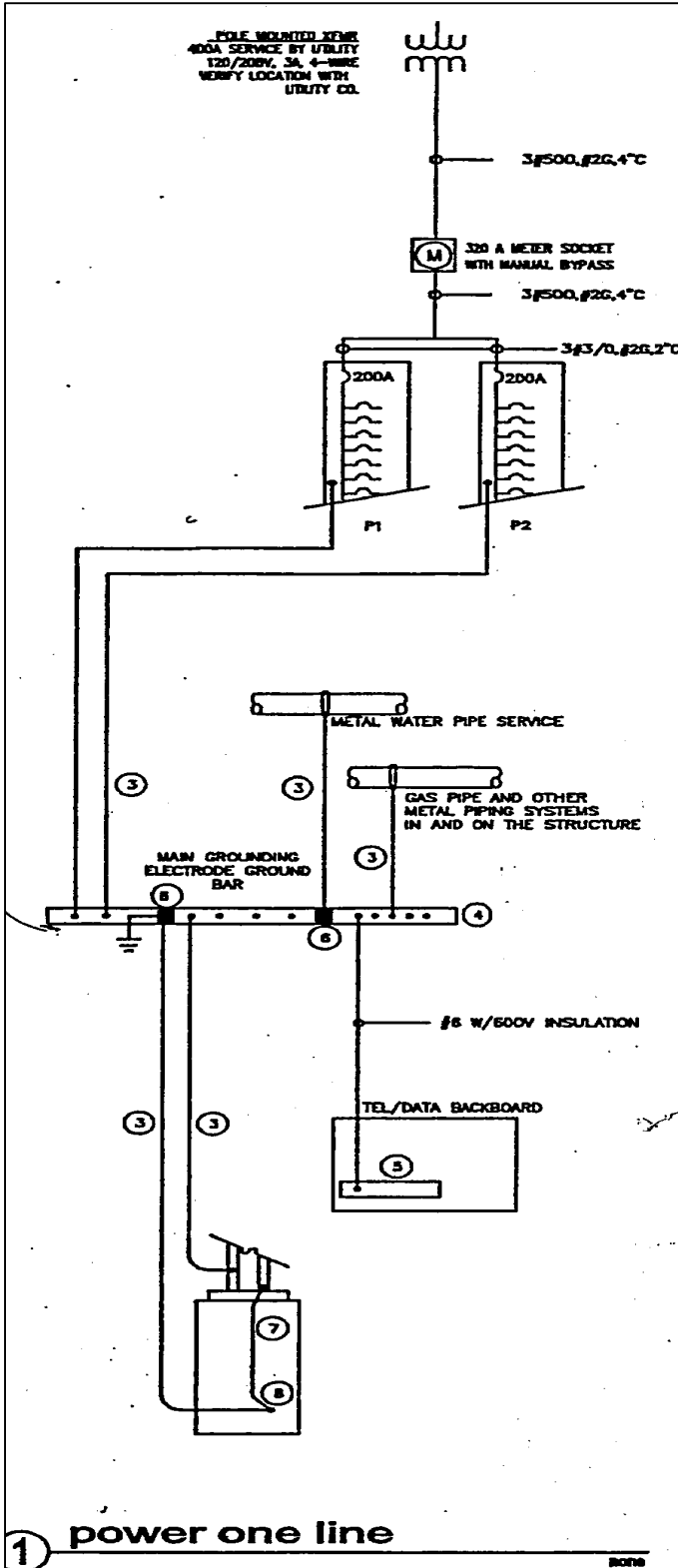


National Grid Specifications for One Line Diagrams

The following information is for reference only and will help you assemble your one line diagram. Please be sure to detail your diagram as accurately as possible. Any inconsistencies could delay the overall design of your requested service.



The One-Line diagram must indicate the following and should be submitted for all single-phase services, 400 amps or greater and for all 200 amp or greater three-phase services.

1. Number of conductors, size of conductors, insulation, copper or aluminum
2. Number of conduits, size and material
3. Size of main switch, fuse size and class used. If circuit breakers are used, indicate frame size in amperes and the trip setting to be supplied and adjusted or fixed
4. Metering shall indicate the following:

Self-contained

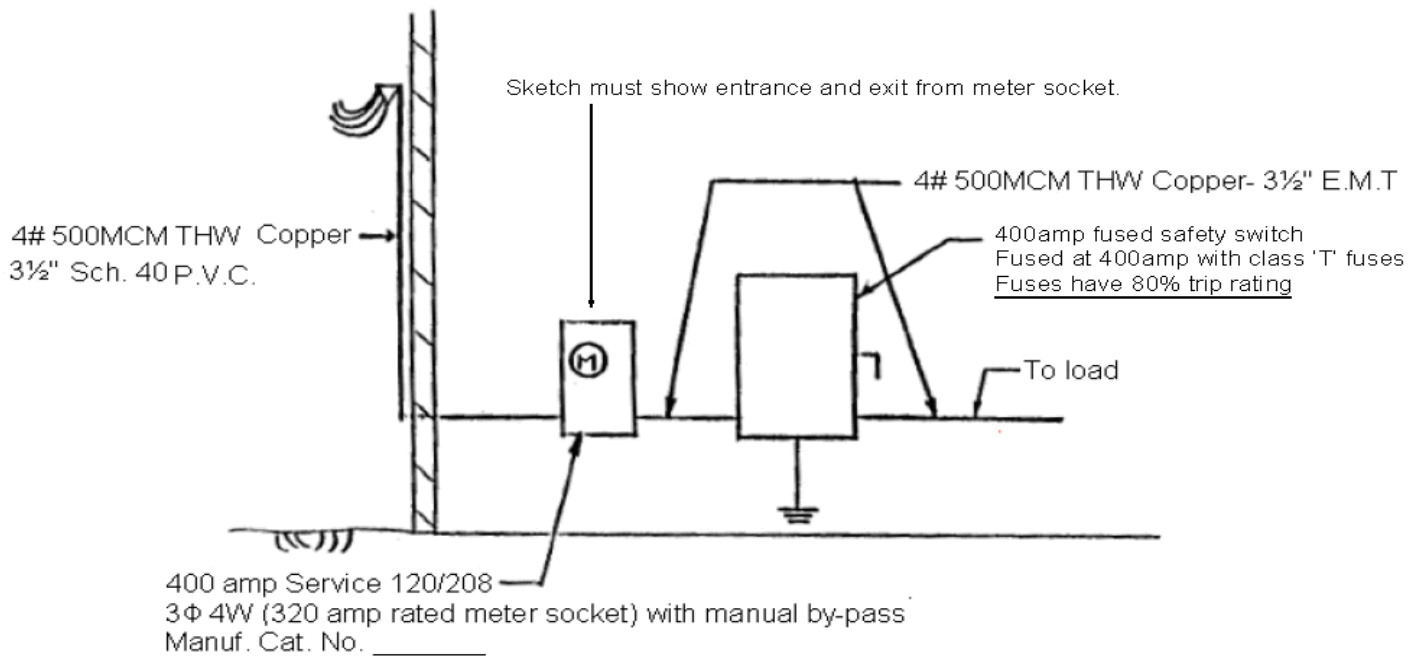
- Number of meters
- Ganged
- Manual bypass
- Metered and unmetered conductor location

C.T. Rated

- Location
- Disconnecting location
- Conductor size and number entering C.T. cabinet
- Conductor size and number leaving C.T. cabinet and their termination point
- C.T. compartments in the switchgear shall require a set of switchgear shop drawings

Metered location, inside, outside or pad-mounted.

Below is an example of a one line diagram and a list of metering guidelines.
The one line diagram is for a 400 amp 120/208 three phase service and is for reference only.



METERING GUIDELINES

- **Jumped Socket Policy:**
 - A “No Jumper” policy is in effect. This policy is due to revenue and safety concerns.
 - Coordination of the completed work with the Municipal Inspector’s approval would enable National Grid to complete the necessary meter work to avoid interruption of power.
 - If such coordination is not possible, the existing meter may be installed in the socket if compatible. National Grid will accommodate requests for removal of locking device promptly in most instances. Within 24 hours if not an emergency.
- **General Metering Parameters:**
 - Self-contained installations are limited to service sizes less than or equal to 400amp service (320 amp rated meter socket) 120/240, 120/208.
 - Hot sequence (meter ahead of main disconnect) vs. Cold sequence (meter disconnect ahead of meter). Hot sequence is typically the standard, however, the following exceptions require cold sequence: Locations with more than 6 meters, 277/480 and 600 volt self-contained installations, and underground networks.
 - Multiple meter locations require socket ID marking by owner or electrical contractor before meter installation.
 - Meter height required to be between 3-6 feet for outdoor installations. Indoor meters required to be between 2-6 feet.
 - CT Cabinet will be supplied and installed by the customer according to the company’s specifications.
- **Meter Socket Requirements:**
 - All sockets must be UL approved.
 - Bypass socket (safety arc shield) installations are required for all Commercial and Industrial service installations, and Common areas or Owner’s meter. If in doubt, presume bypass required unless otherwise authorized by National Grid’s Metering supervisor.
 - Bypass sockets 200 amps or above require locking jaws.
 - Class 320 sockets must be UL approved.
 - Single Phase 120/208 installations require a 5th terminal at 9 or 6 o’clock positions.