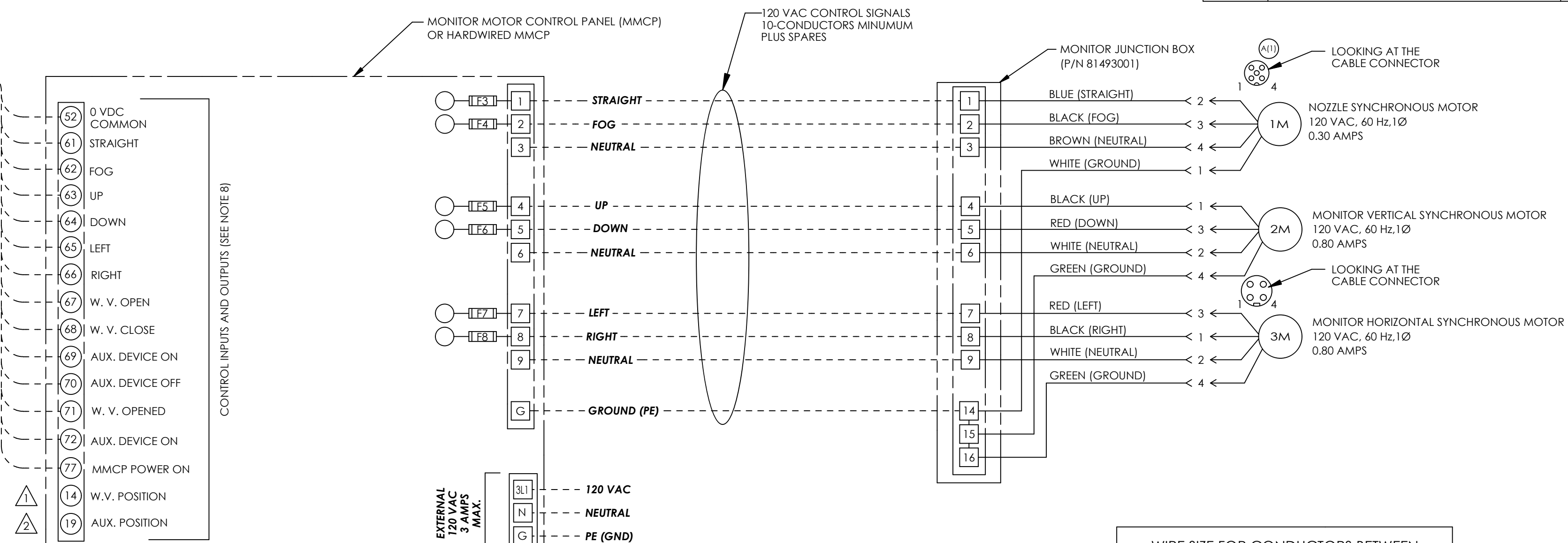


REV.	DESCRIPTION (NOTE: ADDITIONAL ECH BLOCKS TO BE COPIED AND FILLED OUT MANUALLY)	BY	E. C. N.
REL	RELEASE TO PRODUCTION	BJS	150208

TO OCP OR OTHER DISCRETE CONTROLS - SEE NOTE 8

- NOTES:
- 1 WHEN OCP WATER VALVE "OPENED" INDICATION IS REQUIRED FROM WATER VALVE. USE TERMINAL 14 IN MMCP WITH WIRE #71 FROM OCP.
 - 2 WHEN OCP AUXILIARY DEVICE "ON" INDICATION IS REQUIRED FROM AUXILIARY DEVICE USE TERMINAL 19 IN MMCP WITH WIRE #72 FROM OCP.

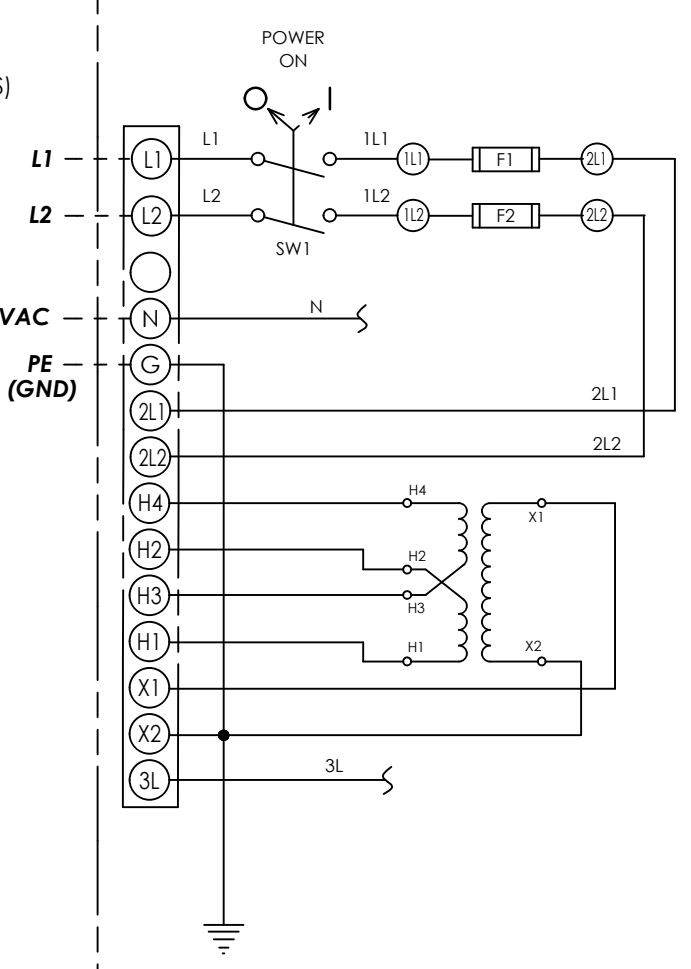


WIRE SIZE FOR CONDUCTORS BETWEEN MONITOR MOTOR CONTROL PANEL AND MONITOR JUNCTION BOX

CONDUCTOR LENGTH	WIRE SIZE
UP TO 75 FEET (22 m)	18-AWG (0.75 mm ²)
75 TO 100 FEET (30 m)	16-AWG (1.0 mm ²)
100 TO 200 FEET (60 m)	14-AWG (2.5 mm ²)
200 TO 400 FEET (121 m)	12-AWG (4.0 mm ²)

POWER SOURCE (SEE MMCP CHART FOR CONNECTIONS)
 110/120 VAC, 50/60 Hz.
 220/240 VAC, 50/60 Hz.
 5 AMPS MAX.
 OR
 440/480 VAC, 50/60 Hz.
 1 AMP MAX.

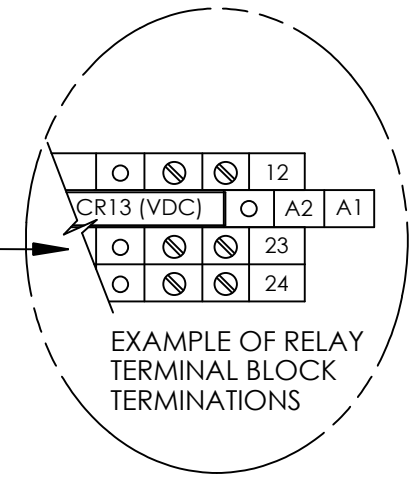
INSTALLATION NOTE:
 INSTALLER TO PROVIDE DISCONNECT MEANS, BRANCH CIRCUIT MEANS, AND OVERLOAD PROTECTION.



- EXTERNAL 120 VAC 3 AMPS MAX.
 3L1 --- 120 VAC
 N --- NEUTRAL
 G --- PE (GND)
- EXTERNAL DC POWER 5 AMPS MAX.
 51 --- +24 VDC
 52 --- 0 VDC COMMON

- WATER VALVE
- 10 --- WATER VALVE "OPEN" (N.O., UNIVERSAL CONTACT, 5 AMP)
 - 11 --- WATER VALVE "CLOSE" (N.C., UNIVERSAL CONTACT, 5 AMP)
 - 12 --- WATER VALVE "SOURCE" SIGNAL (COM., UNIVERSAL CONTACT, 5 AMP)
 - 13A1 --- WATER VALVE "OPENED" FEEDBACK (+24 VDC)
 - 13A2 --- WATER VALVE "OPENED" (0 VDC COMMON)
 - 23 --- ISOLATED WATER VALVE "OPEN" (N.O., DRY CONTACT, 5 AMP)
 - 24 --- ISOLATED WATER VALVE "OPEN" (COM., DRY CONTACT, 5 AMP)
 - 14A1 --- WATER VALVE "OPENED" FEEDBACK (120 VAC)
 - 14A2 --- WATER VALVE "OPENED" (AC NEUTRAL)
- AUXILIARY DEVICE (SEE NOTE 8)
- 15 --- AUXILIARY "TURN ON" (N.O., UNIVERSAL CONTACT, 5 AMP)
 - 16 --- AUXILIARY "TURN OFF" (N.C., UNIVERSAL CONTACT, 5 AMP)
 - 17 --- AUXILIARY "SOURCE" SIGNAL (COM., UNIVERSAL CONTACT, 5 AMP)
 - 15A1 --- AUXILIARY "ON" FEEDBACK (+24 VDC)
 - 15A2 --- AUXILIARY "ON" (0 VDC COMMON)
 - 25 --- ISOLATED AUXILIARY DEVICE "ON" (N.O., DRY CONTACT, 5 AMP)
 - 26 --- ISOLATED AUXILIARY DEVICE "ON" (COM., DRY CONTACT, 5 AMP)
 - 16A1 --- AUXILIARY "ON" FEEDBACK (120 VAC)
 - 16A2 --- AUXILIARY "ON" (AC NEUTRAL)

- NOTES:
- (3) WATER VALVE "OPEN" AND "CLOSE" SIGNALS ALONG WITH AUXILIARY DEVICE "ON" AND "OFF" ARE SUPPLIED AS DRY CONTACTS. THIS GIVES THE OPTION FOR THE END USER TO CONNECT THEIR DEVICES ACCORDINGLY. IF NEED BE EXTERNAL DC AND AC POWER TERMINALS ARE SUPPLIED FOR SUCH CONNECTIONS. SEE EXAMPLES BELOW.
 - (4) PROVISIONS HAVE BEEN MADE TO ACCOMMODATE EITHER A DC (CR13 AND CR15) OR AC (CR14 AND CR16) FEEDBACK SIGNAL FROM BOTH DEVICES. WIRE CIRCUIT TO APPROPRIATE VOLTAGE RELAY DEVICE AS LABELED. SEE EXAMPLE
 - (5) NUMBER OF CONDUCTORS MAY VARY ACCORDING TO DEVICE CONNECTIONS - TYPICAL 8 CONDUCTORS REQUIRED PLUS SPARES.
 - (6) EACH DEVICE HAS A SPARE ISOLATED CONTACT THAT IS ACTIVATED WHEN THE DEVICE RELAY IS ENERGIZED. THIS CONTACT CAN BE USED PER CUSTOMER REQUIREMENTS.
 - (7) WHEN CONNECTING ELKHART BRASS VALVE (P/N 70117000 OR 70133000) REFERENCE VALVE MANUAL (P/N 98378000) AND SEE INTERCONNECT DWG. #30231031S7 FOR WIRING DETAILS.
 - (8) SOME CONNECTIONS ARE NOT AVAILABLE OR REQUIRED FOR ALL PANELS. INPUTS 61-70 CONTROL RELAYS 1CR - 10CR.



WIRE SIZE FOR CONDUCTORS BETWEEN MONITOR MOTOR CONTROL PANEL AND OPERATOR CONTROL PANEL

CONDUCTOR LENGTH	WIRE SIZE
UP TO 75 FEET (228 m)	18-AWG (0.75 mm ²)
75 TO 1500 FEET (457 m)	16-AWG (1.0 mm ²)
1550 TO 2500 FEET (762 m)	14-AWG (2.5 mm ²)
2500 TO 3500 FEET (1066 m)	12-AWG (4.0 mm ²)

MMCP MAIN POWER PANEL, FUSE, & JUMPER CONNECTIONS
 SEE DWG. #30231031S9 FOR MAIN POWER TERMINATIONS

MAIN POWER	PANEL CONNECTIONS	JUMPER CONNECTIONS	FUSE	DESCRIPTION	PT. NO.
110/120 VAC 50/60 Hz.	L1, N, AND G	2L1 to 3L	F1	CLASS CC, TIME DELAY 600-VAC, 5-AMP	FNQ-R-5
			F2	CLASS CC, TIME DELAY 600-VAC, 5-AMP	FNQ-R-5
* 220/240 VAC 50/60 Hz.	L1, L2, AND G	2L1 to H4 H4 to H2 2L2 to H1	F1	CLASS CC, TIME DELAY 600-VAC, 5-AMP	FNQ-R-5
		H3 to H1 X1 to 3L X2 to N	F2	CLASS CC, TIME DELAY 600-VAC, 5-AMP	FNQ-R-5
440/480 VAC 50/60 Hz.	L1, L2, AND G	2L1 to H4 2L2 to H1 H2 to H3	F1	CLASS CC, TIME DELAY 600-VAC, 1-AMP	FNQ-R-1
		X1 to 3L X2 to N	F2	CLASS CC, TIME DELAY 600-VAC, 1-AMP	FNQ-R-1

* 220/240 VAC, 50/60 Hz., (FACTORY CONFIGURATION)

TOTAL WIRE RUN FROM FURTHEST HARDWIRED CONTROL TO MMCP

REFERENCE DWG. #81504095 (MULTI-MONITOR SPITFIRE SYSTEM LAYOUT) OR CUSTOM SYSTEM LAYOUT.

ELKHART BRASS MFG. CO., INC. #1302 West Beardsley Ave, Elkhart, IN 46514, USA <small>This print and all data contained here on is the sole and exclusive property of Elkhart Brass Mfg. Co., INC. and will not be disclosed to others without the consent of Elkhart Brass Mfg. Co., INC. This print must be returned to Elkhart Brass Mfg. Co., INC. Copyright © 2013 by Elkhart Brass Mfg. Co., INC.</small>		DRAWN BY BS CHECKED BY BS DATE 02/18/2015 DATE 02/19/2015	ELKHART BRASS Fire Fighting Equipment
MATERIAL N/A		WEIGHT (LBS) N/A	DESCRIPTION MONITOR MOTOR CONTROL PANEL ELECTRICAL INTERCONNECT DRAWING AND HMMCP
TOLERANCE UNLESS OTHERWISE SPECIFIED 2 PLACE DEC. ± .060" 3 PLACE DEC. ± .030" ANGLES ± 1°		UNLESS OTHERWISE SPECIFIED DIMENSIOND ARE IN INCHES ALL FILLETS AND ROUNDS R 0.06 DO NOT SCALE PRINT INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M 1994 CAD MODEL:	CAT. NO. INDUSTRIAL SYSTEMS SIZE C PART NUMBER 30231031S1 REV. REL
TOTAL WIRE RUN FROM FURTHEST HARDWIRED CONTROL TO MMCP		THIRD ANGLE PROJECTION	CAD SCALE: SHEET 1 OF 9