ALTITUDE AND TEMPERATURE DE-RATING

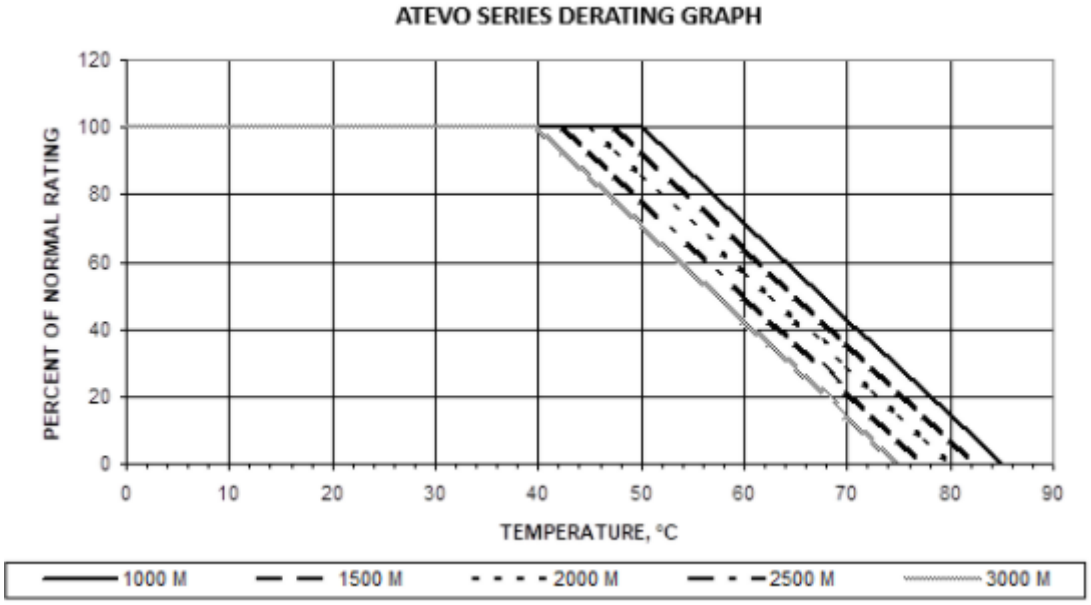
BACKGROUND

A standard battery charger/rectifier may be operated at any ambient temperatures up to 75 °C (158 °F) or higher with proper de-rating. Any standard rating may also be operated at any elevation, up to 3,000 meters (10,000 feet), with proper de-rating.

No battery charger/rectifier should be operated beyond these limits. Note that the allowable output current is zero at 85 °C because of the temperature limitations of internal components. Also, if any model is equipped with any custom features (such as a NEMA-4 type enclosure) consult the factory before operating the equipment outside the normal environmental limits listed in the product specifications.

Any battery charger/rectifier may be damaged if operated outside the environmental limits listed in the specifications. To guarantee proper system operation in such conditions, you should de-rate the charger/rectifier. Do this by ordering a charger/rectifier with a higher output current rating than you would normally specify. Use the curve below to determine the rating of the charger/rectifier you need for the anticipated service conditions. The current limit setting of the charger must be adjusted to reflect the de-rating.

DE-RATING GRAPH



HOW TO USE THE DE-RATING GRAPH

Find the maximum ambient temperature for your installation on the horizontal axis. Move vertically upward until you intersect the curve for the elevation at your installation. Now move to the left axis to find the rating factor (in percent) for any charger rating.

Example: Suppose you have a site at 1500 meters (about 5000 feet), where the maximum ambient temperature is 60 °C (140 °F). Starting from 60° on the horizontal axis, move upward to the curve for 1500 M, then move to the left vertical axis to find the rating factor, about 62%. This means that the charger will reliably deliver 62% of its normal rated output current. To find the charger rating to deliver 100% of your requirement, divide the amperes you need by 62, and multiply by 100. For example, if you need a 30 Adc output, order a 50 Adc charger to operate in this environment. Set the current limit to 30A.