DESCRIPTION • INSTALLATION • MAINTENANCE

INSTRUCTIONS

Life-Linestarter*

Class 11-200N.1 **Three Pole** **Type N, Size 1**

TYPE N, LIFE-LINESTARTER will give protection against 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 load motor current, or by an instantaneous trip circuit breaker.

STARTER IDENTIFICATION

This LIFE-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 without coil, and (2) the coil.

The style number of the starter unit (without coil) is S# 1532 852 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	1577 240
110	25	1470 242	1577 241
208	60		
220	60		
220	25	1470 243	1577 242
380	50		
440	60		
480	60		
550	60	1470 244	1577 243
600	60	1470 245	1577 244
110	50	1470 246	1577 245
220	50	1470 247	1577 246
440	50	1470 248	1577 247
550	50	1470 249	1577 248
440	25	1470 250	1577 249
550	25	1470 251	1577 250

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 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.

4. Below the top mounting hole in the starter backplate an opening is provided for the purpose of supporting the weight of the starter during installation if the customer wishes to provide a peg or shoulder pin on the mounting surface for this purpose.

OVERLOAD RELAYS

The overload relay is furnished set for Hand reset operation. The relay may be set for Automatic reset, Hand reset, or Hand reset with no manual means of opening the contacts. The type of operation is determined by the position of the control spring in the notched pushrod; the respective positions (as illustrated in Fig. 1) are indicated by "Auto", "Hand" and "No Stop" as lettered on the back plate of the relay. Automatic reset should not be used with two-wire master switch.

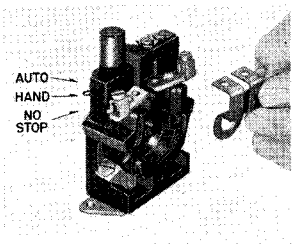


FIG. 1. Thermal Overload Relay, Showing Heater and Installation Method

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

VOLTS	MAXIMUM HORSEPOWER	
	Polyphase	Single Phase
110	3	1½
208-220	5	3
440-600	7½	5

* Trade-Mark

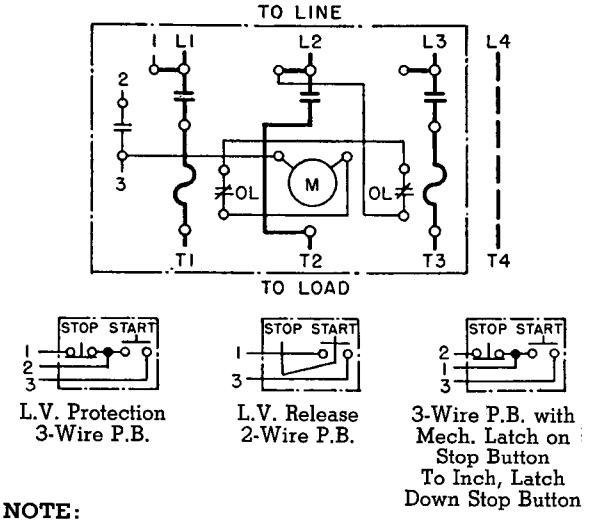
ELECTRICAL INTERLOCKS

This starter comes equipped with one normally open interlock mounted on the left hand side. A second interlock may be obtained by ordering either S# 1314 884, normally open, or S# 1314 885, normally closed. A third or fourth interlock may be obtained 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.



NOTE:

1. When used on single-phase circuit, connect line leads to L1 and L2, load leads to T1 and T2.
2. When used on 2-phase, 3-wire circuit, make L2 the common lead.
3. When used on 2-phase, 4-wire circuit run fourth wire direct to load where local codes permit. Connect one phase to L1 and L2, T1 and T2; connect other phase to L3 and L4, T3 and T4.

FIG. 2. Wiring Diagram

SEPARATE CONTROL CIRCUIT

If it is desired to operate the coil from a separate control circuit, disconnect control lead at "L2" and at lower right O.L. relay terminal (Fig. 2) and remove. Connect one side of separate control circuit to relay terminal where lead was removed and the other side to isolated terminal on top of left O.L. relay. To this point connect terminal "1" of P.B. station or master switch; in other respects connect per Fig. 2.

To eliminate a coil change, it is recommended that S# 1577 240 be ordered when separate control voltage is 110 volts and main line voltage is 600 volts or less.

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 bi-metallic 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

Moving Contact	S# 1314 985
Stationary Contact	S# 1314 986
Contact Spring	S# 1314 961
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) @ 40°C	Heater Current Rating (Amperes) @ 40°C	125% Overload Protection Full Load Current of Motor (Amperes) @ 40°C	Heater Current Rating (Amperes) @ 40°C
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 1.07	1.25	.93 to 1.02	1.16
966 470	AF 1.2	1.08 to 1.18	1.31	1.03 to 1.11	1.29
966 471	AG 1.4	1.19 to 1.32	1.49	1.12 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 10.7	11.90
966 491	BD 13	11.6 to 12.4	14.50	10.8 to 11.8	13.50
966 492	BE 14	12.5 to 13.4	15.6	11.9 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 19.5	22.5	16.9 to 18.4	20.90
966 497	BK 23	19.6 to 20.5	23.9	18.5 to 20.1	23.18
966 498	BL 25	20.6 to 22.6	25.9	20.2 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 37.1	41.4	28.5 to 32.2	36.0
1040 590	BS 40	37.2 to 42.5	46.5	32.3 to 36.2	40.0

Note: Use Next Lower Code No. Heater for 115% Protection

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BEAVER PLANT • STANDARD CONTROL DIVISION • BEAVER, PA.
Printed in U.S.A.