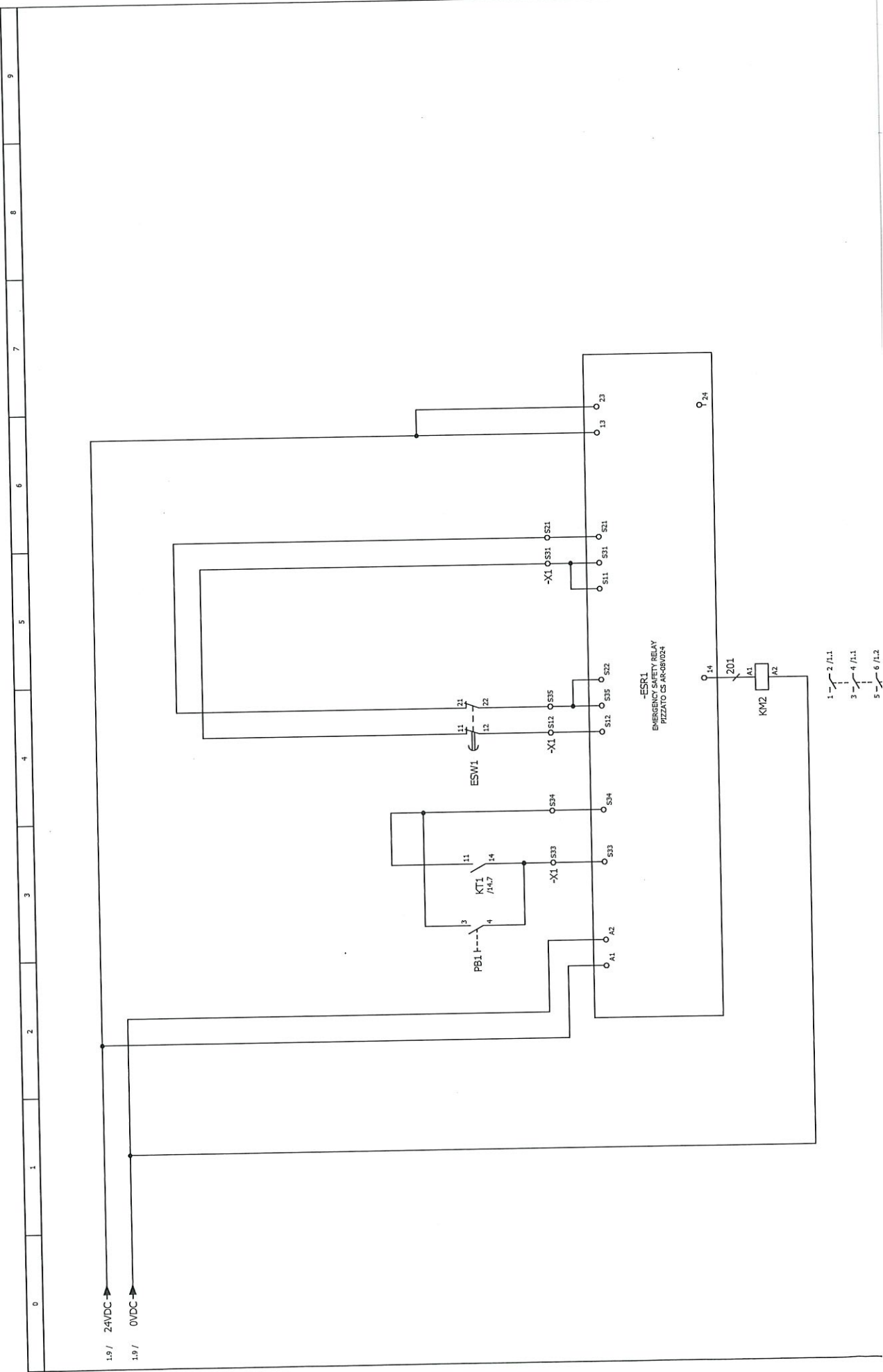
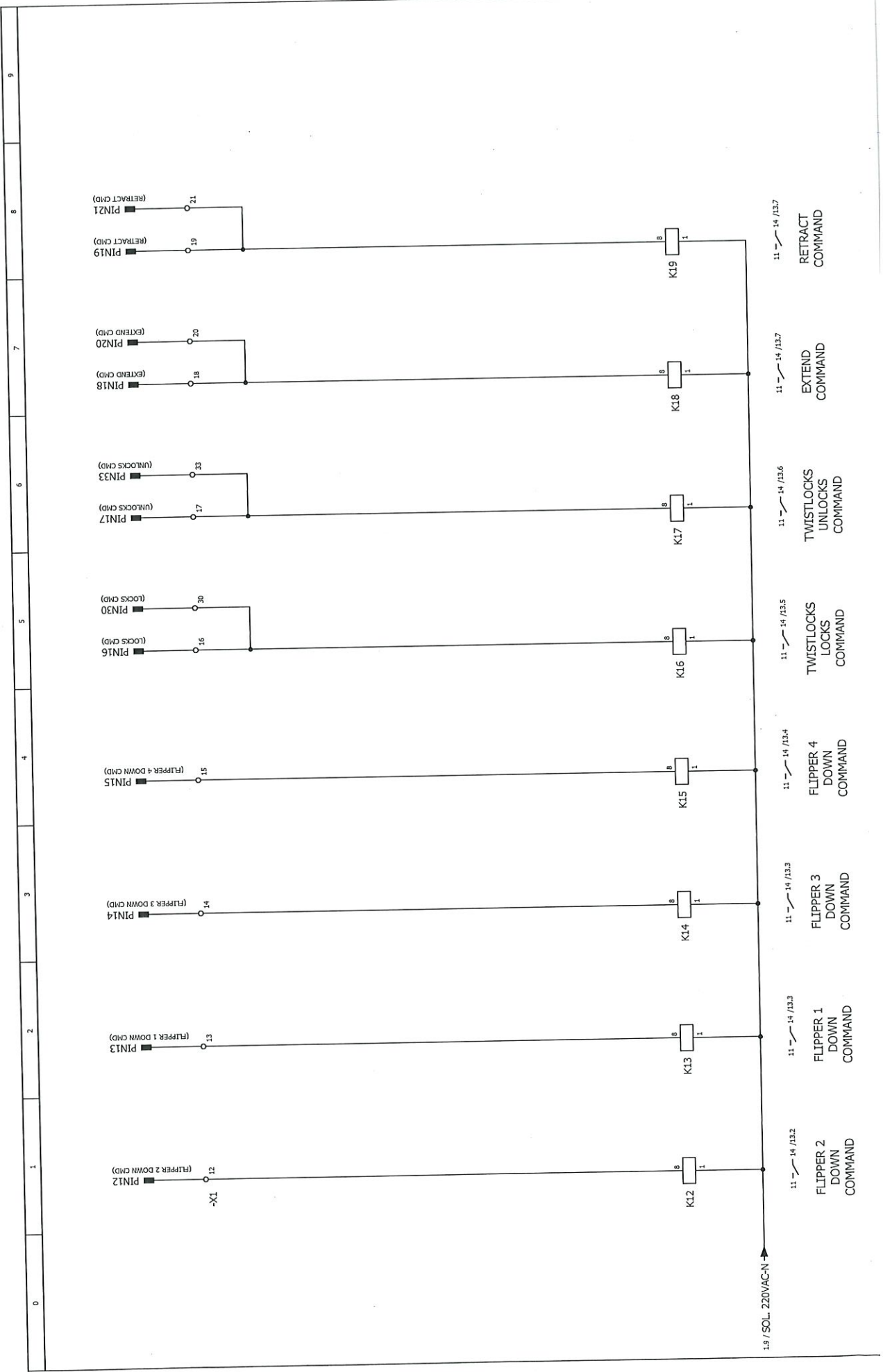
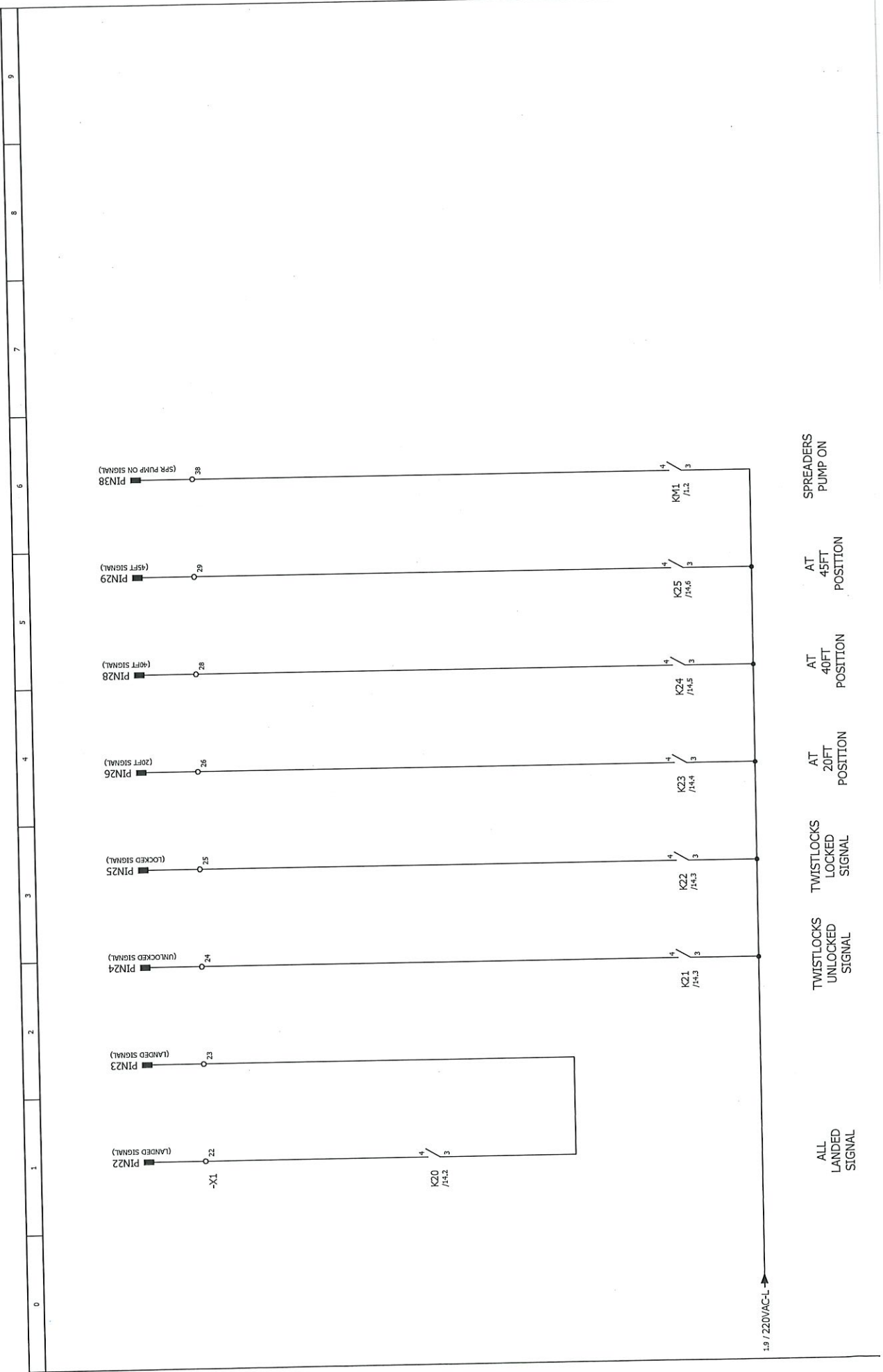
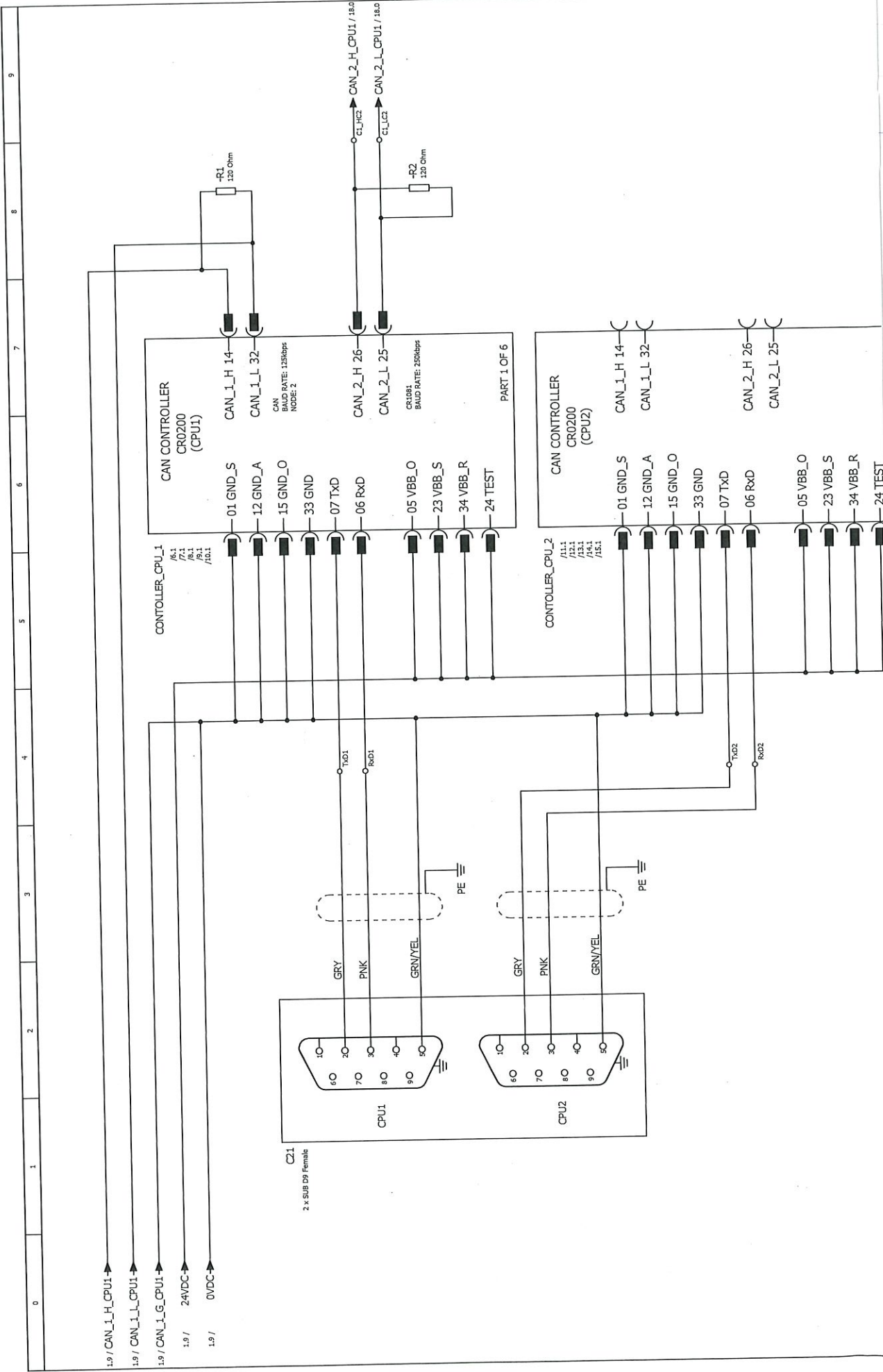


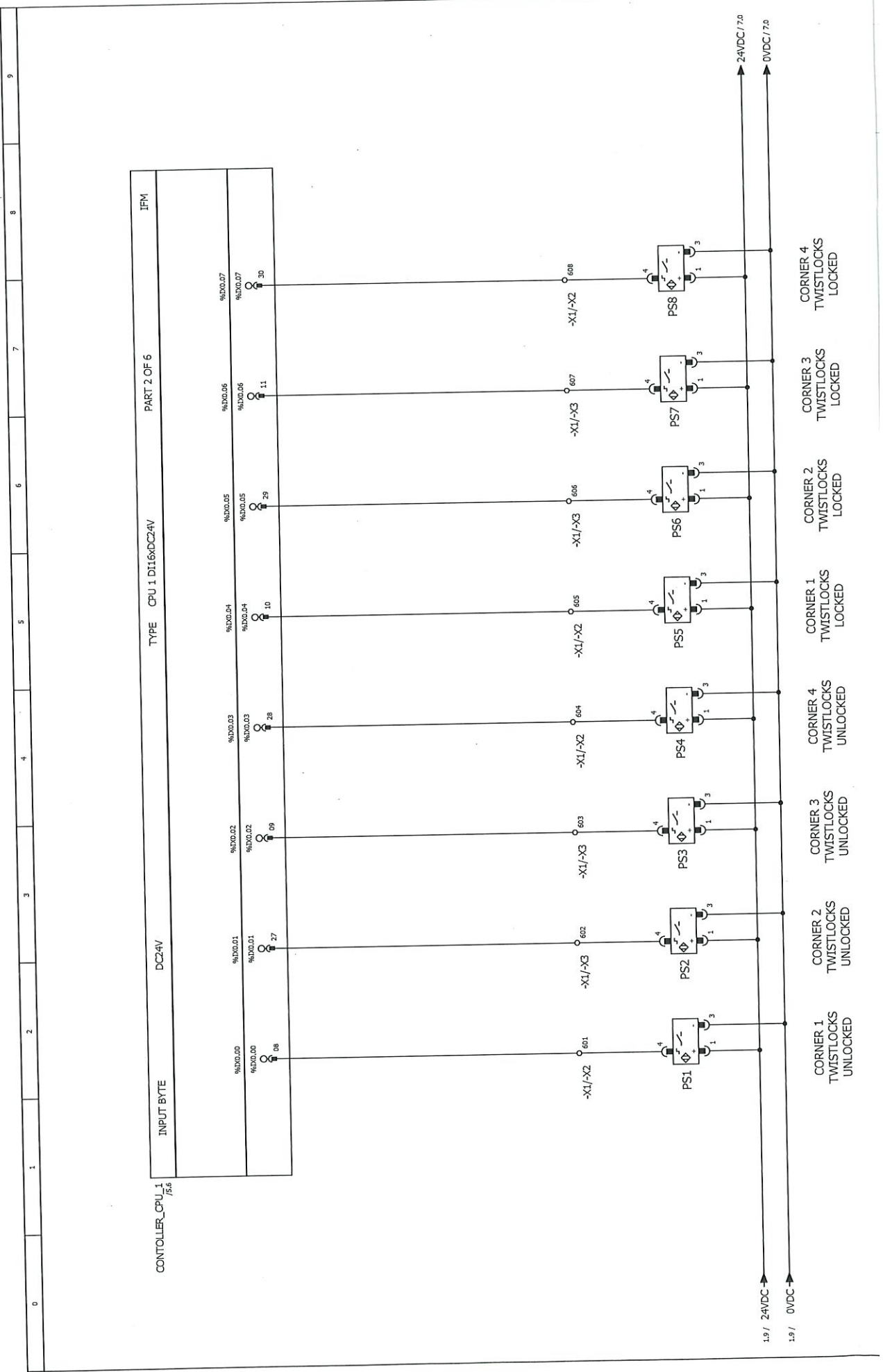
MOTOR TAG NO:
 -M1
 RATING:
 7.5KW 380VAC 3PH 50Hz
 COMMENT:





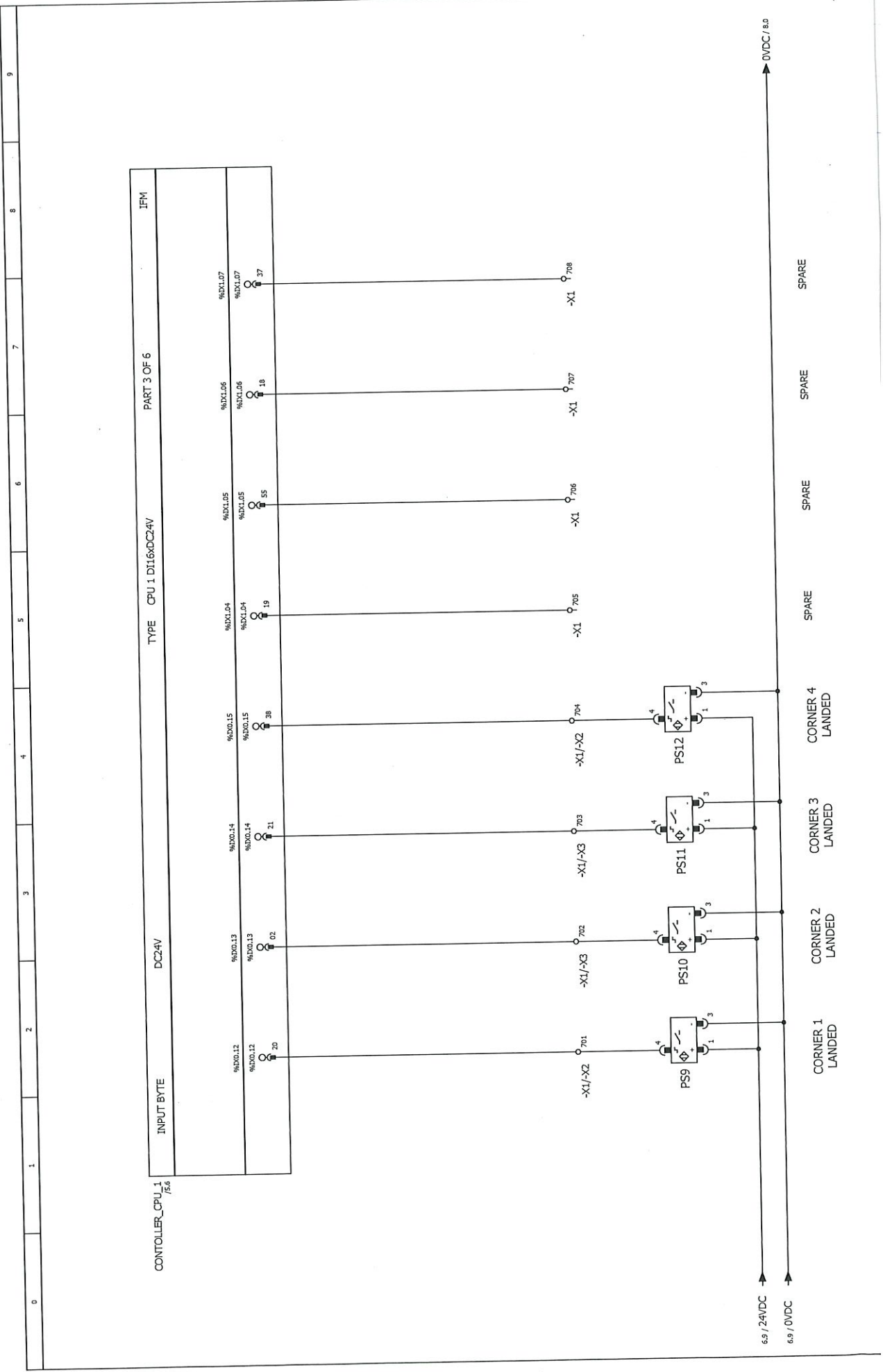


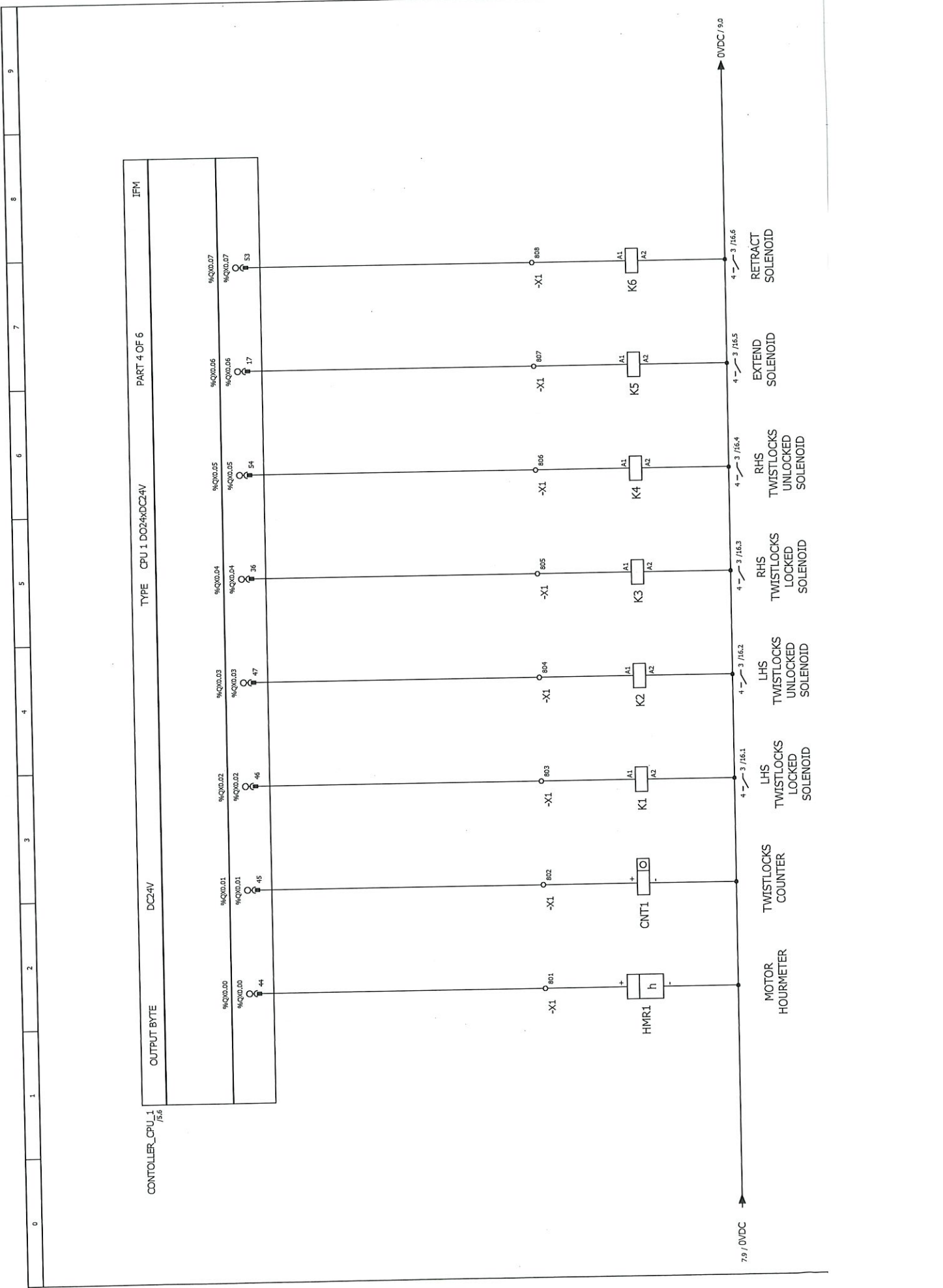




CONTROLLER_CPU_1 / 5,6

INPUT BYTE	DC24V	TYPE CPU 1 DI16xDC24V	PART 2 OF 6	IFM
%IX0.00 %IX0.00 08	%IX0.01 %IX0.01 27	%IX0.02 %IX0.02 09	%IX0.03 %IX0.03 28	%IX0.04 %IX0.04 10
%IX0.05 %IX0.05 29	%IX0.06 %IX0.06 11	%IX0.07 %IX0.07 30		





CONTROLLER_CPU_1 /5,6

OUTPUT BYTE

DC24V

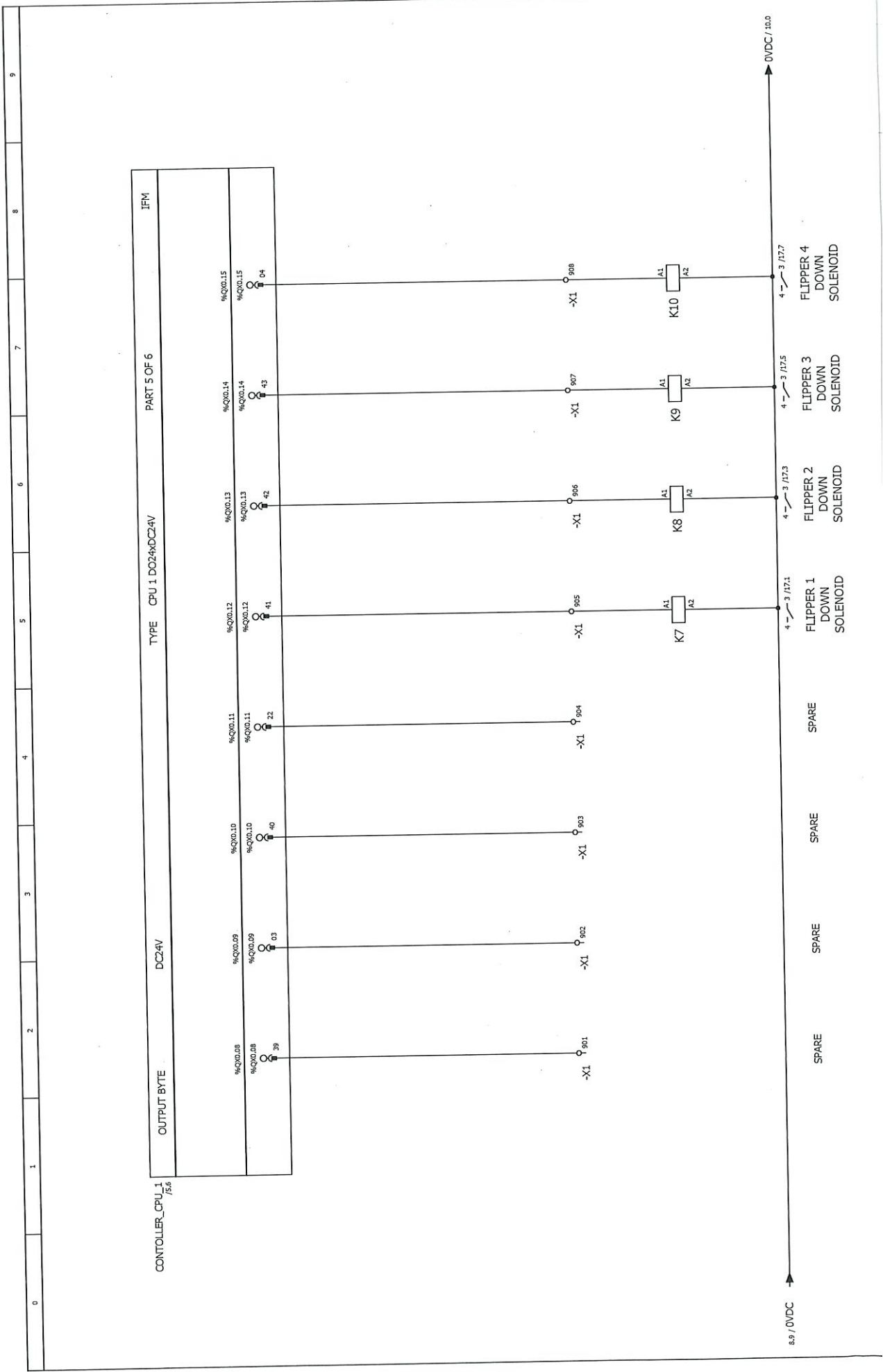
TYPE CPU 1 DO24xDC24V

PART 4 OF 6

IFM

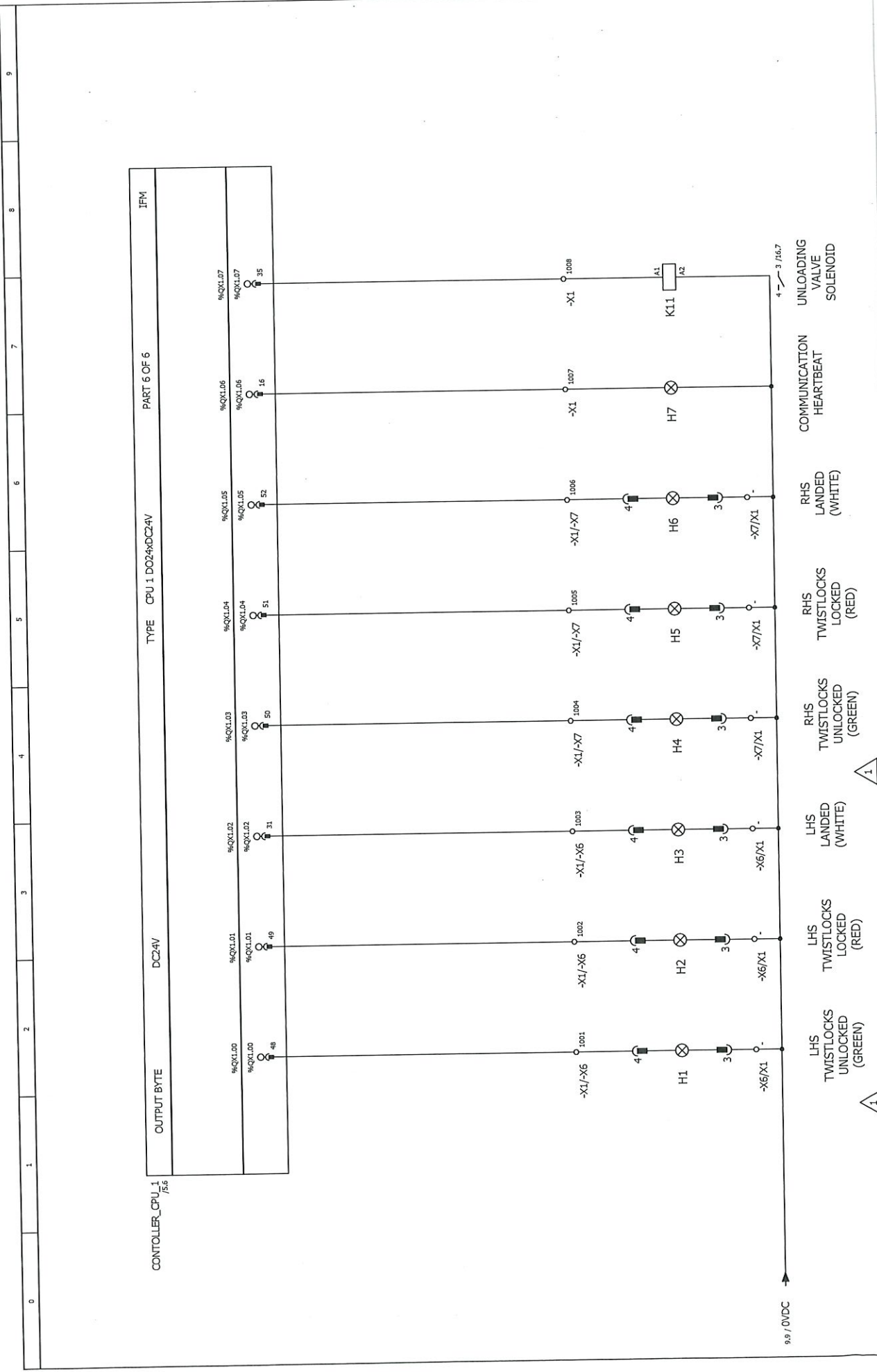
7.9 / 0VDC

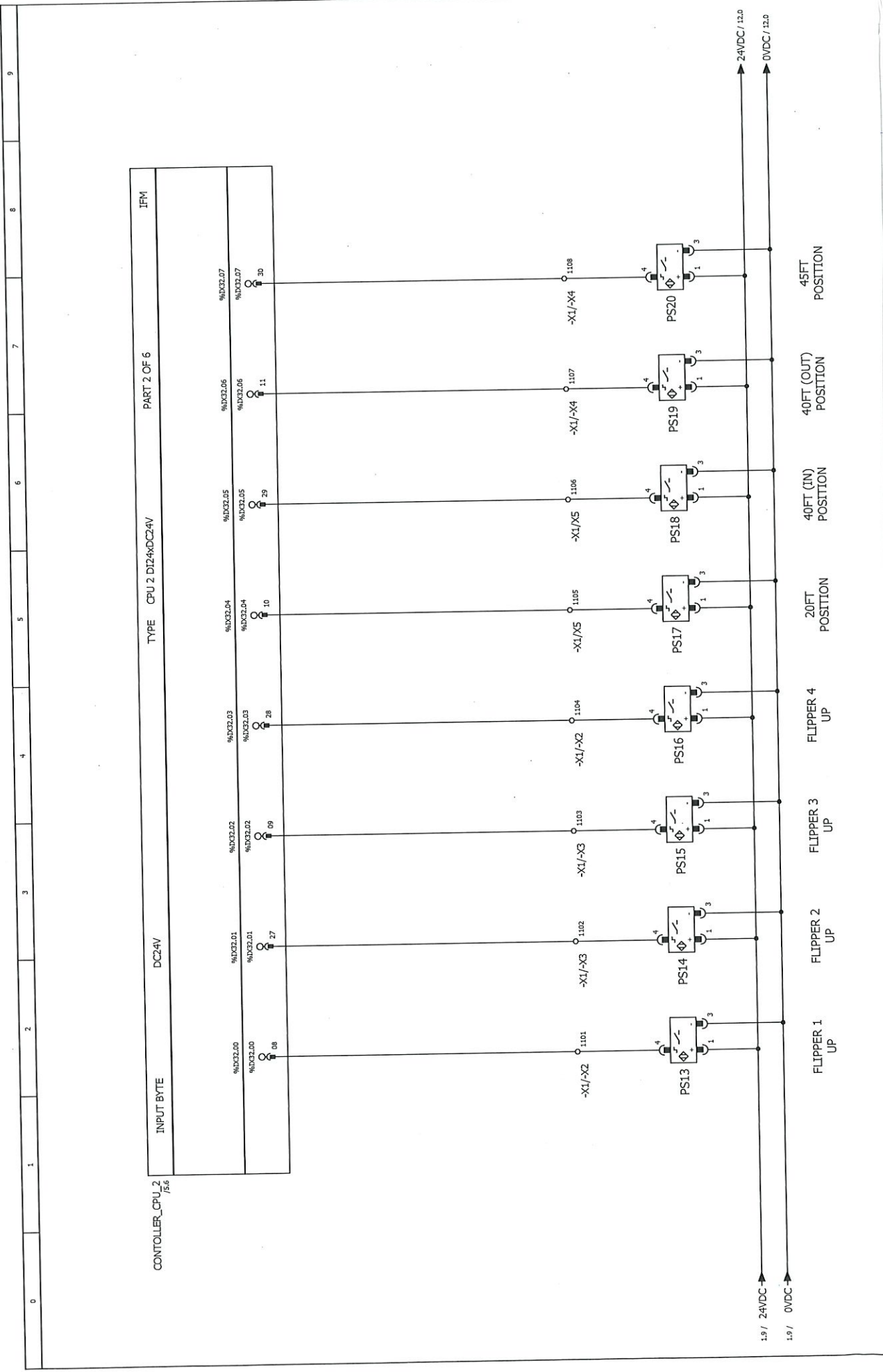
0VDC / 9.0



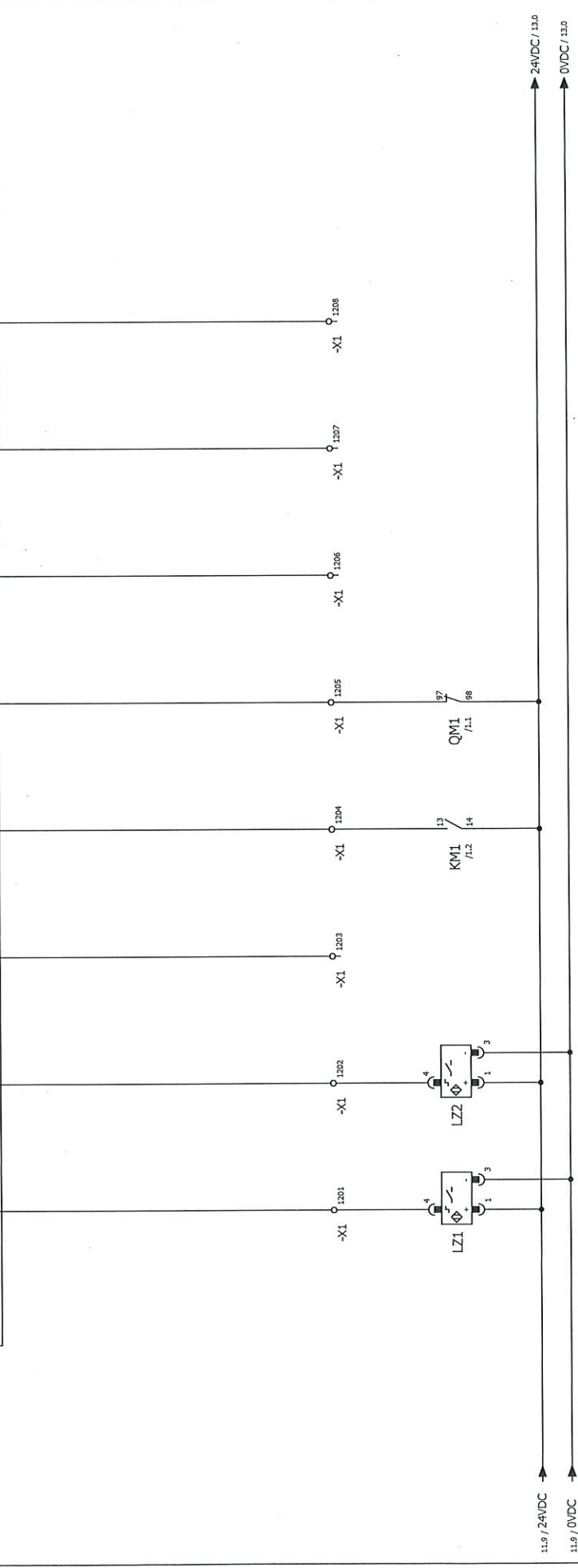
CONTROLLER_CPU_1 / 5.6
 OUTPUT BYTE
 DC24V
 TYPE CPU 1 D024XC24V
 PART 5 OF 6
 IFM

0VDC / 10.0

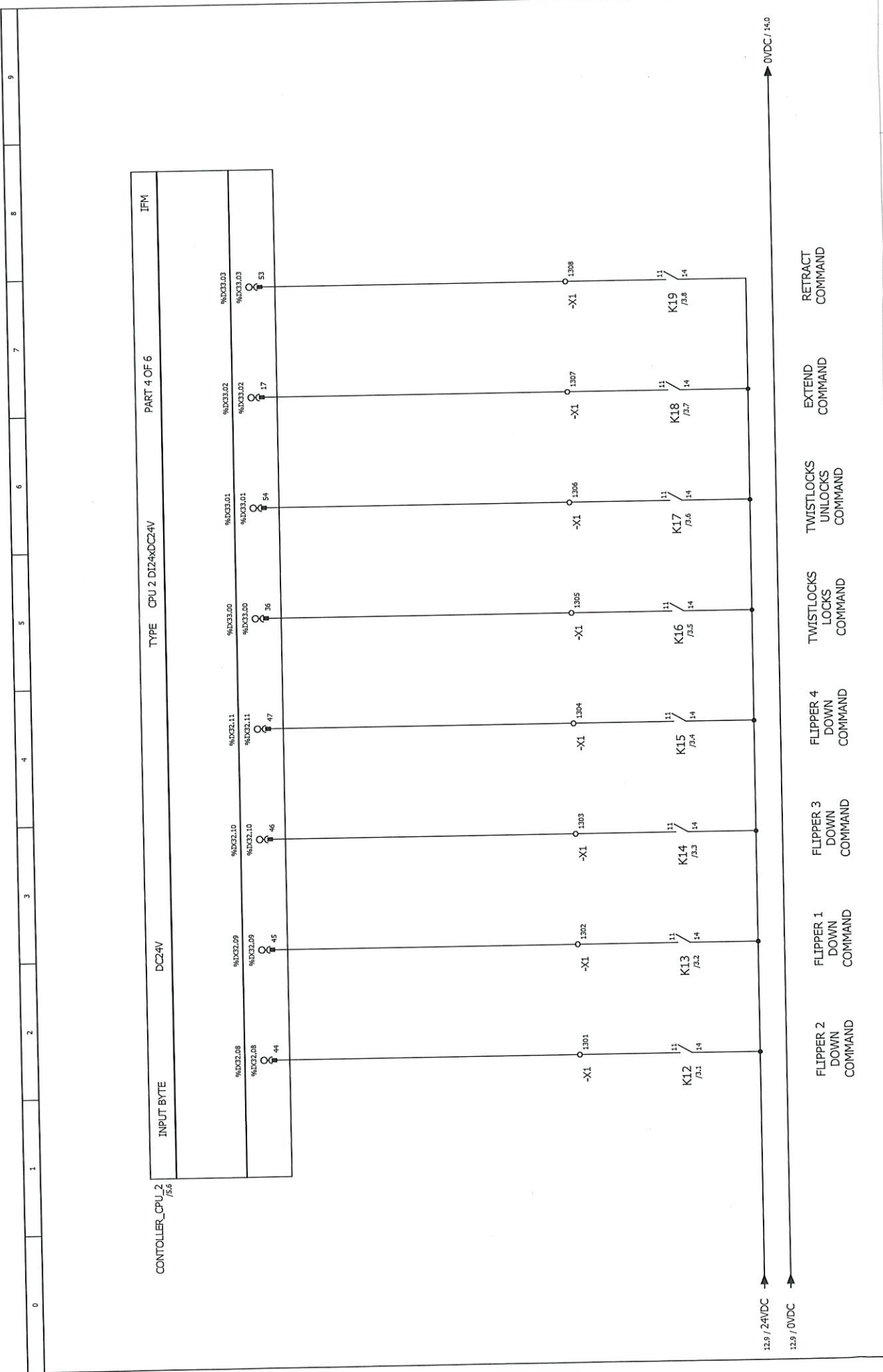


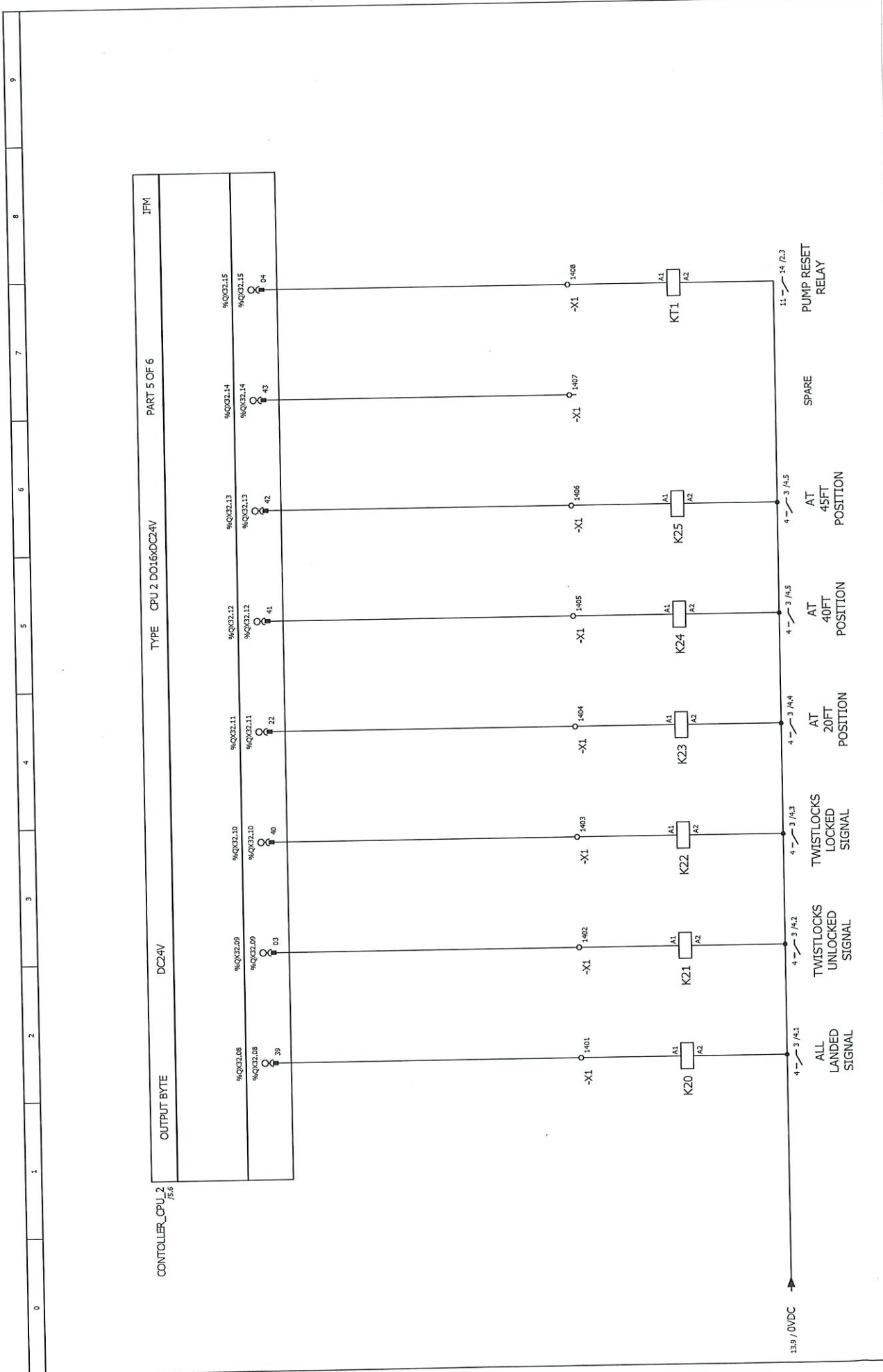


CONTROLLER_CPU_2 /5,6	INPUT BYTE	DC24V	TYPE CPU 2 DIZ4*DC24V	PART 3 OF 6	IFM
%IX2.12	%IX2.12	%IX2.12	%IX2.12	%IX2.12	%IX2.12
%IX2.13	%IX2.13	%IX2.13	%IX2.13	%IX2.13	%IX2.13
%IX2.14	%IX2.14	%IX2.14	%IX2.14	%IX2.14	%IX2.14
%IX2.15	%IX2.15	%IX2.15	%IX2.15	%IX2.15	%IX2.15
%IX3.04	%IX3.04	%IX3.04	%IX3.04	%IX3.04	%IX3.04
%IX3.05	%IX3.05	%IX3.05	%IX3.05	%IX3.05	%IX3.05
%IX3.06	%IX3.06	%IX3.06	%IX3.06	%IX3.06	%IX3.06
%IX3.07	%IX3.07	%IX3.07	%IX3.07	%IX3.07	%IX3.07



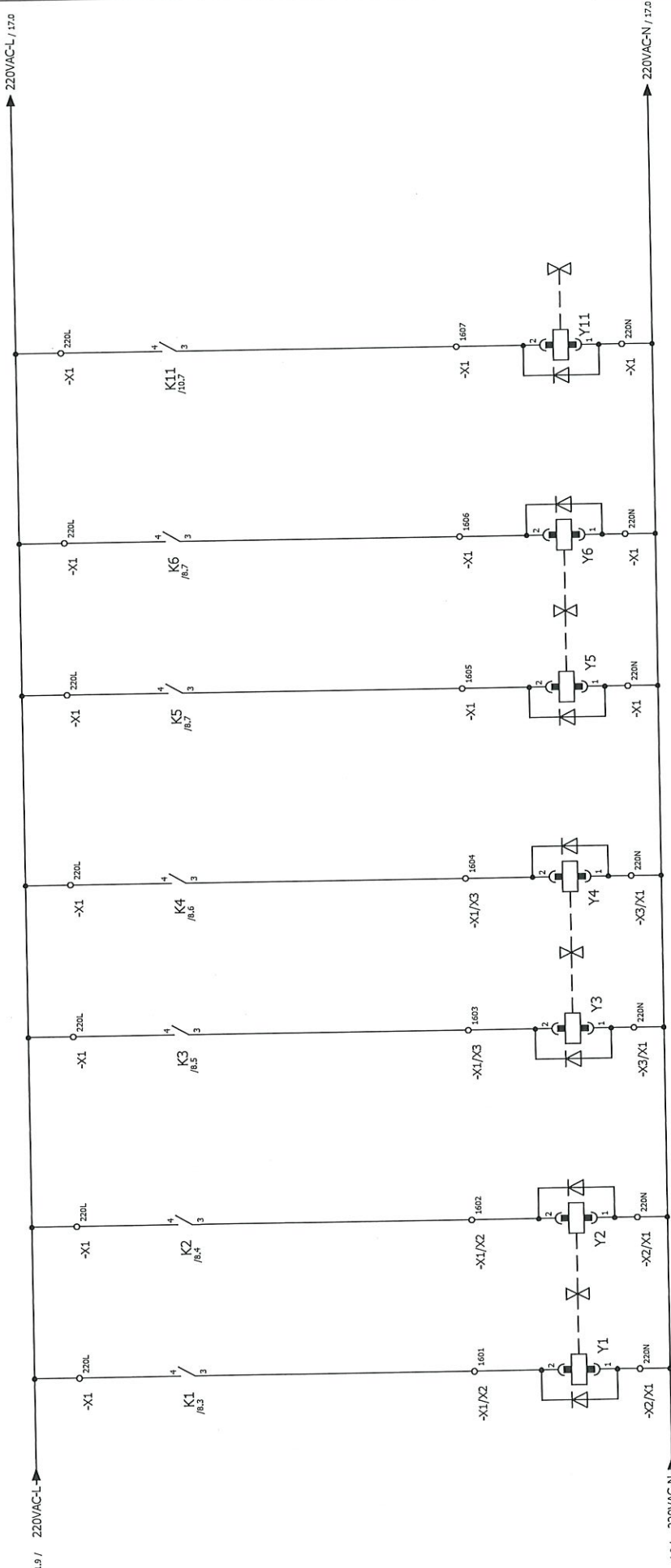
11.9 / 24VDC
 11.9 / 0VDC
 TTDS SEASIDE
 TTDS LANDSIDE
 SPARE
 SPREADERS PUMP ON
 MOTOR OVERLOADED
 SPARE
 SPARE
 SPARE
 SPARE
 24VDC / 13.0
 0VDC / 13.0



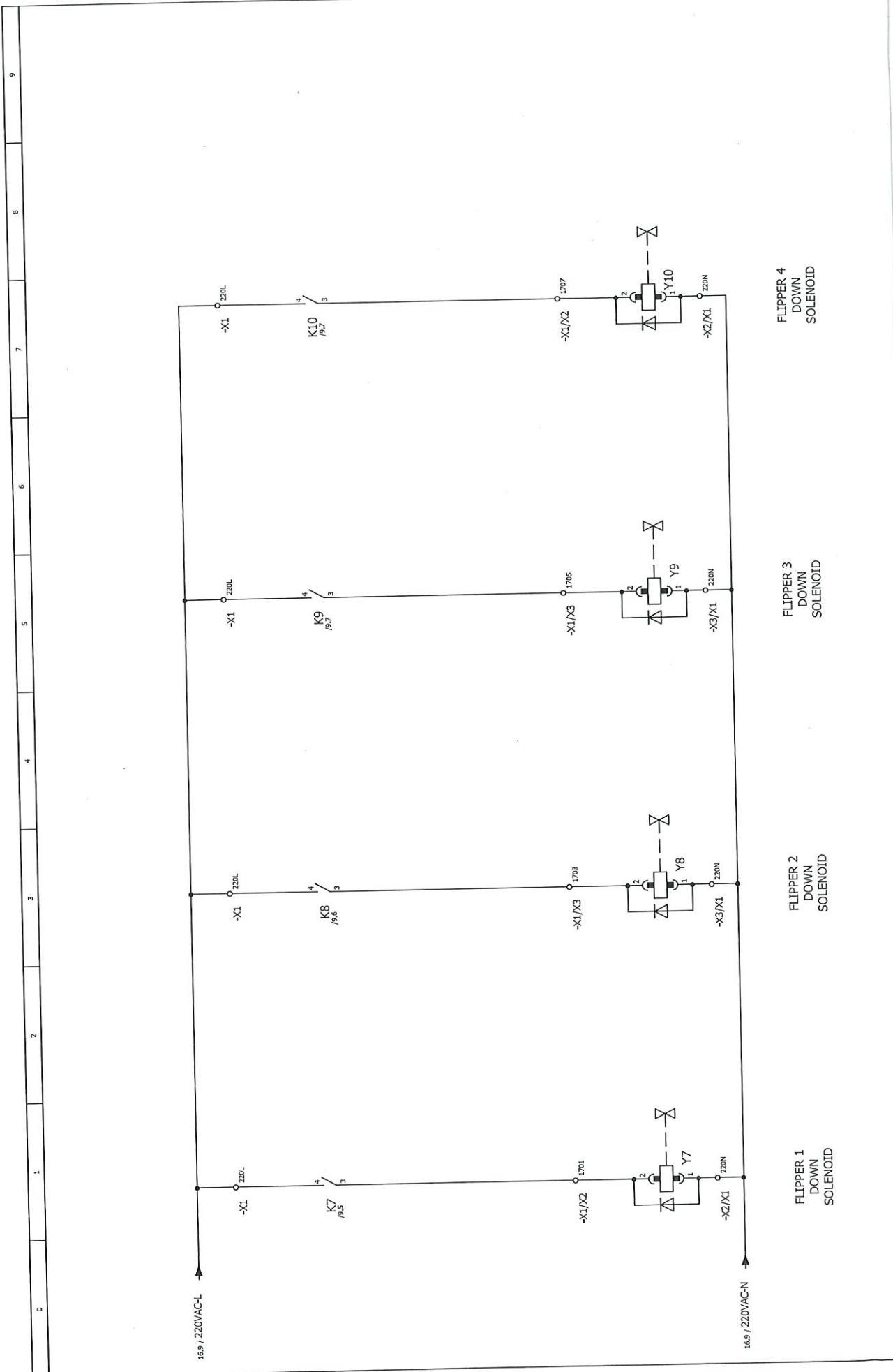


CONTROLLER_CPU_2 /56 TYPE CPU 2 DO16xDC24V PART 5 OF 6 IFM

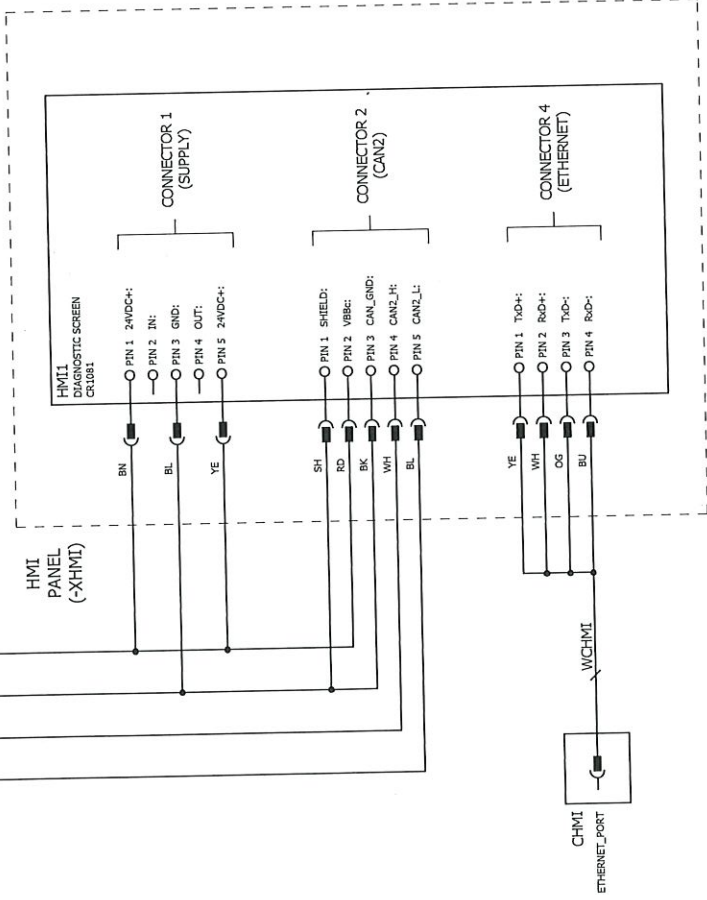
%QX32.08	%QX32.08	%QX32.09	%QX32.09	%QX32.10	%QX32.10	%QX32.11	%QX32.11	%QX32.12	%QX32.12	%QX32.13	%QX32.13	%QX32.14	%QX32.14	%QX32.15	%QX32.15
39	39	03	03	40	40	22	22	41	41	42	42	43	43	04	04



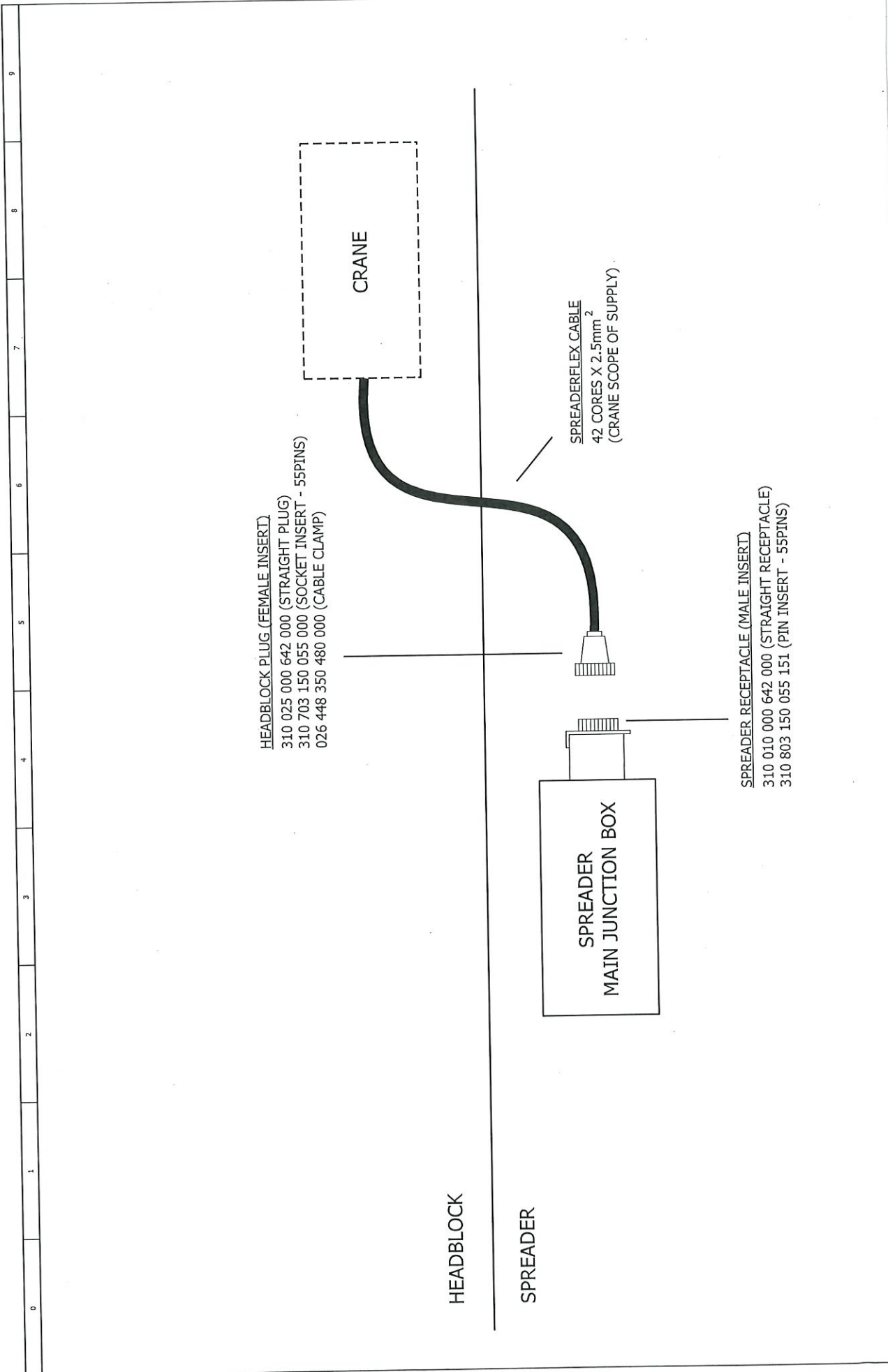
LHS TWISTLOCKS LOCKS SOLENOID
 LHS TWISTLOCKS UNLOCKS SOLENOID
 RHS TWISTLOCKS LOCKS SOLENOID
 RHS TWISTLOCKS UNLOCKS SOLENOID
 EXTEND SOLENOID
 RETRACT SOLENOID
 UNLOADING VALVE SOLENOID



5.9 / CAN_2_H_CPU1 →
 5.9 / CAN_2_L_CPU1 →
 1.9 / 24VDC →
 1.9 / 0VDC →



CHMI
 ETHERNET_PORT



HEADBLOCK PLUG (FEMALE INSERT)
 310 025 000 642 000 (STRAIGHT PLUG)
 310 703 150 055 000 (SOCKET INSERT - 55PINS)
 026 448 350 480 000 (CABLE CLAMP)

SPREADERLEFLEX CABLE
 42 CORES X 2.5mm²
 (CRANE SCOPE OF SUPPLY)

SPREADER RECEPTACLE (MALE INSERT)
 310 010 000 642 000 (STRAIGHT RECEPTACLE)
 310 803 150 055 151 (PIN INSERT - 55PINS)

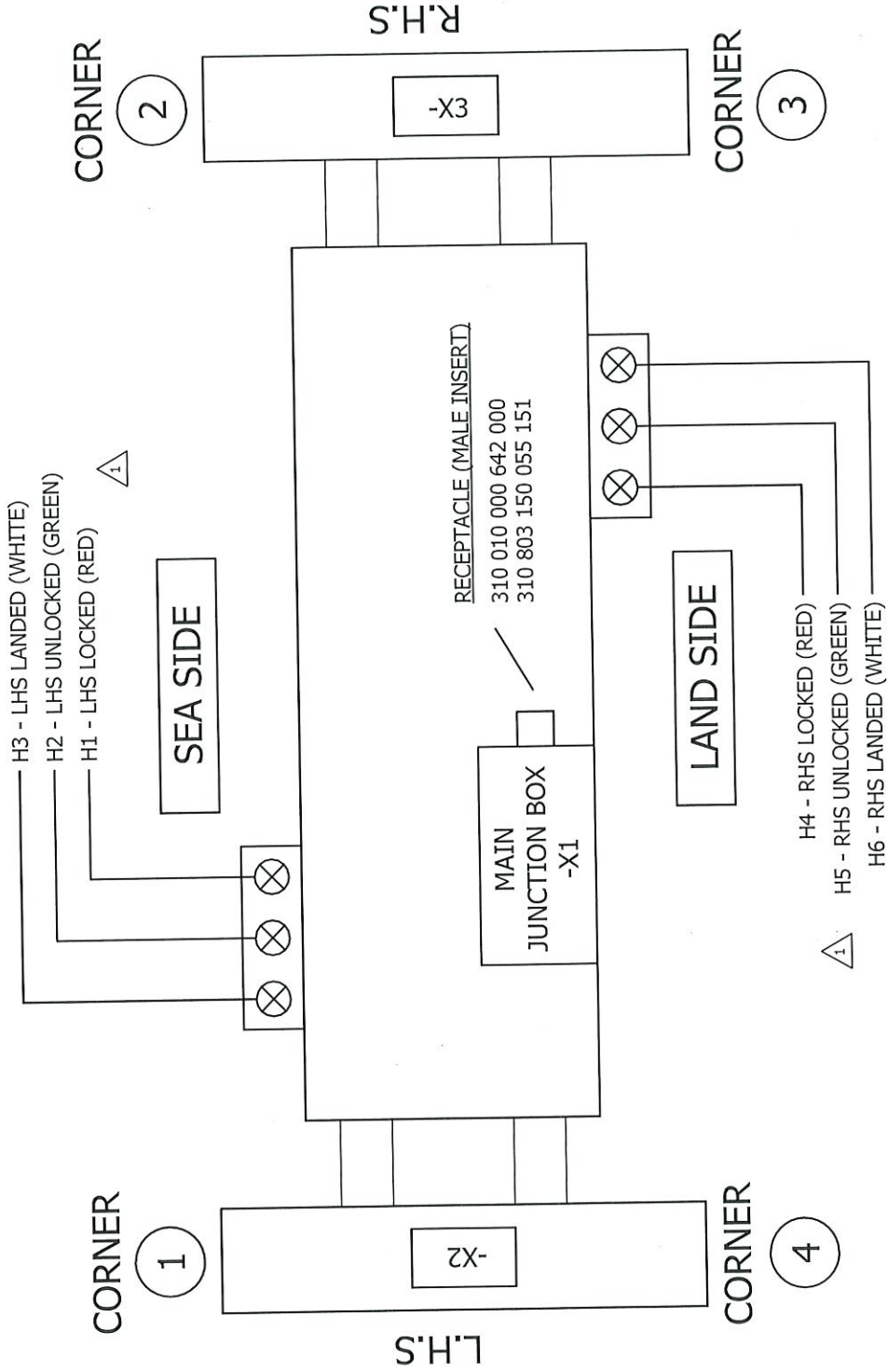
HEADBLOCK

SPREADER

SPREADER
 MAIN JUNCTION BOX

CRANE

RAM SPREADER CONVENTION



H3 - LHS LANDED (WHITE)
H2 - LHS UNLOCKED (GREEN)
H1 - LHS LOCKED (RED)

SEA SIDE

RECEPTACLE (MALE INSERT)
310 010 000 642 000
310 803 150 055 151

MAIN JUNCTION BOX
-X1

LAND SIDE

H4 - RHS LOCKED (RED)
H5 - RHS UNLOCKED (GREEN)
H6 - RHS LANDED (WHITE)

⚠

SEA SIDE

CORNER 2

PS2 CORNER 2 UNLOCKED
 PS6 CORNER 2 LOCKED
 PS10 CORNER 2 LANDED
 PS14 CORNER 2 FLIPPER UP

Y3 - RHS TWLKS LOCKS SOL.
 Y4 - RHS TWLKS UNLOCKS SOL.
 Y8 - CORNER 2 FLIPPER DOWN SOL.
 Y10 - CORNER 3 FLIPPER DOWN SOL.

PS3 CORNER 3 UNLOCKED
 PS7 CORNER 3 LOCKED
 PS11 CORNER 3 LANDED
 PS15 CORNER 3 FLIPPER UP

CORNER 3

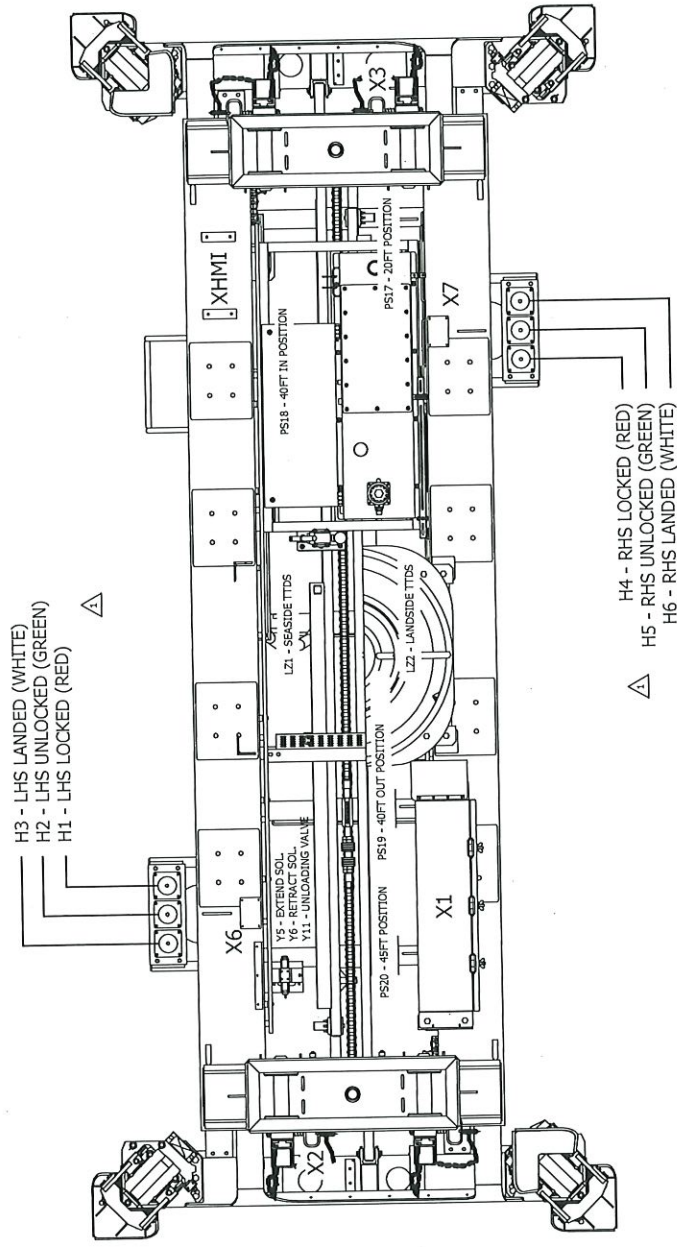
CORNER 1

PS1 CORNER 1 UNLOCKED
 PS5 CORNER 1 LOCKED
 PS9 CORNER 1 LANDED
 PS13 CORNER 1 FLIPPER UP

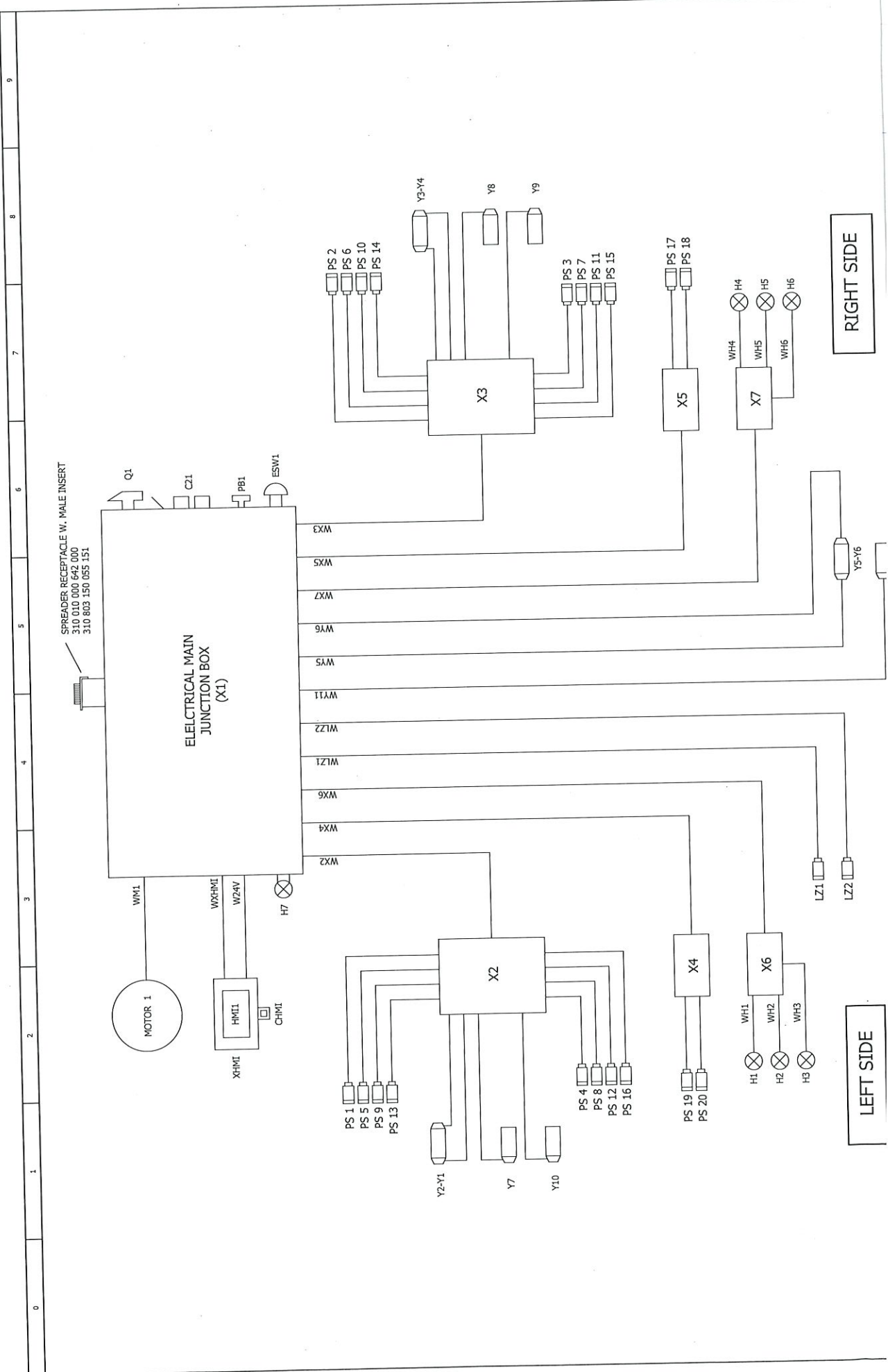
Y1 - LHS TWLKS LOCKS SOL.
 Y2 - LHS TWLKS UNLOCKS SOL.
 Y7 - CORNER 1 FLIPPER DOWN SOL.
 Y10 - CORNER 4 FLIPPER DOWN SOL.

PS4 CORNER 4 UNLOCKED
 PS8 CORNER 4 LOCKED
 PS12 CORNER 4 LANDED
 PS16 CORNER 4 FLIPPER UP

CORNER 4



LAND SIDE

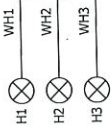
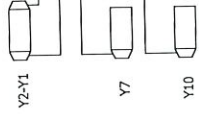
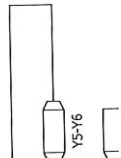
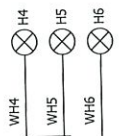
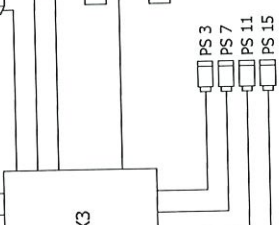
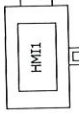
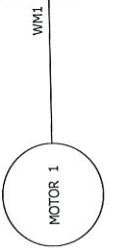


RIGHT SIDE

LEFT SIDE

SPREADER RECEPTACLE W. MALE INSERT
31.0 010 000 642 000
31.0 803 150 055 151

ELECTRICAL MAIN
JUNCTION BOX
(X1)

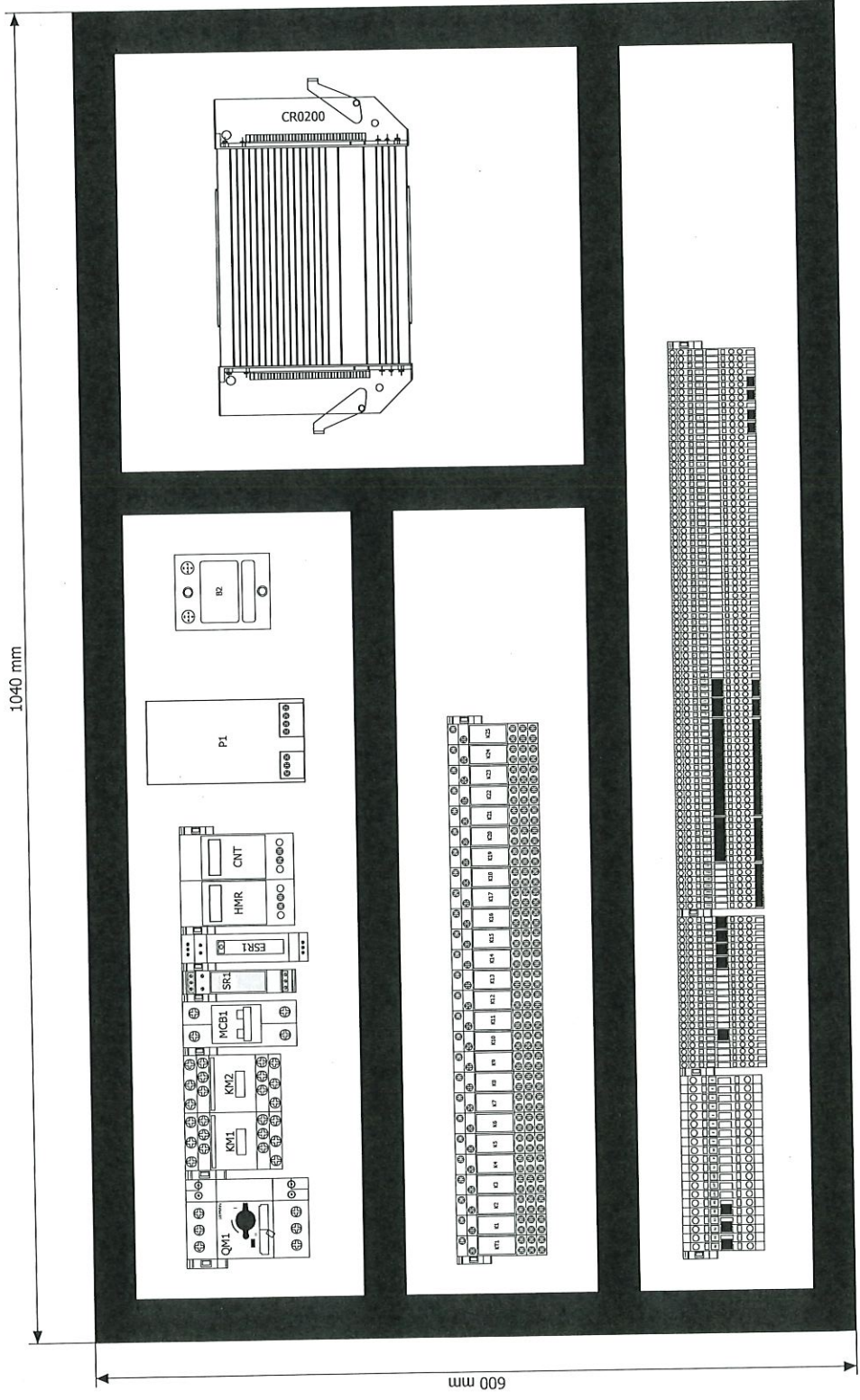


ABBREVIATION	CABLE DESCRIPTION	CABLE GLAND
WM1	4G x 4MM SQ.	2E09-00212 (CABLE O.D. 12MM)
	MOTOR SIDE	2E09-00228 (CABLE O.D. 12MM)
WX2	24G x 2.5MM SQ.	2E09-00217 (CABLE O.D. 25MM)
WX3		
WX4	7G x 1.5MM SQ.	2E09-00211 (CABLE O.D. 12MM)
WX5		
WX6		
WX7		
WXHMI	MURR 7000-40531-8030800	2E09-00207 (CABLE O.D. 4.3MM)
W24V	MURR 7000-12241-6351000	2E09-00207 (CABLE O.D. 4.3MM)
SENSOR CABLE (WPS1 - WPS16) (WH1 - WH6)	MURR 7000-12381-6330300	2E09-00207 (CABLE O.D. 4.3MM)
SENSOR CABLE (WPS17 - WPS20) (WLZ1 - WLZ2)	MURR 7000-12381-6330500	2E09-00207 (CABLE O.D. 4.3MM)
VALVE CABLE (WY1 - WY4) (WY7 - WY10)	MURR 7000-18061-6360300	2E09-00208 (CABLE O.D. 5.9MM)
VALVE CABLE (WY5 - WY6)	MURR 7000-18061-6360500	2E09-00208 (CABLE O.D. 5.9MM)
WY11	MPM S18311TC452 + 7G x 1.5MM SQ.	2E09-00208 (CABLE O.D. 5.9MM)

ABBREVIATION	FUNCTION
PS1	CORNER 1 TWISTLOCKS UNLOCKED
PS2	CORNER 2 TWISTLOCKS UNLOCKED
PS3	CORNER 3 TWISTLOCKS UNLOCKED
PS4	CORNER 4 TWISTLOCKS UNLOCKED
PS5	CORNER 1 TWISTLOCKS LOCKED
PS6	CORNER 2 TWISTLOCKS LOCKED
PS7	CORNER 3 TWISTLOCKS LOCKED
PS8	CORNER 4 TWISTLOCKS LOCKED
PS9	CORNER 1 LANDED
PS10	CORNER 2 LANDED
PS11	CORNER 3 LANDED
PS12	CORNER 4 LANDED
PS13	SEASIDE LEFT FLIPPER UP
PS14	SEASIDE RIGHT FLIPPER UP
PS15	LANDSIDE RIGHT FLIPPER UP
PS16	LANDSIDE LEFT FLIPPER UP
PS17	20FT POSITION
PS18	40FT (IN) POSITION
PS19	40FT (OUT) POSITION
PS20	45FT POSITION
LZ1	SEASIDE TWIN DETECTION
LZ2	LANDSIDE TWIN DETECTION
Q1	MOTOR ISOLATOR SWITCH
C21	SUB-D9 FEMALE FRONT PANEL INTERFACE
PB1	PUMP RESET BUTTON
ESW1	SPREADERS EMERGENCY STOP

ABBREVIATION	FUNCTION
Y1	LHS TWISTLOCKS LOCKS SOL.
Y2	LHS TWISTLOCKS UNLOCKS SOL.
Y3	RHS TWISTLOCKS LOCKS SOL.
Y4	RHS TWISTLOCKS UNLOCKS SOL.
Y5	EXTEND SOL.
Y6	RETRACT SOL.
Y7	LANDSIDE RIGHT FLIPPER UP SOL.
Y8	LANDSIDE RIGHT FLIPPER DOWN SOL.
Y9	LANDSIDE LEFT FLIPPER UP SOL.
Y10	LANDSIDE LEFT FLIPPER DOWN SOL.
Y11	UNLOADING VALVE SOL.
X1	MAIN ELECTRICAL JUNCTION BOX
X2	LEFT SIDE ELECTRICAL JUNCTION BOX
X3	RIGHT SIDE ELECTRICAL JUNCTION BOX
X4	LEFT SIDE POSITION ENCLOSURE BOX
X5	RIGHT SIDE POSITION ENCLOSURE BOX
X6	LEFT SIDE LED ENCLOSURE BOX
X7	RIGHT SIDE LED ENCLOSURE BOX
XHMI	DIAGNOSTIC SCREEN ENCLOSURE BOX
H1	LHS TWISTLOCKS LOCKED INDICATION (GREEN)
H2	LHS TWISTLOCKS UNLOCKED INDICATION (RED)
H3	LHS LANDED INDICATION (WHITE)
H4	RHS TWISTLOCKS LOCKED INDICATION (GREEN)
H5	RHS TWISTLOCKS UNLOCKED INDICATION (RED)
H6	RHS LANDED INDICATION (WHITE)
H7	COMMUNICATION HEARTBEAT

MAIN JUNCTION LAYOUT DIAGRAM (-X1)



0 1 2 3 4 5 6 7 8 9

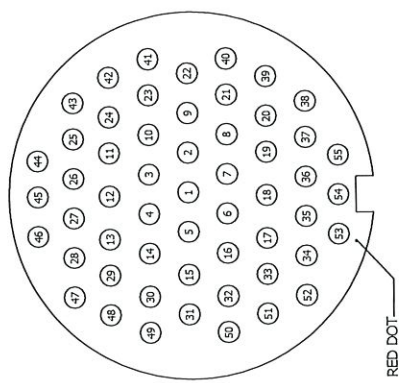
1040 mm

600 mm

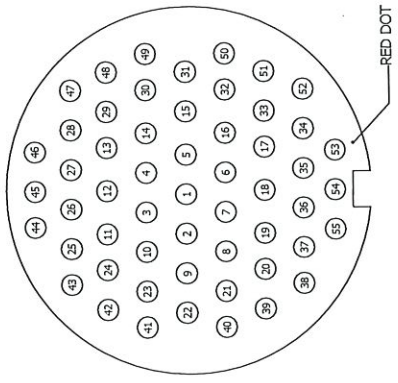
PIN NO. CONFIGURATION

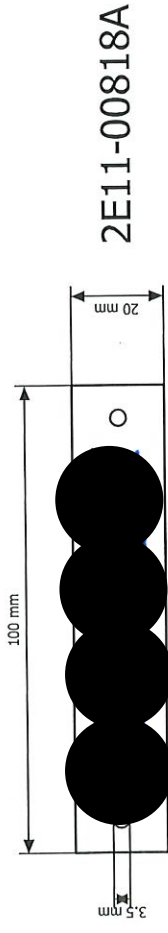
PIN #	DESCRIPTION
1	
2	CAN HIGH
3	CAN LOW
4	CAN GROUND
5	CAN SPREADERS CONNECTED SIGNAL
6	
7	CONTROL VOLTAGE 220VAC (N)
8	
9	
10	
11	SOLENOID CONTROL VOLTAGE 220VAC (N)
12	CORNER 2 FLIPPER DOWN COMMAND
13	CORNER 1 FLIPPER DOWN COMMAND
14	CORNER 3 FLIPPER DOWN COMMAND
15	CORNER 4 FLIPPER DOWN COMMAND
16	TWISTLOCKS LOCKS COMMAND
17	TWISTLOCKS UNLOCKS COMMAND
18	EXTEND COMMAND
19	RETRACT COMMAND
20	EXTEND COMMAND
21	RETRACT COMMAND
22	LANDED LOOP SIGNAL
23	LANDED LOOP SIGNAL
24	TWISTLOCKS UNLOCKED SIGNAL
25	TWISTLOCKS LOCKED SIGNAL
26	20FT POSITION SIGNAL
27	SPARE
28	40FT POSITION SIGNAL
29	45FT POSITION SIGNAL
30	TWISTLOCKS LOCKS COMMAND
31	SOLENOID CONTROL VOLTAGE 220VAC (N)
32	SOLENOID CONTROL VOLTAGE 220VAC (N)
33	TWISTLOCKS UNLOCKS COMMAND
34	
35	CONTROL VOLTAGE 220VAC (L)
36	
37	
38	PUMP FEEDBACK SIGNAL
39	
40	MOTOR SUPPLY L1 (380VAC - 50HZ)
41	MOTOR SUPPLY L1 (380VAC - 50HZ)
42	MOTOR SUPPLY L2 (380VAC - 50HZ)
43	MOTOR SUPPLY L2 (380VAC - 50HZ)
44	MOTOR SUPPLY L3 (380VAC - 50HZ)
45	MOTOR SUPPLY L3 (380VAC - 50HZ)
46	
47	
48	
49	PROTECTIVE EARTH
50	
51	
52	
53	
54	
55	

MALE INSERT ON SPREADER RECEPTACLE
 VIEW FROM SOLDERING SIDE
 310 010 000 642 000 (STRAIGHT RECEPTACLE)
 310 803 150 055 151 (PIN INSERT - 55PINS)

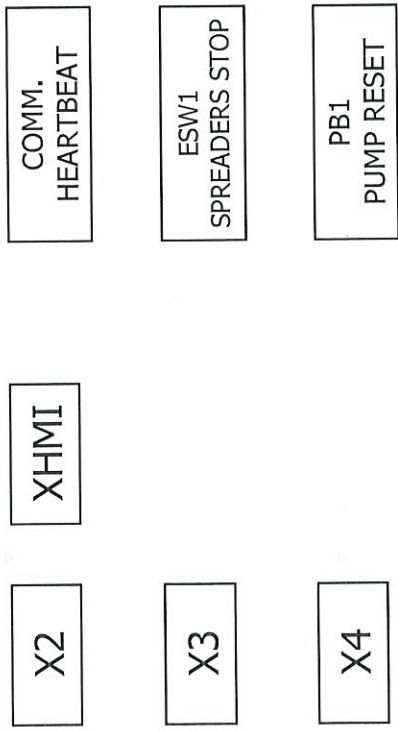
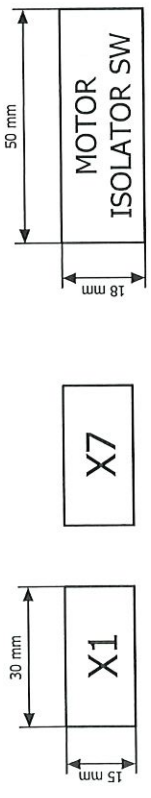


FEMALE INSERT ON HEADBLOCK PLUG
 VIEW FROM SOLDERING SIDE
 310 025 000 642 000 (STRAIGHT PLUG)
 310 703 150 055 000 (SOCKET INSERT - 55PINS)
 026 448 350 480 000 (CABLE CLAMP)





THICKNESS:	0.635mm (0.25")
MATERIAL:	SS316
FINISHING:	ENGRAVED
FONT TYPE:	ARIAL
FONT COLOR:	BLACK (DEFAULT)



2E11-00818C

2E11-00818R