



Ultra-High-Speed Flame Detection Releasing System



EAGLE QUANTUM PREMIER®
ULTRA-FDRS





EAGLE QUANTUM PREMIER® ULTRA-FDRS 2400 | 3600 | 4800 | RIO



Since 1973, Det-Tronics has been the standard bearer for flame detection worldwide, supporting applications requiring ultra-high-speed flame detection since its inception. The widely-known Flame Detection Releasing System (FDRS) was introduced shortly thereafter and has been produced for decades. Today, due to the unavailability of electronic components from that era, we are no longer able to manufacture our **legacy FDRS systems**.

Fortunately, we've redesigned the FDRS and offer three new models with ultra-high-speed capabilities that are listed to allow you to meet your requirements for many years to come.

The Eagle Quantum Premier® ULTRA-FDRS is the only listed system in the world capable of ultra-high-speed deluge, making it ideal for a variety of industrial applications ranging from munitions manufacturing to aerosol fill.

When paired with Det-Tronics-listed optical flame detectors the response time from the presentation of a saturated source at the flame detector to water flowing from an ultra-high-speed deluge valve can be less than 50 milliseconds (mS).



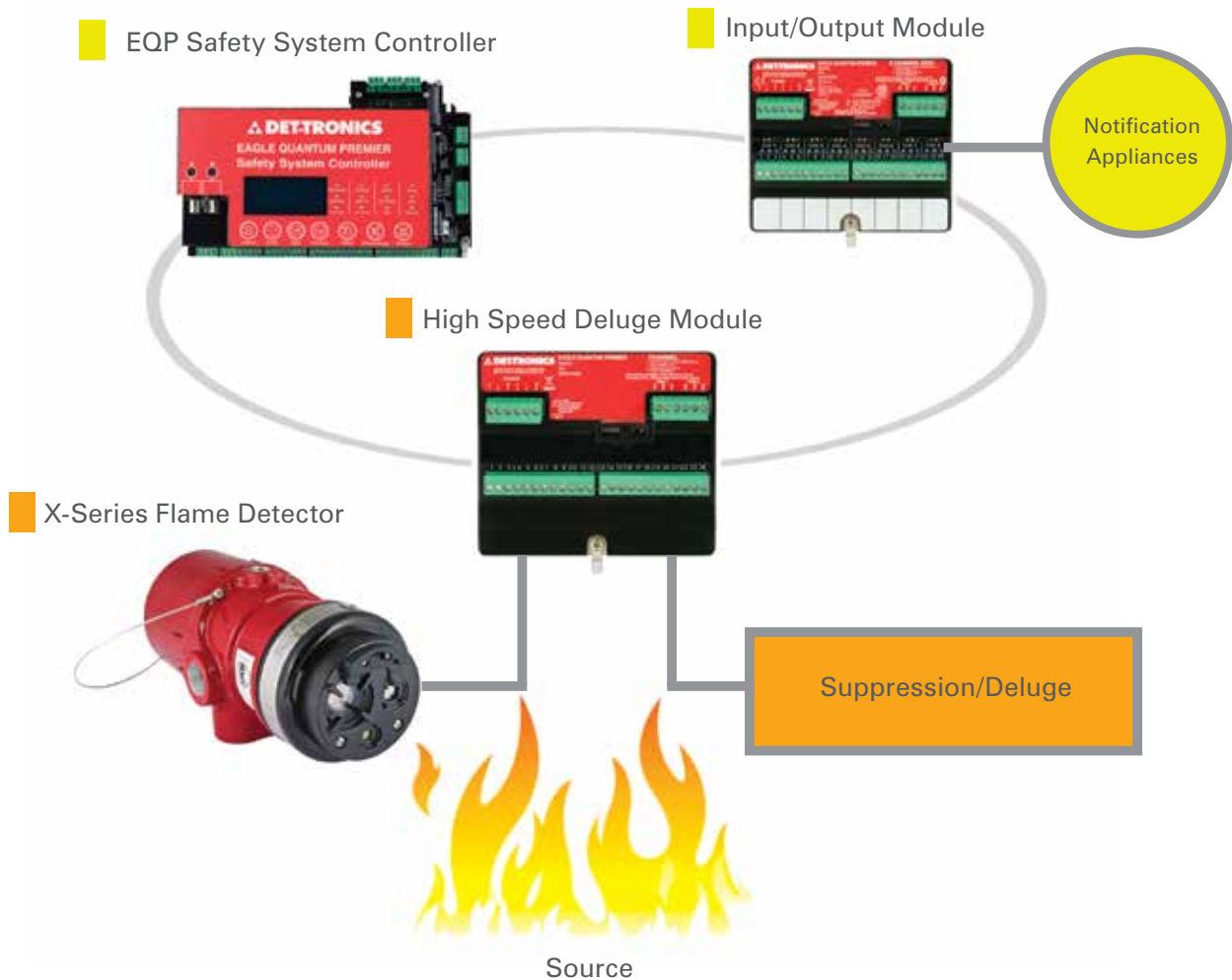
Superior Performance and Reliability

EAGLE QUANTUM PREMIER[®] **ULTRA-FDRS**

- ▲ Combines flame detection with water solenoid releasing functionality in a single integrated ultra-high-speed capable solution
- ▲ Certified SIL 2 capable
- ▲ CE compliant, CSA and FM Approved for general purpose areas
- ▲ Permits compliance to NFPA 72[®] and NFPA 15 (Chapter 12)
- ▲ Eagle Quantum Premier systems have provided a reliable solution for over 15 years

ULTRA-HIGH-SPEED DETECTION AND RELEASING SYSTEM*

*Certified SIL 2 capable



NFPA 72[®]: National Fire Alarm and Signaling Code[®]

NFPA 15[®]: Chapter 12 Ultra-High-Speed Water Spray System

The **New** Benchmark in Listed Ultra-High-Speed Flame Detection and Releasing Solutions



EAGLE QUANTUM PREMIER® ULTRA-FDRS

2400 | 3600 | 4800 | RIO



REPUTABLE & TESTED

The EQP® ULTRA-FDRS combines more than 45 years of industry knowledge and experience and has been tested and approved against rate-of-rise heating conditions.

PROGRAMMED & FLEXIBLE

EQP® ULTRA-FDRS systems are fully programmed to meet the specific needs of your cause-and-effect requirements. **Full Factory Acceptance Test (FAT)** and field service commissioning services are provided as an option at the time of order.

INTUITIVE

The heart of the system—the EQP® **Safety System Controller**—has an easy-to-read vacuum-fluorescent display (VFD). The system status conditions are communicated via this display in simple, easy to understand text.

LISTED

Flame detection and releasing systems are required to be listed by the Occupational Health and Safety Administration (**OSHA**), codes such **NFPA 15** and **NFPA 72**, as well as the Unified Facilities Criteria (**UFC 3-600**).

EQP® ULTRA-FDRS models are approved to **FM 3010** in accordance with **NFPA 72®**: National Fire Alarm and Signaling Code, 2013 Edition. The system is also certified **SIL 2** capable and is CE marked.

HIGHLY CAPABLE

Inputs to the EQP® ULTRA-FDRS include listed contact closures from flame, heat and smoke detectors, plus manual pull stations. It will respond to a validated input within **2 milliseconds (mS)** and provide an output that activates solenoid(s), which are in turn used to activate ultra-high-speed pilot-actuated deluge valves.

PROJECT MANAGEMENT & SUPPORT

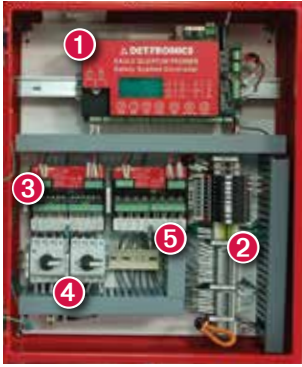
Every EQP® ULTRA-FDRS is assigned a dedicated project manager to provide detailed communication and help ensure that manufacturing schedules are met. We also provide **lifetime technical services** on the systems that we manufacture.

DOCUMENTED

Every EQP® ULTRA-FDRS comes complete with a full drawing set that includes dimensional drawings, cause-and-effect logic tables and wiring connection diagrams. We also keep your project on file **permanently** should you ever need to make changes.

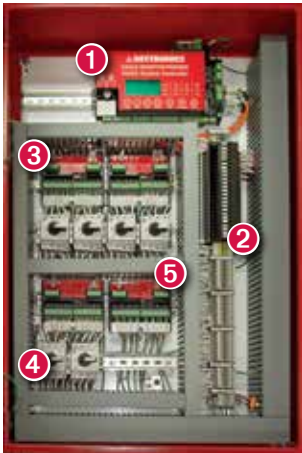


Model	Size (HxWxD)	Rating	Flame Detector Inputs (Class B)	Flame Detector Outputs (Class B)	Non-High-Speed I/O	EQP Controller	HSDM Modules	EDIO Modules	Disconnect Switches
ULTRA-FDRS 2400	24" x 20" x 8" 610 x 508 x 203mm	NEMA 4	6	6	7	1	1	1	2
ULTRA-FDRS 3600	36" x 24" x 8" 914 x 610 x 203mm	NEMA 4	18	18	7	1	3	1	6
ULTRA-FDRS 4800	48" x 24" x 10" 1219 x 610 x 254mm	NEMA 4	30	30	7	1	5	1	10
ULTRA-FDRS RIO	36" x 24" x 8" 914 x 610 x 203mm	NEMA 4	18	18	7	0	3	1	6



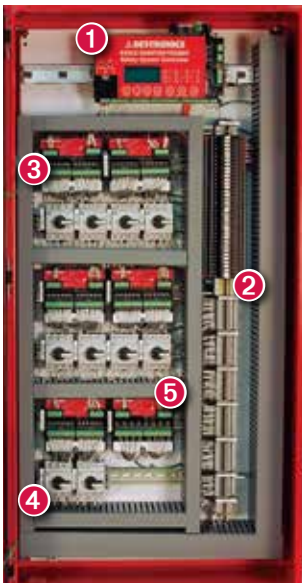
2400 EAGLE QUANTUM PREMIER® ULTRA-FDRS 6 INPUTS/UHS OUTPUTS

- ❶ SIL 2 Eagle Quantum Premier Safety System Controller
- ❷ Interposing terminals for field wiring
- ❸ **One SIL 2 High-Speed Deluge Module (HSDM)** provides up to 6 inputs & 6 ultra-high-speed outputs
- ❹ Lockable, physical disconnect switches
- ❺ One SIL 2 Enhanced Discrete Input Output Module (EDIO) provides up to 7 inputs/outputs



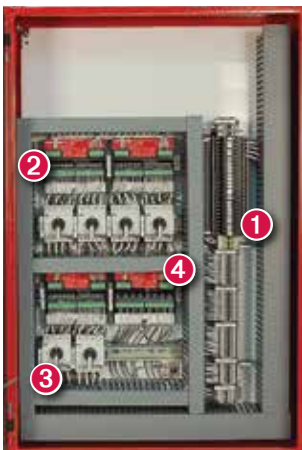
3600 EAGLE QUANTUM PREMIER® ULTRA-FDRS 18 INPUTS/UHS OUTPUTS

- ❶ SIL 2 Eagle Quantum Premier Safety System Controller
- ❷ Interposing terminals for field wiring
- ❸ **Three SIL 2 High-Speed Deluge Modules (HSDM)** provide up to 18 inputs & 18 ultra-high-speed outputs
- ❹ Lockable, physical disconnect switches
- ❺ One SIL 2 Enhanced Discrete Input Output Module (EDIO) provides up to 7 inputs/outputs



4800 EAGLE QUANTUM PREMIER® ULTRA-FDRS 30 INPUTS/UHS OUTPUTS

- ❶ SIL 2 Eagle Quantum Premier Safety System Controller
- ❷ Interposing terminals for field wiring
- ❸ **Five SIL 2 High-Speed Deluge Modules (HSDM)** provide up to 30 inputs & 30 ultra-high-speed outputs
- ❹ Lockable, physical disconnect switches
- ❺ One SIL 2 Enhanced Discrete Input Output Module (EDIO) provides up to 7 inputs/outputs



EAGLE QUANTUM PREMIER® ULTRA-FDRS RIO 18 ADDITIONAL INPUTS/UHS OUTPUTS

For larger systems where field wiring runs can be long and costly, the EQP® ULTRA-FDRS **Remote Input Output** allows for the remote installation of the High Speed Deluge Modules and Enhanced Discrete Input Output module.

- ❶ Interposing terminals for field wiring
- ❷ **Three SIL 2 High-Speed Deluge Modules (HSDM)** provide up to 18 inputs & 18 ultra-high-speed outputs
- ❸ Lockable, physical disconnect switches
- ❹ One SIL 2 Enhanced Discrete Input Output Module (EDIO) provide up to 7 inputs/outputs



Flame Detectors

X5200 ULTRAVIOLET/INFRARED FLAME DETECTOR



- ▲ Leverages UV and IR technologies to detect fire
- ▲ Ultra-high-speed, versatile detector for specialty applications, such as munitions and aerosol filling
- ▲ Auxiliary relay offers the flexibility to be configured to detect UV or IR
- ▲ Allows for the detection of fires from a wide variety of materials of interest

▲ The Det-Tronics X5200 UVIR radiant energy-sensing flame detector configurations are optimized for the ultra-high-speed detection of energetic material fires.

▲ The X5200 UVIR is configured to respond to UV or IR alarm conditions, optimizing the detector's response time when milliseconds count.

▲ X5200 response times to a saturated source are typically less than 30mS (IR Channel) and can be as little as 18mS (UV Channel). Response times are dependent upon the materials involved, the distance between the fire and the detector, and the size of the fire.

▲ When connected to an EQP® ULTRA-FDRS model and an ultra-high-speed hydraulic system, overall system response times of less than 100mS can be consistently achieved.

▲ Optical Integrity (oi®) performs automatic fail-safe checks every 60 seconds.



Det-Tronics Power System & Initiating Devices

EAGLE QUANTUM PREMIER® (EQP) ULTRA-FDRS SAFETY SYSTEM ACCESSORIES



Three power supplies/chargers are listed for use with the EQP® ULTRA-FDRS system. 10A, 30A and 75A models are available to meet your requirements.



The EQ3900G Power Supply Distribution/Monitoring enclosure monitors the power supply status and communicates trouble conditions to the EQP Controller. Monitored status conditions include power supply failure, loss of AC power, loss of battery power, power ground fault, AC and DC voltage (hi/low level) and backup battery current charge levels.



Backup batteries and battery boxes are also available. The battery box helps to keep the batteries protected and stored in an orderly fashion.



U5015 EXPLOSION-PROOF SMOKE DETECTOR



Q5016 DUCT ACCESSORY



MODEL HD EXPLOSION-PROOF HEAT DETECTOR



KIDDE® MANUAL PULL STATIONS

NOTIFICATION APPLIANCES AND SOLENOIDS





A Global Leader in Fire and Gas Safety Systems

Det-Tronics has been a global leader in fire and gas-safety systems since 1973. We're leaders in flame and gas detection and hazard-mitigation systems for high-risk processes and industrial operations worldwide.

UPGRADE your legacy FDRS to the *Eagle Quantum Premier*® **ULTRA-FDRS** to protect your facility with state-of-the-art technology. Contact us today to get started.



SAFETY & PROTECTION — SINCE 1973



92-1087-1.1



Corporate Office
6901 West 110th Street
Minneapolis, MN 55438 USA
det-tronics.com

Phone: +1 952.941.5665
Toll-free: +1 800.765.3473
Fax: +1 952.829.8750
det-tronics@carrier.com

