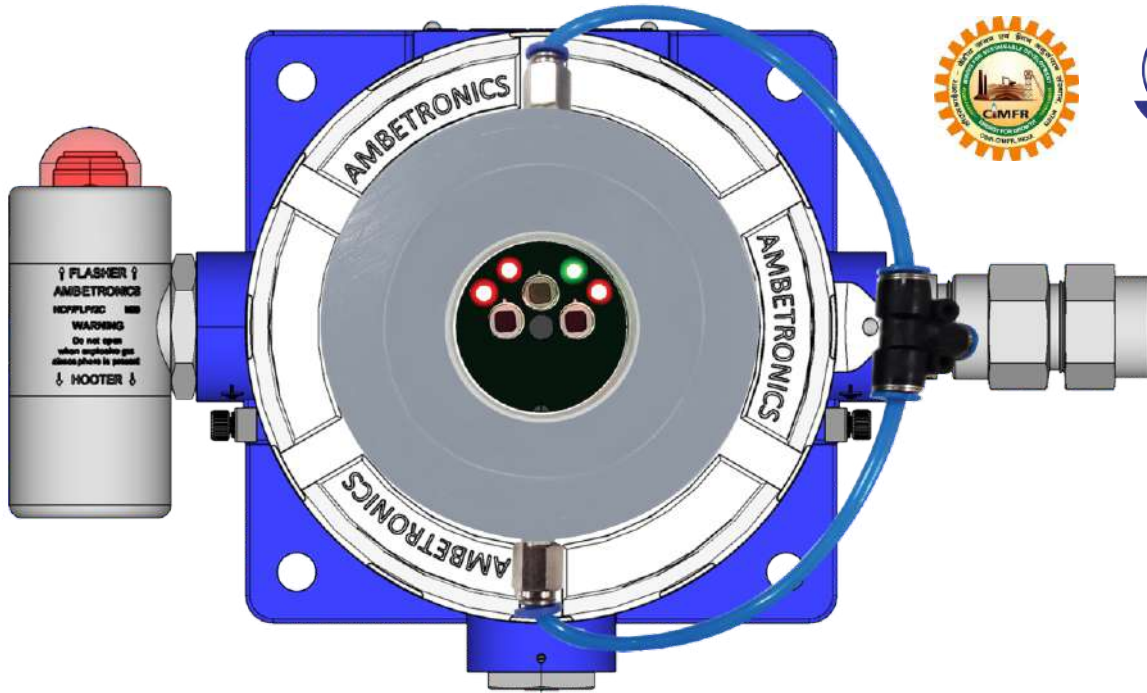


EMBER (RADIANT ENERGY) DETECTOR



Features

- High speed Ember detection using IR technology.
- Specially designed for hazardous environment.
- Built in self test.
- Optical cleaning system to prevent dust & dirt accumulation on the window.
- Ember verification for accurate & precise detection.
- Low power consumption
- Insensitive to sunlight
- Sensitivity Selection - To ensure no zone cross over detection
- High sensitivity combined with fast response time to ensure rapid & accurate Ember detection
- Multiple output options for maximum flexibility and compatibility.
 - (3) Relays for EMBER 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
- Built in self test (BIT)
- Mobile alert (LoRa/WiFi) (optional)
- Connectivity via IoT (optional)
- Test Lamp compatibility for safe Test

Approval & Compliance

Approval & Compliance for Flameproof :

IIC Approval :	CIMFR Test Report No. :	PESO Certificate No. :
Certified to Ex d IIC T6 Gb, IP66 & 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	P492376/1 Dt.: 13/01/2021
BIS LICENSE NUMBER : 7800046916		

* Applied for UL certification

Applications

- Conveyors, Silos
- Waste Recycling Conveyors
- Coal dust conveyance
- Escalators
- Drying Lines
- Extractors
- Production & Automation industry
- Waste recycling industry
- Wood industry: sawdust shavings
- Textile industry
- Food industry
- Pharmaceutical & chemical industry

TECHNICAL SPECIFICATIONS

GENERAL

Parameter Setting	: Field configuration settings done by Bluetooth or MODBUS RTU Protocol
Spectral Response	: 1.0 to 15µm
Detection Range	: UPTO 1.5 m

PERFORMANCE

Response Time	: Typically Less than 1sec.
Ember Velocity	: 2-50m/s
Field of View	: 90° Horizontal, 90° Vertical
Adjustable Sensitivity	: Low, Medium and High
BIT	: Automatic and manual built in self check test
Performance Test	: Performance can be tested by using Test Lamp (FTU-3311-FLP)(Safe Test)

ELECTRICAL

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

OUTPUT SIGNAL

4-20mA Current Output	: 250 to 600 ohms load driving capacity
or 0- 10V	: Fault : 1mA Normal : 4mA Fire detect : 20mA
L.E.D. Indication	: Blinking POWER LED (Green), EMBER DETECT LED (RED) & COMMUNICATION LED (Blue)
Relay	: Three SPDT relays 6A@ 30VDC & 250 VAC for Ember detection, Auxiliary & Fail safe output
Event Logging	: 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 (Complementary)

- Air Shield
- Mounting Stand

ACCESSORIES (OPTIONAL)

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

FLAMEPROOF HOUSING

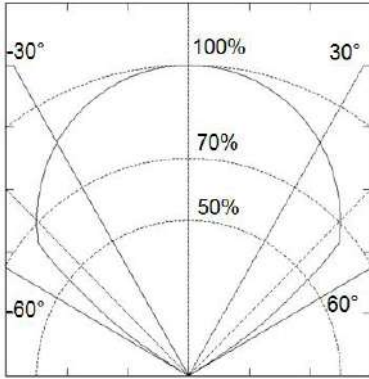
Degree of Protection Class	: IP-66 & IP-68
Housing Material	: Cast Aluminium LM6 alloy or Stainless Steel
Cable Entry	: Flameproof, IP66 Double Compression Cable Gland - M20 x 1.5 (P)
Wiring	: 16-26AWG (1.5mm ² - 0.14 mm ²)
Dimension (IIC Enclosure)	: 155mm (H) x 263mm (W) with Hooter cum Flasher & cable gland x 135 mm (D) 155mm (H) x 223 mm (W) with stopper plug & cable gland x 135 mm (D)
Dimension (JB-90 Enclosure)	: 128mm (H) x 200mm (W) with one cable gland & Stopping Plug x 110 mm (D) 128 mm (H) x 240mm (W) with Hooter Cum Flasher & one cable glands x 110 mm (D) 128 mm (H) x 240mm (W) with Ho
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

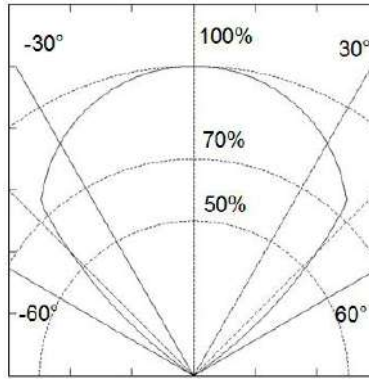
Degree of Protection Class	: IP-66 & IP-68
<u>JB/FLP/IIC Enclosure</u>	: <ul style="list-style-type: none">CIMFR CERTIFICATE NO. : IN/CIMFR/TR20/3034 Dt. : 10/11/2020PESO CERTIFICATE NO. : P492376/1 Dt. : 13/01/2021
<u>JB/90FLP/IIC Enclosure</u>	: <ul style="list-style-type: none">CIMFR CERTIFICATE NO. : IN/CIMFR/TR20/3007 Dt. : 22/10/2020PESO 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. : 13/12/2019PESO 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. : 19/09/2018PESO 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. : 19/09/2018PESO CERTIFICATE NO. : P431645/3 Dt. : 19/11/2019

FIELD OF VIEW

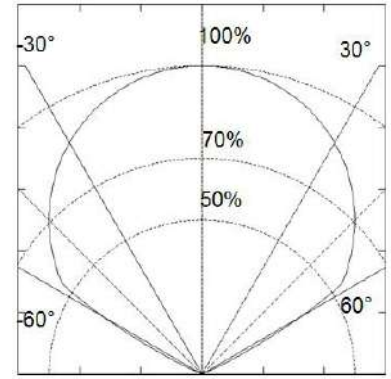
100° HORIZONTAL



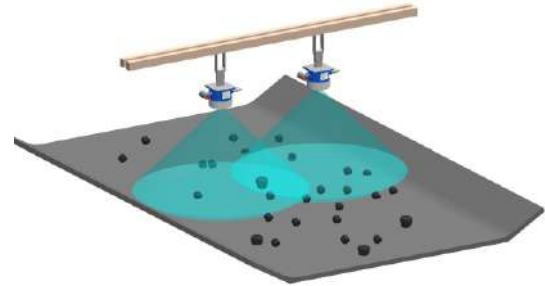
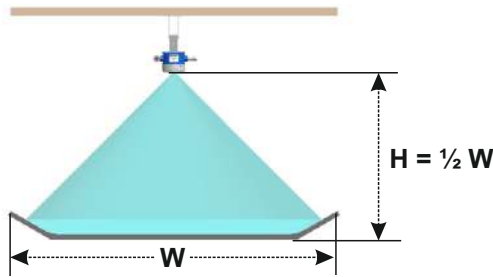
90° VERTICAL



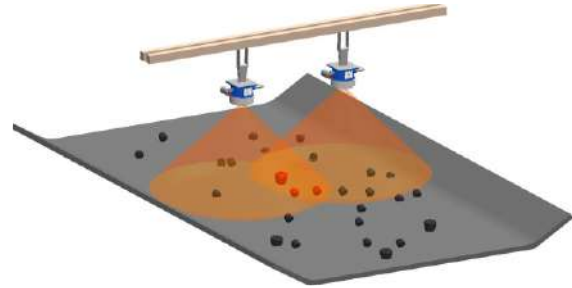
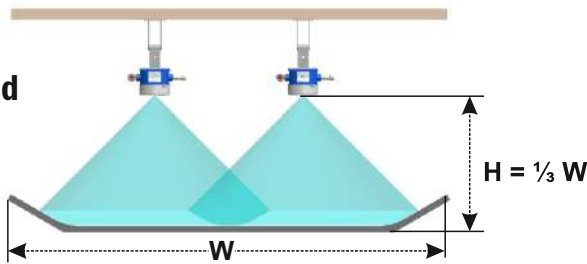
120° DIAGONAL



**Minimum
1 Detector**



**Recommended
2 Detectors**



ORDERING INFORMATION

EMB-7700-FLP

A	B	C	D	E	F	G	H
A) Enclosure (FLP) 1) JB-FLP-IIC 2) JB - 90	B) Enclosure (FLP) 1) LM-6 2) SS-316	C) Transmission Output 1) 4-20mA 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) Protection Cover 1) No 2) Yes	H) Test Lamp FTU-33-(FLP)

* Before placing order please Refer the above ordering information or Contact below address for assistance.

Specifications subject to change without any prior notice

Manufactured by :

AMBETRONICS ENGINEERS PVT. LTD.

17-B, Tarun Industrial Estate, Mogra Pada, New Nagardas Road, Andheri (E) Mumbai - 400 069, India.
 Mob. : +91-9320619646 • +91-9167418106 • +91-7208962297 • Tel.: +91-22-61673000/26
 E-mail : project@ambetronics.com • manan@ambetronics.com • sales14@ambetronics.com
 Website : www.ambetronics.com



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Version : EMB-7000-FLP-R5-23-02-2021