

Flame Detector Worksheet

Customer Name _____

Phone Number _____ Fax Number _____

Plant/Unit Name _____

Contact Name _____

Estimated ship date _____

☐ New Installation ☐ Upgrade of Forney equipment ☐ Replacement of _____

Market: ☐ Utility ☐ Petro-chemical ☐ Pulp & Paper ☐ Steel ☐ Other _____

Type of Boiler: ☐ Front Fired ☐ Opposed fired ☐ Tangentially fired ☐ Other _____
For tangentially fired applications, are the burners fixed or tilting? ☐ Fixed ☐ Tilting

Fuel(s) fired for main burner: ☐ Natural Gas ☐ Light Oil ☐ Heavy Oil ☐ Coal
☐ Lignite ☐ Other: _____
Atomization for fuel oils: ☐ Steam ☐ Mechanical ☐ Air

Fuel(s) for Igniter: ☐ Natural Gas ☐ Light Oil ☐ Propane Oil ☐ Other: _____

Furnace Pressure: ☐ Pressurized (FD Fan only) ☐ Balanced (FD and ID Fan)

Burner Arrangement: Number of elevations _____ Burners per elevation _____
Approximate distance between burners (centerline to centerline) _____ ft.

Can customer furnish fully dimensioned burner drawings? _____

Number of main burner detectors _____ Number of igniter detectors _____

Has detection method been specified? ☐ UV ☐ IR ☐ UV/IR ☐ Other _____

Is a weatherproof rating required for the detector? ☐ None ☐ NEMA 4 ☐ IP65 ☐ Other _____

Is an Explosion-proof rating required for the detector?
☐ US Standards: Class 1, Division 2, Group _____ (D, C, B, and or A) ☐ None
☐ CE Standards: Exd II _____ (C, B, and/or A) ☐ Other _____

If Fiber-optics are required, how long do they have to be? 3ft 5ft 7ft 9ft 10ft 12ft 14ft Other _____
Do the fiber optics require an outer carrier or re-use the existing outer carrier? ☐ New ☐ Re-use

Voltage available? ☐ 115VAC ☐ 230VAC ☐ 50Hz ☐ 60Hz

Average distance between amplifier and flame detector (to determine cable length) _____ ft

Will amplifiers be mounted in an existing enclosure or does a new enclosure need to be provided? ☐ Existing ☐ New
If a new enclosure is required for the amplifiers, what is the rating?
☐ NEMA 12 (IP55) ☐ NEMA 4 (IP65) ☐ Explosion-proof

Does a flame detector cooling air blower need to be provided? ☐ Yes ☐ No

Flame Detector Selection Guide

Use this as a general rule for the selection of your flame detector. First, choose your igniter detector. Second, choose your main flame detector. The following chart may be used for selection of both the igniter detector and the main flame detector.

		Natural Gas	Oil	Coal	Lignite	Coal & Gas	Coal & Oil	Lignite & Gas
Discrete Detectors (separate amplifier required)								
	DR6.1 PN 378099-01 IR sensor 350 - 3300 nm UV sensor 190 - 260 nm	A	A	A	A	A	A	A
	IDD – IIU PN 38321-22 400 - 3300 nm	A	P	P	A	N	P	N
	IDD – IIL PN 38321-23 700 - 3300 nm	N	N	N	P	N	N	N
	IDD – II PN 38321-21 700 - 3300 nm	N	P	P	A	N	A	N
	IDD – Ultra PN 38321-29 200-425 nm	P	A	N	N	N	N	N
	UV-4 PN 379189-02 190-260 nm	P	A	N	N	N	N	N
Unitized Detectors (integral amplifier)								
	UniFlame® I IR sensor 700 - 1700 nm UV sensor 295 - 320 nm	P	P	P	P	P	P	P
	UniFlame® II IR sensor 700 - 1700 nm UV sensor 295 - 320 nm	P	P	P	P	P	P	P
	D85® IR sensor 830 - 1100 nm UV sensor 295 - 340 nm (K3 option 310-500 nm)	P	P	P	P	P	P	P

P = Preferred A = Acceptable N = Not recommended / will not detect

Fiber Optics are available for tangential and opposed fired units.

Notes:

1. UniFlame I has 3 versions: IR, UV, and Dual (IR & UV). Contact Forney for application assistance.
2. Cooling air requirements: Front mount applications - minimum 10 scfm, Fiber optic applications - minimum 15 scfm. Maximum cooling air temperature 120 °F (48°C) for all except **new IDD- Ultra which requires no cooling up to 250 °F (121°C)**