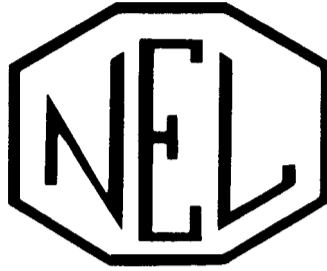

NILSSON
ELECTRICAL LABORATORY



OPERATING INSTRUCTIONS
MODEL 825
ELECTRONICALLY SYNCHRONIZED
Quartz Crystal Controlled
CURRENT INTERRUPTER

INSTRUMENT SPECIALISTS

The model 825 provides a precisely timed opening and closing cycle of a mercury displacement relay. Timing of the relay cycle is selected by two sets of digital thumbwheel switches. The digits indicate the number of seconds of open time and closed time. Open and closed times can each be set for any time from 1 to 999 seconds in 1 second increments. (1 to 99.9 seconds in .1 second increments if your unit has this option). The quartz crystal control circuit is adjusted to an accuracy of better than one second per day. (Optional accuracies to.1 second in 24 hours are available). Since the timing is so accurate the unit may be synchronized with another Model 825 (see below), or with the second hand of a watch, or any other accurately timed equipment.

OPERATION OF A SINGLE UNIT

- 1 Set the toggle switches as follows: Power — “OFF”, Start switch — “RESET”. The relay is a normally closed device and is always closed in the RESET position or when the power is off.
- 2 Connect the circuit to be interrupted to the binding posts.
- 3 Set the Power switch “ON”. The HOLD lamp under the CLOSED setting will be lit.
- 4 Set the thumbwheel switches to the number of “ON” & “OFF” seconds desired for the interrupter cycle.
- 5 Push the START switch to “INT. START” and release. The relay will immediately open and remain so for the OPEN time selected. The lamp under the OPEN setting will light, indicating the state of the relay.
- 6 At the end of the OPEN time the relay will close for the number of seconds selected. The unit will continue to repeat this cycle.
- 7 The cycle selected may be started and stopped at any time by operation of the START switch. When the interrupter is timing the HOLD lamp will flicker at a tenth second rate.

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- 8 A twelve volt battery powers the instrument, It is connected to a two blade male plug on the panel. The wide blade is positive. The instrument will not be damaged by a reverse polarity connection, but it will not operate in this condition. A rechargeable battery (Model 110) is available for extended operation.
 - 9 A lamp next to the battery plug indicates the condition of the battery. It will light *ONLY* when the battery falls to 10 volts. When the lamp lights the battery should be replaced or recharged.

SYNCHRONIZATION OF MULTIPLE UNITS

- 1 Set POWER switch of both units to "ON", START switches to "RESET". Both units should have the same timing program.
- 2 Start one unit by pushing the START switch to "INT. START" and release.
- 3 Connect the "SYNC OUT" connector of running unit to the "SYNC IN" connector of second unit with the cable provided.
- 4 Put switch of second unit from "RESET" to "SYNC START".
- 5 Transition of the running unit from CLOSED to OPEN will start the second unit in sync.
- 6 The cable may now be disconnected and the units will continue to operate in synchronization.
- 7 Multiple units may be started by cascading "SYNC OUT" connector of one to "SYNC IN" connector of the next.

If a number of units are being used at different locations they may be re-synchronized by establishing a "MASTER" unit. While keeping this unit running it may be taken to each location and used to restart the field unit. All field units will then be synchronized with the "MASTER" and with each other.

RELAY CONTACT RATINGS

D.C.		A.C.	
VOLTS	AMPS	VOLTS	AMPS
12	- 75	50	- 75
24	- 60	120	- 60
48	- 50	240	- 35
120	- 18	440	- 22
240	- 10		

For proper relay operation the panel of the Model 825 must be horizontal.

OPTIONAL ACCESSORY

MODEL 110

RECHARGEABLE 12 VOLT BATTERY PACK

WILL OUTLAST HUNDREDS OF 12 VOLT LANTERN BATTERIES

SPECIALLY DESIGNED FOR USE WITH
NILSSON MODELS 825 AND 830 CURRENT INTERRUPTERS
AND
NILSSON MODEL 715 PIPE AND CABLE LOCATOR

The Model 110 battery pack will clamp directly in either the Model 715 pipe and cable locator or the Model 825 or 830 current interrupter, in the same space as the 12 volt lantern battery normally supplied. It will outlast hundreds of 12 volt lantern batteries and can be used over a wide operating temperature range under rugged field conditions. The Model 110 can be used with any equipment requiring a 12 volt D.C. power source. Capacity: 7.0 ampere/hours,

RECHARGES OVERNIGHT - CANNOT BE OVERCHARGED

The battery can be recharged overnight by plugging into any 110 volt A.C. outlet. It can be recharged hundreds of times, and is so designed that it will not be overcharged.