



# DESCRIPTION • OPERATION • MAINTENANCE INSTRUCTIONS

## REVERSING *life-line*starter\*

TYPE N

CLASS 11-211N.2

SIZE 2

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—50 Amperes		Enclosed—45 Amperes	
Volts	HORSEPOWER		
	Polyphase	Single Phase	
110	7½	3	
208-220	15	7½	
440-600	25	10	

### 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.

### NEW INFORMATION

\*Trade Mark

### CONNECTIONS

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

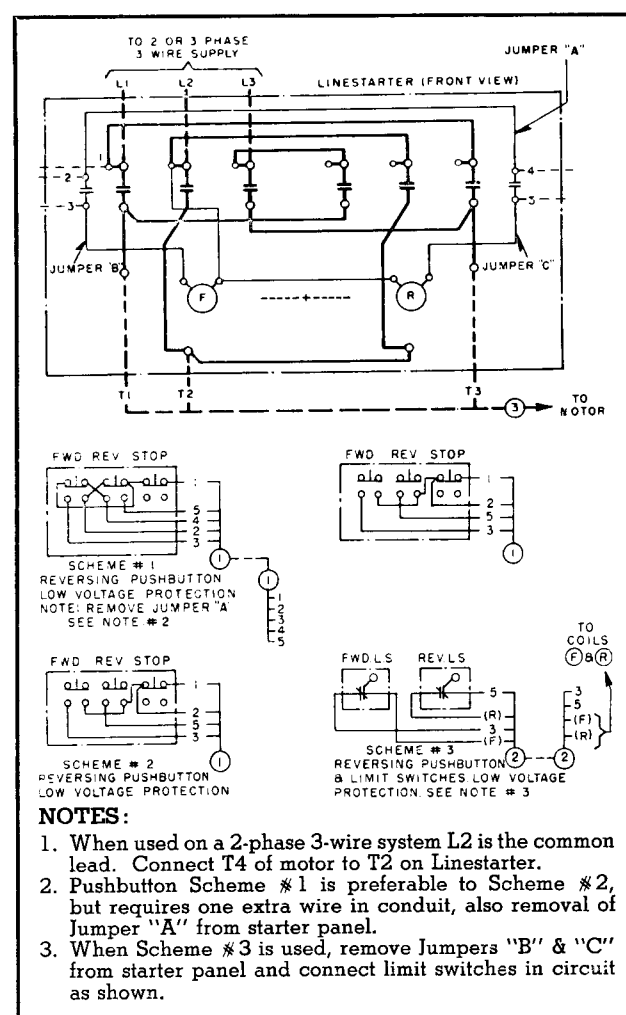


FIG. 1. Wiring Diagram of Linestarter and Connections to Master Switches

### INSTALLATION

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

EFFECTIVE JANUARY, 1950

**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#1578 107 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 201	1578 412
110	25	1470 202	1578 413
208	60		
220	60		
220	25	1470 203	1578 414
380	50		
440	60		
480	60		
550	60	1470 204	1578 415
600	60	1470 205	1578 416
110	50	1470 206	1578 417
220	50	1470 207	1578 418
440	50	1470 208	1578 419
550	50	1470 209	1578 420
440	25	1470 210	1578 421
550	25	1470 211	1578 422

**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 888, normally open, or S#1314 889, normally closed. A *third* interlock per contactor may be had by ordering either S#1315 890, normally open, or S#1314 891, 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 Hex head magnet mounting bolts and withdraw the coil and magnet.

*When Installing Contactor Coil*, make sure that Hex head magnet mounting bolts are securely tightened.

**PRINCIPAL RENEWAL PARTS**

Contactor Moving Contact.....S#1224 773  
Contactor Stationary Contact.....S#1224 774  
Contactor Contact Spring.....S#1221 426

For other parts refer to Renewal Parts Catalog.



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