

Series 92 Electric Actuator

CAUTION: Proper voltage must be supplied to actuator.

CAUTION: If 115VAC & 220VAC models are PLC driven, output contacts of PLC should be rated at a minimum of 1.5 times required input voltage of actuator

NOTE: To conform to various electrical codes, a green grounding screw has been installed (on the base plate) inside of actuator.

Cover/Base bolts should be torqued to 120 in/lbs

Terminal strip is suitable for up to #14 AWG wire, and should be wired as per the attached diagrams or the wiring diagram affixed inside of actuator cover.

NOTE: We recommend sealing conduit openings on units installed outdoors or exposed to large temperature swings (15°F or more).

We also recommend the heater and thermostat option in these applications.

Model	Torque (in/lbs)	115 VAC		230 VAC		12 VDC		24 VDC		12 VAC		24 VAC		Cycle Time per 90 Degrees (seconds)
		Amp Draw	Duty Cycle	Amp Draw	Duty Cycle	Amp Draw	Duty Cycle	Amp Draw	Duty Cycle	Amp Draw	Duty Cycle	Amp Draw	Duty Cycle	
S92	400	0.5	100%	0.4	100%	2.0	75%	4.0	75%	2.0	75%	3.0	75%	10
A92	700	0.8	75%	0.6	75%	2.0	75%	4.0	75%	2.0	75%	3.0	75%	10
B92	1100	0.5	100%	0.4	100%	2.0	75%	4.0	75%	2.0	75%	3.0	75%	25
C92	2000	1.0	50%	0.6	50%	2.0	75%	4.0	75%	2.0	75%	3.0	75%	25

NOTE: Amp rating is considered locked rotor.
Duty cycles are for ambient temperature (73°F)

For outdoor or wet locations it is recommended prior to replacing the cover that the top shaft seal be cleaned and coated with silicone grease. Also clean shaft and lightly coat seal area of shaft with silicone grease.

Operation

Manual Override Operation Reference Drawing #289S92

Models S-92, A92, & B92

Pull up the declutching knob (Part #18) and apply a 5/8" open end wrench to exposed flats and rotate within labeled limits as indicated by arrows.

To re-engage simply rotate actuator shaft in the opposite direction until declutching knob drops back down into position.

Model C92

Push down on hand wheel (Part #18A) and rotate within labeled limits.

To re-engage simply rotate actuator hand wheel in the opposite direction until it moves up and re-engages.

Need more detailed information? Download a complete IOM at our website. www.asahi-america.com

CAUTION: The manual override should only be used when there is no power applied to actuator. When power is restored the actuator will automatically resume normal operation.

Setting Limit Switches
Reference Drawing #289S92



Disconnect power!

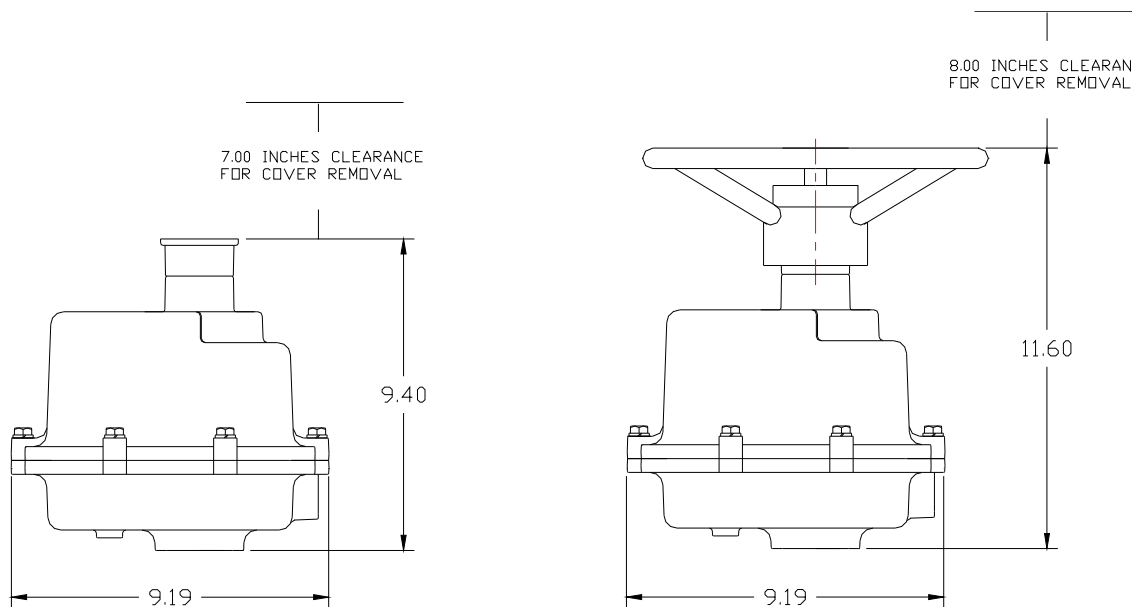
Open Travel Limit Switch (Top Switch Part #25):

Using declutchable manual override, move the valve into a full open position. Then loosen set screws on top cam (Part #40) and rotate cam (CCW) into limit switch arm until a click is heard, this designates the switch circuit has opened and defines a full open position. Tighten 2 set screws (Part #40) on cam.

Close Travel Limit Switch (Bottom Switch Part #25):

Using declutchable manual override, move the valve to a full closed position, loosen set screws on bottom cam (Part #40) and rotate cam (CW) into limit switch arm until a click is heard, this designates the switch circuit has opened and defines a full closed position. Tighten 2 set screws (Part #40) on cam.

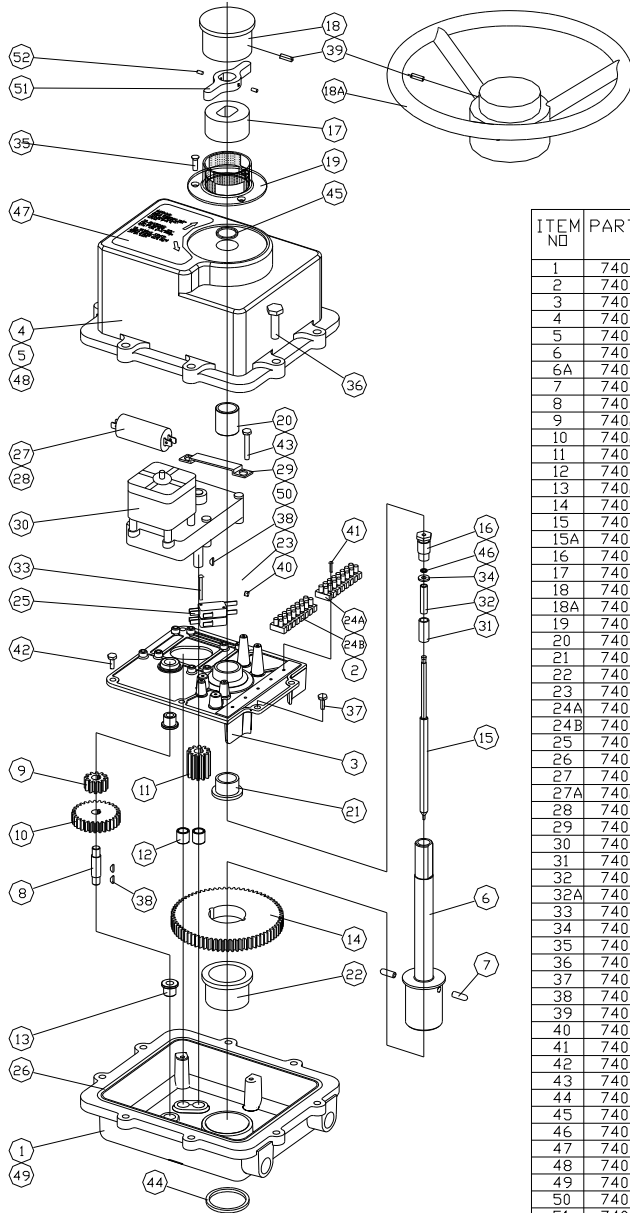
Manually position valve to mid-stroke. Reapply power to actuator and drive to open or closed position. Actuator motor will run. The shaft will not turn until drive pins (Part #7) reseat in drive gear. This could take up to 25 seconds.



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SERIES 92

PARTS LIST & MATERIALS OF CONSTRUCTION



S92= 400 IN*LBS
 A92= 700 IN*LBS
 B92=1100 IN*LBS
 C92=2000 IN*LBS

ITEM NO	PART NO	QUANTITY				DESCRIPTION
		S92	A92	B92	C92	
1	7401920	1	1	1	1	BASE
2	7401440	1	1	1	1	WIRING HARNESS - 4 PCS
3	7401060	1	1	1	1	BASE PLATE
4	7401940	1	1	1	1	COVER
5	7401925	1	1	1	1	WIRING DIAGRAM LABEL
6	7401900	1	1	1	-	SHAFT MAIN
6A	7401905	-	-	-	1	SHAFT MAIN
7	7401360	2	2	2	2	PIN
8	7401280	-	-	1	1	SHAFT STUB
9	7402003	-	-	1	1	SPUR GEAR 1B
10	7402002	-	-	1	1	SPUR GEAR 1A
11	7401400	1	1	1	1	GEAR PINION
12	7401540	1	1	1	1	BEARING PINION
13	7402006	-	-	2	2	BEARING FL - SPUR GEAR
14	7401380	1	1	1	1	GEAR MAIN
15	7401200	1	1	1	-	SHAFT INNER
15A	7401210	-	-	-	1	SHAFT INNER
16	7401180	1	1	1	1	SHAFT RETAINER
17	7401300	1	1	1	1	KNOB LOWER
18	7401320	1	1	1	-	KNOB UPPER
18A	7401995	-	-	-	1	HANDWHEEL
19	7401260	1	1	1	1	COLLAR
20	7401120	1	1	1	1	BEARING UPPER COVER
21	7401080	1	1	1	1	BASE PLATE BEARING
22	7401020	1	1	1	1	BASE BEARING
23	7401480	2	2	2	2	CAM
24A	7401420	2	2	2	2	TERMINAL BLOCK 1-8
24B	7401425	2	2	2	2	TERMINAL BLOCK 9-16
25	7401460	2	2	2	2	SWITCH ACTUATOR
26	7401560	1	1	1	1	O-RING BASE/COVER
27	7401948	1	-	1	-	CAPACITOR 4.2 MFD
27A	7402004	-	1	-	-	CAPACITOR 6.7 MFD
28	7403008	-	-	-	1	CAPACITOR 7.6 MFD
29	7401520	1	1	1	1	CLAMP CAPACITOR
30	7401340	1	1	1	1	MOTOR
31	7401250	1	1	1	1	SHELL
32	7401220	1	1	1	-	SPRING
32A	7401230	-	-	-	1	SPRING
33	7401620	2	2	2	2	SCREW ROUND HD. 4-40 x 1.00 LG.
34	7401240	1	1	1	1	WASHER, FLAT #10 0.450 x .06 THK.
35	7401680	3	3	3	3	SCREW FLAT HD. 8-32 x .25 LG. SS.
36	7401640	8	8	8	8	SCREW HEX HD. 5/16-18 x 1.00 LG. SS.
37	7401521	1	1	1	1	SCREW SELF TAP <GREEN> #10 x .50 LG.
38	7401880	1	1	3	3	KEY, WOODRUF 3/32
39	7401700	1	1	1	1	SCREW SLOT SET 8-32 x .50 LG. SS.
40	7401740	4	4	4	4	SCREW SET 8-32 x .12 LG.
41	7401600	4	4	4	4	SCREW SELF TAP #4 x .50 LG.
42	7401660	5	5	5	5	SCREW SELF TAP SLOT/HEX #10 x .50 LG.
43	7401720	4	4	4	4	SCREW SLOT/HEX 10-32 x 1.62 LG.
44	7401040	1	1	1	1	SEAL BASE
45	7401140	1	1	1	1	SEAL COVER
46	7401580	1	1	1	1	O-RING SHAFT
47	7401950	1	1	1	1	OVERRIDE LABEL
48	7401960	1	1	1	1	COVER NAMEPLATE
49	7401970	1	1	1	1	BASE NAMEPLATE
50	7401430	1	1	1	1	CAPACITOR HARNESS- 2 PCS
51	7401485	-	-	-	1	HANDWHEEL CAM
52	8100179	-	-	-	2	CAM SCREW SET 1/4-20 x /250 LG.

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 35 GREEN STREET, P.O. BOX 653, MALDEN, MA.



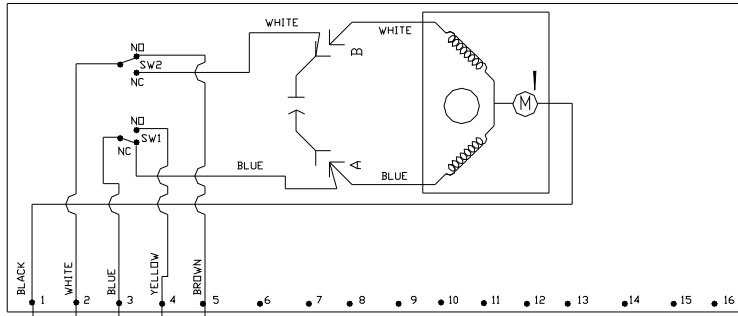
SERIES 92 EXPLODED VIEW

	NAME	DATE
DR	A.SELEZNEV	2/17/98
PATH	\\ACAD11\S92	
DO NOT SCALE DRAWING		

SIZE	DWG. NO.	REV
A	289S92	3
SCALE	SHEET 1 OF 1	
NTS		

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ACTUATOR SHOWN IN COUNTER-CLOCKWISE EXTREME OF TRAVEL, OR "OPEN" POSITION



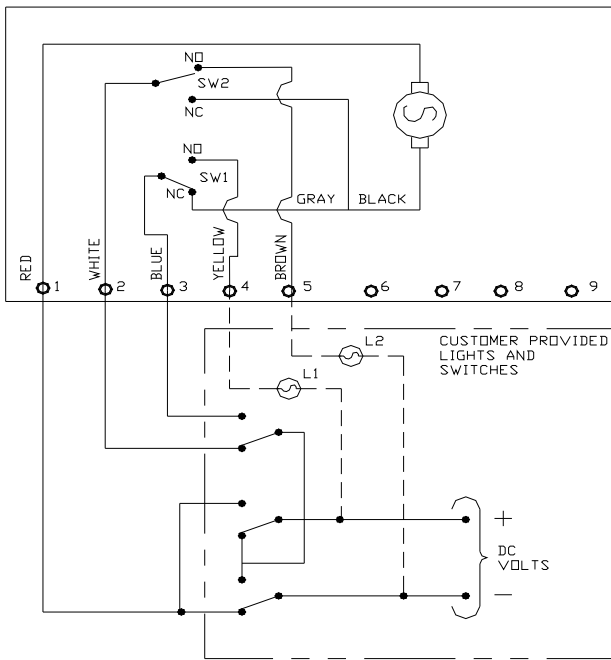
- TERMINAL #1 = NEUTRAL
- TERMINAL #2 = HOT TO OPEN
- TERMINAL #3 = HOT TO CLOSE
- TERMINAL #4 = LIGHT INDICATION CLOSED
- TERMINAL #5 = LIGHT INDICATION OPEN

NOTE:

1. EACH ACTUATOR MUST BE POWERED THRU ITS OWN INDIVIDUAL SWITCH CONTACTS TO AVOID CROSS FEED.
2. WIRING AS SHOWN IS FOR S92 & A92 MOTOR LEADS AT "A" AND "B" ARE REVERSED FOR B92 AND C92.
3. MOTOR HAS A THERMAL PROTECTOR AS SHOWN BY IN DIAGRAM.
4. TORQUE TERMINAL STRIP WIRING TO 5 IN-LBS.
5. CONTROL WIRING SHALL BE INSULATED WITH CONDUCTORS RATED 105°C, 300V MINIMUM.
6. 75°C COPPER SUPPLY WIRES ONLY.

SEE IMPORTANT NOTE

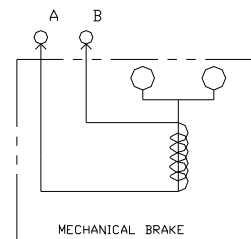
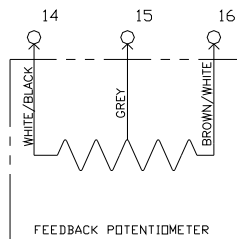
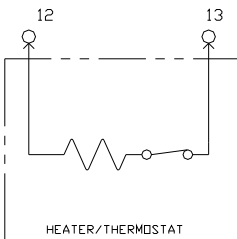
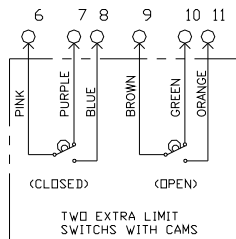
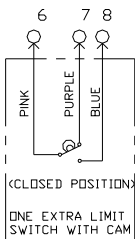
DC WIRING DIAGRAM



1. ACTUATOR SHOWN IN COUNTER CLOCKWISE EXTREME OF TRAVEL OR "OPEN" POSITION
2. MOTOR LEADS REVERSED FOR 1100 & 2000 IN/LB UNIT.

WIRING LEGEND

TERMINAL NUMBER	1	2	3	4	5
	-	+	-	+	-
				LIGHT INDICATION OPEN (WIRED BEFORE CONTROL SWITCH)	LIGHT INDICATION CLOSE (WIRED BEFORE CONTROL SWITCH)
				OPEN	CLOSE



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