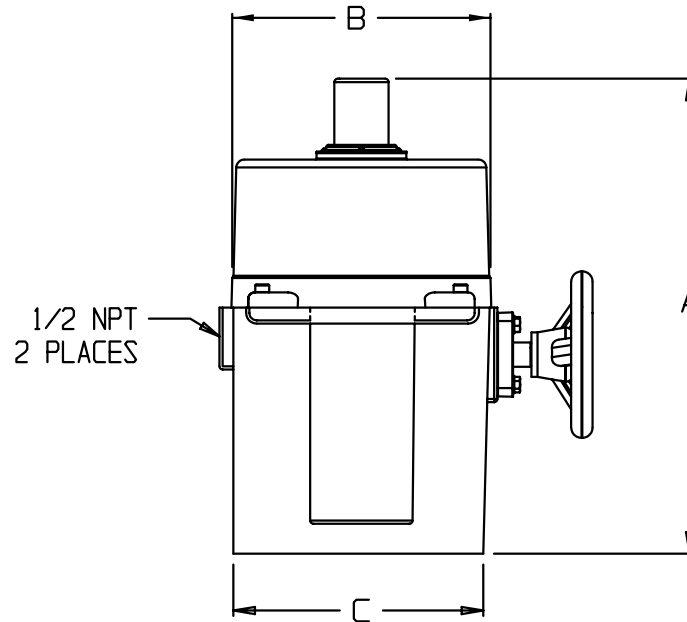
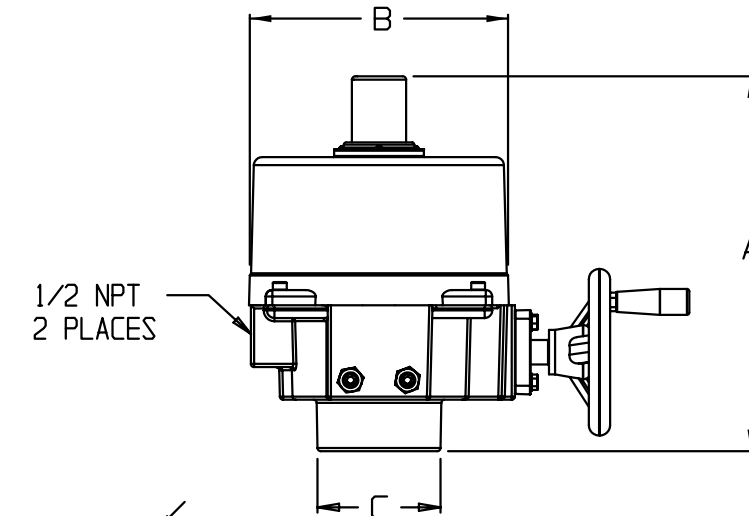


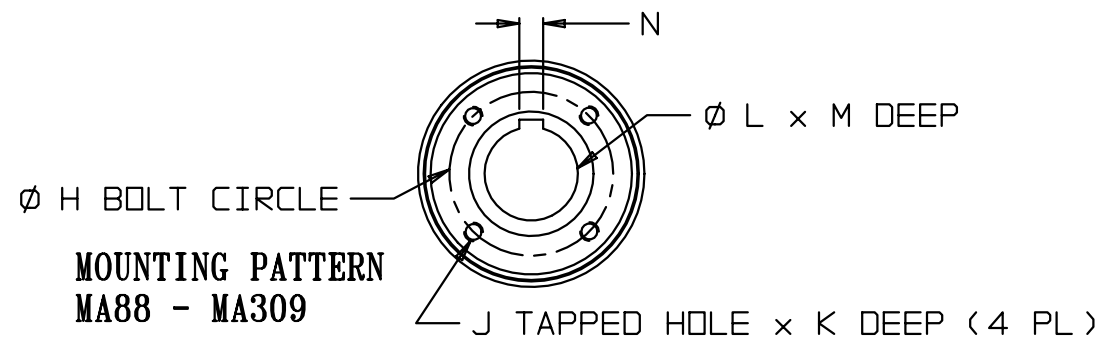
MA177
MA221
MA265
MA306



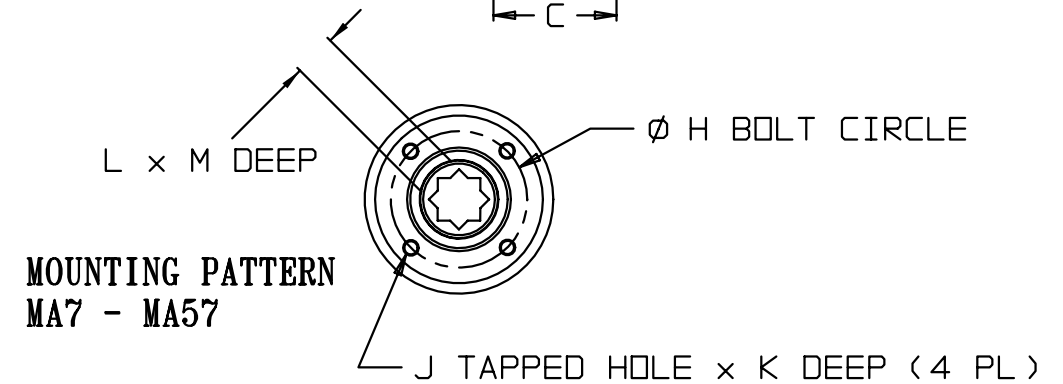
MA88
MA32



MA7
MA13
MA20
MA35
MA44
MA57



MOUNTING PATTERN
MA88 - MA309



MOUNTING PATTERN
MA7 - MA57

SEE PAGE 2 FOR ADDITIONAL SPECIFICATIONS

MODEL	TORQUE IN-LB	CYCLE TIME	A	B	C	D	E	F	G	H	J	K	L	M	N
MA7	795	15 sec	10.04	7.87	3.55	---	13.00	4.92	7.87	2.76	M8	.75	.866	1.18	
MA13	1325	22 sec													
MA20	2000	28 sec													
MA35	3540	22 sec	12.40	9.21	4.92	---	14.96	7.68	11.81	4.02	M10	.63	1.378	1.57	---
MA44	4425	28 sec													
MA57	5750	35 sec													
MA88	8850	46 sec	16.54	9.21	7.09	---	17.72	11.61	13.39	5.51	M16	1.14	1.378	2.36	.394
MA132	13275	46 sec													
MA177	17700	58 sec													
MA221	22125	58 sec	23.23	10.24	8.70	13.00	18.50	15.75	13.79	6.496	M20	1.14	2.953	3.94	.472
MA265	26550	58 sec													
MA309	30975	58 sec													

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NO. MA SERIES FILE NO. SUB116.1

TITLE
MA7 - MA309 SERIES
ELECTRIC ACTUATOR

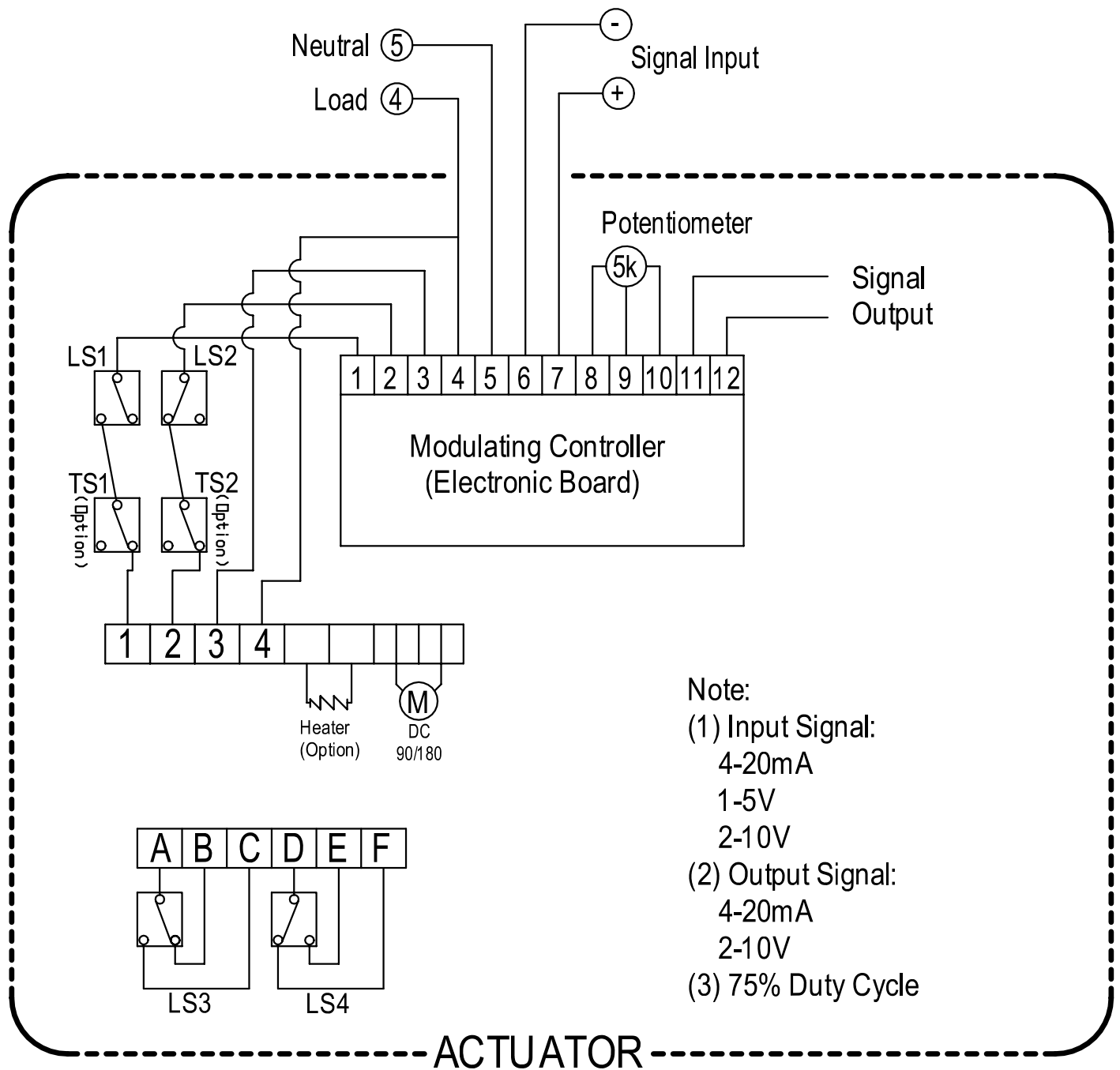
DR	DATE	CH'KD	DATE	ENGR	DATE
LJH	09-22-05	LJH	03-31-03	LJH	03-31-03



Wiring Diagram

MA7 - MA132 Series Actuator Modulation Controller

120 / 220 VAC - 1Ph - 75% DUTY CYCLE



Note:

(1) Input Signal:

4-20mA

1-5V

2-10V

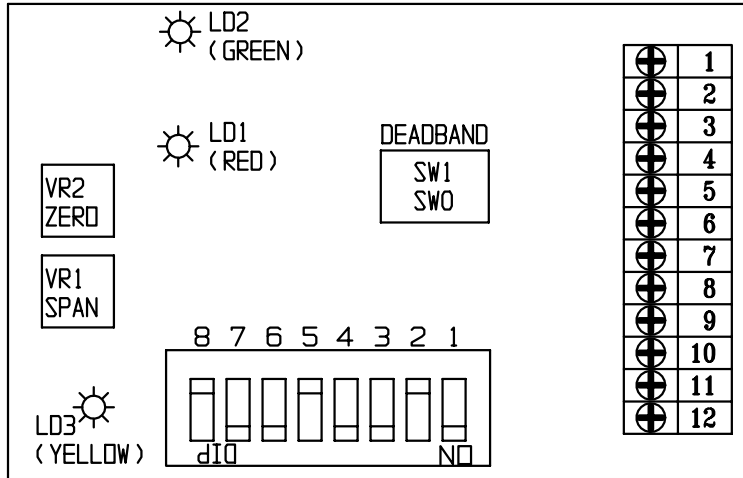
(2) Output Signal:

4-20mA

2-10V

(3) 75% Duty Cycle

DynaQuip MA Series Electric Actuator MODULATING CONTROL BOARD; Interface



TURN POWER OFF BEFORE CHANGING ANY SETTINGS

INSTRUMENT INPUT SIGNAL, OUTPUT SIGNAL, and FAILURE MODE SELECTION

The selection of "input signal", output signal", and "failure mode" is determined by "Dip Switches" S1 to S8.

Instrument Input Signal Selection

- A) 4 - 20 mA : Set 1 "ON" / 2 "OFF"
- B) 2 - 10 VDC : Set 1 "OFF" / 2 "ON"
- C) 1 - 5 VDC : Set 1 "OFF" / 2 "OFF"

Output Signal Position Transmission Signal

- A) 4 - 20 mA : Set 3 "OFF" / 4 "ON" / 5 "OFF"
- B) 2 - 10 VDC : Set 3 "ON" / 4 "OFF" / 5 "ON"

Valve Position at Signal Input

- A) Fully "Closed" at 4 mA, 2 V or 1 V and fully "Open" at 20 mA, 10 V, or 5 V : Set 6 "OFF"
- B) Fully "Closed" at 20 mA, 10 V or 5 V and fully "Open" at 4 mA, 2 V, or 1 V : Set 6 "ON"

Valve Position upon Loss of Instrument Signal

- A) Valve stays in "LAST POSITION" when 4 mA (2 V or 1 V) is "Fully Closed" : Set 7 "ON" / 8 "ON"
- B) Valve moves to "Closed" when 4 mA (2 V or 1 V) is "Fully Closed" : Set 7 "OFF" / 8 "ON"
- C) Valve moves to "Open" when 4 mA (2 V or 1 V) is "Fully Closed" : Set 7 "ON" / 8 "OFF"

- A) Valve stays in "LAST POSITION" when 20 mA (10 V or 5 V) is "Fully Closed" : Set 7 "ON" / 8 "ON"

- B) Valve moves to Closed " when 20 mA (10 V or 5 V) is "Full Closed" : Set 7 "ON" / 8 "OFF"
- C) Valve moves to "Open" when 20 mA (10 V or 5 V) is "Fully Closed" : set 7 "OFF" / 8 "ON"

ZERO & SPAN ADJUSTMENT

ZERO (VR2)

- A) Place actuator in full clockwise position.
- B) Input signal (4 mA, 2 V, or 1 V).
- C) Turn VR2 in a counter-clockwise direction until RED LIGHT remains ON.

SPAN (VR1)

- A) Place Actuator in full counter-clockwise position.
- B) Input signal (20 mA, 10 V, or 5 V).
- C) Turn VR1 in a clockwise direction until the GREEN LIGHT remains ON.

DEADBAND ADJUSTMENT

Deadband (SW1 - SW0 adjust sensitivity to input signals)

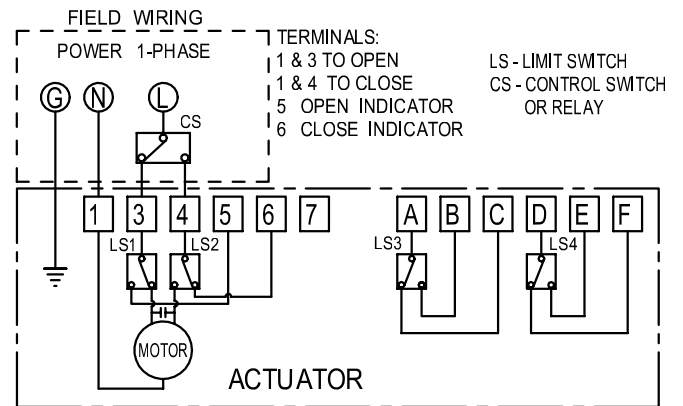
- A) Greatest sensitivity is with switch "1"
(0 - 90° is divided into 80 set points)
- B) Least sensitivity is with switch at "0". (17 set points)

(Each selected number after "1" drops the number of inputs by 17 from the previous setting.)
(Setting 2 would have 63 set points, etc.)

STANDARD FEATURES:

- NEMA 4 WEATHERPROOF ENCLOSURE
- ENCLOSURE - ALUMINUM DIE CASTING
- POLYESTER POWDER COATING
- STAINLESS STEEL FASTENERS
- SELF-LOCKING HIGH ALLOY STEEL GEAR TRAIN
- LUBRICATED FOR LIFE
- PLATED STEEL OUTPUT SHAFT
- 30% DUTY RATED REVERSING MOTORS
- THERMAL OVER LOAD PROTECTION
- OPERATING TEMPERATURE RANGE: 23°F - 140°F
- ADJUSTABLE MECHANICAL TRAVEL STOPS
- MANUAL OVERRIDE: NON-CLUTCH SIDE MOUNTED HANDWHEEL
- GEARED FOR MECHANICAL ADVANTAGE
- LOCAL POSITION INDICATOR

MODEL	LOCK ROTOR - AMPS		WEIGHT LBS
	115 VAC	220VAC	
MA7	1.8	0.9	20
MA13	1.8	0.9	20
MA20	1.8		20
MA35	3.6	1.8	39
MA44	3.6	1.8	39
MA57	3.6	1.8	39
MA88	10.0	4.0	80
MA132	10.0	5.0	80
MA177	6.0	4.0	124
MA221	6.0	3.0	124
MA265	5.0	3.0	124
MA309	5.0	3.0	124



SWITCHES - 10A 1/2HP 125 - 250 VAC
0.6A 125VDC 0.3A 250VDC

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NO. MA SERIES

MA SERIES

FILE NO.
SUB116.2

TITLE

MA7 - MA309 SERIES
ELECTRIC ACTUATOR

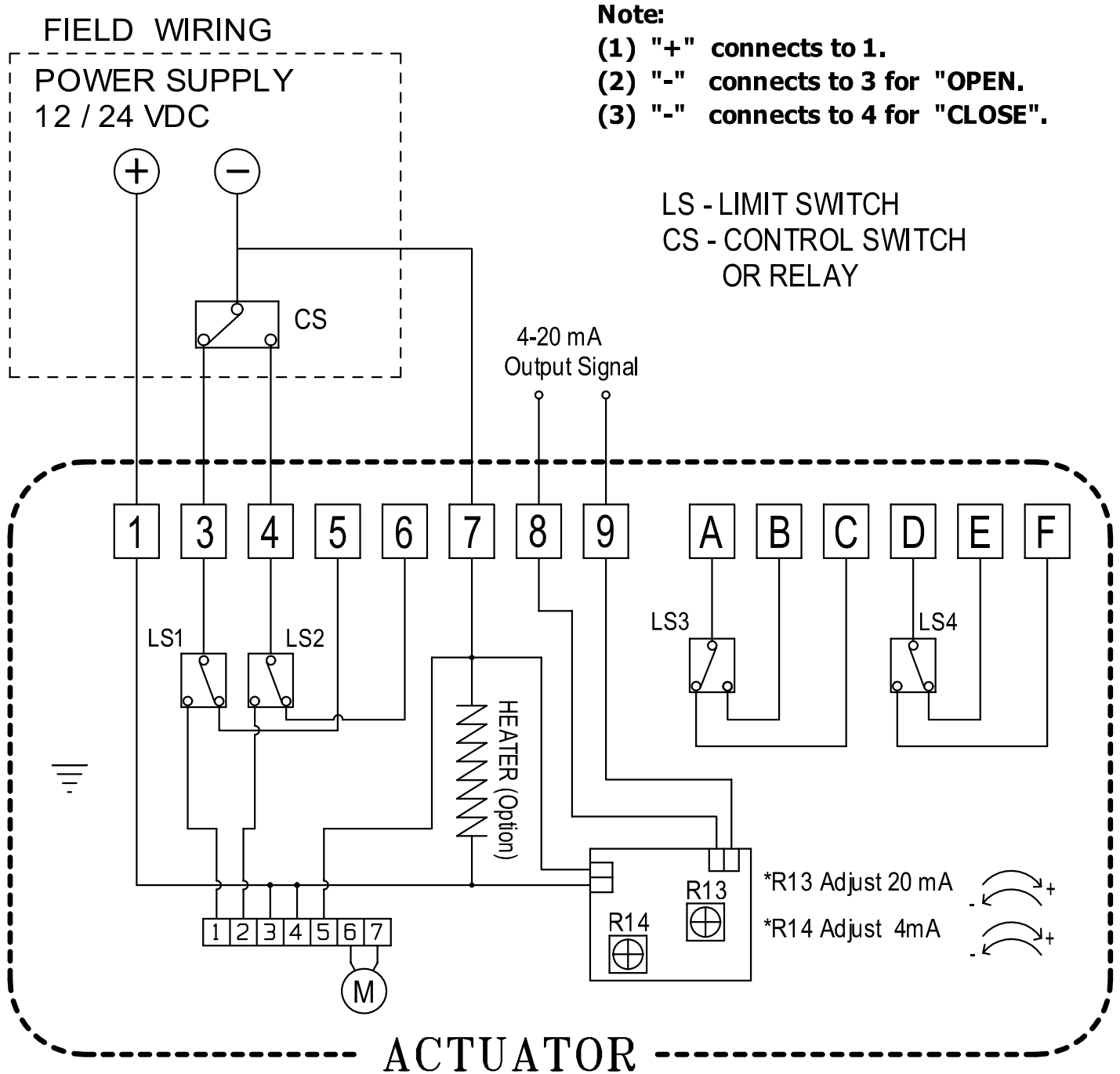
DR LJH	DATE 09-23-05	CH'KD LJH	DATE 04-08-03	ENGR LJH	DATE 04-08-03	PAGE 2 OF 2
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Wiring Diagram 12V / 24V DC

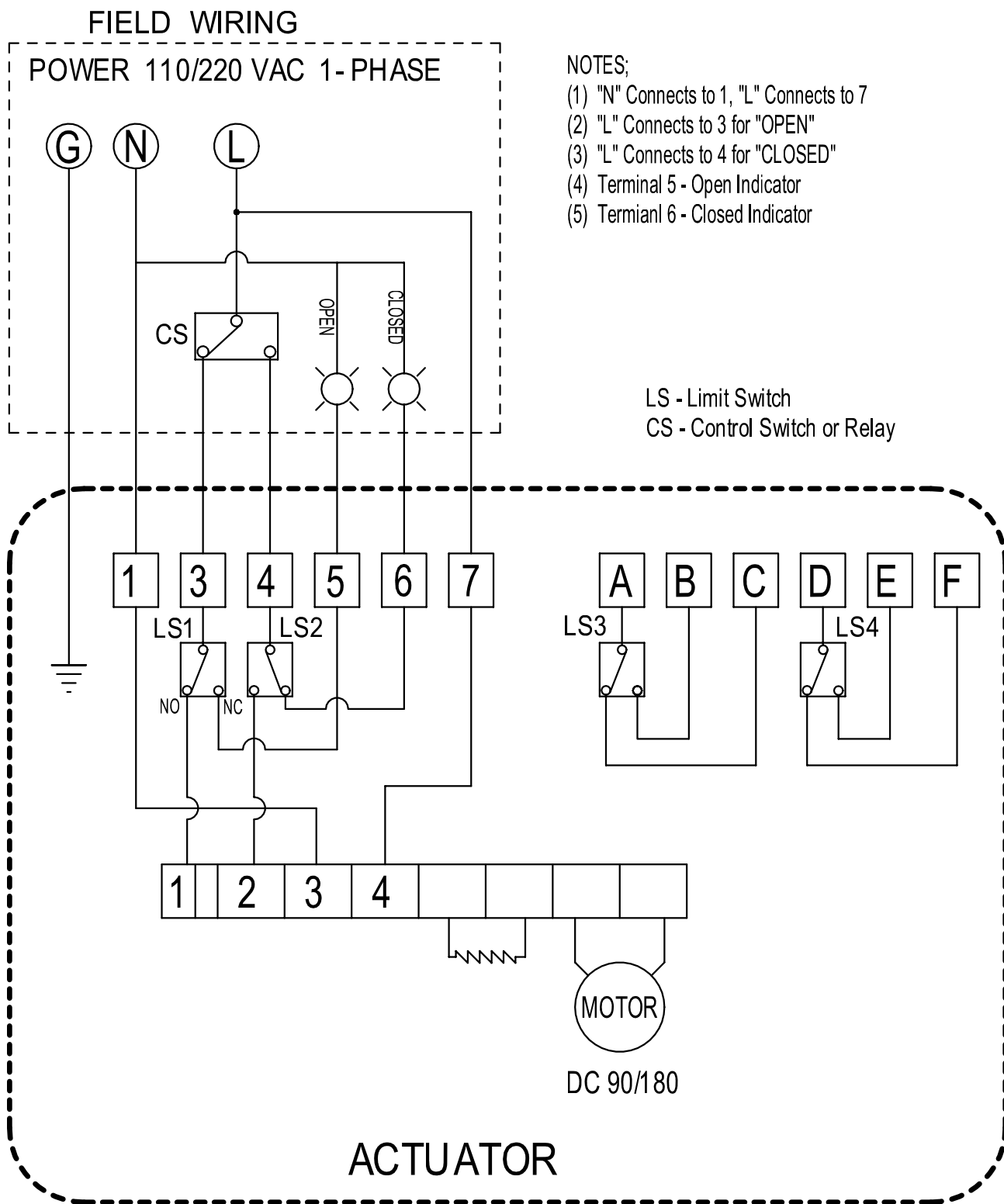
4-20 mA Output Signal

MA7 - MA57 Series Actuator



DynaQuip Controls

MA20 Series Actuator Wiring Diagram



◆ WIRING DIAGRAM

【 MA20 110V/220V AC 1-PH / Modulating Service
75% Duty Cycle 】

