



# DESCRIPTION • OPERATION • MAINTENANCE INSTRUCTIONS

## REVERSING *Life-Line* Starter\* TYPE N CLASS 11-211N.1 SIZE 1

THIS TYPE N REVERSING LIFE-LINE-STARTER has been designed primarily to provide reversing operation for A-C motors and consists of two 3-pole non-reversing contactors mechanically interlocked to prevent both contactors from being closed at the same time. Up to three electrical interlocks per contactor (total of 6 on starter) may be mounted on this device depending upon circuit requirements (see Electrical Interlocks). The LINESTARTER is complete with Line, Load, and Control Terminals, both Control and Main Cross Wiring, and one normally open electrical interlock on each contactor (total of 2 on complete unit).

For use with A-C motors, the following table of ratings applies.

### MAXIMUM A-C RATINGS

Open—25 Amperes		Enclosed—22½ Amperes	
Volts	HORSEPOWER		
	Polyphase	Single Phase	
110	3	1½	
208-220	5	3	
440-600	7½	5	

### CONSTRUCTION

This starter employs two 3-pole non-reversing contactors of the inverted clapper type with knife-edge bearing and having positive action through the use of a compression kick-out spring. This construction provides maximum accessibility for servicing and maintenance and allows coil change to be a simple operation. All current carrying parts are of high conductivity copper or copper alloy of large cross section resulting in high electrical efficiency. Long life and low contact drop are assured by fine silver contacts with large area of bond for current conduction and heat transfer.

Pressure-type connectors on main and control terminals permit the use of either solid or stranded wire without soldered joints.

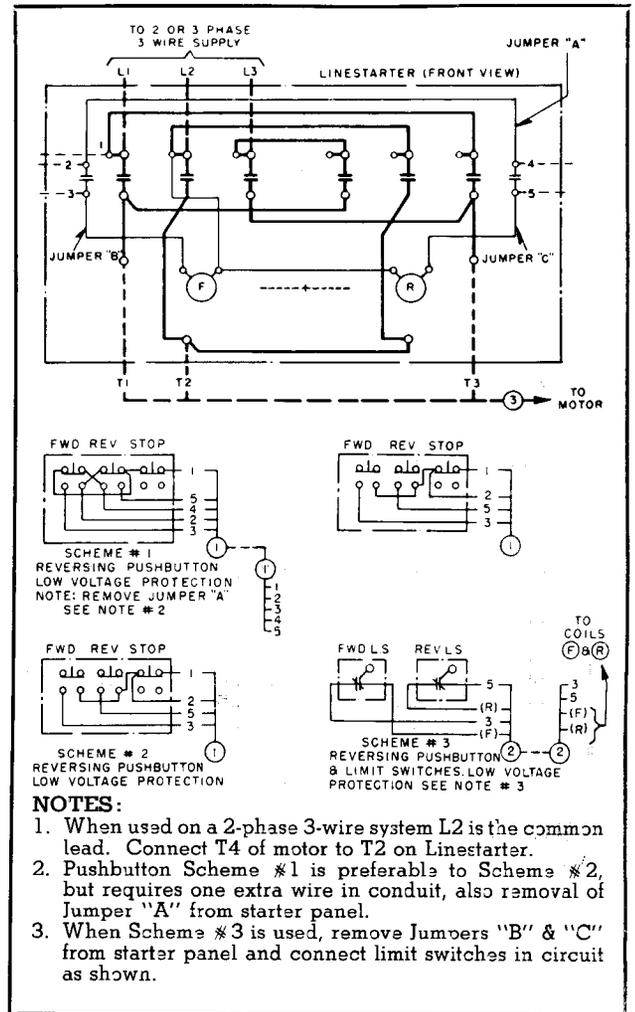


FIG. 1. Wiring Diagram of Linestarter and Connections to Master Switches

### CONNECTIONS

This LINESTARTER provides connections for several control schemes, three of which are shown in the diagram above.

### INSTALLATION

1. Clean the magnet surfaces.
2. Operate the armature by hand to be sure that all parts move freely.

# REVERSING LIFE-LINESTARTER

## STARTER IDENTIFICATION

This LINESTARTER complete is identified by style (shown on carton and as listed in Price List) and consists of two basic parts: (1) the starter unit and (2) the coils.

The style number of the starter unit (without coils) is S# 1577 945 and appears on the metal nameplate attached to the unit.

The coil style is marked on the coil itself along with its voltage and frequency rating.

Style identification for use in ordering either a complete LINESTARTER or individual coils is given in the table below:

### STYLE IDENTIFICATION

VOLTS	CYCLES	COIL STYLE	COMPLETE STYLE
110	60	1470 241	1578 131
110	25	1470 242	1578 132
208	60		
220	60		
220	25	1470 243	1578 133
380	50		
440	60		
480	60		
550	60	1470 244	1578 134
600	60	1470 245	1578 135
110	50	1470 246	1578 136
220	50	1470 247	1578 137
440	50	1470 248	1578 138
550	50	1470 249	1578 139
440	25	1470 250	1578 140
550	25	1470 251	1578 141

## ELECTRICAL INTERLOCKS

This starter comes equipped with *one* normally open interlock on each contactor. A *second* interlock for each contactor may be obtained by ordering either S#1314 884, normally open, or S#1314 885, normally closed. A *third* interlock per contactor may be had by ordering either S#1314 886, normally open, or S#1314 887, normally closed. The above normally open interlocks may readily be installed as normally closed interlocks per instructions enclosed with each interlock.

## MAINTENANCE

The sealing surfaces on the magnet frame and armature should be kept clean.

Do not lubricate the contact tips or bearings. Fine silver contacts need no dressing throughout their life.

*To Remove Contactor Coil* remove the three round head magnet mounting screws and withdraw the coil and magnet.

*When Installing Contactor Coil* make sure that round head magnet mounting screws are securely tightened.

## PRINCIPAL RENEWAL PARTS

Contactor Moving Contact.....S# 1314 985  
 Contactor Stationary Contact.....S# 1314 986  
 Contactor Contact Spring.....S# 1314 961

For other parts refer to Renewal Parts Catalog.



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