

BILL OF MATERIAL

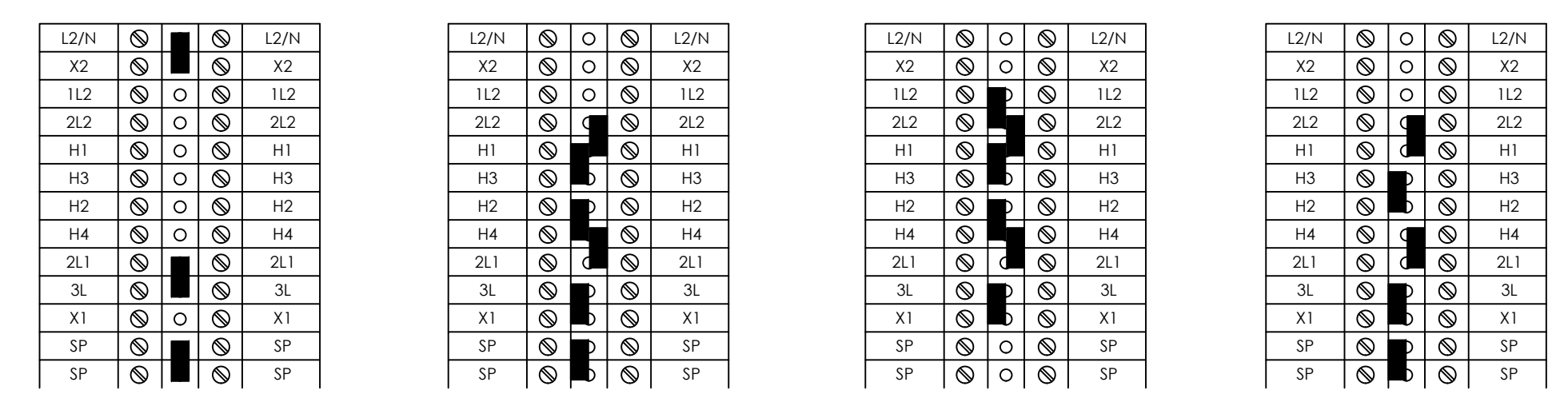
ELKHART BRASS PART NUMBER	DEVICE	QTY.	DESCRIPTION
5295030	PL	1	PILOT LIGHT WITH GREEN LENS, NEMA 4X/3, 12-30V AC/DC
5295040	WV OPEN LIGHT	1	PILOT LIGHT WITH BLUE LENS, NEMA 4X/3, 12-30V AC/DC
IN00005	S1	1	3-POSITION MAINTENANCE SELECTOR SWITCH NEMA 4X/3, WITH 1/2 IN. 2 IN. C. N.C. BUOTE-KAF EXPLOSION PROTECTED CONTACTS
52 AND 511	2	2	2-WAY JONSTOCK (SPRING RETURN TO CENTER) CLASS 1, DIV 2
53 AND 512	1	1	4-WAY JONSTOCK (SPRING RETURN TO CENTER) CLASS 1, DIV 2
54 AND 55	2	2	PUSH BUTTON MOMENTARY CONTACT SWITCH (BLACK) CLASS 1, DIV 2
5290800	T	1	230/480 VAC, 50 Hz OR 240/480V 60 Hz PRIMARY, 120 VAC 50 Hz OR 120 VAC, 60 Hz SECONDARY, 500 ULTRA TRANSFORMER
5295000	P5	1	AC/DC POWER SUPPLY, 24 VDC, 4.2 AMPS, 120 WATTS 100/240 VAC INPUT
IN000053	AS	AS	HI-RISE MOUNTING RAIL, SEE LAYOUT DRAWING FOR CUT LENGTHS
IN000017	AS	AS	MOUNTING RAIL, SEE LAYOUT DRAWING FOR CUT LENGTHS
IN000066	TR ANCHORS	10	TERMINAL END ANCHOR
67295000	TERMINAL GROUP MARKERS	9	GROUP TERMINAL MARKER
IN000007	TERMINAL BLOCK	37	STANDARD FEED-THROUGH TERMINAL BLOCK 600 AC/DC, 35 AMPS, 45T, 8 TO 16 AWG WIRE
IN000008	GROUNDING TERMINAL BLOCK	5	GROUNDING TERMINAL BLOCK (#2 - #16 AWG WIRE)
IN000009	TERMINAL BLOCK END BARRIER	17	END BARRIER FOR 1492-14 TERMINALS
IN000051	JUMPER 2	10	2-POLE PLUG-IN CENTER JUMPER FOR 1492-14 TERMINAL BLOCK
IN000046	TERMINAL BLOCK	33	MULTI-CIRCUIT FEED-THROUGH TERMINAL BLOCK 600 AC/DC, 15 AMPS, 45T AND 90T WIRE
67293000	TERMINAL BLOCK END BARRIER	1	END BARRIER FOR 1492-104 TERMINAL BLOCK
IN000011	24 THROUGH	6	TWO-LEVEL TERMINAL BLOCK WITH 500K OHM, 1/2 WATT RESISTOR BETWEEN LEVELS
IN000010	TERMINAL BLOCK END BARRIER	2	END BARRIER FOR 1492-103 TERMINAL BLOCK
IN000047	JUMPER 6 & 6	3	10-POLE SCREW-IN CENTER JUMPER
IN000087	FT THRU F10	13	CLASS CC FOR HUBS, 1 POLE
59079130	F3 AND F2	2	FUSE, CLASS CC, TIME DELAY, CURRENT LIMITING, 600 VAC
32233050	F3 AND F4	2	FUSE, CLASS CC, FAST ACTING, 600 VAC, 1 AMP
32233040	F5, F6, F7, AND F8	4	FUSE, CLASS CC, FAST ACTING, 600 VAC, 1 1/2 AMP
32233160	F9	1	FUSE, CLASS CC, FAST ACTING, 600 VAC, 5 AMP
32233130	F10	1	FUSE, CLASS CC, FAST ACTING, 600 VAC, 3 AMP
IN000068	F11	1	FUSE, CLASS CC, TIME DELAY, CURRENT LIMITING, 600 VAC, 6.25 AMP
IN000091	1CR THROUGH 8	8	RELAY SOCKET (4PDT)
IN000069	1CR THROUGH 8	8	SPRING LOUP (RELAY HOLD DOWN)
59078000	1CR THROUGH 8	8	RELAY - 4PDT 4 FORM C CONTACTS, 24 VDC
65887000	1CR THROUGH 8	8	DIODE WITH LED SURGE SUPPRESSOR, 24 VDC
67296000	13CR	1	24 VDC ELECTROMECHANICAL TERMINAL BLOCK RELAY
67297000	14CR	1	120 VAC ELECTROMECHANICAL TERMINAL BLOCK RELAY
81373010	C1	1	CAPACITOR MONITOR MOTOR 10.0 U.F., 370 VAC, MIN 300 VAC OR EQUIVALENT
81373020	C3	1	CAPACITOR MONITOR MOTOR 10.0 U.F., 370 VAC, MIN 300 VAC OR EQUIVALENT
28247000	C2	1	CAPACITOR MONITOR MOTOR 12.5 U.F., 370 VAC, MIN 300 VAC OR EQUIVALENT
IN000086	R1	1	RESISTOR - NOZZLE MOTOR, 300 OHM, 50 WATT, OR EQUIVALENT
IN000087	R1, R2, AND R3	3	ALUMINUM ANGLE 4 X 1/2" LENGTH (OR EQUIVALENT)
IN000088	R2 AND R3	2	RESISTOR - MONITOR MOTORS, 100 OHM, 100 WATT OR EQUIVALENT
67298000	D1	1	DIODE TERMINAL BLOCK, REVERSE BIAS
IN000020	WIRE DUCT COVER	AS	WHITE SLOTTED DUCT 1.75" X 2.12" - SEE LAYOUT FOR CUT LENGTH
IN000021	WIRE DUCT COVER	AS	WHITE COVER - SEE LAYOUT FOR CUT LENGTH
IN000070	DIN RAIL WIRE DUCT ENCLOSURE	1	304 SS NEMA 4X WALL MOUNT ENCLOSURE 30" H X 24" W X 8" D, OR EQUIVALENT
44492000	MOUNTING PANEL	1	30" H X 24" W SUBPANEL, WHITE OR EQUIVALENT
44547000	WARNING LABEL - INSIDE PANEL	1	WARNING LABEL - INSIDE PANEL - OR EQUIVALENT
44547000	WARNING LABEL - OUTSIDE PANEL	1	WARNING LABEL - OUTSIDE PANEL - OR EQUIVALENT
44547000	MWCF WRITING INSTRUCTION LABEL INSIDE DOOR	1	MWCF WRITING INSTRUCTION LABEL INSIDE DOOR
44547000	FUSE CHART	1	FUSE CHART
44547000	MONITOR MOTOR CONTROL PANEL WIRING DIAGRAM LABEL INSIDE DOOR	1	MONITOR MOTOR CONTROL PANEL WIRING DIAGRAM LABEL INSIDE DOOR
44547000	ELKHART LOGO LABEL	1	ELKHART LOGO LABEL
IN000091	GP	1	81471074GP INCLUDES ABOVE AND OPTIONAL GLAND PLATE SHOWN BELOW GLAND PLATE (OR EQUIVALENT)

- NOTES:
- (1) NEMA 4X (IP-44) ENCLOSURE, CONTINUOUS HINGE WITH CLAMPS, 304 STAINLESS STEEL.
 - (2) NO CONDUIT HUBS/GLANDS OR KNOCK-OUTS ARE PROVIDED IN THIS ENCLOSURE BY ELKHART. NEMA 4 HUBS/GLANDS & KNOCK-OUT HOLES TO BE SUPPLIED BY OTHERS.
 - (2a) ADD SUFFIX "GP" TO PANEL PART NUMBER TO SELECT THE GLAND PLATE OPTION EXAMPLE: 24359001GP.
 - (3) APPROX. WEIGHT = 105 LBS.
 - (4) ONLY ONE WIRE PER CONNECTION ON THE PLC, DC POWER SUPPLY, AND ETHERNET SWITCH. MAXIMUM OF TWO CONDUCTORS MAY BE TERMINATED IN EACH TERMINAL BLOCK, FUSE HOLDER, PUSHBUTTON CONTACT BLOCK, OR PILOT LIGHT CONTACT BLOCK.
 - (5) TERMINATE ALL WIRES THAT CONNECT TO SCREW TERMINALS OF CONTACT BLOCKS AND OTHER DEVICES BY TRIMMING OR WITH FERRULES TO PREVENT WHISKERS AND UNRAVELING.
 - (6) INSTALLATION NOTE: THIS PANEL PROVIDES SUPPLEMENTARY PROTECTION. INSTALLER TO PROVIDE DISCONNECT AND BRANCH CIRCUIT PROTECTION. ENCLOSURE'S INTERNAL POWER SWITCH IS NOT LOCKABLE AND DOES NOT QUALIFY AS DISCONNECT.
 - (7) TERMINALS SUPPLIED ARE RATED FOR 60°C CONDUCTORS.
 - (8) WIRE SPECIFICATION: 120VAC WIRING: 18 AWG 600V MTW, COLOR: BLACK. AC NEUTRAL WIRING: 18 AWG 600V MTW, COLOR: WHITE. +24VDC WIRING: 18 AWG 600V MTW, COLOR: BLUE. DC COMMON WIRING: 18 AWG 600V MTW, COLOR: BLUE WITH WHITE STRIPE. GROUNDING WIRE: 14 AWG 600V MTW, COLOR: GREEN OR GREEN WITH YELLOW STRIPE.
 - (9) PANEL INTERRUPTING RATING OF 200,000 AMPS SYMMETRICAL.
 - (10) MONITOR MOTOR CONTROL PANEL TO BE UL LABELED PER UL1203, ISA 12.12.01 FOR USE IN CLASS 1, (GROUP B, C, & D), DIVISION 2 HAZARDOUS LOCATION.
 - (11) LABEL ALL WIRES WITH WRAP AROUND WIRE LABELS, WHITE WITH BLACK TEXT. FONT SHALL BE LEGIBLE AND APPROPRIATE FOR GIVEN WIRE SIZE.
 - (12) TIE ALL GROUND POINTS MARKED () BACK TO COMMON GROUND LUG.
 - (13) ALL SWITCHES RATED FOR USE IN CLASS I, ZONE 2 LOCATIONS.
 - (14) RESISTORS R1, R2, AND R3 SHALL BE MOUNTED SO THE WIRE LEADS ARE FACING DOWN.

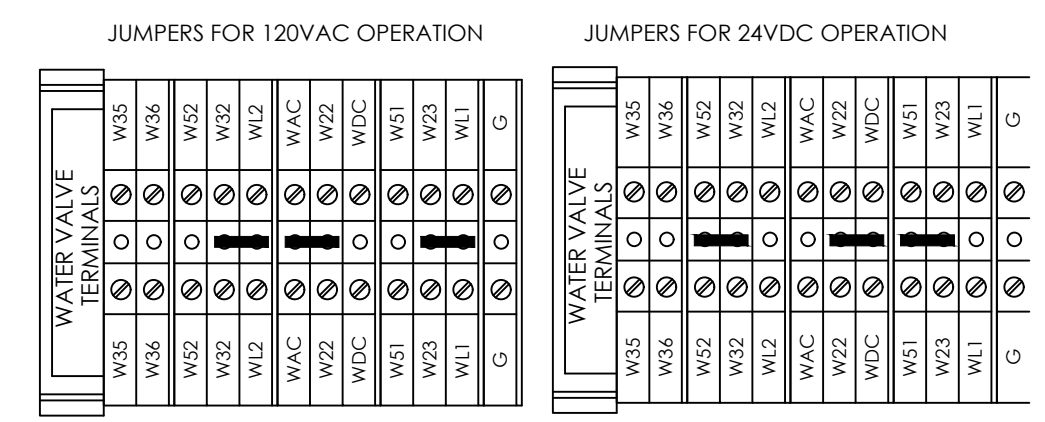
FUSE NO.	DESCRIPTION	PART NUMBER	ELKHART BRASS PART NUMBER
F1, F2	FUSE, CLASS CC, TIME DELAY, CURRENT LIMITING 600 VAC	FNQ-R-5	59079130
F3, F4	FUSE, CLASS CC, FAST ACTING, 600 VAC, 1 AMP	KTk-R-1	32233050
F5, F6, F7, F8	FUSE, CLASS CC, FAST ACTING, 600 VAC, 1 1/2 AMP	KTk-R-1-1/2	32233040
F9	FUSE, CLASS CC, FAST ACTING, 600 VAC, 5 AMP	KTk-R-5	32233160
F10	FUSE, CLASS CC, FAST ACTING, 600 VAC, 3 AMP	KTk-R-3	32233130
F11	FUSE, CLASS CC, TIME DELAY, CURRENT LIMITING, 600 VAC, 6.25 AMP	FNQ-R-6-1/4	IN000068

JUMPER CONFIGURATIONS FOR DIFFERENT INPUT POWERS

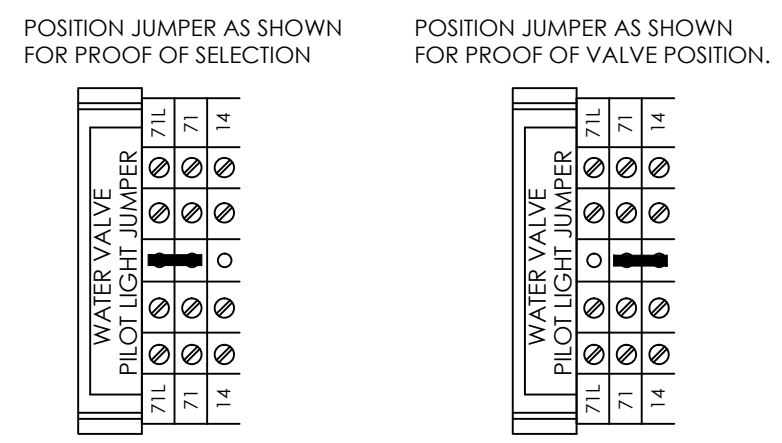
120 VAC, 60 Hz 240 VAC, 50/60 Hz WHEN L2 IS HOT /UNGROUNDDED 240 VAC, 50/60 Hz WHEN L2 IS GROUNDED 480 VAC, 60 Hz



WATER VALVE DRY CONTACTS AND FEEDBACK CONTROL



WATER VALVE OPEN LIGHT



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ELKHART BRASS MFG. CO., INC. 1302 West Broadway Ave. Detroit, MI 48214 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. The print must be returned to Elkhart Brass Mfg. Co., Inc. Copyright © 2013 by Elkhart Brass Mfg. Co., Inc.</small>		DRAWN BY: MSF DATE: 1/8/19 CHECKED BY: MSF DATE: 1/8/2019	ELKHART BRASS Fire Fighting Equipment
MATERIAL: N/A		WEIGHT (LBS): CAT. NO.: INDUSTRIAL SYSTEMS	DESCRIPTION: HARDWIRED MONITOR MOTOR CONTROL PANEL PANEL LAYOUT SIZE: D PART NUMBER: 81471074 REV.: A
TOLERANCE UNLESS OTHERWISE SPECIFIED: 2 PLACE DEC. ± .060" 3 PLACE DEC. ± .030" ANGLES ± 1°		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES ALL FILLETS AND ROUNDS R.006 DO NOT SCALE FROM INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M-1994 CAD MODEL	THIRD ANGLE PROJECTION CAD SCALE: SHEET 1 OF 2

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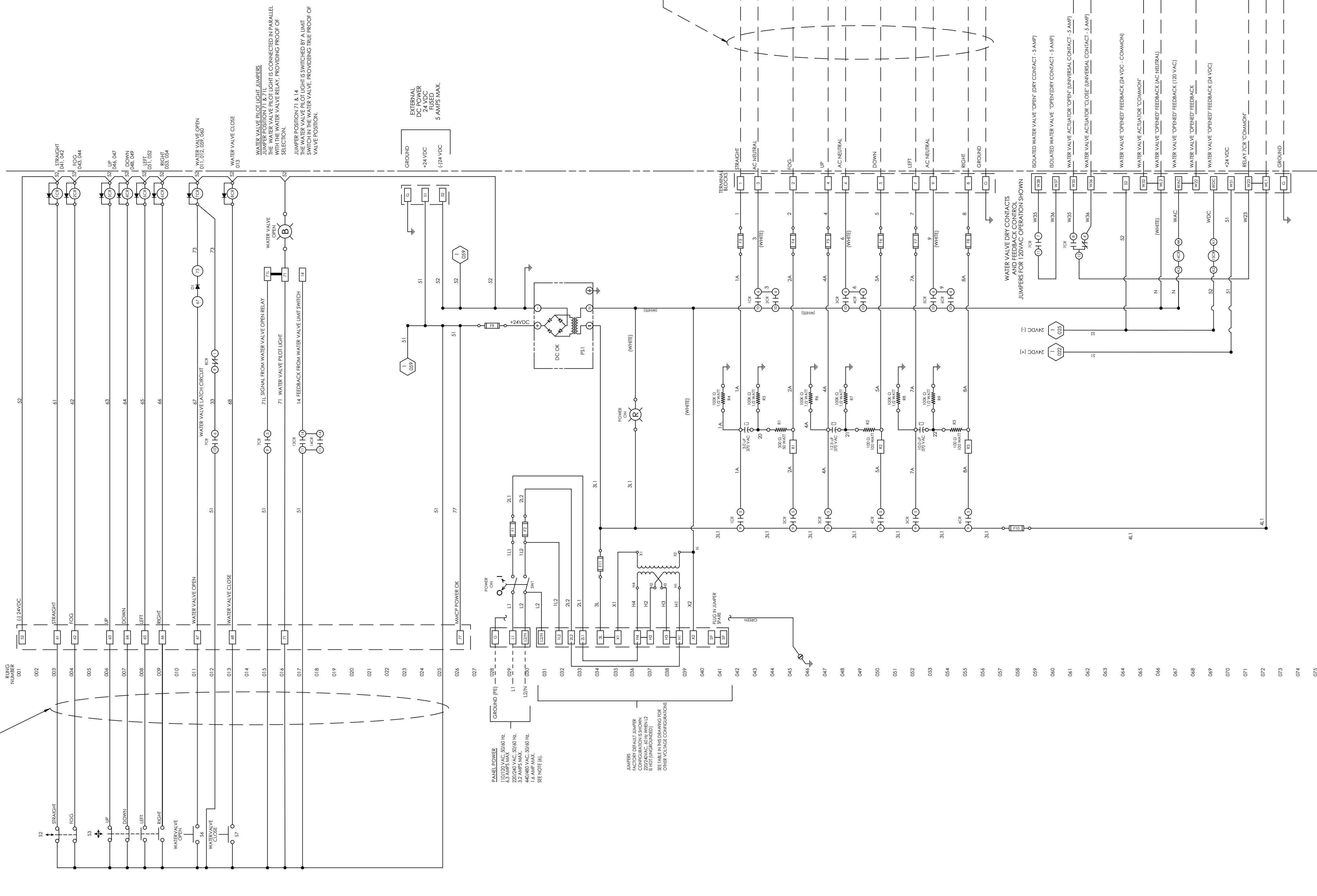
SEE TABLE 1 FOR WIRE SIZE

TABLE 1
WIRE SIZE FOR CONDUCTORS BETWEEN MONITOR MOTOR CONTROL PANEL AND OPERATOR CONTROL PANEL

CONDUCTOR LENGTH	WIRE SIZE
UP TO 750 FEET (228 m)	18-AWG (0.75 mm ²)
750 TO 1500 FEET (228 m)	16-AWG (1.0 mm ²)
1500 TO 2500 FEET (457 m)	14-AWG (2.0 mm ²)
2500 TO 3000 FEET (914 m)	12-AWG (4.0 mm ²)

TABLE 2
WIRE SIZE FOR CONDUCTORS BETWEEN MONITOR MOTOR CONTROL PANEL AND MONITOR JUNCTION BOX

CONDUCTOR LENGTH	WIRE SIZE
UP TO 25 FEET (7.6 m)	18-AWG (0.75 mm ²)
25 TO 50 FEET (7.6 m)	16-AWG (1.0 mm ²)
50 TO 100 FEET (30.5 m)	14-AWG (2.0 mm ²)
100 TO 200 FEET (30.5 m)	12-AWG (4.0 mm ²)
200 TO 400 FEET (121 m)	12-AWG (4.0 mm ²)

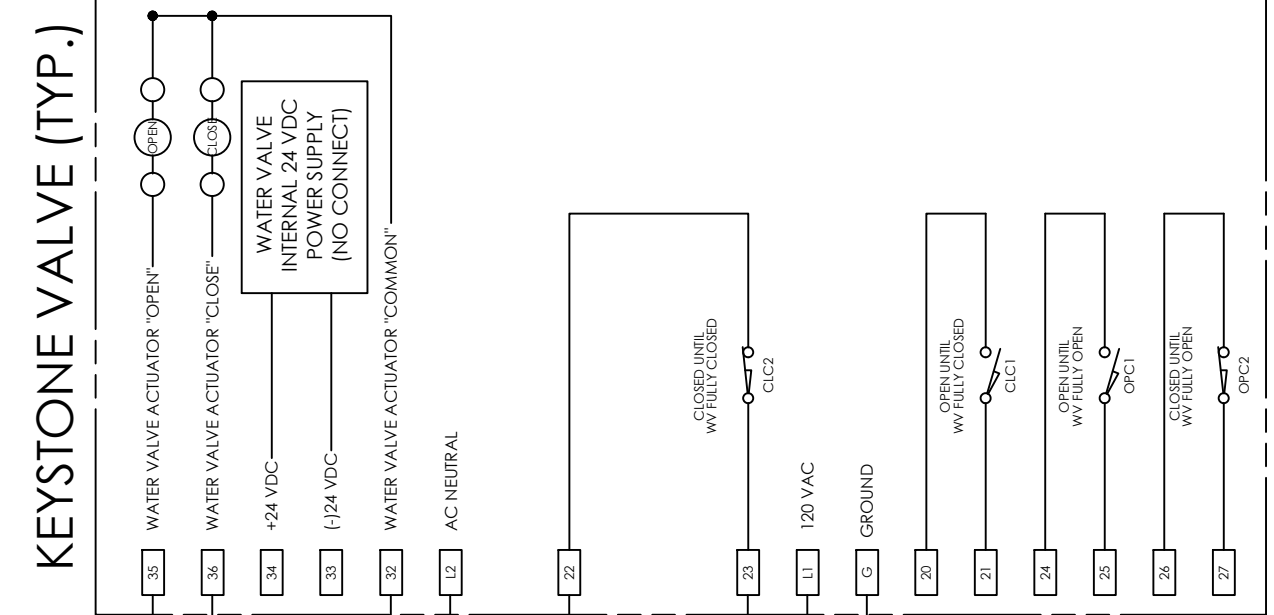
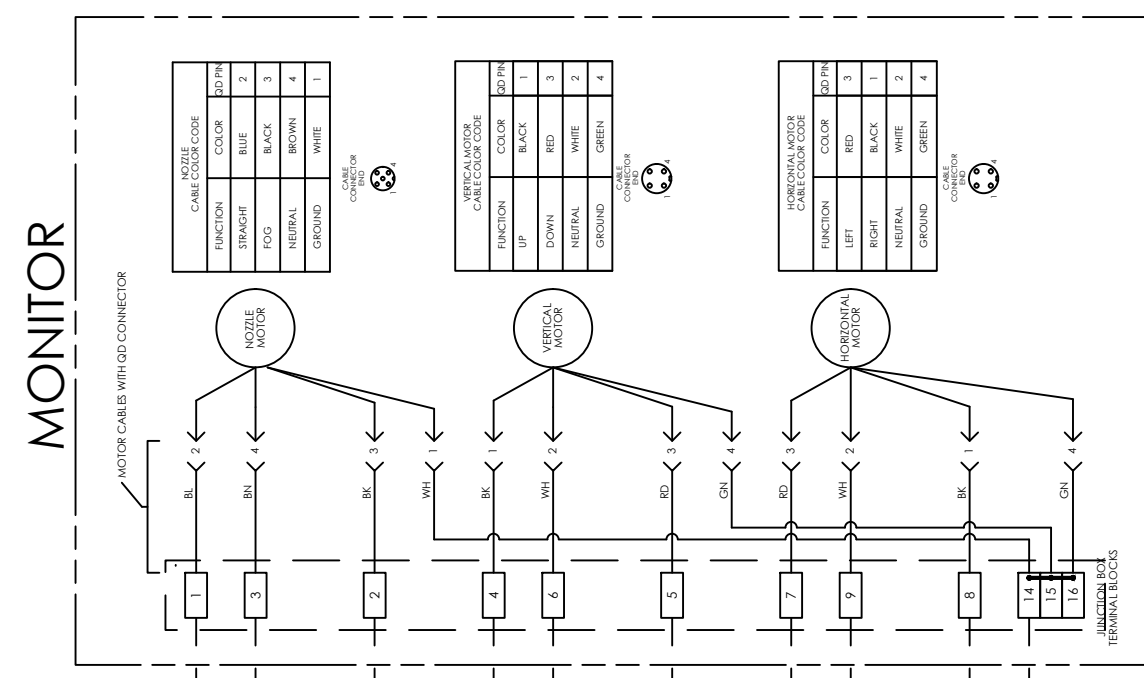


WATER VALVE PILOT LIGHT JUMBERS
JUMPER POSITION 71 & 71.1 LIGHT IS CONNECTED IN PARALLEL WITH THE WATER VALVE RELAY, PROVIDING PROOF OF SECTION.

JUMPER POSITION 71 & 14
SWITCH IN THE WATER VALVE, PROVIDING PROOF OF VALVE POSITION.

EXTERNAL
24 VDC
5 AMP MAX.

SEE TABLE 2 FOR WIRE SIZE



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MATERIAL N/A		CHECKED BY MSF	DATE 1/8/2019	DESCRIPTION MONITOR MOTOR CONTROL PANEL WIRING DIAGRAM	
TOLERANCE UNLESS OTHERWISE SPECIFIED: 2 PLACE DEC. ± .060" 3 PLACE DEC. ± .030" ANGLES ± 1°		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES ALL FILLETS AND ROUNDS R .0625 DO NOT SCALE PRINT INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M-1994		CAT. NO. INDUSTRIAL SYSTEMS	WEIGHT (LBS) SIZE D PART NUMBER 81471074 REV. A
CAD MODEL THRD ANGLE PROJECTION		CAD SCALE:		SHEET 2 OF 2	

REV.	DESCRIPTION	BY	E. C. N.
A	(NOTE: ADDITIONAL ECN BLOCKS TO BE COPIED AND FILLED OUT MANUALLY) SEE REVISION TABLE	MSF	8JAN19