

# IDD 9000 Flame Detector Amplifier

*The IDD 9000 Flame Detector Amplifier provides enhanced discrimination and tuning for NFPA compliant systems and offers a single retrofit solution for multiple discrete legacy amplifiers.*

## Product Overview

Reliable flame detection and burner-to-burner discrimination in multi-burner boilers is significantly more challenging with the NFPA 85 requirement to prove “flame not detected” prior to burner start-up. This NFPA requirement along with difficult discrimination challenges, such as low NO<sub>x</sub> burners and opposed fired boilers, are demanding more powerful signal analysis and tuning capability from flame detection systems. The IDD 9000 employs a Digital Signal Processor (DSP) based flame signal processing method to offer advanced tuning capabilities necessary for a NFPA compliant system.

The IDD 9000 Flame Amplifier is designed for easy upgrade of existing Forney flame amplifiers with most installations simply requiring a flame amplifier replacement and reconnection of existing wires to improve flame detection and discrimination. The IDD 9000 is available in panel or rack mount; single or dual channel configurations. The dual channel configurations use two fully independent channels to support two flame detectors simultaneously.

## COMPATIBILITY

- Amplifier Upgrades - The IDD 9000 can replace most Forney flame amplifiers, panel or rack mount, in any application with complete compatibility.
- Flame Detector - Works with all versions of Forney’s IDD and UV-4 detectors.
- Analog Output - Flame intensity output is available in either 0-10 VDC or 4-20 mA.

## Features & Benefits

- Enhanced Discrimination and Tuning - Increased IDD frequency response options along with spectrum weighting capability for tuning to unique flame patterns.
- Storage for eight operating profiles allows BMS controlled or manual file switching for instantaneous recall of optimized performance for a variety of fuels and burner operating conditions.
- Flame signal processing can be IR only or UV only on each channel.
- Connecting an IDD and UV-4 flame detector to one dual channel IDD 9000 amplifier allows supervision of a burner/ igniter pair.

## APPROVALS

- All IDD 9000 Amplifiers are Factory Mutual (FM) approved
- PM IDD 9000 has the CE Marking



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Pub # 404005-21  
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## Products and Accessories:

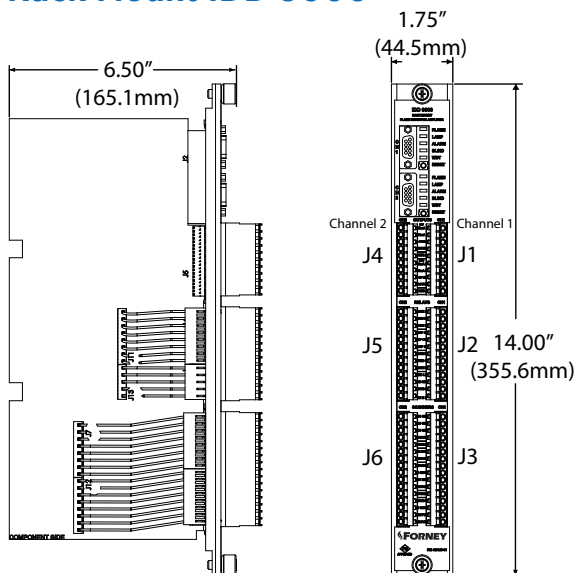
Dual Channel Panel Mount (PM) IDD 9000 Amplifier	Part #408100-00
Single Channel Panel Mount (PM) IDD 9000 Amplifier	Part #408100-50
Rack Mount (RM) IDD 9000 Amplifier - dual channel	Part #408120-01
Amplifier Tuning Kit	Part #408103-01
Termiflex / SMARTDisplay® terminal with 9-pin connector*	Part #408106-01
Cable 40' (12.2 m) for IDD	Part #399854-04
Cable 40' (12.2 m) for UV-4	Part #399855-04
Compatible Flame Detectors:	
IDD-II, Filtered, Infrared Detector	Part #38321-21
IDD-IIU, Unfiltered, Infrared Detector	Part #38321-22
IDD-III, Infrared Detector for Lignite	Part #38321-23
UV-4, UV Tube Detector	Part #379189-02

\*If using an older Termiflex / SMARTDisplay® terminal with a 25-pin connection, a DB25-pin to DB9-pin adapter is required (Forney Part #408107-01)

## IDD 9000 Specifications:

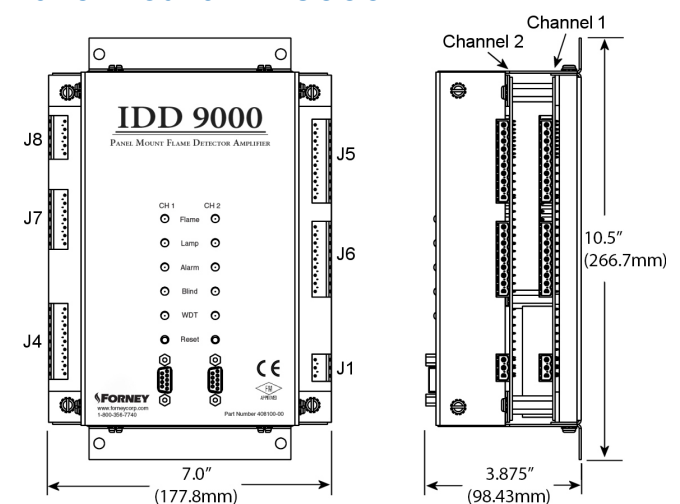
	Panel Mount:	Rack Mount:
Dimensions:	10 1/2" x 7 7/8" x 3 7/8" (26.6 cm x 20 cm x 9.8 cm)	6.5 x 14 x 1.75 inches (155.6 x 355.6 x 44.5 mm)
Weight:	5 lbs. 3 oz. (2.35 kg)	1 lb 7 oz. (0.68 kg)
Approvals:	CE and Factory Mutual (FM)	Factory Mutual (FM)
Temperature:	32° to 140°F (0° to 60°C)	
Humidity:	5% to 95% relative humidity, non-condensing	
Power Requirements:	120/240 VAC, 50/60 Hz @ 12 VA	
Output Relay Ratings (SPDT):	3 A at 125 VAC, 250 VAC & 30 VDC <i>3 relays are available for each channel (Lamp, Main Flame &amp; Alarm).</i>	
Flame Strength:	4-20 mA or 0-10 VDC (sourcing)	
Flame Failure Response Time (FFRT):	1.0, 2.0, 3.0 or 3.8 seconds	
Flame Pickup Time:	less than 2 seconds	
Nonvolatile RAM:	8 complete operating profiles	

## Rack Mount IDD 9000



The RM IDD 9000 is a dual channel amplifier with a separate identical CPU Processor for each channel. The right side is for Channel 1 and the left side is Channel 2. The RM IDD 9000 is designed for installation into an amplifier rack (Part # 404325-02) in an equipment cabinet.

## Panel Mount IDD 9000



The PM IDD 9000 is available as single or dual channel. The dual channel has a separate, identical PCB motherboard for each channel. Each board contains six connectors on the side panels. Dual channel shown, bottom board is removed on single channel configuration.

**Forney Corporation**

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