

Meter Socket Adaptors

Usage Requirements, Connections to Green Mountain Power, August 2025

Meter Socket Adaptors (MSA) are devices designed to fit in-between the utility meter and the customer's electrical socket. They have a variety of purposes and intentions from: 1) allowing a customer to more easily connect solar generation to a service panel that is already at capacity, 2) adding additional controlled loads to a customer's electrical system without violating NEC load requirements, 3) enabling home microgrids by acting as the automatic disconnect/transfer switch between the customer's home generation/battery backup systems and the utility grid power, 4) allowing the customer to connect a backup generator to provide power during outages.

The following MSA's are approved for use within GMP service territory.

- ConnectDER Solar
- ConnectDER EV
- ConnectDER IslandDER
- Tesla Backup Switch
- Enphase IQ
- GenerLink

If the MSA you wish to install is not on the pre-approved list, please reach out to GMP Metering Department to determine if the MSA is allowed.

General requirements for installation of Meter Socket Adapters

- Meter Socket Adapter (MSA) installation must be performed by qualified personnel only. Follow your employer's requirements for personal protective equipment (PPE) and procedures.
- Oxide-inhibiting joint compound shall not be applied to jaws of sockets or GMP meter terminals.
- Socket jaw tension must meet requirements to support heat transfer away from the meter and socket adapter.
- Service conductor insulation must be in place without evidence of failure.
- Only one adapter may be installed behind a meter.
- Meter mounting equipment shall be for a single meter position or two-meter positions.
- Meter socket must be firmly attached to its mounting.
- Circuit Breakers, when present, shall have an interrupting rating consistent with the maximum design short circuit duty rating at the point of connection in compliance with NEC.
- Adapters used on 120/208 volt, 3-wire services shall have a 5th terminal and 5th jaw to supply neutral voltage to the meter.
- Meter socket adapters may not be used where the customer has opted-out from having an Advanced Metering Infrastructure (AMI) Meter installed.

ConnectDER Solar / EV / IslandDER

Function of device:

ConnectDER Solar enables solar system to be connected after the meter and before an existing electrical panel at the premises. Includes a 2-pole circuit breaker to interrupt over current and support isolation of solar system for maintenance.

ConnectDER EV enables an EV charger to be connected after the meter and before an existing electrical panel at the premises. Includes a 2-pole circuit breaker to interrupt over current and support isolation of EV charger system for maintenance. EV charger is load controlled and will not violate NEC load requirements at customers premises.

ConnectDER IslandDER enables automatic grid disconnection and islanding for home battery backup. The ConnectDER IslandDER is a meter socket adaptor with integrated microgrid interconnection device (MID) and current sensors for energy consumption metering. The ConnectDER IslandDER automatically detects grid outages and provides a seamless transition to backup power. It is designed to communicate with a variety of battery manufacturers; consult with ConnectDER for the most up to date list of compatible battery systems.

Required adapter features:

- Adapter shall connect solar/EV system on the customer side of the GMP meter.
- PV/DER/EV circuit breaker shall be able to interrupt fault currents up to 22,000 amps.
- PV/DER/EV circuit breaker trip current rating may be between 40 and 80 amps.
- Adapters installed in 5 jaw sockets shall have a 5th terminal installed on the rear of adapter.

Installation Requirements unique to the ConnectDER Solar / EV / IslandDER

- The installation of the Meter Socket Adapter is subject to review by both GMP and the Vermont State Electrical Inspector.
- Adapter may only be used in meters socket blocks rated up to 200 amps continuous current. It shall not be used with sockets rated 320 amps.
- Adapter may be used on services described as: 120/240 volt, 3 wire, single phase service ANSI C12 Form 2S; or 120/208 volt, 3 wire, network service ANSI C12 Form 12S.

- Adapter relocates the mounting position of meter. A clear space of at least 3 feet in front of the meter and within 6 inches around the meter shall be provided around meters to allow for testing, reading, and repairing (VT Electric Service requirements 704C).
- The Junction box terminal must use 1” liquid-tight flexible conduit for connection to solar branch circuit. The liquid tight shall be installed with a drip loop and enough slack that the terminal box may be removed to gain access to the meter socket and adaptor.
- The socket adaptor, terminal box and the conduit shall not block access to breaker compartments in meter socket or second meter position in meter socket.
- The neutral pig tail provided by the manufacturer shall connect the meter socket adaptor to the neutral in the socket.
- Multiple methods of attaching the neutral pig tail to the neutral in the socket are acceptable. The method selected must comply with requirements of the 2023 version of the NEC, including paragraph 230.46. This paragraph specifies that pressure connectors and devices for splices and taps installed on service conductors shall be marked “suitable for use on the line side of the service equipment” or equivalent.

Tesla Backup Switch

Function of device:

Intended for use with Tesla Powerwall battery energy storage system. The Tesla Backup Switch is a meter socket adaptor with integrated microgrid interconnection device (MID) and current sensors for energy consumption metering. The Tesla Backup Switch automatically detects grid outages, providing a seamless transition to backup power. It communicates directly with Powerwall, allowing home energy usage monitoring from any mobile device with the Tesla app.

Required adapter features:

- Intended for use with compatible Tesla Powerwall energy storage systems: Powerwall 3, Powerwall 2, Powerwall+

Installation limitations unique to this Tesla, Backup Switch adapter

- Tesla adapter may only be used on ANSI C12 Form 2S meters sockets rated up to 200 amps. It shall not be used with sockets rated 320 amps.
- Tesla adapter may only be used on services described as: 120/240 volt, 3 wire, single phase service.
- Adapter relocates the mounting position of meter. A clear space of at least 3 feet in front of the meter and within 6 inches around the meter shall be provided around meters to allow for testing, reading, and repairing (VT Electric Service requirements 704C).
- Liquid-tight flexible conduit for control cable connection to Powerwall, is attached to the bottom of the adapter. It may not block access to breaker compartments in meter socket or second meter position in meter socket.

Enphase IQ

Function of device:

Intended for use with Enphase Energy Systems. The Enphase IQ Meter Collar is a meter socket adapter with integrated microgrid interconnection device (MID) and current sensors for energy consumption metering. The IQ Meter Collar is rated at 200 A and can be installed on an ANSI C12 Form 2S meter socket rated up to 200 A continuous operation. It can be installed either at the service entrance directly on the utility meter socket or on a load-side standalone meter socket.

Required adapter features:

- Intended for use with 3rd generational Enphase Energy System: IQ System Controller 3M and IQ Battery 5P.
- It is also compatible with 4th generation Enphase Energy Systems installed with the IQ Combiner 6C and IQ Battery 10C.

Installation limitations unique to the Enphase IQ adapter:

- IQ adapter may only be used on ANSI C12 Form 2S meters sockets rated up to 200 amps. It shall not be used with sockets rated 320 amps.
- IQ adapter may only be used on services described as: 120/240 volt, 3 wire, single phase service.
- Adapter relocates the mounting position of meter. A clear space of at least 3 feet in front of the meter and within 6 inches around the meter shall be provided around meters to allow for testing, reading, and repairing (VT Electric Service requirements 704C).
- Liquid-tight flexible conduit for control cable connection to Enphase Energy System, is attached to the bottom of the adapter. It may not block access to breaker compartments in meter socket or second meter position in meter socket.

GenerLink

Function of device:

Intended for use with home backup generators. Enables a confirmed disconnect from the grid when grid voltage is not available. This allows the home generator to power the home electric system when isolated from the grid.

Required adapter features:

- The GenerLink is only intended for 120/240 volt, 3 wire single phase connections with maximum current of 200 amps.
- GenerLok is a custom power cable that connects the GenerLink automatic disconnect device to the customers home backup generator. L14-30 Locking (30 amps) or 14-50 Straight (40 amps)
- The neutral pig tail provided by the manufacturer shall connect the meter socket adapter to the neutral in the socket.

Installation limitations unique to the GenerLink adapter:

- GenerLink cannot be used with generators with capacity greater than 7.2 to 9.6 kW continuous power rating (depending on model)
- GenerLink cannot be used with generators with full GFCI panel.
- GenerLok power cable is attached to the bottom of the adapter. It may not block access to breaker compartments in meter socket or second meter position in meter socket.
- Adapter may only be used in meters socket blocks rated up to 200 amps. It may not be used with sockets rated 320 amps.
- Adapter may only be used on services described as: 120/240 volt, 3 wire, single phase service.
- Adapter relocates the mounting position of meter. A clear space of at least 3 feet in front of the meter and within 6 inches around the meter shall be provided around meters to allow for testing, reading, and repairing (VT Electric Service requirements 704C).