VOLTAGE DROP TABLE

- Voltage drop becomes important when the length of a run of wire or cable becomes very long. Usually this is not a problem in circuits within a house, but may become an issue when running wire exposed to different elements.
- Excessive voltage drop can cause loss of efficiency in operation of light, motors and elements. This could result in a shortened life of your unit.
- To avoid excessive voltage drop, select a size wire that will minimize voltage drop. You need to know the length of the wire run and the amp load or current that will be on the circuit. To determine amps, add up the wattages of all electrical devices that will be on the circuit and divide this total by the voltage of the circuit, 110 or 220.

Wire Size Selection for Long Runs						
110 Volt, Single Phase, 3% Max Voltage Drop						
			Length of Run			
	25’	50’	100’	150’	200’	Amp Load
Copper Gauge	14	12	8	6	6	15 AMP
Copper Gauge	12	10	8	6	4	20 AMP
220 Volt, Single Phase, 3% Max Voltage Drop						
Copper Gauge	14	14	12	10	8	15 AMP
Copper Gauge	12	12	10	8	8	20 AMP
Copper Gauge	10	10	8	6	6	30 AMP
Copper Gauge	8°	8°	8	6	4	40 AMP
Copper Gauge	8	8	6	4	4	50 AMP

- The table above applies to the single phase systems. It assumes a power factor of one. The table may be used for systems using non-steel conduit.
- Must use 6 gauge if using NMB or UFB.

Warning! Installation of electrical wire can be hazardous, if done improperly, can result in personal injury or property damage. For safe wiring practices, consult the National Electric Code® and your local building inspector.