

SPECIFICATION for a City Master Box, Telegraphic Coded Alarm Transmitter

PART 1.0 – GENERAL

1.1 GENERAL REQUIREMENTS

- A. Furnish and install an NFPA 72 compliant electronic coded auxiliary or master box alarm transmitter for installation on a Public Emergency Alarm Reporting System
- B. The transmitter shall be furnished and installed in accordance with this specification and as indicated or described on the drawings.
- C. The transmitter shall be Factory Mutual Approved

1.2 SCOPE

- A. The transmitter shall supervise and transmit coded alarms on any 100mA telegraphic type constant current system
- B. The transmitter shall be a solid state microprocessor based circuit board mounted to a durable mounting plate and installed in the appropriate enclosure as supplied by or recommended by the manufacturer and in accordance with the requirements of the authority having jurisdiction
- C. All of the circuit and transmitter level attributes shall be programmable using the manufacturer's software and any office or portable computer using a Microsoft operating system that supports MS-DOS

1.3 SUBMITTALS

A. General

1. Submit two copies of documentation to the Architect/Engineer for review
2. Include copies of the manufacturer's technical data sheets

B. Shop Drawings

1. Sufficient information, clearly presented, shall be included to determine compliance with the drawings and specifications
2. Include the manufacturer's name, model numbers, equipment layout, device arrangement, complete point-to-point wiring diagrams and circuit and/or conduit layout.

PART 2.0 – PRODUCTS

2.1 EQUIPMENT AND MATERIAL, GENERAL

- A. All equipment shall be new and the manufacturer's current model
- B. All equipment and components shall be installed in strict compliance with the manufacturer's recommendations and in accordance with the requirements of the authority having jurisdiction
- C. For convenience and expediency all of the manufacturer's data is available on their website www.citymasterbox.com or;
- D. Contact the manufacturer, Alarm Applications, Inc, P.O. Box 297, Colchester, CT 06415, 800.875.8882 for sales information and technical assistance as may be required.

2.2 TRANSMITTER

A. General

1. The transmitter shall be comprised of a solid state microprocessor based circuit board
2. The transmitter shall have eight programmable input zones each with a

- corresponding SPDT dry contact relay
 - 3. The transmitter shall also have a separate local energy type input zone with a corresponding dry contact relay
 - 4. Each input zone shall be programmable to transmit an individual box code of from 1-10 digits
 - 5. Each input zone shall be programmable to transmit an individual box code for Restoral, if required
 - 6. Each input zone shall be programmable to be activated by either a normally open or normally closed circuit
 - 7. The transmitter shall provide the current to supervise the initiation circuit.
 - 8. Activation of any input zone shall not inhibit subsequent activation of any other or all input zones
 - 9. The transmitter shall be programmable for timing from 1/8 to 4 seconds in 1/16 second increments
 - 10. The transmitter shall be programmable to transmit on either a municipal or summoning type 100mA telegraphic circuit
 - 11. The transmitter shall automatically switch to Earth Ground Return in the event that the 100mA telegraphic circuit is open
 - 12. The transmitter shall be equipped with a Bulldog feature that will attempt transmission regardless of the condition of the 100mA telegraphic circuit
 - 13. The transmitter shall have Positive Non Interfering Quick Successive Operation
 - 14. The transmitter shall be supplied with the appropriate type of onboard and /or remote disconnect switch as required by the authority having jurisdiction.
- B. Alarm Signal
- 1. Transmitter shall be equipped with a SPDT Dry Contact Alarm Relay that will change state on any alarm condition.
 - 2. The transmitter shall be equipped with a silenceable piezo sounder that sounds on any alarm or condition. Activation of the silence feature shall not inhibit subsequent audible alarm or trouble activation.
- C. Trouble Signal
- 1. The transmitter shall be equipped with a failsafe SPDT Dry Contact Trouble Relay that is normally energized that will change state on any trouble condition or loss of operating power.
- D. Environmental Operating Parameters
- 1. The transmitter shall be approved for operation between -40F and 158F and up to 90% humidity non condensing

PART 3.0 EXECUTION

3.1 INSTALLATION

- A. installation shall be in accordance with the referenced editions of NFPA 70, the NEC, NFPA 72, local and state codes, manufacturer's recommendations and the requirements of the authority having jurisdiction.
- B. The transmitter shall be installed in the location as designated by the authority having jurisdiction.
- C. Temporarily or permanently ground the earth terminal on the municipal connection block before energizing the transmitter
- D. The transmitter shall require non resettable, filtered and regulated 24-30VDC power for proper operation.

1. Power shall be derived from an approved source such as the Fire Alarm Control Panel or a Notification Alarm Circuit Power Supply or;
 2. The manufacturer shall offer an optional larger enclosure with a power supply/charger designed to house the transmitter, the power supply/charger and a pair of batteries.
- E. Furnish a dry contact relay or switch device and circuit for each input zone to be activated
 - F. Install a 10k OHM resistor across the contact or switch for proper supervision of the Circuit
 - G. If the Local Energy Input is to be used provide an approved or listed Municipal Box Trip Module and circuit and install and test the circuit according to the manufacturer's instructions
 - H. Furnish a fire alarm circuit or module to monitor the transmitter trouble contacts and label the event as "Master Box Trouble"

3.2 PROGRAMMING

- A. All programmable transmitter attributes, box codes and corresponding rounds will be determined by the Authority Having Jurisdiction
 1. Programming may be performed by the manufacturer's representative, the installer, the authority having jurisdiction, or it's designee.

3.3 TESTING

- A. At a minimum the following tests shall be performed
 1. Test all external circuits for opens, shorts and grounds prior to termination on the transmitter zones.
 2. Test each initiation relay or device to trip the respective transmitter zone in order to verify proper transmission of the code and rounds
 3. Open each initiation circuit to verify actuation of the trouble contact
 4. Verify activation of the piezo sounder upon actuation of any alarm and trouble condition
 5. Activate the City Disconnect Switch and test any zone to verify that the switch shunts the 100mA telegraphic circuit and disconnects the transmitter.

3.4 WARRANTY

- A. The transmitter shall be warranted against defects in materials and workmanship for twenty-four months from the date of shipment
- B. The transmitter shall carry a manufacturer's lifetime replacement or repair warranty for damage caused by lightning

3.5 CLOSEOUT DOCUMENTS

1. Submit a copy of the manufacturer's warranty
2. Submit a programming data sheet listing the box codes and the description and nomenclature for each zone if required by the owner and/or the authority having jurisdiction
3. Submit a Testing/Commissioning checklist if required by the owner and/or the authority having jurisdiction