

SECTION 26 27 13 - ELECTRICITY METERING

PART 1 - GENERAL

1.1 SUBMITTAL REQUIREMENTS

- A. Product Data
 - 1. For each type include detailed product information, electrical characteristics, outputs, connection protocols, accessory components, enclosures, wiring diagrams, warranty, etc.
- B. Training
 - 1. Cover installation, maintenance, troubleshooting, programming, repair and operation of the system.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Provide lugs, lug kits and related accessory work as required to accommodate the conductor sizes and quantities needed for each application. Coordinate with single-line diagram, field conditions, etc. Provide barriers required for separating sections compliant with NFPA 70. Provide nameplates that identify loads/tenants that are compliant with prevailing codes, Owner's standards and utility company requirements.

2.2 EQUIPMENT FOR ELECTRICITY METERING BY OWNER ("TAB METERING")

- A. General Requirements and Specifications for Owner's Meters:
 - 1. Provide campus standard meter – Veris Industries E50F5A with the Ion protocol Din Rail Meter in enclosure with clear panel on enclosure. Provide digital meter and current transformers (CT's), rated at amperes and voltages as necessary for each particular application. Install meters in strict accordance with manufacturer's instructions. Provide conduit, wiring and connections between CT's and meters per manufacturer's instructions as required to render the metering fully functional.
 - 2. Provide Demand (kW) reading, which shows and records the highest peak demand and date and time peak occurred. Provide meter with modular connector(s) to provide interfacing for the following.
 - a. AMR (Automatic Meter Reading).
 - b. Pulse modules.
 - c. Analog signal modules.
 - d. Energy control modules Instantaneous demand displays.
 - 3. Provide meter that is UL listed and labeled, CSA Approved and certified by a nationally recognized independent test facility to ANSI C12.1 and C12.16 specifications with split-core current sensors.
 - 4. Enclosure: Provide heavy-duty JIC steel enclosure suitable for indoor installation.
 - 5. Identification: Comply with requirements in Section 260553 "Identification for Electrical Systems."
 - 6. Memory Backup: Self-contained, non-volatile, to maintain memory throughout power outages of 72 hours, minimum.
 - 7. Sensors: Current-sensing type, with current or voltage output, selected for optimum range and accuracy for meters indicated for this application. Allow for paralleling of sensors and/or mounting up to 500 feet from the meter. Provide sensors of split-core configuration to allow installation without powering down, with sensors available from 25 amp to 4,000 amp.

8. Voltage Input Configuration: 2-wire, 3-wire and 4-wire, which covers all secondary voltage supplies; single-phase, split-secondary and three-phase, both grounded and ungrounded.
9. Voltage Input: Up to 480 volts rms AC.
10. Current Range: Up to 3200 amps rms AC.
11. Power Factor: 0.5 leading or lagging.
12. Frequency: 50 Hz to 60 Hz.
13. Accuracy: Certified to ANSI C12.1 and C12.16 National Accuracy Standards.
14. Humidity: 0-95% non-condensing.
15. Temperature Range: -20 degrees C to +50 degrees C.
16. Voltage overload: +25% continuously.
17. Current Overload: Can be overloaded 100% without damaging meter.
18. Display: Fully electronic LCD display.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Provide Series Combination Warning Labels, if applicable: Self-adhesive type, with text as required by NFPA 70.

END OF SECTION 26 27 13