sepanta Electronic Tabarestan



SFD 100-UI Features:

- Multi-Spectrum: senses ultraviolet and Wide Band Infrared
- Senses solar-blink ultraviolet band
- Automatic Built-In-Test and Manual - to assure continued reliable operation
- Wide field-of-view and solar-blind
- Adjustable detector sensitivity
- Microcomputer based algorithms
- Wide temperature range of operation
- Compatible with standard approved fire alarm panels
- Explosion-proof housing
- Time programmable alarm verification
- User Programmable via HART or RS-485

Applications

- Refineries and Petrochemical Facilities
- Drilling and Production Platforms
- Fuel Loading Facilities
- Compressor Stations
- Electrostatic Paint Spray Booths
- LNG/LPG Processing and Storage Facilities
- Gas Turbines
- Aircraft Hangars

Description

SFD 100-UI is Ultraviolet/Infrared flame detectors designed to detect unwanted fires and provide alarm outputs directly from the detector while maintaining false alarm immunity. This Detector has sensitivity to type A, B, and C flaming fires. It is optimized for detection of hydrogen, ethanol, methanol, and methane (natural gas) fires.

This detector is fast-reacting (within 5 seconds), digital, configurable, microprocessor-based, "smart" units.

Its installation is simple, and operation straightforward due to the built-in self-testing feature. Therefore, the maintenance consists mainly in keeping the Detector window lens clean, and performing periodic testing required by the manufacturer of the Fire Control and Suppression System.

The SFD 100-UI's electronics is housed in an anodized aluminum explosion-proof enclosure. The detector is available with the following output configurations:

- ***4-20 mA stepped output***
- ***Dual serial communications***
- ***HART communication***
- ***Warning, alarm and fault relays***

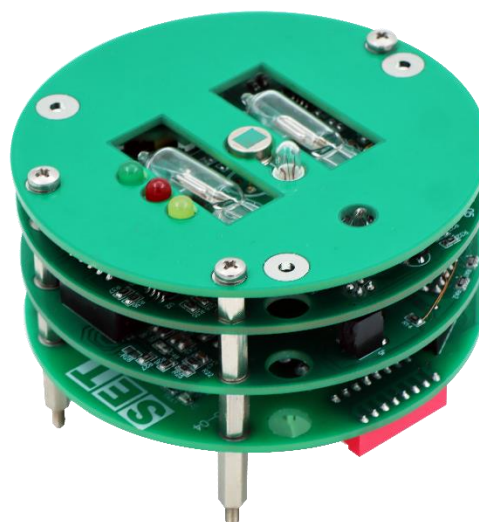


Electrical Specifications	
INPUT Voltage Rang	20-36 VDC 24 VDC @ 100 mA (2.4 W)
ANALOG SIGNAL	0-20 mA (400 ohms maximum) 3.5-20 mA (HART)
FAULT MODE	0 mA (<0.6 mA)
TEST MODE	1.5 mA (± 0.6 mA)
COPM FAULT	2 mA (± 0.6 mA)
READY MODE	4 mA (± 0.6 mA)
WARN MODE	16 mA (± 0.6 mA)
ALARM MODE	20 mA (± 0.6 mA)
RELAY CONTACT RATING	0.5A @ 120 VAC, 1A @ 24 VDC resistive maximum
EMC	Complies with EN 61000-6-4 and EN 50130-4
SELECTABLE OPTIONS	High, Medium or Low up to 14 seconds with dip switches and up to 30 seconds with Modbus Latching/Non-Latching RELAYS Energized/De-Energized
RS-485 OUTPUT	Modbus RTU
BAUD RATE	2400, 4800, 9600, 19200, or 38400 bit/s
HART	HART Device Description Language available.
STATUS INDICATORS	3 LEDs with status and fault cues
FAULT MONITORING	EEPROM checksum errors, optics failure, blockage and low supply voltage
CABLE REQUIREMENTS	3 wire shielded cable minimum configuration Maximum distance between SDF 100- UI and power source or remote sensor @ 24 VDC nominal (20 ohm loop): 14 AWG - 3,000 ft (930 m) Maximum distance for analog output (250 ohms max): 14 AWG - 9,000 ft. (2,750 m)
STANDARD CONFIGURATION	Non-Latching, 0 - 20 mA, high sensitivity, 10 second delay.

Mechanical Specifications	
ENCLOSURE MATERIAL	Copper Free Aluminum
PHYSICAL DIMENSIONS:	140 mm base 90 mm optical housing
WEIGHT	Aluminum: 1.7 kg approximately
ENCLOSURE RATING	IP66
CABLE ENTRY	2 x 3/4" NPT

Environmental Specifications	
OPERATING TEMPERATURE	-40° C to +80° C (-40° F to +176° F)
STORAGE TEMPERATURE	-50° C to +100° C (-43° F to +212° F)
OPERATING HUMIDITY RANGE	10% to 95% RH, non-condensing

Performance Specifications	
SPECTRAL RANG	UV: 185 to 220nm IR: 4.35 μ m
FIELD OF VIEW	105° Horizontal and Vertical
MAXIMUM RANGE	70m (230 ft.)
TYP. RESPONSE TIME	<10 Sec



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