rev	change date	revision	name
h	06.04.24	UPDATED FLD CNTL IN SW. FROM NEU TO HOT	MKK
g	01.28.22	Updated connectors to match board versions exported 24 board pro #	DJG
f	12.07.21	Reworked control switching to match SV wiring constant heater operation, Mag Switch DC.	DJG
e	07.27.20	Changed control wiring to Positive switched	DJG
d	07.24.20	Changed control switching to terminal #1 supporting constant heater operation	PMR
c	10.16.19	Added 2 and three connector versions of board. Updated product IDs	DJG
b	10.11.19	Change to two connectors	PMR
a	08.20.19	New dwg from 850-AA001 L All voltages. Check w SY 10 16 19	PMR

naming | material no | ind | material

dwn by: PMR | Date: 09.19.19 | .

scale NONE

6/5/2024 9:08 AM

ProMation

WD-850-EOA01

On/Off wiring diagram for 120/230/24ACDC PA/D(0) Series CW Spring Return Actuators.

REV H

WD-850-EOA01 H.dwg

Wiring Diagram

0° – 5° *
5° – 90° *
COM *
85° – 90° *
0° – 85° *
COM *
* CONNECTIONS OPTIONAL

ACL, ANC, ACC, AOP, ANO, AOC

F BLK
E BRN
D WHT
C GRY
B BLU
A RED

AUXILIARY SWITCH (STANDARD)
AS4 NO COM NC
AUXILIARY SWITCH (STANDARD)
AS3 NO COM NC

SPRING RTN (FULL CW)
LOAD SPRING (FULL CCW)

	−5° 0° 5	85° 90° 95°
F		
E		
D	COM SW4	
C		
B		
A	COM SW3	

HEATER
7 (on Riser)
RED6
6
5
4
3 BLU16
1 RED16
HOT
NEU
HOT

LINE IN
120VAC
230VAC
24VAC
24VDC
L1 H
L2 N
GND
GND Screw

FIELD CONTROL DEVICE LOAD

24VAC Only
35A
SA-176(A)(J)-24 Only
24VDC Only
Blu16, Red16, Blk16, AC1, AC2, V+, V−, (Jumpers)

4 3 2 1

SA176J 408-30278
SA176J-24
408-30274

NC
FOR−120/230/24AC
BLK
Capacitor 15uF/250V
WHT
THERMAL SWITCH
AC DRIVE MOTOR
RED

24VDC Brake
24VDC Brake
M
DRIVE MOTOR
THERMAL SWITCH
FOR−24VDC

RED CAM NO
LS2
COM NC
GRY22 NON POLARIZED

GRN CAM NO
LS1
COM NC
BLU22 NON POLARIZED

SA-176J
LS1
LS2
Brake

SA-176A
J3 (to LS1)
J1 (to LS2)
J2 (to Brake)

WHT 22

OPEN showing in indicator window = FULLY LOADED (CCW)

CLOSED showing in indicator window = FULL SPRING RTN (CW)

ACTUATOR SHIPS IN CW DIRECTION

FIELD WIRING
INTERNAL ACTUATOR WIRING

Switch Stack Detail

NO NC
GRY22
BLU22
RED AS4
GRN AS3
RED LS2
GRN LS1

LED1 – RED Power
LED2 – GREEN Driving in the Load Direction.
LED3 – RED Fully Loaded (OPEN) Position
LED4 – YELLOW Failsafe Position and Restart Delay after Power Trip.

All switches shown with actuator in unloaded position

ProMation Engineering, Inc.
16138 Flight Path Drive
Brooksville, FL 34604
Ph:352-544-8436 Fx(352-544-8439

Use For:
PA/PD(0)-CW-24/120/2302(A/D)S(4/7)

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