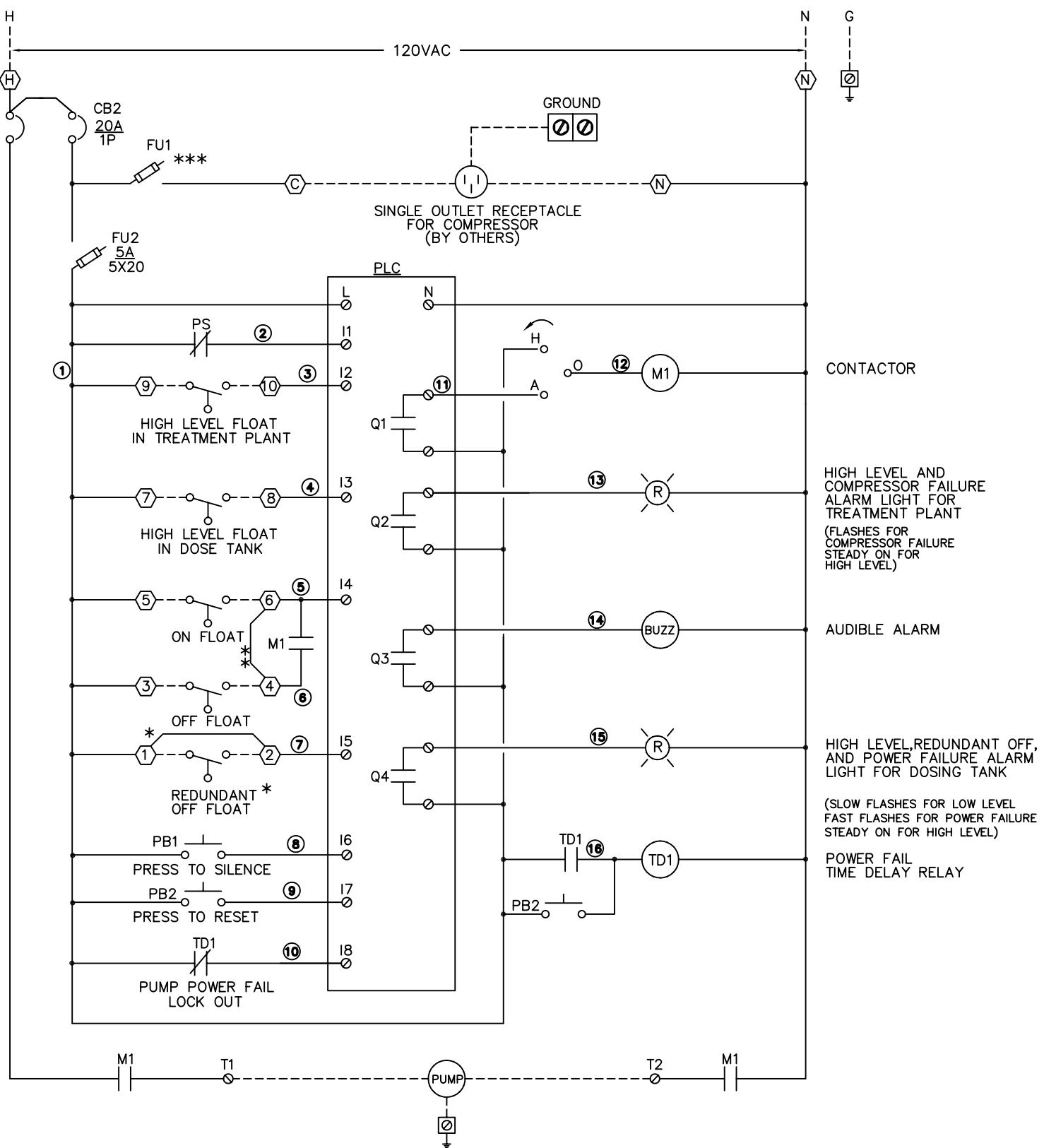

COX

Research and Technology, Inc.

PUMP & COMPRESSOR CONTROL PANEL

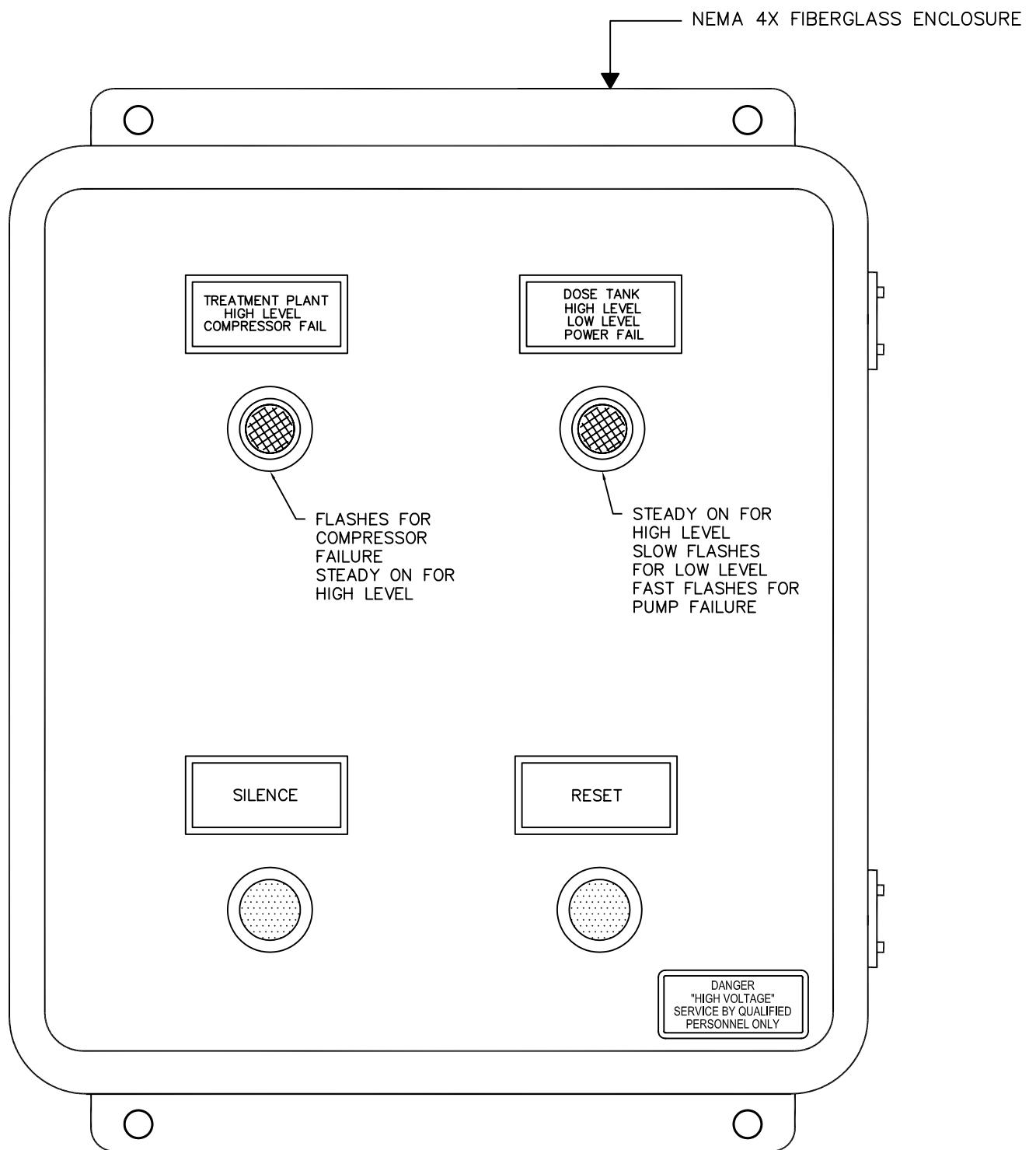
Cox Research and Technology, Inc.
14697 S. Harrells Ferry Road
Baton Rouge, LA. 70816
(225) 756-3271 Fax (225) 755-1030



* REMOVE BAR JUMPER IF REDUNDANT OFF FLOAT IS REQUIRED
 ** ADD WIRE JUMPER FOR RCT MODE. FLOAT IN TERMINALS 5 & 6 IS NOT REQUIRED.
 *** FUSE SIZE VARIES WITH COMPRESSOR SIZE PER NATIONAL ELECTRIC CODE

PROGRAM: CP2056Ar5

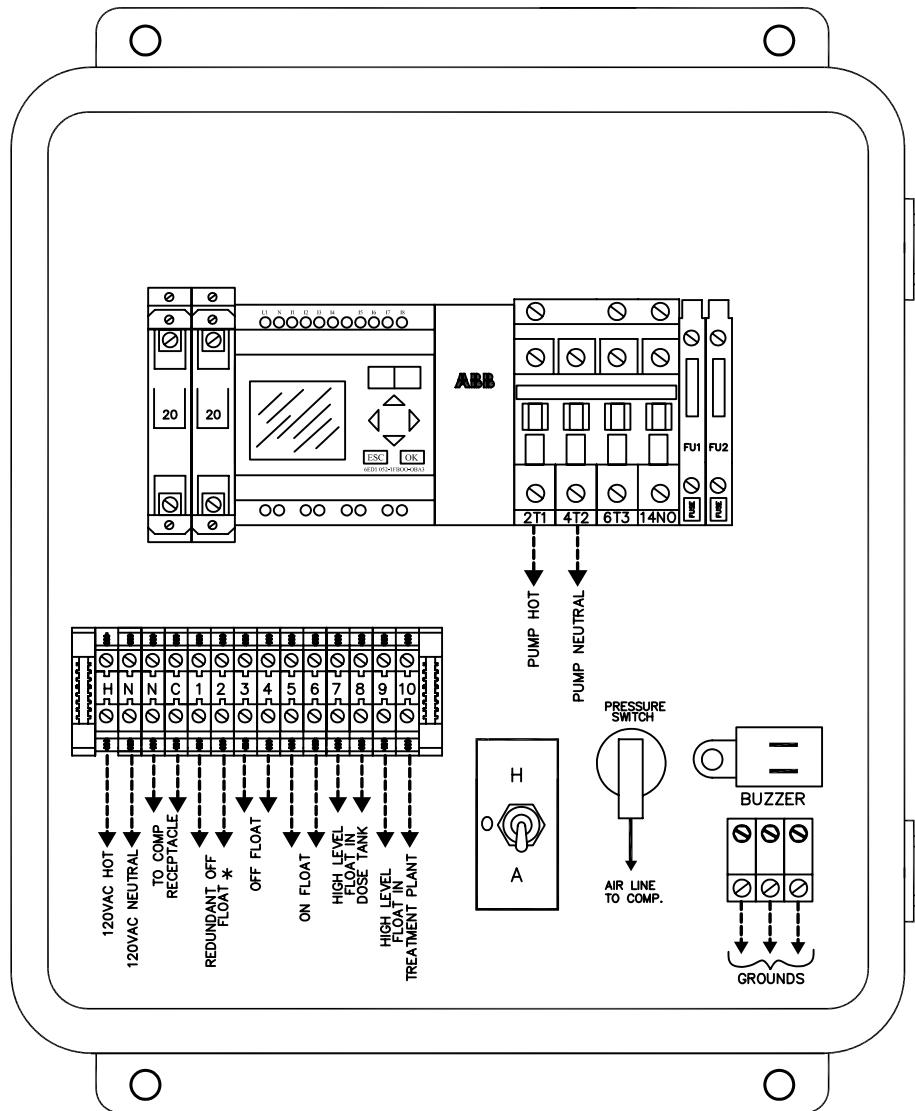
	Drawing Title POWER/CONTROL DIAGRAM				
			1	NOTE JUMPER/REDUNDANT OFF FLOAT	5/12/06
		REFERENCE DRAWING S/N	NO. C.C.	REVISION-LOCATION DRAWN BY COREYC	ECN APPROVED BY DATE
DATE 02/14/07	Project Title PUMP & COMPRESSOR CONTROL PANEL	COX Research and Technology, Inc.		P.O. Box 77808 Baton Rouge, LA 70809 Ph. (225)756-3271 Fax (225)755-1030	PURCHASE ORDER NUMBER DRAWING NUMBER CP-2056Ar5 SHEET NUMBER 1



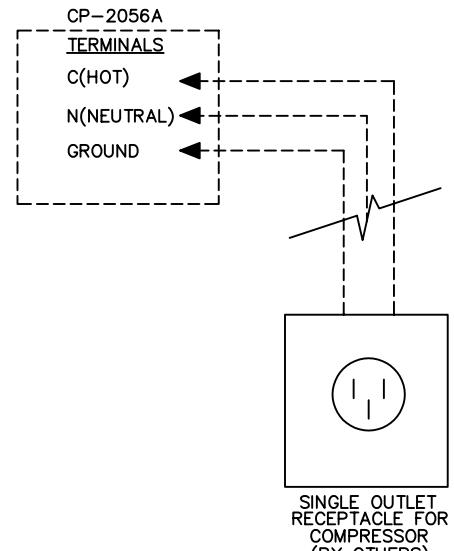
VIEW OF FRONT OF ENCLOSURE

	Drawing Title						
	ENCLOSURE						
		1	NOTE JUMPER/REDUNDANT OFF FLOAT			5/12/06	
	REFERENCE DRAWING	NO.	REVISION-LOCATION	ECN	DATE	BY	
DATE 02/14/07	S/N	Sales Engineer	Application Engineer	DRAWN	APPROVED		
	C.C.		R.C.	BY COREYC	BY	DATE	
	Project Title	<hr/> <hr/> <hr/> COX <hr/> <hr/> <hr/> Research and Technology, Inc. <hr/> <hr/> <hr/>			P.O. Box 77808 Baton Rouge, LA 70809	PURCHASE ORDER NUMBER	
	PUMP & COMPRESSOR CONTROL PANEL				Ph. (225)756-3271 Fax (225)755-1030	DRAWING NUMBER CP-2056Ar5	
						SHEET NUMBER 2	

CP2056A
CONTROL PANEL



VIEW OF INTERIOR OF ENCLOSURE

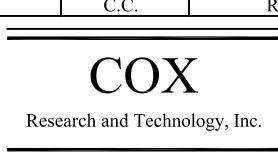


* REMOVE BAR JUMPER IF REDUNDANT OFF FLOAT IS REQUIRED

	Drawing Title ENCLOSURE					
			1	NOTE JUMPER/REDUNDANT OFF FLOAT		5/12/06
		REFERENCE DRAWING S/N	NO. C.C.	REVISION-LOCATION DRAWN BY COREYC	ECN	DATE BY APPROVED
DATE 02/14/07		Sales Engineer	Application Engineer R.C.		BY	DATE
	Project Title PUMP & COMPRESSOR CONTROL PANEL	COX Research and Technology, Inc.			P.O. Box 77808 Baton Rouge, LA 70809 Ph. (225)756-3271 Fax (225)755-1030	PURCHASE ORDER NUMBER DRAWING NUMBER CP-2056Ar5 SHEET NUMBER 3

BILL OF MATERIALS

ITEM	QTY	MANUFACTURER	PART NO.	DESCRIPTION
1	1	STAHLIN	J1210HAPL	ENCLOSURE
1a	1	STAHLIN	BP1210AL	BACKPLATE
2	2	SQUARE D	QOU120	CB1,2
3	1	SIEMENS	LOGO! OBA5	PLC
4	1	ABB	A16-30-10-84	CONTACTOR
5	2	ACI	MONOBLOCK	PILOT LIGHT
6	2	ACI	JR22AN20B	PUSH BUTTON
7	1	HERGA	SINGLE	PRESSURE SWITCH
8	1	U.S. CONTROL	10191-60	BUZZER
9	9	WEIDMUELLER	WDU4	TERMINAL BLOCK
10	2	WEIDMUELLER	WSI6	FUSE HOLDER
11	3	WEIDMUELLER	WDU6	TERMINAL BLOCK
12	1	ABB	ISVR430120R0100	TIME DELAY RELAY
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

	Drawing Title BILL OF MATERIALS								
				1	NOTE JUMPER/REDUNDANT OFF FLOAT			5/12/06	
		REFERENCE DRAWING	NO.	REVISION-LOCATION	ECN	DATE	BY		
DATE 02/14/07		S/N	Sales Engineer	Application Engineer	DRAWN		APPROVED		
		C.C.		R.C.	BY COREYC	BY	DATE		
	Project Title PUMP & COMPRESSOR CONTROL PANEL	 COX Research and Technology, Inc.				P.O. Box 77808 Baton Rouge, LA 70809	PURCHASE ORDER NUMBER		
						Ph. (225)756-3271 Fax (225)755-1030	DRAWING NUMBER CP-2056Ar5		
							SHEET NUMBER 4		

PARAMETERS (FACTORY SETTINGS)

PARAMETER SETTINGS ARE REQUIRED IN RCT MODE ONLY.

FROM THE FOLLOWING SCREEN

ON	XX: XX	← ON TIME
OFF	XX: XX	← OFF TIME
	XX: XX	← TIME REMAINING

PRESS **ESC** FOR 2 SECONDS

PRESS **OK**

C1
▲

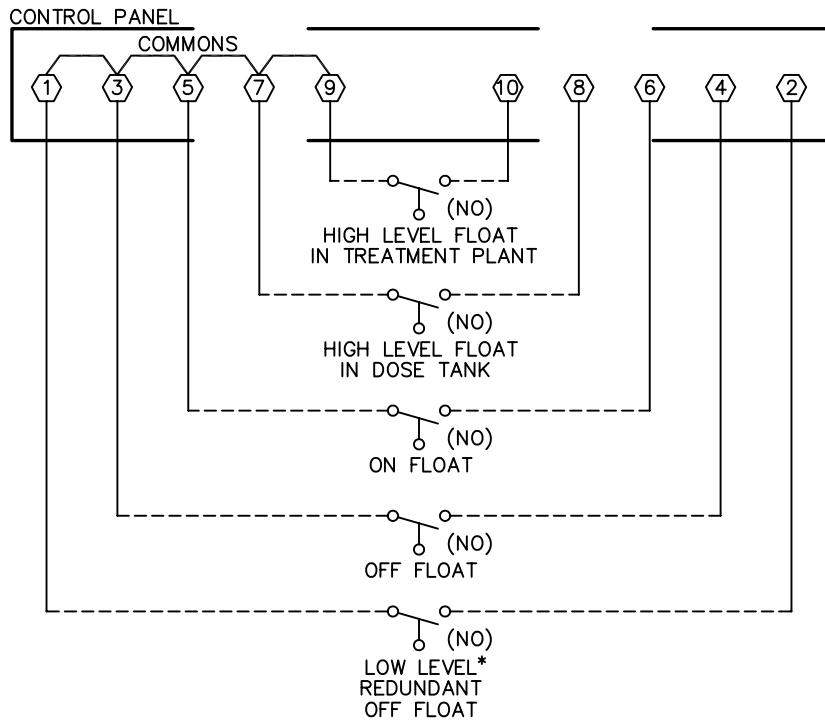
TOGGLE SETTINGS WITH C3 ← → C4 AND **OK**

▼
C2

PRESS **OK**

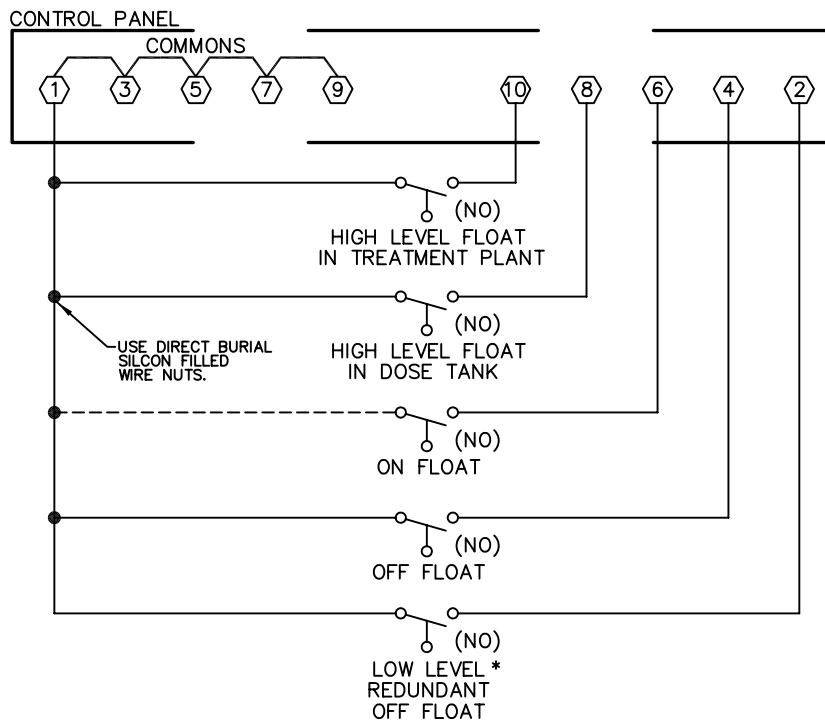
PRESS **ESC**

FLOAT ARRANGEMENT
2056 SERIES



* IF NOT USED, ADD JUMPER BETWEEN TERMINALS 1 & 2

ALTERNATIVE FLOAT ARRANGEMENT
2056 SERIES



* IF NOT USED, ADD JUMPER BETWEEN TERMINALS 1 & 2

OPERATION

The compressor will run continuously and is protected by fuse FU1.
The controller is protected by fuse FU2.

The controller will alarm under the following conditions:

1. High level in treatment plant
2. High level in dose tank
3. Low level in dose tank
4. Compressor failure
5. If power has been off more than the time setting on the time delay relay TD1

The controller will lock out the dose pump under the following conditions:

1. High level in treatment plant
2. Low level in dose tank
3. If power has been off more than the time setting on the time delay relay TD1
4. Compressor failure

The reset P.B. will have to be manually pressed to reset

As the level rises in the dose tank to the level of the ON float, the pump will start. The pump will run until the level drops to the OFF float level. Adjust the power failure relay to 10 minutes (factory setting). After the power has been off for 10 minutes, the dose pump will not run until the reset button is pressed.

The pump can be operated manually by pushing the HOA switch to the H (hand) position. The switch is spring return. Do not run the pump dry. The pump can be operated manually even if the controller fails.

In RCT mode, when the level rises to the level of the float in terminals 3 & 4, the timer starts the off time. At the end of the off time, the pump will run for the on time or until the float drops.

Treatment plant alarm light

1. Flashes for compressor failure
2. Steady on for high level

Dose tank alarm

1. Steady on for high level
2. Slow flash for low level
3. Fast flash for power failure

TROUBLE SHOOTING

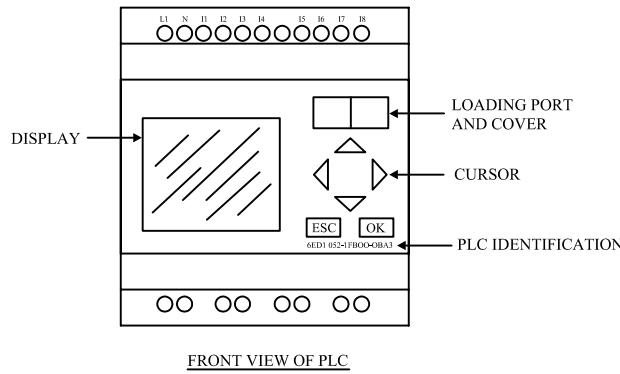
FU1 blows - check compressor and wiring

FU2 blows - check float switch wiring

CB1 trips - check pump and wiring

DISCONNECT ALL POWER TO PANEL BEFORE SERVICING

Setting the PLC



FRONT VIEW OF PLC

Upon power up the clock screen may not be displayed. The screen is considered the “main” screen and will be the starting point for all programming.

Press the “**DOWN**” key to scroll until the clock screen is shown.

To enter into program mode press “**ESC**” once. Arrow down to desired selection and press “**OK**”.

- To set clock, arrow down to “**SET**” and press “**OK**”. “**CLOCK**” will appear. Press “**OK**”. “**SET CLOCK**” will then appear. Press “**OK**” again. Use “**LEFT**” and “**RIGHT**” arrow keys to maneuver around and the “**UP**” and “**DOWN**” keys to change setting. Once complete press “**OK**”. To get back to main screen press “**ESC**” three times.

EXAMPLES:

TH 10:30 = 10:30 AM THURSDAY

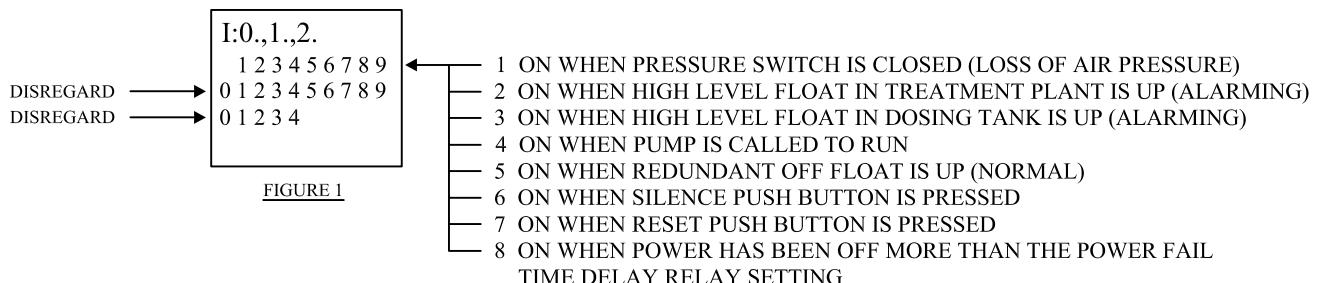
FR 23:15 = 11:15 PM FRIDAY

MO 13:30 = 1:30 P MONDAY

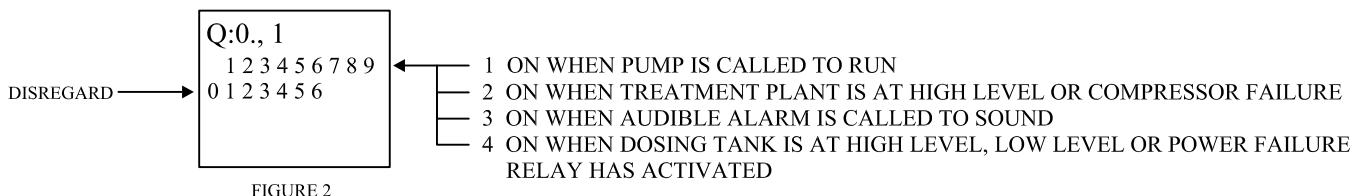
To view inputs, at the main screen (clock showing) press the “**RIGHT**” arrow key. To return to main screen press “**LEFT**” arrow key.

To view outputs, at the main screen (clock showing) press the “**RIGHT**” arrow key twice. To return to main screen press “**LEFT**” arrow key twice.

INPUTS



OUTPUTS



PARAMETERS

B033 - RCT OFF TIME (TH=02:00H)
RCT ON TIME (TL=12:00M)

B033 - DISREGARD IF IN DEMAND MODE

B100 - ON = STOPS PUMP ON AIR COMPRESSOR FAILURE
*B100 - OFF = DOES NOT STOP PUMP

B101 - ON = STOPS PUMP ON HIGH LEVEL IN TREATMENT PLANT
*B101 - OFF = DOES NOT STOP PUMP

B102 - ON = STOPS PUMP ON LOSS OF POWER FOR 10 MINUTES
*B102 - OFF = DOES NOT STOP PUMP
WHEN B102 IS SET TO OFF, NO ALARM WILL OCCUR

B103 - ON = RCT MODE
*B103 - OFF = DEMAND MODE

*B104 - ON = AUTO RESET OF HLDT ALARM
B104 - OFF = MANUAL RESET OF HLDT ALARM

* = FACTORY SETTING

OTHER

THERE IS A 2 MINUTE DELAY ON POWER UP BEFORE PUMP WILL RUN.

LOSS OF COMPRESSOR ALARM AND SHUTDOWN FACTORY SET AT 15 SECONDS.

PUMP DELAYS 2 SECONDS WHEN CALLED TO RUN VIA FLOAT SWITCH.

PUMP STOP ON POWER FAILURE REQUIRES AUXILIARY POWER FAIL RELAY WIRED TO 18

PUMP ETM AND START COUNTS ARE "CALL FOR" SIGNALS IN AUTO MODE.

THIS SHOULD ACCOUNT FOR 99% OF ALL RUN TIME AND COUNTS.

OPERATION IN RCT MODE:

1. RCT STARTS IN OFF MODE WHEN THE OFF FLOAT RISES.
2. PUMP WILL START AT THE END OF THE OFF TIME AND WILL CONTINUE TO CYCLE UNTIL THE OFF FLOAT DROPS.
3. RCT REMEMBERS ITS TIMING POINT AND WILL RESUME UPON POWER RESTORATION.