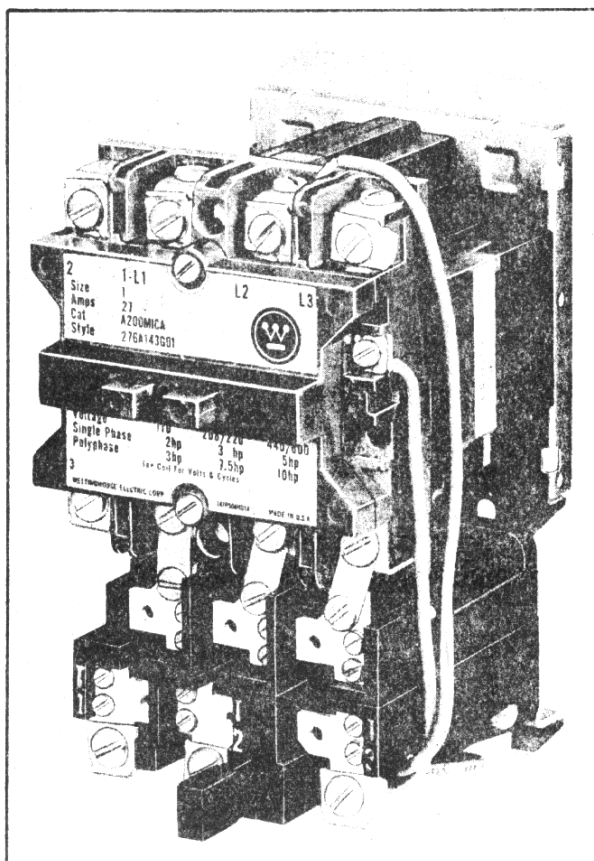


Instructions For A/200 Size 0 and 1 Motor Controller With Block Type Overload Relay



I.L. 13169D
File 8200

Table 1 Motor Ratings - Horsepower						
NEMA Size	Three Phase Voltage			Current Rating Amperes	Coil Volt Amp 60 Cy. 3 Pole	
	110	220	440/ 600		Open VA	Closed VA
0	2	3	5	18	160	25
1	3	7-1/2	10	27	160	25



Size 1, A/200 Motor Controller

The Controller

The Westinghouse A/200 Motor Controller, when wired as shown, will operate as a full voltage starter and will give protection against overload (but not against short circuit currents) when provided with over-

load heaters as listed in the Heater Application Tables or when used with any means of inherent protection activated by motor temperature.

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

The A/200 Motor Controller complete is identified by CAT. No.

The coil style number is marked on the end of the coil along with the voltage and frequency rating.

Coil

The A/200 Motor Controller is available with single or dual voltage coil. When supplied with a dual voltage coil, the motor controller is normally wired for the high voltage (HV) connection.

Overload Relay

The A/200 Motor Controller is equipped with an overload relay Type AN12A mounted below the contactor unit. This relay is a non-compensated bimetal actuated type which is equipped with a trip indicator, trip adjustment covering $\pm 15\%$ of rating, normally closed control contact and which may be operated with either a hand or automatic reset. A STOP function is not incorporated in this mechanism. See I.L. 13193 for more complete information.

Type of operation is determined by the position of the adjusting plate on the load side of the overload relay base. The "HAND" position is set when the adjusting plate is positioned away from the panel. To set for "AUTO" operation: loosen the locking screw, move the adjusting plate toward the panel, and retighten the screw. Automatic reset should not be used with 2-wire master switch.

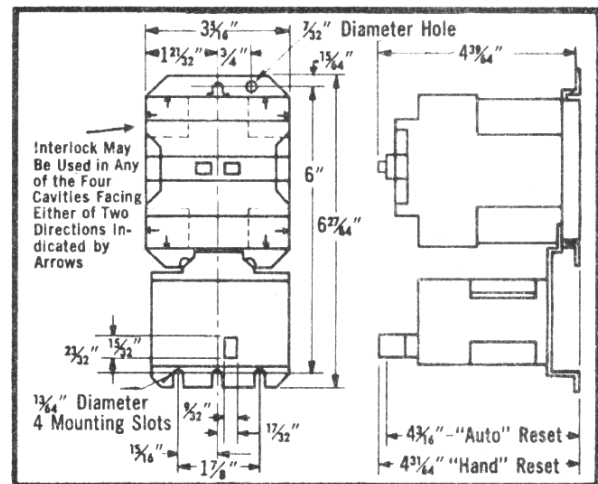
Heaters

Heaters are not included with the motor controller and must be ordered separately per the heater application table and the selection information listed below. When installing heaters be sure that connecting surfaces are clean and heaters are attached securely to the relay in the proper location with the screws provided. The trip rating of a heater at 40°C Ambient is 125% of the minimum full load current.

Heaters should be selected on the basis of the motor nameplate rating. The heater application table indicates the range of full load motor current to which a given heater may be applied. When motor and controller are in the same ambient the data listed in the table provide 40°C rated motors or those with a service factor of 1.15 to 1.25 with 115% to 125% protection. For 50°C or 55°C rated motors, those with a 1.00 service factor, or where a maximum of 115% protection is desired, select one size smaller heater than indicated. When motor and controller ambients differ, select heaters from the table using adjusted motor currents as follows: decrease rated motor current 1% for each °C motor ambient exceeds controller ambient; increase rated motor current 1% for each °C controller ambient exceeds motor ambient. For temperature compensated overload relays select heaters according to the table and selection information above regardless of ambient. Protect the heater against short circuits by providing branch circuit protection per National Electric Code but not to exceed the maximum fuse ratings listed in the table.

Electrical Interlocks - L56

This motor Controller is constructed to provide a normally open power pole to be used as a holding interlock. A maximum of four auxiliary interlock units may be added in corner recesses on all starter units with no increase in panel area.

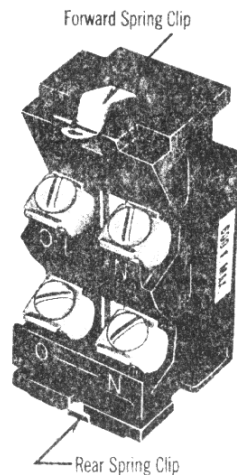


Dimension Drawing

A universal contact electrical interlock, 503C782G01, is available as standard equipment on all Size 1 A/200 devices. It provides NO or NC operation or may be used as a DPST switch. I.L. 13134 gives more complete details for the electrical interlock.

The L56 interlock is designed for "snap-in" mounting. Motor starter arrangements are such that the L56 may be mounted with the terminals in line with the power poles or, where necessary, may also be mounted with the terminals in a right angle relationship to the power poles. Secure mounting is obtained by means of spring clips which snap into locations provided in the motor starter unit. To remove the L56 it is only necessary to disengage the top spring clip, by pressing on the extended tab, and withdraw the interlock unit.

The diagram shows a black, rectangular L56 interlock unit being inserted into a motor starter assembly. A white arrow points to a "Forward Spring Clip" on top of the unit. The unit has four terminal openings on its front face, arranged in two rows. The top row has terminals labeled "O" and "N", and the bottom row has terminals labeled "O" and "N". A white arrow points to the bottom "O" terminal. The unit is shown in a perspective view, highlighting its compact design and the ease of installation.



L-56
Electrical Interlock

Maintenance

Magnet and armature mating surfaces are self-aligning; no maintenance is necessary.

To remove starter coil - Loosen two screws (1) recessed between the center power poles and also three screws (2) at the relay end of the links between the starter and overload relay. Lift off the top section (3) of the starter unit. The coil (4) will normally be lifted as a part of this assembly. Pull coil loose (withdraw coil stabs). If the starter has been installed and wired, remove the screws as indicated above and tilt the base assembly (5) over the line leads (in closely spaced assemblies it may be necessary to remove the line leads).

Current carrying parts are replaceable. The stationary contact (6) and line or load

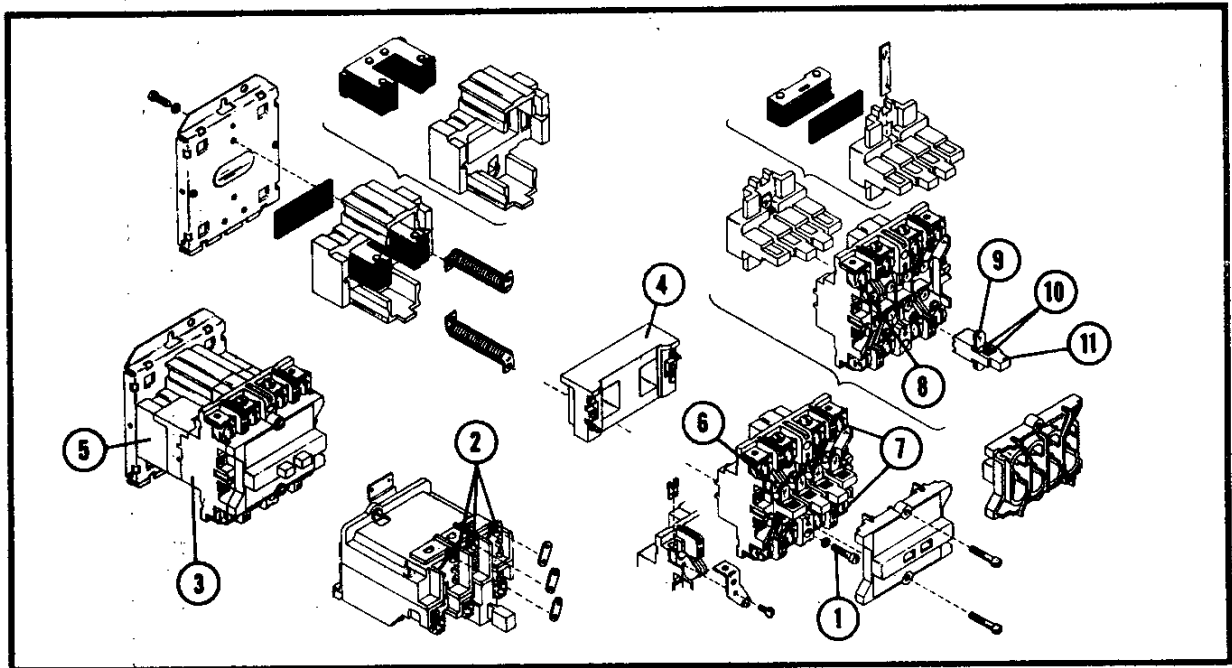
terminal (7) are parts of one assembly. This assembly may be changed by removing any leads and by removing the screw (8) holding the strap to the molded base. The bridging contact (9) is changed as shown below.

1. Lift the keeper and overtravel spring (10) (preferably by using a flat object such as a screw-driver blade).

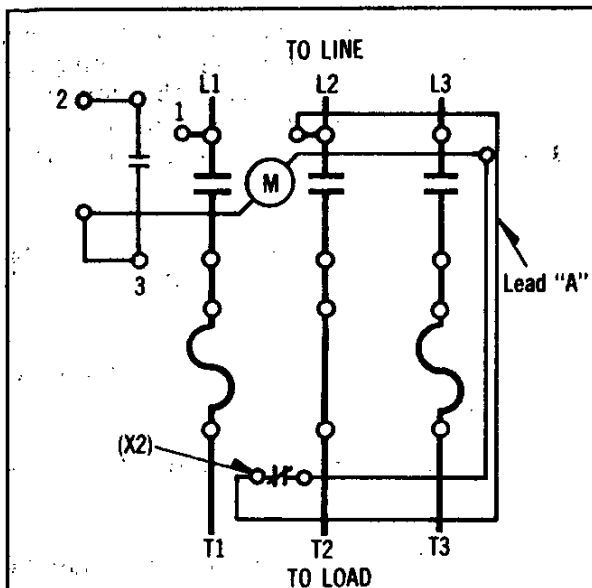
2. Rotate the bridging contact (9) approximately 45°.

3. Withdraw the bridge from the cross-bar (11).

New bridging contacts may be added by a similar process. **CAUTION:** All contacts must be changed as a group to avoid misalignment.

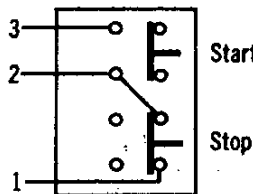


Components of A/200 Series Motor Controller



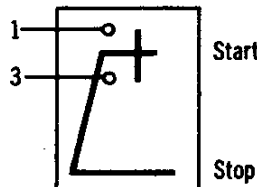
Notes:

1. For 'Separate Control' Remove Lead "A". Connect One Lead of Separate Control Circuit to OL Relay Terminal "X2" Where Lead "A" Was Removed & Other Lead to Term "1" of PB Station or Master SW. (If Starter is Wired for Separate Control at Factory, Connect Control Supply Leads to Terminal "X2" and Terminal "1" of PB Station.)
2. Customer Should Disregard All Schemes Except the One Used in Connecting His Equipment.



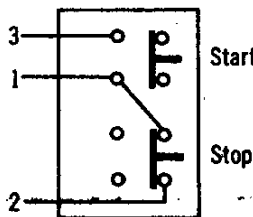
Scheme No. 1

LVP with 3 Wire PB
"Start-Stop" Operation



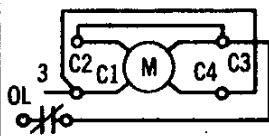
Scheme No. 2

LVR with 2 Wire PB
"Start-Stop" Operation

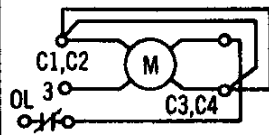


Scheme No. 3

LVP with 3 Wire PB. The Stop Button Having A Mechanical Latch — "Start-Stop-Inch" Operation. To Inch, Latch "Stop" Button Down and Operate "Start" Button



Dual Voltage Coil
Connected for Low Voltage
(When Used)



Dual Voltage Coil
Connected for High Voltage
(When Used)

Wiring Diagrams

Westinghouse Electric Corporation

Standard Control Division, Beaver, Pa.

Renewal Parts

Size 0	1 Pole Kit	373B331601
	2 Pole Kit	373B331602
	3 Pole Kit	373B331604
Size 1	1 Pole Kit	373B331606
	2 Pole Kit	373B331607
	3 Pole Kit	373B331609

HEATER TABLE

Ambient Compensated and
Non-Compensated Open Starters

Code Marking	Full Load Current of Motor (Amperes) (40°C Ambient)	Max. Fuse Prot. (Amps)
H03	.29 - .31	1
H04	.32 - .35	3
H05	.36 - .39	3
H08	.40 - .43	3
H07	.44 - .48	3
H08	.49 - .53	3
H09	.54 - .58	3
H10	.59 - .64	3
H11	.65 - .71	3
H12	.72 - .79	3
H13	.80 - .87	3
H14	.88 - .96	6
H15	.97 - 1.06	6
H16	1.07 - 1.16	6
H17	1.17 - 1.20	6
H18	1.29 - 1.41	6
H19	1.42 - 1.55	6
H20	1.56 - 1.71	6
H21	1.72 - 1.87	6
H22	1.88 - 2.08	8
H23	2.07 - 2.26	8
H24	2.27 - 2.48	8
H25	2.49 - 2.72	9
H26	2.73 - 2.99	9
H27	3.00 - 3.28	12
H28	3.29 - 3.60	12
H29	3.61 - 3.95	15
H30	3.96 - 4.31	15
H31	4.32 - 4.71	15
H32	4.72 - 5.14	20
H33	5.15 - 5.6	20
H34	5.7 - 6.2	20
H35	6.3 - 6.8	25
H36	6.9 - 7.5	30
H37	7.6 - 8.2	30
H38	8.3 - 9.0	35
H39	9.1 - 9.9	35
H40	10.0 - 10.8	40
H41	10.9 - 11.9	45
H42	12.0 - 13.1	50
H43	13.2 - 14.3	50
H44	14.4 - 15.7	60
H45	15.8 - 17.2	60
H46	17.3 - 18.9	70
Heaters Above for Size 0		
H47	19.0 - 20.8	80
H48	20.9 - 22.9	90
H49	23.0 - 25.2	100
H50	25.3 - 27.0	100
Heaters Above for Size 1		