

PROJECT NUMBER \_\_\_\_\_

PROJECT NAME \_\_\_\_\_

DATE \_\_\_\_\_

PROJECT LOCATION \_\_\_\_\_

## TECHNICAL SPECIFICATIONS

### SECTION 27 16 00 - COMMUNICATIONS DEVICES and ADAPTORS

### SECTION 27 16 16 - COMMUNICATIONS ADAPTORS and TRANSCEIVERS

#### TYPE ET1500CWS ETHERNET EXTENDER SYSTEM – NEMA TS-2

## PART 1 GENERAL

- 1.01 All equipment to be supplied under this specification shall be new and the current model of a standard product of an OEM of record. An OEM of record shall be defined a company whose main occupation is the manufacture for sale of the equipment supplied and which:
  - A. Maintains a factory production line for the item submitted.
  - B. Maintains a stock of replacement parts for the item submitted.
  - C. Maintains engineering drawings, specifications, and operating manuals for the items submitted.
  - D. Has published and distributed descriptive literature and equipment specifications on the items of equipment submitted.
- 1.02 Specifications of equipment as set forth herein are salient and minimum requirements, unless otherwise stated and shall not be construed as limiting the overall quality, quantity or performance characteristics of items furnished.
- 1.03 Systems and components shall have been thoroughly tested and proven in actual use.
- 1.04 All systems and components shall be provided with the availability of a toll free (U.S. and Canada) technical support number from the manufacturer. The number shall provide technical assistance for either the dealer/installer or the end user at no charge.

## PART 2 SPECIFICATIONS

- 2.01 The outdoor rated Ethernet Extender over Coax Transmitter shall be a NITEK Model ET1500CWS and shall be capable of providing PoE power and transmitting IP Ethernet network data over standard RG59U coaxial cables for distances of up to 1,640 feet (500 meters) over a 10/100 network.
- 2.02 The Ethernet Extender over Coax Weatherproof Transmitter shall be NEMA TS-2 rated. The Transmitter and a NITEK Model IP/COAX! Surge Suppressor or equivalent shall be enclosed in a NEMA 4X outdoor rated enclosure. The Transmitter unit shall be in self-contained aluminum extruded cases 1.1"H x 1.6"W x 5.1"D. The 5.1" dimension being the bottom panel and shall include two mounting tabs, one at each end. The NEMA4X enclosure shall provide protection for the enclosed transmitter and surge suppressor devices from the adverse effects of atmospheric elements and shall be 8.25" x 5.74 X 2.17 with two (2) water-proof cable grommets, four (4) screw holes for securing the face plate to the case body, and four (4) screw holes to be utilized for case body mounting.
- 2.03 The Left Panel of both the Transmitter unit shall provide an RJ45 Network Port for connection to the Ethernet. The RJ45 housing shall contain two LED indicators viewable from the Left Panel. A white LED to indicate PoE power present and a green LED to indicate Ethernet connected.
- 2.04 The Right Panel of the Transmitter unit shall provide a Link Port BNC type female connector for connection to the coaxial cable and two

## TECHNICAL SPECIFICATIONS

**SECTION 27 16 00 - COMMUNICATIONS DEVICES and ADAPTORS**  
**SECTION 27 16 16 - COMMUNICATIONS ADAPTORS and TRANSCEIVERS**  
**TYPE EL1500CWS ETHERNET EXTENDER SYSTEM – NEMA TS-2**

**PART 2 - SPECIFICATIONS (continued)**

separate LED status indicators; white to indicate PoE power present when illuminated and green to indicate a 100Mb Ethernet link, when illuminated.

- 2.05 The Ethernet Extender System Transmitter unit shall be powered from a ER1500C Receiver unit over the connected coaxial cable. The enclosed Transmitter unit shall in turn provide power to the connected network device such as an IP camera. When power requirements of a network device are greater than power available from the Transmitter unit, a local PoE supply, NITEK Model PS48 or equivalent, shall be connected at the enclosed Transmitter to provide supplemental power. An optional 2.5mm mini-jack for external PoE power input connection shall also be provided on the Left Panel, of the enclosed Transmitter unit for this purpose.
- 2.06 The Weatherproof Ethernet Extender over Coax Transmitter shall support any standard Network device, shall support mega-pixel cameras and multi-camera installations.
- 2.07 The Weatherproof Ethernet Extender over Coax Transmitter shall operate in a manner that is completely transparent to the Network. The System shall require no IP or MAC addresses. The system shall operate as follows:
- A. A coaxial cable shall be connected between the BNC connectors on the enclosed Transmitter and the ER1500C Receiver.
  - B. A patch cable from the Receiver shall connect to the head-end Network equipment and a patch cable from the enclosed Transmitter shall connect to the network device.
  - C. With PoE power applied to the enclosed Transmitter, the Receiver shall receive power, immediately establish a link with the Transmitter and begin operating as a full-duplex 100BaseT Ethernet conduit.
  - D. LED indicators on both the enclosed Transmitter and Receiver units shall be illuminated to indicate Power (white LED) and Data connection (green LED).
- 2.08 The Ethernet Extender System Over Coax Transmitter and Receiver Units shall be Environmentally Hardened to meet NEMA TS-2 Specifications:
- A. Temperature & Humidity – NEMA 2.2.7
    - Operating Temperature Range -40° to 75°C/ -40° to 167°F
  - B. Mechanical Vibration – NEMA 2.2.8
  - C. Mechanical Shock – NEMA 2.2.9
  - D. Operating Voltage – NEMA 2.1.2
  - E. Operating Frequency – NEMA 2.1.3
  - F. Transient Test – NEMA 2.1.6 through 2.1.8
- 2.09 The ET1500CWS shall have a limited lifetime warranty.

17JUL2013