



METERING REQUIREMENTS FOR DISTRIBUTED GENERATION FACILITIES LARGER THAN 300kW

PURPOSE

These electric service requirements detail metering requirements for distributed generation (DG) facilities larger than 300kW. The Arizona Corporation Commission (ACC) requires metering for all DG production sources for annual reporting purposes. Because large DG facilities can significantly affect the Company's grid operations, the Company requires DG production metering that is also capable of providing real-time generation information to its System Control & Reliability office.

EQUIPMENT REQUIREMENTS

1. An ION meter is required for DG metering for generating facilities larger than 300kW. The Service Provider will furnish the ION meter at customer expense.
2. The ION meter interfaces with potential transformers (PT), current transformers (CT), and a communications modem. The Service Provider will furnish these items at customer expense.
3. Customer shall furnish the following equipment to support the DG metering:
 - a. CT cabinet as per SR-422
 - b. Transformer-rated meter socket as per SR-414
 - c. PT enclosure
 - d. Communications equipment enclosure



Alternatively, if customer plans are to furnish DG interconnection switchgear, a suitably sized compartment in the switchgear sufficient to house all of the Company's metering equipment is acceptable.

CONSTRUCTION

1. All conduit connections subject to moisture ingress shall be watertight.
2. All conduit fittings at box or cabinet connection points shall be appropriately bonded.
3. The grounded circuit conductor (neutral) shall not be bonded to the CT cabinet. (Note: This is opposite of the requirement for a neutral-ground bond inside the revenue meter CT cabinet.)
4. An auxiliary 120V_{ac} or 277V_{ac} single-phase 3-wire supply circuit sourced from the service entrance panel, switchboard, or switchgear shall be provided. The circuit shall run from the service entrance to the communications equipment enclosure. Alternatively, the circuit may also be derived from any sub-panel that is located on the line (utility) side of the DG disconnect switch. This circuit will provide power to the ION meter during periods when the DG is out of service and the DG disconnect is open.

EQUIPMENT LAYOUT

1. See FIGURE 1 for the required equipment layout when using a CT cabinet and transformer-rated meter socket for DG metering.

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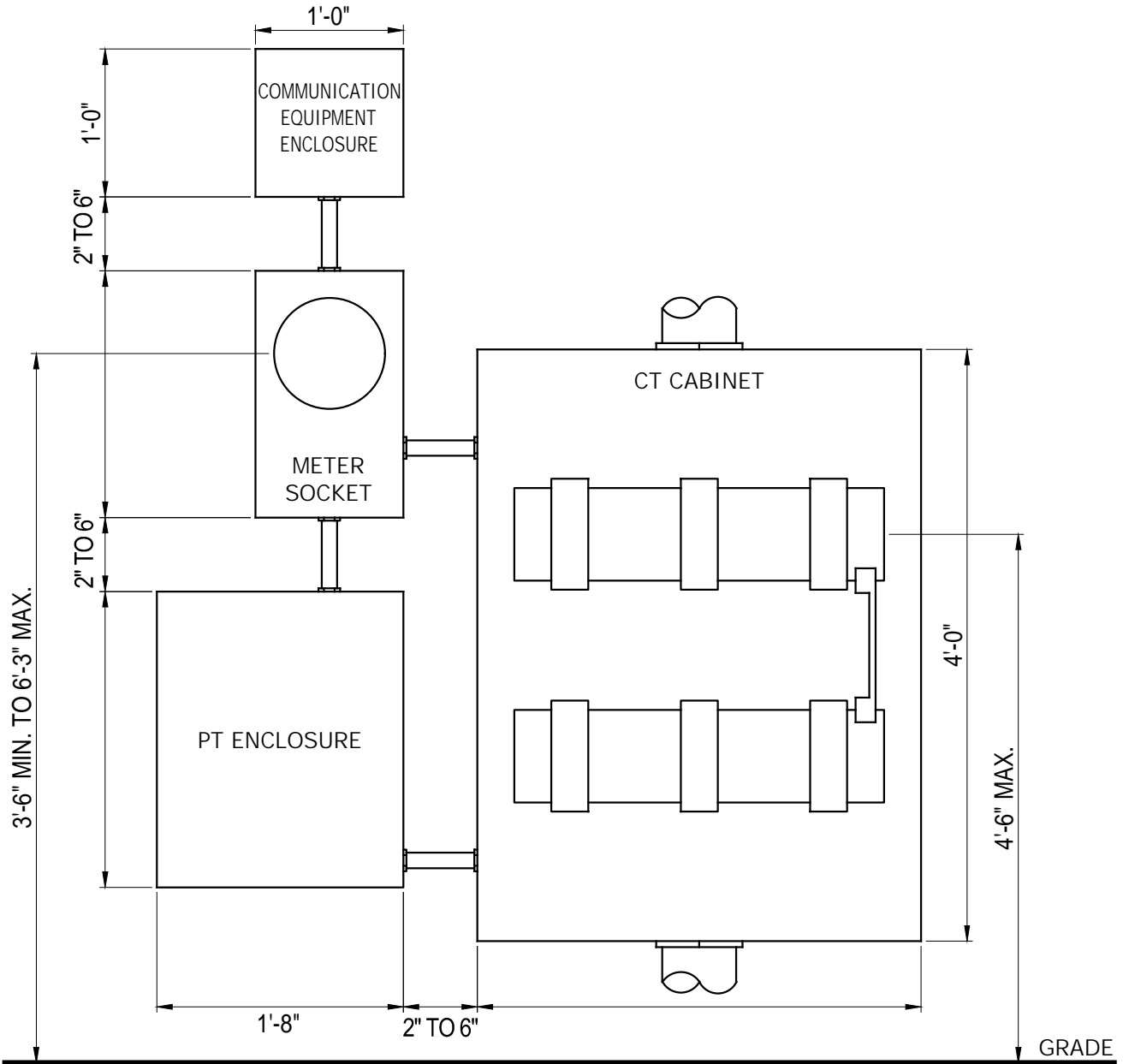




FIGURE 1
TYPE IV DG METERING LAYOUT

NOTES:

1. REFER TO SR-422 FOR A LIST OF APPROVE CT CABINETS. ERICKSON CABINET DIMENSIONS, DIFFER FROM EUSERC, BUT ARE APPROVED.
2. ALL METER CONDUIT, SHALL BE 1 1/4", IMC OR RMC.
3. ALL CONDUIT CONNECTIONS, SUBJECT TO MOISTURE INGRESS, SHALL BE WATER TIGHT.
4. METERING SOCKET, SHALL BE A MILBANK, CATALOG # UC7461-YL-TGE-DES.
5. PT ENCLOSURE, SHALL BE A HOFFMAN, CATALOG # A24R208HCR.
6. COMMUNICATION EQUIPMENT, SHALL BE A HOFFMAN, CATALOG # A12R128HCR.
7. COMPANY METERING DEPARTMENT, TO FURNISH AND INSTALL, CT's, PT's, METER AND MODEM COMPONENTS.

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