

Approval Standard for Central Station Service for Fire Alarms and Protective Equipment Supervision

Class Number 3011

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1.0 INTRODUCTION

1.1 Purpose

- 1.1.1 This standard states FM Approval requirements for Central Station Service for Fire Alarms and Protective Equipment Supervision.
- 1.1.2 FM Approval criteria may include, but are not limited to, examination of supervising stations, subsidiary stations, repeater stations, service facilities, protected premises, marking requirements, operating procedures and records, runners, maintenance, testing and service, and a follow-up examination program.

1.2 Scope

- 1.2.1 Central station service is the installation, operation, testing and maintenance of signaling systems wherein fire alarm and related supervisory, trouble and test signals and guard's tour signals are initiated at a subscribing protected premises and monitored at a constantly attended central station. At the central station, properly trained personnel take prescribed action on the signals received, including retransmission to the designated agency and dispatch of runners (inspection personnel), where required, to the protected premises. Central station service includes provision for regularly scheduled testing and maintenance of systems, readily available repairs and appropriate record keeping.
- 1.2.2 FM Approval of central station service is limited to service provided in accordance with all requirements of this Standard. Such service is referred to as Standard Service. (See Section 9. MARKING)

1.3 Basis for Approval

- 1.3.1 This Standard reflects FM Approval practices in verifying compliance with the applicable requirements in ANSI/NFPA 72 *National Fire Alarm Code* of the National Fire Protection Association (NFPA). Requirements contained in ANSI/NFPA 72 are considered applicable except where altered or amended by this Standard. A service deviating from these requirements will be considered according to the intent of this Standard and, if equivalent, may be Approved. Meeting the requirements of this Standard does not assure Approval; other factors may dominate, such as compliance with the conditions listed on the Approval Agreement.
- 1.3.2 FM Approval is based on satisfactory results of an examination of the facilities, equipment, service procedures, including tests of equipment at protected premises.

1.4 Basis for Continued Approval

Continued FM Approval is based upon:

- availability of Standard Service to subscribers as currently Approved;
- the continued use of FM Approved equipment and facilities to provide Standard Service;
- satisfactory field performance;
- satisfactory results of periodic reexaminations;
- compliance with the terms stipulated in the Approval Agreement.

Also, as a condition of retaining Approval, a Central Station Company or a Fire Alarm Service – Local Company may not change facilities and locations used to support the provision of Standard Service without prior notification to, and authorization by FM Approvals.

1.5 Approval Application Requirements

- 1.5.1 To apply for an Approval examination the central station or local company, or its authorized representative, shall submit a request to:

Electrical Group Manager
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062
U. S. A.

- 1.5.2 The requestor shall provide the names and addresses of all locations to be included in the Approval examination. See paragraphs 1.7.2 and 1.7.3 below.

1.6 Contract(s) and Prime Contractor

FM Approved Central Station Standard Service is required to be provided under contract as described in Sections 1.6.1 through 1.6.3. The company responsible for coordination of all requirements contained herein for Standard Service is referred to as the Prime Contractor. The Prime Contractor's responsibilities include confirmation that all requirements are provided to the subscriber as listed under contract.

- 1.6.1 Central Station Standard Service provided by an FM Approved Central Station Company – Complete Service (as Prime Contractor) whose supervising station, subsidiary and/or repeater station(s) (where used for signal transmission), and service facility(ies) are covered by FM Approval.
- 1.6.2 Central Station Standard Service provided by an FM Approved Central Station Company (as Prime Contractor) in conjunction with an FM Approved Fire Alarm Service – Local Company. The supervising station and subsidiary and/or repeater station(s) (where used for signal transmission) are covered by FM Approval. All or part of the installation, testing, maintenance and runner service is subcontracted to the Fire Alarm Service – Local Company.
- 1.6.3 Central Station Standard Service provided by an FM Approved Fire Alarm Service – Local Company (as Prime Contractor) in conjunction with an FM Approved Central Station Company. The signal monitoring, retransmission and associated record keeping are subcontracted to the Central Station Company whose supervising station and subsidiary and/or repeater station(s) (where used for signal transmission) are covered by FM Approval.

1.7 FM Approved Facilities Used for Central Station Standard Service

- 1.7.1 FM Approved Central Station Standard Service shall be provided only by the use of FM Approved facilities and equipment as required by this Standard.
- 1.7.2 FM Approvals examines and issues Approvals for central station service facilities in the categories identified below.
- a. Supervising Station;
 - b. Subsidiary Station or Repeater Station;
 - c. Fire Alarm Service – Local Company;
 - d. Maintenance and Service Facility.

- 1.7.3 Where additional facilities and locations, such as dispatch facilities, communication facilities, etc., not listed in 1.7.2, are used to support the provision of Standard Service, these facilities and locations may also be required by FM Approvals to be examined and/or FM Approved.

1.8 Travel Time for Runners and Service Personnel

- 1.8.1 In order to assure prompt inspection, maintenance and equipment repair at protected properties, FM Approval is limited to the area within the land based travel times as listed in 1.8.1.1 to 1.8.1.3.
- 1.8.1.1 Four hours travel time [200 mi (320 km)] from the FM Approved Central Station Company maintenance and service facility or, in the case of jointly provided service, from the FM Approved Fire Alarm Service – Local Company, from which personnel are dispatched to initiate maintenance.
- 1.8.1.2 One hour travel time [50 mi (80 km)] from the FM Approved Central Station Company maintenance and service facility or, in the case of jointly provided service, from the FM Approved Fire Alarm Service – Local Company, from which personnel are dispatched to reset protected property equipment or to investigate supervisory signals.
- 1.8.1.3 Thirty minutes travel time [25 mi (40 km)] from the FM Approved Central Station Company maintenance and service facility or, in the case of jointly provided service, from the FM Approved Fire Alarm Service – Local Company, from which personnel are dispatched to investigate a delinquent guard's signal.
- 1.8.2 Where supervisory signals must be investigated or protected premises equipment needs to be manually reset or rewound, the Standard Service contract shall include provision for runner response.
- 1.8.3 Dispatch of service personnel is permitted in lieu of runners where the required runner response time is maintained.

1.9 Equipment Not Covered by FM Approval

FM Approval does not cover equipment used to provide a communications channel, transmission channel, switched telephone network or public switched telephone network, unless such equipment is under the control of the Central Station Company.

1.10 Systems of Units

Units of measurement used in this Standard are United States (U.S.) Customary units. These are followed by their arithmetic equivalents in International System (SI) units, enclosed in parentheses. The first value stated shall be regarded as the requirement. The converted equivalent value may be approximate. Appendix A lists selected units and conversions to SI units for measures appearing in this Standard. Conversion of U.S. customary units is in accordance with the American National Standards Institute (ANSI)/Institute of Electrical and Electronics Engineers (IEEE)/American Society for Testing Materials (ASTM) SI 10-97, "Standard for Use of the International System of Units (SI): The Modern Metric System".

1.11 Applicable Documents

ANSI/IEEE/ASTM SI 10-97, *Standard for Use of the International System of Units (SI): The Modern Metric System*

ANSI/NFPA 72 – 1996 *National Fire Alarm Code*

ANSI/UL 827 – 1996 *Central-Station for Watchman, Fire-Alarm and Supervisory Services*

1.12 Definitions

1.12.1 Unless otherwise indicated, the terms used herein are intended to conform with the definitions in ANSI/NFPA 72 *National Fire Alarm Code*.

1.12.2 Additional definitions are as follows:

Alarm Verification

Confirmation via voice contact or physical investigation of the validity of a signal received at the supervising station from a protected premises.

Central Station Company

A person, firm or corporation whose business is the furnishing of Approved central station service to protected premises. The Central Station Company may be either a Central Station Company – Complete Service or a Central Station Company – Monitoring Only.

Central Station Company – Complete Service

A Central Station Company that provides all elements of central station service with its own facilities and personnel.

Central Station Company – Monitoring Only

A Central Station Company that provides, as a minimum, the signal monitoring, retransmission, and associated record keeping and reporting with its own facilities and personnel and that subcontracts all or part of the installation, testing, maintenance and runner service.

Fire Alarm Service – Local Company

A company that provides the installation and testing and maintenance with its own facilities and personnel and that subcontracts the signal monitoring, retransmission, and associated record keeping and reporting to a Central Station Company. The required runner service is provided by the Fire Alarm Service – Local Company with its own personnel or by the Central Station Company with its own personnel.

Maintenance and Service Facility

A facility, operated by a Central Station Company or by a Fire Alarm Service – Local Company, from which repair service, including periodic maintenance and tests required to keep the fire alarm system and its component parts in an operative condition at all times, and the records thereof are based.

Standard Service

FM Approved central station service conforming to all requirements of this Standard, under contract, and identified by a Placard.

1.13 Effective Date

The effective date of an FM Approval Standard mandates that all products or services tested for Approval after the effective date shall satisfy the requirements of that Standard. Products or services Approved under a previous edition shall comply with the new version by the effective date or else forfeit Approval. The effective date shall apply to the entire Approval Standard or, where so indicated, only to specific paragraphs of the Standard. Where other referenced standards have requirement effective dates later than that for this Standard, the later dates for those requirements shall apply.

The effective date of this Standard is **January 1, 2001**.

2.0 FACILITIES

2.1 General

Supervising, subsidiary and repeater stations shall be firesafe and physically secure to the extent that central station functions are not likely to be interrupted. The supervising station and subsidiary station facilities shall conform to ANSI/NFPA 72-1996 *National Fire Alarm Code* requirements for “Building Construction”, “Physical Protection”, “Fire Protection”, “Standby Lighting”, “Power Supply”, “Subsidiary Stations”, “Cable System” and “Automation Systems” and as amended in this Standard.

2.2 Flooding

Where equipment required to provide Standard Service is in a location susceptible to water accumulation (such as a basement), the equipment and monitoring device(s) shall be installed to alert the supervising station in advance of water accumulation which will impair equipment operation.

2.3 Repeater Station

A repeater station shall meet the requirements for a subsidiary station, unless the repeater station is fully duplicated at another location and the alarm transmission equipment is configured to utilize the operational station in the event of a failure of one station. Where multiple repeater stations are required to meet the equipment requirements of ANSI/NFPA 72 *National Fire Alarm Code*, or of the FM Approval of the signaling equipment, transmission channel or communication channel, all required repeater stations shall meet the requirements for a subsidiary station. A repeater station need not be capable of operating as a supervising station where signals can be retransmitted manually to a supervising station for processing.

2.4 Secondary Power Supply

2.4.1 In the event of primary power failure, the secondary power supply (which may be from a combination of sources) shall be capable of providing the necessary energy for vital supervising station, subsidiary station, and repeater station operations. The secondary power supply shall be in accordance with ANSI/NFPA 72 *National Fire Alarm Code* and have adequate capacity for at least 60 hours of operation.

2.4.2 The 60-hour secondary power capability shall be supplied by one of the methods listed in ANSI/NFPA 72 as amended below.

2.4.2.1 Where storage batteries constitute the secondary supply they shall have a minimum capacity of 60 hours.

2.4.2.2 Where a single, automatic starting, engine driven generator is provided along with storage batteries, the batteries shall have a minimum capacity of 4 hours.

2.4.2.3 Where multiple engine driven generators (at least one of which is arranged for automatic starting) are provided along with batteries, the batteries shall have a minimum capacity of 15 minutes.

2.4.2.4 Alternatively, the secondary supply can be provided by automatically charged storage batteries capable of providing energy automatically and without interruption for at least 24 hours, supplemented by a readily available, portable, engine-driven generator, or a permanently connected, manually started, engine-driven generator. The generator capacity shall be at least 150% of the maximum normal load. Instructions for obtaining, connecting and operating the generator shall be posted at the location of use and personnel responding to emergency situations shall be familiar with the procedure. To qualify as readily available, the portable engine-driven generator must be owned, operated and maintained by the Central Station Company, or under contract from a service providing such equipment, with a maximum 16 hour delivery time. Instructions for use, contract(s)