

Section 16211

Electricity Metering

PART 1: General

- 1.1 *Summary* – This Section includes equipment for utility company's electricity metering.
- 1.2 *Submittals* –
 - 1.2.1 *Product Data* – Include construction details, material descriptions, dimensions of individual components and profiles, and finishes. Describe electrical characteristics, features, and operating sequences. Include Electricity-metering equipment.
 - 1.2.2 *Shop Drawings for Electricity-Metering Equipment* –
 - 1.2.2.1 Dimensioned plans and sections or elevation layouts.
 - 1.2.2.2 Wiring Diagrams: Power, signal, and control wiring specific to this Project. Identify terminals and wiring designations and color codes to facilitate installation, operation, and maintenance. Indicate recommended types, wire sizes, and circuiting arrangements for field-installed wiring, and show circuit protection features.
 - 1.2.2.3 Mounting and anchoring devices recommended by the Manufacturer.
 - 1.2.3 *Operation and Maintenance Data* – For electricity-metering equipment to include in operation and maintenance manuals.
- 1.3 *Quality Assurance* –
 - 1.3.1 *Electrical Components, Devices, and Accessories* – Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- 1.4 *Coordination* –
 - 1.4.1 *Electrical Service Connections* – Coordinate with utility companies and components they furnish as follows:
 - 1.4.1.1 Comply with requirements of utilities providing electrical power services.
 - 1.4.1.2 Coordinate installation and connection of utilities and services, including provision for electricity-metering components.

PART 2: Products

- 2.1 *Manufacturers* – In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
 - 2.1.1 *Available Manufacturers* – Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, Manufacturers specified.
- 2.2 *Equipment for Electricity Metering by Utility Company* –
 - 2.2.1 *Current-Transformer Cabinets* – Comply with requirements of electrical power utility company.
 - 2.2.2 *Meter Sockets* – Comply with requirements of electrical power utility company.
- 2.3 *Equipment for Electricity Metering by Owner* – For MCC or panel board.
 - 2.3.1 *Available Manufacturers* –
 - 2.3.1.1 Siemens Company
 - 2.3.1.2 Allen-Bradley Company
 - 2.3.1.3 Square D; Schneider Electric.
 - 2.3.2 *Kilowatt-Hour Meter Feed-Through Socket Enclosure* – Electronic three-phase, 5-jaw, measuring electricity used.
 - 2.3.2.1 Voltage and Phase Configuration: Meter shall be designed for use on circuits with voltage rating and phase configuration indicated on the Drawings for its application.
 - 2.3.2.2 Ampacity: Meter ampacity shall be size based upon, and not rated lower, the serving main overcurrent device ampacity rating.
 - 2.3.2.3 NEMA 4X stainless steel (316L) enclosure.
 - 2.3.2.3.1 UL Listed
 - 2.3.2.4 Coordinate additional requirements with utility company standards.
 - 2.3.3 *Kilowatt-Hour Meter Socket Enclosure and CT Cabinet* – Electronic three-phase, measuring electricity used.
 - 2.3.3.1 Voltage and Phase Configuration: Meter shall be designed for use on circuits with voltage rating and phase configuration indicated on the Drawings for its application.
 - 2.3.3.2 NEMA 4X stainless steel (316L) enclosure and CT cabinet.
 - 2.3.3.2.1 UL Listed.

2.3.3.3 Current-Transformer Cabinet: Listed or recommended by metering equipment Manufacturer for use with sensors indicated.

2.3.3.3.1 Provide

2.3.3.3.2 Current-Transformers provide by utility company.

2.3.3.4 Coordinate additional requirements with utility company standards.

2.3.4 *Kilowatt-Hour Meter* – Provided by utility company.

PART 3: Execution

3.1 *Installation* –

3.1.1 Comply with equipment installation requirements in NECA 1.

3.1.2 Install equipment for utility company metering. Install raceways and equipment according to utility company's written requirements. Extend grounding connections as required by utility company.