

FLD-2211-FLP

UV & Dual IR Flame (Radiant Energy) Detector



AMBETRONICS
AN ISO 9001:2015 CERTIFIED COMPANY

PESO Approved
Enclosure

EN-50270
EN 61000-6-4
Compliance



MAKE IN INDIA



Features

- Detector detects Multi-Spectral Sensitivity of fire by using UV & IR sensors
- Dual 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 : <ul style="list-style-type: none">• 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

Applications

- Refineries
- Power Plants
- Chemical Plants
- Tunnels
- Storage Tanks
- Engine Rooms
- Aircraft Hangers
- Military Applications
- Marine Applications
- Petrochemical / LNG/LPG Production
- Waste Recycling
- Power Plants / Chemical Plants
- Pharmaceutical Production

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) Two IR Bands - (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	: Typically Less than 5 seconds (Depending on Flame Size & Sensitivity)
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)

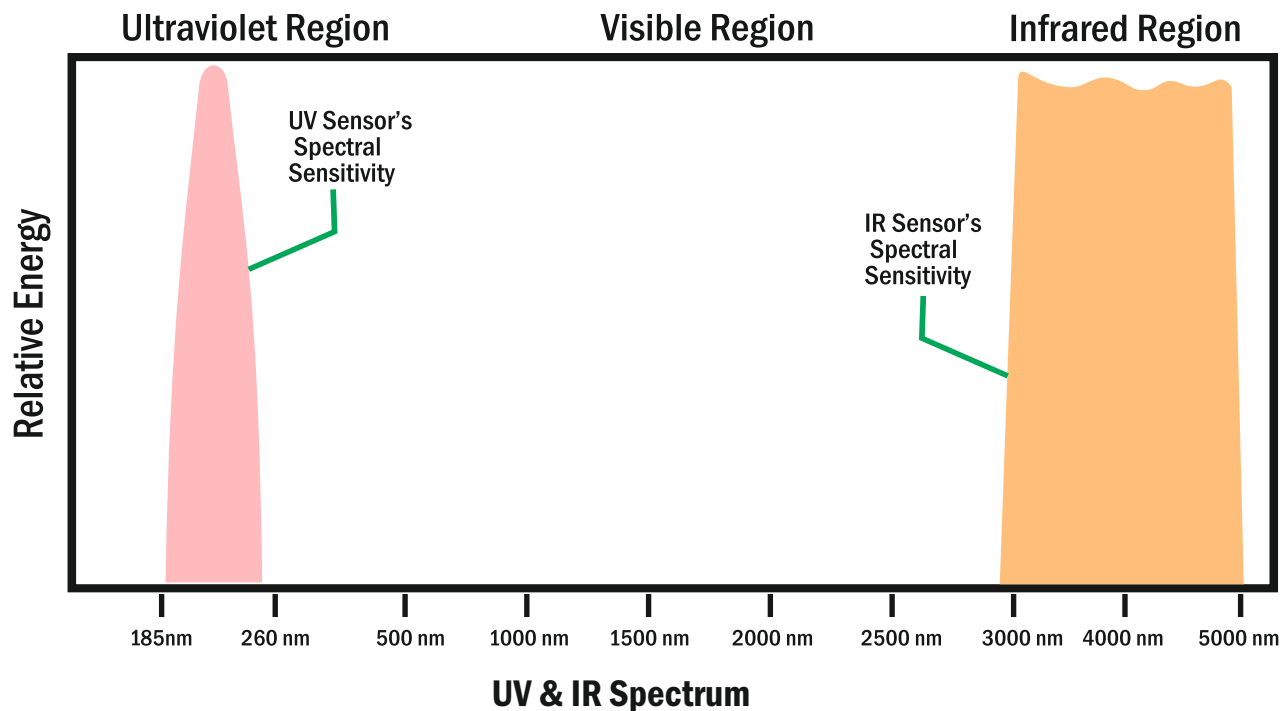
- RS-485 to USB OR RS-232 converter
- Hooter cum Flasher
- Protection Cover
- Heat Detector
- Air shield
- Magnetic Wand
- Test Lamp

FLAMEPROOF HOUSING

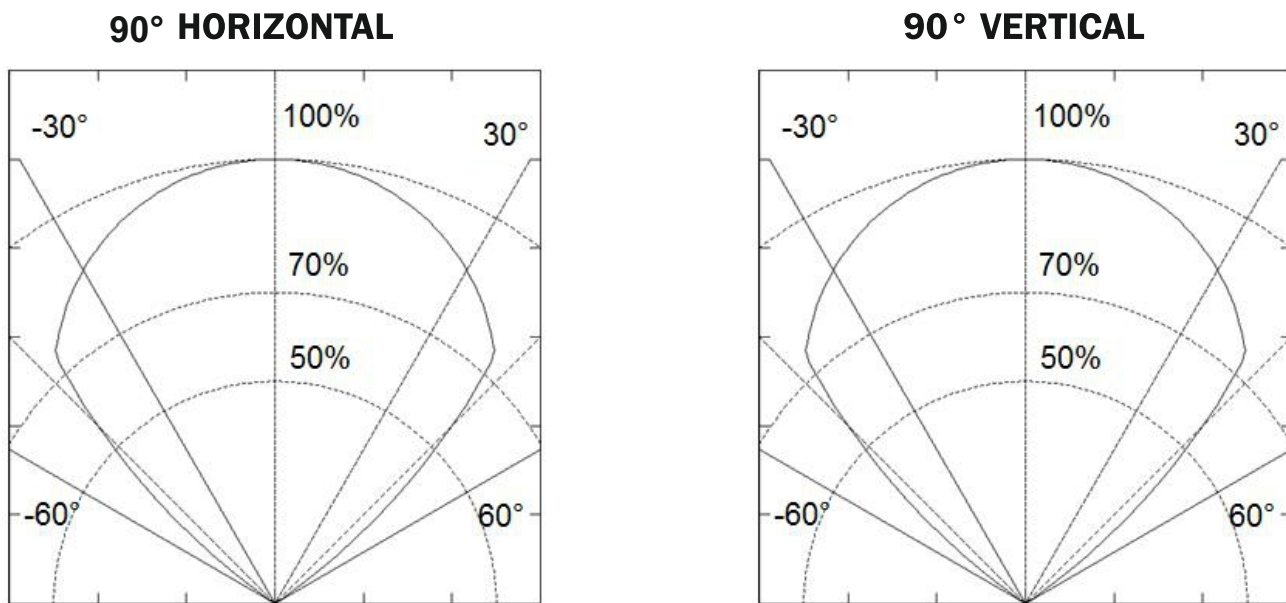
Degree of Protection Class	: IP66 & Ip68
Housing Material	: Cast Aluminium LM6 alloy or Stainless Steel
Cable Entry	: Flameproof, IP66 Double Compression Cable Gland - M20 x 1.5 (P)
Wiring	: 16-26AWG (1.5mm ² - 0.14 mm ²)
Dimension (IIC Enclosure)	: 155mm (H) x 263mm (W) with Hooter cum Flasher & cable 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



FIELD OF VIEW



ORDERING INFORMATION

FLD-2211-FLP-UV & IR2 — **A** — **B** — **C** — **D** — **E** — **F** — **G**

A) Enclosure (FLP) 1) JB-FLP-IIC 2) JB - 90	B) Housing 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) Air Shield 1) No 2) Yes	G) Test Lamp FTU-3311 1) No 2) Yes
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*Before placing order please refer the above ordering information of contact below address for assistance.

Manufactured by :



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