**FIRE SPRINKLER SYSTEMS, WIRELESS BRIDGE SUPERVISORY SYSTEM**

A. Furnish and install a wireless bridge supervisory system where it is impracticable or not cost effective to run wiring to a supervisory or other switch type of device for monitoring elements of a fire sprinkler system.

1. The wireless bridge supervisory system shall consist of a transmitter and receiver. The system shall be capable of supporting up to three wireless repeaters to extend the range of the wireless bridge.
2. The transmitter, receiver, and repeaters shall be housed in a NEMA 4 rated weatherproof enclosures, suitable for outdoor use.
3. The transmitter, receiver, and repeaters shall communicate wirelessly via the 2.4 GHz band.
4. The transmitter, receiver, and repeaters shall be capable of being paired for operation and optionally paired via a software setup tool and radio using a portable computer.
5. The transmitter, receiver, and repeaters shall be UL listed to UL 864 and shall be capable of operating over the temperature range from -40°F to 120°F

B. Approved wireless devices are:

1. Potter Electric SignaLink™ wireless transmitter, model WTX-M.
2. Potter Electric SignaLink™ wireless repeater, model WR.
3. Potter Electric SignaLink™ wireless receiver, model WRX-R.

C. Potter SignaLink™ wireless transmitter, model WTX-M

1. The transmitter housing shall include provisions to detect cover removal.
2. The transmitter shall include provisions to directly mount to ½” NPT electrical openings on supervisory devices, switch type devices, or electrical junction boxes.
3. The transmitter shall provide wiring connections to the supervisory or switch type device suitable for connection to normally open, dry switch or relay contacts.
4. The transmitter shall include provisions for electrically supervising continuity of the wiring to the monitored device or switch.
5. The transmitter shall be capable of operating for a minimum of one year on two AA size lithium iron disulfide (LiFeS2) batteries.
6. The transmitter shall transmit to the receiver via optional repeaters the status of the switch device being monitored, tamper condition indicative of transmitter cover removal, low battery condition, and lost continuity of wiring to the monitored device or switch.

D. Potter SignaLink™ wireless repeater, model WR

1. The repeater housing shall include provisions to detect cover removal and removal of the repeater from its mounting surface or post.
2. The repeater shall be capable of being surface mounted or post mounted.
3. The repeater shall be capable of operating for a minimum of one year on one D size lithium thionyl chloride (Li/SOCl₂) battery.
4. The repeater shall be capable of being optionally powered by a 24 Vdc power supply.

E. Potter SignaLink™ wireless receiver, model WRX-R

1. The receiver shall include relay or switch outputs suitable for monitoring by any listed fire panel.
2. The receiver shall be capable of being powered by a 24 Vdc power supply or auxiliary power from the fire panel.
3. The receiver shall individually indicate power, system setup mode, tamper conditions of transmitters and repeaters, communication errors, monitored device switch state, low battery, and wiring integrity to monitored device or switch.
4. The receiver shall be fully automatic and not require human intervention for normal operation.
5. The receiver outputs shall mirror status of the monitored device or switch.