



NYC Department of Buildings
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Report of Materials and Equipment Acceptance Division

Pursuant to Administrative Code Section 27-131, the following equipment or material has been found acceptable for use subject to the terms and conditions contained herein.

MEA 233-07-E

Manufacturer: Fireflex Systems Inc., 1935 Lionel-Bertrand Blvd., Boisbriand, Quebec, Canada J7H 1N8

Trade Name(s): Fireflex Systems

Product: Fire alarm control for automatic release of extinguishing systems

Pertinent Code Section(s): Subchapter 17 and Reference Standard RS 17

Prescribed Test(s): FM Approvals Standards – 3010

Laboratory: Factory Mutual Approvals

Test Report(s): Project ID: 3021612 dated December 6, 2004

Description: This ARC-1 Analog Releasing Control panel is intended to be integrated with the Fireflex Systems family on integrated fire protection systems. FM Approvals, Project ID: 3019601, provides information specific to the extinguishing system components.

The ARC-1 is a modular microprocessor-based control consisting of an enclosure with integral local alpha-numeric annunciator display (LAA) and user interface. The internal power supply model (PSA) and battery charger module (BCA) are independent of an internal rack enclosure and mother board (MBA). The MBA accepts modular components such as system control and galvanic isolation module (SCA/GIA), system supervisory module (SSA), Transducer interface module (TIA), system input modules (SIA), system output modules (SOA) and auxiliary-relay module (ARA).

Enclosure – The ARC-1 is enclosed within a red, 14-gauge metal enclosure {915mm (36in) x 508mm (20in) x 406mm (16in) or 1168mm (46in) x 610mm (24in) x 406mm (16in)} of dead front construction. When integrated with the Fireflex extinguishing system, it mounts on top of the enclosure housing the releasing components and is isolated via a solid metal panel. No accessible openings of any type existed on top or sides of the enclosure. Entry to any circuits was suitable protected via keyed lock.

LAA, Local Alphanumeric Annunciator – Is visible on the front of the control and is the main human interface with separate areas for displaying common system indicators, LED's and operator keys. The large alphanumeric display provides additional information via plain text.

PSA, Power Supply – A dual voltage 120/240 VAC supply that provides up to 7.5A of filtered and regulated 24 VDC power to the ARC-1 control and connected peripherals.

BCA, Battery Charger – Provides connection and supervision-circuitry for secondary power source consisting of a 24VDC battery array available in 26, 78 or 104 amp hour ratings.

MBA, Mother Board – Provides the main system communications bus as well as the card cage that accepts up to twelve standards ARC-1 system plug-in modules. The three slots (A, B and C) are occupied with the minimum system configuration boards, SCA, GIA and SSA boards. The remaining nine slots are available to house additional the input and output boards TIA, SIA, SOA and ARA.

SCA & GIA, System Control and Galvanic Isolation Modules - The main processor board (SCA) and galvanic communication and power while the GIA provides isolation circuitry and additional protection from electro-magnetic forces.

SSA, System Supervisory Module – Provides form C common system trouble contacts rated 30VDC @ 1.0A, a current-limited auxiliary power circuit rated 24V dc @ 1.5A, a 100ma re-settable 24VDC power for connection of 4-wire smoke detectors and a RS485 data communication line for supplemental use only.

TIA, Transducer Interface Module – Provides three independent circuits that monitor 0-100mv analog pressure transducers for monitoring compressed air and other supervisory related circuits of fixed extinguishing systems.

SIA, System Input Module – Provides connection points for conventional 2-wire smoke detector as well as N. O. dry-contact type devices. Two class A or B (Style B or D) smoke detection zones and two class B (Style B) dry-contact zones are provided.

SOA, Supervised Output Module – Provides three outputs configurable for either releasing or notification appliance circuits. NAC's can also be configured as Class B (Style Y) or Class A (Style Z) circuits. Overall ARC-1 system is limited to 6A max for all outputs circuits combined, each SOA module is limited to a max of 3A per module and no more than 1.5A per circuit when used as NAC's and 1.0A per circuit when used for releasing applications.

ARA, Auxiliary Relay Module – Provides four Form C user-definable relay functions rated 30VDC @ 1A.

Restricted/Limited Access – In addition to the key-locked enclosure protecting the user interface, four separate levels of password protection restrict access to the user definable option. Pressing and holding the “MENU/EXIT” key for more than two seconds is required to gain access.

Cross-Zone Applications – The ARC-1 is capable of software definable cross-zone applications limited to the first two detection zones of the each SIA module.

Control Panels

Control panels for automatic release of extinguishing systems are not considered approved by FM Approvals if they incorporate an accessible disable or abort switch. A key operated test switch, or a disable switch behind a lockable cover, or a manually operated momentary switch is permitted, but not recommended, by FM Approvals for providing an intentional interruption of operation for servicing and testing.

When disconnecting the extinguishing system discharged for testing and/or maintenance, the extinguishing system must be isolated mechanically and not solely by electrically disconnecting the equipment and not by the software programming.

Pursuant to "Promulgation of the Rules relating to Material and Equipment Application Procedures" dated November 5, 1992, the Bureau of Fire Prevention has no objections Letter dated August 10, 2007, F.P. Index #0707027.

Terms and Conditions: The above units are accepted on condition that:

1. All uses, configurations, arrangements and functions, application and installations shall comply with all applicable provisions of New York City Building Code, specifically Subchapter 17 and NYC Electrical Code. Further, the installation and use shall be in accordance with manufacturer’s recommendations, NFPA 72 and Factory Mutual Approvals report, #3021612.
2. The above models shall be used only with MEA-approved fire alarm equipments and extinguishing systems.
3. The above controllers shall not be used with extinguishing systems incorporating an accessible disable or abort switch.
4. Factory Mutual Approvals’ requirements and limitations shall be complied with.

5. All shipments and deliveries of such equipment shall be provided with a metal tag, suitably placed, certifying that the equipment shipped or delivered is equivalent to that tested and acceptable for use, as provided in Section 27-131 of the New York City Building Code.

Final Acceptance August 28, 2027
Examined By Donald [Signature]