
COX

Research and Technology, Inc.

DUPLEX PUMP
CONTROL PANEL
WEST KENTUCKY

AS BUILTS

JUNE 29, 2010

FIELD REVISIONS

DECEMBER 9, 2020

PUMP 1 SWAPPED OUT FOR SULZER 115HP

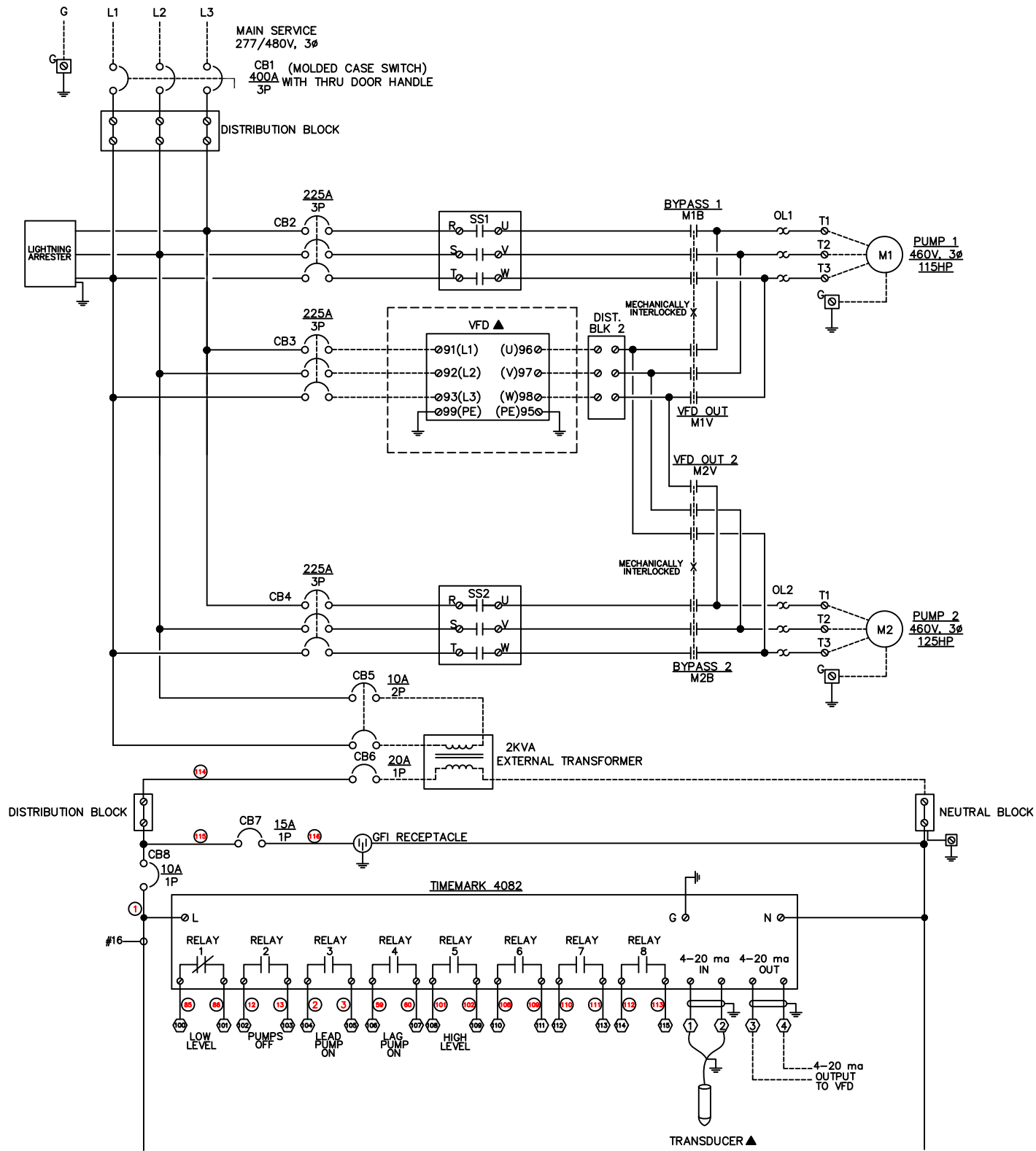
JANUARY 24, 2022

Changed Softstart #1

AUGUST 9, 2022

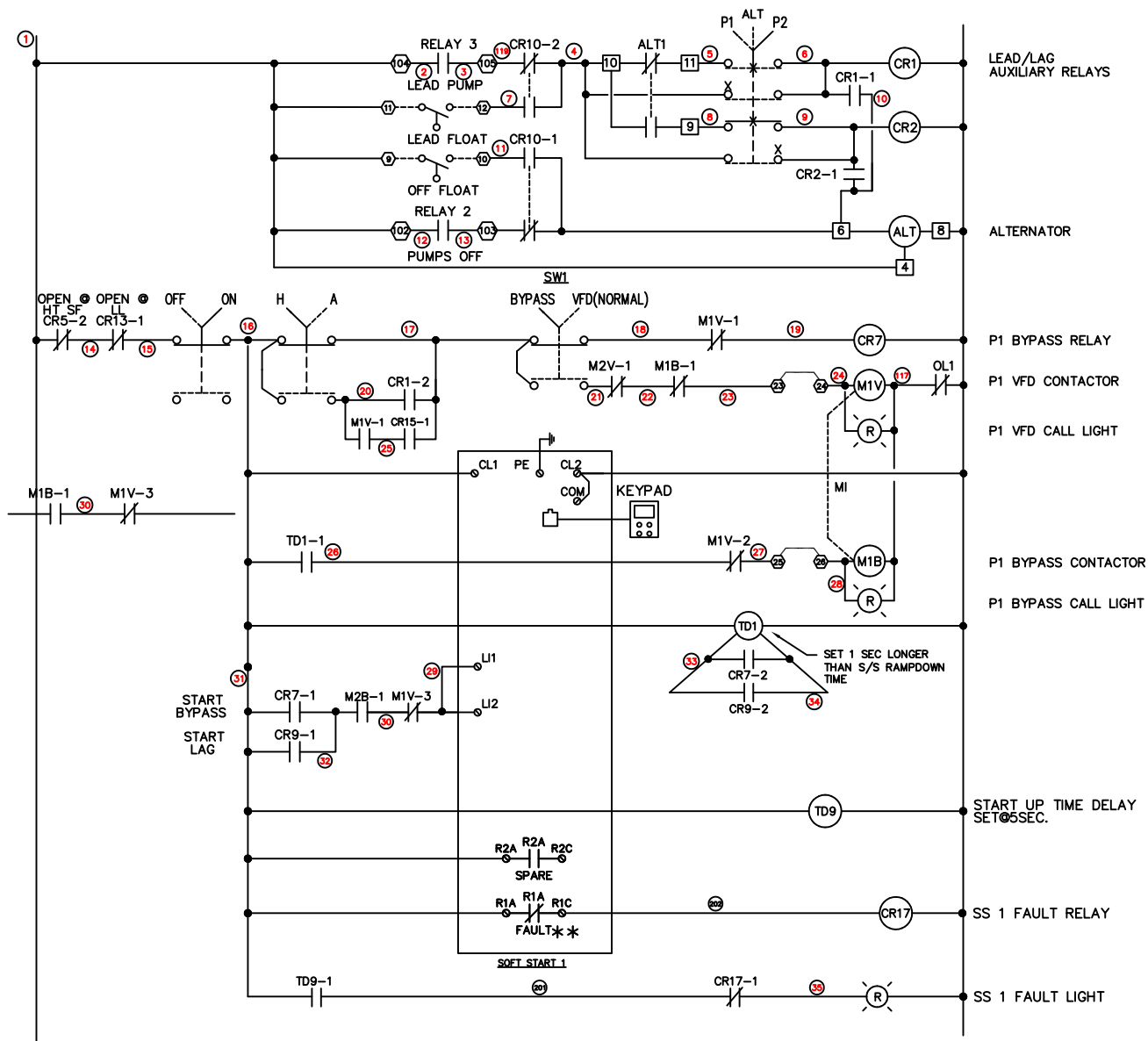
Cox Research and Technology, Inc.
14697 S. Harrells Ferry Road
Baton Rouge, LA. 70816
(225) 756-3271 Fax (225) 755-1030

CP-2206R3



▲ EXTERNALLY MOUNTED, NOT SUPPLIED BY CONTROL PANEL MANUFACTURER

	Drawing Title
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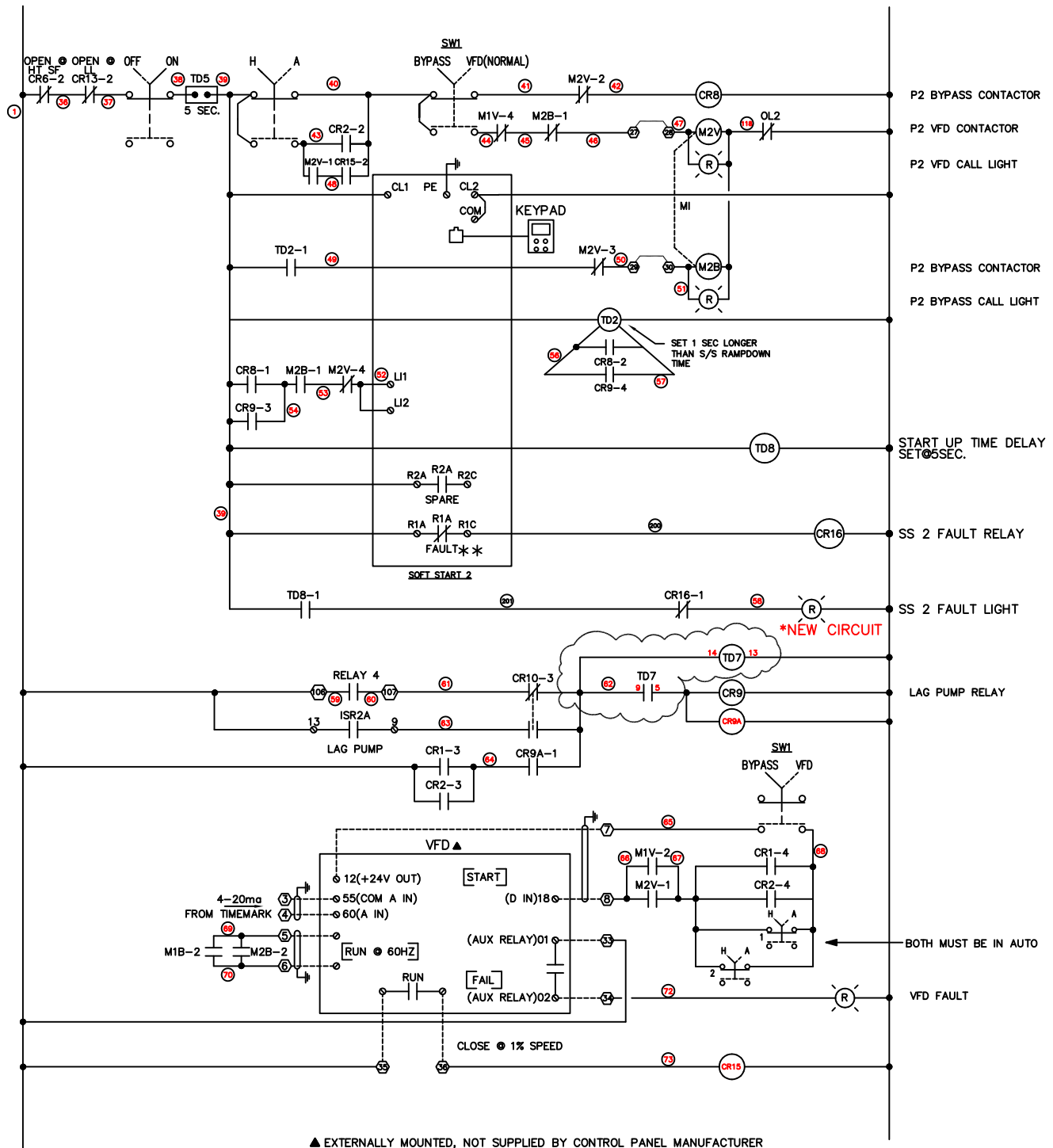
NOTES:

- VFD RAMP DOWN TIME MUST BE LONGER THAN SOFT START RAMP DOWN TIME.(RECOMMEND 8 SEC. MINIMUM.)
- TO RESET SOFT START FAULT, TURN "OFF-ON" SWITCH OFF, THEN BACK ON.
- LOW LEVEL WILL LOCK OUT SOFT STARTS AND CAUSE FAULT LIGHTS TO COME ON. PRESS RESET BUTTON WHEN LEVEL RISES.
- ON OVERLOAD TRIP, TURN POWER OFF BEFORE RESETTING OVERLOADS.

FACTORY TIME DELAY SETTINGS:

TD1: 6 SEC.	TD4: 2 SEC.	SS1 RAMP UP: 5 SEC.
TD2: 6 SEC.	TD5: 5 SEC.	SS1 RAMP DN: 3 SEC.
TD3: 2 SEC.	TD6: 2 SEC.	SS2 RAMP UP: 5 SEC.
		SS2 RAMP DN: 3 SEC.

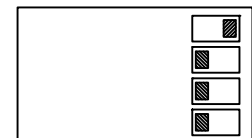
	Drawing Title <div>CONTROL DIAGRAM</div>			R1	P2 CHANGES TO BARNES NEW		12/09/20	N.B.	
					SCHNEIDER SOFT START				
				R2	INSTALLED SULZER PUMP 1		01/24/22	T.L.	
				R3	CHANGED S.S. #1, M1V, M1B		8/9/22	T.L.	
DATE 08/09/22			REFERENCE DRAWING	NO.	REVISION-LOCATION		ECN	DATE	BY
		S/N	Sales Engineer C.C.	Application Engineer R.C.		DRAWN BY NCR		APPROVED BY DATE	
	Project Title <div>DUPLEX PUMP CONTROL PANEL</div>	<div><div></div><div>COX</div><div>Research and Technology, Inc.</div><div></div></div>				P.O. Box 77808 Baton Rouge, LA 70809 Ph. (225)756-3271 Fax (225)755-1030		PURCHASE ORDER NUMBER	
DRAWING NUMBER CP-2206R3									
SHEET NUMBER 3									



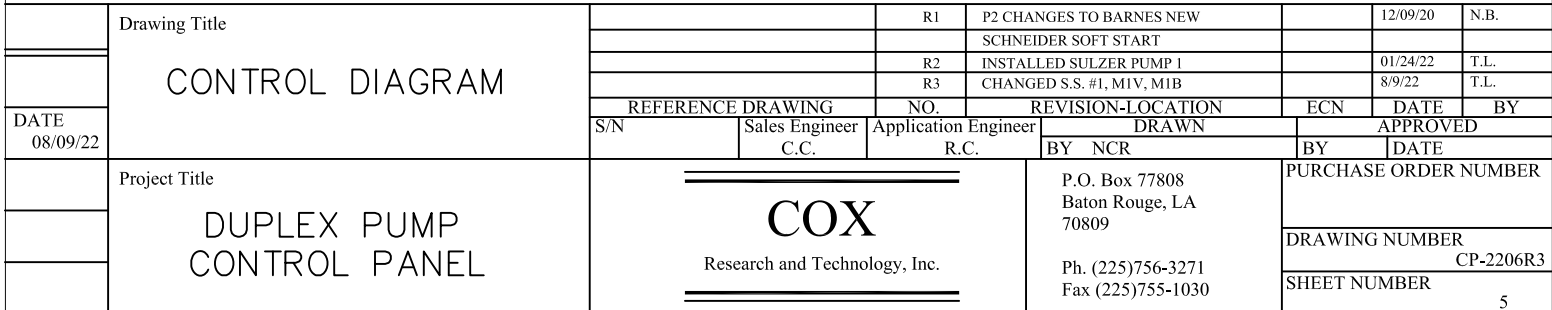
* REMOVE WIRE #62 FROM CR9 & 9A, MOVE TO TD7 Ø 9, 14
 RUN NEW WIRE FROM TD7 Ø 5 TO CR9, 9A
 RUN NEW WIRE FROM CR9 NEUTRAL TO TD7 Ø 13

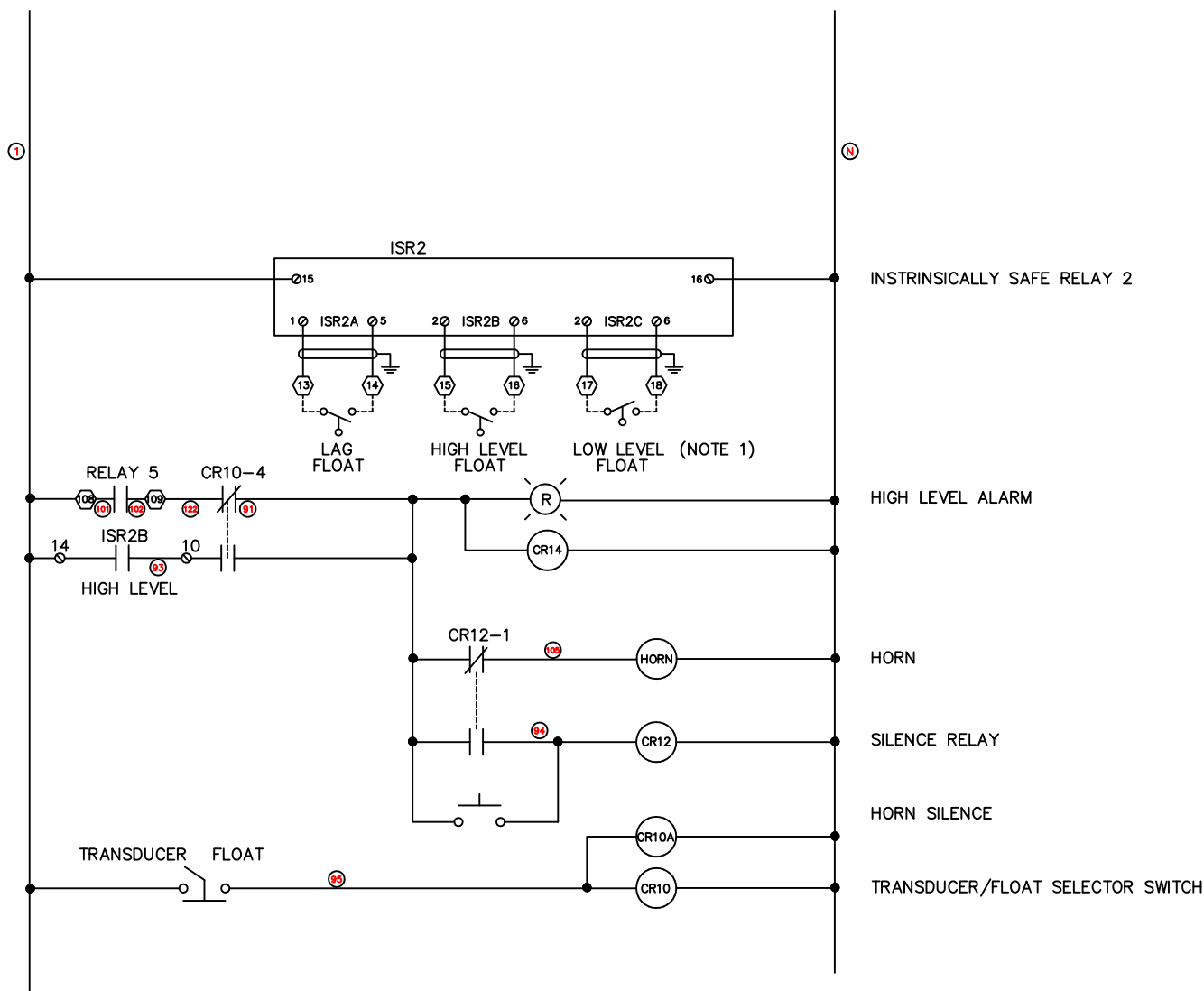
** UPON SOFT START ENERGIZATION, RELAY CLOSSES IF NO FAULT. RELAY OPENS ON FAULT.

DIP SWITCH
 SETTINGS



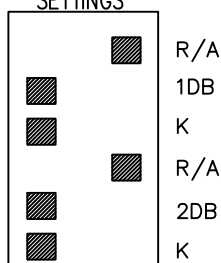
	Drawing Title <div>LAG PUMP TIME DELAY CIRCUIT</div>			R1	P2 CHANGES TO BARNES NEW		12/09/20	N.B.	
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				R3	CHANGED S.S. #1, M1V, M1B		8/9/22	T.L.	
DATE 5/10/06			REFERENCE DRAWING		NO.	REVISION-LOCATION		ECN	DATE
		S/N	Sales Engineer C.C.	Application Engineer R.C.	DRAWN		APPROVED		
	Project Title <div>DUPLEX PUMP CONTROL PANEL</div>				BY NCR		BY	DATE	
		<div>COX</div> <div>Research and Technology, Inc.</div>			P.O. Box 77808 Baton Rouge, LA 70809		PURCHASE ORDER NUMBER		
					Ph. (225)756-3271 Fax (225)755-1030		DRAWING NUMBER CP-2206R3		
							SHEET NUMBER 4A		



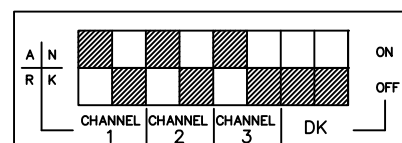


NOTE:
1. THIS FLOAT MUST BE A
NORMALLY CLOSED FLOAT

ISR1 DIP SWITCH SETTINGS



ISR2 DIP SWITCH SETTINGS



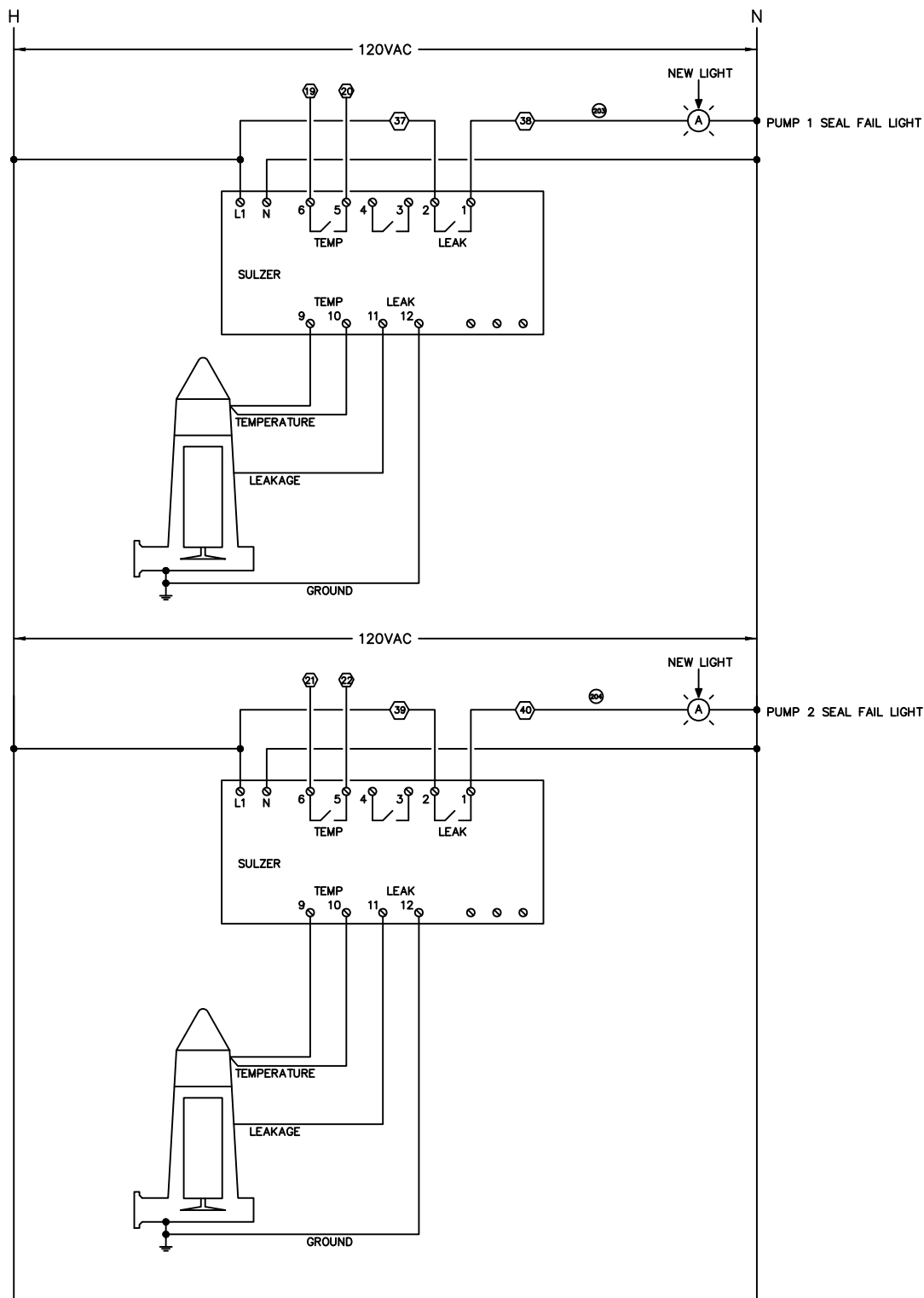
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					Ph. (225)756-3271 Fax (225)755-1030	DRAWING NUMBER CP-2206R3	
						SHEET NUMBER	

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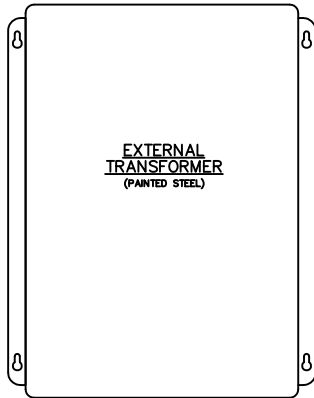
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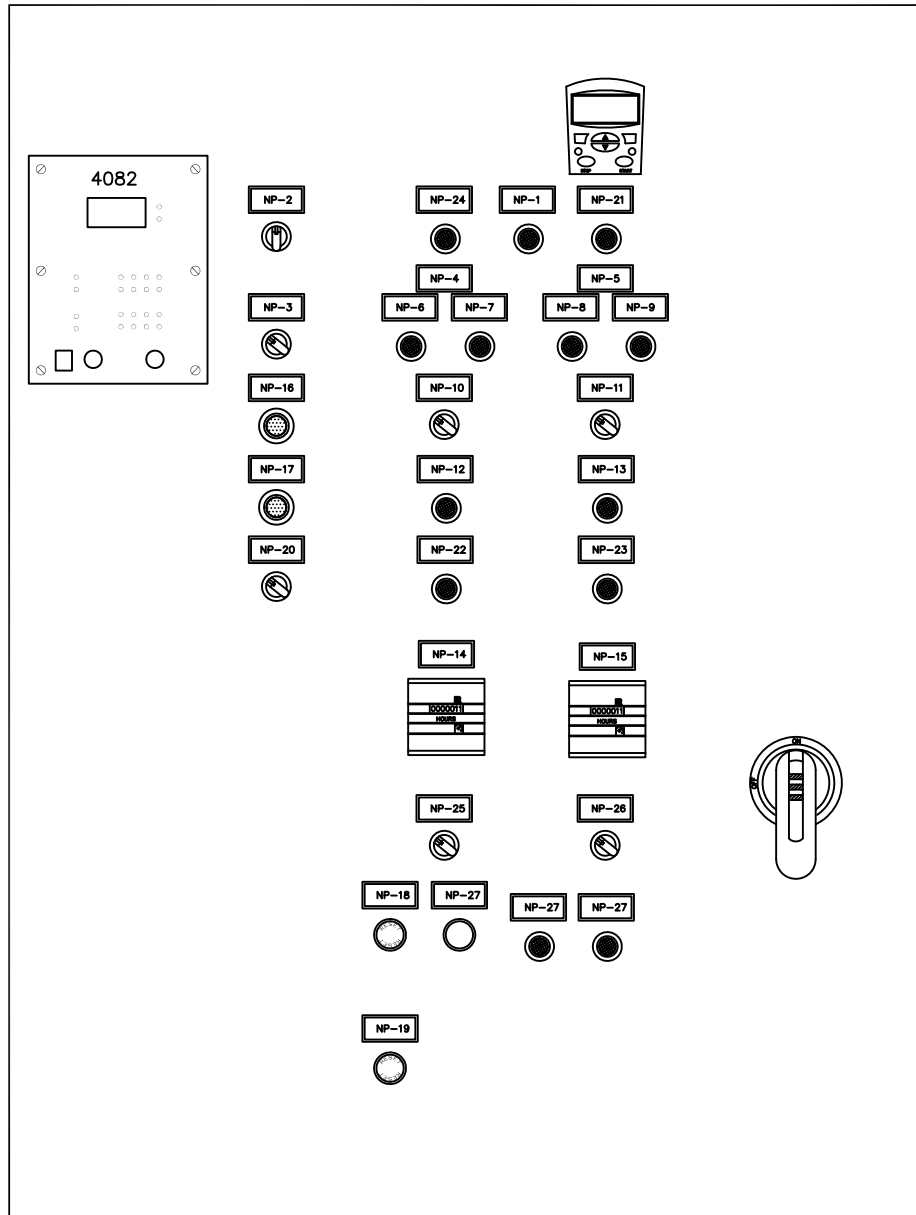
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DATE 08/09/22			REFERENCE DRAWING S/N	NO. Sales Engineer C.C.	REVISION-LOCATION Application Engineer R.C.	ECN DRAWN BY NCR	DATE APPROVED BY
	Project Title <div>DUPLEX PUMP CONTROL PANEL</div>	<div><div></div><div>COX</div><div>Research and Technology, Inc.</div><div></div></div>			P.O. Box 77808 Baton Rouge, LA 70809 Ph. (225)756-3271 Fax (225)755-1030		PURCHASE ORDER NUMBER
DRAWING NUMBER CP-2206R3							
SHEET NUMBER 7							

NEMA 3R PAINTED STEEL ENCLOSURE



HORN

LIGHTNING ARRESTER



VIEW OF SWING OUT PANEL

NAMEPLATE SCHEDULE

NP-1	HIGH LEVEL	NP-14	RUN TIME
NP-2	PI-ALT-P2	NP-15	RUN TIME
NP-3	BYPASS-VFD	NP-16	SILENCE
NP-4	PUMP 1	NP-17	ALARM RESET
NP-5	PUMP 2	NP-18	PUMP 1 OVERLOAD/RESET
NP-6	VFD CALL	NP-19	PUMP 2 OVERLOAD/RESET
NP-7	BYPASS CALL	NP-20	TRANSDUCER/FLOATS
NP-8	VFD CALL	NP-21	LOW LEVEL
NP-9	BYPASS CALL	NP-22	SOFT START FAULT
NP-10	OFF-ON	NP-23	SOFT START FAULT
NP-11	OFF-ON	NP-24	VFD FAULT
NP-12	PUMP FAIL	NP-25	H-A
NP-13	PUMP FAIL	NP-26	H-A
		NP-27	SEAL FAIL

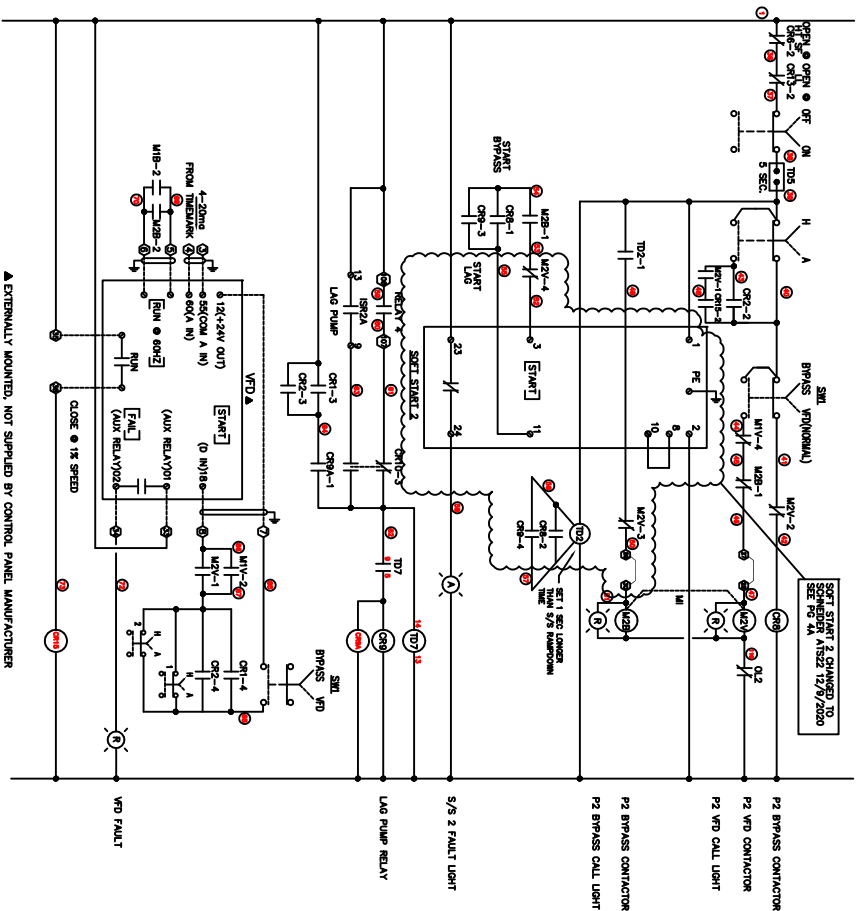
SEWER GASSES WILL DESTROY COMPONENTS IN PANEL. PROPER SEALS MUST BE INSTALLED EXTERNAL TO THE PANEL TO PREVENT ENTRY OF GASSES.

	Drawing Title <div>ENCLOSURE</div>		R1	P2 CHANGES TO BARNES NEW		12/09/20	N.B.		
				SCHNEIDER SOFT START					
			R2	INSTALLED SULZER PUMP 1		01/24/22	T.L.		
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		S/N	Sales Engineer C.C.	Application Engineer R.C.	DRAWN		APPROVED		
	Project Title				BY	NCR	BY	DATE	
	DUPLEX PUMP CONTROL PANEL	<div>COX</div> <div>Research and Technology, Inc.</div>			P.O. Box 77808 Baton Rouge, LA 70809		PURCHASE ORDER NUMBER		
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							SHEET NUMBER 8		

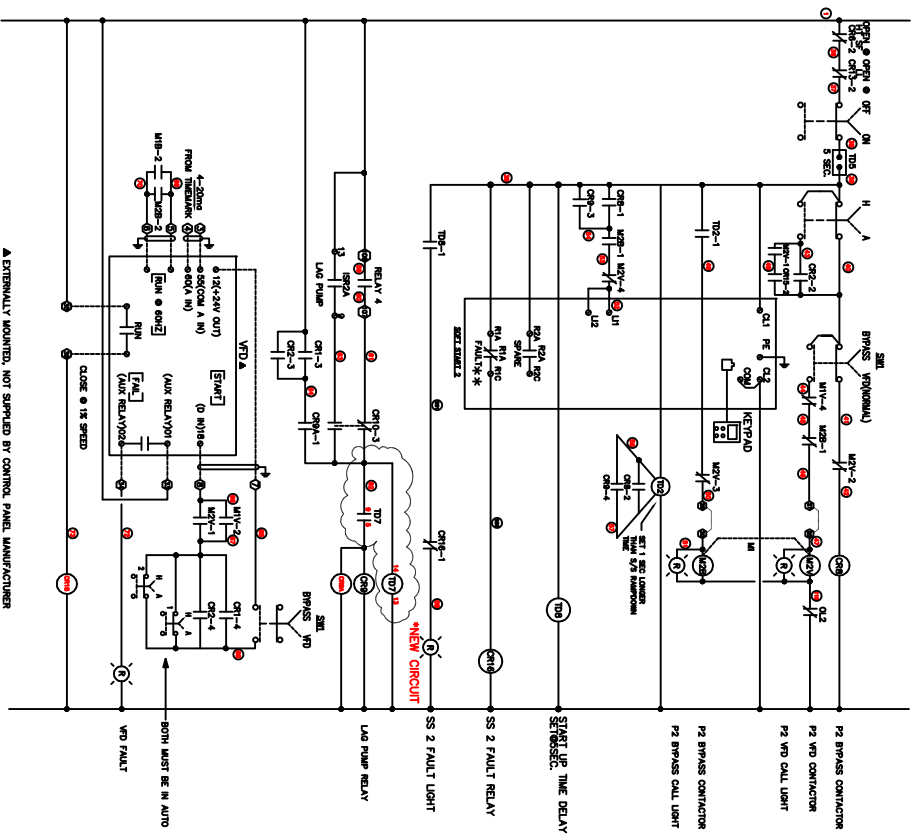
BILL OF MATERIALS

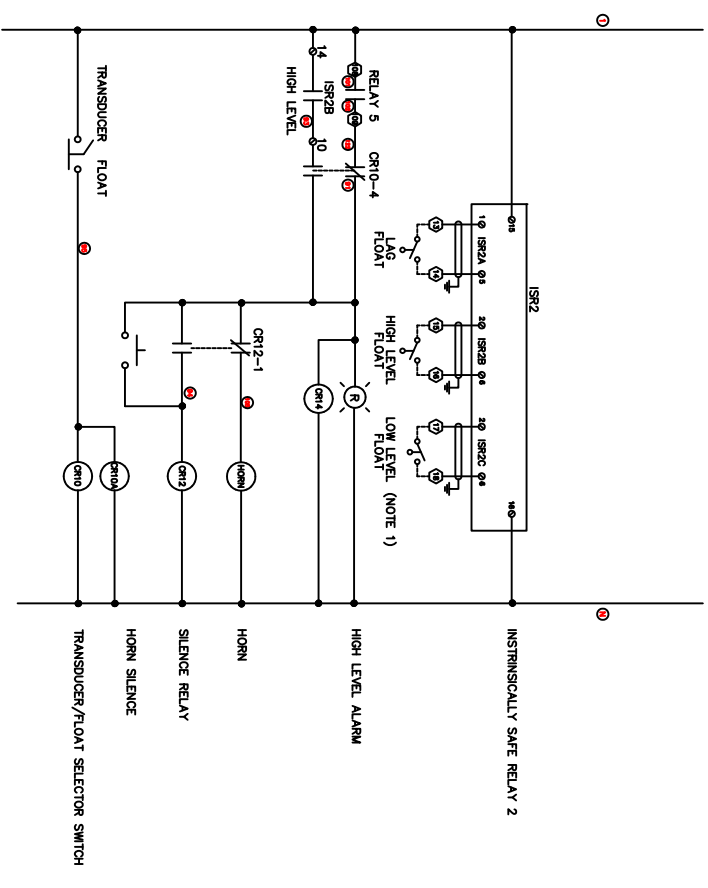
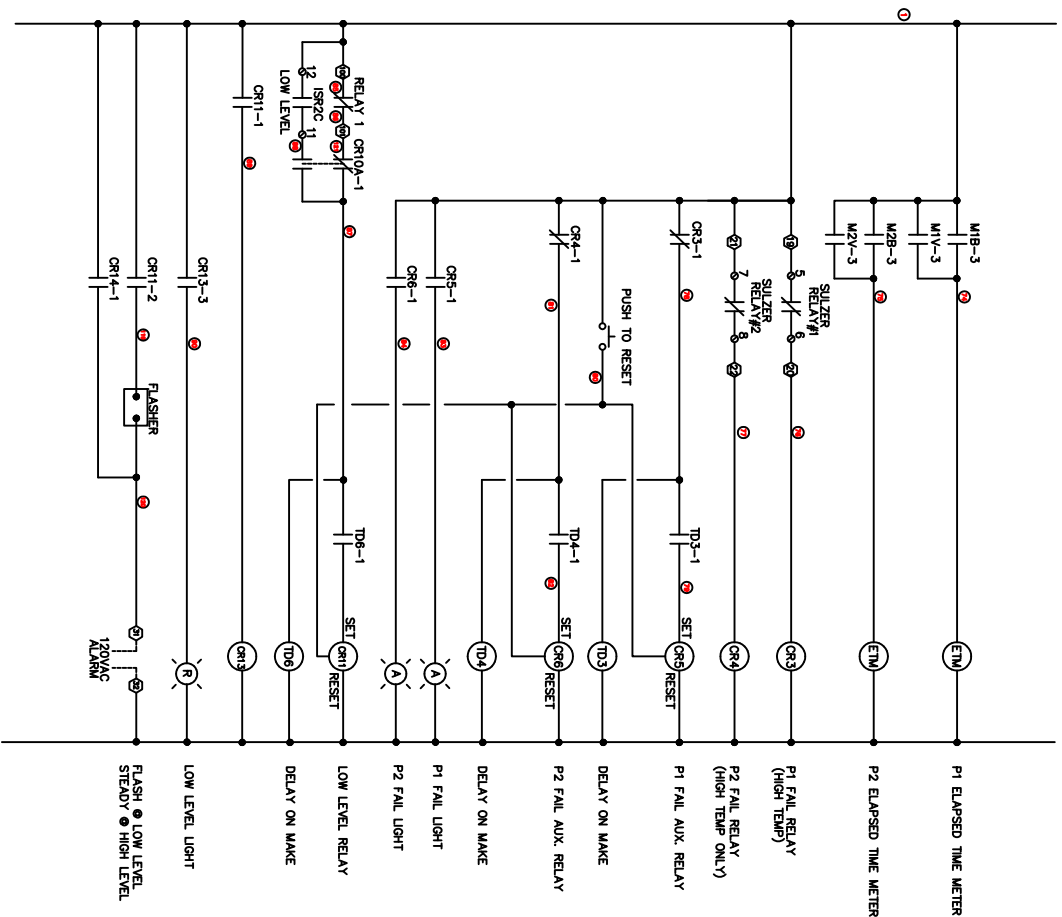
ITEM	QTY	MANUFACTURER	PART NO.	DESCRIPTION
1	1	C&I	C604816DRH	ENCLOSURE
1a	1	C&I	CI-6048P	BACKPLATE
1b	1	C&I	CI-6048SPA	DEAD FRONT
2	1	ABB	S5H400DW	MOLDED CASE SWITCH
3	2	ABB	A260N5-30-11-84	MOTOR STARTERS
4	2	ABB	TA200DU175	OVERLOAD 1,2
5	3	ABB	S3N225TW	CB2, CB3, CB4
6	1	SQUARE D	2S1F	TRANSFORMER
7	1	TIMEMARK	261DT120	ALTERNATING RELAY
8	7	A-B	800H-QR10R	RED PILOT LIGHT
9	1	DAYTON	2A561	TD5
10	1	ABB	K5VDM	MECHANICAL OPERATOR
11	1	ABB	OX10X225	SHAFT
12	1	ABB	OH895J10	HANDLE
13	6	A-B	800H-HR2A	2 POSITION SWITCH
14	1	SQUARE D	QOU115	CB7
15	1	SQUARE D	QOU110	CB8
16	4	A-B	800H-QR10A	AMBER PILOT LIGHT
17	2	REDINGTON	711-0190	ELAPSED TIME METER
18	3	MAGNECRAFT	W388AMLCPX-9	LATCHING RELAY CR 5,6,11
19	2	A-B	800H-AR2A	PUSH BUTTON
20	1	TIMEMARK	4082	LIQUID LEVEL CONTROLLER
21	2	MARATHON	1321580	DISTRIBUTION BLOCK
22	2	ABB	KPR3-104B	O.L. RESET
23	1	EDWARDS	870P-N5	HORN
24	14	IDEC	RU4S-A110	CR1,2,3,4,7,8,9,9A,10,10A,12,13,14,15
25	1	SQUARE D	QOU120	CB6
26	1	STOCK		GFI
27	8	ABB	CAL5-11	AUXILIARY CONTACTS
28	1	TURCK	MK13-22EXOR-115VAC	ISR1
29	1	ABB	S202UP-K10	CB5
30	1	DELTA	LA603	LIGHTNING ARRESTER
31	1	ABB	VM300H	MECHANICAL INTERLOCK
32	1	SQUARE D	9080LBA365106	DISTRIBUTION BLOCK
33	2	SQUARE D	9080LB53	DIST. BLOCK COVERS
34	1	SQUARE D	9080LBA3652021	DISTRIBUTION BLOCK
35	2	ABB	ATK300/2	TERMINAL LUG 2 POLE
36	4	ABB	ATK300	TERMINAL LUG
37	1	SSAC	FS126RC	FLASHER
38	6	ABB	K4TD	BREAKER LUGS
39	2	ABB	K5TG	BREAKER LUGS
40	1	TURCK	MK13-33EXOR/115VAC	ISR2
41	3	OMRON	H3YN2AC120	TD 3,4,6
42	2	DAYTON	5YZ88N	TD 1,2
43	1	WEG	SSW060170T2257ESZ	SOFT START 1
44	1	SQUARE D	9001KS401B	3 POSTION SWITCH
45	1	SQUARE D	9001KA1	CONTACT BLOCK
46	1	SQUARE D	9001KA2	CONTACT BLOCK
47	1	SQUARE D	9001KA3	CONTACT BLOCK
48	2	FINDER	55.34.8.120.0050	CR16, CR17
49	2	FINDER	85.04.0.125.0000	TD8, 9
50	4	FINDER	94.04	RELAY BASE
51	2	SCHNEIDER	ATS22C21S6U	SOFT START 1,2
52	2	SIEMENS	52PYA	SEAL FAIL LIGHT
53	2	ABB	AF265N5-30-11-13	MOTOR STARTER
54	1	ABB	VM19	MECHANICAL INTERLOCK
55	6	ABB	CAL19-118	AUX CONTACT BLOCK

	Drawing Title		R1	P2 CHANGES TO BARNES NEW		12/09/20	N.B.	
				SCHNEIDER SOFT START				
DATE 08/09/22		BILL OF MATERIALS		R2	INSTALLED SULZER PUMP 1		01/24/22	T.L.
				R3	CHANGED S.S. #1, M1V, M1B		8/9/22	T.L.
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SHEET NUMBER 9								

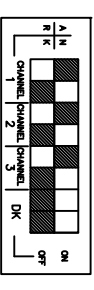
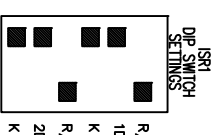


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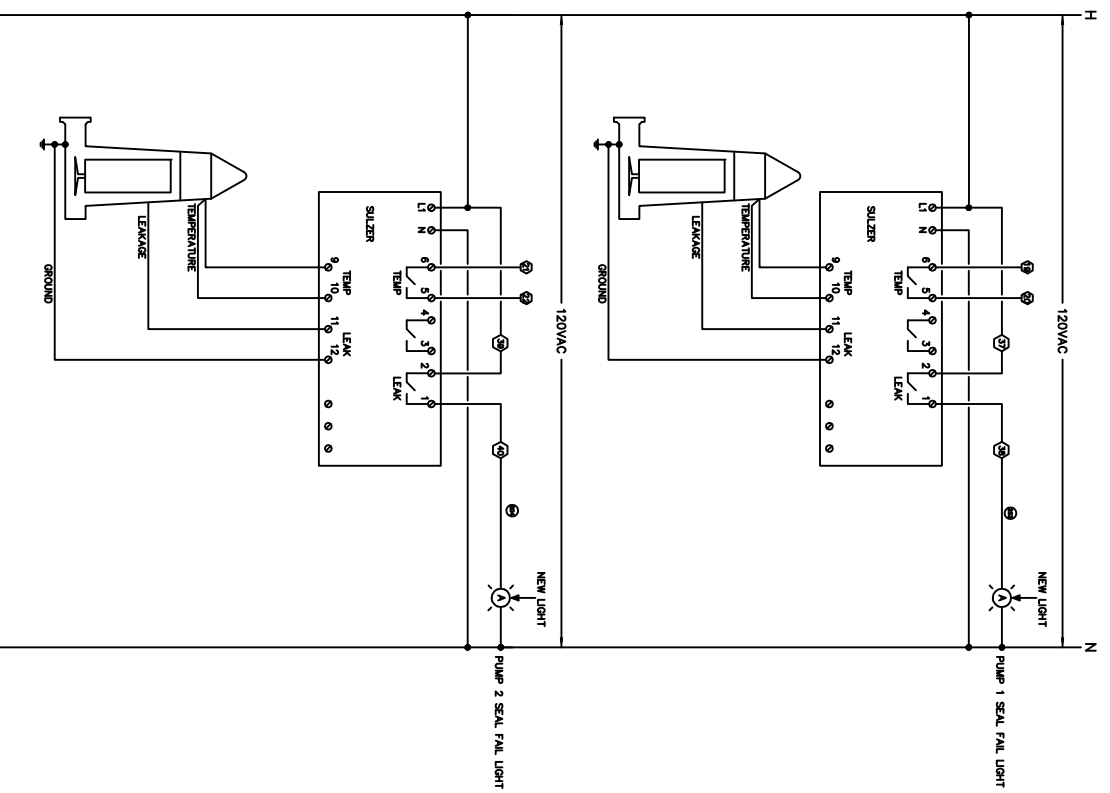




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