# ELECTRICAL MATERIALS COMPANY

Products for the Utility Industry

4/20/22

Electrical Materials Company
145 Elizabeth Lane
Genoa City, WI 53128

FCC ID: 2A3P5HIFIS1

Subject: Professional Installation Attestation

We, Electrical Materials would like to declare that the product being certified requires professional installation.

1. Professional installation must be justified.
   Description: Special trained utility linemen and technical personnel are required to install and activate the system (device) while maintaining high voltage live service to local area utility customers.

   The device is to be installed by utility employees or contracted personnel under the direction of an electrical utility. The device provides encrypted data to an associated computer to perform a function to de-energize a downed energized high-voltage conductor that a protective overcurrent device has failed to clear.

   (1) These electric utilities are authorized to operate by the state in which they are located. Each electric utilities safety practice is governed by the most recent National Electric Safety Code version accepted by the electric utility in that specific state. The National Electric Safety Code has been in effect since 1913 and reviewed every 5 years by electric utilities authorized to operate in that state.

   This device is secured in an enclosure with a lock and mounted at a minimum height of 10-1/2 Ft. above ground on a utility owned pole. The transmitter receiver enclosure is accessible only with a vehicle lift or extension ladder. No pole steps (temporary or permanent) are installed below the 11-foot level. DANGER signs – stating: "High voltage – Warning*" are installed on the pole 5 feet above ground. The Transmitter – receiver is installed to provide signals to automatically de-energize a live downed high voltage primary conductor. Only the electric utility has legal jurisdiction to perform electrical power associated duties on the pole structure. If a telecommunication facility has joint pole use, its work force is restricted to only working on their telecommunication equipment on the specific pole.

2. Professional installation does not permit use of any antenna with the transmitter; the permitted types of antenna specified as below.
Description: Professional installer can select from antenna types listed below. Only the maximum gain of each type is shown. The appliance must be configured correctly to maintain compliance with FCC Rule Part 15 requirement. For more details on each approved antenna please refer to test reports.

| Ant. Type | Connector | Antenna Gain | Frequency |
|---|---|---|---|
| Monopole | N – type female | 6 dBi | 824 – 960 MHz |
| Monopole | N – type female | 3 dBi | 824 – 960 MHz |

3. The applicant should address the following items when justifying professional installation.

(1) To qualify for professional installation, please explain why the hardware is not readily available to average consumer.
Description: This product will not be sold directly to the general public through retail store, therefore the hardware is not readily available to average customer. The product will be sold solely either directly to electric utility companies or through authorized distributors which sell equipment to electric utilities.

(2) Marketing — Applicant must ensure device cannot be sold via retail to the general public or by mail order.
Description: This product and will not be sold directly to the general public through retail store or mail order. The sale of this product will be restricted to sales through authorized distributors which sell to electric utilities or through sales directly to electric utility companies.

(3) Applicant must show that device intended use is not for consumers and general public.
Description: Device is for specific industrial/commercial use, in fact solely for use by electrical utilities, for the sole purpose of device to device communication, as part of a high impedance fault isolation system. The function of the high impedance fault isolation system is to analyze high impedance fault conditions on downed high voltage primary lines, and following positive analysis, de-energizes downed live primary conductors owned and operated solely by electric utilities.

(4) Explain what is unique, sophisticated, complex, or specialized about the equipment that REQUIRES it to be installed by a professional installer?
Description: Please be advised that due to the unique electric utility market and function targeted by this product, this product will need special trained professionals to connect this device to electric utility equipment, that is solely owned and operated by the electric utility. The high voltage nature of electric utility equipment requires professional installers employed or authorized by the electric utility to install and

operate this equipment. These professional installers also will have to be trained specifically on the installation and use of this equipment. We hereby declare that the product will be distributed through controlled distribution channel, with end user being solely electric utilities, which have special trained professionals to install this product and will not be sold directly to the general public through retail store or mail order.

4. Other professional installation requirements

(1) Installation must be controlled.
Description: The product will be distributed through controlled distribution channel solely for electrical utility end users, which has special trained professional to install this product

(2) Installed by licensed professionals.
Description: Device sold solely either directly to electric utilities or through authorized distributors who sell equipment to electric utilities. Electrical utilities hires and trains professional installers that need special training in configuring and installing the product.

(3) Installation requires special training.
Description: This product in installed in a high voltage environment and the system has a specific function, which is isolating (de-energizing) downed high voltage primary conductors experiencing high impedance fault conditions. The device to device communications are encrypted and devices will only recognize and communicate with other associated devices on an installation that are programmed specifically to communicate with each other. Therefore, special training is essential for correct configuration, installation and operation of this equipment. The system also functions solely with high voltage overcurrent systems, which also requires special training to install properly. Therefore special training is essential for configuring and installing the product.

If you have any questions, please do not hesitate to contact us at (847) 404-6131

(Sign here)

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