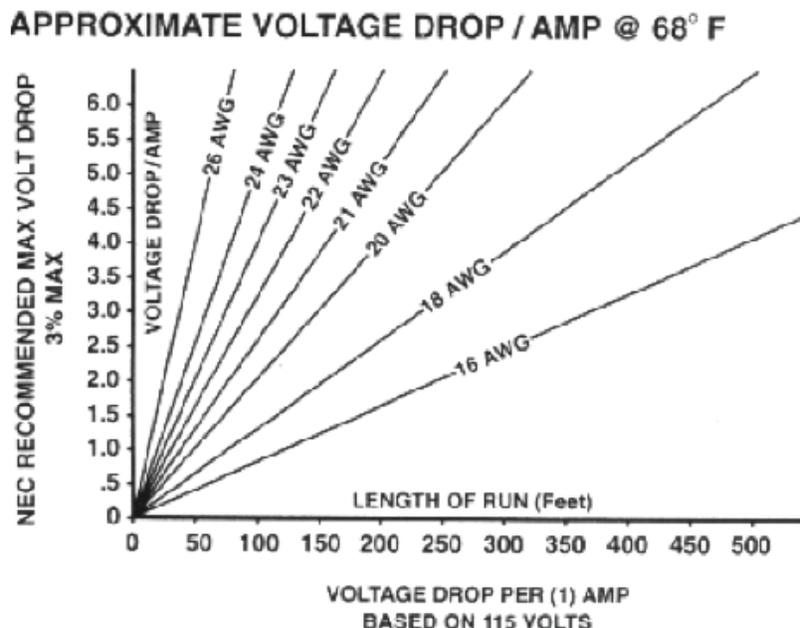


PROPER WIRE SELECTION & VOLTAGE DROP

With today's widespread use of electronic and programmable thermostats, we recommend that you check with the manufacturer of the equipment that you are installing and use their recommendations for wire sizing. This is important today because many electronic and programmable thermostats are particularly sensitive to voltage drop problems. Many manufacturers warranties are voided if the thermostat is not installed to their specifications.

Voltage drop is primarily a function of the length of the conductor and the size of the copper wire. The smaller wire, the higher the voltage drop over a given distance.

The basic formula for determining voltage drop in a 2-wire DC or AC circuit or a 3-wire AC Single phase circuit with a balanced load at 100 percent factor and negligible reactance is:
Voltage Drop + $2 \times I$ (amps) $\times L$ (ft) $\times R$ (ohms/1000 ft) / 1000



For additional information on voltage drop calculations, consult the National Electrical Code.

The information presented within this section has been carefully prepared and is believed to be accurate. Alan Wire Company makes no warranties, expressed or implied, and disclaim any responsibility or liability for loss or damage as a result of the use of this information.



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