

MOTORS General

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Use: Rules applicable to serve customer's motors.

Previous Revision	Originated 03-94	Previous Number ER 900-C & ER 950
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LATEST REVISION:

SPECIFICATION:

1. GENERAL:

- 1.1 All motors of 7-1/2 H.P. or over shall be equipped with a current limiting starting device which will hold the current value within the ranges specified in the following tables. However, when the starting current of any such motor does not exceed the values given in these tables, the motor may be installed without a starting compensator, if written approval is obtained from the Company.
- 1.2 It is recommended that motors be equipped with time delay low voltage releases and overload relays to give complete protection against overload or failure of voltage on any one or more phases.
- 1.3 Phase reversal relays and circuit breakers or equivalent devices shall be installed on all polyphase installations for cranes, passenger or freight elevators, or similar equipment to protect the installation in case of phase reversal.
- 1.4 When motors are used to drive a pulsating load, the motor or driven equipment shall have sufficient fly wheel effect or be so designed as to limit the variation in current to 33 per cent above or below the normal running current.

2. SINGLE PHASE CONSIDERATIONS:

- 2.1 Power installations of one or more motors aggregating 5 H.P. or less shall be single phase, unless three phase is available at the location where the motor is to be used.
- 2.2 Single phase small motors may be served through the regular residential service lighting meter provided the largest individual motor does not exceed 10 H.P. and the total power does not exceed 20 H.P. (See also ER Standards for RURAL FARM SERVICE.)

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3. HORSE POWER CONSIDERATIONS, SINGLE PHASE:

3.1 Single phase motors up to and including 1/2 H.P., or infrequently started motors having locked rotor current values not exceeding 50 amperes at rated voltage, may be operated on 115 or 120 volt lighting circuits. Single phase motors exceeding 1/2 H.P. but not exceeding 3/4 H.P. used for air conditioning may be operated on 115 or 120 volt lighting circuits. All other single phase motors exceeding 1/2 H.P. shall be operated on circuits with nominal voltage rating of 199 volts or higher.

4. POWER SERVICE CONSIDERATIONS:

4.1 For power service depending upon the size and location of the installation, the Company will supply SINGLE PHASE 115-230 volts nominal voltage regulation or THREE PHASE 199, 230, 460, 2300 or 4000 nominal voltage regulation, for motor service. In some exceptional cases where a four wire, 120/208 Y volt secondary network has been installed, the three phase service will be approximately 208 volts. However, in all cases the Customer or Contractor shall consult the Company as to the proper supply voltage. Motors to be used on the above service voltages have voltage ratings of 208, 220, 440, 2300 or 4000 volts.

5. LARGE MOTORS:

- 5.1 Motors having a rated capacity of 75 H.P. or over should be of the synchronous type.
- 5.2 Motors connected directly to the primary system and wired for 2300 volts shall be so wound that they may be readily reconnected for 4000 volt operation.