

## IH153ES - IR EMBER DETECTOR

fladet IH-153ES Infra Red Ember Detector with IP-67 Protection is used to detect smoldering moving embers. The detector makes use of Infra Red sensitive photoelectric sensor for detection of ember (as in smoldering coal). It has a spectral filter of 3 - 14µm, which is insensitive to visible light.

The IR Ember Detector can reliably and quickly detect weak Infra Red radiations emitted from ember due to smoldering fragment of wood or coal. IR Ember Detector is an efficient alternative to any flame detector which has the limitation of low sensitivity to ember.

It can be connected to any standard conventional Fire Alarm Control Panel or to any addressable Fire Alarm Control Panel. It can also be connected to Annunciator/PLC/DCS through the potential free 'NO/NC' contacts provided. In-built RED LED is also provided for visual indication in case of fire/ember detection. Normal working of the detector can be ensured by flickering of GREEN LED indication. The detector also has an in-built Air Purging provision to clean the detector eye by using instrument air.

### ADVANTAGES

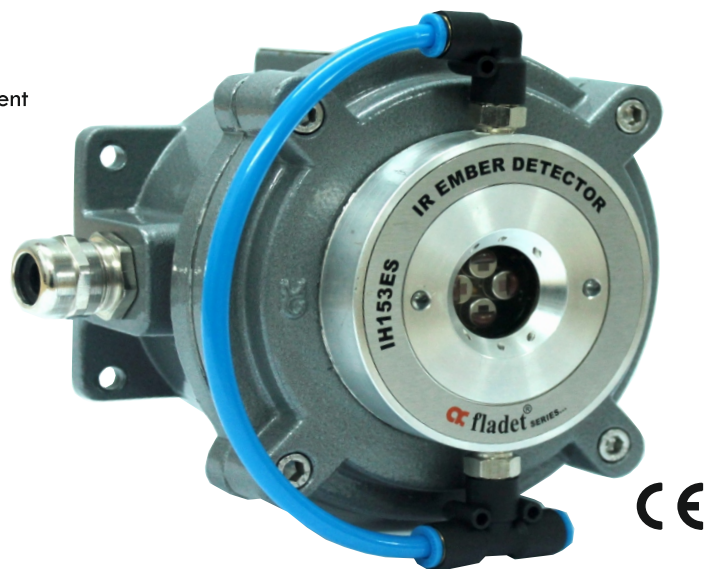
- ▶ Rugged model suitable to be used in challenging environment with weather and dust proof protection.
- ▶ High Sensitivity even in Mist & Fog
- ▶ 4 Range of Sensitivity Selection Provision
- ▶ Easy to Install and operate
- ▶ High speed Response
- ▶ Free from False Alarms
- ▶ Visual Indication for Alarm/Normal condition
- ▶ Low Maintenance Cost
- ▶ Stand Alone Air Purging or In-built Air Purging option

### APPLICATIONS

- ▶ Highly Recommended to use in coal conveyors to detect Smoldering coal or Ember.
- ▶ Material conveyors where fire initially starts with the ember.
- ▶ Environment that are unsuitable for other type of detectors to detect moving ember or ember with flame.

### DETECTOR SENSITIVITY

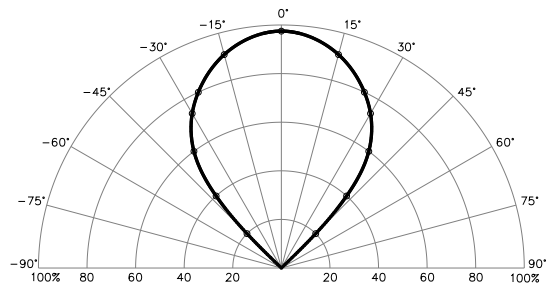
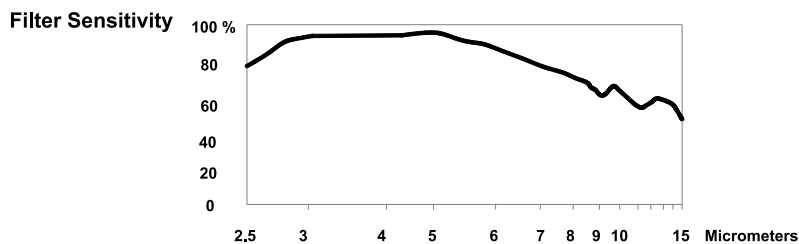
IH153ES detect 100 sq. cm. glowing ember at distance of 1 to 3 metre in 90° Cone angle and Straight Line at normal Sensitivity. The Sensitivity is also adjustable as per requirements.



### INSTALLATION CONSIDERATION

fladet IH-153ES shall be installed such that the view path of the detector is unobstructed. Existence of IR radiation sources like direct sunlight, hot bodies may affect the performance of the detector. For conveyor application (like coal conveyor) the detector should be mounted on the Conveyor Hood or Gantry structure looking down at the material being transported.





**ANGULAR SENSITIVITY**

**MAINTENANCE & INSPECTION**

To assure maximum detector sensitivity, keep the surface of the detector (Detector eye) free from contaminations at all time. Periodically test the sensitivity of the detector using a controlled ember. fladet IH-153ES offers an additional provision for connecting to pneumatic air purging system to clean the surface of the detector.

**ORDERING INFO**

**fladet® SERIES...**

- 1) IH 153ES - IR Ember Detector
- 2) IH153ES-P-IB - IR Ember Detector with inbuilt air purging unit
- 3) IH153ES-P-AC-DC - IR Ember Detector with Air purging unit
- 4) Air Purging Unit Options
  - 4.1) IH323 (stand alone)(Suitable to be used with IH153ES)
  - 4.2) IH323 CT (stand alone with sequential timer)  
(Suitable to be used with IH153ES)
  - 4.3) IH323 AC-DC- 230V AC/24V DC Air purging unit  
(Suitable with IH153ES-P-AC-DC Model)

**ACCESSORIES**

- 1. Swivel Mounting Base - IH-MB-01 XY - 1 No.
- 2. Cable Glands - 2 Nos.
- 3. User Manual

**APPROVAL/ CONFIRMATION/ CERTIFICATION**

- 1. **CE** CERTIFICATE NO. ET/EMC/2022/1335S\*
- 2. IP Protection Certified by ETDC.
- 3. Confirming to Requirement of NFPA 72E.
- 4. Confirming to Requirement of IS-2189.

TECHNICAL SPECIFICATION - PART NO : IH 153ES	
01. BRAND NAME	fladet Series...
02. MANUFACTURER	AGNI CONTROLS, CHENNAI
03. QUIESCENT CURRENT	< 40 mA
04. ALARM CURRENT	< 120 mA
05. RELAY CONTACT RATING	1A AT 125VAC, 2A AT 30VDC
06. CABLE ENTRY	3/4" ET / M20 X 1.5 - 3 Nos
07. PROTECTION CLASS	IP-67
08. SENSING ELEMENT	INFRA RED
09. INDICATION	NORMAL - FLICKERING GREEN LED FIRE - RED LED
10. OPERATING TEMPERATURE	-20 Deg.C to +60 Deg.C
11. FINISH	ENCLOSURE - HAMMER TONE GRAY
12. SUPPLY	24 VDC ± 20%
13. OUTPUT	1. ONE SET OF 'NO-COM-NC' CONTACT FOR FIRE + ONE SET OF DUPLICATE 'NO-COM-NC' CONTACT. 2. ONE SET OF 'NO-COM-NC' CONTACT FOR FAULT + ONE SET OF DUPLICATE 'NO-COM-NC' CONTACT. 3. ZONE DETECTOR LINE TO CONNECT DIRECTLY STANDARD CONVENTIONAL FIRE ALARM PANEL.
14. MATERIAL	CAST ALUMINIUM LM6
15. FASTENERS	SS 304
16. AIR PURGING	1 - 2 BAR
17. APPLICATION	COAL / WOOD MATERIAL CONVEYOR & AREAS WHERE SMOLDERING FIRE IS POSSIBLE
18. SENSITIVITY SELECTION	RANGE OF SELECTION, (a) VERY HIGH SENSITIVITY- 1 (b) HIGH SENSITIVITY - 2 (c) NORMAL SENSITIVITY (DEFAULT SETTING) - 3 (d) LOW SENSITIVITY - 4
19. EMC PROTECTION	IMMUNE TO EMC / EMI INTERFERENCE.

PACKING SIZE : 290 (L) X 165 (W) X 185 (H) (ALL IN MM)  
 PACKING WEIGHT : 3.7 KG. MAX.



DOC.NO: I-MK-3.6-016, REV-03  
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**Important :**  
 This document is not intended to be used for installation purposes. Specifications are subject to change without prior notice.