INSTALLATION • OPERATION • MAINTENANCE

INSTRUCTIONS

Reversing Life-Linestarter*

Type N, Size 0 Class 11-210N.0 2 Phase, 4 Poles

TYPE N REVERSING LIFE-LINESTARTER will give protection for overloads (but not against short circuit currents) when wired in accordance with Fig. 2 and provided with overload heaters selected from the Heater Application Tables.

The starter should be protected against short circuits by fuses not exceeding four times the rated motor current, by a time limit circuit breaker set at not more than four times the full motor current or by an instantaneous trip circuit breaker.

For use with a-c motors, the following table of ratings applies:

MAXIMUM HORSEPOWER RATINGS FOR A-C MOTORS WHEN PROVIDED WITH SUITABLE O.L. RELAY HEATERS

VOLTS	MAXIMUM HORSEPOWER
	Polyphase
110	1½
208-220	2
440-600	2

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 including overload relays, and (2) the coils.

The style number of the starter unit (with overload relays but without coils) is S# 1588 540 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 shown in the next column.

INSTALLATION

1. Clean the magnet surfaces.

2. Operate the armature by hand to be sure that all moving parts move freely.

3. The overload heaters are shipped in a separate carton. First check the heater marking (adjacent to mounting holes) against the Heater Application Tables to see that the full load current marking of the motor nameplate comes within the current range of the heater. Install heater as shown in Fig. 1, making sure that heater mounting screws are tight.

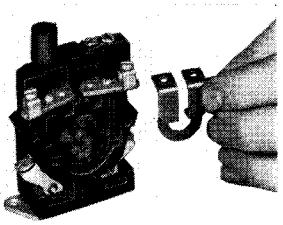


FIG. 1. Thermal Overload Relay, Showing Heater and Installation Method

OVERLOAD RELAY

The overload relay may be set for Automatic reset, Hand reset or Hand reset with no manual means of opening the contacts. "Automatic" reset should not be used with two wire master switch. The type of operation is determined by the position of the control spring in the notches of the pushrod on the opposite side of the relay from the side the heater is inserted. The relay is furnished with the control spring set in the "Hand" reset position. The respective operations are indicated by "Auto", "Hand" and "No Stop" as lettered on the back side of the relay.

STYLE IDENTIFICATION TABLE

VOLTS	CYCLES	COIL STYLE	COMPLETE STYLE
110	60	1470 261	1588 575
110	25	1470 262	1588 576
208	60		
220	60		
220	25	1470 263	1588 577
380	50		
440	60		
480	60		
550	60	1470 264	1588 578
600	60	1470 265	1588 579
110	50	1470 266	1588 580
220	50	1470 267	1588 581
440	50	1470 268	1588 582
550	50	1470 269	1588 583
440	25	1470 270	1588 584
550	25	1470 271	1588 585

*Trade-Mark

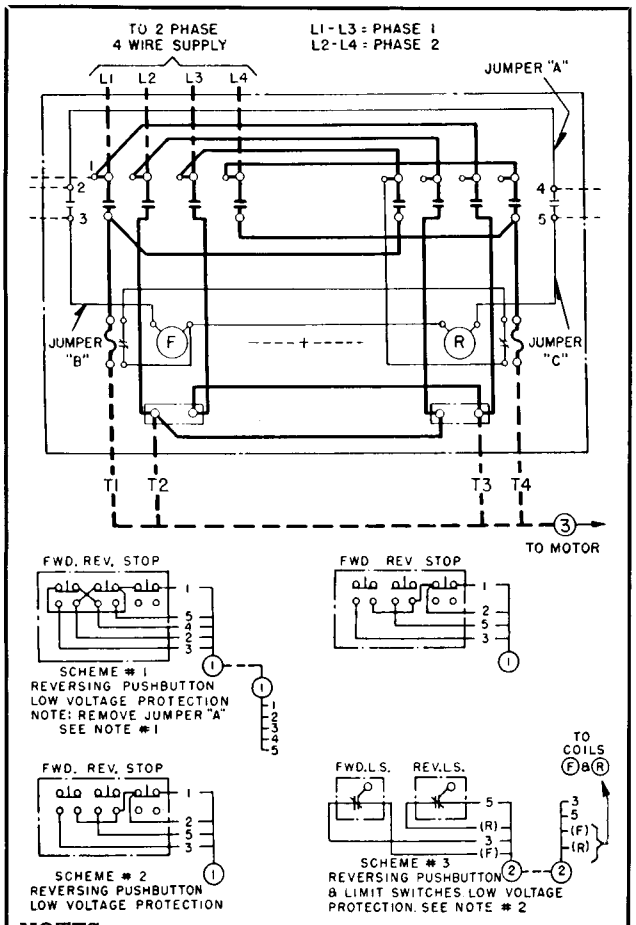
ELECTRICAL INTERLOCKS

This starter comes equipped with *one* normally open interlock on each contactor. A *second* interlock for each contactor may be had by ordering either S# 1314 880, normally open, or S# 1314 881, normally closed. A *third* interlock per contactor may be obtained by ordering either S# 1314 882, normally open, or S# 1314 883, 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.



NOTES:

1. Pushbutton Scheme #1 is preferable to Scheme #2, but requires one extra wire in conduit, also removal of Jumper "A" from starter panel.
2. When Scheme #3 is used, remove Jumpers "B" & "C" from starter panel and connect limit switches in circuit as shown.

FIG. 2. Wiring Diagram of Linestarter and Connections to Master Switches

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.

The bimetallic disc trip unit of the overload relay has been carefully calibrated at the factory and should not be disturbed. In case of damage remove complete relay unit and replace with complete unit.

PRINCIPAL RENEWAL PARTS

Contactor Moving Contact.....S# 1314 978
Contactor Stationary Contact.....S# 1314 979
Contactor Contact Spring.....S# 1314 960
Overload Relay Complete.....S# 1577 761

For other parts refer to Renewal Parts Catalog.

HEATER APPLICATION TABLES

HEATER STYLE NUMBER	HEATER CODE MARKING	TABLE 15 RELAY AMBIENT APPROX. SAME AS MOTOR AMBIENT		TABLE 16 RELAY AMBIENT APPROX.15° ABOVE MOTOR AMBIENT	
		125% Overload Protection Full Load Current of Motor (Amperes)	Heater Current Rating (Amperes)	125% Overload Protection Full Load Current of Motor (Amperes)	Heater Current Rating (Amperes)
1129 372	X .49	0.45 to 0.49	.56	.39 to .43	.49
1129 373	Y .55	0.50 to 0.56	.63	.44 to .49	.55
1129 374	Z .63	0.57 to 0.62	.72	.50 to .56	.63
966 465	AA .71	0.63 to 0.71	.79	.57 to .65	.71
966 466	AB .82	0.72 to 0.79	.90	.66 to .73	.82
966 467	AC .93	0.80 to 0.89	1.00	.74 to .81	.93
966 468	AD 1.0	0.90 to 0.99	1.13	.82 to .92	1.00
966 469	AE 1.1	1.00 to 1.04	1.25	.93 to 1.02	1.16
966 470	AF 1.2	1.05 to 1.18	1.31	1.03 to 1.07	1.29
966 471	AG 1.4	1.19 to 1.32	1.49	1.08 to 1.21	1.35
966 472	AH 1.5	1.33 to 1.49	1.66	1.22 to 1.36	1.53
966 473	AI 1.7	1.50 to 1.71	1.88	1.37 to 1.53	1.71
966 474	AK 1.9	1.72 to 1.89	2.15	1.54 to 1.76	1.93
966 475	AL 2.1	1.90 to 2.09	2.37	1.77 to 1.95	2.22
966 476	AM 2.5	2.10 to 2.35	2.63	1.96 to 2.15	2.44
966 477	AN 2.7	2.36 to 2.65	2.95	2.16 to 2.42	2.71
966 478	AO 3.0	2.66 to 2.98	3.32	2.43 to 2.73	3.02
966 479	AP 3.4	2.99 to 3.35	3.74	2.74 to 3.07	3.42
966 480	AR 3.8	3.36 to 3.75	4.20	3.08 to 3.45	3.85
966 481	AS 4.3	3.76 to 4.21	4.73	3.46 to 3.86	4.32
966 482	AT 4.8	4.22 to 4.71	5.28	3.87 to 4.33	4.87
966 483	AU 5.4	4.72 to 5.33	5.91	4.34 to 4.85	5.43
966 484	AW 6.1	5.34 to 5.94	6.67	4.86 to 5.49	6.09
966 485	AX 6.8	5.95 to 6.63	7.44	5.50 to 6.13	6.86
966 486	AY 7.7	6.64 to 7.52	8.30	6.14 to 6.83	7.65
966 487	AZ 8.5	7.53 to 8.51	9.41	6.84 to 7.74	8.54
966 488	BA 9.6	8.52 to 9.31	10.6	7.75 to 8.75	9.69
966 489	BB 11	9.32 to 10.5	11.64	8.76 to 9.57	10.96
966 490	BC 12	10.6 to 11.5	13.09	9.58 to 10.8	11.90
966 491	BD 13	11.6 to 12.4	14.50	10.9 to 11.3	13.50
966 492	BE 14	12.5 to 13.4	15.6	11.4 to 12.8	14.90
966 493	BF 16	13.5 to 14.9	16.9	12.9 to 13.8	16.10
966 494	BG 18	15.0 to 17.5	18.7	13.9 to 15.4	17.40
966 495	BH 19	17.6 to 18.2	20.3	15.5 to 16.8	19.25
966 496	BI 21	18.3 to 19.0	22.5	16.9 to 18.4	20.90
966 497	BK 23	19.1 to 20.5	23.9	18.5 to 19.5	23.18
966 498	BL 25	20.6 to 22.6	25.9	19.6 to 21.3	24.60
966 499	BM 27	22.7 to 25.7	28.4	21.4 to 23.3	26.7
1040 588	BN 29	25.8 to 28.4	32.5	23.4 to 24.9	29.0
974 084	BO 31	28.5 to 32.7	35.5	25.0 to 28.4	31.0
1040 589	BR 36	32.8 to 36.4	41.4	28.5 to 32.2	36.0
1040 590	BS 40	36.5 to 42.5	46.5	32.3 to 36.2	40.0

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