

ET 332A Step Resistor Motor Starters

A 200 V separately excited 50 HP dc motor draws 212 A at rated output. It has a total armature resistance of 0.231 ohms. It is desired to limit the starting current to 175% of rated. The two step resistive starter show below will be used to start the motor. Calculate the sizes of the starting resistances and the pick-up voltages for the sensing relays 1AR and 2AR. Assume that the relays pickup at rated current. Are two steps of resistance enough to meet the design requirements.

