Base Load Power Hub (BLPH)

NITROGEN GENERATION PACKAGE A-64000
PACKAGE CAUSE EFFECT MATRIX /LOGIC DIAGRAMS

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Rev.	Date	Description	Prepared	Reviewed	Approved

COES

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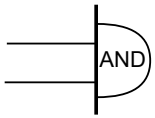
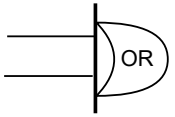
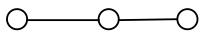
CUSTOMER	END USER
ROSETTI MARINO	CROSSWIND

DOCUMENT NUMBER:
"64-LP-001 LOGIC DIAGRAM"

DRAWN BY:	CHECKED BY:	APPROVED:
R. BERETTA	R. MANZONI	R. MANZONI

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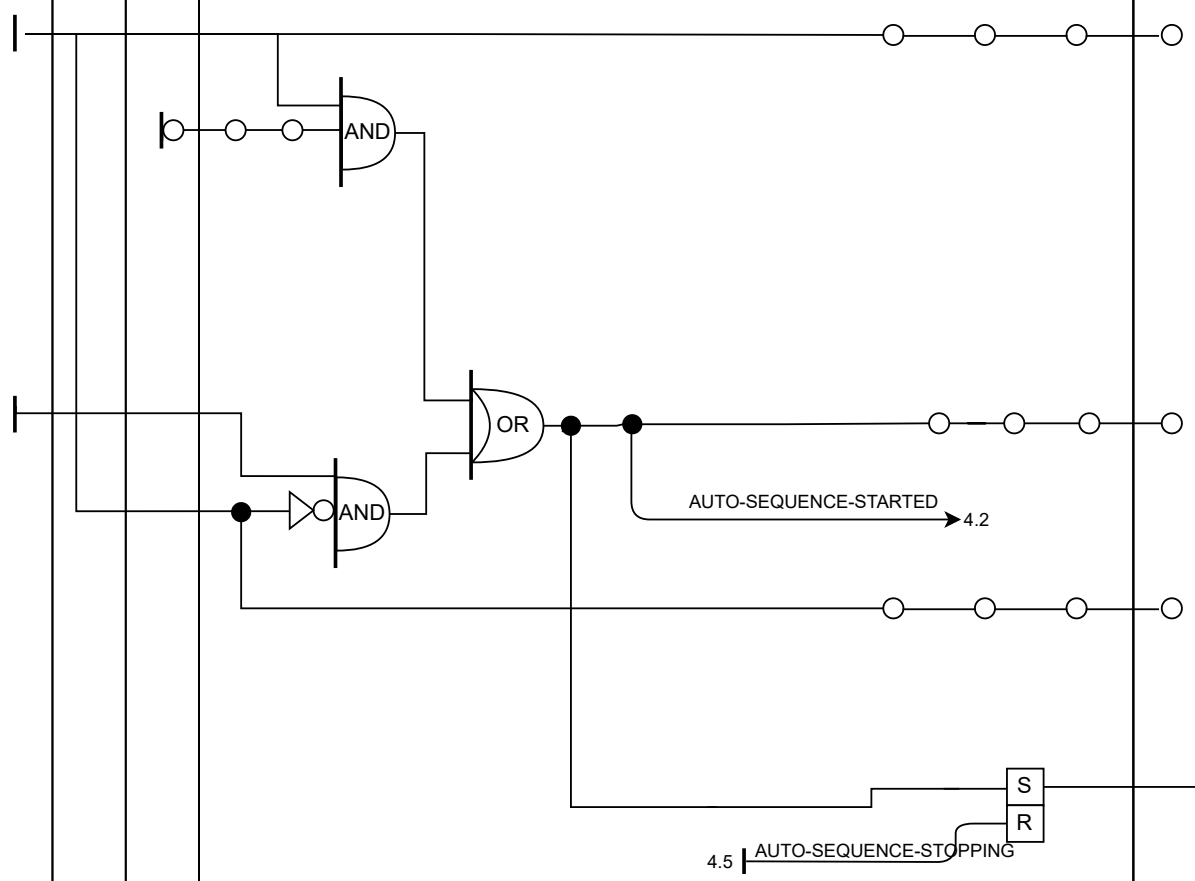
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SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	LOGIC GATE: "AND" INPUT A B / OUTPUT Q: 0 0 0; 0 1 0; 1 0 0; 1 1 1		LOGIC GATE: "OR" INPUT A B / OUTPUT Q: 0 0 0; 0 1 1; 1 0 1; 1 1 1
	LOGIC GATE: "NOT" INPUT A / OUTPUT Q: 0 1; 1 0	LOGIC CONTROL FOR VALVES (with delay timer)	THIS BLOCK CONTAINS ALL THE LOGIC OF CONTROL OF THE FEEDBACKS FROM THE LIMIT SWITCHES AFTER THE CHANGE OF THE COMMAND FOR THE VALVE GENERATED BY THE PLC.
	LOGIC GATE: "SET & RESET" WHEN THE "SET" BLOCK RECEIVES 1, THE OUTPUT WILL BE SETTED. WHEN THE "RESET" BLOCK RECEIVES 1, THE OUTPUT WILL BE RESETTED.	**ALARM LOGIC**	THIS BLOCK MANAGES THE ALARMS. WHEN IT RECEIVES A SIGNAL WITH "0", IT MANAGES THE ALARM AND IT SENDS THE INFO TO THE DCS AND TO THE HMI.
	SIGNAL THROUGH COMMUNICATION PROTOCOL		

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INPUTS					PLC SEQUENCE MODE	OUTPUTS				
DESCRIPTION	FIELD		LCP	PCS		PCS	LCP	FIELD		DESCRIPTION
64-HS-004 LOCAL REMOTE SELECTOR STATUS 0=LOCAL 1=REMOTE										THE PACKAGE WORKS ONLY IN REMOTE 64-PLANT-LOCA-REM
START SIGNAL FROM 64-START-PLANT-CMD 0=NO ACT 1=START										
64 -HS-001 LCP START PUSHBUTTON 0=NO_ACT; 1=START										AUTOMATIC SEQUENCE STARTED 64-XL-003-DCS NITROGEN GENERATOR RUNNING (TO DCS)
										THE PACKAGE WORKS ONLY IN LOCAL 64-PLANT-LOCA-REM
										64-XL-003 LCP RUNNING STATUS LAMP



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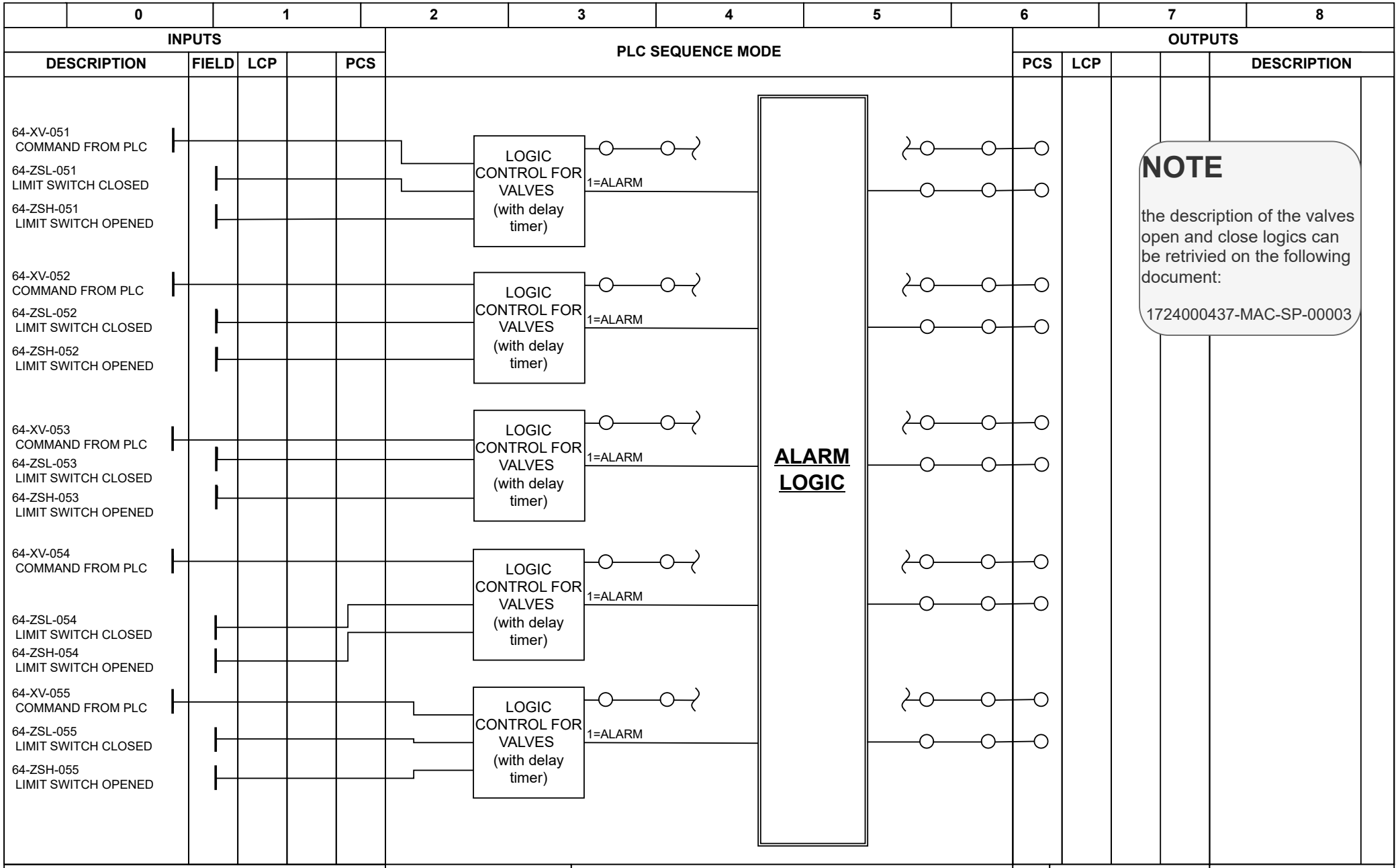
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INPUTS					PLC SEQUENCE MODE	OUTPUTS				
DESCRIPTION	FIELD	LCP	SIS	PCS		PCS	LCP	FIELD	SIS	DESCRIPTION
64-XS-001 SHUT-DOWN COMMAND FROM SIS (0= Fault) (NOT DIRECTLY CONNECTED TO PLC)					NOTE: THIS LOGIC "OR" IS NOT INSIDE THE PLC BUT IS MADE BY A SIL SAFETY RELAY.					SHUTDOWN ALARM FROM SIS 64-ESD-01 (0=FAULT) (CONNECTED TO PLC)
64-SBM-001 LCB-EMERGENCY PUHSBUTTON 0=EMERGENCY 1=NO ACT (NOT DIRECTLY CONNECTED TO PLC)										CUMULATIVE CRITICAL ALARM TO SIS 64-XA-003 (0=FAULT) (CONNECTED TO PLC)
STOP SIGNAL FROM 64-STOP-PLANT-CMD 0= STOP 1= NO ACT					3.4 AUTO-SEQUENCE-STARTED					
64-HS-002 LCP STOP PUSHBUTTON 0=STOP; 1=NO ACT					OR, AND AUTO-SEQUENCE-STOPPING 3.5					
SHUTDOWN ALARM FROM SIS 64-ESD-01 (0=FAULT) (CONNECTED TO PLC)					OR					64-XA-001 LCP GENERAL ALARM LAMP
AT LEAST 1 ALARM PRESENT IN THE SYSTEM 0 = OK; 1 = ALARM										64-ALARM-PLANT NITROGEN GENERATOR ALARM (TO DCS)

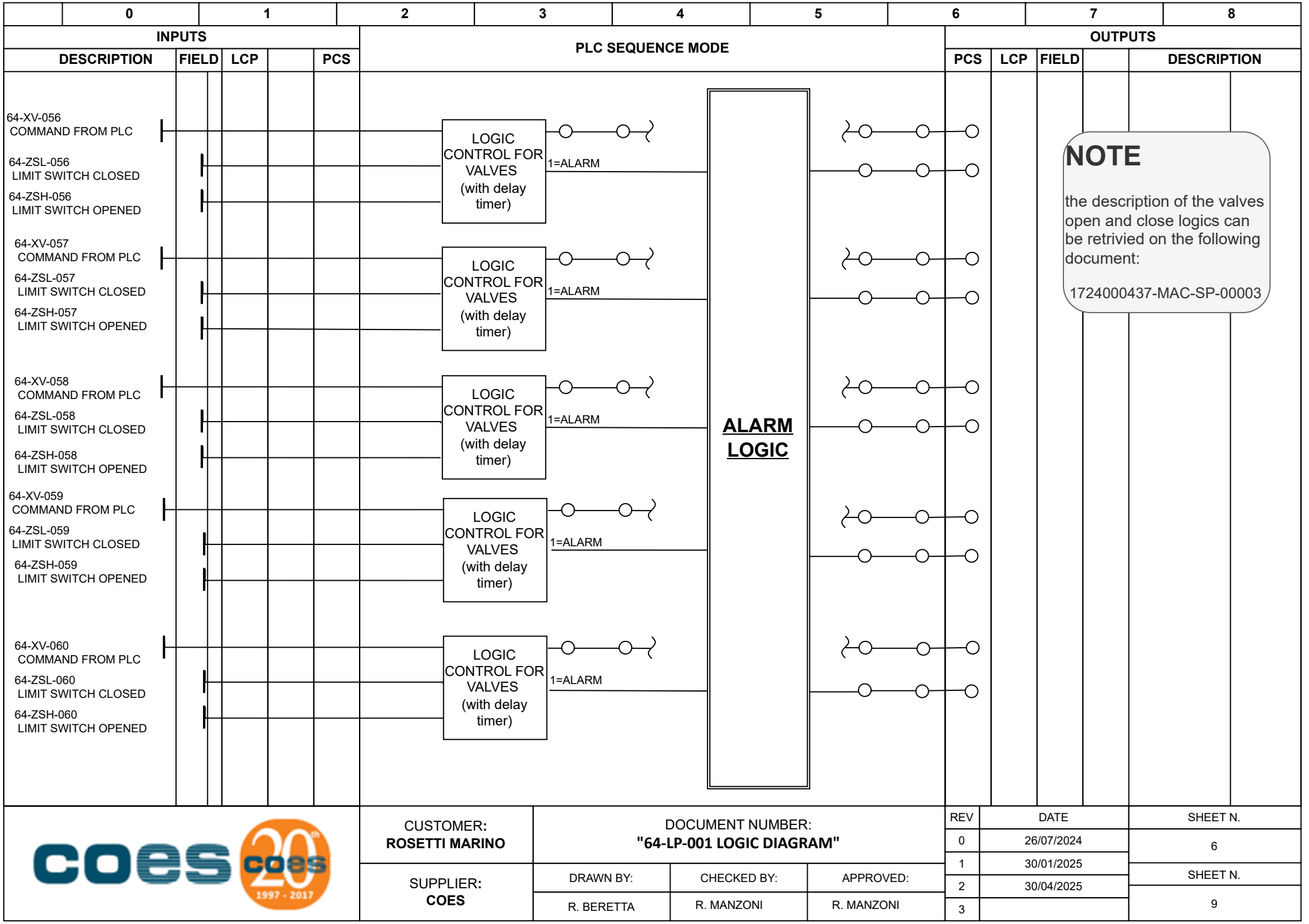
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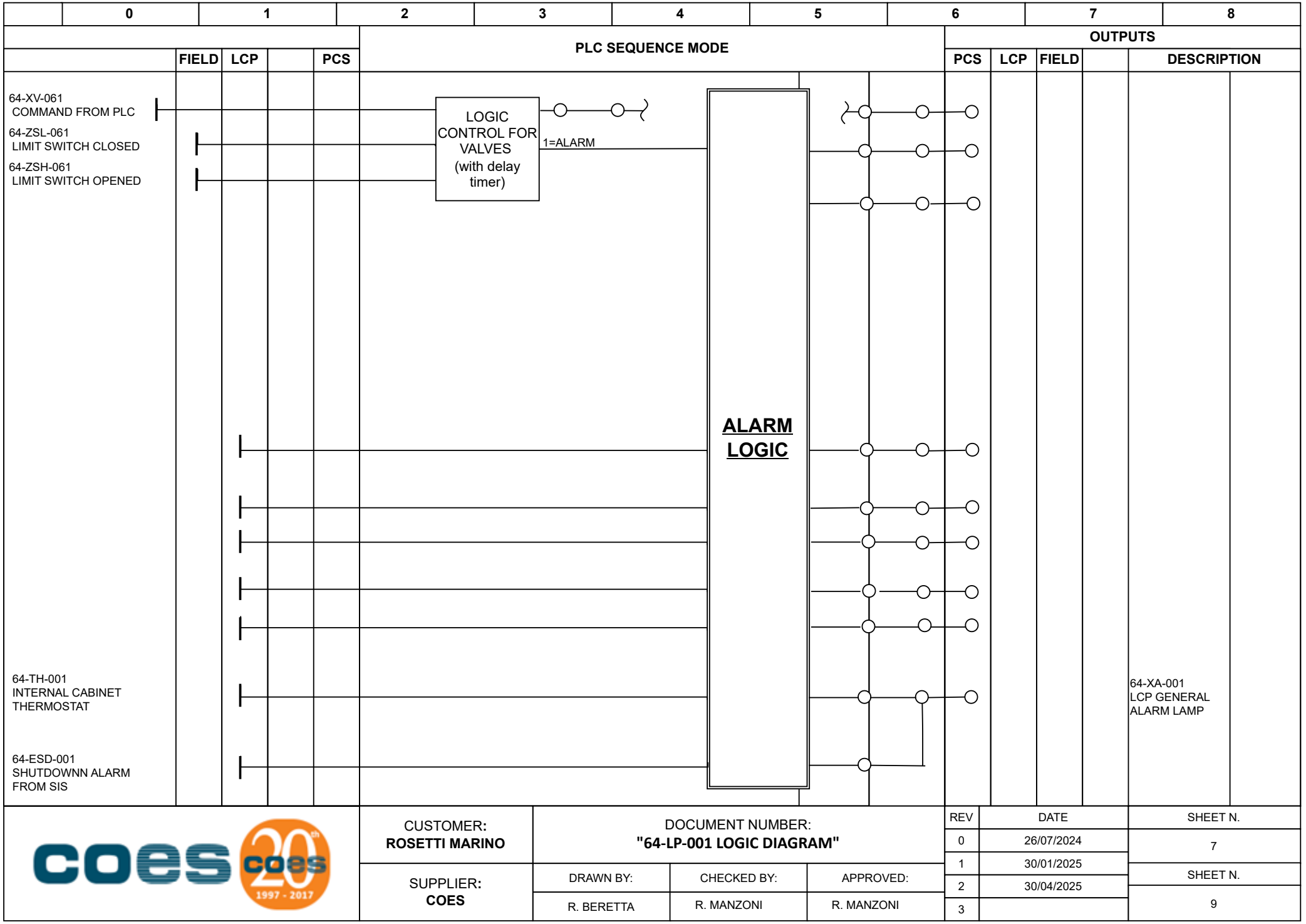
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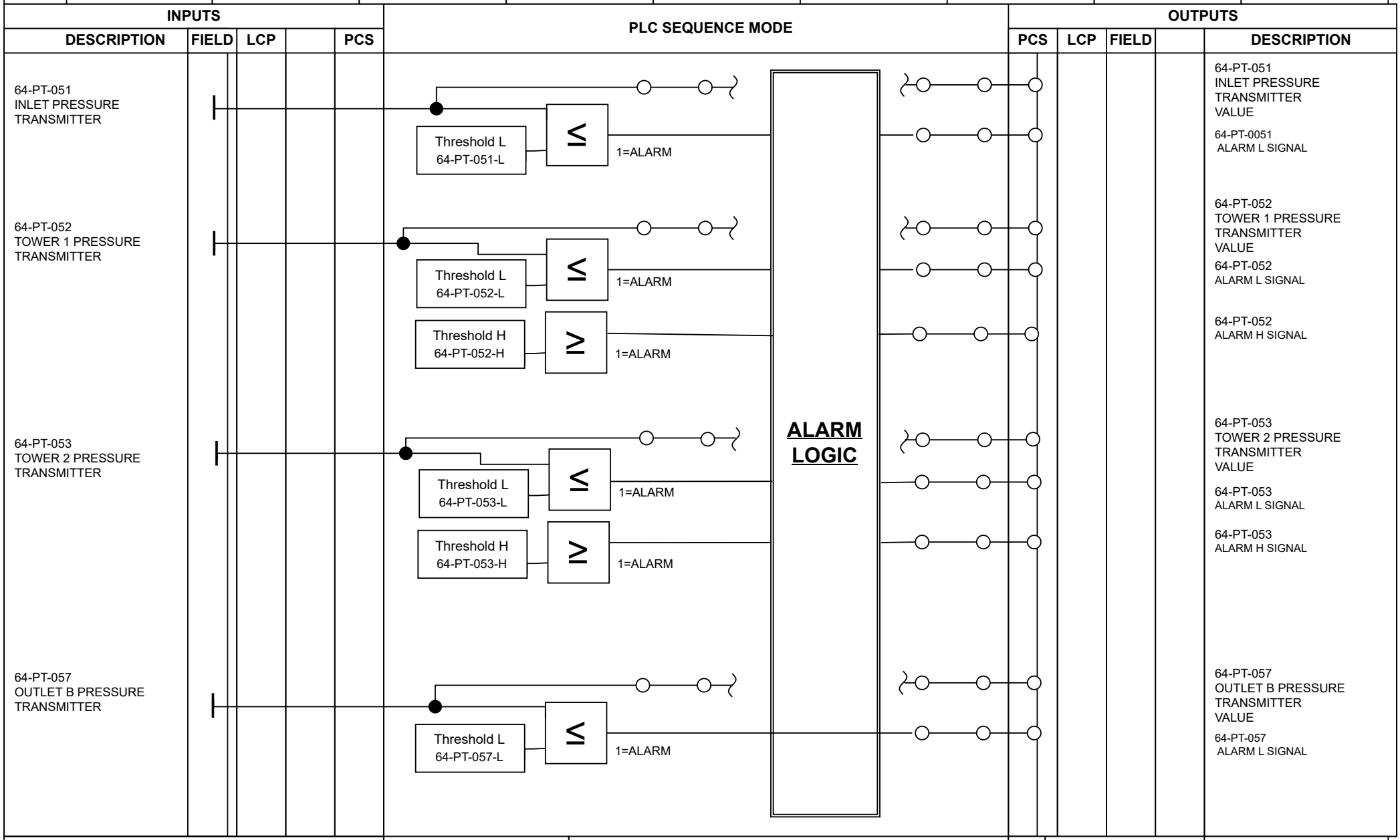
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INPUTS					PLC SEQUENCE MODE	OUTPUTS				
DESCRIPTION	FIELD	LCP		PCS		PCS	LCP	FIELD		DESCRIPTION
64-PT-059 PRESSURE TRANSMITTER NITROGEN RECEIVER										64-PT-059 PRESSURE TRANSMITTER NITROGEN RECEIVER VALUE
					Threshold L 64-PT-059-L ≤ 1=ALARM					64-PT-059 ALARM L SIGNAL
64-PDIT-056 DIFFERENTIAL PRESSURE TRANSMITTER OUTLET FILTERS										64-PDIT-056 DIFFERENTIAL PRESSURE TRANSMITTER OUTLET FILTERS VALUE
					Threshold H 64-PDIT-056-H ≥ 1=ALARM					64-PDIT-056 ALARM H SIGNAL
					ALARM LOGIC					
64-AT-051 OXYGEN ANALYZER TRANSMITTER										64-AT-051 OXYGEN ANALUZER TRANSMITTER VALUE
					Threshold H 64-AT-051-H ≥ 1=ALARM					64-AT-051 ALARM H SIGNAL
					Threshold HH 64-AT-051-HH ≥ 1=ALARM					64-AT-051 ALARM HH SIGNAL

NOTE

the description of the logic related to the oxygen level can be retrivied on the following document:

1724000437-MAC-SP-00003

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