



Storage of SEL Equipment

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PURPOSE

This document provides guidance for situations where SEL equipment is stored with or without factory packaging.

BACKGROUND

Well-designed electronic equipment can perform reliably for decades while energized if the temperature remains relatively constant, even when installed in hot or cold climates. While energized, the equipment is self-heating, which tends to drive moisture away and keep the internal temperature more constant.

However, electronic equipment that is stored for lengthy periods while not energized is more easily damaged by environmental variants, such as moisture or corrosive gases. When the equipment is de-energized, moisture may infiltrate some components and cause premature aging. Repeated thermal cycling and humidity, especially moist air containing ionic contamination or exposure to corrosive gases, can accelerate deterioration of electronic gear.

STORAGE RECOMMENDATIONS

Temperature

Ambient Storage Temperature: -40° to $+85^{\circ}\text{C}$ (-40° to $+185^{\circ}\text{F}$).

Humidity

Maximum 90 percent, noncondensing.

Corrosive Environment

Store only in a benign environment, free of exposure to atmosphere that contains salt or corrosive gases. Pollution degree 2.

Lead Acid Batteries

Store lead acid batteries at 20° to 30°C (68° to 86°F) in a well-ventilated, dry area. Batteries stored at this temperature should be charged at least once a year per the manufacturer's recommendations. Alternatively, monitor or periodically audit the terminal voltage and charge the battery when the terminal voltage drops below 12.6 volts for a 12-volt battery. Storing batteries at higher than recommended temperatures will substantially reduce both storage and useful life. Refer to manufacturer's recommendations for more information.

Power Supply

Energize product at least once every 3 years for 1 hour to avoid degradation of electrolytic capacitors and possible product failure.

ELECTRONIC DEVICES INSIDE OUTDOOR-RATED CABINETS (I.E., RECLOSER CONTROLS)

Some SEL electronic devices are sold in NEMA-rated or IP-rated cabinets that are intended for operational use in a wide range of environments. SEL packages the device in a way to maximize protection during shipment. In this state, the device is not NEMA or IP rated and is not suitable for long-term unprotected storage outdoors. Take care to keep the device dry for long-term storage if kept in the original packaging.

SEL recommends that you store the cabinets indoors at all times under the temperature, humidity, and corrosive environmental guidelines provided in *Storage Recommendations*. In the event that you must store the cabinets outdoors, remove the cabinet from its original packaging to prevent moisture from being in direct contact with the device. Store the cabinet upright, similar to how it would be installed in the field.

New cabinet packaging for recloser controls also includes a **Keep Dry** label.

TECHNICAL SUPPORT

We appreciate your interest in SEL products and services. If you have questions or comments, please contact us at:

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