

# HD Flame Detector

*Forney's HD Flame Detector is the best available flame detector for the Power Generation, Petrochemical and Industrial markets. It provides the highest level of flame discrimination in multi-burner applications with an easy to use interface on a mobile app.*

## Product Overview

The Forney High Definition (HD) Flame Detector integrates both Infrared (IR) and Ultraviolet (UV) optical sensors along with an amplifier and high speed signal processor. The high speed signal processor is able to analyze frequency resolution allowing for precise discrimination between multiple burners and background radiation. HD Detector includes two flame relays, one for signals from each optical sensor. Four different profiles are selectable for maximum flexibility under different operating conditions. 4 to 20mA analog outputs are provided for remote display options.

An industry first mobile app is available in two configurations from the Apple Store and Google Play. The Forney HD Detector app will allow the user to select a specific detector via Bluetooth. The user can then monitor the detector on their mobile device.

A live Fast Fourier Transform (FFT) is also displayed. To tune the detector, the password protected, Forney HD Detector Pro app will allow the user to specify pick up and drop outs for flame on and flame off within the two user specified frequency ranges. Any fault codes are clearly shown with Reset capability. A PC based RS485 connection capability is also available.

A single, flexible 12 wire custom cable is available in multiple lengths to make field connects simple. In many cases the existing field cabling can be reused. (Existing cables for Forney D85, UniFlame, and UniFlame II Detectors can be reused with transition adapters.)

## Benefits

- High Definition – Maximum discrimination in difficult multi-burner environments.
- Easy to use – app available for either smart phones or tablets
- Installation friendly – lightweight housing and single flexible cable
- Robust – 2 year warranty in normal operating conditions

## Features

- Both Infrared (IR) and Ultraviolet (UV) sensors in every unit
- High speed microprocessor based signal analysis
- Bluetooth® and RS485 Modbus communications
- Simple LED status indicators on HD Detector unit for Power, Flame Relay 1 & 2, Fault, Bluetooth®, and High Temperature
- IP 65 housing and connections
- RoHS compliant

## WORLDWIDE AGENCY APPROVALS

- FM, CE, IECEX, Class I Div 2, Groups B,C &D, ATEX



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Pub # 404005-32  
Rev 04-2018

## Products and Accessories:

Forney HD Flame Detector	HD-01	UV/IR Fiber Optic Adapter	358824-05
Forney HD Flame Detector - ATEX	HD-01-ATEX-XXX	UV Flex Fiber Optic Guide Assy	409893-XX
Swivel Mount	91016-63	IR Flex Fiber Optic Guide Assy	409892-XX
Cable, 12 Conductor with Quick Disconnect	HD-CABLE-QD-XXX	Rigid Fiber Optic Guide Assy	409894-XX
Cable Gland, ATEX	92615-17	(IR is 409894 -01 to -49 and UV is 409894 -50 to -99 length dependent)	
Bulk Cable	92615-18		
Cable Adapter for existing Forney Detectors	HD-01-XCONN-D85 HD-01-XCONN-UNFLM1 HD-01-XCONN-UNFLM2		

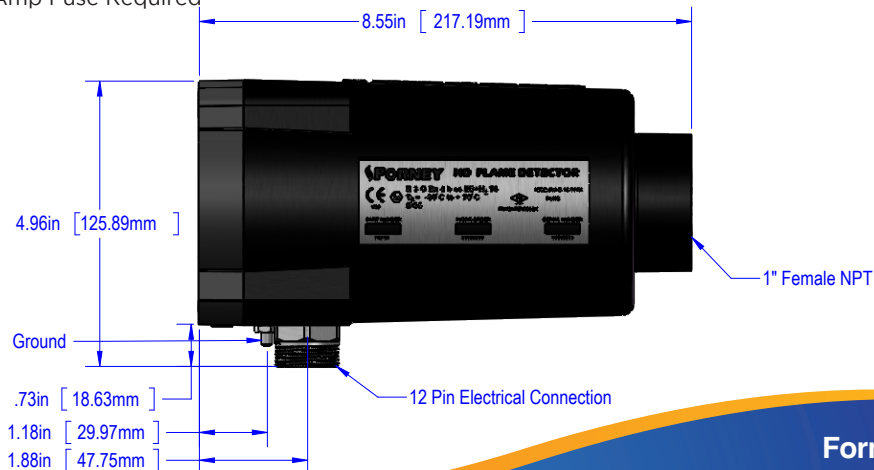
## Specifications:

### Environmental

Ambient Operating Temperature	-30°C to 65° C (-22° F to 149° F)	Heat Dissipation	1.2 Watt
Internal Operating Temperature	Up to 85° C (185° F)	Flame Relay	Two (2) independent (fail safe)
Ambient Storage and Transportation Temperature	20°C to 50°C (68°F to 122° F)	Contacts	SPST 24 VDC, 1 amp
Relative Humidity	40°C (104°F), RH 95%	Flame Failure Response Time (FFRT)	1, 2, 3, 4 second (user adjustable)
Vibration Sinusoidal Operating	Frequency: 5 -200 Hz Acceleration: 8G	Fault Relay	Internally Wired
Flammability Rating	UL94	Analog Output	Sourced 4-20 ma, one for each flame relay Load resistance < 750 Ohm
Conformal Coatings		Digital Inputs	Two self-powered inputs for up to four file selections
RoHS Compliant		Communication	RS-485 / Modbus Bluetooth®
<b>Mechanical</b>		Electrical connections	Standard - Quick disconnect ATEX version - Prewired
Housing Material	Engineered Polymer	Prefabricated Cable	12 Conductor (color coded) Tinned Copper Braid Shield, Black PVC Jacket CSA CMG (UL) PLTC-ER 300V 105C, Fire Resistant - FT4, UV Resistance Diameter -0.463" Nominal Weight - 0.17 lb/ft
Weight	1.2 Kg (2.7 lbs)		
Degree of Protection	IP65, NEMA 4X		
Sight Tube Mounting	1" NPT		
Lens Temperature Rating	538°C (1000° F)		
Purge Air Flow	Minimum 5 SCFM		
<b>Optical Sensitivity</b>	Responsive to oil, coal & gas flames using IR & UV spectrum		

### Power Supply

Steady State Current	120 ma
Inrush Current	350 ma
Power Consumption	2.88 watt
External In-line Fuse	1 Amp Fuse Required



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