IDD-II Series Flame Detector

Forney's IDD-II Series Flame Detector meets the operational flexibility requirements of utilities through multiple flame detecting and discriminating capabilities.

Product Overview

Forney's Intelligent Dynamic Detector (IDD) II Series is designed to accurately detect and discriminate the luminous flames produced by burning oil, coal, and lignite fuels.

The IDD-II (Filtered) flame detector is typically used for sensing heavy fuel oil and coal flames. The IDD-IIU (Unfiltered) flame detector is typically used for sensing light fuel oil flames. The IDD-IIL (Lignite) flame detector is specifically designed to sense low flame frequency produced by lignite and high ash coal flames.

The IDD-II Series is used in conjunction with Forney's supporting amplifiers IDD-9000, DR-6101E, RM-IDD and IDD-IIIA.

The IDD-II's solid state circuitry amplifies a continuously changing voltage signal transmitted from the lead sulfide sensor when flame is sensed. The signal is then sent to the amplifier by way of a four conductor cable. The amplifier processes the signal and provides outputs to the burner management system.

For trouble-free operation, the detector electronics are potted within the cast steel housing. In addition, the amplifier also initiates a periodic, electronic self-check of the sensor and printed circuit board to verify proper operation of the detector assembly.

Features & Benefits

- **Lead Sulfide Sensor**
  Sensitive to infrared and visible light radiation prevalent in fuel oil, coal and lignite flames.
- **Dynamic Flame Sensing Circuitry**
  Senses only a dynamic flame signal, discriminates flame from hot refractory and other background conditions.
- **Compact, Durable Assembly**
  The printed circuit board and sensor are potted within a cast steel housing providing a maintenance free product.
- **Simplified System Maintenance**
  Quick disconnect, electrical and mechanical connections are used for easy replacement.
- **Fiber Optics**
  Optional fixtures are available for fiber optic applications.
- **Factory Mutual Approval**
  Factory Mutual (FM) approval means safe operation and lower insurance rates.

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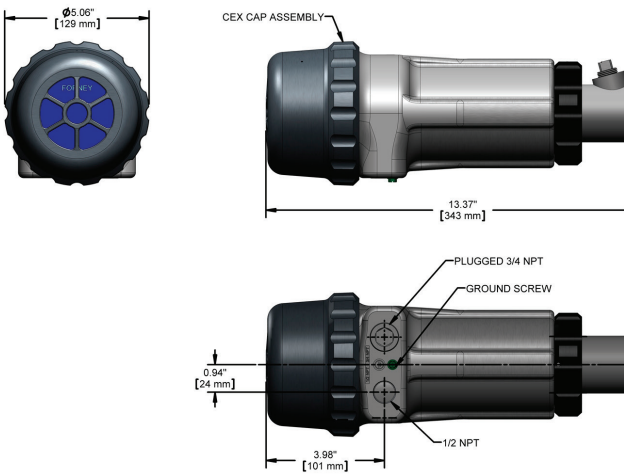
Products and Accessories:

		Standard Housing	ATEX Housing
IDD-II Infrared Detector	Filtered (#6 Oil & Coal)	Part #38321-21	Part #38321-25
IDD-IIU Infrared Detector	Unfiltered (#2 Oil, #6 Oil & Coal)	Part #38321-22	Part #38321-27
IDD-IIL, Infrared Detector	Lignite Fuel	Part #38321-23	Part #38321-26
Cooling Chamber (optional)		Part #381071-01	NA

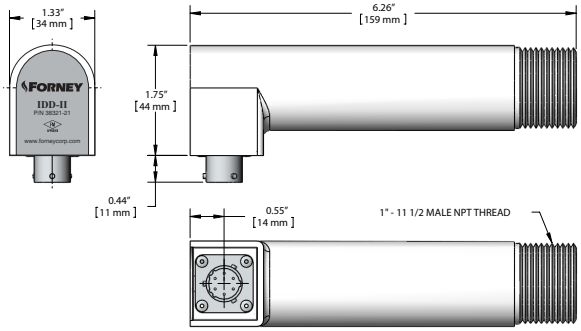
Specifications:

	Standard Housing	ATEX Housing
Mounting:	1" NPT sight pipe fitting	
Materials:	Cast Steel Housing, Potted Electronics	Cast aluminum with grey polyester powder coat finish
Electrical:	Supplied by Amplifier, 50 VDC and 12 VDC	
Electrical Connections:	MS Bayonet connector supplied with cable, 1/2" flexible conduit required	
Cooling Air Requirements:	Front mount applications - minimum cooling air flow of 10 scfm (17 m^3/hr) at a maximum temperature of 120°F (48°C) Fiber optic applications - minimum cooling air flow of 15 scfm (25 m^3/hr) at a maximum temperature of 120°F (48°C)	
Temperature Ratings:	32°F to 140°F (0°C to 60°C)	
With Cooling Chamber:	For ambient temperatures of 140°F to 200°F (60°C to 93°C) the Forney Cooling Chamber must be used.	Not Applicable
Humidity:	0-95% relative humidity, non-condensing	
Shipping Weight:	21 oz (0.60 kg)	7.1 lbs (3.22kg)
Approvals:	Factory Mutual (FM)	ATEX
Sensor / Wavelength:	IDD-IIU 400 - 3300nm IDD-II 700 - 3300nm IDD-IIL 700 - 3300nm *(The IDD-IIL detector has better flame flicker frequency response at lower flicker frequency ranges of >5 to 18 Hz)*	

ATEX Housing



Standard Housing



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