Addendum

Multispectrum IR Flame Detector X3301
with Automotive Mode Dual Stage Output

DET-TRONICS

ADDENDUM

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Multispectrum IR Flame Detector X3301 with Automotive Mode Dual Stage Output

This addendum describes the operational benefits offered by the Model X3301 multi-spectrum flame detector with automotive mode dual stage output for body paint line applications.

The current requirement in fire/loss prevention for automotive paint lines is to use independent alarm action to initiate a two-stage extinguishing process. In the first of these extinguishing processes, the painting operation is shut down. Sometimes, this action is combined with gaseous suppression agent. If this first action does not successfully extinguish the fire, a second stage of suppression, typically water deluge, is initiated. The aim of this approach is to minimize process interruption in case of an accidental fire. If the first stage extinguishes the fire, use of water deluge is eliminated, minimizing downtime and loss. If the first stage of action fails to extinguish the fire, the second stage of action (water deluge) prevents catastrophic loss.

The X3301 automotive mode meets these requirements by providing two independent outputs to activate these two stages of mitigation. Both outputs have identical sensitivity extending from the medium sensitivity performance of the non-automotive X3301. Unique to the automotive mode is high-speed reaction to fires greater than 6" x 6" at ranges less than 20 feet. Typical response time of the first (auxiliary) output is less than 0.5 second to the listed hazards. If the fire is not extinguished by the first extinguishing action, a second (fire) output is activated. Typical response time of this second output is less than 8 seconds*. The X3301 automotive mode is also available in a LON output. The first stage alarm, second stage alarm and the detector's timing sequence are configurable using the Eagle Quantum Premier's (EQP) Safety System Software (S^3). Please consult the factory before adjusting timers from the default values.

If the first stage output succeeds in extinguishing the fire, the second stage output does not activate, thus preventing needless loss due to unwarranted activation of the second (deluge) extinguishing action. This important feature helps minimize the losses associated with the consequences of extinguishing an accidental fire.

Performing a manual or magnetic oi test will simultaneously change the state of the fire alarm and auxiliary relays. Refer to the "Optical Integrity" section of instruction manual number 95-8704.

Automatic fire alarm signaling performance verified per FM 3260 (2018). Refer to page 2 for test result data.

* One device per circuit is required for relay output model per NFPA 72.

Gun Fire Atomized Fuel (10 cc per second) — Typical Relay Response (In Seconds)

Fuel	20 Feet on Axis		10 Feet Off Axis (+/- 45° Horiz.)		10 Feet Off Axis (+45° -30° Vert.)	
	First Stage (Auxiliary)	Second Stage (Fire)	First Stage (Auxiliary)	Second Stage (Fire)	First Stage (Auxiliary)	Second Stage (Fire)
Xylene	0.2	7.1	0.1	6.6	0.1	6.5
MEK	0.2	6.5	0.1	7.3	0.2	6.5
Toluene	0.2	7.1	0.1	6.8	0.1	6.6
Isopropanol	0.2	6.8	0.3	7.1	0.1	6.4

Pan Fire (6” x 6”) — Typical Relay Response (In Seconds)

Fuel	20 Feet on Axis		20 Feet Off Axis (+/- 45° Horiz.)		20 Feet Off Axis (+45° -30° Vert.)	
	First Stage (Auxiliary)	Second Stage (Fire)	First Stage (Auxiliary)	Second Stage (Fire)	First Stage (Auxiliary)	Second Stage (Fire)
Xylene	0.3	6.5	0.3	6.5	0.4	6.7
MEK	0.3	6.5	0.3	6.5	0.2	6.5
Toluene	0.2	6.4	0.2	6.5	0.3	6.5
Isopropanol	0.2	6.5	0.4	6.8	0.3	6.6

Pan Fire (1 ft. x 1 ft.) — Typical Relay Response (In Seconds)

Fuel	100 Feet on Axis		75 Feet Off Axis (+/- 45° Horiz.)		75 Feet Off Axis (+45° -30° Vert.)	
	First Stage (Auxiliary)	Second Stage (Fire)	First Stage (Auxiliary)	Second Stage (Fire)	First Stage (Auxiliary)	Second Stage (Fire)
n-Heptane	6.6	13.4	4.2	10.9	5.9	12.4

95-8787

FlexSonic® Acoustic Leak Detector

X3301 Multispectrum IR Flame Detector

PointWatch Eclipse® IR Combustible Gas Detector

FlexVu® Universal Display with GT3000 Toxic Gas Detector

Eagle Quantum Premier® Safety System

Carrier

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