

FLD-1111-FLP

Ultra Fast Flame (Radiant Energy) Detector



AMBETRONICS
AN ISO 9001:2015 CERTIFIED COMPANY



PESO Approved Enclosure

EN-50270
EN 61000-6-4
Compliance

Optional Air Shield



MAKE IN INDIA



Features

- Detector detects Multi-Spectral Sensitivity of fire by using UV & IR sensors
- Line of Sight visual range (upto specific distance)
- IR Spectrum Design- For long distance detection & Higher false alarm immunity
- Sensitivity Selection – To ensure no zone cross over detection.
- High sensitivity combined with fast response time to ensure rapid & accurate flame detection.
- The high dynamic range allows detection of small & large flames, nearby or over large distance.
- Multiple output options for maximum flexibility and compatibility.
 - (3) Relays for FLAME DETECTION, AUXILIARY and FAULT
 - 0 - 20mA (Stepped) or 0 - 10V (Stepped)
 - Optional HART protocol for configuration setting
 - RS-485, MODBUS compatible
- User programmable via Bluetooth, HART or RS-485.
- Heat detector extension (optional)
- Date-time stamped event logging (optional)
- Built in self test (BIT)
- Mobile alert (LoRa/WiFi) (optional)
- Connectivity via IoT (optional)
- Test Lamp compatibility for safe Test

Approvals & Compliance

Approval & Compliance for Flameproof :

IIC Approval :	CIMFR Test Report No.	PESO Certificate No.
Certified to Ex d IIC T6 Gb, @ 60°C IP68 Standard Compliance : • IS/IEC 60079-0 : 2017 • IS/IEC 60079-1 : 2014 • IS/IEC 60529 : 2001	IN/CIMFR/TR20/3034 Dt.: 10/11/2020	P538850/8 Dt.: 16/06/2022
	BIS LICENSE NUMBER	7800046916

* Applied for UL certification

- EMI & EMC Compliance:EN-50270 EN 61000-6-4

Applications

- Refineries
- Power Plants
- Electric Power Transformers
- Laboratories
- Loading & Unloading Terminals: Truck, Rail & Marine
- Engine Test Rooms
- Onshore & Offshore Applications
- Waste Recycling
- Monitoring Of Machinery
- Petrochemical CNG / LNG / LPG Production
- Automation & Manufacturing Industries
- Chemical & Pharmaceutical Plants
- Hospitals & Clean Rooms

MUST FOR HUMAN & INDUSTRIAL SAFETY

TECHNICAL SPECIFICATIONS

GENERAL

Parameter Setting	: Field configuration settings done by Bluetooth or MODBUS RTU Protocol.
Spectral Response	: UV Band - (185nm to 260 nm) Single IR Band - (3000 nm to 5000 nm)
Detection Range (At highest sensitivity)	: • n-Heptane : 88ft (27m) • Kerosene : 82ft (25m)
Setting for 1ft ² pan fire	: • Diesel Fuel : 82ft (25m) • Methanol : 66ft (20m) • Gasoline : 82ft (25m)

PERFORMANCE

Response Time	: Ultra Fast Response time typically around 100 ms Detection less than 3 sec. at 30 meters
Field of View	: 90° Horizontal, 90° Vertical
Adjustable Time Delay	: Upto 30 seconds
Adjustable Sensitivity	: Low, Medium and High
BIT	: Automatic self check test
Performance Test	: Performance can be tested by using Test Lamp (FTU-3311)(Safe Test)

ELECTRICAL

Supply Voltage	: 18 to 36 VDC, typically 24VDC
Power Consumption	: Less than 3W

OUTPUT SIGNAL

4-20mA Current Output or 0- 10V	: 250 to 600 ohms load driving capacity Fault : 1mA Normal : 4mA Fire detect : 20mA
L.E.D. Indication	: Blinking POWER LED (Green), FIRE DETECT LED (RED) & COMMUNICATION LED (Blue)
Relay	: Three SPDT relays 5A@ 30VDC & 250 VAC for Fail safe, Fire detection & Auxiliary output.
Event Logging (optional)	: Date-Time stamped Event Logging
Communication	: RS-485 communication port with MODBUS RTU protocol.
HART Protocol (Proprietary optional)	: Use for configuration changes by using AEPL Communicator
Connectivity (optional)	: Mobile connectivity and SMS alert via LoRa & IoT support

ENVIRONMENTAL

Operating Temperature	: -15°C to +50°C
Storage Temperature	: -20°C to +85°C
Humidity	: Less than 95% Non-Condensing

ACCESSORIES (OPTIONAL)

- RS-485 to USB OR RS-232 converter
- Hooter cum Flasher
- Protection Cover
- Heat Detector
- Air shield
- Magnetic Wand
- Test Lamp

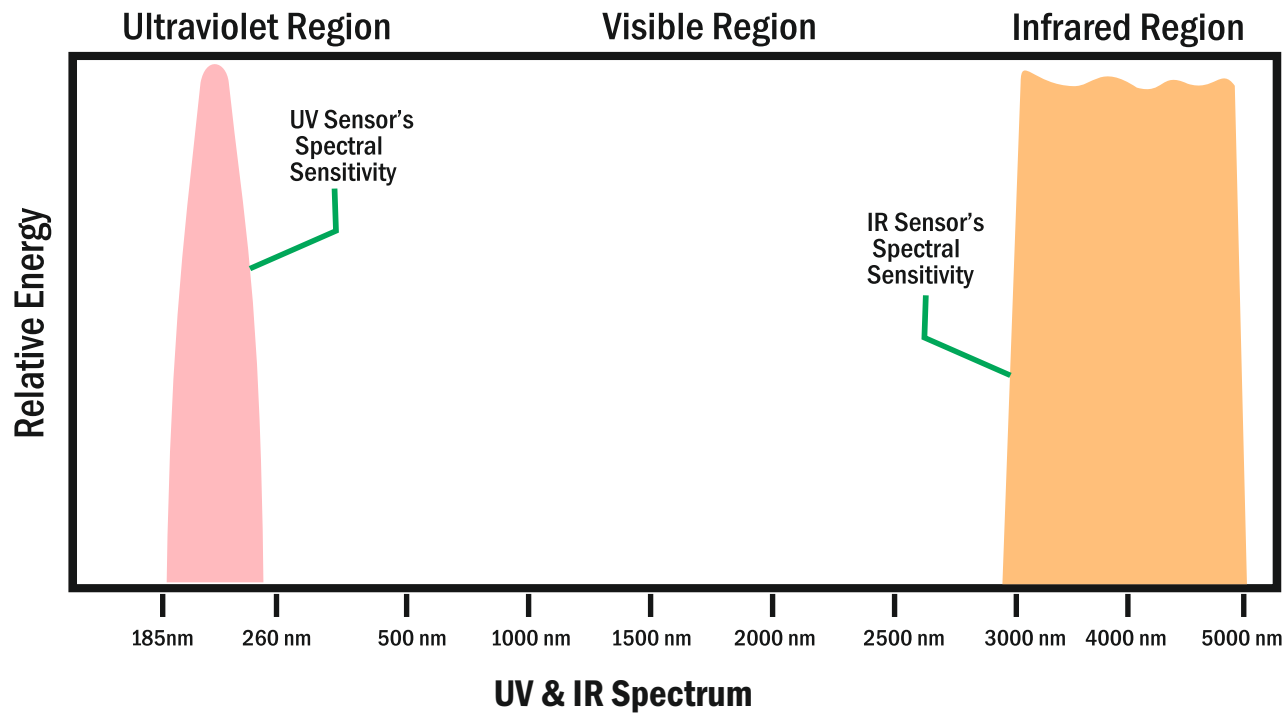
FLAMEPROOF HOUSING

Degree of Protection Class	: IP66 & Ip68
Housing Material	: Cast Aluminium LM6 alloy or Stainless Steel
Cable Entry	: Flameproof, IP66 Double Compression Cable Gland - M20 x 1.5 (P)
Wiring	: 16-26AWG (1.5mm ² - 0.14 mm ²)
Dimension (IIC Enclosure)	: 155mm (H) x 263mm (W) with Hooter cum Flasher & cable gland x 125 mm (D) 155mm (H) x 223 mm (W) with stopper plug & cable gland x 125 mm (D)
Dimension (JB-90 Enclosure)	: 128mm (H) x 200mm (W) with one cable gland & Stopping Plug x 97 mm (D) 128 mm (H) x 240mm (W) with Hooter Cum Flasher & one cable glands x 97mm (D)
Mounting	: Wall or Pipe Mounting
Weight	: <ul style="list-style-type: none">• IIC Enclosure : Approx 2.53 Kg. (LM6), Approx 7 Kg. (SS316)• JB-90 Enclosure : Approx 1.25 Kg. (LM6), Approx 4.5 Kg. (SS316)• Mounting stand for IIC Enclosure : 1.6 kg. to 2 kg.

CIMFR & PESO APPROVALS & STANDARDS

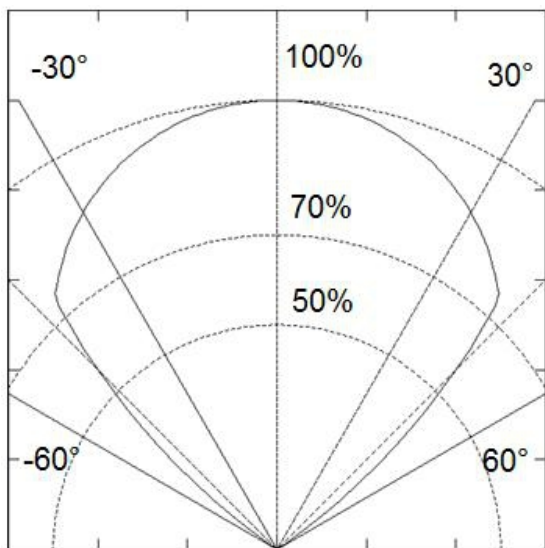
Degree of Protection Class	: IP66 & IP68
<u>JB/FLP/IIC Enclosure</u>	: <ul style="list-style-type: none">• CIMFR CERTIFICATE NO. : IN/CIMFR/TR20/3034 Dt. : 10/11/2020• PESO CERTIFICATE NO. : P492376/1 Dt. : 13/01/2021
<u>JB/90FLP/IIC Enclosure</u>	: <ul style="list-style-type: none">• CIMFR CERTIFICATE NO. : IN/CIMFR/TR20/3007 Dt. : 22/10/2020• PESO CERTIFICATE NO. : P492376/2 Dt. : 13/01/2021
<u>Hooter cum Flasher</u>	: HCF/FLP/2C <ul style="list-style-type: none">• CIMFR CERTIFICATE NO. : IN/CIMFR/TR19/4378 Dt. : 13/12/2019• PESO CERTIFICATE NO. : P468728/3 Dt. : 21/02/2020
<u>Cable Gland</u>	: Double Compression Cable Gland - Model No.: CG/FLP/2C M20 x 1.5 (P) ½" NPT & ¾" NPT <ul style="list-style-type: none">• CIMFR CERTIFICATE NO. : CIMFR/TC/P/1313 Dt. : 19/09/2018• PESO CERTIFICATE NO. : P431645/2 Dt. : 19/11/2019
<u>Stopping Plug</u>	: SP/FLP/2C - (M20 x 1.5P) <ul style="list-style-type: none">• CIMFR CERTIFICATE NO. : CIMFR/TC/P/1314 Dt. : 19/09/2018• PESO CERTIFICATE NO. : P431645/3 Dt. : 19/11/2019

UV & IR SPECTRUM

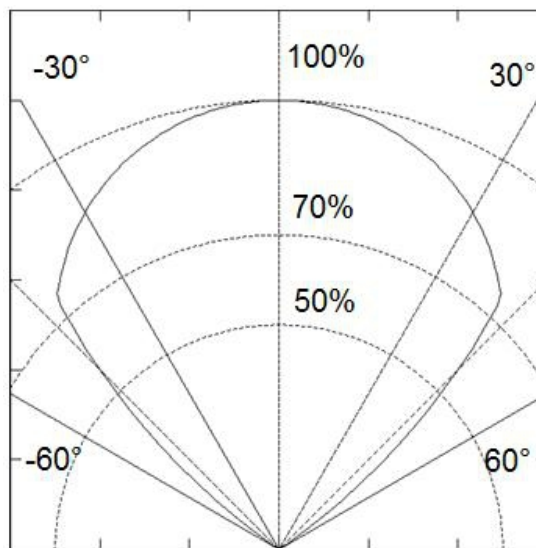


FIELD OF VIEW

90° HORIZONTAL



90° VERTICAL



ORDERING INFORMATION

FLD-1111-FLP-UV & IR

A	B	C	D	E	F	G	H
A) Enclosure (FLP) 1) JB-FLP-IIC 2) JB - 90	B) Enclosure (FLP) Material 1) LM6 2) SS-316	C) Transmission Output 1) 4-20mA / 0-10V 2) 4-20mA with HART	D) Hooter cum Flasher 1) No 2) Yes	E) Heat Detector 1) No 2) Yes	F) Mobile Connectivity 1) No 2) Yes	G) Air Shield 1) No 2) Yes	H) Test Lamp FTU-3311 1) No 2) Yes

*Before placing order please refer the above ordering information of contact below address for assistance.

Manufactured by :



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