

Project: MBari

				Date	17/11-2021	CNP Freire MBarí				Front page				
	Removed CP02	28.11.2022	ANP	User	GSK									
	Updated after adding WP03	21.11.2022	ANP	Approved	RAJ									
Status	Change	Date	Name	Standard		Origin	Repl. f.	Repl. by			10070 -	FP	Rev. G	Sheet 1 Next 2

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	Removed CP02	28.11.2022	ANP	User	GSK												
	Updated after adding WP03	21.11.2022	ANP	Approved	RAJ												
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Drawing list		DL		Drawing list Drawing list Drawing list Drawing list Drawing list Drawing list								1 2 3 4 5 6				
Cable list		CD		Cable list Cable list Cable list Cable list								1 2 3 4				
Termination list		TL		Termination list								1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19				
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Locations		00-LO		Locations System Equipment Overview Cabinet Overview Network Topology Emergency Stop								1 2 3				
Cable Diagram		00-CD		Ship Connections Supply from Ship Power Supply Connections Supply from Ship Signal Connections						=SHIP =SHIP		1 2				
Circuit Diagram		00-CC		Ship Connections Power Connections 440VAC, 230VAC PMS, Alarm, Internet Optional Alarm				+Power +Signal		=SHIP =SHIP		1 2				
Cable Diagram		01-CD		Main VFD Cabinet Pentagon WCS01 Cabinet						=WCS01		1				
				Date	17/11-2021		CNP Freire				Drawing list					
	Updated after CP02 removed	28.11.2022	ANP	User	GSK		MBarí									
	Updated after adding WP03	21.11.2022	ANP	Approved	RAJ											
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				Date	17/11-2021	CNP Freire				Drawing list					
	Updated after CP02 removed	28.11.2022	ANP	User	GSK	MBarí									
	Updated after adding WP03	21.11.2022	ANP	Approved	RAJ										
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Document Type		Drawing number		Title				Location (+)		Function (=)		Sheet		Rev.	
Part list		19-PL		Hangar Control Panel Part list Part list						=WP03 =WP03		1 2			
Cable Diagram		20-CD		Overhead Crane Outhauler Motor						=OHC		1			

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1		2		3		4		5		6		7		8			
A	Cable	Cable type		Connection A Item designation		Location		Connection B Item designation		Location		Comment		OD mm.			
	-WG20	FD CP (TP) plus 4x2x0.25		=WCS01-X40		+UH03		=CP03-X40		+CP03				5 7,4			
	-WG24	FD CP (TP) plus 4x2x0.75		=WCS01-X30		+UH03		=HPUBR01-X1		+UC01				5 12,2			
	-WG25	FD CP (TP) plus 4x2x0.75		=WCS01-X31		+UH03		=HPUGC01-X1		+UC01				5 12,2			
	-WGS1	Ship Signal Cable 6x2x0.75		=WCS01-X82		+UH03		=SHIP-X1		+PMS				5 7,9			
	-WGS2	Ship Signal Cable 4x2x0.75		=WCS01-X80		+UH03		=SHIP-X3		+CSCS				5 6,5			
B	-WGS3	Ship Signal Cable 4x2x0.75		=WCS01-X81		+UH03		=SHIP-X2		+Alarm				5 6,5			
C																	
D																	
E																	
F																	
				Date	17/11-2021		CNP Freire				Cable list		400209341				
		Updated Cables after CP02 removed		28.11.2022	ANP	User	GSK										
		Updated after adding WP03		21.11.2022	ANP	Approved	RAJ										
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1		2		3		4		5		6		7		8	
Cable		Cable type Core		Connection A Item designation		Location		Connection B Item designation		Location		Instruction			
-WF2		EtherLine CAT7		=WCS01-RJ3		+UH03		=CP01-XG3		+CP01		Cable shield to be connected in both ends of the cable. Connection by 360* connection to ground			
		WHBU		=WCS01-RJ3:5		01/30.D3		=CP01-XG3:5		08/1.D5					
		BU		=WCS01-RJ3:4		01/30.D3		=CP01-XG3:4		08/1.D5					
		TW1													
		WHOR		=WCS01-RJ3:1		01/30.D3		=CP01-XG3:1		08/1.D5					
		OR		=WCS01-RJ3:2		01/30.D3		=CP01-XG3:2		08/1.D5					
		TW2													
		WHGN		=WCS01-RJ3:3		01/30.D4		=CP01-XG3:3		08/1.D5					
-WF3		EtherLine CAT7		=WCS01-RJ4		+UH03		=CP01-XG4		+CP01		Cable shield to be connected in both ends of the cable. Connection by 360* connection to ground			
		WHBU		=WCS01-RJ4:5		01/30.D4		=CP01-XG4:5		08/1.D6					
		BU		=WCS01-RJ4:4		01/30.D4		=CP01-XG4:4		08/1.D6					
		TW1													
		WHOR		=WCS01-RJ4:1		01/30.D4		=CP01-XG4:1		08/1.D6					
		OR		=WCS01-RJ4:2		01/30.D4		=CP01-XG4:2		08/1.D6					
		TW2													
		WHGN		=WCS01-RJ4:3		01/30.D4		=CP01-XG4:3		08/1.D6					
-WF5		DeviceNet Thick		=WCS01-X50		+UH03		=CP03-X50		+CP03		Cable shield to be connected in both ends of the cable. Connection by 360* connection to ground			
		Shield		=WCS01-X50:3		01/33.D2		=CP03-X50:3		10/2.D6					
		WH		=WCS01-X50:4		01/33.D3		=CP03-X50:4		10/2.D6					
		BU		=WCS01-X50:2		01/33.D2		=CP03-X50:2		10/2.D6					
		TW1													
		RD		=WCS01-X50:5		01/33.D3		=CP03-X50:5		10/2.D7					
		BK		=WCS01-X50:1		01/33.D2		=CP03-X50:1		10/2.D6					
		TW2													
SH1		EMC		01/33.E4		EMC		10/2.E7							
				</											

1		2		3		4		5		6		7		8		
A	Cable		Cable type Core		Connection A Item designation		Location		Connection B Item designation		Location		Instruction			
			TW2 SH1		EMC		11/1.E8		EMC		12/1.E7					
	-WF13		EtherLine CAT7		=WCS01-RJ1		+UH03		=TRIP01-X91		+TRIP01		Cable shield to be connected in both ends of the cable. Connection by 360* connection to ground			
			WHBU BU TW1 WHOR OR TW2 WHGN GN TW3 WHBN BN TW4 SH1		=WCS01-RJ1:5 =WCS01-RJ1:4		01/30.D1 01/30.D1		=A-FRAME STERN-X91:5 =A-FRAME STERN-X91:4		18/1.D1 18/1.D1					
					=WCS01-RJ1:1 =WCS01-RJ1:2		01/30.D1 01/30.D1		=A-FRAME STERN-X91:1 =A-FRAME STERN-X91:2		18/1.D1 18/1.D2					
					=WCS01-RJ1:3 =WCS01-RJ1:6		01/30.D1 01/30.D1		=A-FRAME STERN-X91:3 =A-FRAME STERN-X91:6		18/1.D2 18/1.D2					
B					=WCS01-RJ1:7 =WCS01-RJ1:8		01/30.D1 01/30.D1		=A-FRAME STERN-X91:7 =A-FRAME STERN-X91:8		18/1.D2 18/1.D2					
					=WCS01-RJ1:S		01/30.D1		=A-FRAME STERN-X91:S		18/1.D2					
	-WF14		EtherLine CAT7		=WCS01-RJ8		+UH03		=WP03-RJ1		+WP03		Cable shield to be connected in both ends of the cable. Connection by 360* connection to ground			
			WHBU BU TW1 WHOR OR TW2 WHGN GN TW3 WHBN BN TW4 SH1		=WCS01-RJ8:5 =WCS01-RJ8:4		01/30.D2 01/30.D2		=WP03-RJ1:5 =WP03-RJ1:4		19/2.D6 19/2.D6					
					=WCS01-RJ8:1 =WCS01-RJ8:2		01/30.D3 01/30.D3		=WP03-RJ1:1 =WP03-RJ1:2		19/2.D6 19/2.D6					
					=WCS01-RJ8:3 =WCS01-RJ8:6		01/30.D3 01/30.D3		=WP03-RJ1:3 =WP03-RJ1:6		19/2.D6 19/2.D6					
					=WCS01-RJ8:7 =WCS01-RJ8:8		01/30.D3 01/30.D3		=WP03-RJ1:7 =WP03-RJ1:8		19/2.D6 19/2.D6					
C					=WCS01-RJ8:S		01/30.D3		=WP03-RJ1:S		19/2.D6					
	-WF15		EtherLine CAT7		=WCS01-RJ2		+UH03		=WP03-RJ2		+WP03		Cable shield to be connected in both ends of the cable. Connection by 360* connection to ground			
			WHBU BU TW1 WHOR OR TW2 WHGN GN TW3 WHBN BN TW4 SH1		=WCS01-RJ2:5 =WCS01-RJ2:4		01/30.D1 01/30.D2		=WP03-RJ2:5 =WP03-RJ2:4		19/2.D7 19/2.D8					
					=WCS01-RJ2:1 =WCS01-RJ2:2		01/30.D2 01/30.D2		=WP03-RJ2:1 =WP03-RJ2:2		19/2.D8 19/2.D8					
					=WCS01-RJ2:3 =WCS01-RJ2:6		01/30.D2 01/30.D2		=WP03-RJ2:3 =WP03-RJ2:6		19/2.D8 19/2.D8					
					=WCS01-RJ2:7 =WCS01-RJ2:8		01/30.D2 01/30.D2		=WP03-RJ2:7 =WP03-RJ2:8		19/2.D8 19/2.D8					
D					=WCS01-RJ2:S		01/30.D2		=WP03-RJ2:S		19/2.D8					
E																
F																

Cable	Cable type Core	Connection A Item designation	Location	Connection B Item designation	Location	Instruction
	SH1	EMC	01/39.D4	EMC	02/1.D6	
-WG2	Unitronic Lapp Cable 4x2x0.25 WH BN TW1 GN YE TW2 GY PK TW3 BU RD TW4 SH1	=WCS01-TA3.KF2:X82 =WCS01-TA3.KF2:X82:5 =WCS01-TA3.KF2:X82:6 =WCS01-TA3.KF2:X82:3 =WCS01-TA3.KF2:X82:4 =WCS01-TA3.KF2:X82:2 =WCS01-TA3.KF2:X82:1 =WCS01-TA3.KF2:X81:5 =WCS01-TA3.KF2:X81:4 =WCS01-TA3.KF2:X82:7	+UH01 01/7.B4 01/7.B4 01/7.B4 01/7.B4 01/7.B4 01/7.B3 01/7.B3 01/7.B3 01/7.B4	=HW01-MA2 =HW01-MA2:7 =HW01-MA2:8 =HW01-MA2:5 =HW01-MA2:6 =HW01-MA2:4 =HW01-MA2:3 =HW01-MA2:2 =HW01-MA2:1 =HW01-MA2:9	 01/7.E4 01/7.E4 01/7.E4 01/7.E4 01/7.E4 01/7.E3 01/7.E3 01/7.E3 01/7.E4	Cable shield to be connected in both ends of the cable. Connected by 360° connection to ground
-WG3	Unitronic Lapp Cable 1x2x0.75 WH BN TW1 SH1	=WCS01-X70 =WCS01-X70:3 =WCS01-X70:4 EMC	+UH01 01/7.D7 01/7.D7 01/7.D7	=HW01-MA2 =HW01-MA2:PTC1 =HW01-MA2:PTC2 EMC	 01/7.F7 01/7.F7 01/7.F7	Cable shield to be connected in both ends of the cable. Connected by 360° connection to ground
-WG4	Unitronic Lapp Cable 4x2x0.25 WH BN TW1 GN YE TW2 GY PK TW3 BU RD TW4 SH1	=WCS01-TA7.KF2:X82 =WCS01-TA7.KF2:X82:5 =WCS01-TA7.KF2:X82:6 =WCS01-TA7.KF2:X82:3 =WCS01-TA7.KF2:X82:4 =WCS01-TA7.KF2:X82:2 =WCS01-TA7.KF2:X82:1 =WCS01-TA7.KF2:X81:5 =WCS01-TA7.KF2:X81:4 =WCS01-TA7.KF2:X82:7	+UH02 01/15.B7 01/15.B8 01/15.B7 01/15.B7 01/15.B7 01/15.B7 01/15.B7 01/15.B7 01/15.B8	=HW01-MA1 =HW01-MA1:4 =HW01-MA1:3 =HW01-MA1:6 =HW01-MA1:5 =HW01-MA1:7 =HW01-MA1:8 =HW01-MA1:1 =HW01-MA1:2 =HW01-MA1:PE	 01/15.E7 01/15.E8 01/15.E7 01/15.E7 01/15.E7 01/15.E7 01/15.E7 01/15.E7 01/15.E8	Cable shield to be connected in both ends of the cable. Connected by 360° connection to ground
-WG5	Unitronic Lapp Cable 1x2x0.75 WH BN TW1 SH1	=WCS01-X71 =WCS01-X71:7 =WCS01-X71:8 EMC	+UH02 01/16.D4 01/16.D4 01/16.D4	=HW01-MA1 =HW01-MA1:1TP1 =HW01-MA1:1TP2 EMC	 01/16.F4 01/16.F4 01/16.F4	Cable shield to be connected in both ends of the cable. Connected by 360° connection to ground

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General Installation Notes

Note 1!

Electrical installation to be installed according to
Rapp Marine Electrical Installation Procedure (Document ID: 4251),
Good craftsmanship and National regulations

Note 2!

Cable ID description:
WDS= Power cables, Ship power supply (Cable type, not specified by Rapp Marine)
WD= Power cables
WG= Signal cables
WGS= Signal cables, Ship signals (Cable type, not specified by Rapp Marine)
WF= Data cables / Communication Bus

Note 3!

Cable types to be evaluated by the yard
in accordance with applicable regulations
and installation environment,
Cables have to be equal or better than Rapp Marine suggestions
All cables must be of screened type

Note 4!

Motor cable conductor sizes are minimum sizes
Max cable length 40m, For lengths over 40m contact Rapp Marine

Note 5!

Distance between motor and high power cables to encoder and signal cables
to be MIN 500mm

Note 6!

Encoder plugs for encoders is
delivered by Rapp Marine
Must be Soldered by Yard under installation

Note 7!

Yard to supply all cables in cable list
Exceptions are indicated in the cable list

Note 8!

Cables for main supply VFD cabinet & from VFD cabinet to motors
must be "Symmetrical Cables with screen"
(3x Cables) (3x + 3xPE Cables)

Note 9!

Device Net / Can Bus Cables must be of approved type:
Unitronic DeviceNet (Thick) or Belden 3082

Note 10!

Standard cable entries in cabinets is from the bottom
Products are delivered without cable glands for
external / yard cables

Note 11!

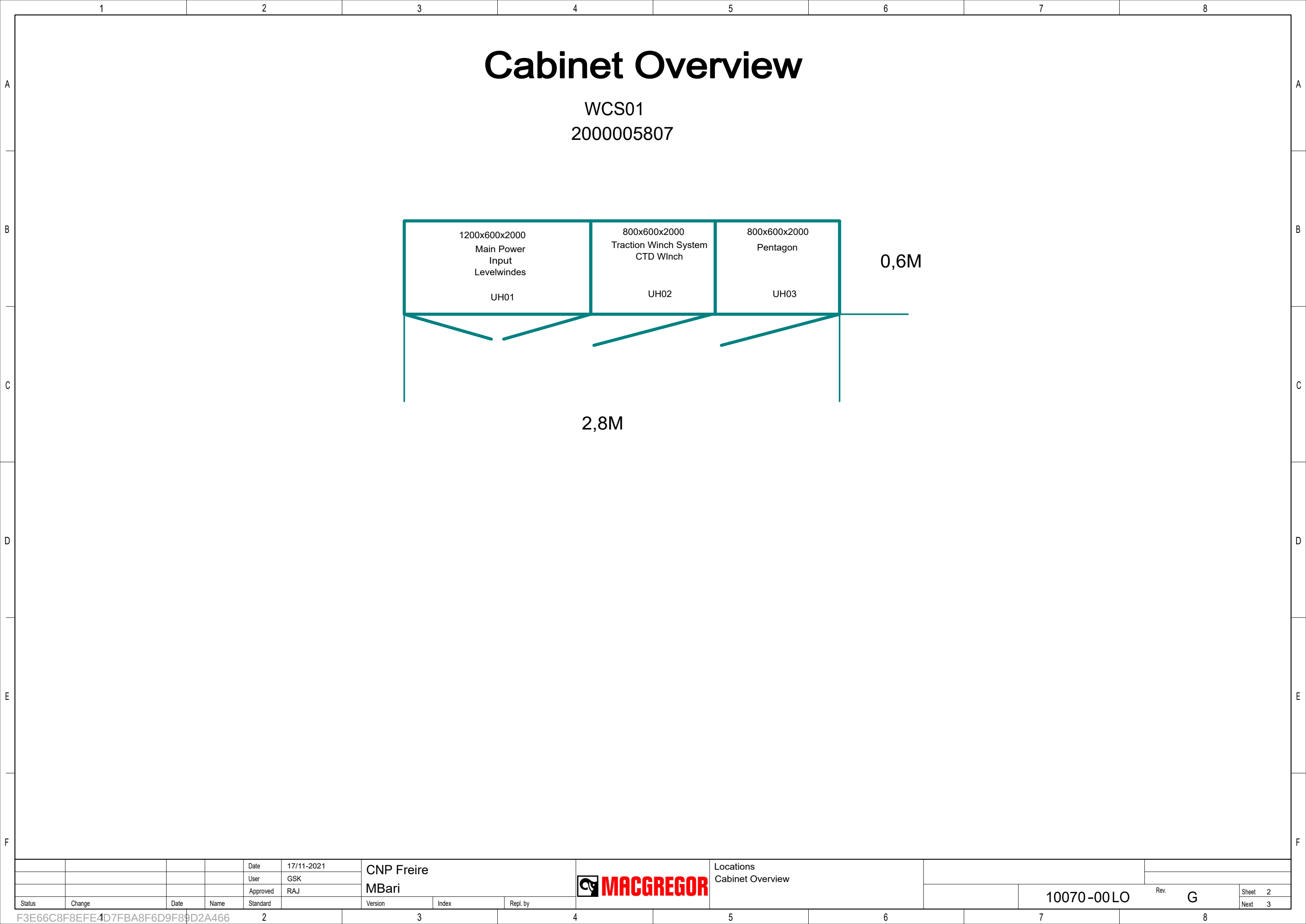
All cable shields must be connected with 360 degree
connection to ground (PE), or suitable EMC connection
in both ends.
This is to reduce the EMI from the VFD cabinet

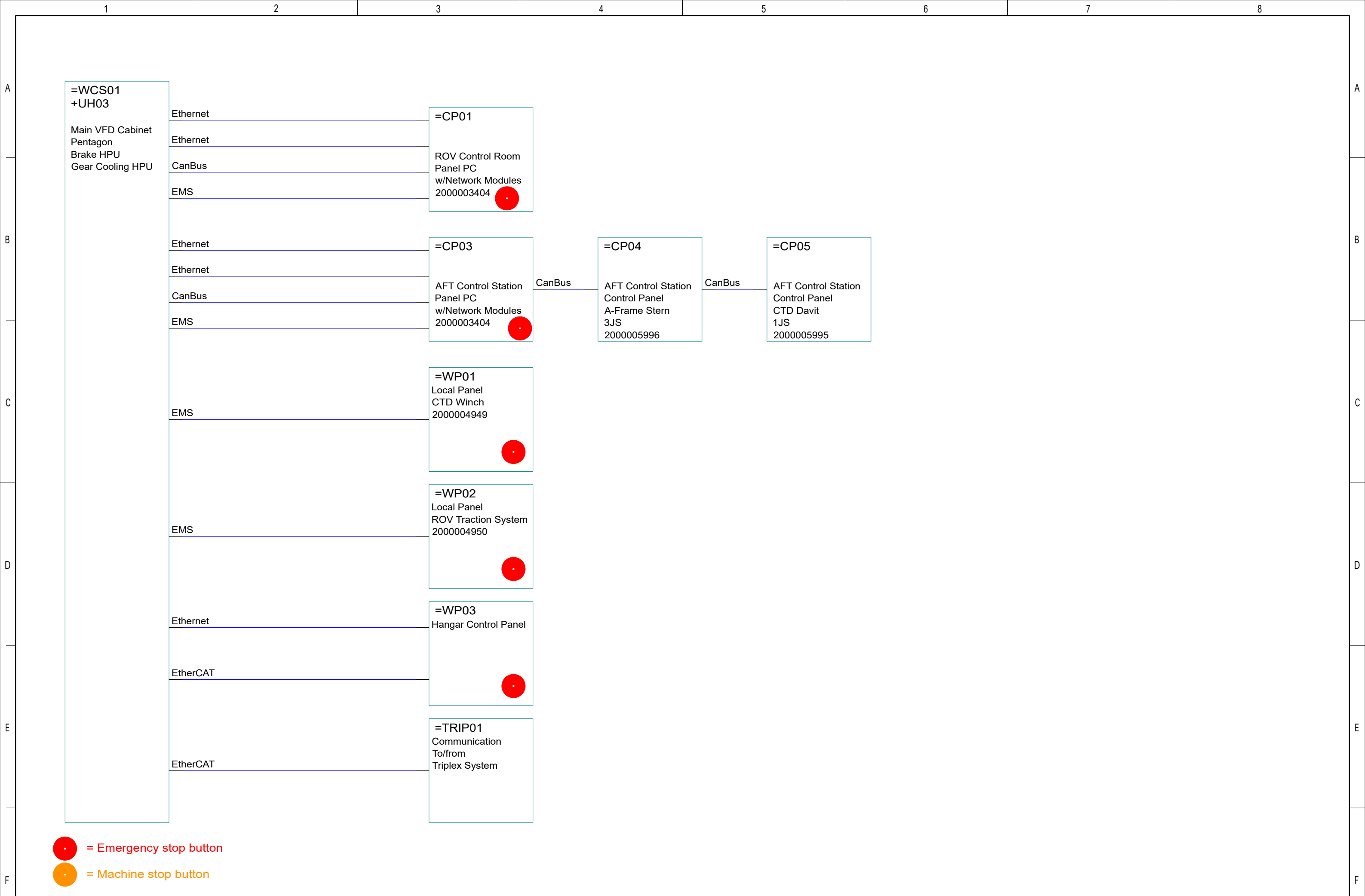
				Date	17/11-2021	CNP Freire MBar										
				User	GSK											
				Approved	RAJ											
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Location Overview System Equipment

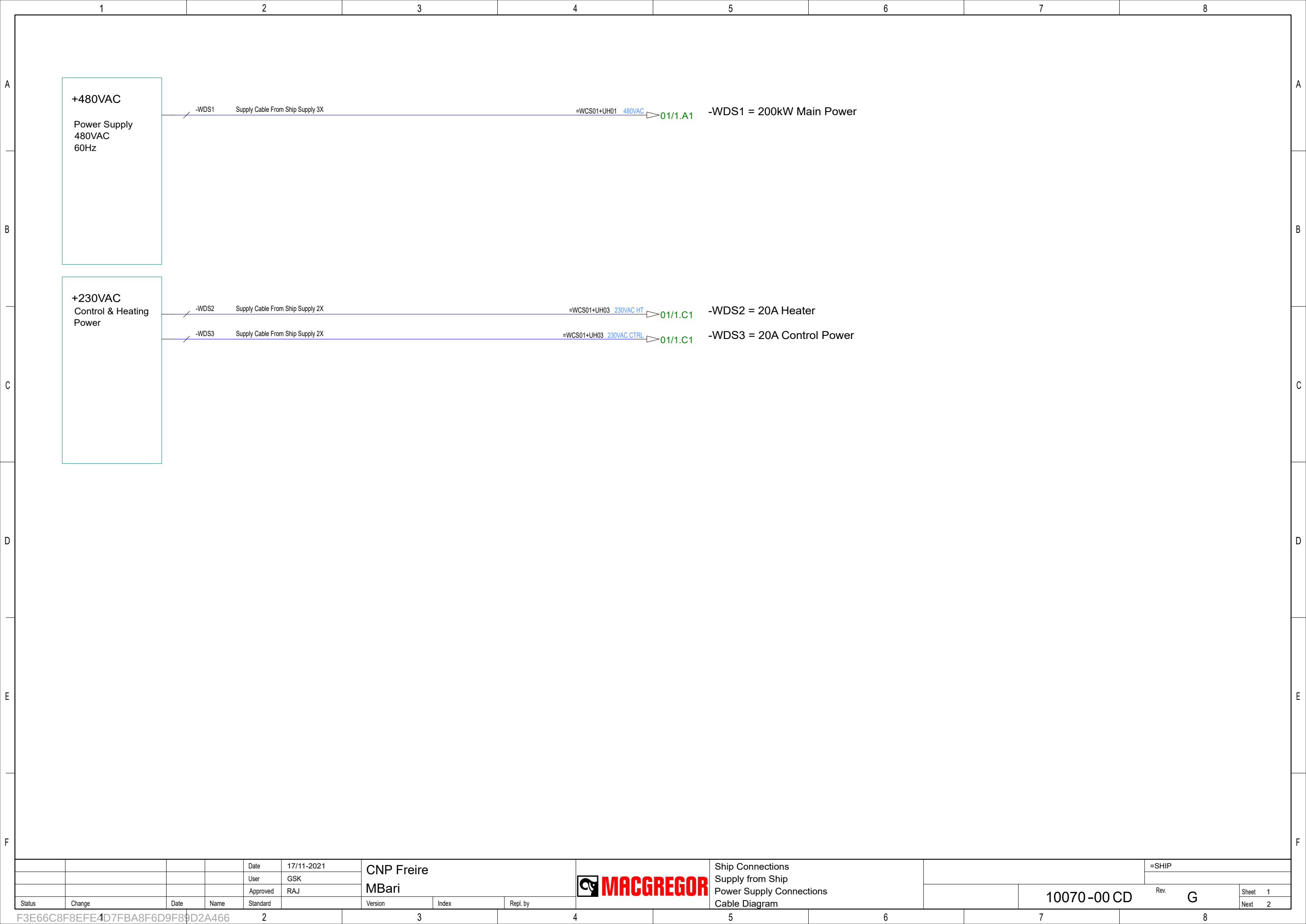
- =WCS01 Main VFD Cabinet
- =HW01 CTD Winch
- =TRW01 ROV System Traction Winch
- =LEV01 ROV System Levelwinde/Slack Wire
- =RW01 ROV System Storage Drum
- =DS01 ROV System Load Cell
- =WP01 Local Control Panel CTD Winch
- =WP02 Local Control Panel Traction System
- =WP03 Hangar Control Panel
- =CP01 ROV Control Room Panel Winches
- =CP03 AFT Control Station Panel Winches
- =CP04 AFT Control Station Panel A-Frame Stern
- =CP05 AFT Control Station Panel CTD Davit
- =TRIP01 Triplex Communication
- =HPUBR01 Brake HPU
- =HPUGC01 Gear Cooling HPU

				Date	17/11-2021	CNP Freire MBari				Locations System Equipment Overview				
	Removed CP02	28.11.2022	ANP	User	GSK									
	Added WP03 panel	21.11.2022	ANP	Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-00LO	Rev. G	Sheet 1 Next 2

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				Date	17/11-2021	CNP Freire MBarí					Locations Network Topology Emergency Stop		10070-00LO		Rev. G		Sheet 3 Next 1	
	Removed CP02	28.11.2022	ANP	User	GSK													
	Added WP03 panel	21.11.2022	ANP	Approved	RAJ													
Status	Change	Date	Name	Standard		Version	Index	Repl. by										



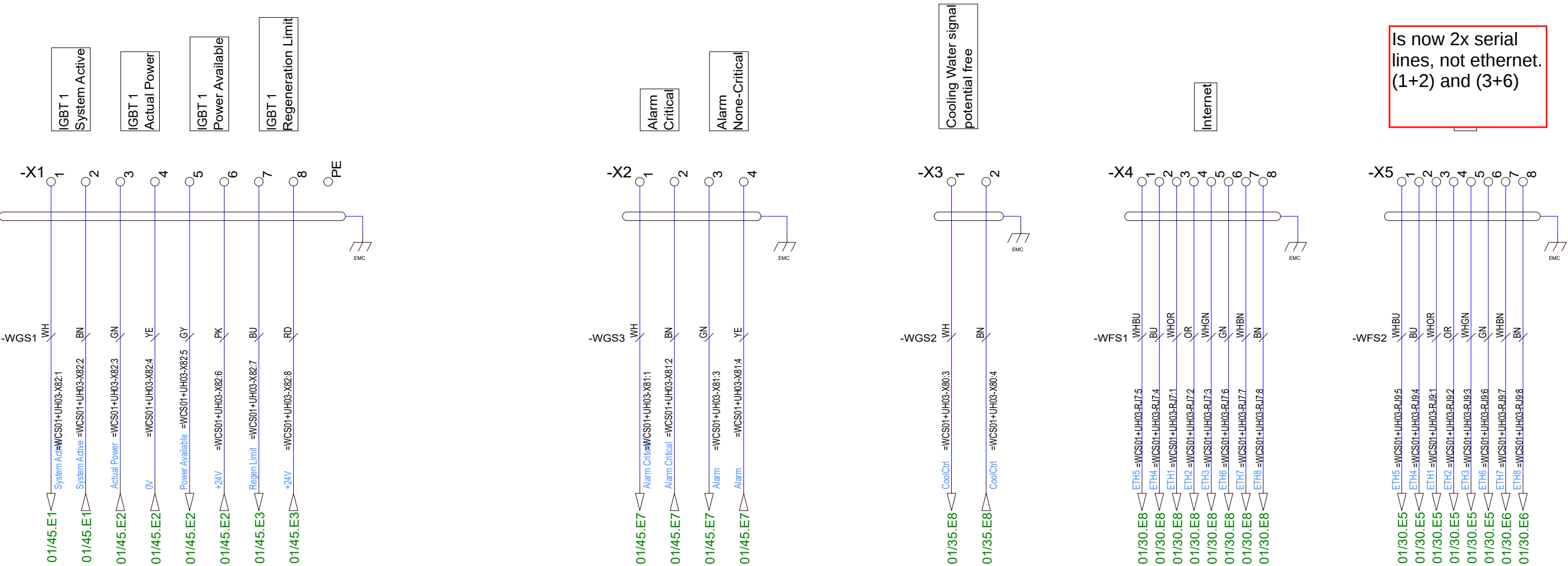
Yard Connections

Terminals not verified



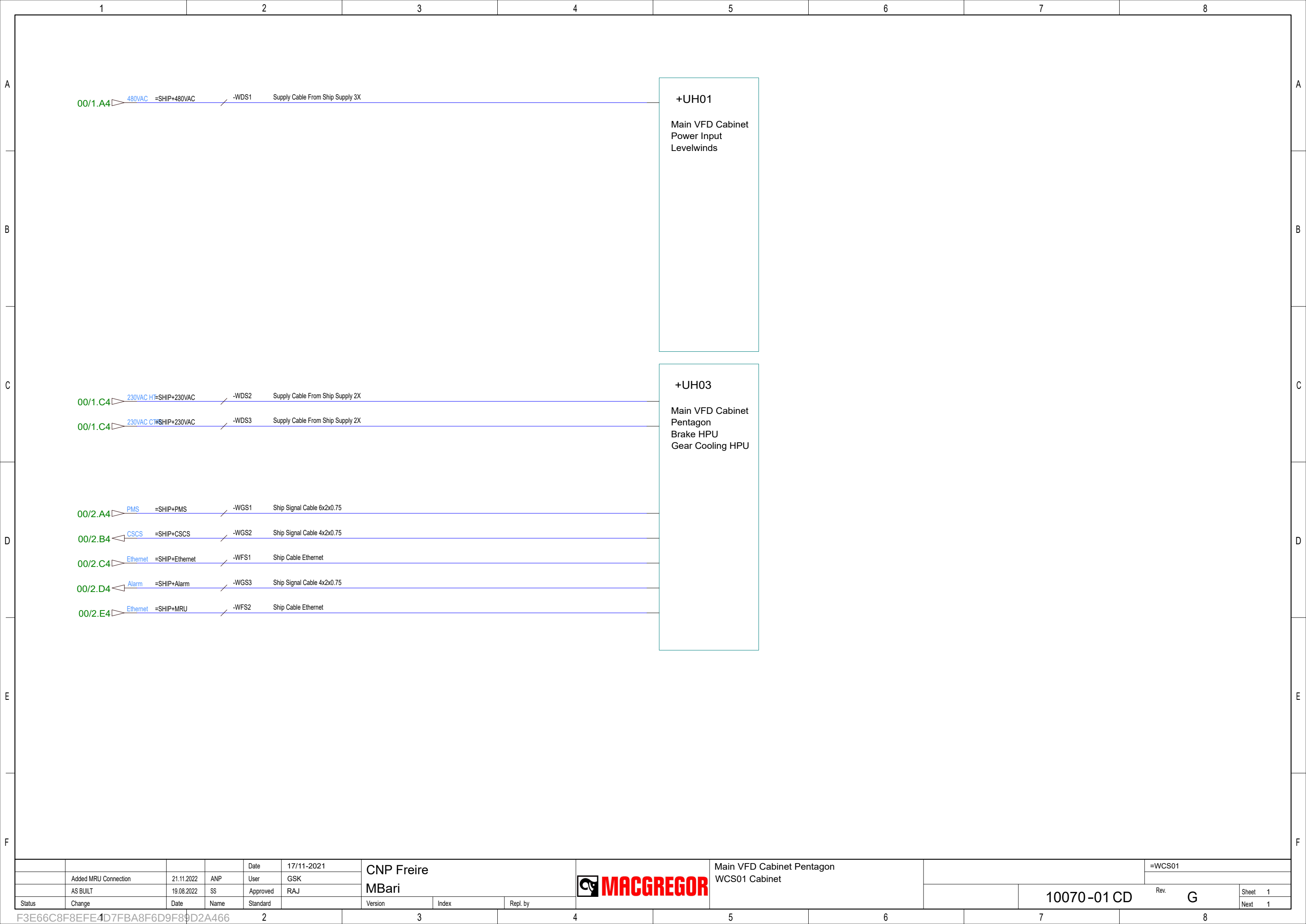
				Date	17/11-2021	CNP Freire				Ship Connections Power Connections 440VAC, 230VAC				=SHIP	
				User	GSK									+Power	
				Approved	RAJ						MBar				
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Yard Connections
To be verified



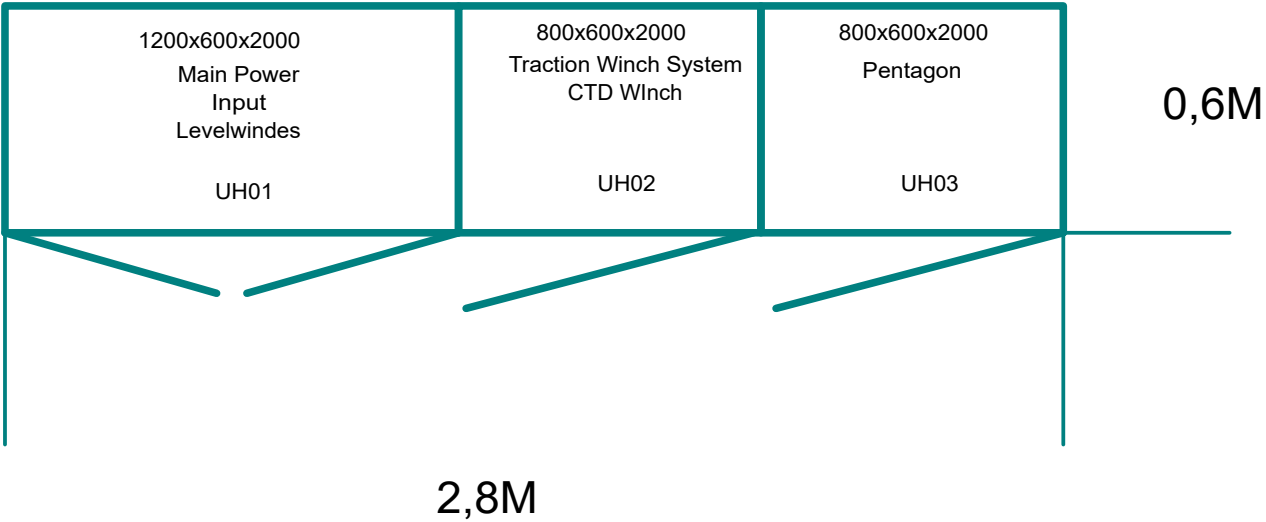
Is now 2x serial lines, not ethernet. (1+2) and (3+6)

F3E66C8F8EFE4D7FBA8F6D9F89D2A466		2		3		4		5		6		7		8	
1		2		3		4		5		6		7		8	
Status		Change		Date		Name		Standard		Version		Index		Repl. by	
Added MRU Connection		21.11.2022		ANP		Approved		RAJ		CNP Freire		MBar		Ship Connections	
Date		User		17/11-2021		GSK		MACGREGOR		PMS, Alarm, Internet		Optional Alarm		=SHIP	
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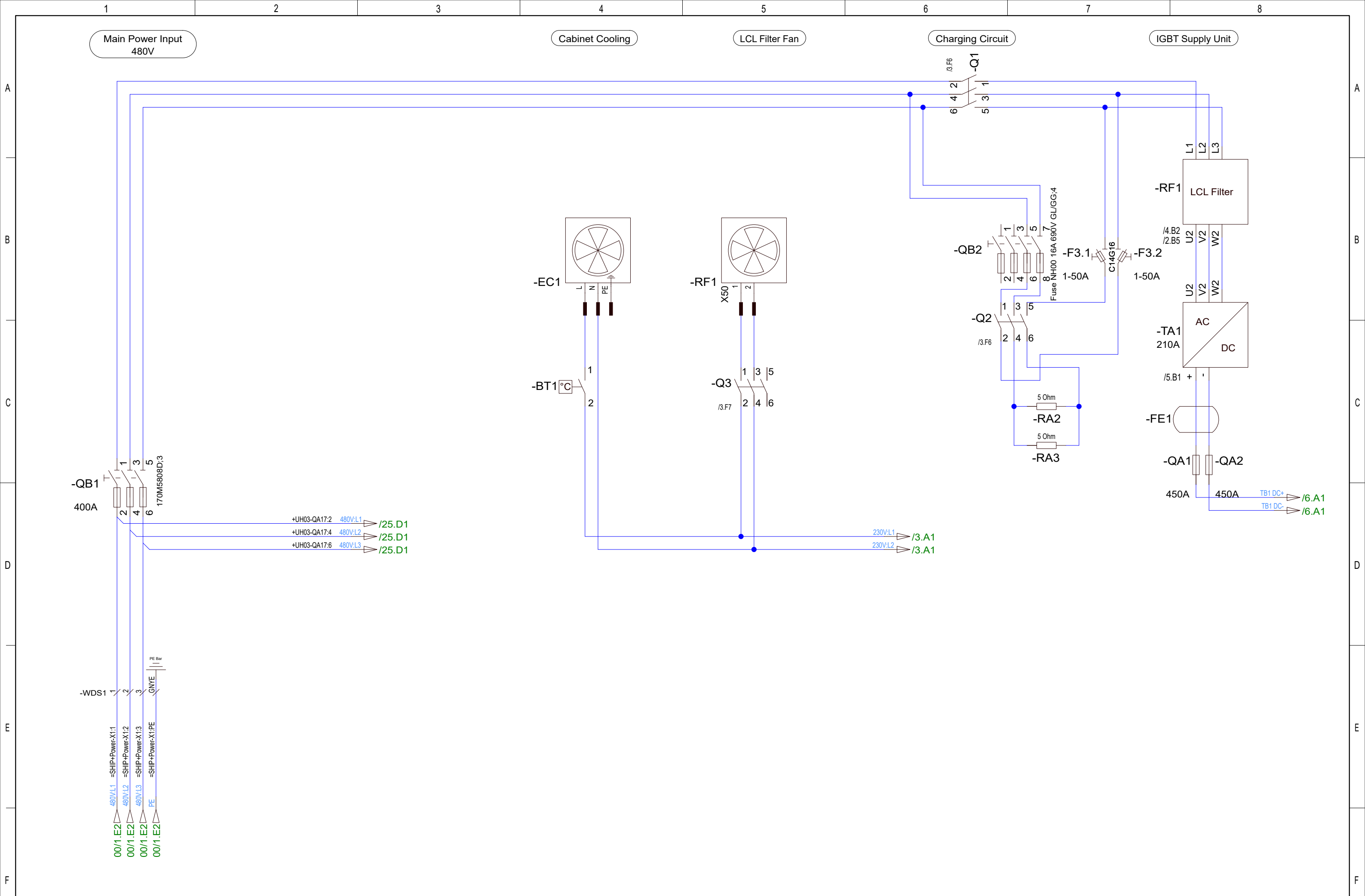


Cabinet Overview

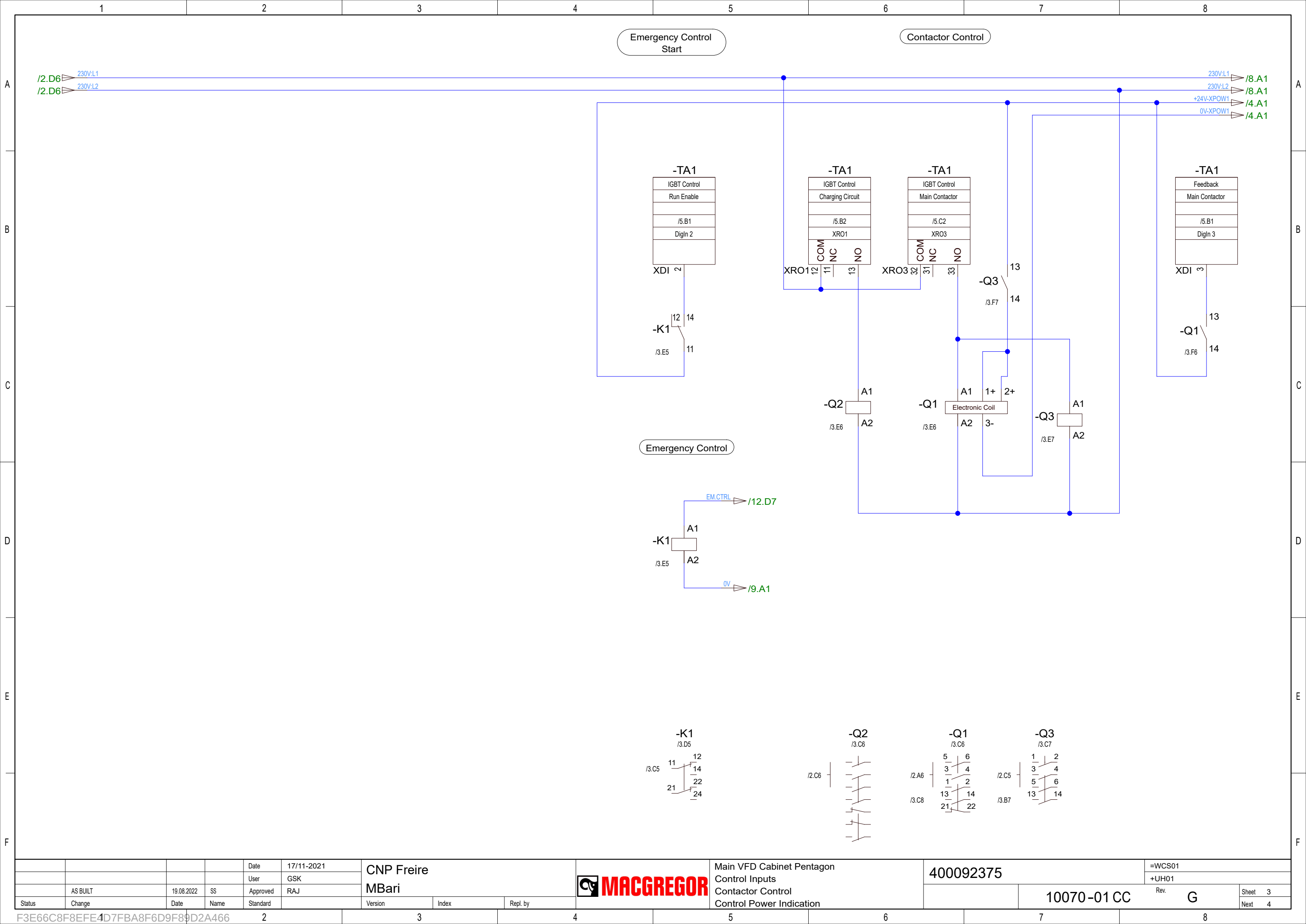
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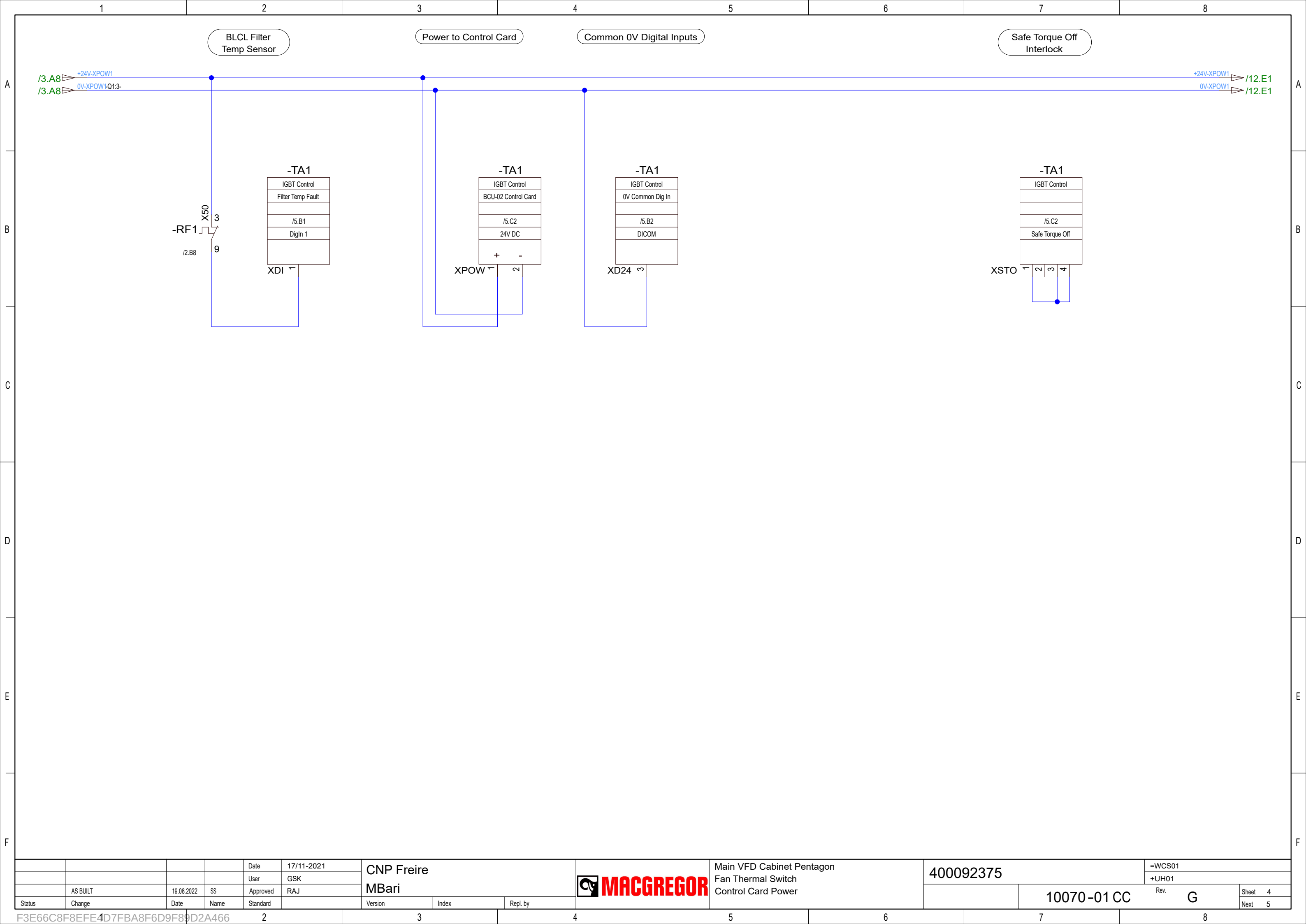


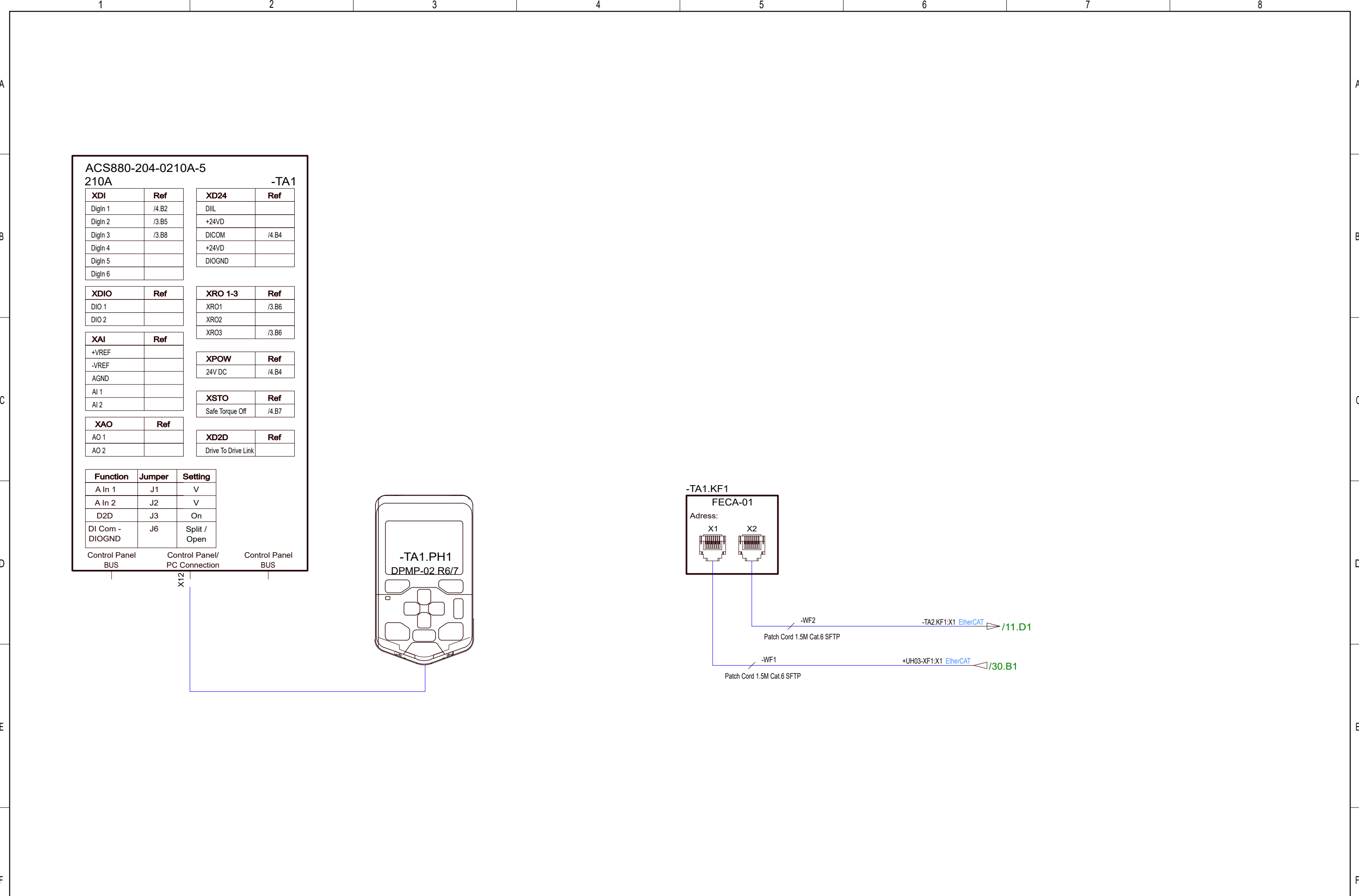
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				User	GSK									
	AS BUILT	19.08.2022	SS	Approved	RAJ							10070-01 CC	Rev. G	Sheet 1
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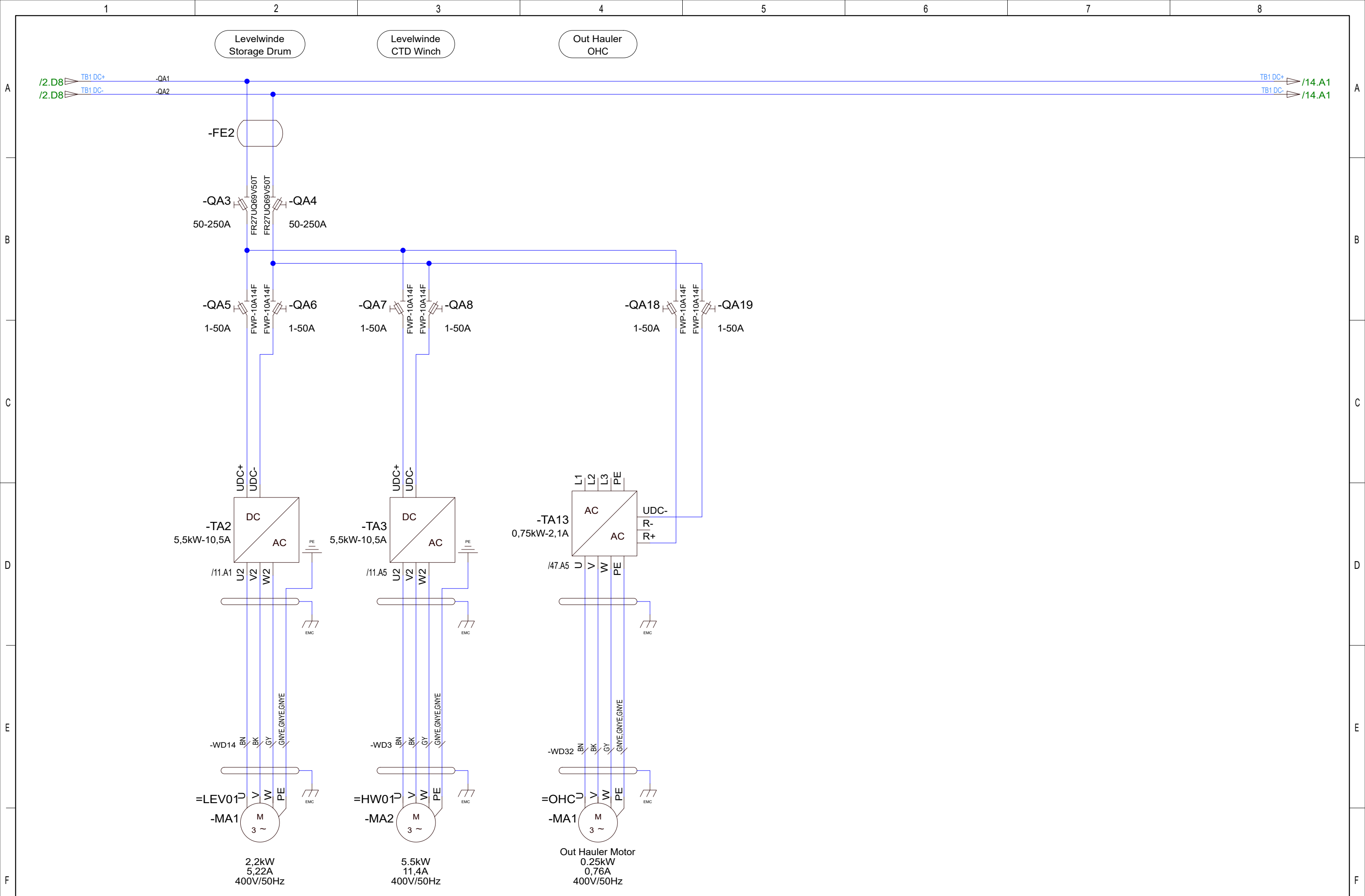


				Date	17/11-2021	CNP Freire MBarí				Main VFD Cabinet Pentagon Main Power input 1 Control Power, Charging Circuit IGBT Modules	400092375		=WCS01	
			User	GSK	+UH01									
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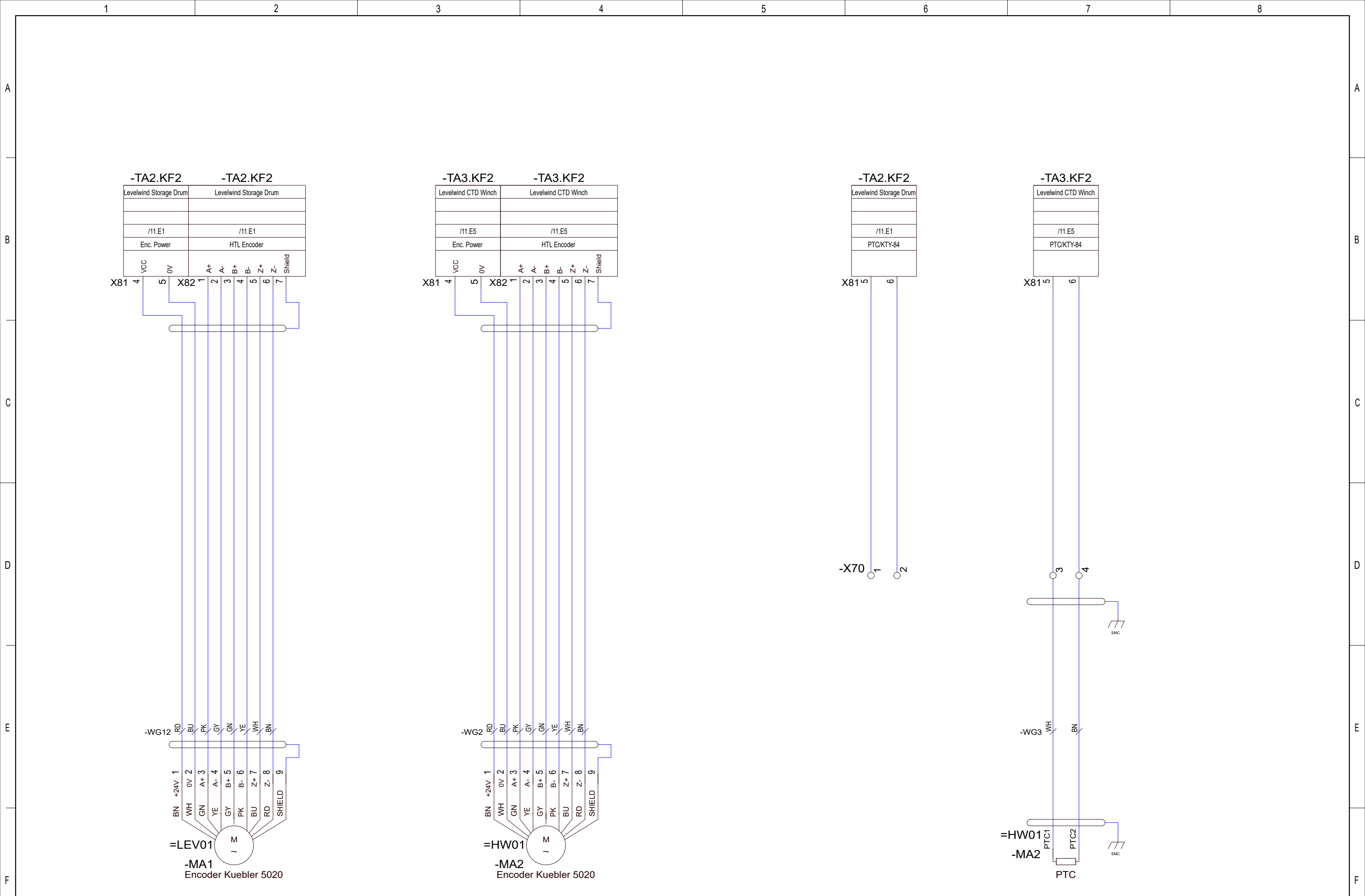


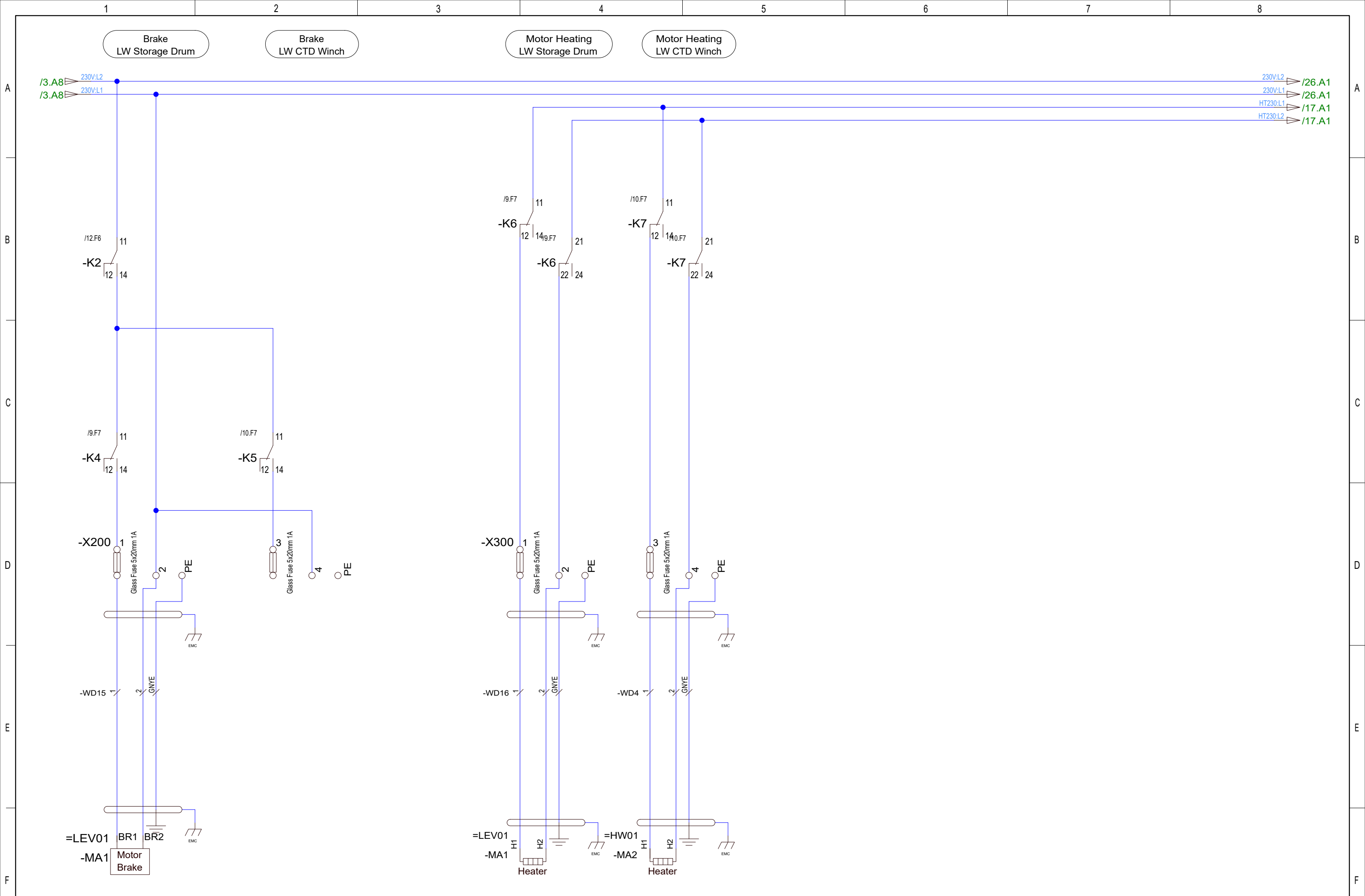






				Date	17/11-2021	CNP Freire MBarí				Main VFD Cabinet Pentagon Levelwindes Frequency Inverter	400092375		=WCS01					
				User	GSK								+UH01					
	AS BUILT	19.08.2022	SS	Approved	RAJ													
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															Next	7		





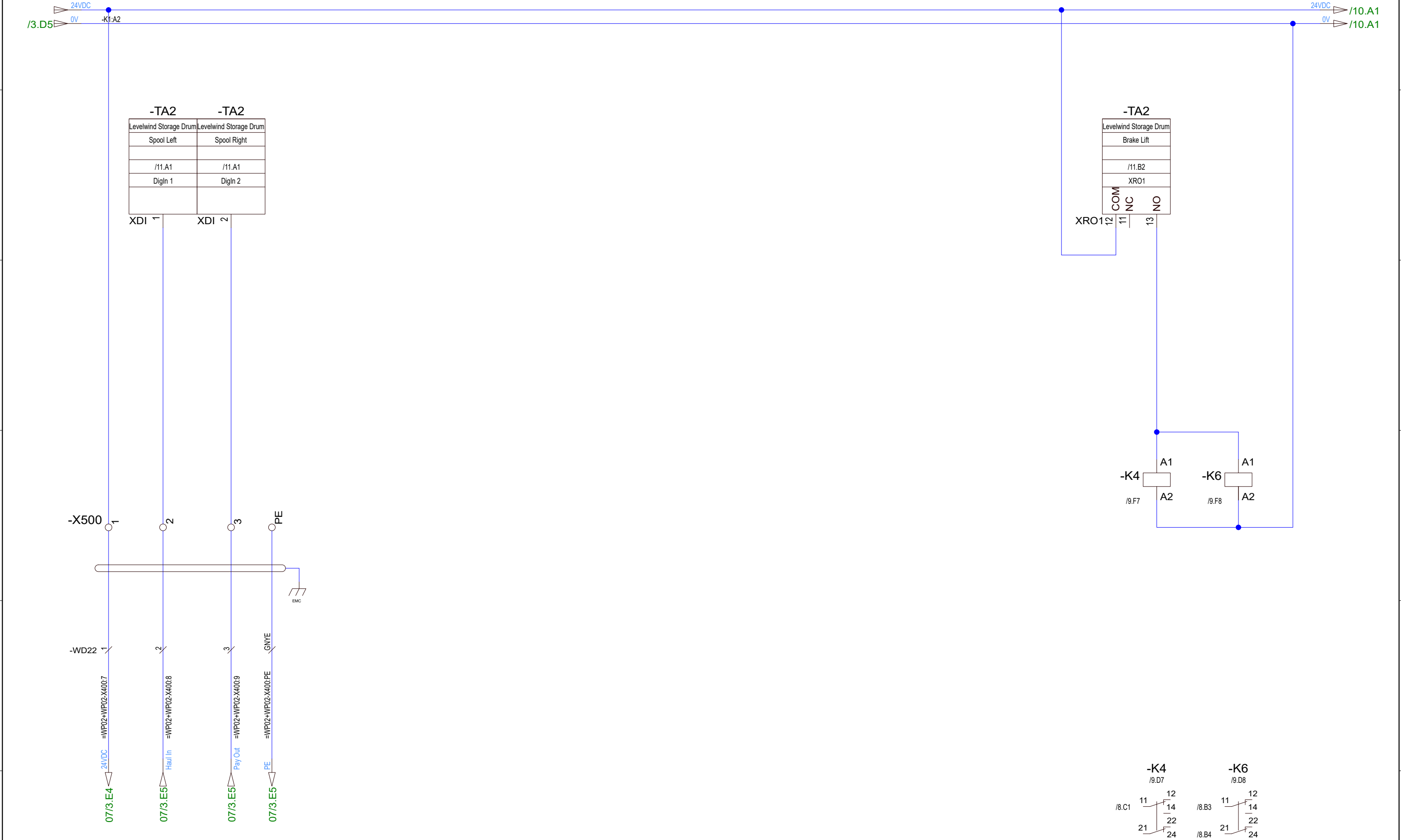
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				User	GSK								+UH01	
	AS BUILT	19.08.2022	SS	Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-01 CC	Rev. G	Sheet 8
														Next 9

Emergency JOG

Brake Lift & Heating

-TA2		-TA2	
Levelwind Storage Drum		Levelwind Storage Drum	
Spool Left		Spool Right	
/11.A1		/11.A1	
DigIn 1		DigIn 2	

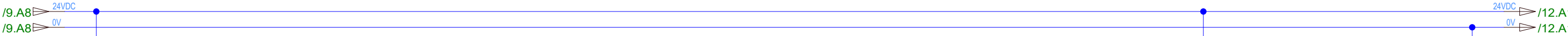
-TA2	
Levelwind Storage Drum	
Brake Lift	
/11.B2	
XRO1	
COM	
NC	
NO	



				Date	17/11-2021	CNP Freire				Main VFD Cabinet Pentagon Levelwind Storage Drum Emergency Control Connection Brake and Motor Heating Control	400092375		=WCS01	
				User	GSK								+UH01	
	AS BUILT	19.08.2022	SS	Approved	RAJ	MBar							Rev. G	
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-01 CC		Next 10	

Emergency JOG

Brake Lift & Heating



-TA3	
Levelwind CTD Winch	Levelwind CTD Winch
Spool Left	Spool Right
/11.A5	/11.A5
DigIn 1	DigIn 2

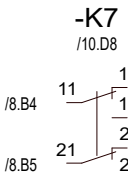
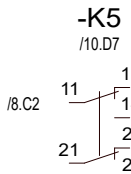
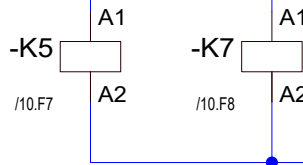
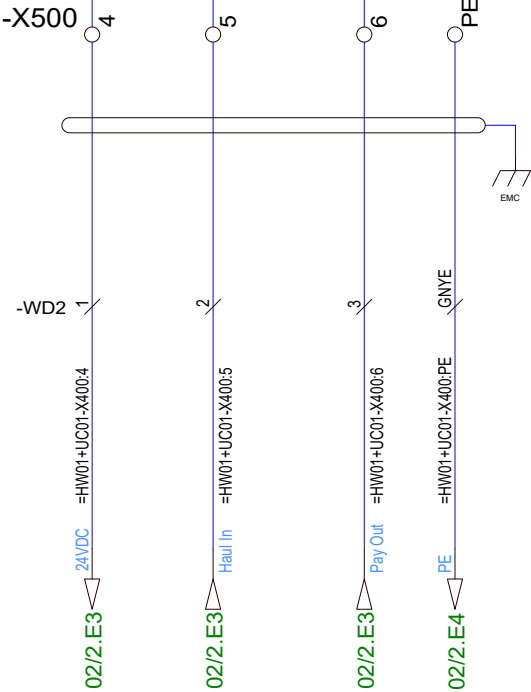
XDI ↶

XDI ↷

-TA3	
Levelwind CTD Winch	Levelwind CTD Winch
Brake Lift	
/11.B6	
XRO1	
COM	
NC	
NO	

XRO1 ↶

XRO1 ↷



F3E66C8F8EFE4D7FBA8F6D9F89D2A466		19.08.2022		SS		Approved		RAJ		Version		Index		Repl. by		Main VFD Cabinet Pentagon Levelwind CTD Winch Emergency Control Connection Brake and Motor Heating Control		400092375		=WCS01 +UH01		Rev. G		Sheet 10		Next 11	
AS BUILT		19.08.2022		SS		Approved		RAJ		Version		Index		Repl. by		Main VFD Cabinet Pentagon Levelwind CTD Winch Emergency Control Connection Brake and Motor Heating Control		400092375		=WCS01 +UH01		Rev. G		Sheet 10		Next 11	
Status		Change		Date		Name		Standard		Version		Index		Repl. by		Main VFD Cabinet Pentagon Levelwind CTD Winch Emergency Control Connection Brake and Motor Heating Control		400092375		=WCS01 +UH01		Rev. G		Sheet 10		Next 11	

Levelwinde
Storage Drum

Levelwinde
CTD Winch

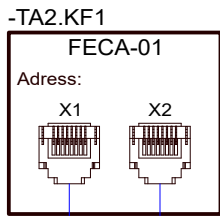
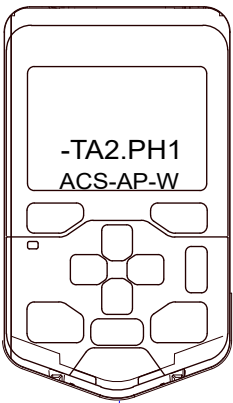
ACS880-104-0011A-5
5,5kW-10,5A

-TA2

XDI	Ref	XD24	Ref
DigIn 1	/9.B1	DIIL	
DigIn 2	/9.B2	+24VD	
DigIn 3	/12.B6	DICOM	/12.B1
DigIn 4		+24VD	
DigIn 5		DIOGND	
DigIn 6			
XDIO	Ref	XRO 1-3	Ref
DIO 1		XRO1	/9.B7
DIO 2		XRO2	
		XRO3	
XAI	Ref	XPOW	Ref
+VREF		24V DC	/12.E1
-VREF			
AGND			
AI 1			
AI 2			
XAO	Ref	XSTO	Ref
AO 1		Safe Torque Off	/13.B1
AO 2			
		XD2D	Ref
		Drive To Drive Link	

Function	Jumper	Setting
A In 1	J1	V
A In 2	J2	V
D2D	J3	On
DI Com - DIOGND	J6	Split / Open

Control Panel BUS Control Panel/ PC Connection Control Panel BUS



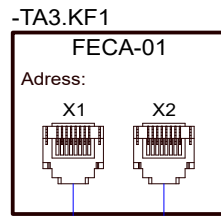
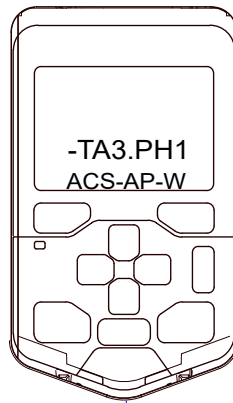
ACS880-104-0011A-5
5,5kW-10,5A

-TA3

XDI	Ref	XD24	Ref
DigIn 1	/10.B1	DIIL	
DigIn 2	/10.B2	+24VD	
DigIn 3	/12.B7	DICOM	/12.B2
DigIn 4		+24VD	
DigIn 5		DIOGND	
DigIn 6			
XDIO	Ref	XRO 1-3	Ref
DIO 1		XRO1	/10.B7
DIO 2		XRO2	
		XRO3	
XAI	Ref	XPOW	Ref
+VREF		24V DC	/12.E2
-VREF			
AGND			
AI 1			
AI 2			
XAO	Ref	XSTO	Ref
AO 1		Safe Torque Off	/13.B3
AO 2			
		XD2D	Ref
		Drive To Drive Link	

Function	Jumper	Setting
A In 1	J1	V
A In 2	J2	V
D2D	J3	On
DI Com - DIOGND	J6	Split / Open

Control Panel BUS Control Panel/ PC Connection Control Panel BUS



/5.D6 EtherCAT -TA1.KF1:X2 -WF2 Patch Cord 1.5M Cat.6 SFTP

-WF3 Patch Cord 1.5M Cat.6 SFTP

-TA13.KF1:X1 EtherCAT /47.D5
-WF4 Patch Cord 1.5M Cat.6 SFTP

FEN-31

-TA2.KF2

X81	Ref	X22	Ref
Power Latch	/12.B4	TTL Encoder	
Enc. Power	/7.B1		
PTC/KTY-84	/7.B6		
X82	Ref	X84	Ref
HTL Encoder	/7.B2	Power	
		Dig In 1	
		Dig In 2	
DIP Sw.	Pos	Internal Pull-Up Resistor DIP Switches Located under plastic cover Default position 0	
DIP 1	0		
DIP 2	0		
DIP 3	0		
DIP 4	0		

FEN-31

-TA3.KF2

X81	Ref	X22	Ref
Power Latch	/12.B4	TTL Encoder	
Enc. Power	/7.B3		
PTC/KTY-84	/7.B7		
X82	Ref	X84	Ref
HTL Encoder	/7.B4	Power	
		Dig In 1	
		Dig In 2	
DIP Sw.	Pos	Internal Pull-Up Resistor DIP Switches Located under plastic cover Default position 0	
DIP 1	0		
DIP 2	0		
DIP 3	0		
DIP 4	0		

CNP Freire
MBarí



Main VFD Cabinet Pentagon
Levelwindes Storage Drum & CTD Winch
Frequency Inverter References

400092375

=WCS01
+UH01

10070-01 CC

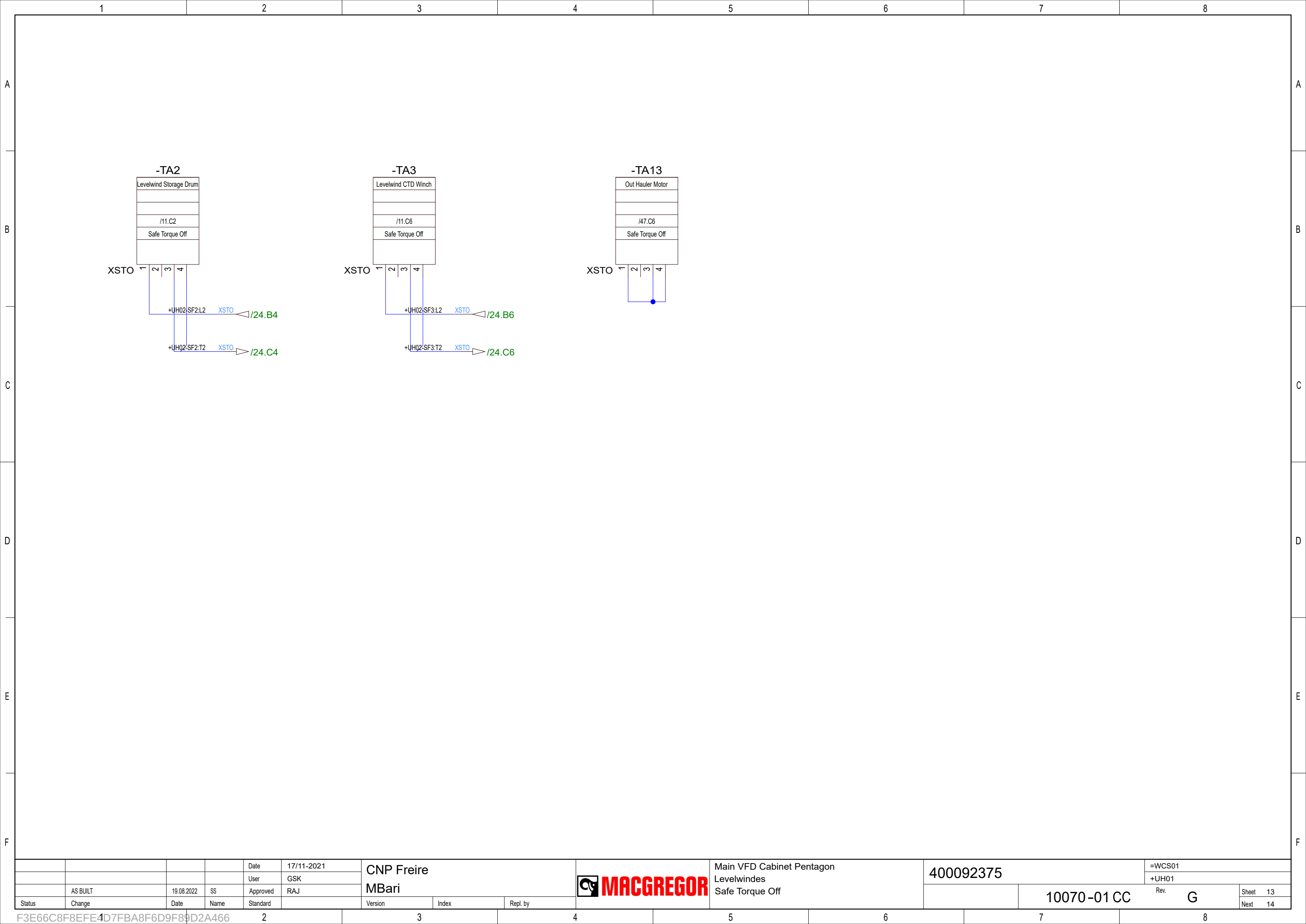
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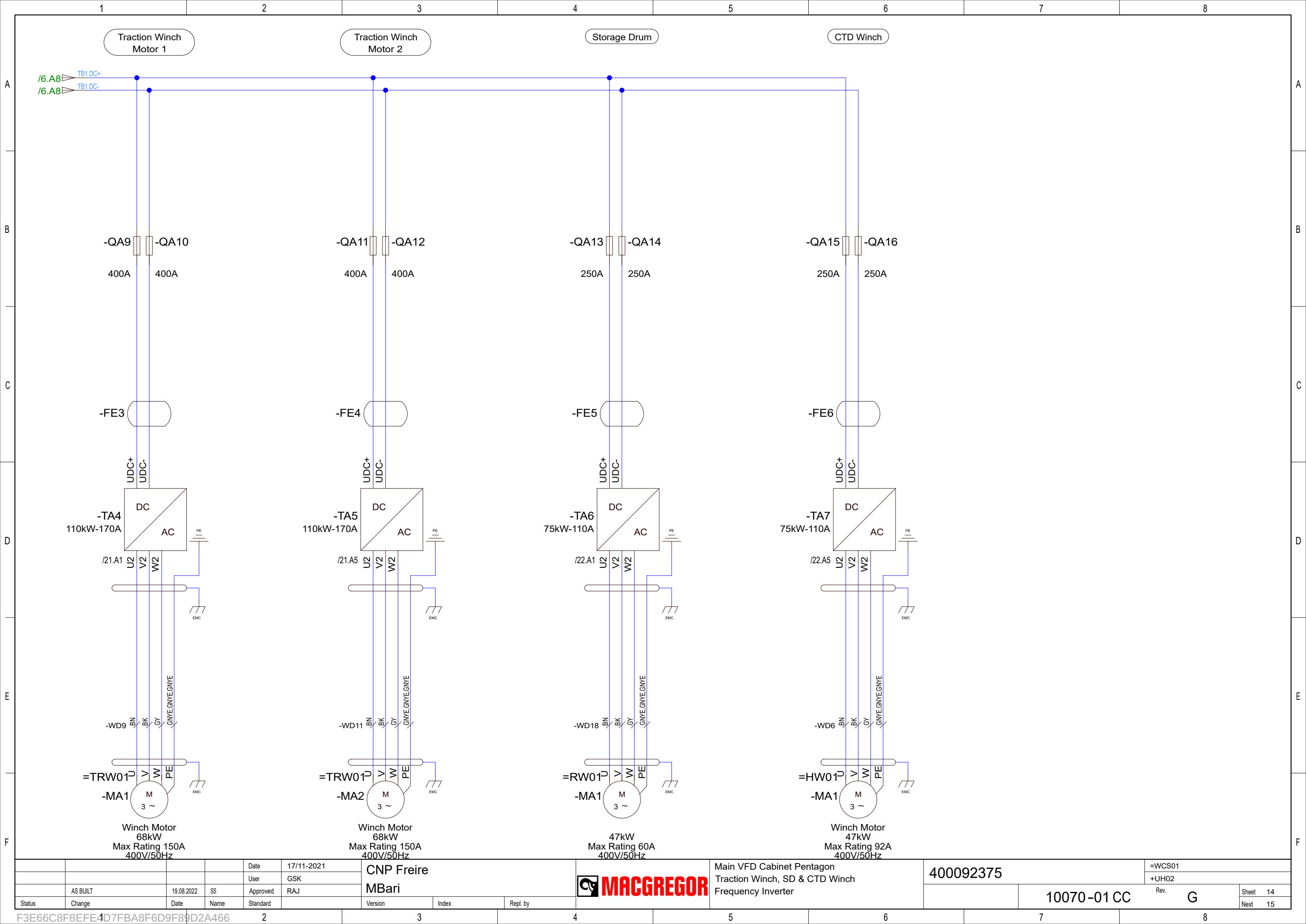
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Sheet 11

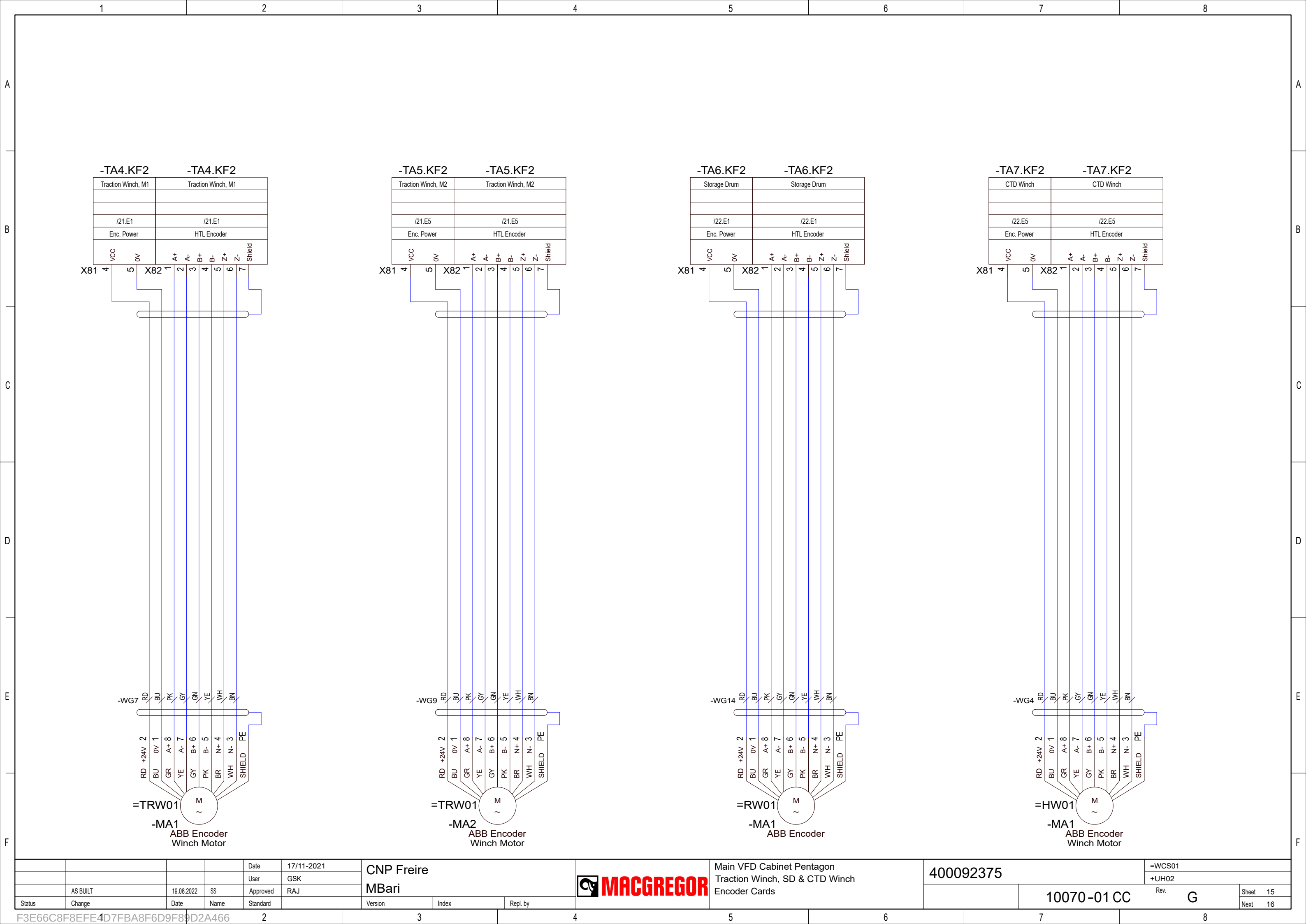
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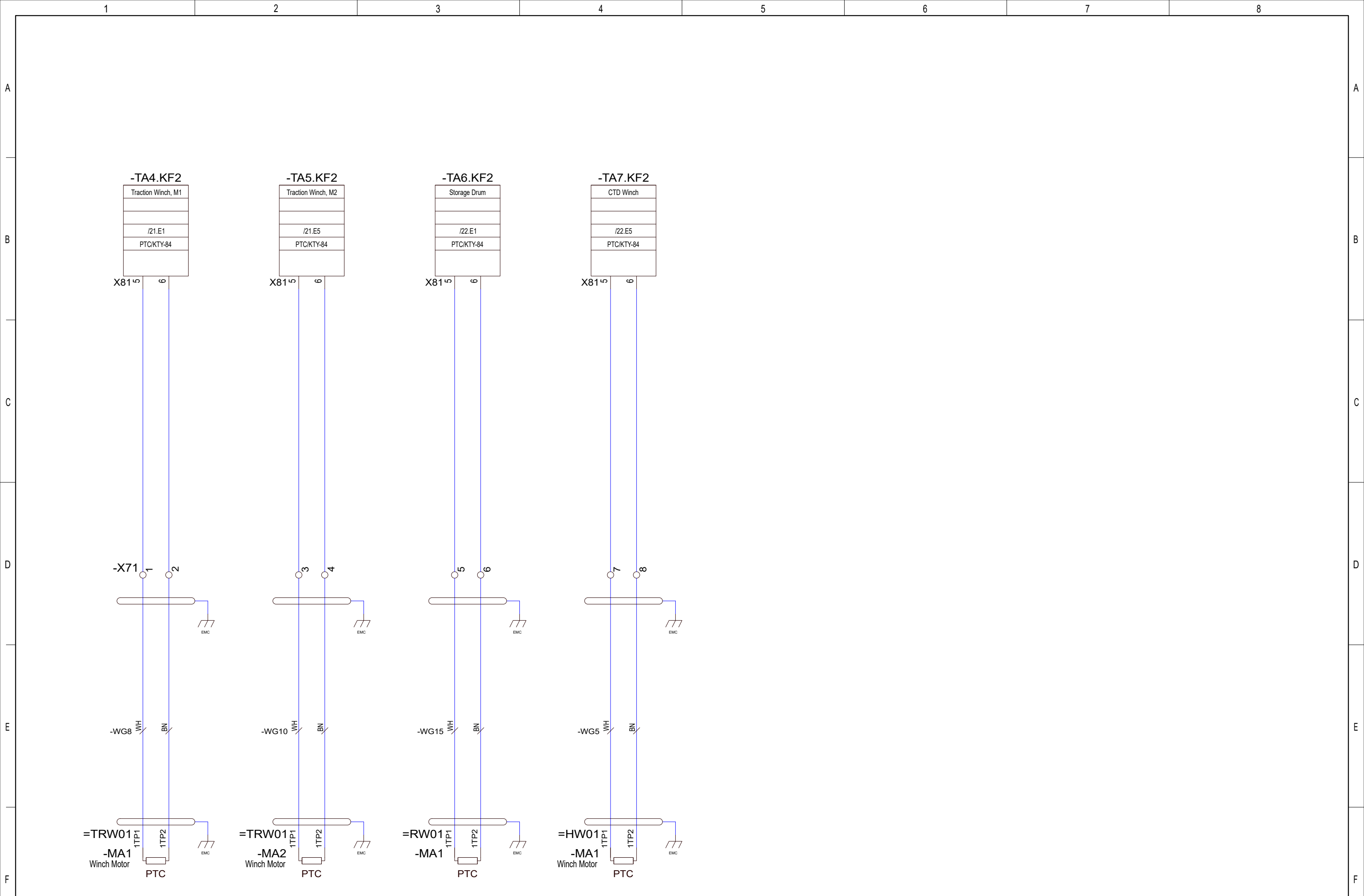




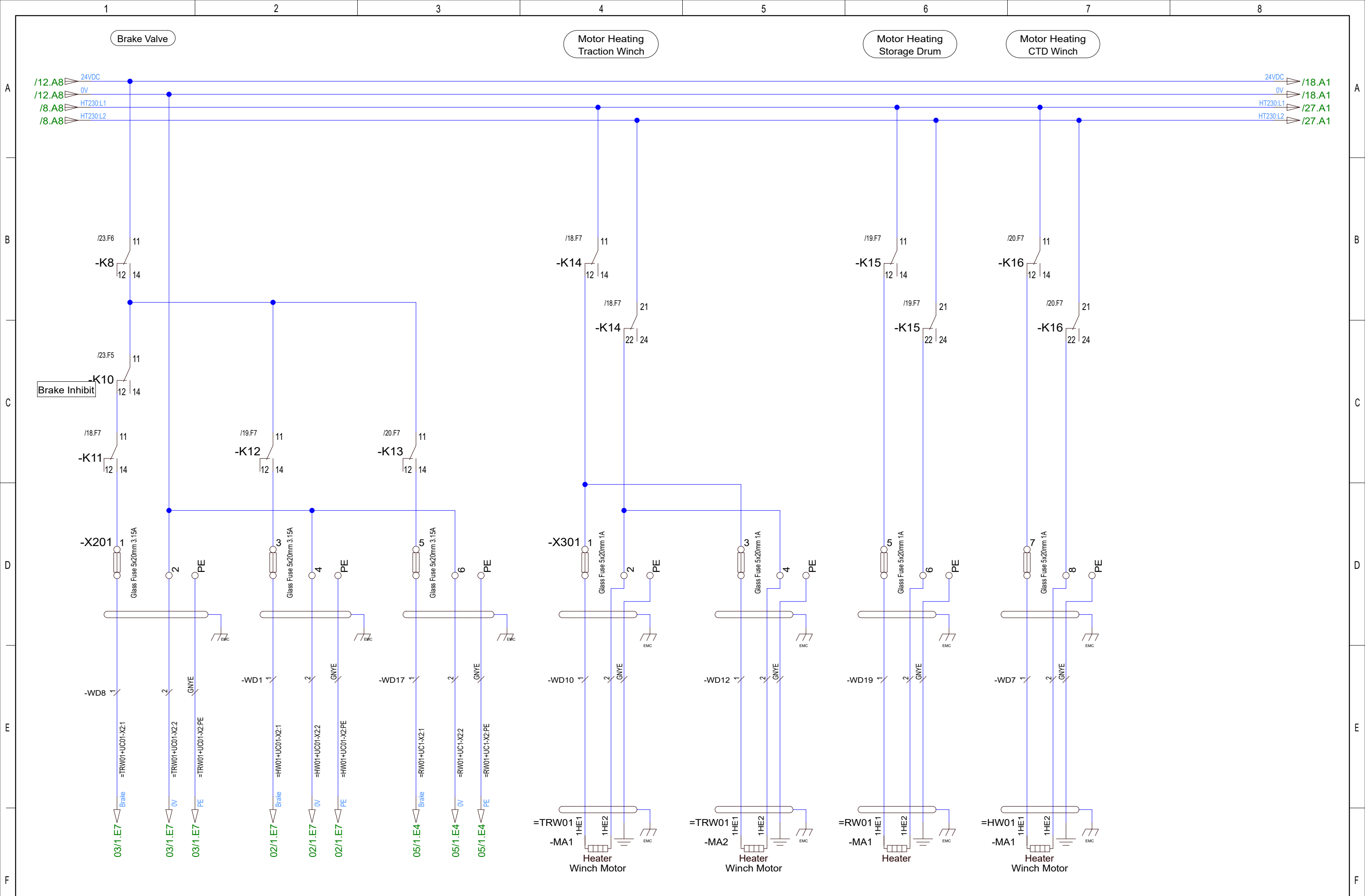


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				User	GSK								+UH02	
	AS BUILT	19.08.2022	SS	Approved	RAJ	MBar							Rev. G	
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-01 CC		Next 15	

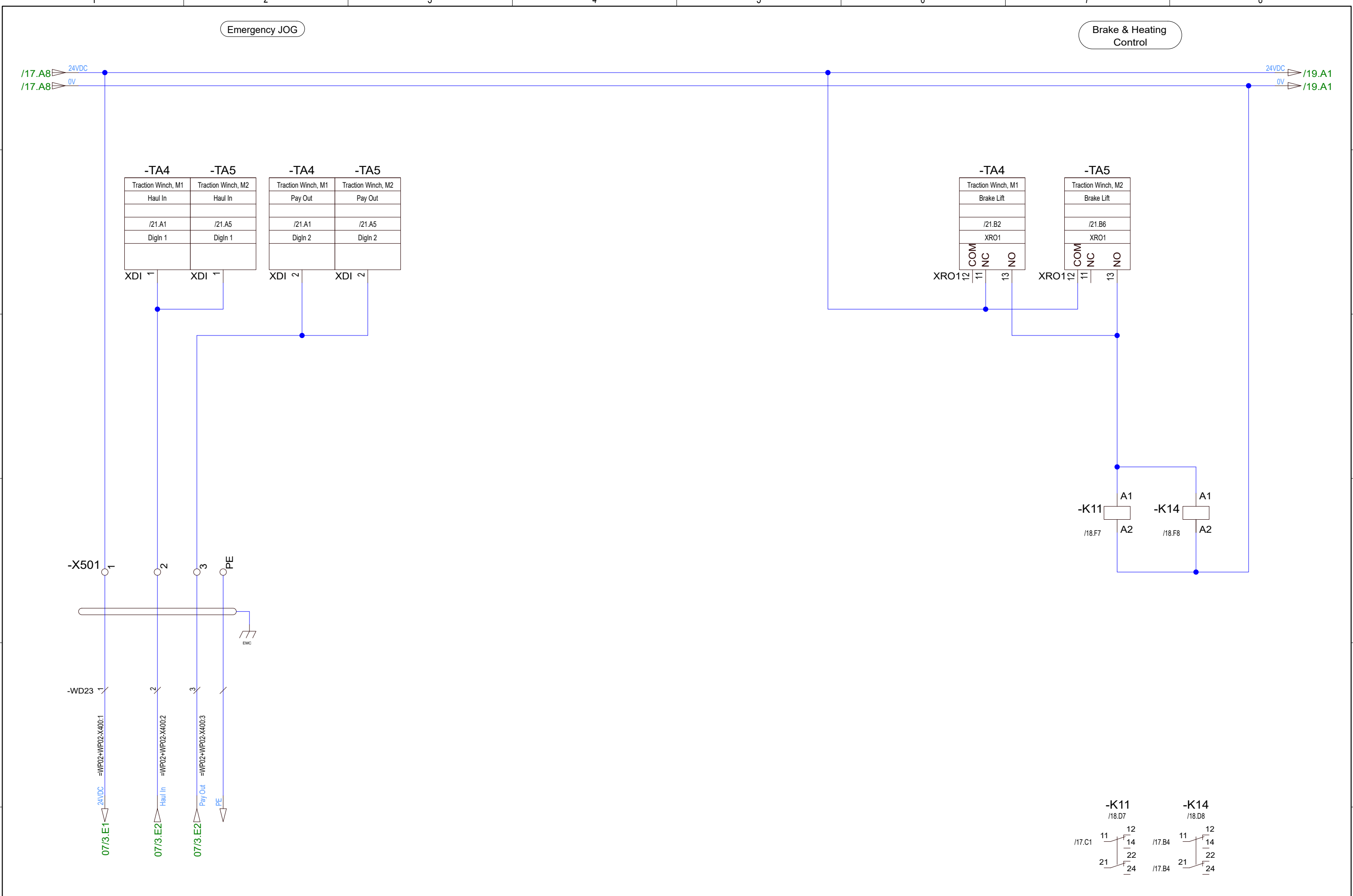




				Date	17/11-2021	CNP Freire MBar				Main VFD Cabinet Pentagon Traction Winch, SD & CTD Winch PTC Connections	400092375		=WCS01	
				User	GSK								+UH02	
	AS BUILT	19.08.2022	SS	Approved	RAJ								Rev. G	
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-01 CC		Next 17	



				Date	17/11-2021	CNP Freire MBar				Main VFD Cabinet Pentagon Traction Winch, SD & CTD Winch Brake & Heating	400092375		=WCS01	
			User	GSK	+UH02									
	AS BUILT	19.08.2022	SS	Approved	RAJ						Rev.		G	Sheet 17
Status	Change	Date	Name	Standard		Version	Index	Repl. by		10070-01 CC		Next 18		



				Date	17/11-2021	CNP Freire MBarí				Main VFD Cabinet Pentagon Traction Winch Emergency Control Connection	400092375		=WCS01	
				User	GSK								+UH02	
	AS BUILT	19.08.2022	SS	Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-01 CC	Rev. G	Sheet 18
														Next 19

Emergency JOG

Brake & Heating
Control



				Date	17/11-2021	CNP Freire MBari				Main VFD Cabinet Pentagon Storage Drum Emergency Control Connection	400092375		=WCS01	
			User	GSK	+UH02									
	AS BUILT	19.08.2022	SS	Approved	RAJ						10070-01 CC		Rev. G	Sheet 19
Status	Change	Date	Name	Standard		Version	Index	Repl. by					Next 20	

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Emergency JOG

Brake & Heating
Control



				Date	17/11-2021	CNP Freire MBar			Main VFD Cabinet Pentagon CTD Winch Emergency Control Connection		400092375		=WCS01	
				User	GSK								+UH02	
Status	AS BUILT	19.08.2022	SS	Approved	RAJ	Version	Index	Repl. by			10070-01 CC		Rev.	G
Change		Date	Name	Standard									Sheet	20
													Next	21

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Traction Winch Motor 1

Traction Winch Motor 2

ACS880-104-0170A-5
110kW-170A

-TA4

XDI	Ref	XD24	Ref
DigIn 1	/18.B1	DIIL	
DigIn 2	/18.B2	+24VD	
DigIn 3	/23.B6	DICOM	/23.B1
DigIn 4		+24VD	
DigIn 5		DIOGND	
DigIn 6			

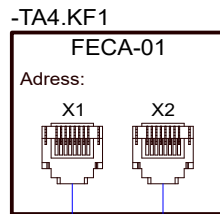
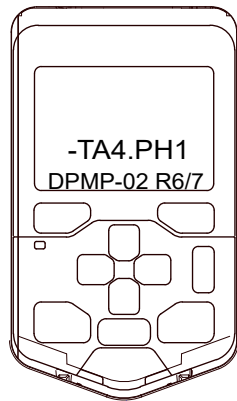
XDIO	Ref	XRO 1-3	Ref
DIO 1		XRO1	/18.B6
DIO 2		XRO2	
		XRO3	

XAI	Ref	XPOW	Ref
+VREF		24V DC	/23.D1
-VREF			
AGND			
AI 1			
AI 2			

XAO	Ref	XSTO	Ref
AO 1		Safe Torque Off	/24.B1
AO 2			

Function	Jumper	Setting
A In 1	J1	V
A In 2	J2	V
D2D	J3	On
DI Com - DIOGND	J6	Split / Open

Control Panel BUS Control Panel/ PC Connection Control Panel BUS



ACS880-104-0170A-5
110kW-170A

-TA5

XDI	Ref	XD24	Ref
DigIn 1	/18.B2	DIIL	
DigIn 2	/18.B3	+24VD	
DigIn 3	/23.B7	DICOM	/23.B2
DigIn 4		+24VD	
DigIn 5		DIOGND	
DigIn 6			

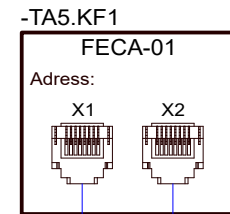
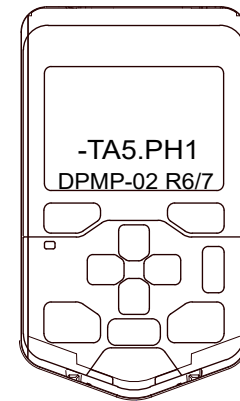
XDIO	Ref	XRO 1-3	Ref
DIO 1		XRO1	/18.B7
DIO 2		XRO2	
		XRO3	

XAI	Ref	XPOW	Ref
+VREF		24V DC	/23.D2
-VREF			
AGND			
AI 1			
AI 2			

XAO	Ref	XSTO	Ref
AO 1		Safe Torque Off	/24.B2
AO 2			

Function	Jumper	Setting
A In 1	J1	V
A In 2	J2	V
D2D	J3	On
DI Com - DIOGND	J6	Split / Open

Control Panel BUS Control Panel/ PC Connection Control Panel BUS



FEN-31

-TA4.KF2

X81	Ref	X22	Ref
Power Latch	/23.B3	TTL Encoder	
Enc. Power	/15.B1		
PTC/KTY-84	/16.B1		

X82	Ref	X84	Ref
HTL Encoder	/15.B2	Power	
		Dig In 1	
		Dig In 2	

DIP Sw.	Pos
DIP 1	0
DIP 2	0
DIP 3	0
DIP 4	0

Internal Pull-Up Resistor
DIP Switches
Located under plastic cover
Default position 0

FEN-31

-TA5.KF2

X81	Ref	X22	Ref
Power Latch	/23.B4	TTL Encoder	
Enc. Power	/15.B3		
PTC/KTY-84	/16.B2		

X82	Ref	X84	Ref
HTL Encoder	/15.B4	Power	
		Dig In 1	
		Dig In 2	

DIP Sw.	Pos
DIP 1	0
DIP 2	0
DIP 3	0
DIP 4	0

Internal Pull-Up Resistor
DIP Switches
Located under plastic cover
Default position 0

Storage Drum

CTD Winch

ACS880-104-0110A-5
75kW-110A -TA6

XDI	Ref	XD24	Ref
DigIn 1	/19.B1	DIIL	
DigIn 2	/19.B2	+24VD	
DigIn 3	/23.B7	DICOM	/23.B2
DigIn 4		+24VD	
DigIn 5		DIOGND	
DigIn 6			

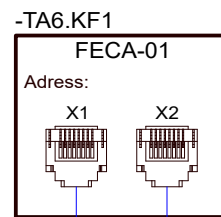
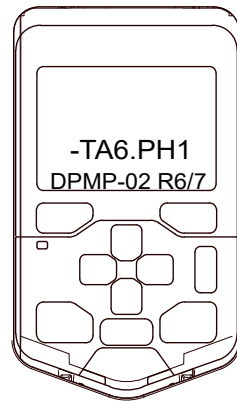
XDIO	Ref	XRO 1-3	Ref
DIO 1		XRO1	/19.B7
DIO 2		XRO2	
		XRO3	

XAI	Ref	XPOW	Ref
+VREF		24V DC	/23.D3
-VREF			
AGND			
AI 1			
AI 2			

XAO	Ref	XSTO	Ref
AO 1		Safe Torque Off	/24.B3
AO 2			

Function	Jumper	Setting
A In 1	J1	V
A In 2	J2	V
D2D	J3	On
DI Com - DIOGND	J6	Split / Open

Control Panel BUS Control Panel/ PC Connection Control Panel BUS



ACS880-104-0110A-5
75kW-110A -TA7

XDI	Ref	XD24	Ref
DigIn 1	/20.B1	DIIL	
DigIn 2	/20.B2	+24VD	
DigIn 3	/23.B8	DICOM	/23.B3
DigIn 4		+24VD	
DigIn 5		DIOGND	
DigIn 6			

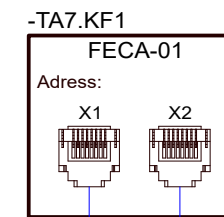
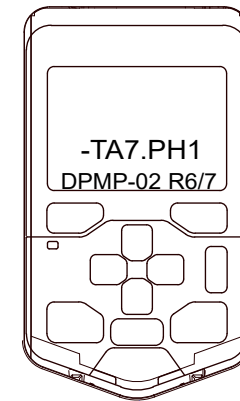
XDIO	Ref	XRO 1-3	Ref
DIO 1		XRO1	/20.B7
DIO 2		XRO2	
		XRO3	

XAI	Ref	XPOW	Ref
+VREF		24V DC	/23.D3
-VREF			
AGND			
AI 1			
AI 2			

XAO	Ref	XSTO	Ref
AO 1		Safe Torque Off	/24.B5
AO 2			

Function	Jumper	Setting
A In 1	J1	V
A In 2	J2	V
D2D	J3	On
DI Com - DIOGND	J6	Split / Open

Control Panel BUS Control Panel/ PC Connection Control Panel BUS



FEN-31 -TA6.KF2

X81	Ref	X22	Ref
Power Latch	/23.B4	TTL Encoder	
Enc. Power	/15.B5		
PTC/KTY-84	/16.B3		

X82	Ref	X84	Ref
HTL Encoder	/15.B5	Power	
		Dig In 1	
		Dig In 2	

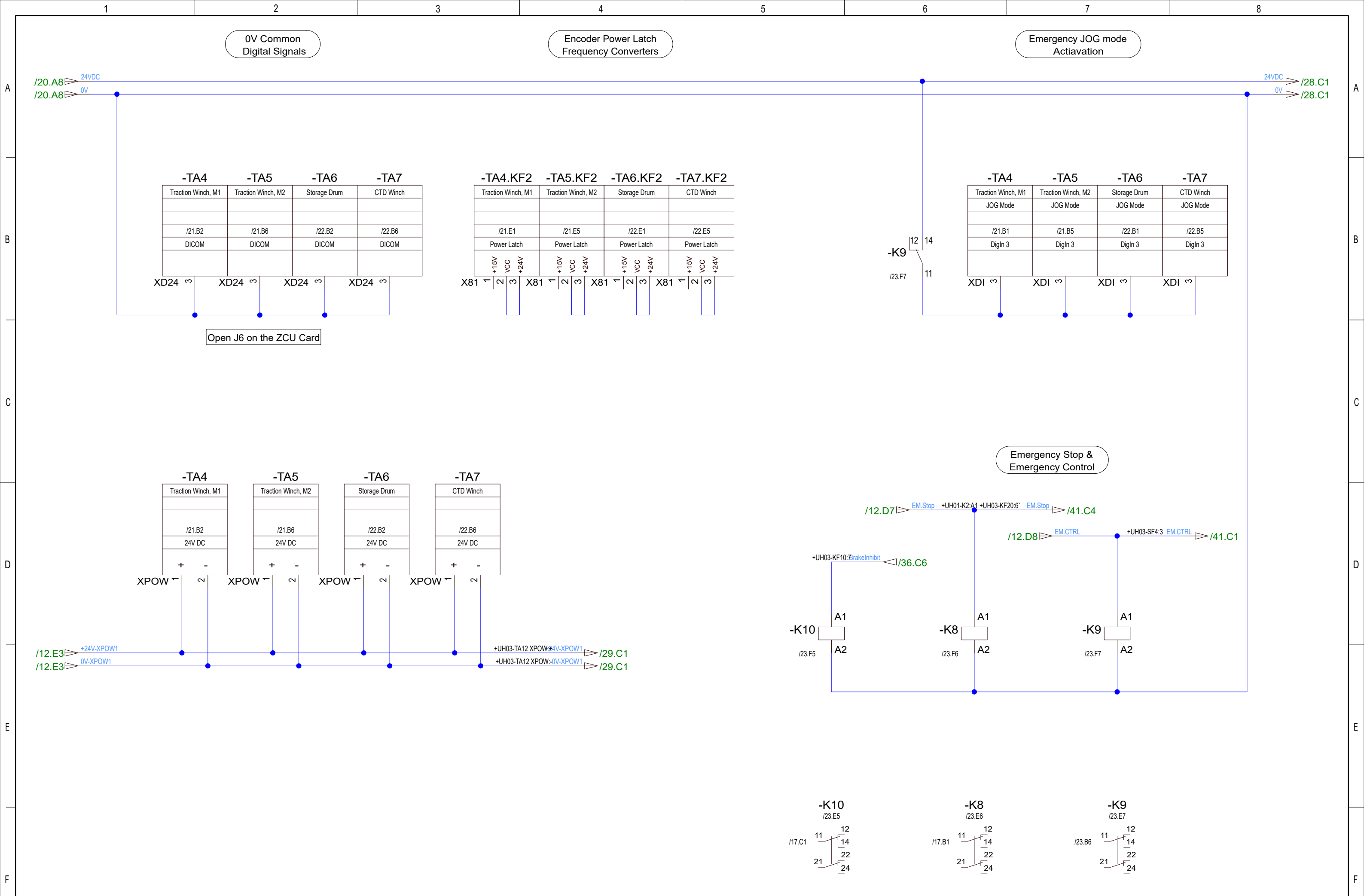
DIP Sw.	Pos	Internal Pull-Up Resistor DIP Switches Located under plastic cover Default position 0
DIP 1	0	
DIP 2	0	
DIP 3	0	
DIP 4	0	

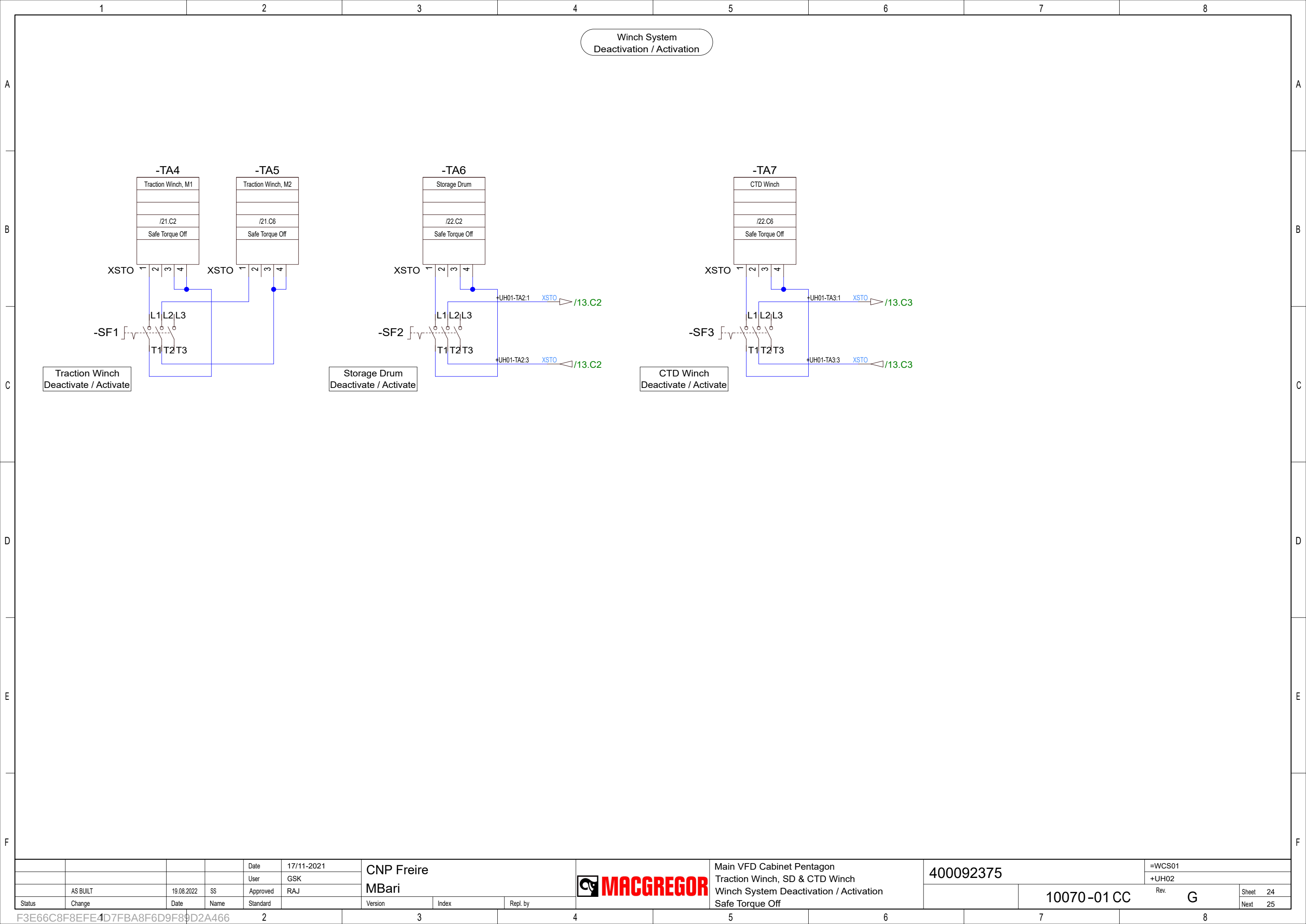
FEN-31 -TA7.KF2

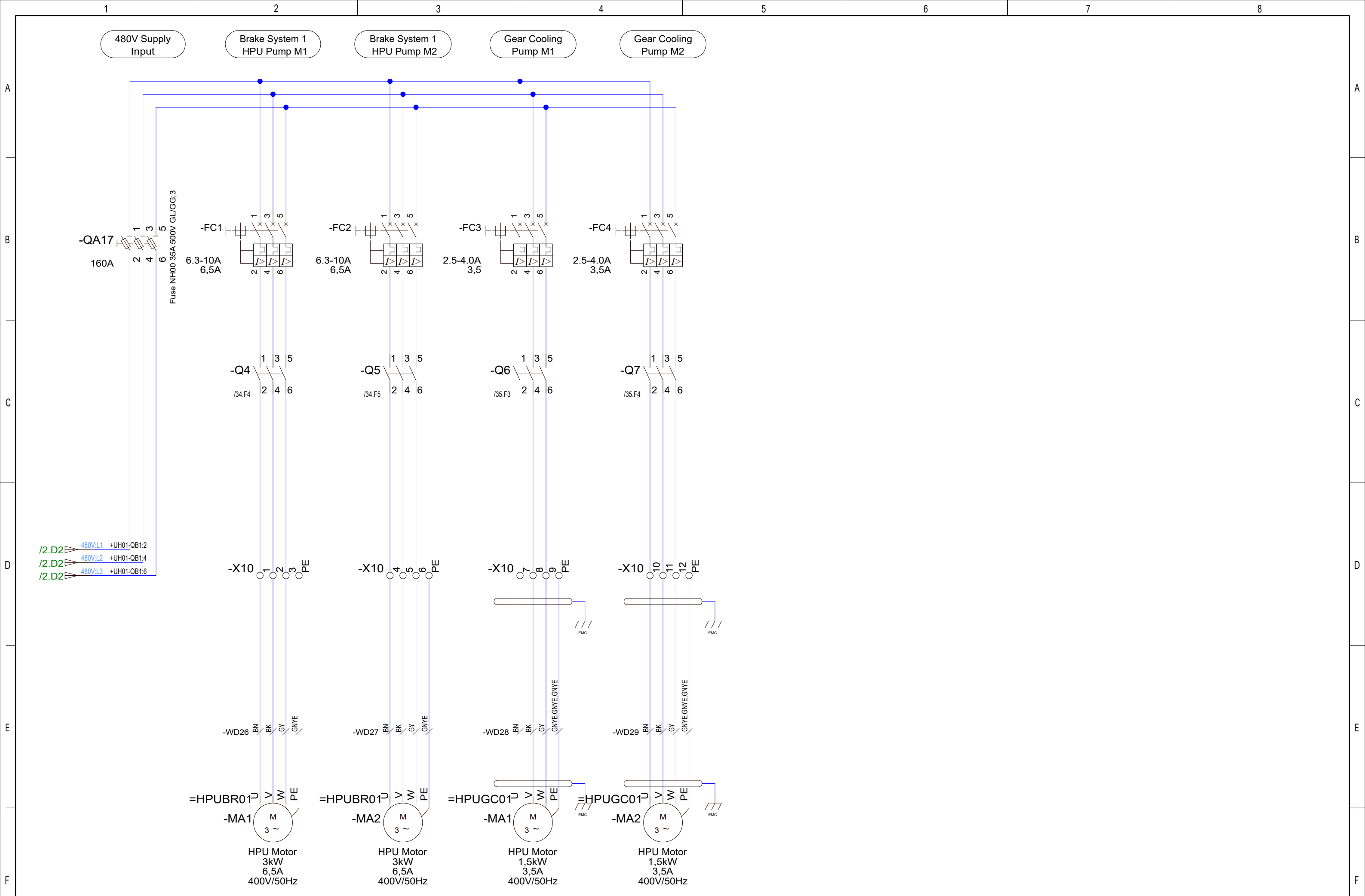
X81	Ref	X22	Ref
Power Latch	/23.B5	TTL Encoder	
Enc. Power	/15.B7		
PTC/KTY-84	/16.B4		

X82	Ref	X84	Ref
HTL Encoder	/15.B7	Power	
		Dig In 1	
		Dig In 2	

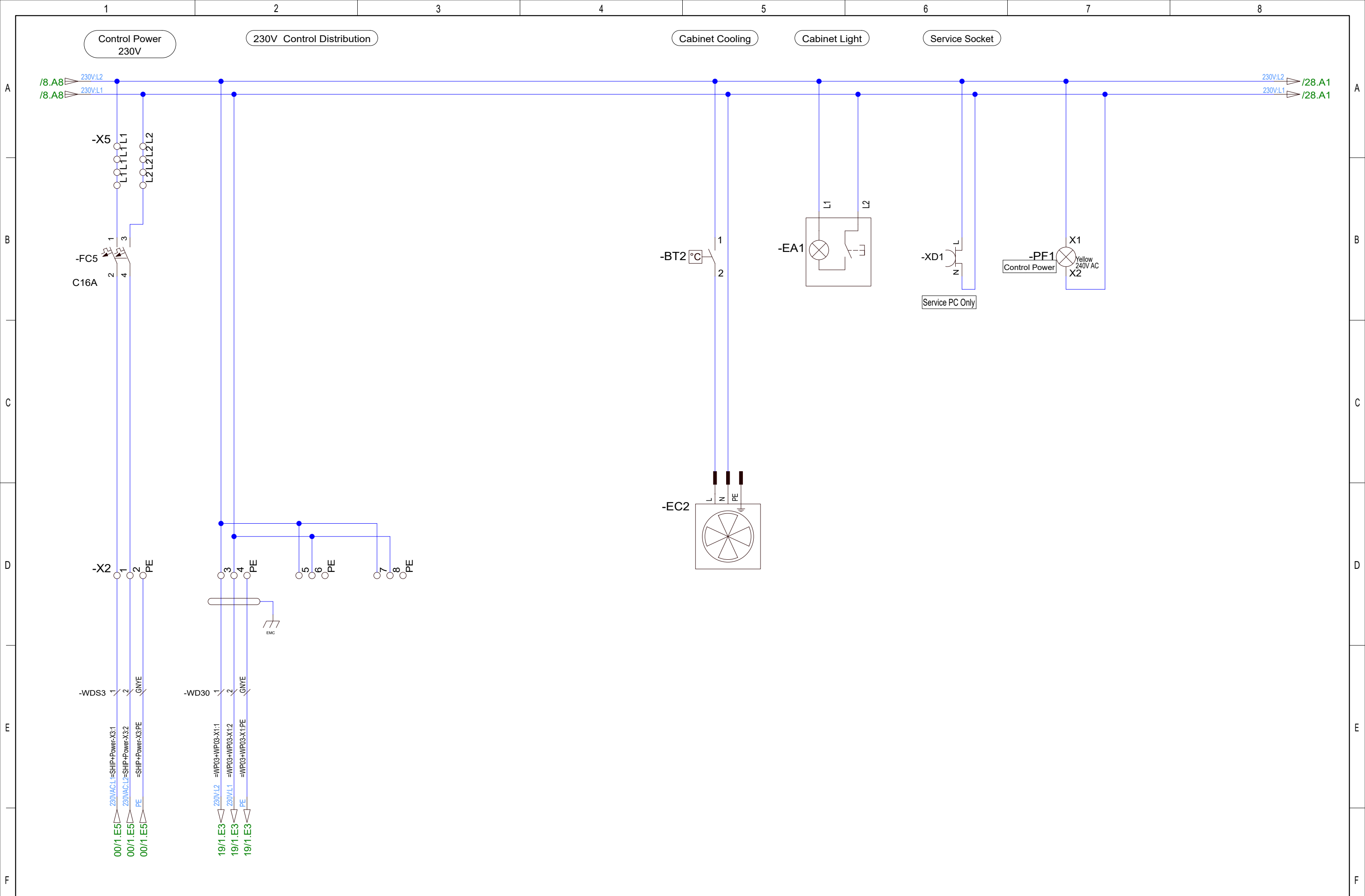
DIP Sw.	Pos	Internal Pull-Up Resistor DIP Switches Located under plastic cover Default position 0
DIP 1	0	
DIP 2	0	
DIP 3	0	
DIP 4	0	



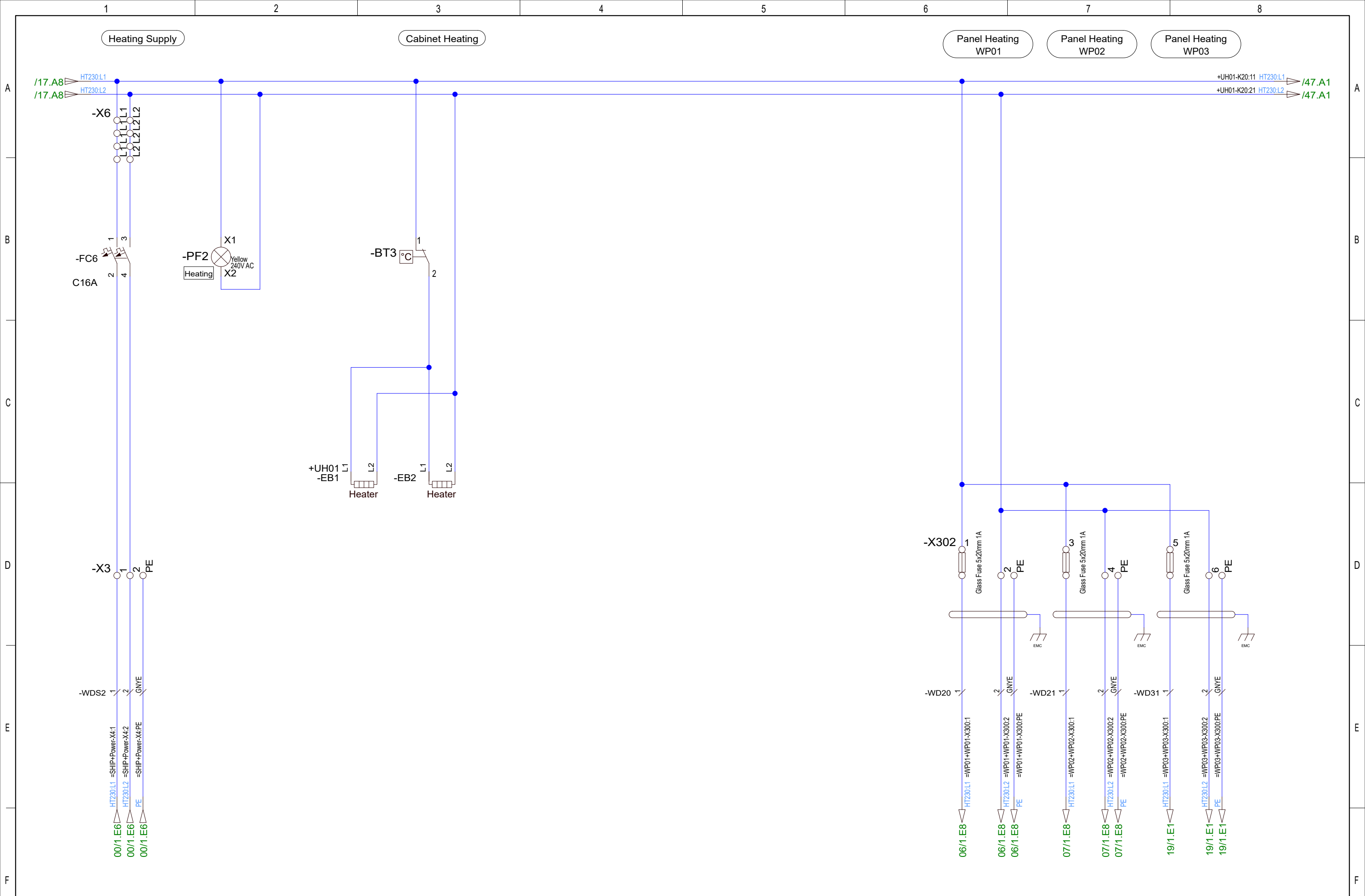




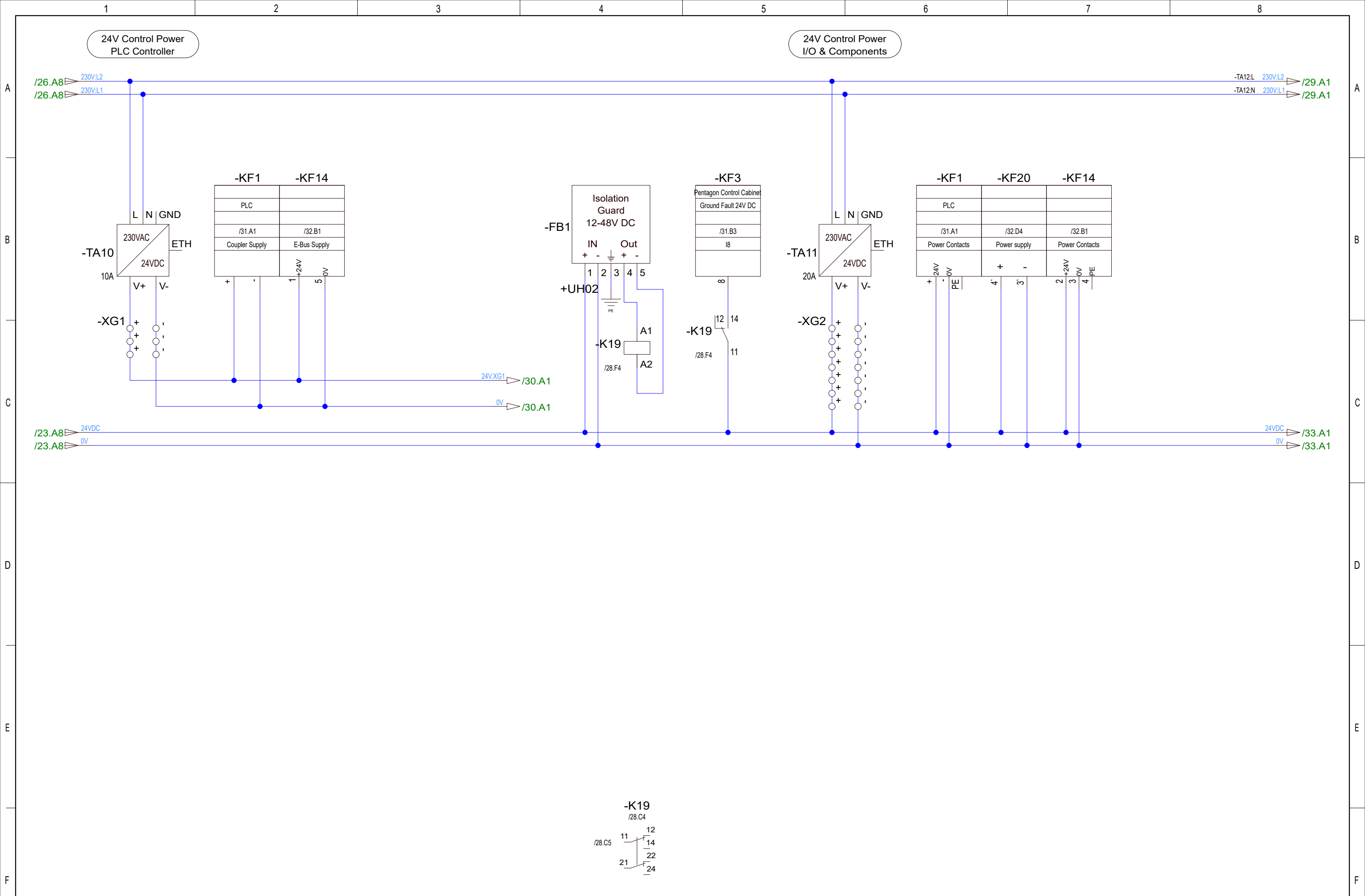
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				User	GSK									+UH03	
Status	AS BUILT	19.08.2022	SS	Approved	RAJ									Rev. G	
Change		Date	Name	Standard		Version	Index	Repl. by				10070-01 CC		Sheet 25	Next 26

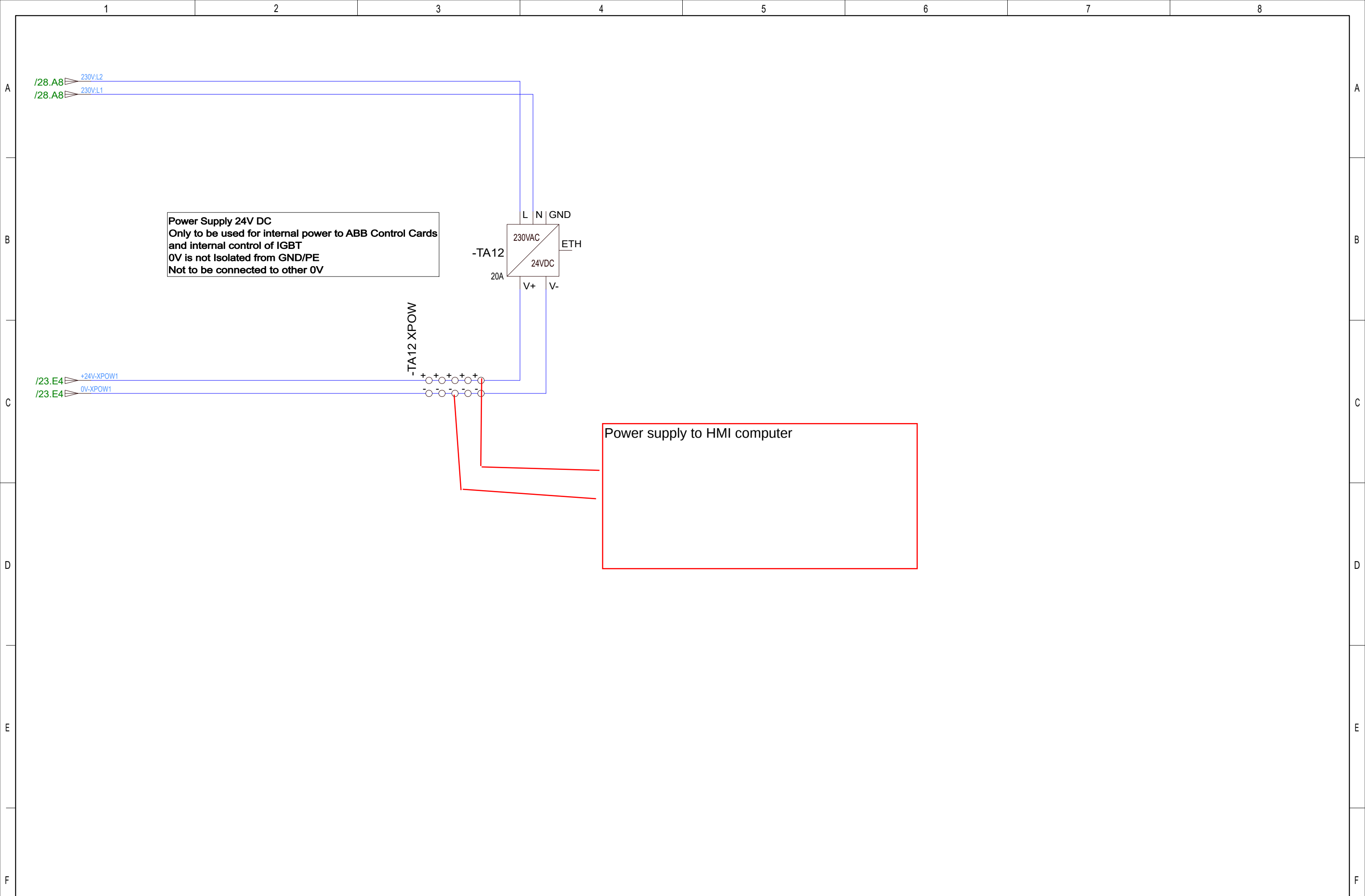


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	Added WP03 connections	21.11.2022	ANP	User	GSK										
	AS BUILT	19.08.2022	SS	Approved	RAJ									Rev.	G
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-01 CC		Sheet	26
														Next	27



				Date	17/11-2021	CNP Freire MBarí				Main VFD Cabinet Pentagon Pentagon Control Cabinet Heating Distribution, Cabinet Heating Control Panel Heating	400092375		=WCS01	
	Added WP03 connections	21.11.2022	ANP	User	GSK								+UH03	
	AS BUILT	19.08.2022	SS	Approved	RAJ							Rev. G	Sheet 27	
Status	Change	Date	Name	Standard		Version	Index	Repl. by					10070-01 CC	

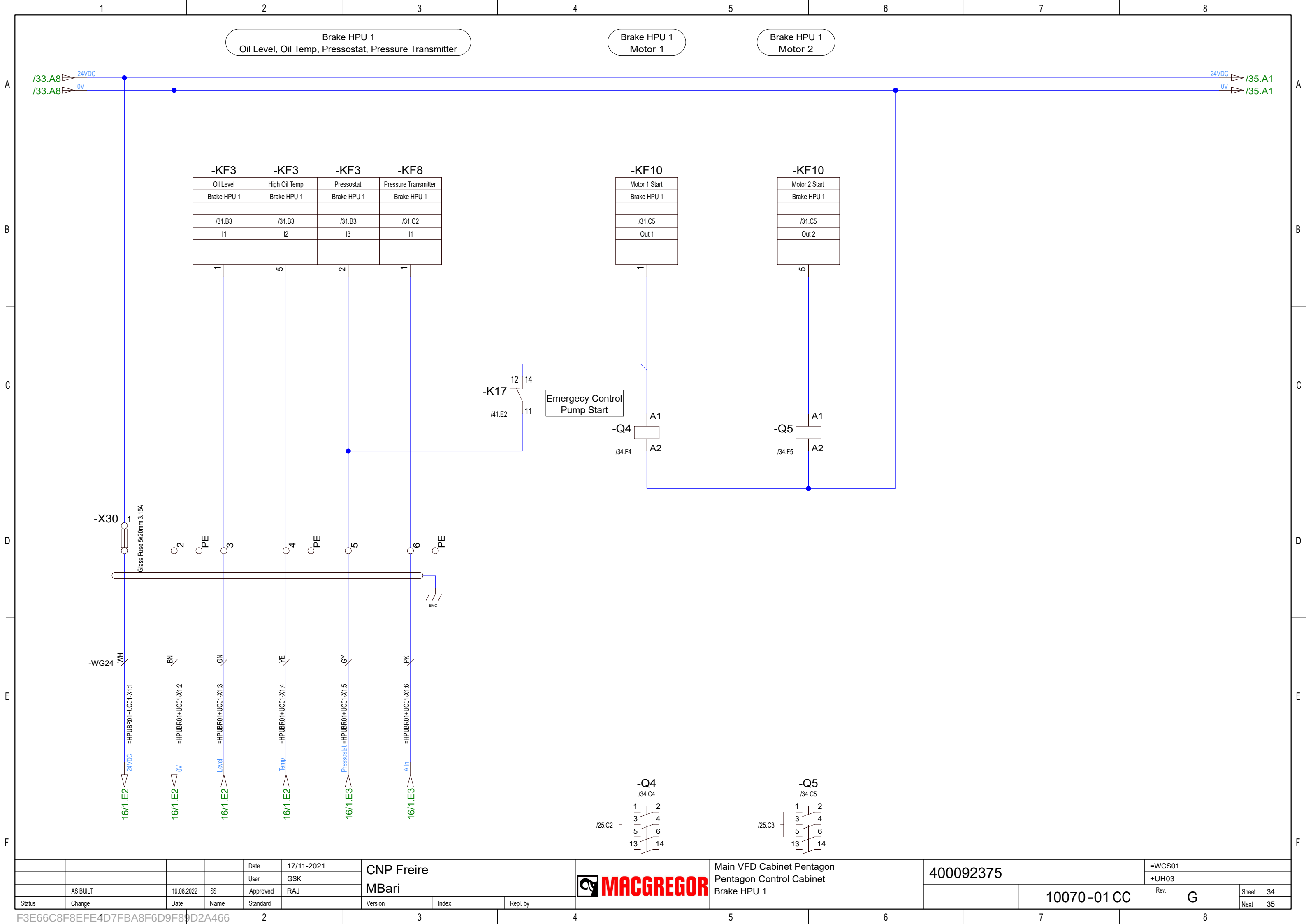




				Date	17/11-2021	CNP Freire MBar				Main VFD Cabinet Pentagon Pentagon Control Cabinet VFD Controlcard Powersupply	400092375		=WCS01	
				User	GSK								+UH03	
	AS BUILT	19.08.2022	SS	Approved	RAJ								Rev.	G
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-01 CC	Sheet	29
													Next	30

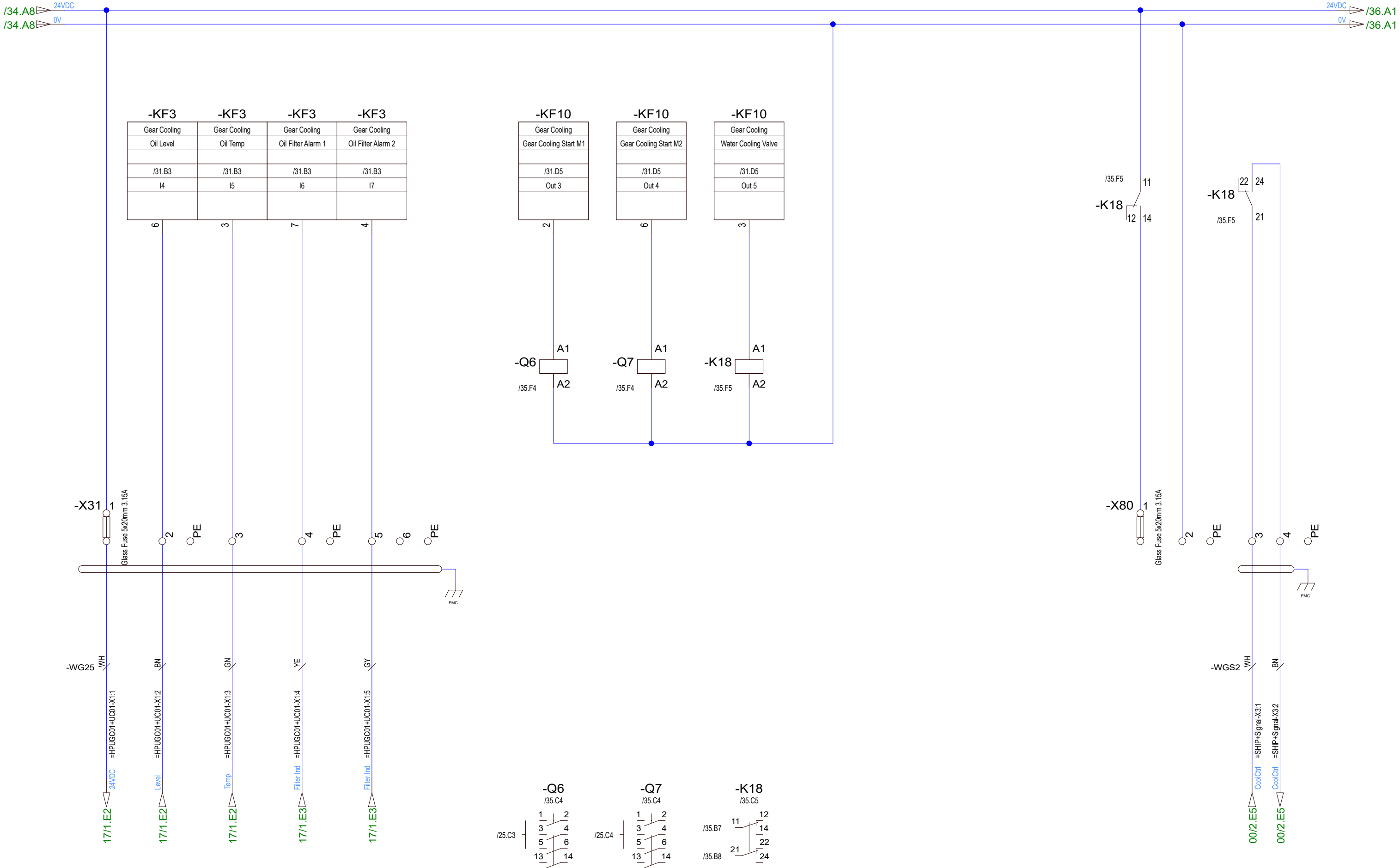




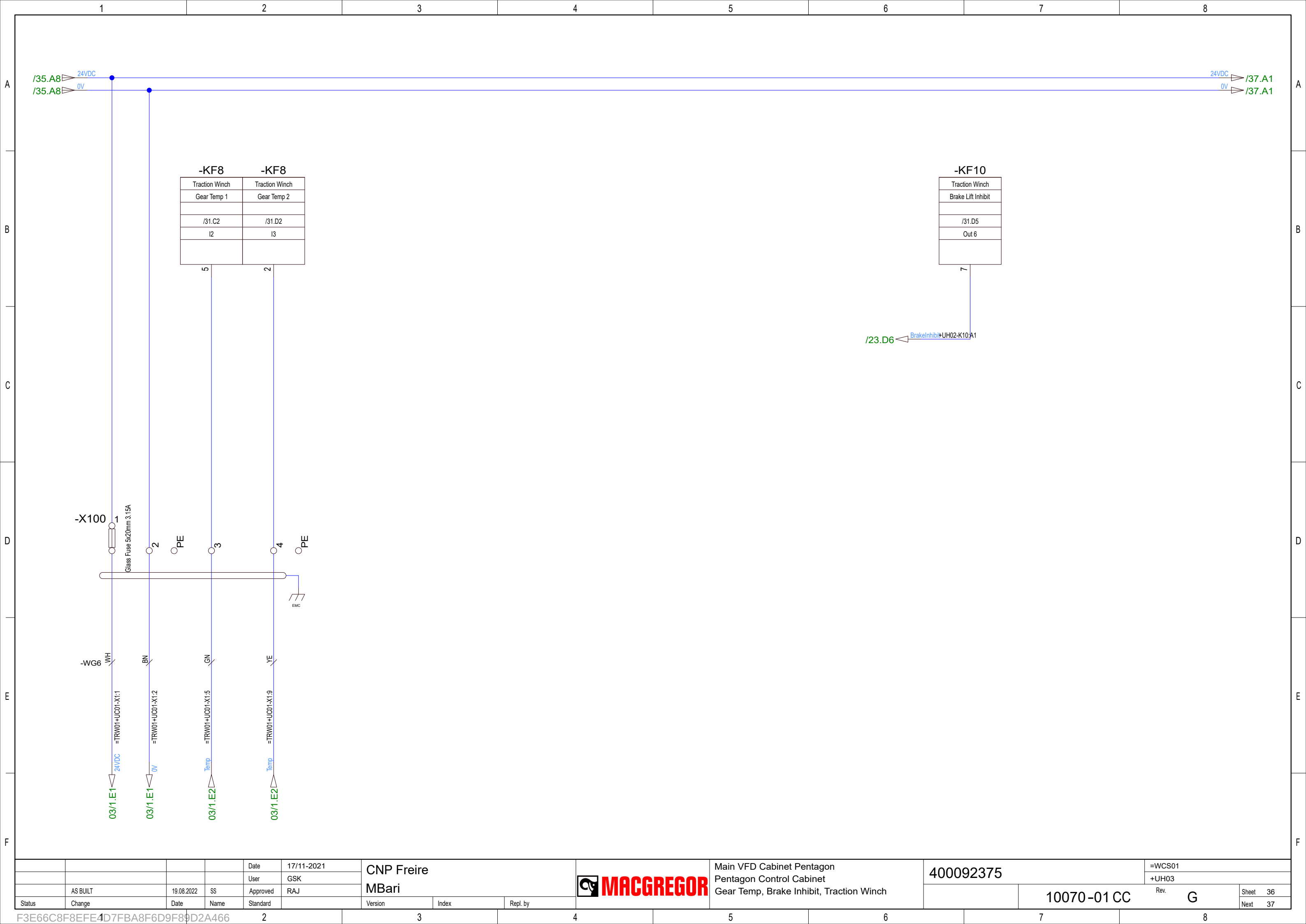


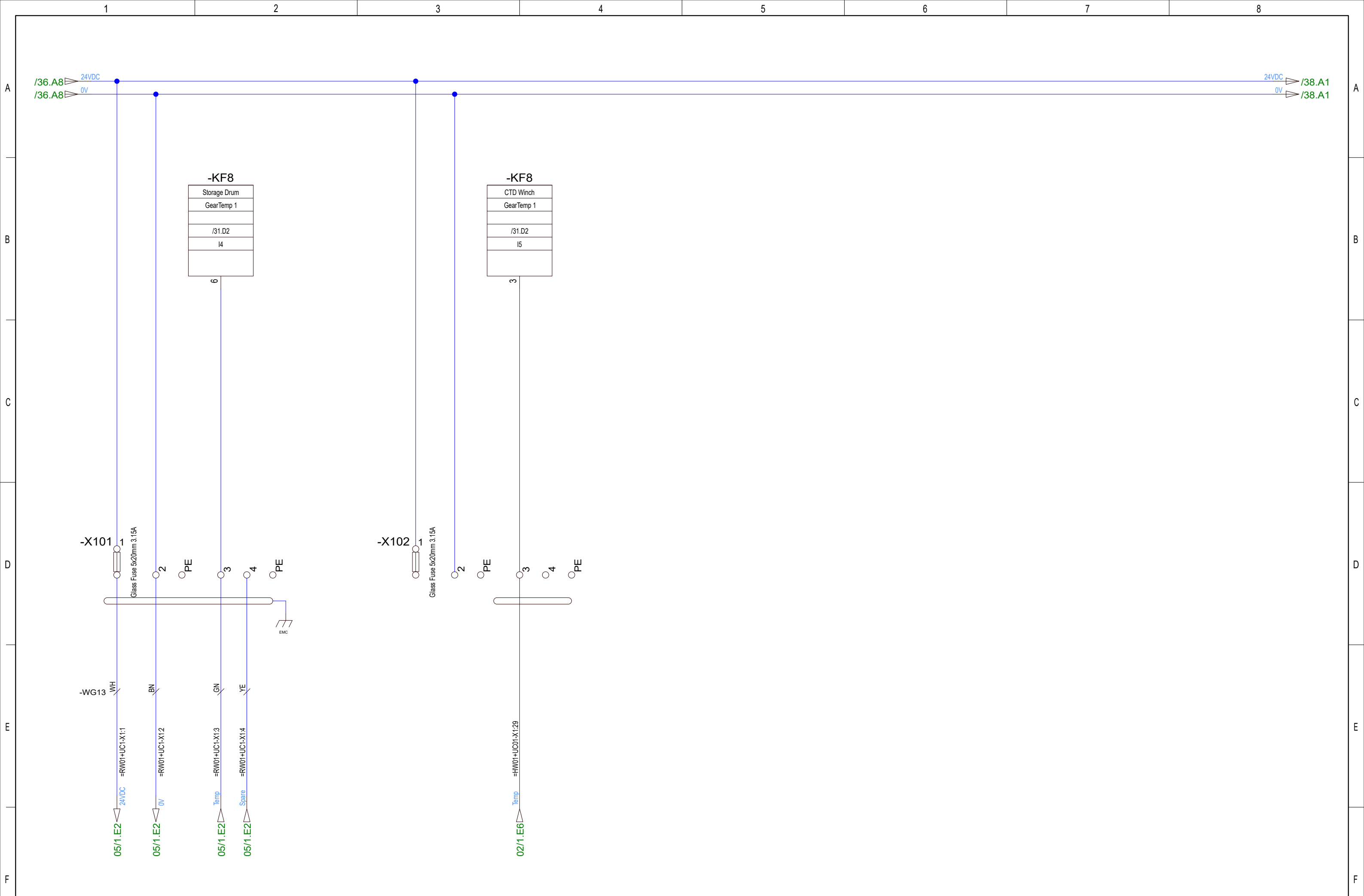
Gear Cooling HPU
Oil Level, Oil Temp, Oil Filter

Gear Cooling HPU
Water Valve / Cooling Signal

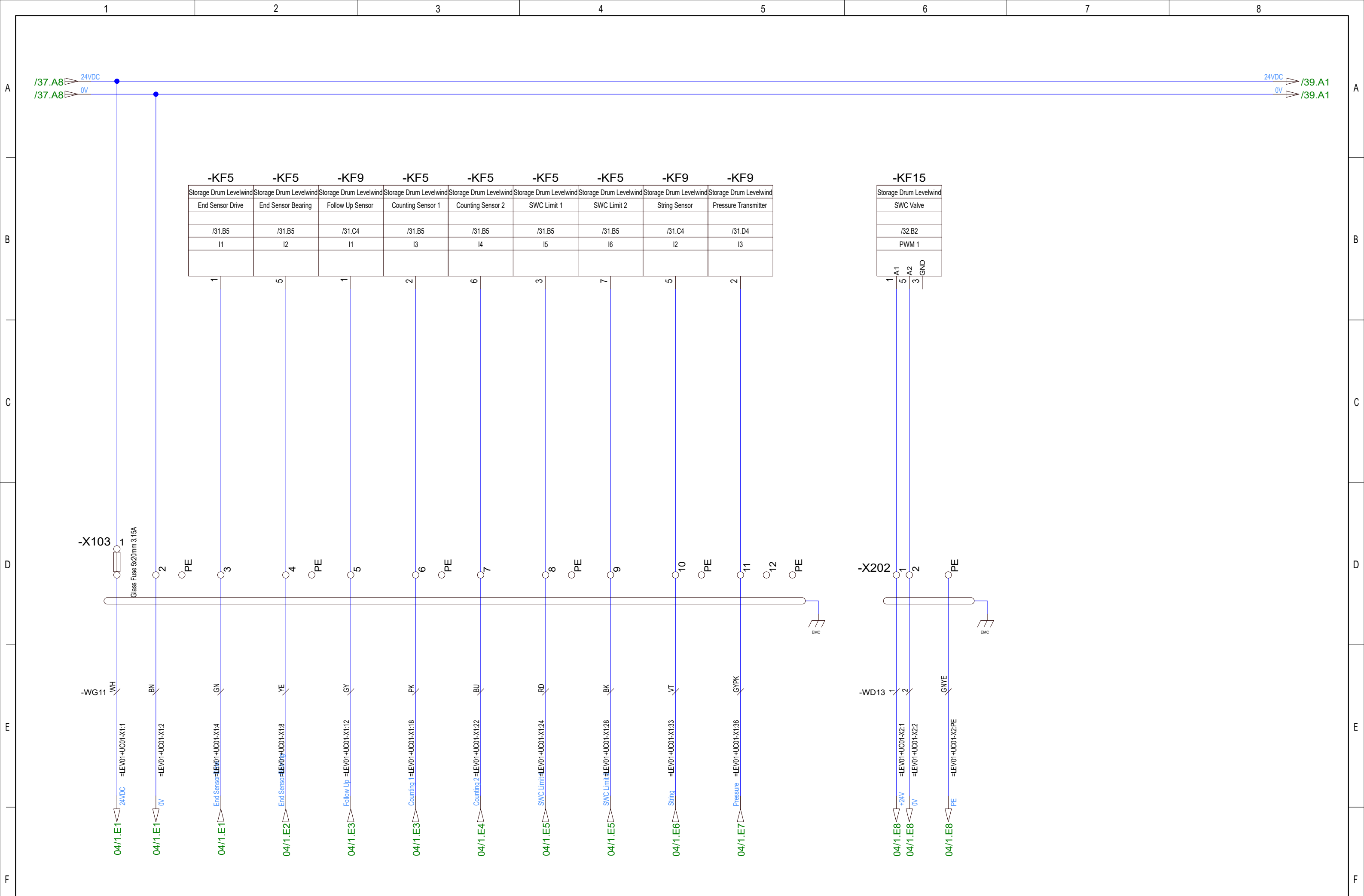


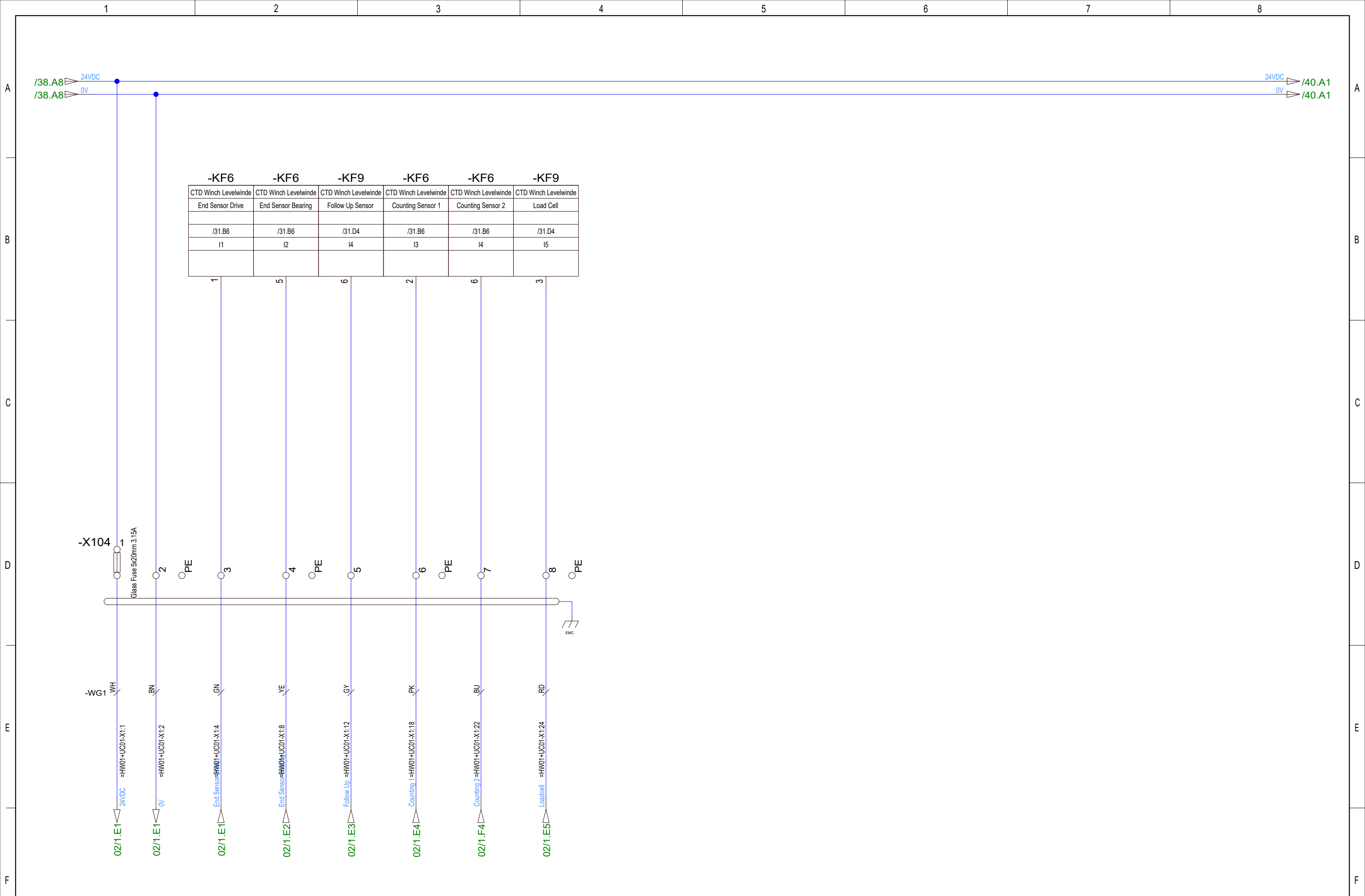
				Date	17/11-2021	CNP Freire MBari				Main VFD Cabinet Pentagon Pentagon Control Cabinet Gear Cooling HPU	400092375		=WCS01	
				User	GSK								+UH03	
	AS BUILT	19.08.2022	SS	Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-01 CC	Rev. G	Sheet 35 Next 36

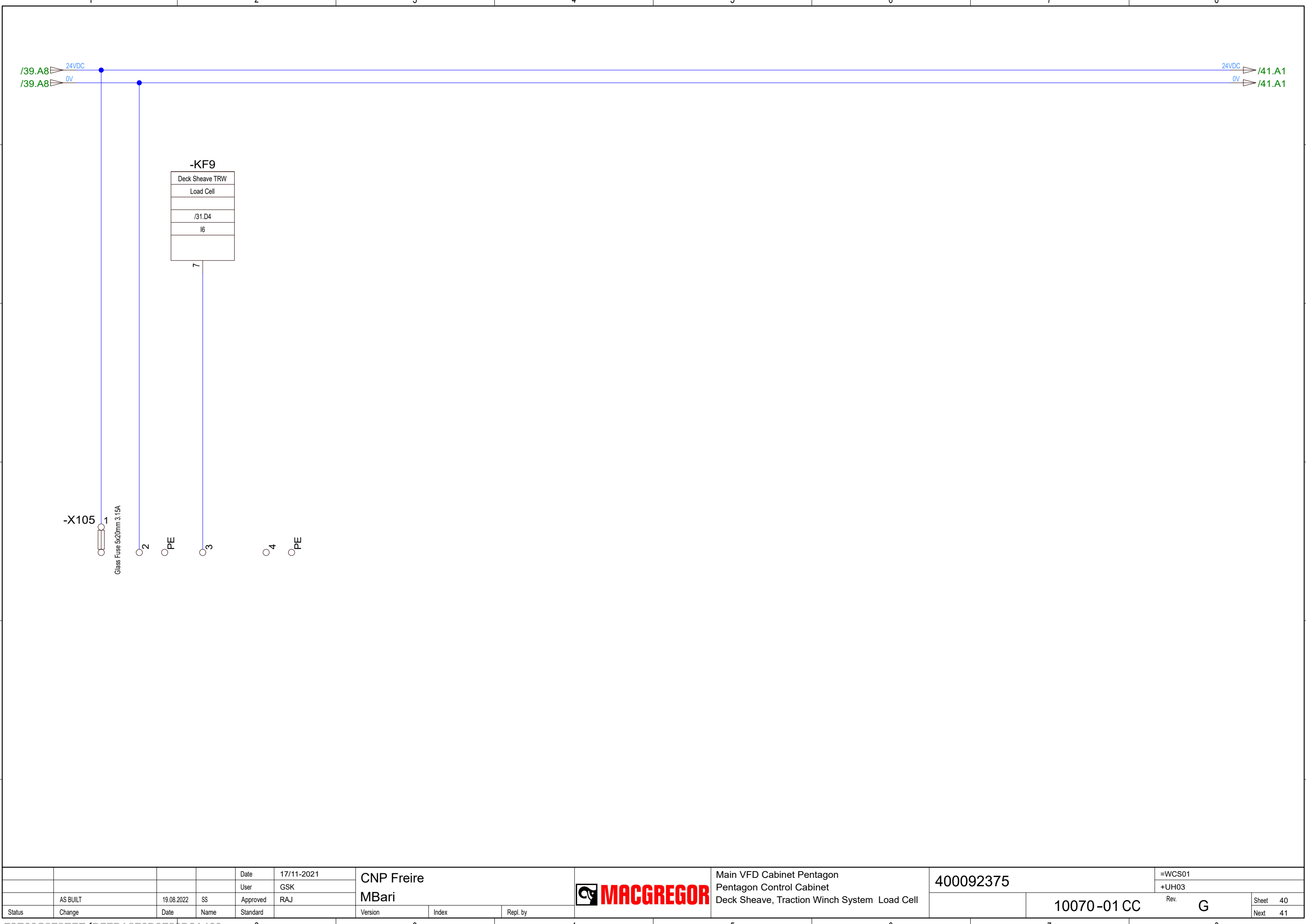


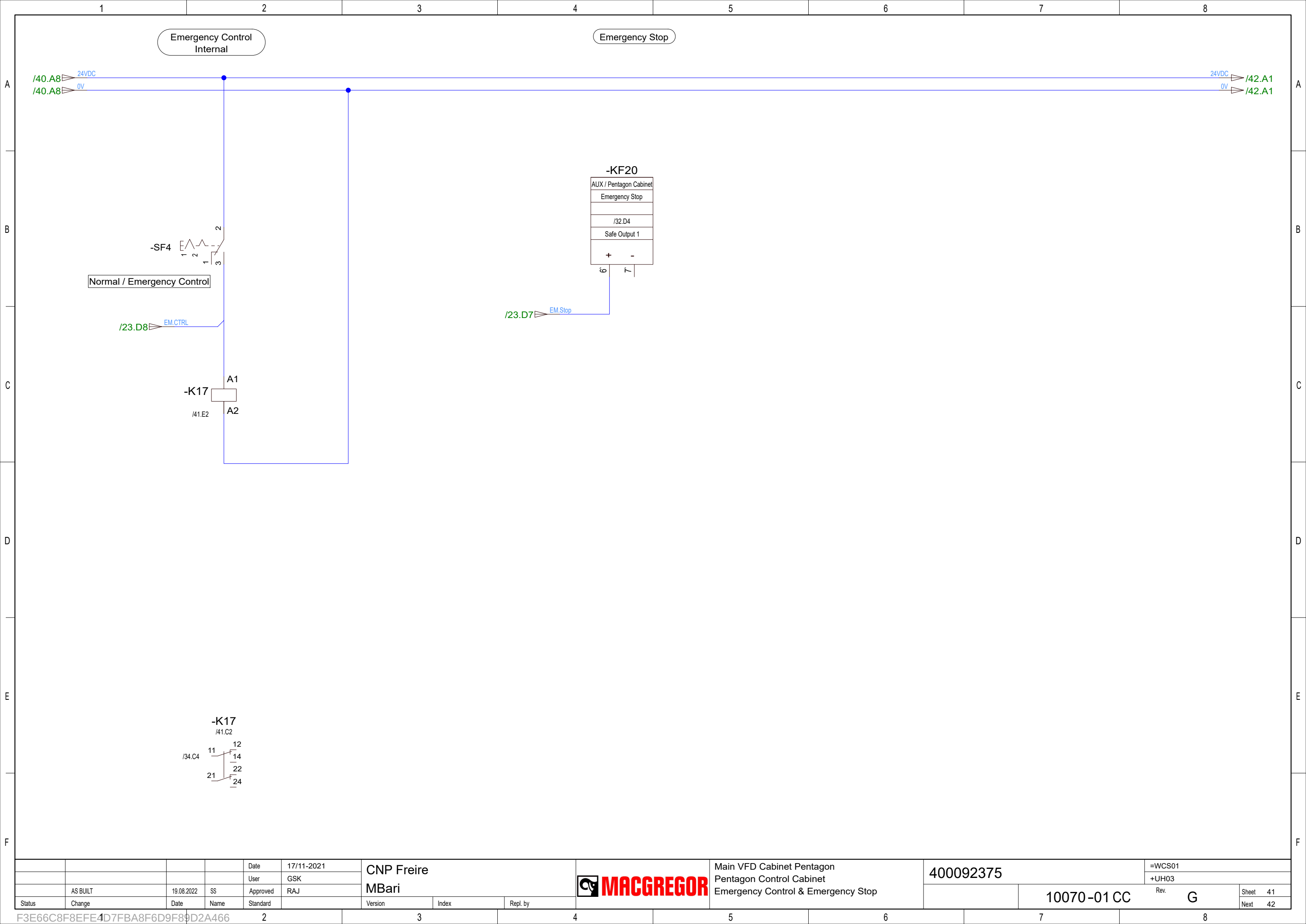


				Date	17/11-2021	CNP Freire MBarí			Main VFD Cabinet Pentagon Pentagon Control Cabinet Gear Temp Storage Drum & CTD Winch			400092375		=WCS01	
				User	GSK									+UH03	
	AS BUILT	19.08.2022	SS	Approved	RAJ									Rev. G	
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-01 CC		Sheet 37	Next 38

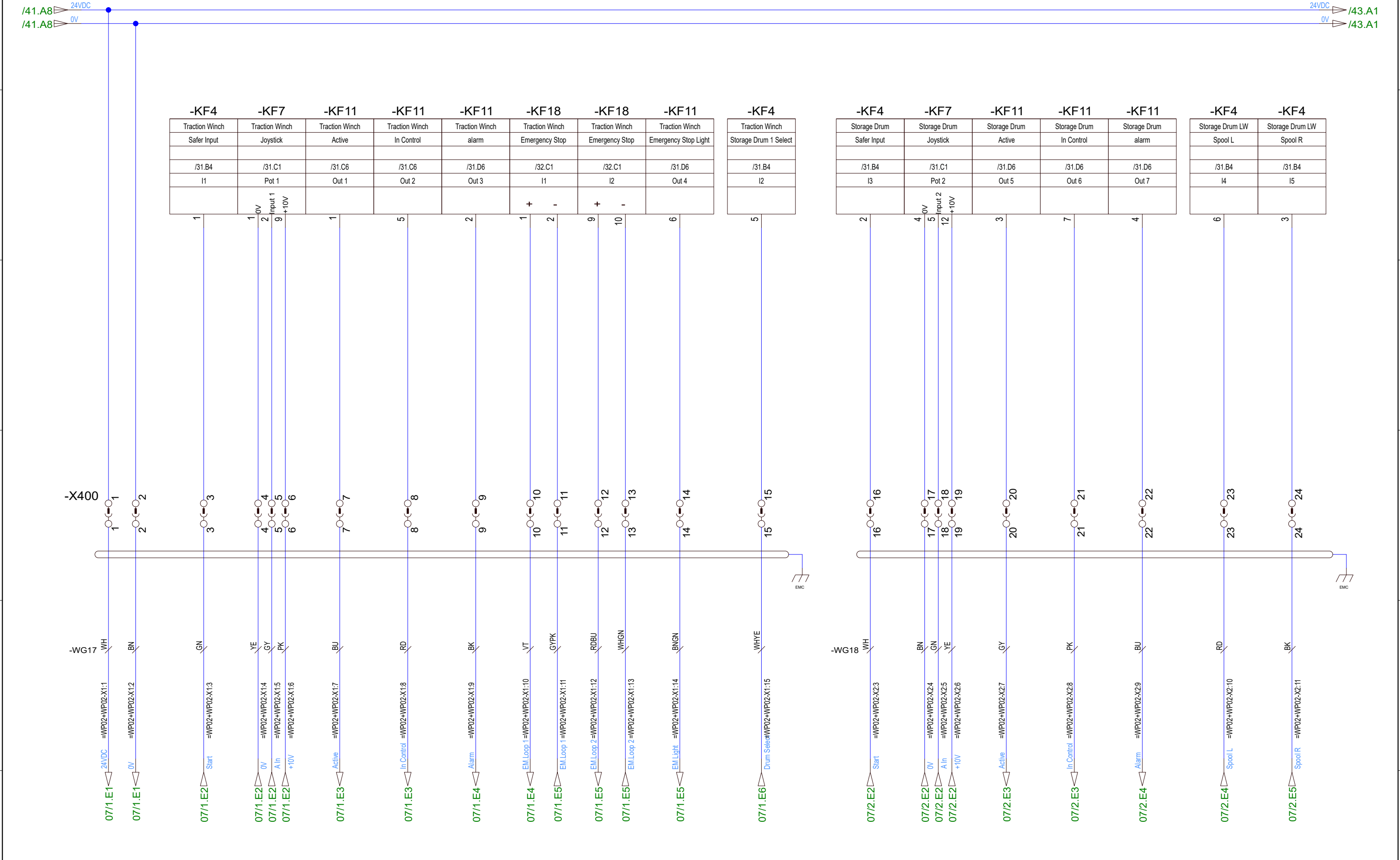


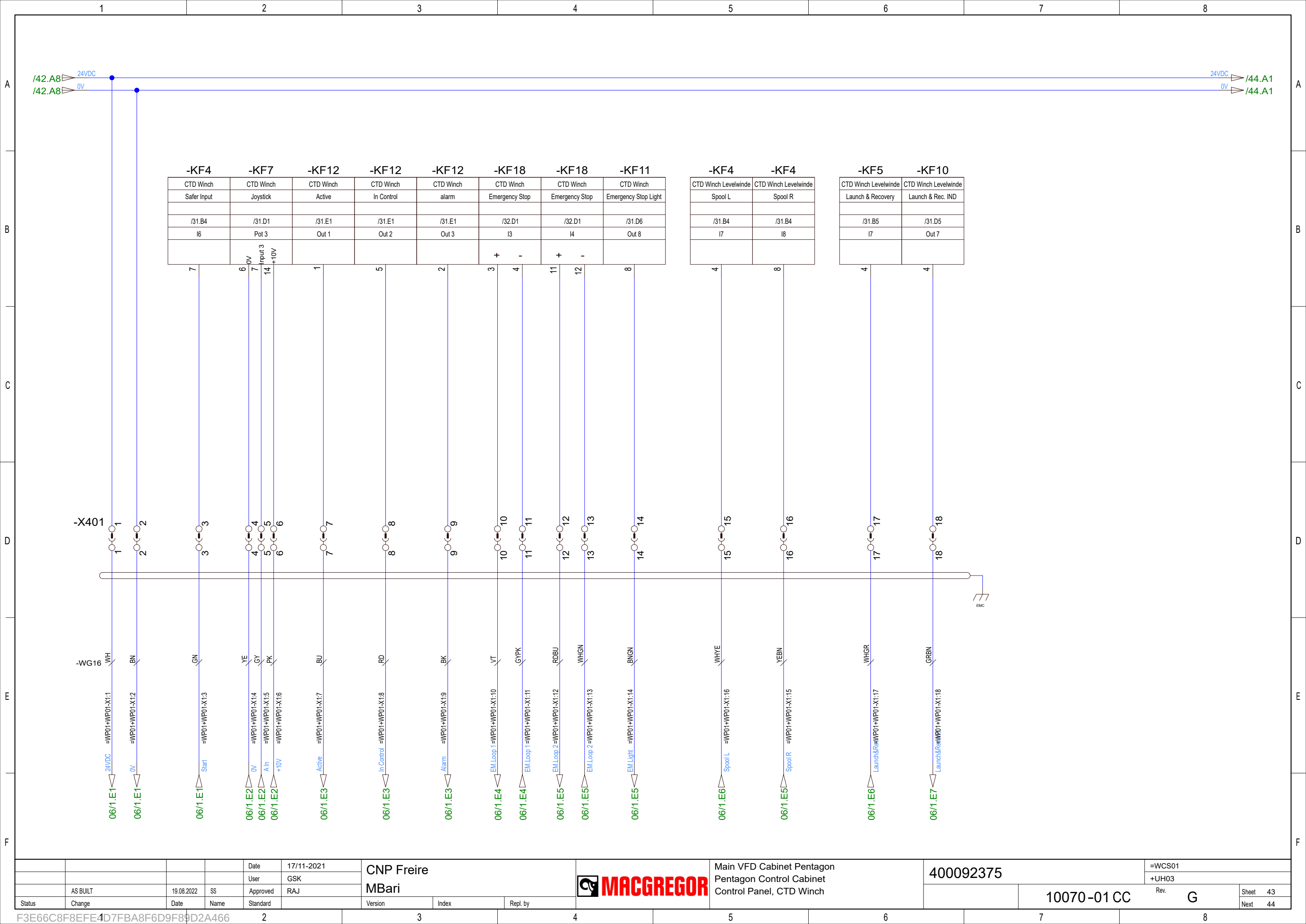


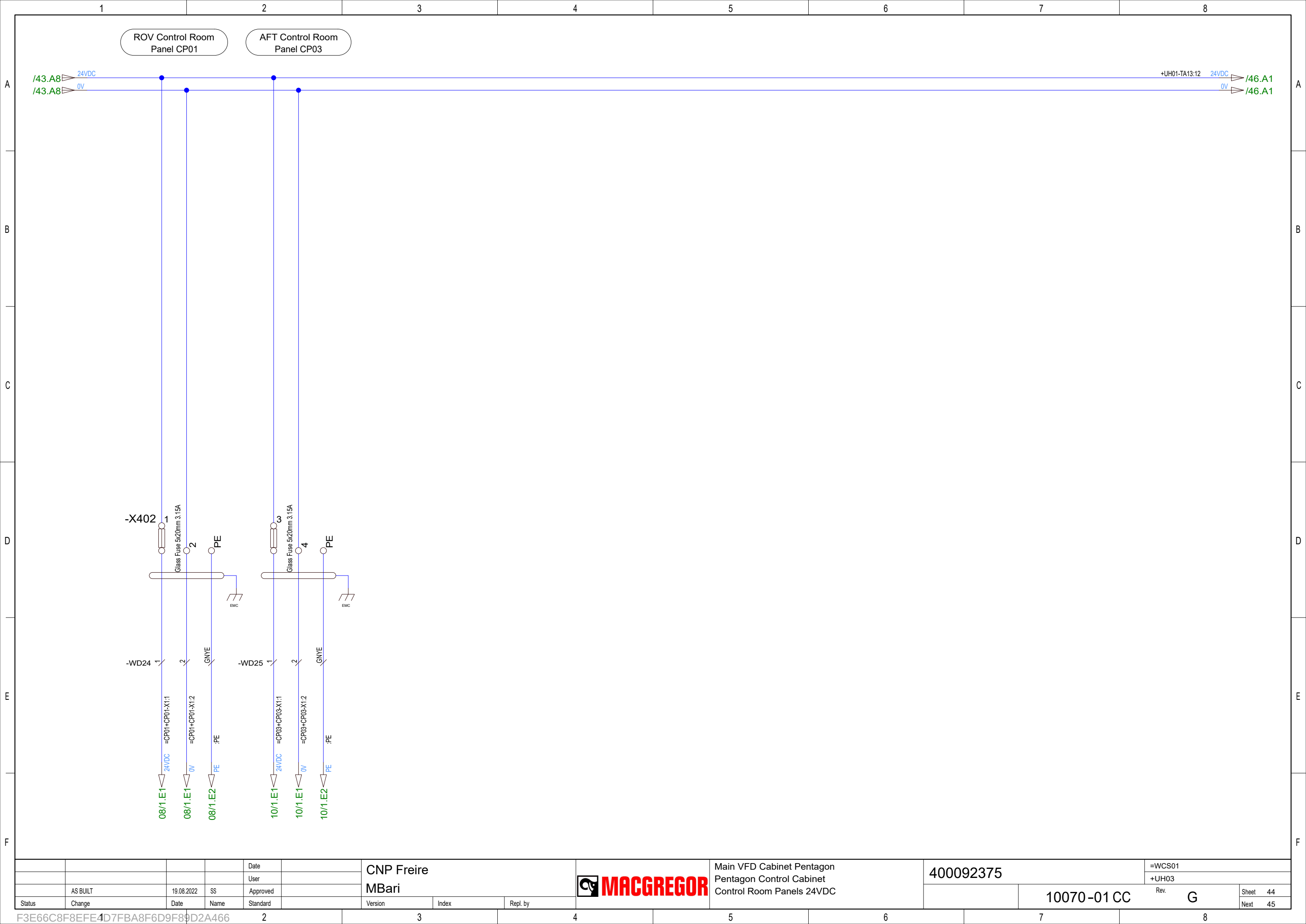




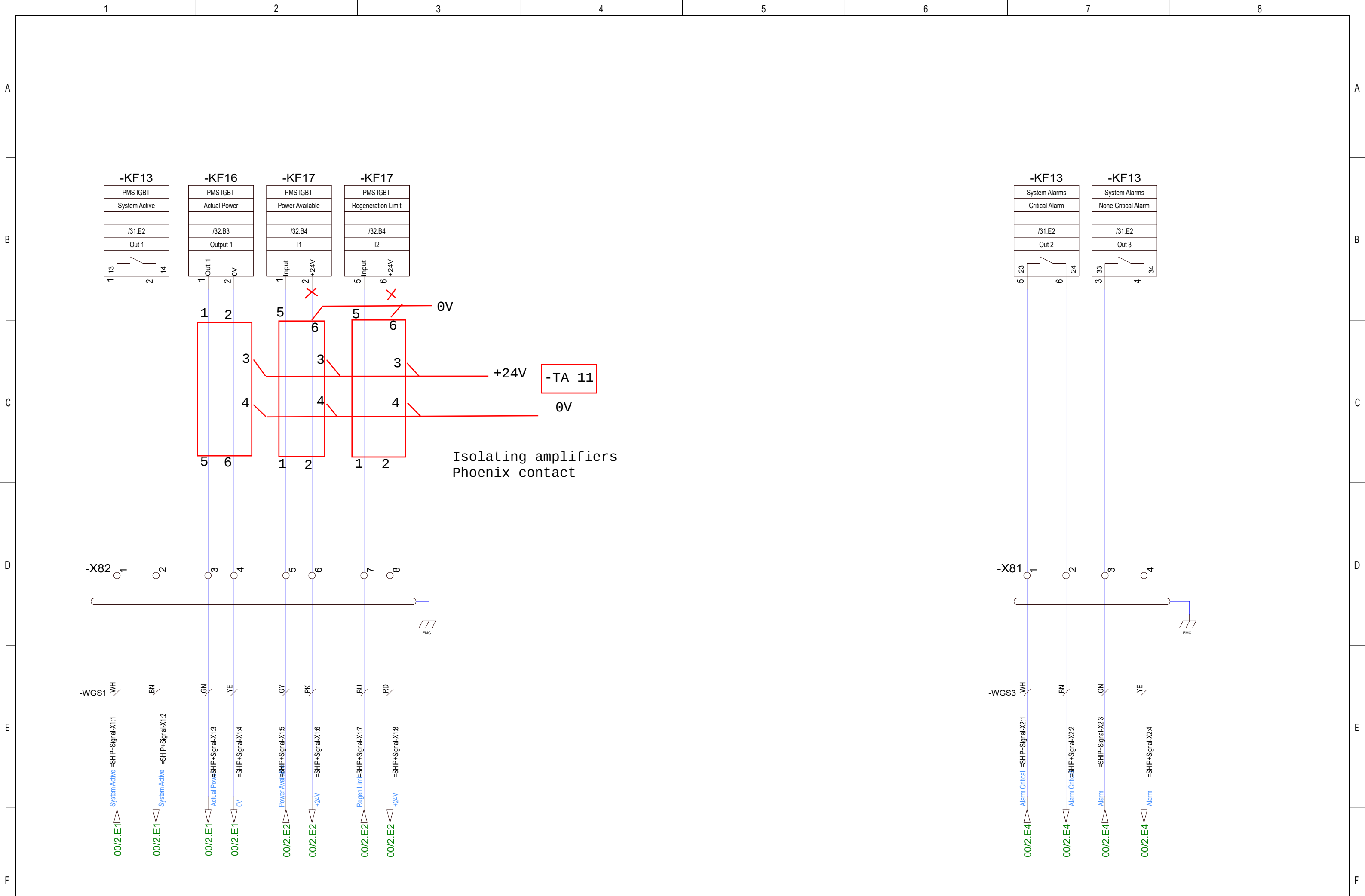
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				User	GSK								+UH03	
	AS BUILT	19.08.2022	SS	Approved	RAJ								Rev.	G
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-01 CC	Sheet	41
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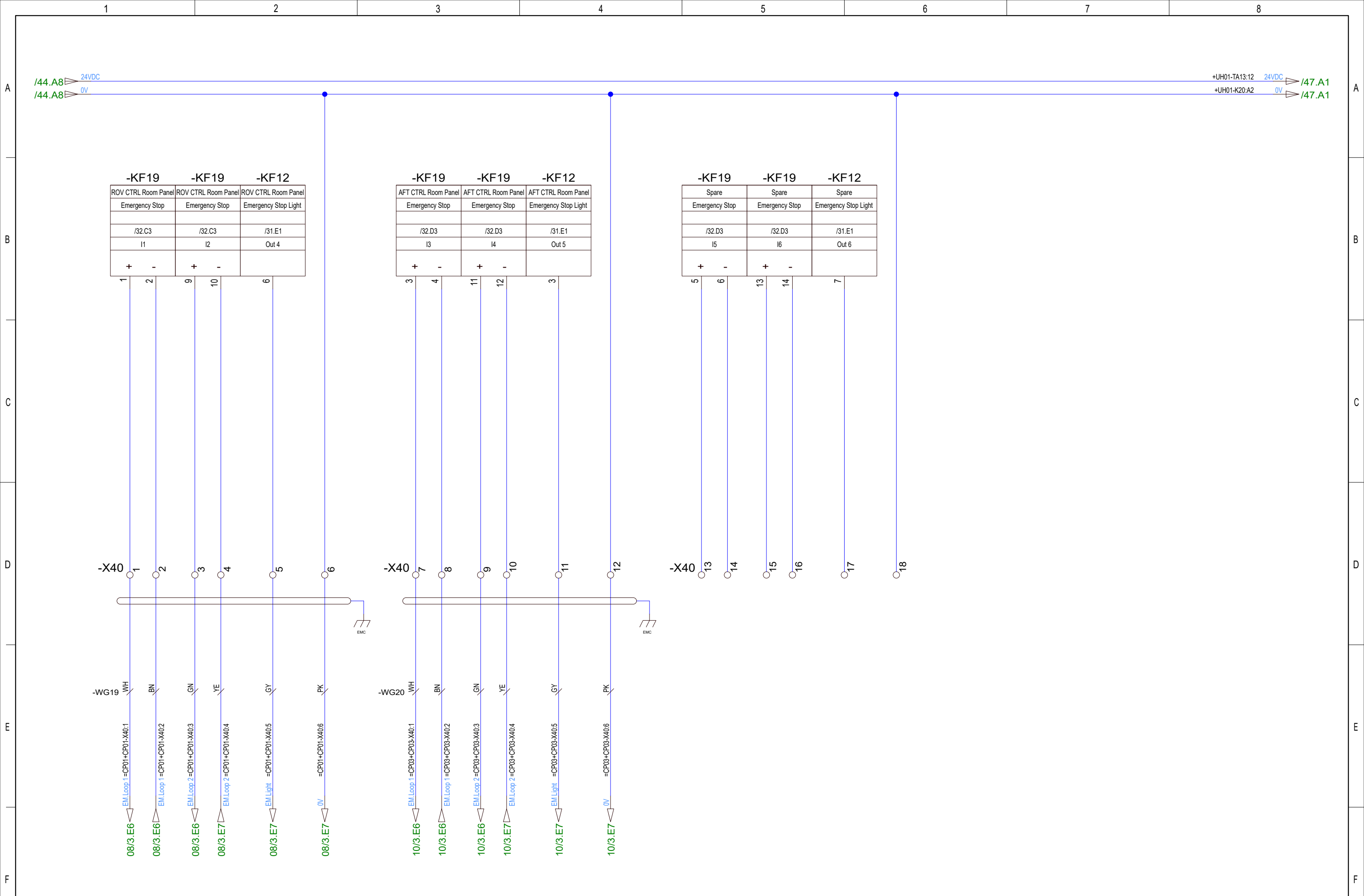




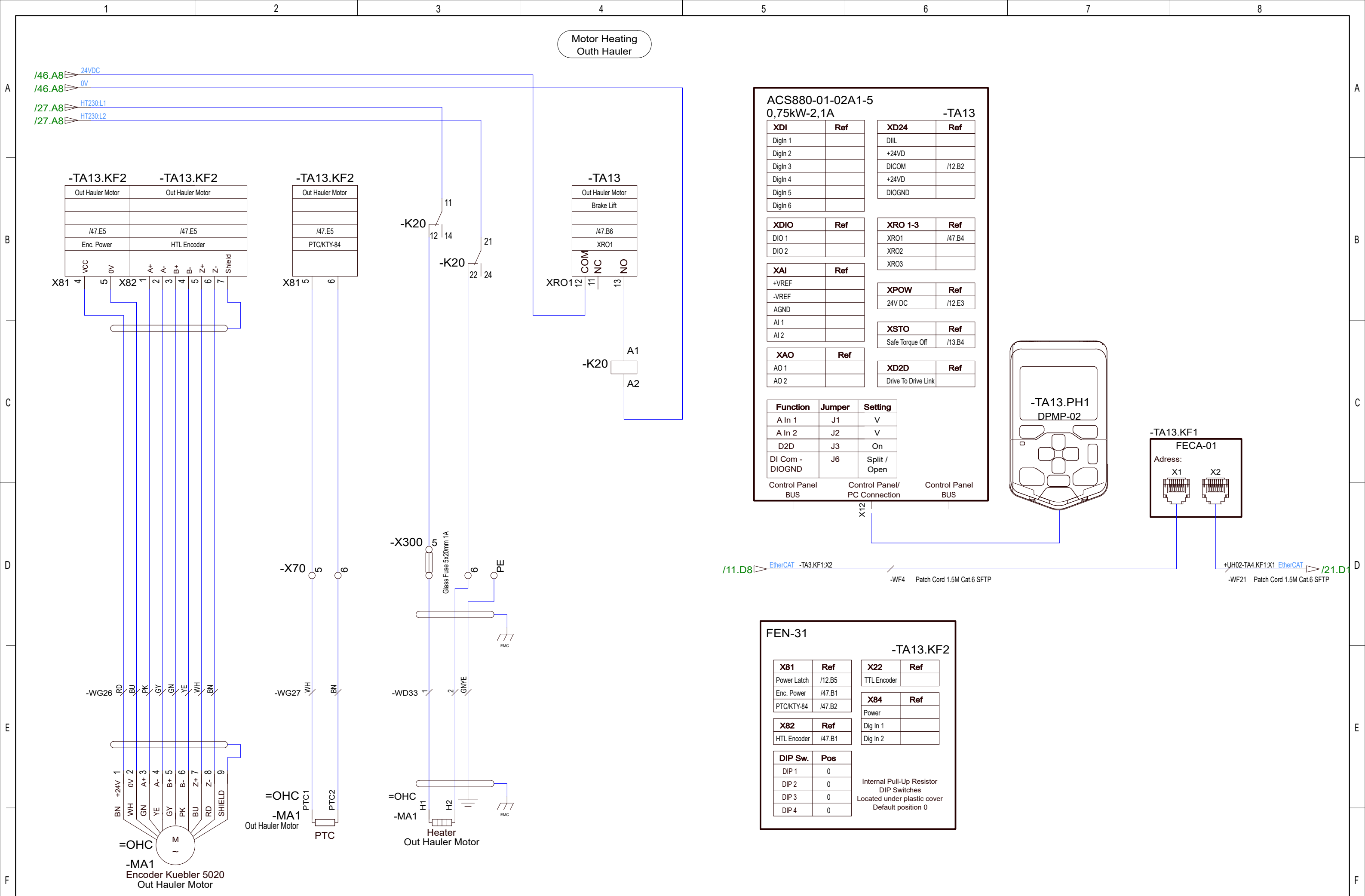


				Date		CNP Freire MBarí				Main VFD Cabinet Pentagon Pentagon Control Cabinet Control Room Panels 24VDC	400092375		=WCS01			
				User									+UH03			
	AS BUILT	19.08.2022	SS	Approved												
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-01 CC				Next	45





				Date	17/11-2021	CNP Freire MBarí			Main VFD Cabinet Pentagon Pentagon Control Cabinet External Emergency Stop			400092375		=WCS01 +UH03	
				User	GSK										
	AS BUILT	19.08.2022	SS	Approved	RAJ									Rev.	G
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ACS880-01-02A1-5
0,75kW-2,1A

XDI	Ref
DigIn 1	
DigIn 2	
DigIn 3	
DigIn 4	
DigIn 5	
DigIn 6	

XD24	Ref
DILL	
+24VD	
DICOM	/12.B2
+24VD	
DIOGND	

XDIO	Ref
DIO 1	
DIO 2	

XRO 1-3	Ref
XRO1	/47.B4
XRO2	
XRO3	

XAI	Ref
+VREF	
-VREF	
AGND	
AI 1	
AI 2	

XPOW	Ref
24V DC	/12.E3

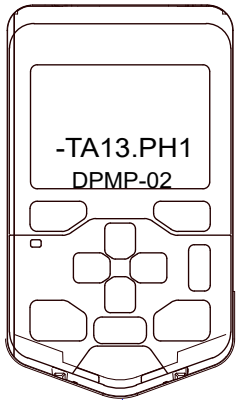
XSTO	Ref
Safe Torque Off	/13.B4

XAO	Ref
AO 1	
AO 2	

XD2D	Ref
Drive To Drive Link	

Function	Jumper	Setting
A In 1	J1	V
A In 2	J2	V
D2D	J3	On
DI Com - DIOGND	J6	Split / Open

Control Panel BUS Control Panel/ PC Connection Control Panel BUS



-TA13.KF1
FECA-01

Adress:

X1 X2

FEN-31

X81	Ref
Power Latch	/12.B5
Enc. Power	/47.B1
PTC/KTY-84	/47.B2

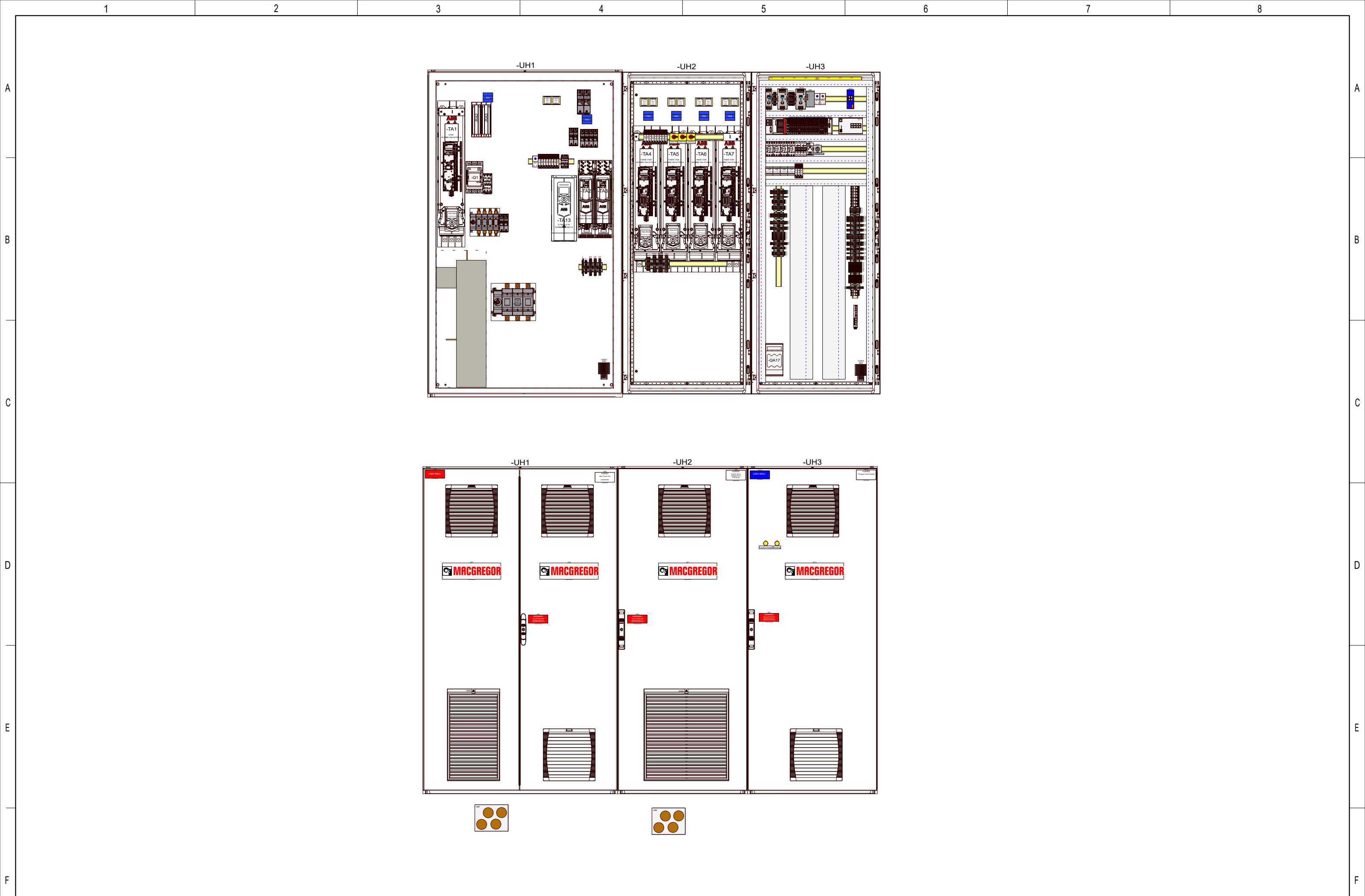
X82	Ref
HTL Encoder	/47.B1

X22	Ref
TTL Encoder	

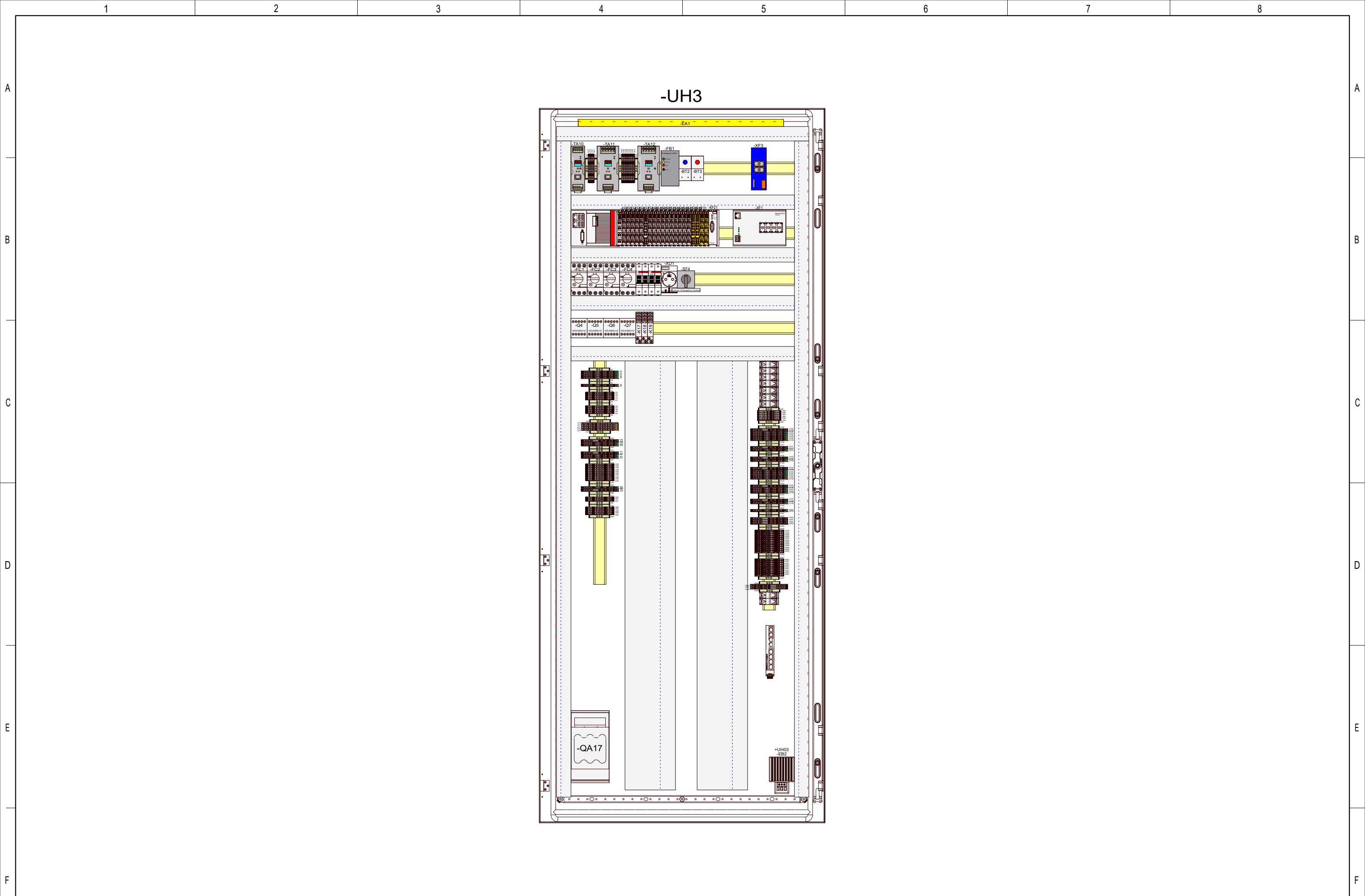
X84	Ref
Power	
Dig In 1	
Dig In 2	

DIP Sw.	Pos
DIP 1	0
DIP 2	0
DIP 3	0
DIP 4	0

Internal Pull-Up Resistor
DIP Switches
Located under plastic cover
Default position 0



				Date	17/11-2021	CNP Freire MBar				Main VFD Cabinet Pentagon Panel Layout	400092375		=WCS01	
	Added WP03 connections	21.11.2022	ANP	User	GSK									
	AS BUILT	19.08.2022	SS	Approved	RAJ								Rev. G	
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-01 GA		Next 2	



				Date	17/11-2021	CNP Freire MBari			Main VFD Cabinet Pentagon Panel Layout		400092375		=WCS01	
	Added WP03 connections	21.11.2022	ANP	User	GSK									
	AS BUILT	19.08.2022	SS	Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-01 GA		Rev. G	Sheet 2
														Next 1

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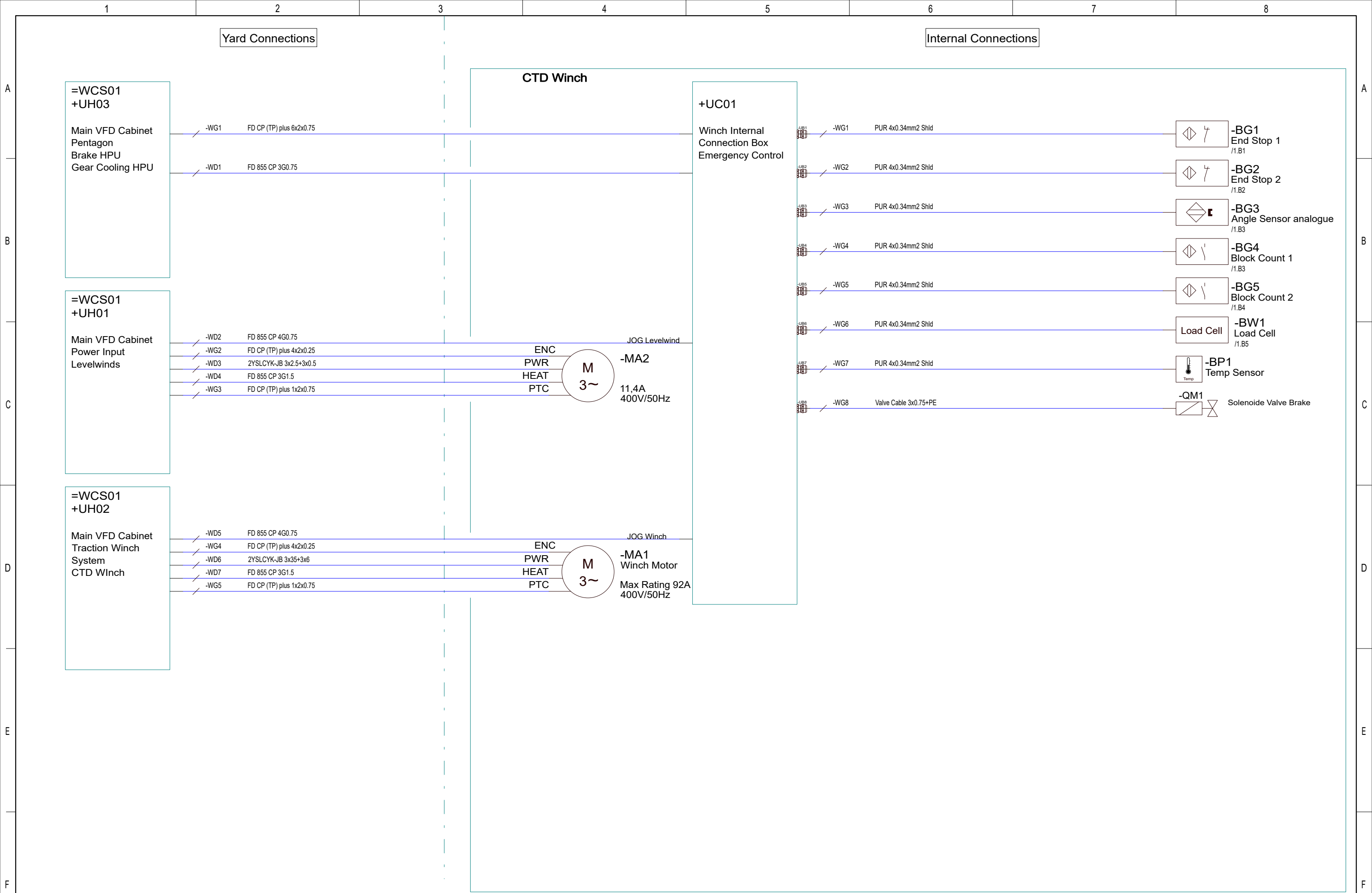
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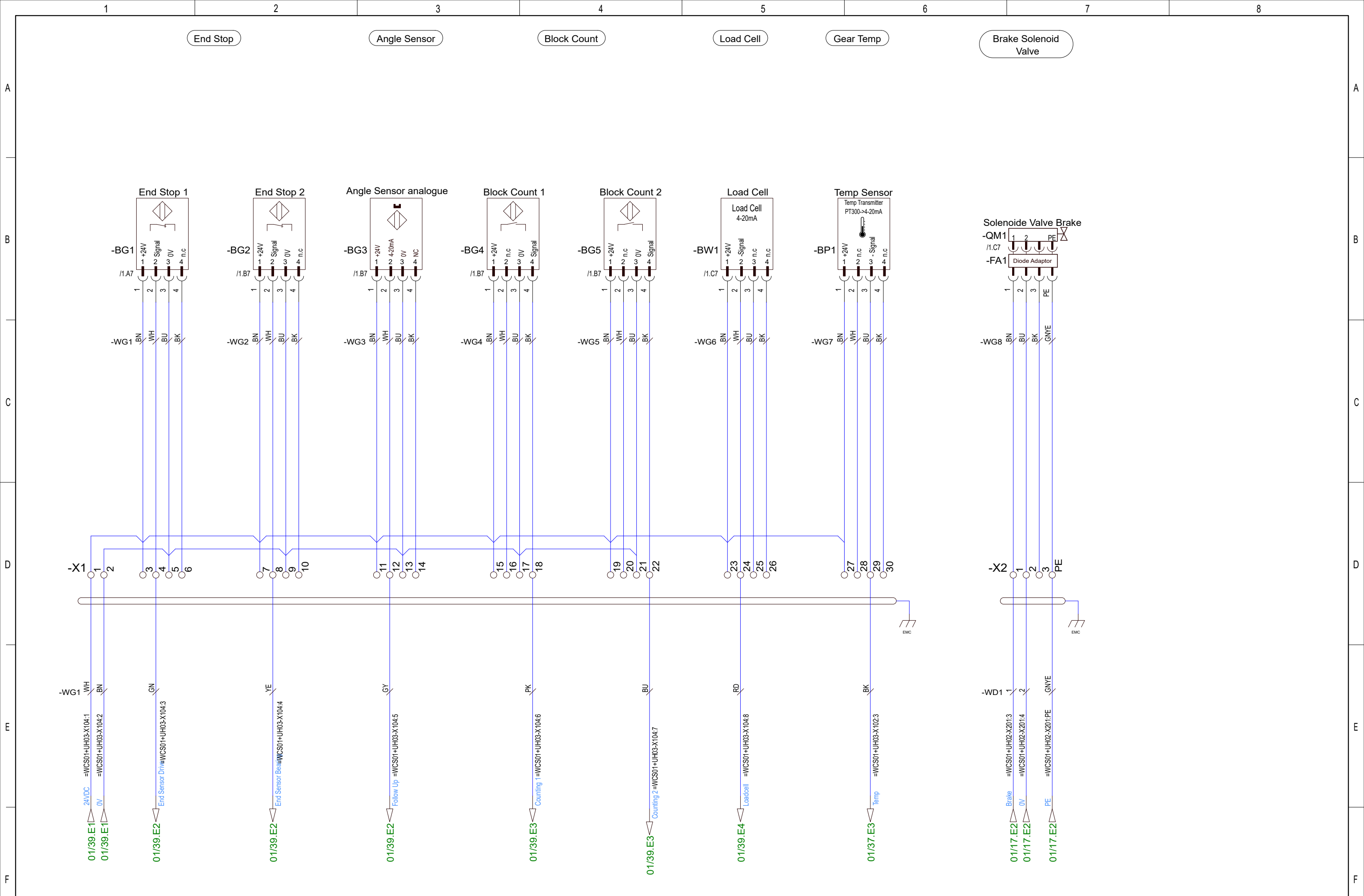
1		2		3		4		5		6		7		8				
Device ID		Device		Part Number		Qty	Unit	Description		Manufacturer		Datablad						
-AF1,-AF3,-AF6		120x50 Warning		EACVA074		3	Pcs	120x50 Red Engraved Sign plate Warning										
-AF2		120x50 Red		EACVA075		1	Pcs	120x50 Red Engraved Sign plate										
-AF3..-AF4,-AF7,-AF11		360x100 MCG		RMCLOGO1		4	Pcs	360x100Macgregor Logo										
-AF5,-AF8,-AF12		120x60 White		EACVA076		3	Pcs	120x60 White Engraved Sign plate										
-AF10		120x50 Blue		EACVA082		1	Pcs	120x50 Blue Engraved Sign plate										
-BT1,-BT2		Thermostat Blue/Fan		EACHE010-2		2	Pcs	Thermostat Blue/Fan ETR 201		Eldon		ETR Thermostat.pdf						
-BT3		Thermostat Red/Heating		EACHE010-1		1	Pcs	Thermostat Red/Heating ETR 202		Eldon		ETR Thermostat.pdf						
-EA1		Cabinet Fluorecent Light w/Switch		EACBU0050		1	Pcs	Cabinet Cooling Fan Filter		Cenika		Cenika Cabinet Lamp. pdf						
-EB1,-EB2		EHG045		EACHE0111		2	Pcs	Heater 45W		Eldon		HEG Heater.pdf						
-EC1,-EC2		Eldon EF700R5 Fan		EFTRN000-009		2	Pcs	Cabinet Cooling Fan		Eldon		EF500R5.pdf						
-F3.1,-F3.2		C14G16		400202703		2	Pcs	Cylindrical fuse links 690 14x51mm 16A		Bussmann		A7000000006914194.pdf						
-F3.1,-F3.2,-QA5..-QA8		US141		EACFU280		6	Pcs	Ultrasafe Fuse Holder 14x51mm Fuses		Ferraz Shawmut		DS-Semiconductor-Modular-Fuse-Holders-UltraSafe-US14-EN.pdf						
-FB1		NK isolateguard 12-48VDC		EACAL025		1	Pcs	Isolation Guard		Omron		Brosjyre Jordfeilmonitor 490500.pdf						
-FC1,-FC2		MS 132-10		ESTPA2506		2	Pcs	Manual Motor Starter 6.3-10A		ABB		ABB MS-MO Series. pdf						
-FC3,-FC4		MS 132-4		ESTPA2504		2	Pcs	Manual Motor Starter 2.5-4.0A		ABB		ABB MS-MO Series. pdf						
-FC5,-FC6		ABB S202-C 16A		400091945		2	Pcs	Circuit Braker 16A 2P		ABB		ABB S-Series.pdf						
-FE1..-FE6		TDK Toroids		EFTRN000-0035		6	Pcs	TDK Motor Cable Chokes Di39,2mm H56,4mm		TDK		TDK Ferrit Ring.pdf						
-K1..-K19		G2R-2-SNI-24VDC		EACRE039		19	Pcs	Relay		Omron		G2R-Relays.pdf						
-K1..-K19		P2RF-08-PU		EACRE041		19	Pcs	Relay base		Omron		G2R-Relays.pdf						
-KF1		CX2900-0038		400092258		1	Pcs	40 GB CFast card, 3D flash, extended temperature range		Beckhoff								
-KF1		CX5230-0175		ECPPEB17		1	Pcs	Basic CPU module CX5230, 2 Cores, Microsoft Windows 10 IoT Enterprise 2019 LTSC, 64 bit, TwinCAT 3 runtime (XAR), no licenses included		Beckhoff		Datasheet						
				Date		CNP Freire						Main VFD Cabinet Pentagon			400092375		=WCS01	
				User		MBar						Part list						
	AS BUILT	19.08.2022	SS	Approved														
Status	Change	Date	Name	Standard		Version	Index	Repl. by						10070-01 PL		Rev. G	Sheet 1	
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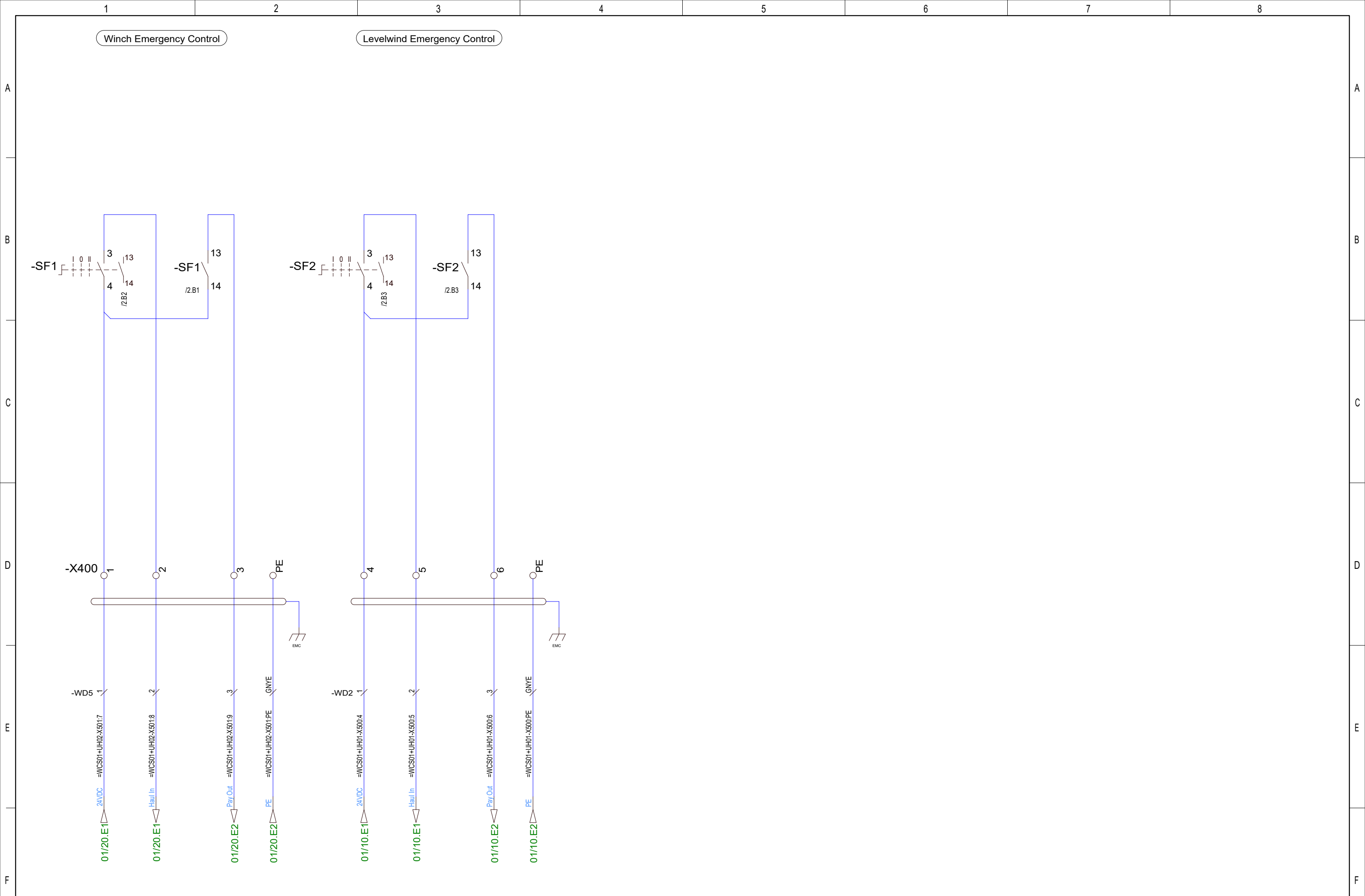
1		2		3		4		5		6		7		8	
Device ID		Device		Part Number		Qty	Unit	Description			Manufacturer		Datablad		
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-QA3,-QA4		US27 1MI		EACFU290		2	Pcs	Ultrasafe Fuse Holder 27x60mm Fuses			Ferraz Shawmut		DS-Fuse-Holders-Modulostar-CMS27-Ultrasafe-US27-EN.pdf		
-QA5..-QA8		FWP-10A14F		EACFU281		4	Pcs	Ferrule FWP 690/700V 14x51mm			Ferraz Shawmut		FWP Fuses.pdf		
-QA9..-QA12		Fuse SBFEC 400A 690V		EACFU273		4	Pcs	Square Body Flush End Size 1, 400A			Bussmann		BUS_Ele_SB_Flush_End_Contact.pdf		
-QA13..-QA16		Fuse SBFEC 250A 690V		EACFU270		4	Pcs	Square Body Flush End Size 1, 250A			Bussmann		BUS_Ele_SB_Flush_End_Contact.pdf		
-QA17		Fuse NH00 35A 500V GL/GG		EACFU030		3	Pcs	Fuse NH00 35A 500V GL/GG			Siba		NH00 6-160A.pdf		
-QA17		NH FUZE SWITCH-DISCON. SIZE 00 160 A		ESTPA261		1	Pcs	NH00 Fuse base 160A			Wöhner		woehner-33198000.pdf		
-QB1		170M5808D		400182561		3	Pcs	HSDI Square Body DIN 43620, 400A 690V Size 2			Bussmann		Datasheet		
-QB1		OS400D03K		400182421		1	Pcs	Fuse Switch			ABB		Datasheet		
-QB1		OSS400G1L/3		400182423		2	Pcs	Terminal Shroud Cover 101,4mm (3pcs)			ABB		Catalogue		
-RA1		ACS880 Charge Kit 13 R8i RRU		EFTRN7171		1	Pcs	Charge Kit DC			ABB		Datasheet		
-RJ1...-RJ9		IE-XM-RJ45/IDC		400090935		9	Pcs	Mounting rail outlet, RJ45, RJ45 module, IP20, Cat.6A			Weidmuller		Datasheet		
-SF1...-SF3		KG10A T203/58 VE21		400090765		3	Pcs	3 Pole 20A Main, Safety, Maintenance Switch			Kraus & Naimer		Datasheet		
-SF4		K&N CG8-A220-VE21V (No-EM)		EACSW0193-01		1	Pcs	Rotary Switch 1P Double-throw Base Mounted (Normal-Emergency)			Kraus & Naimer		CG8_E.pdf		

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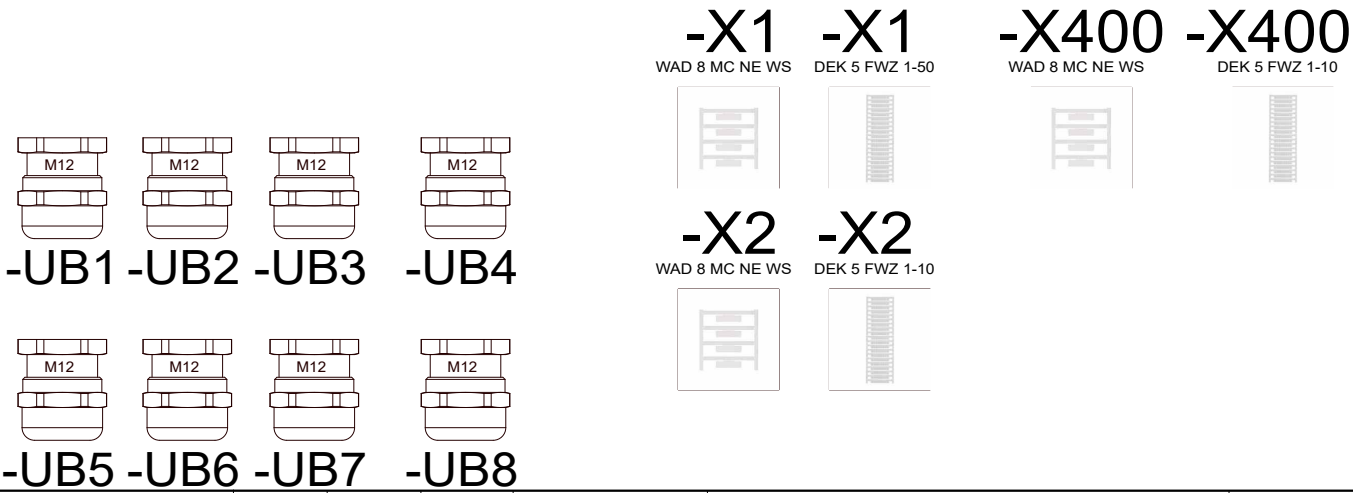
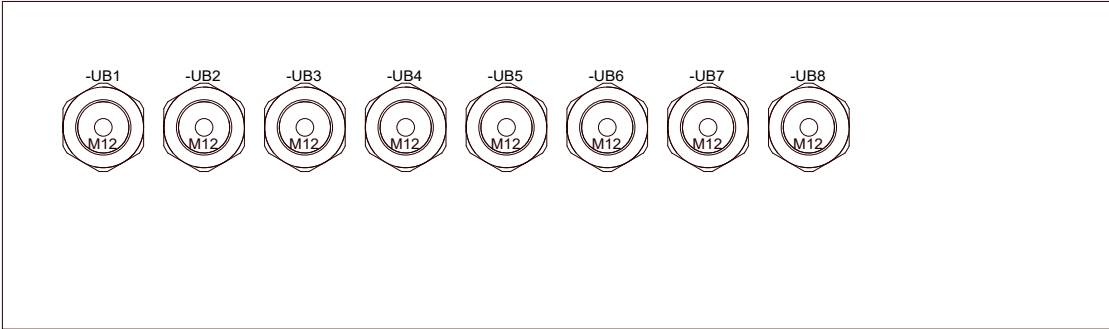
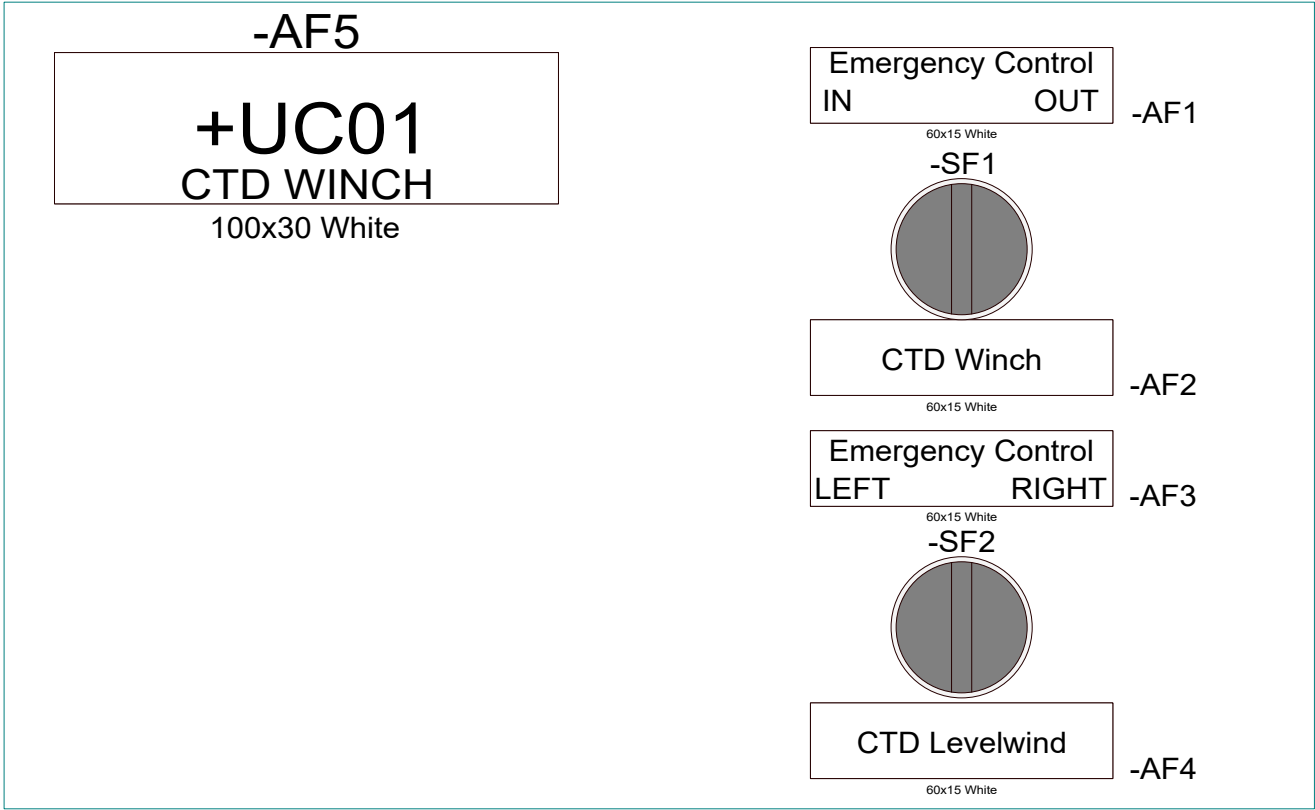
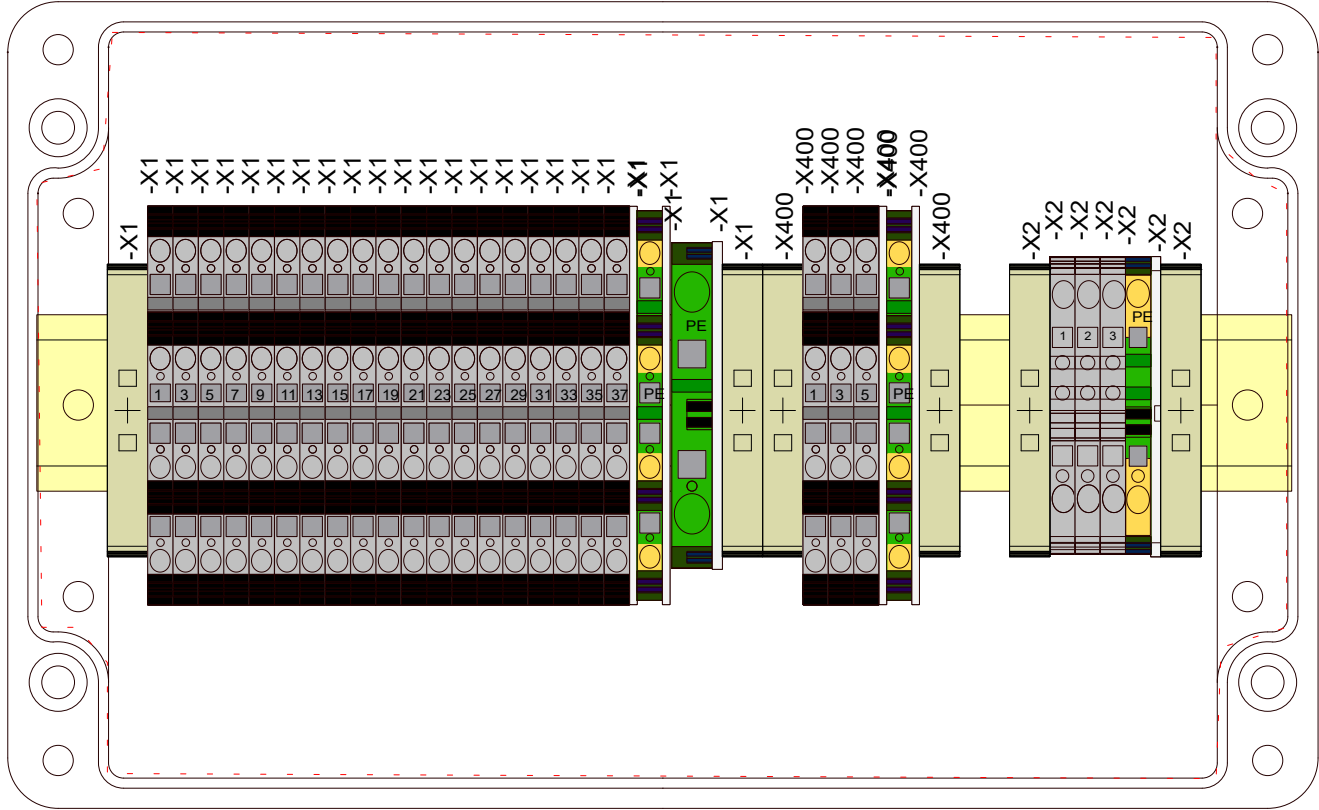


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				User	GSK									
				Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-02 CD	Rev. G	Sheet 1 Next 2

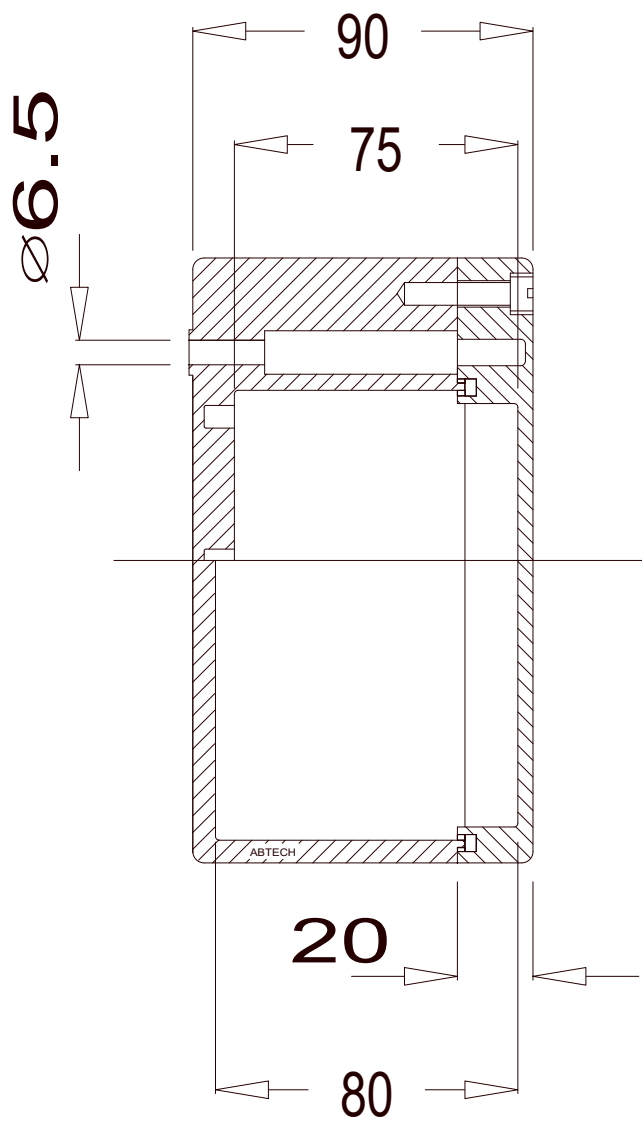
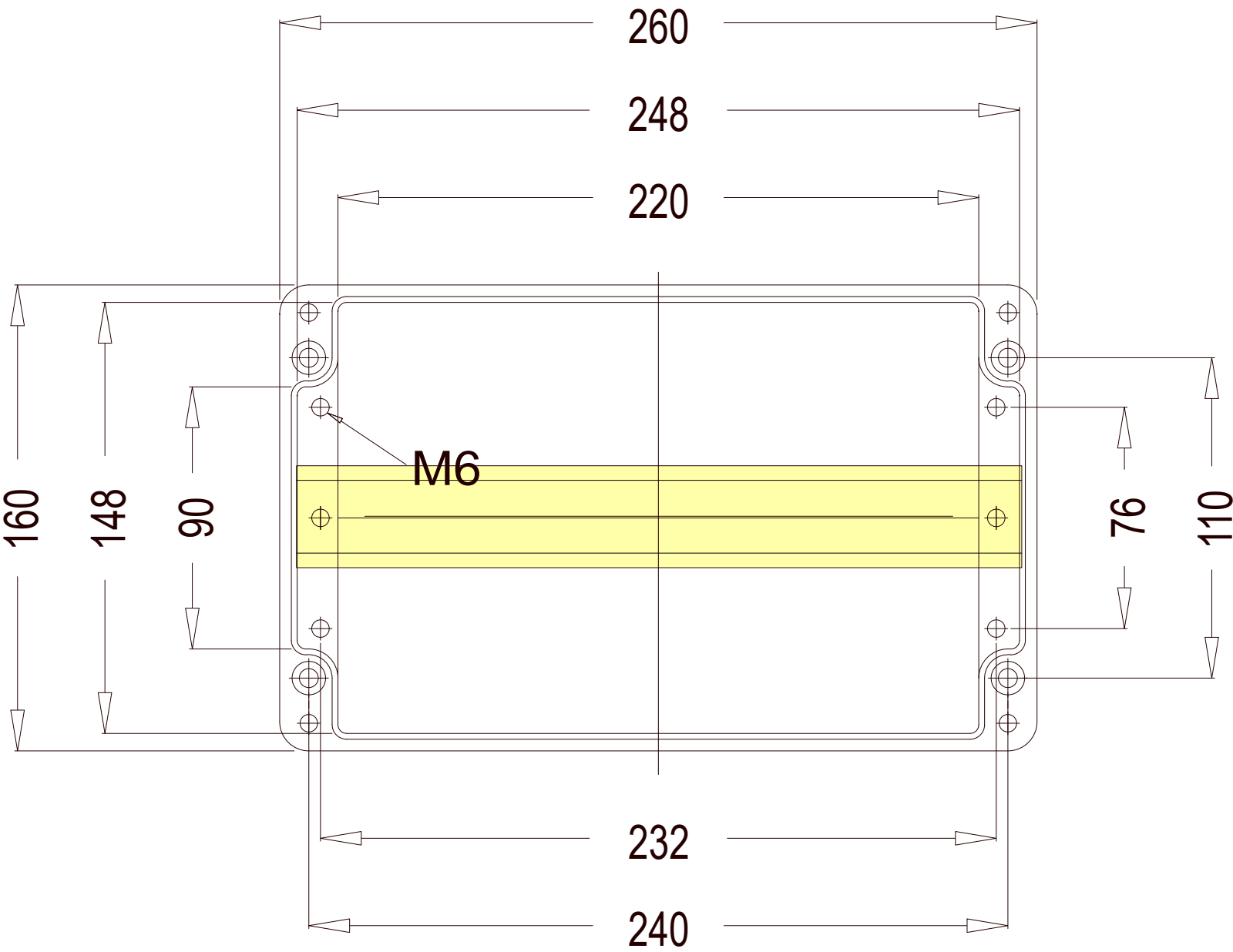




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				User	GSK								+UC01	
				Approved	RAJ								Rev.	G
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-02 CC	Sheet	2
													Next	1

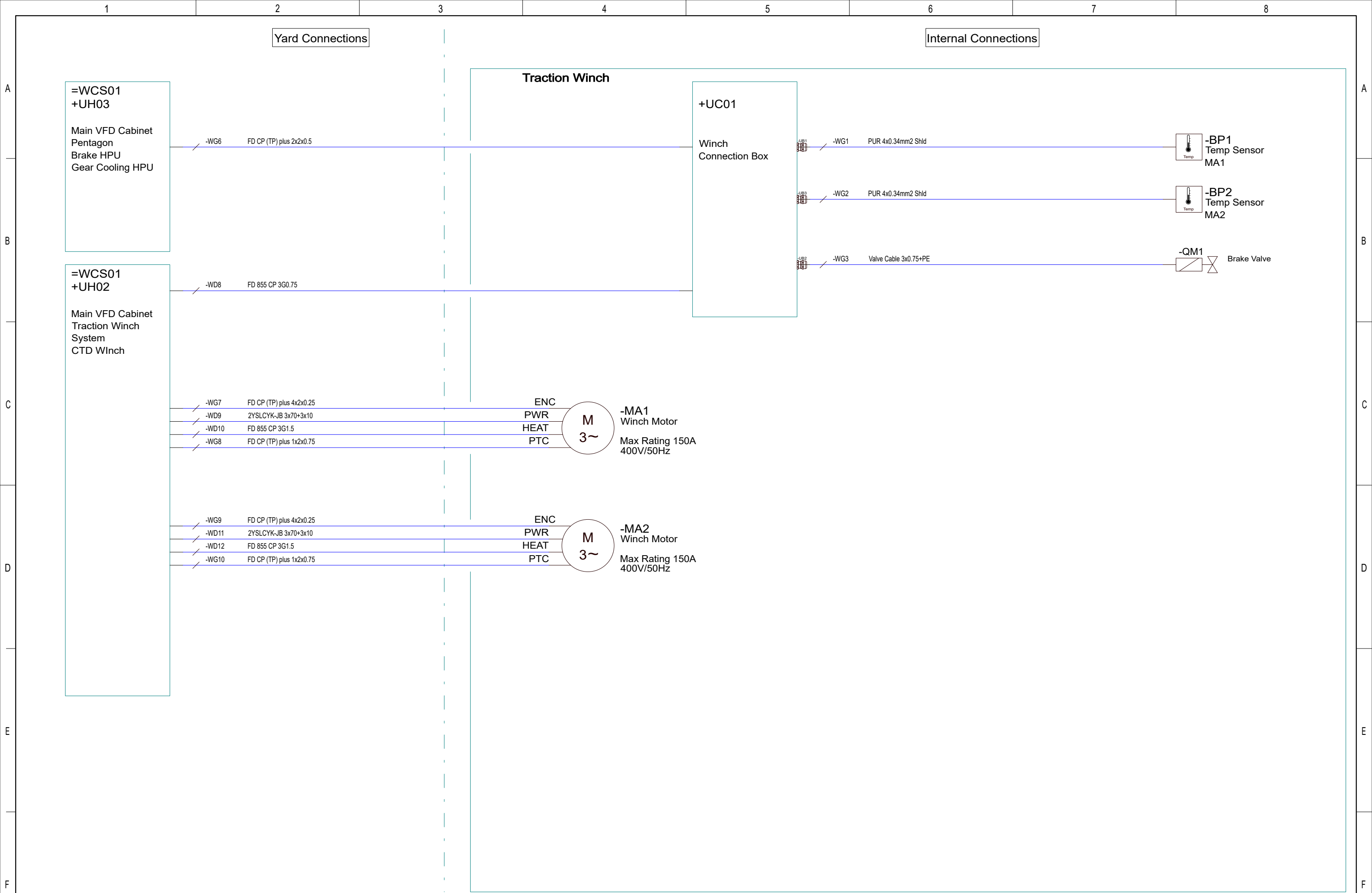


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				User	GSK								+UC01	
				Approved	RAJ								MBarí	
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-02 GA	Rev. G	Sheet 1
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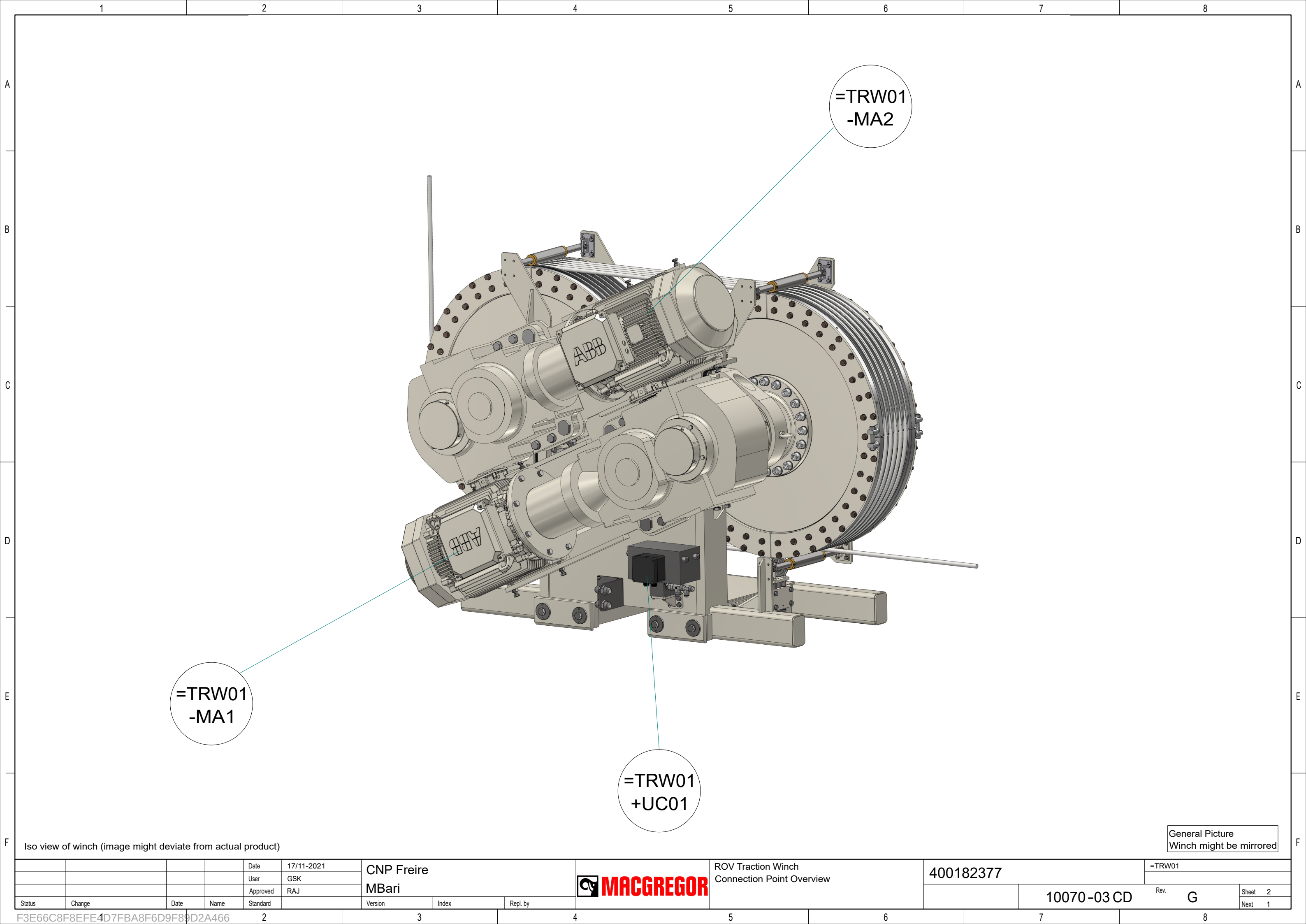


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				Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-02 GA	Rev. G	Sheet 2
														Next 1

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				Date	17/11-2021	CNP Freire MBarí				ROV Traction Winch ROV Traction Winch	400182377	=TRW01		
				User	GSK									
				Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-03 CD	Rev. G	Sheet 1	
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Iso view of winch (image might deviate from actual product)

General Picture
Winch might be mirrored

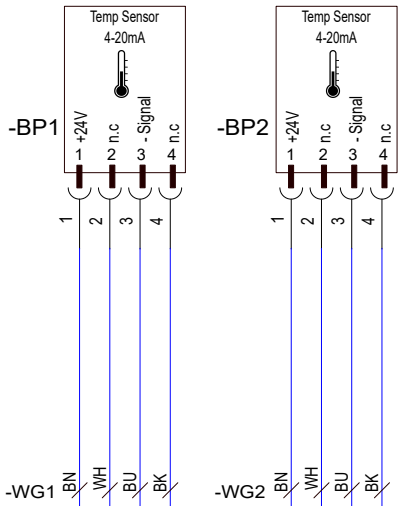
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				User	GSK									
				Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-03 CD	Rev. G	Sheet 2
														Next 1

Gear Temp

Brake Solenoid
Valve

Temp Sensor
MA1

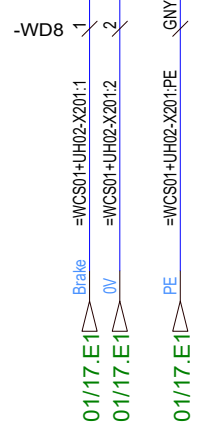
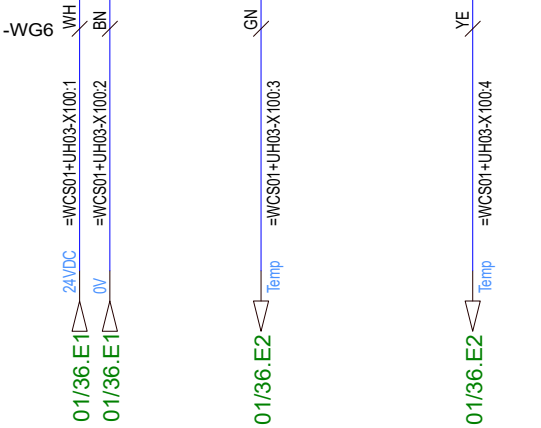
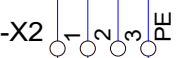
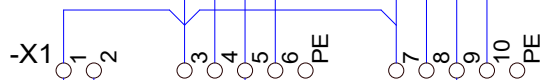
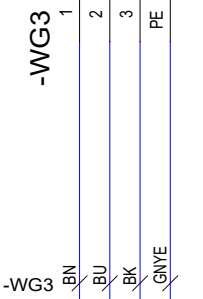
Temp Sensor
MA2



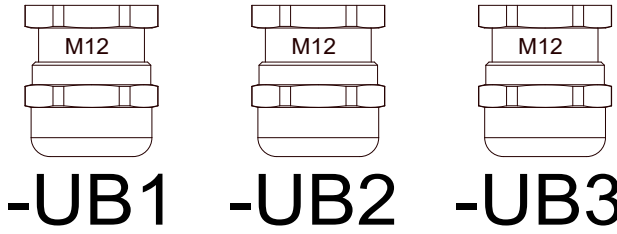
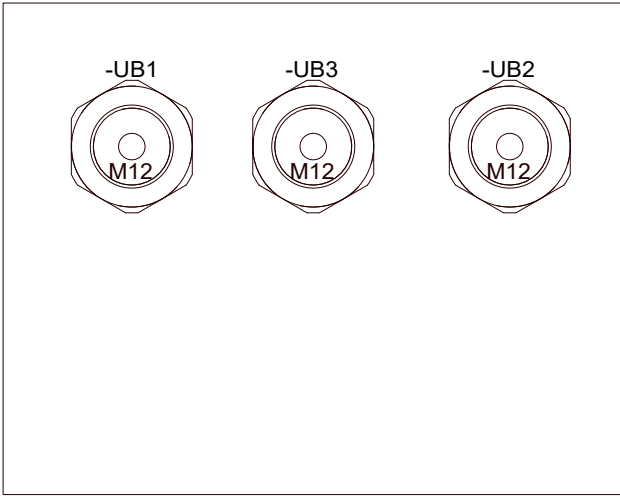
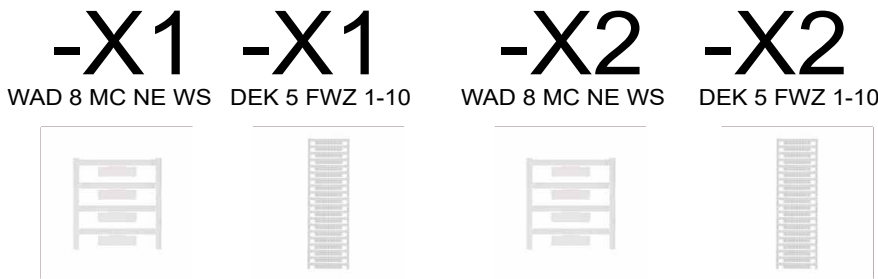
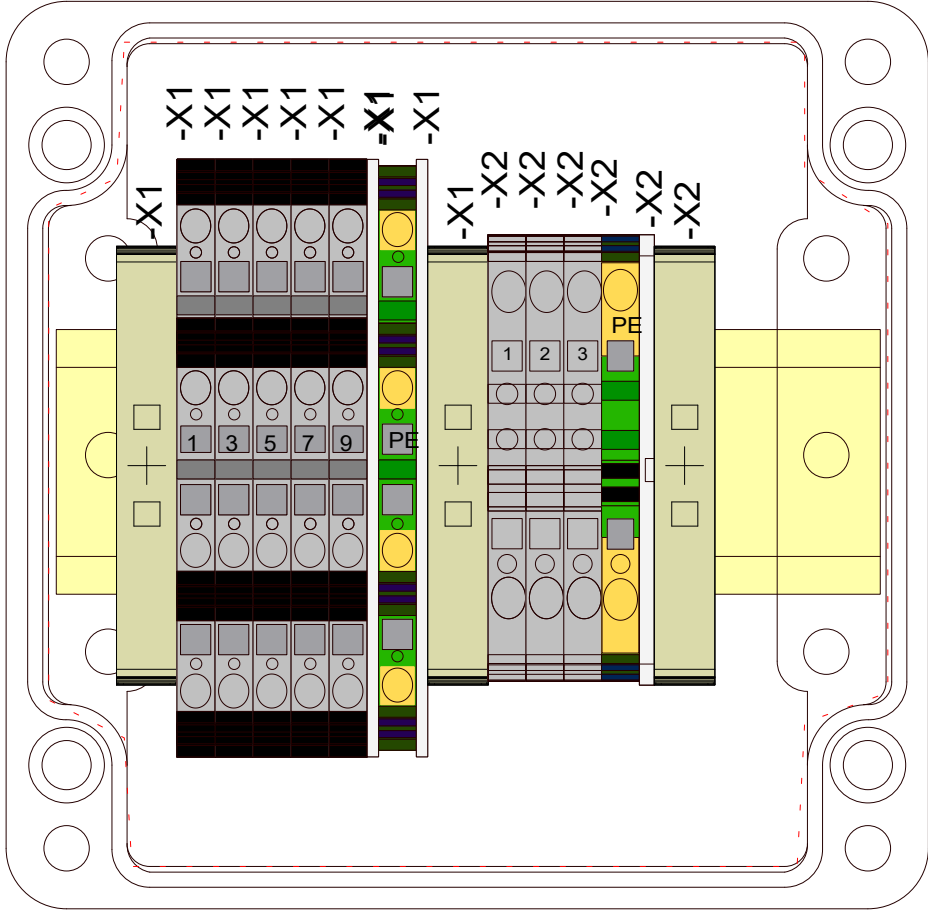
Brake Valve

-QM1 /1.B7

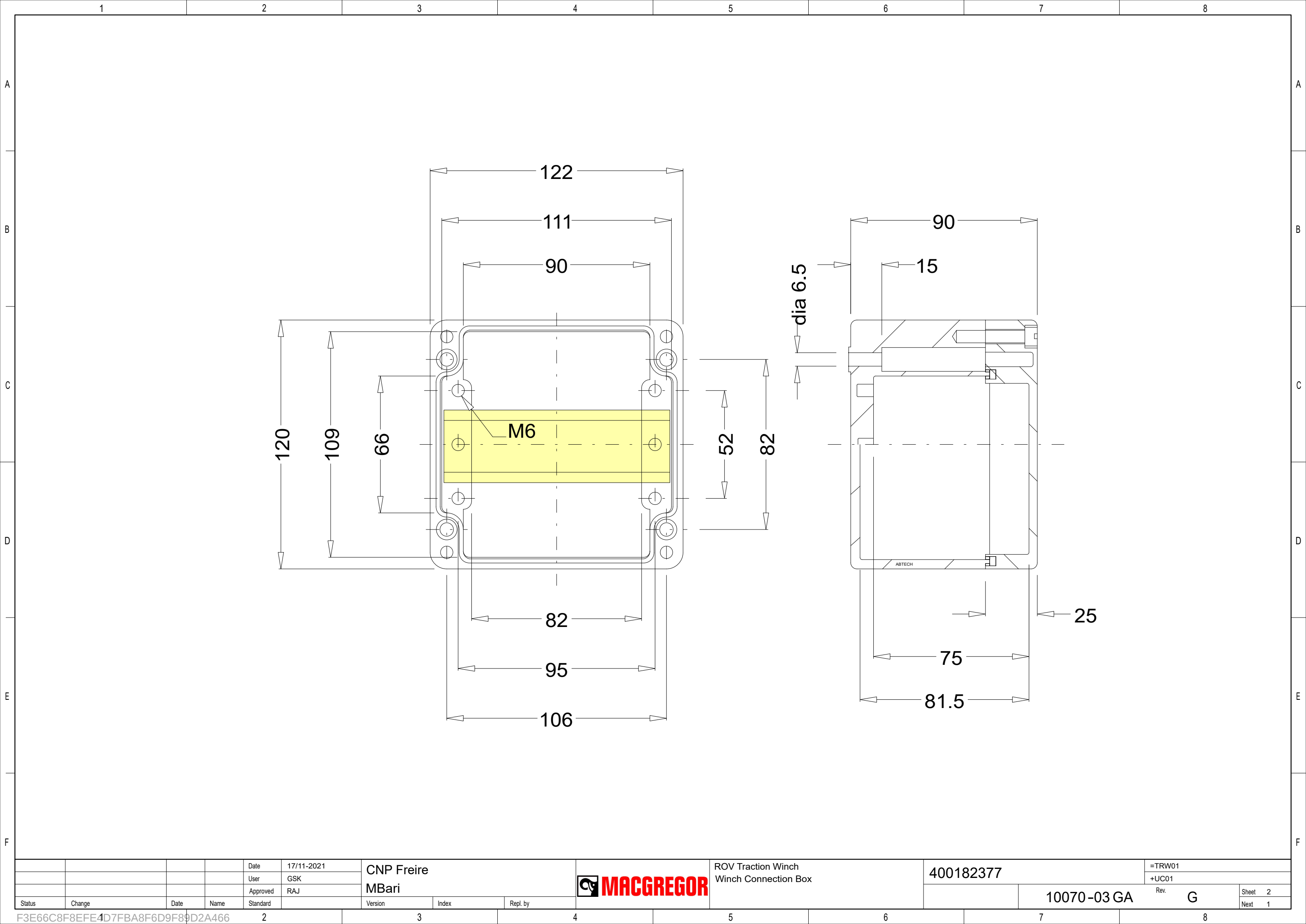
-FA1 Diode Adaptor



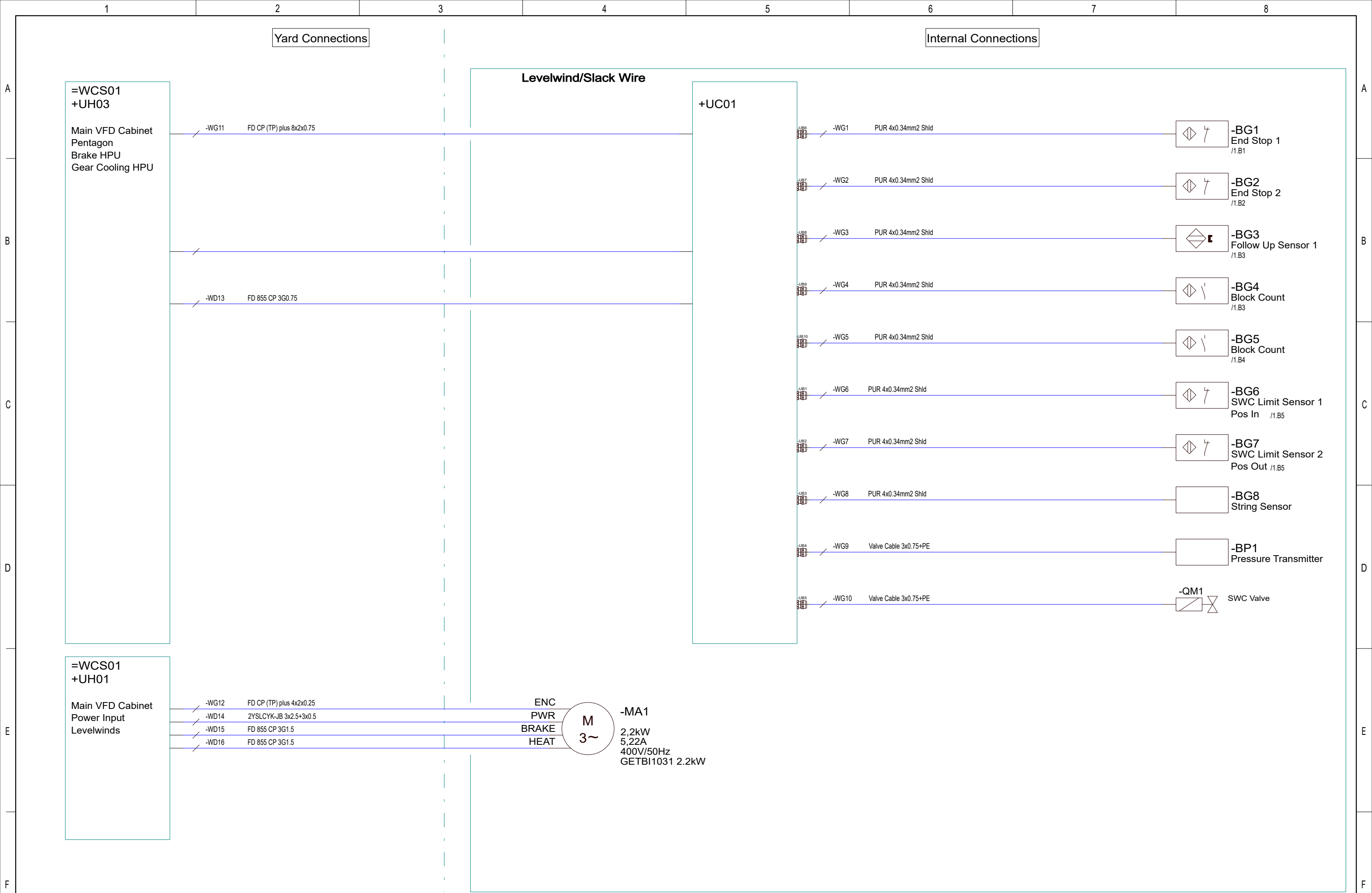
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				User	GSK							+UC01		
				Approved	RAJ							MBarí		
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-03 CC	Rev. G	Sheet 1
														Next 1



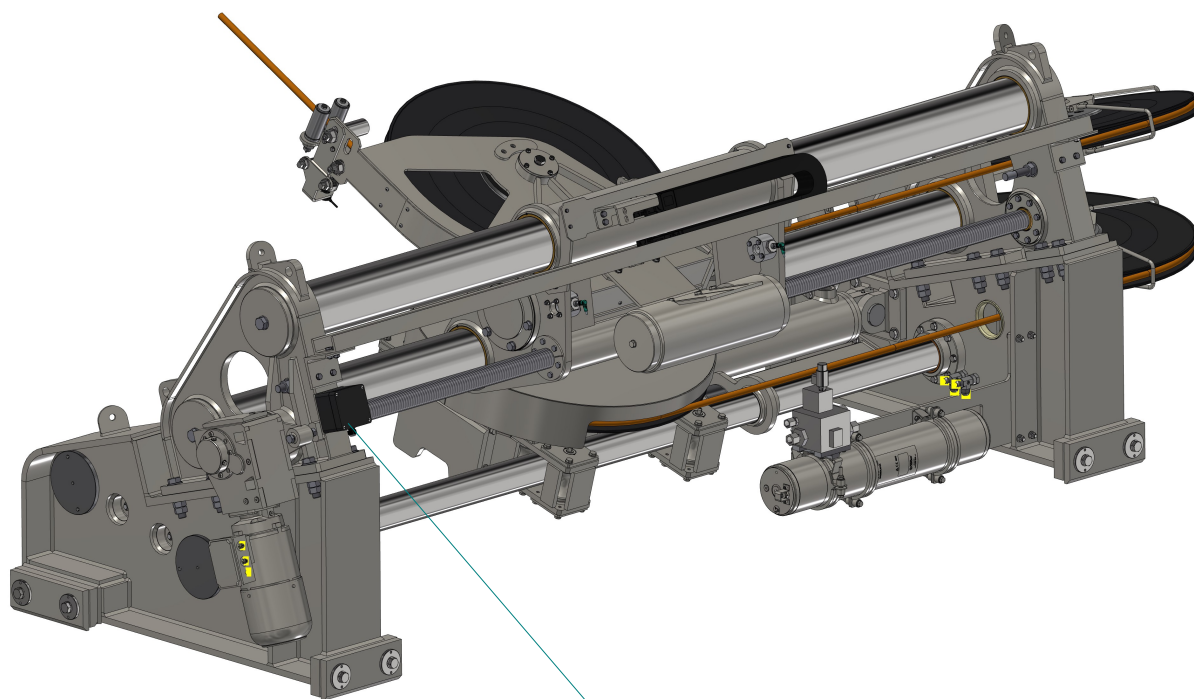
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				Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-03 GA	Rev. G	Sheet 1
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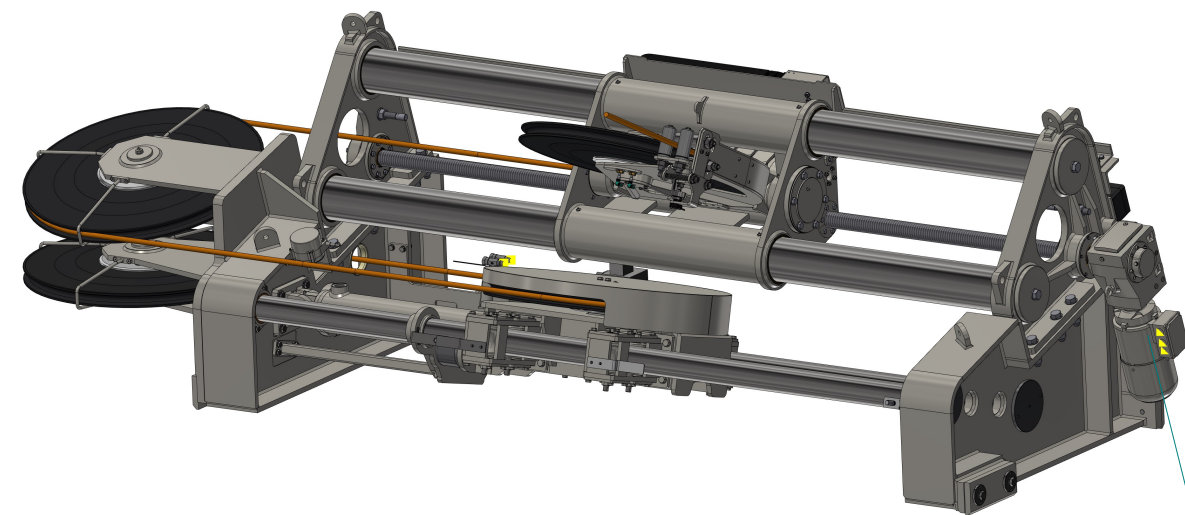
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				User	GSK							+UC01		
				Approved	RAJ							MBar		
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-03 GA	Rev. G	Sheet 2
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				Date	17/11-2021	CNP Freire MBarí				Levelwind & Slack Wire Compensator Levelwind & Slack Wire Compensator	400182378	=LEV01		
				User	GSK									
				Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-04 CD	Rev. G	Sheet 1
														Next 2



=LEV01
+UC01



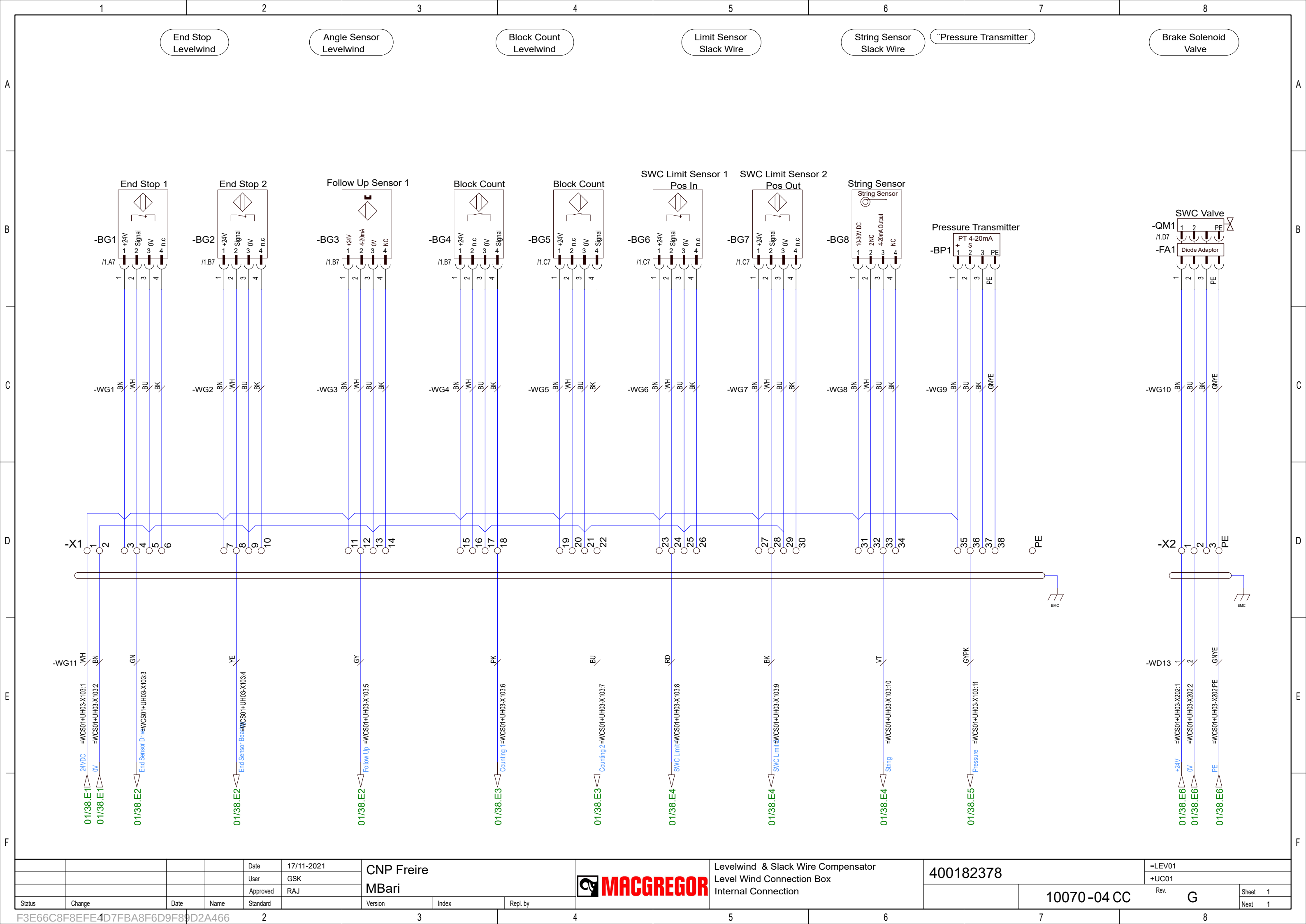
=LEV01
-MA1

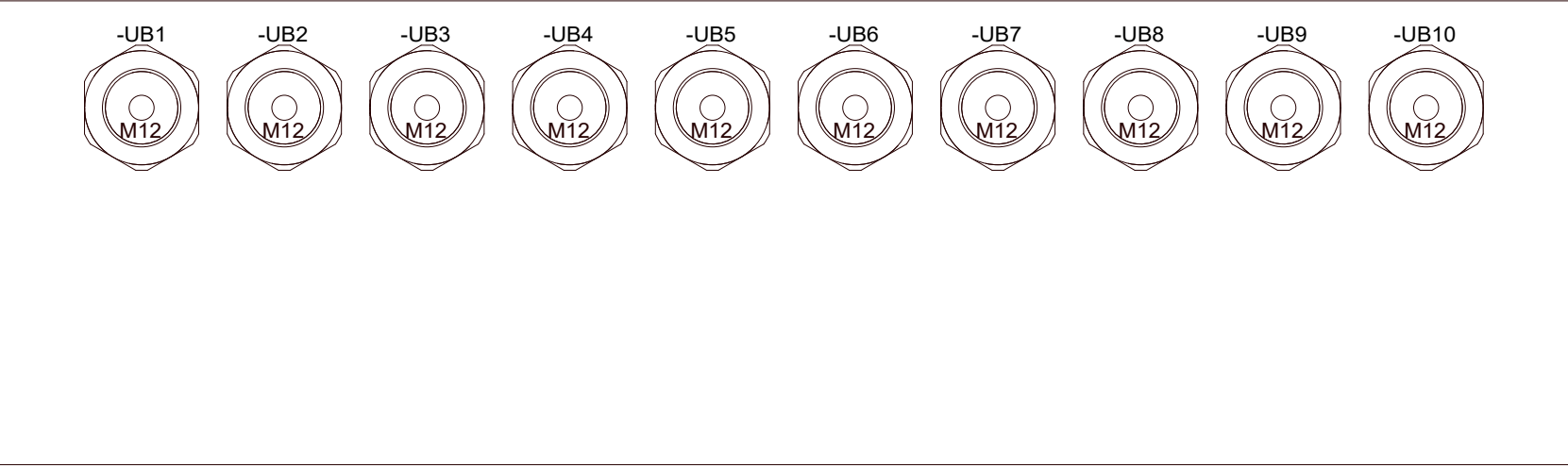
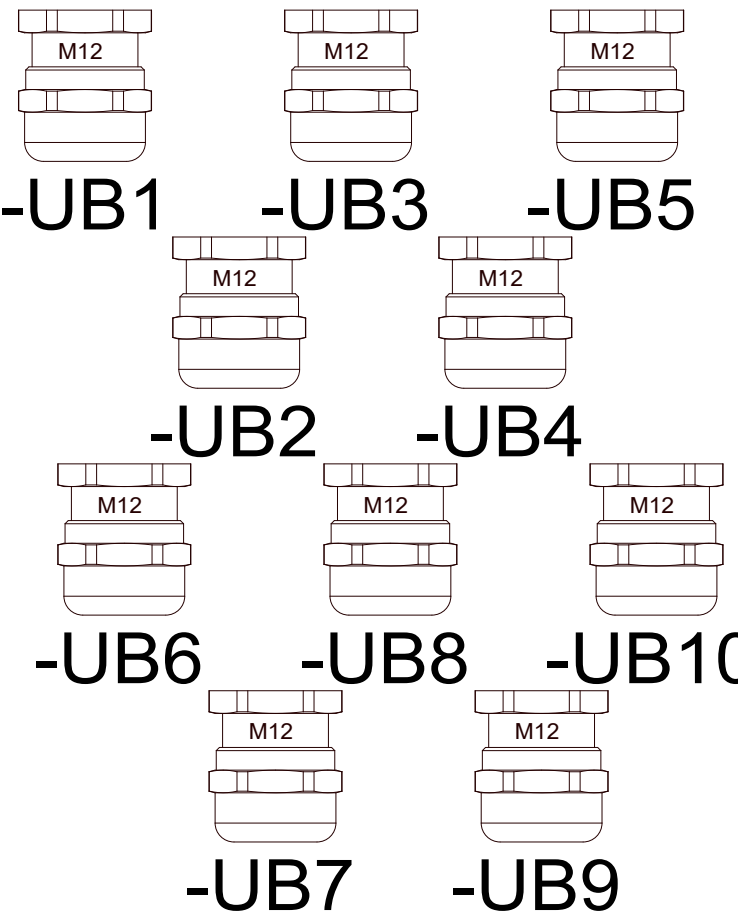
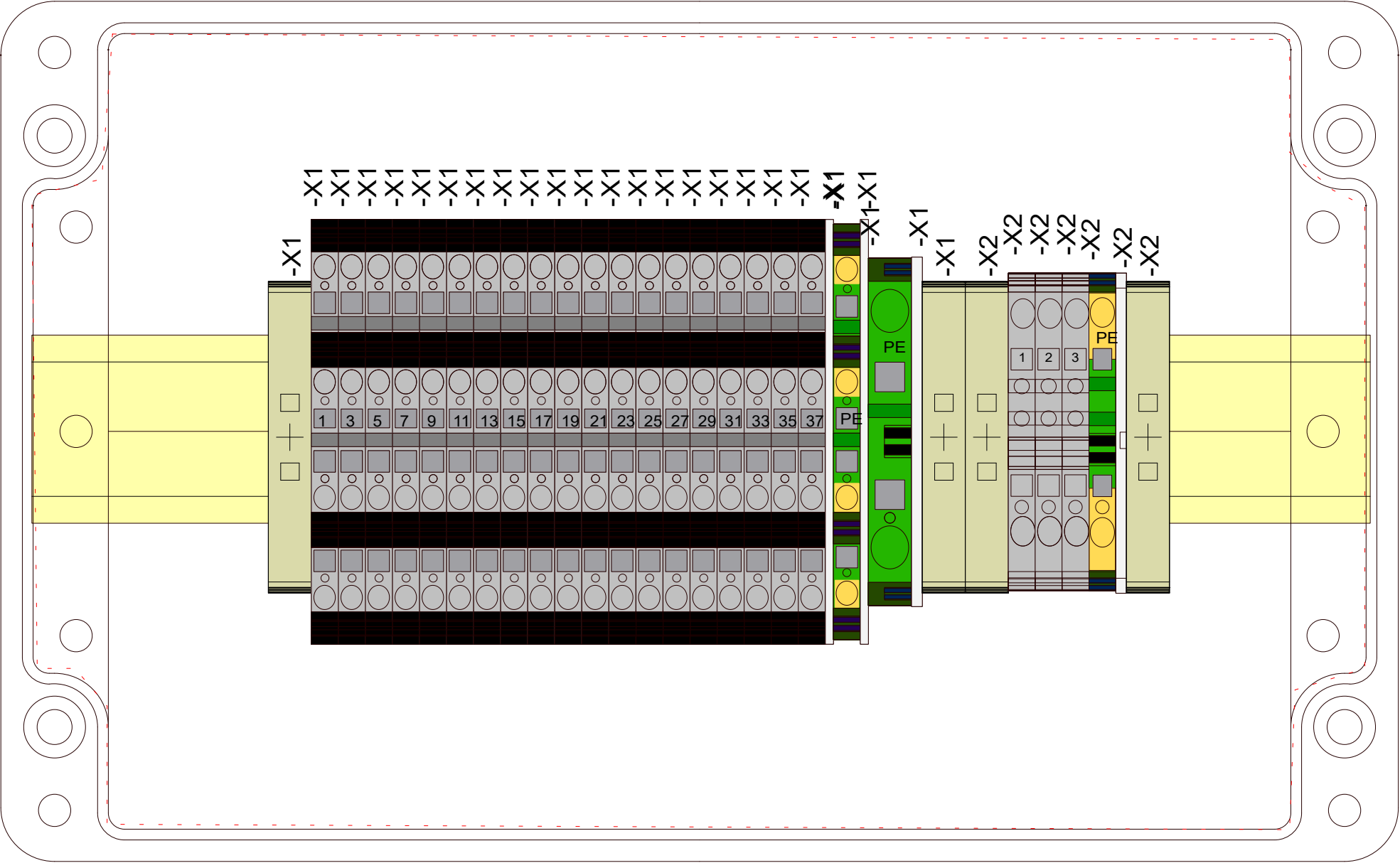
Iso view of winch (image might deviate from actual product)

General Picture
Winch might be mirrored

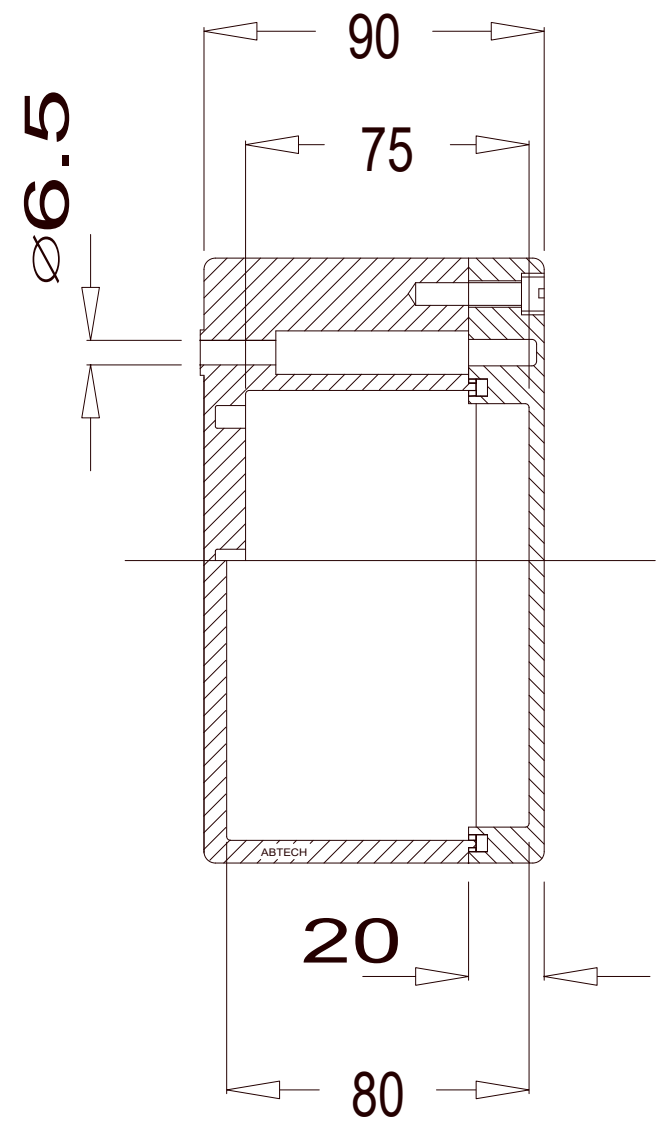
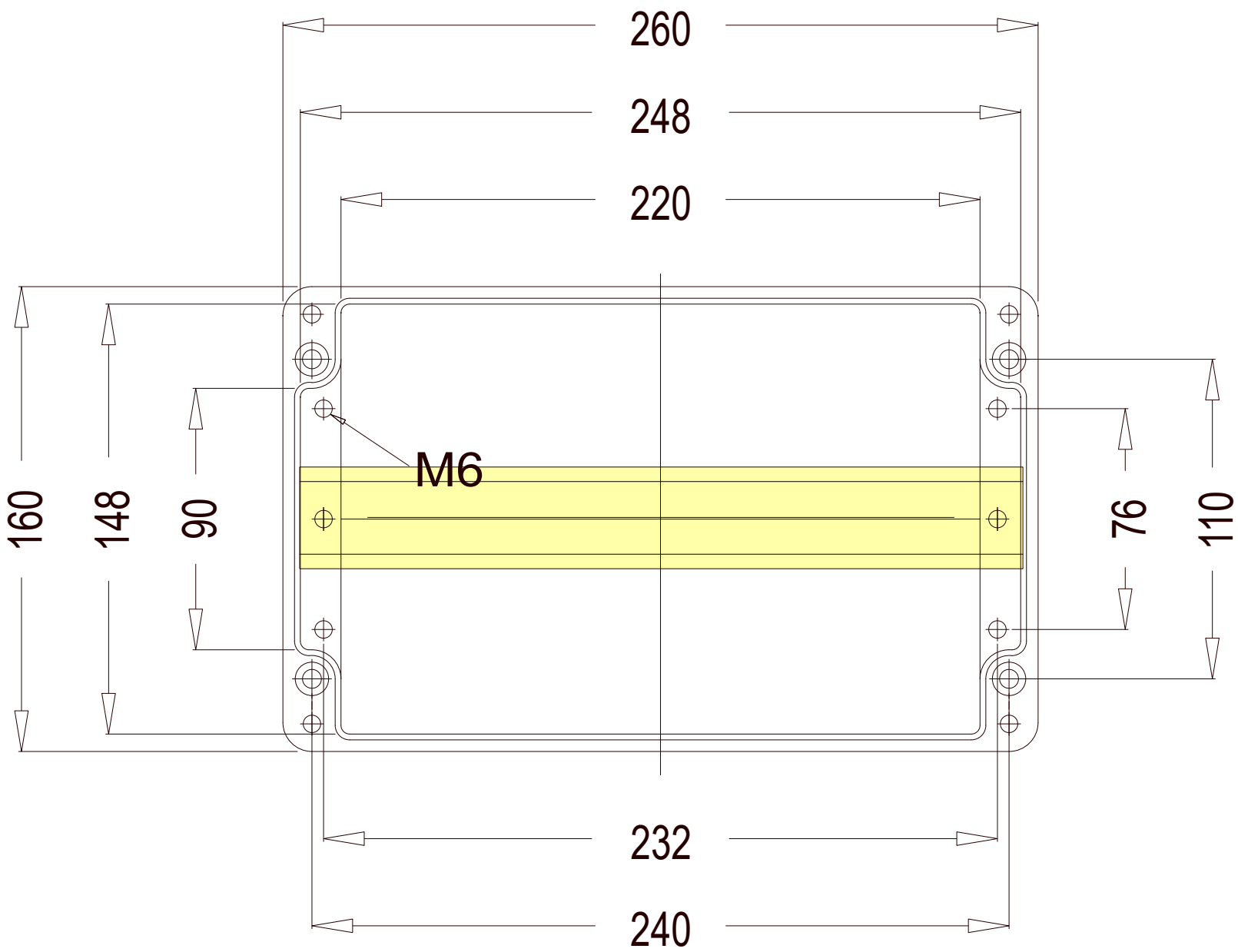
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Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-04 CD	Rev. G	Sheet 2
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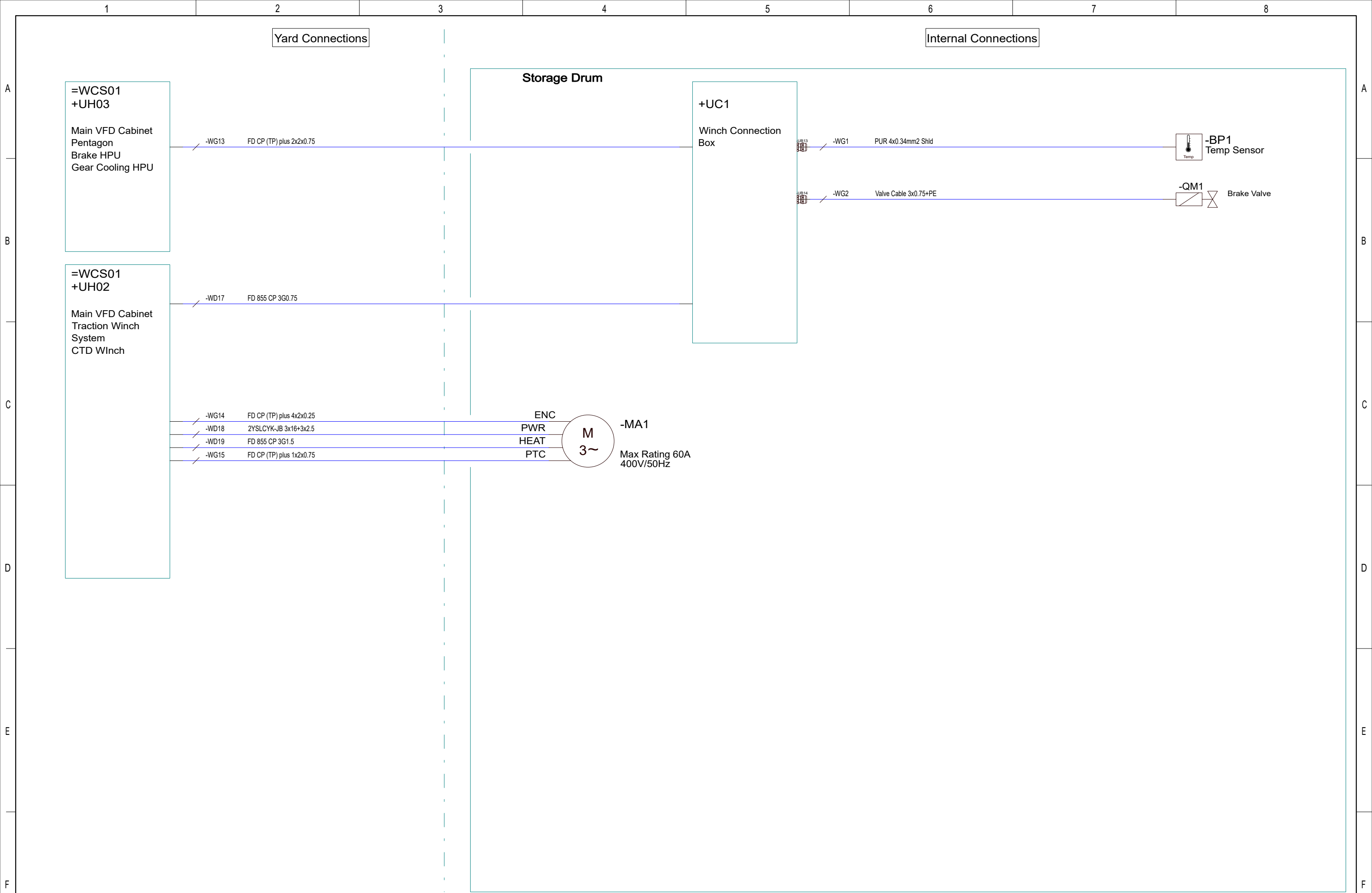


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				Approved	RAJ							Rev. G		
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-04 GA	Sheet 1	Next 2	

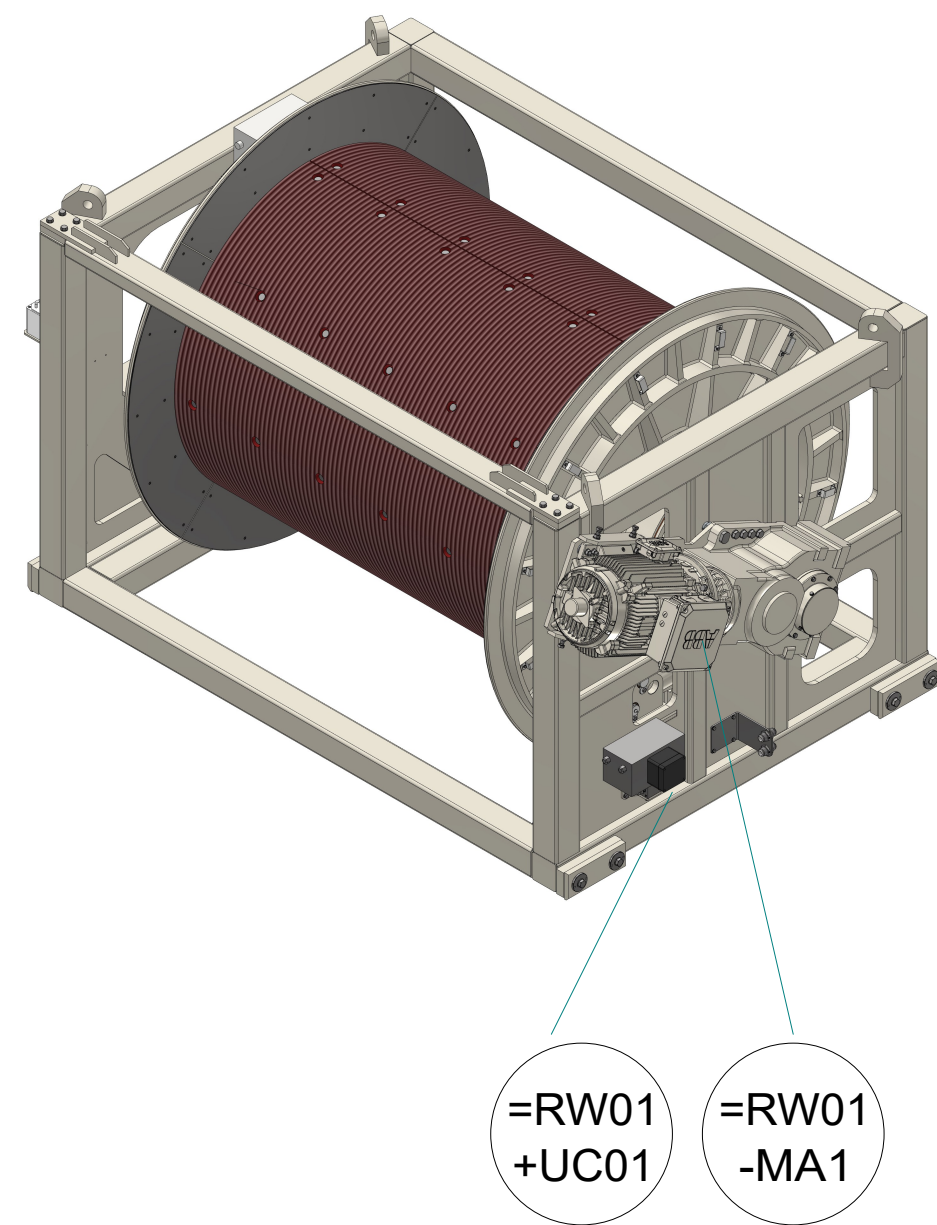
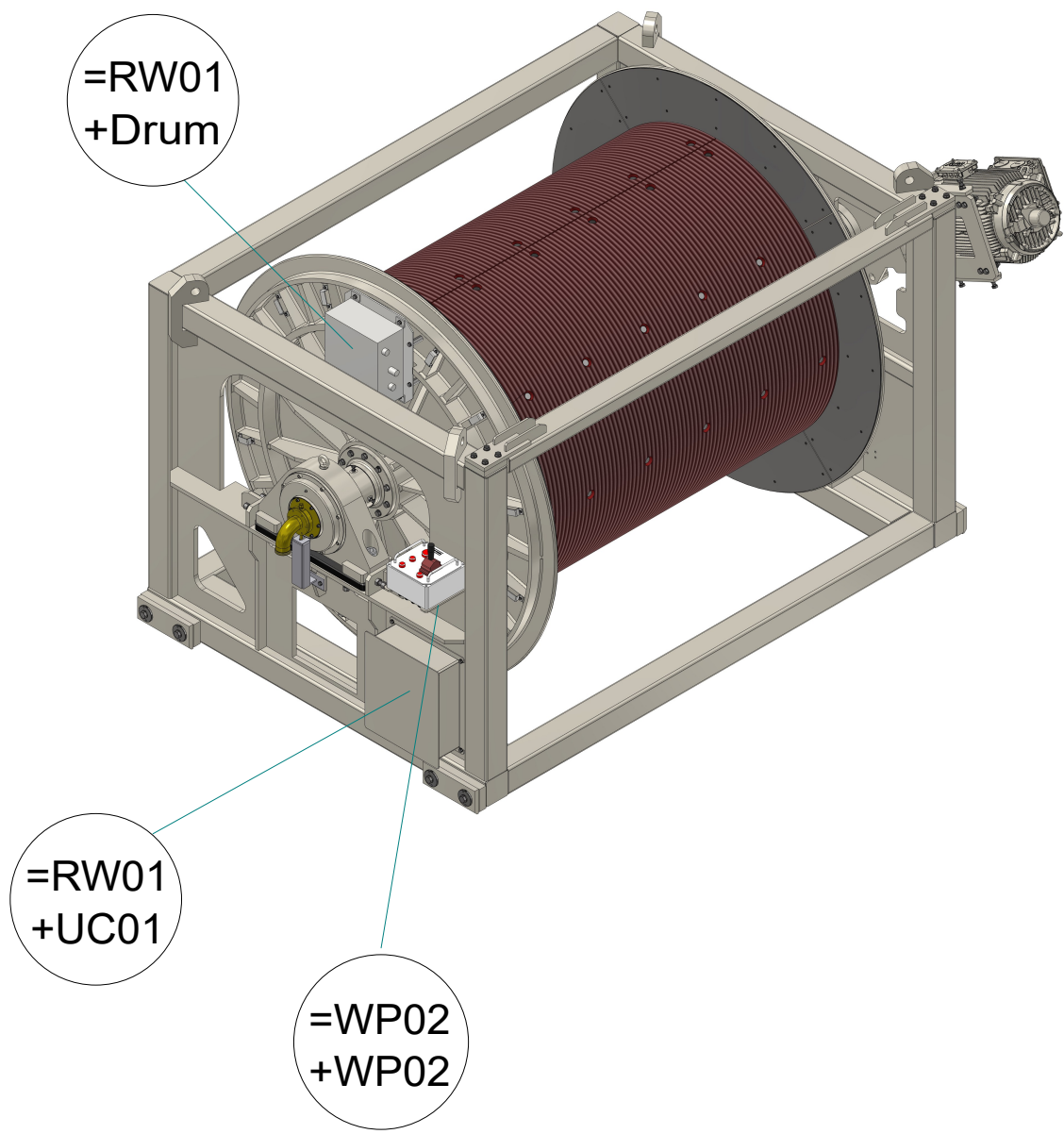


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Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-04 GA		Rev. G	Sheet 2
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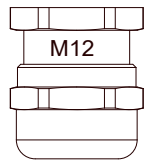
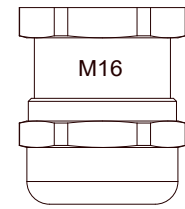
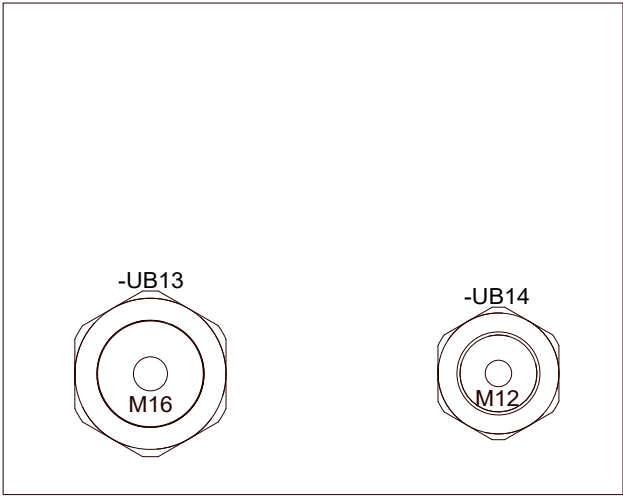
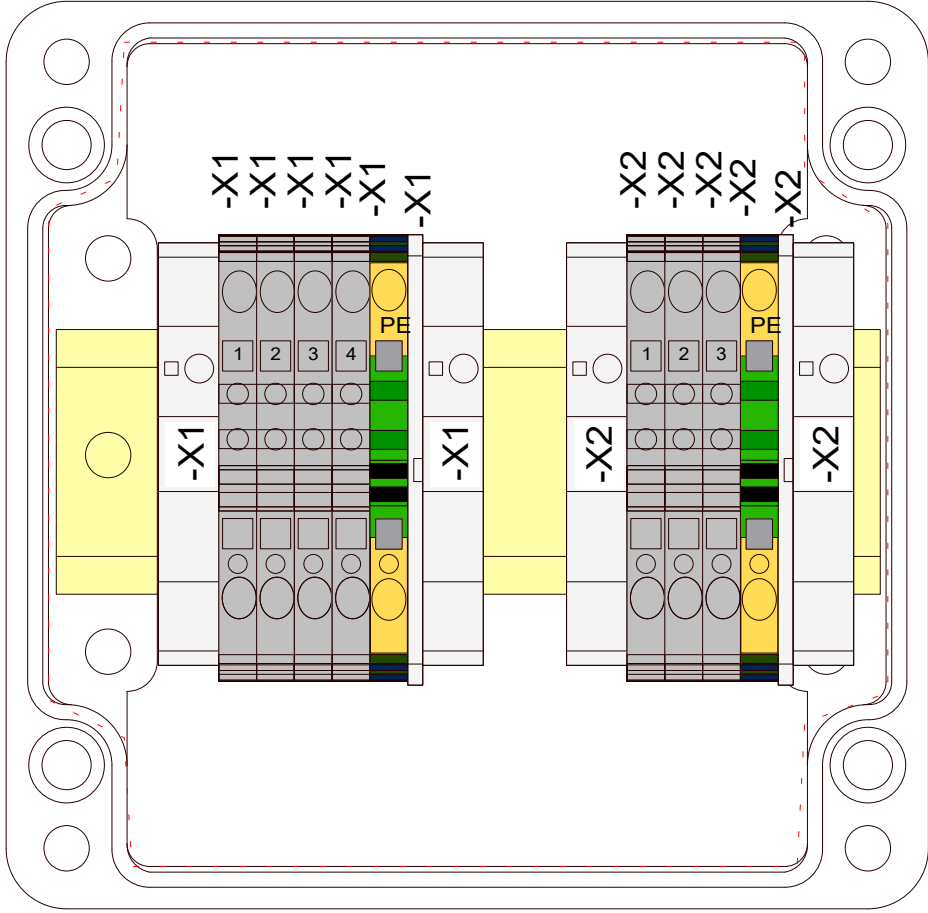


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				Approved	RAJ								Rev.	G
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-05 CD		Sheet	1
													Next	2



General Picture
Winch might be mirrored

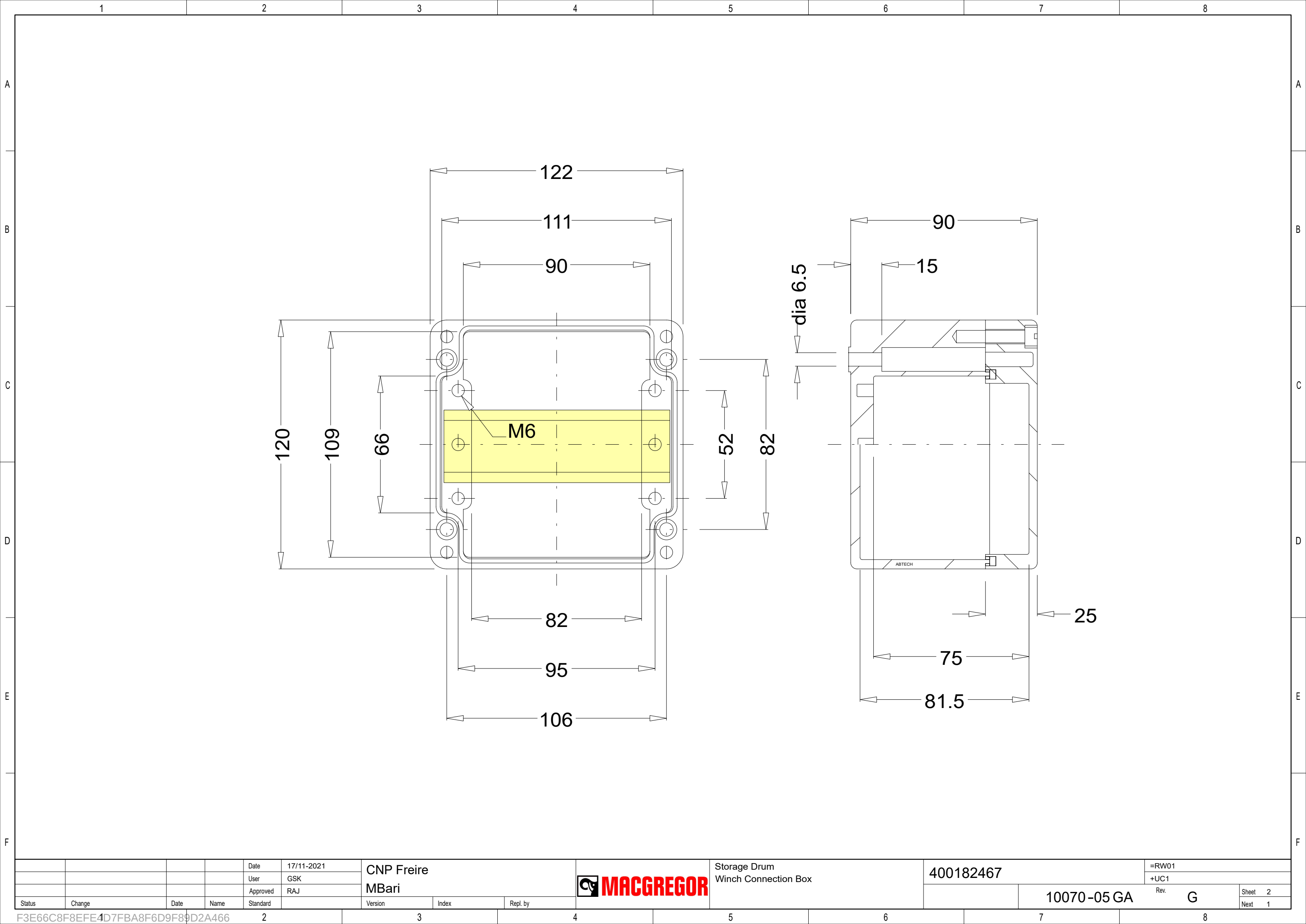
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Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-05 CD		Rev.	G
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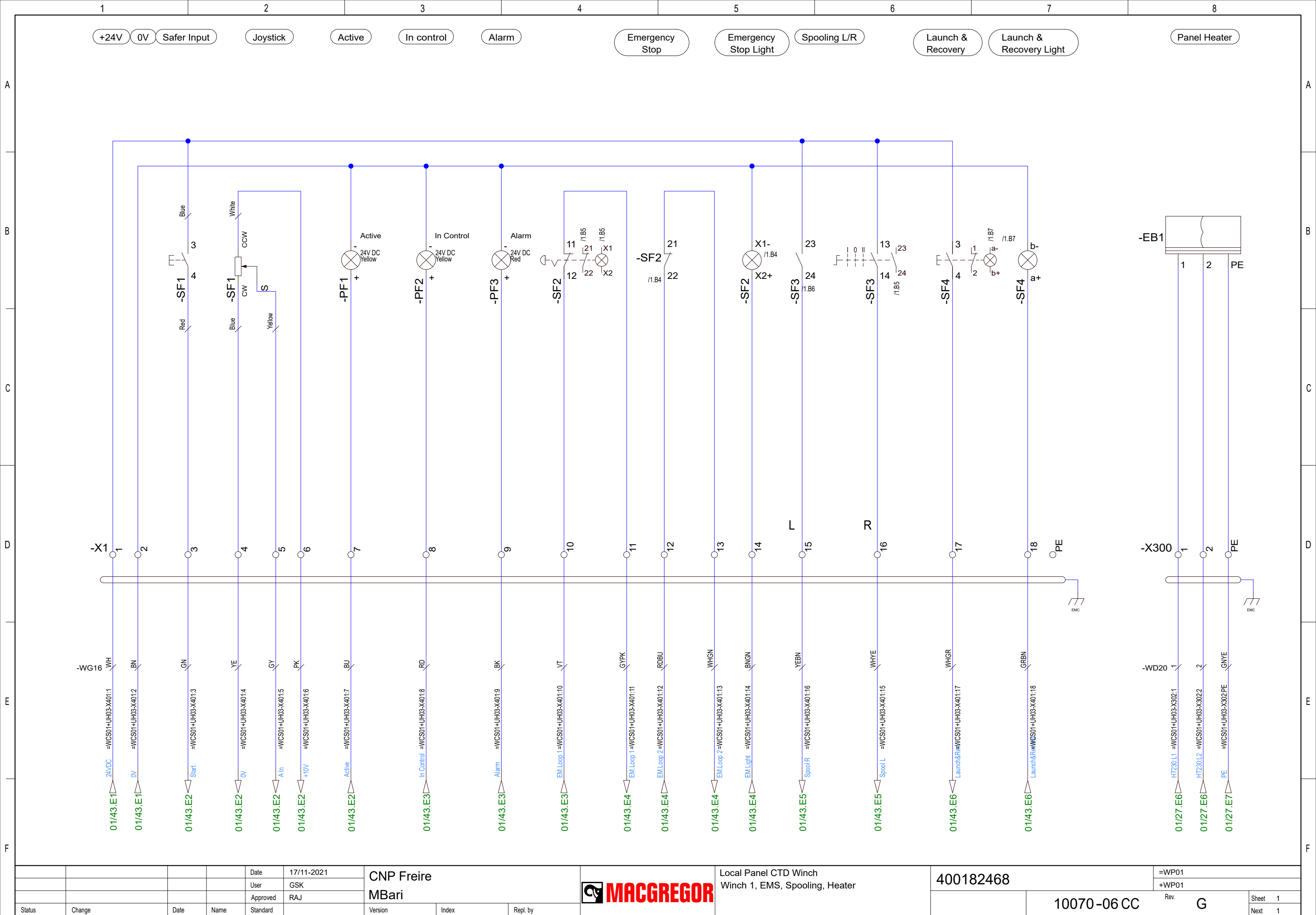
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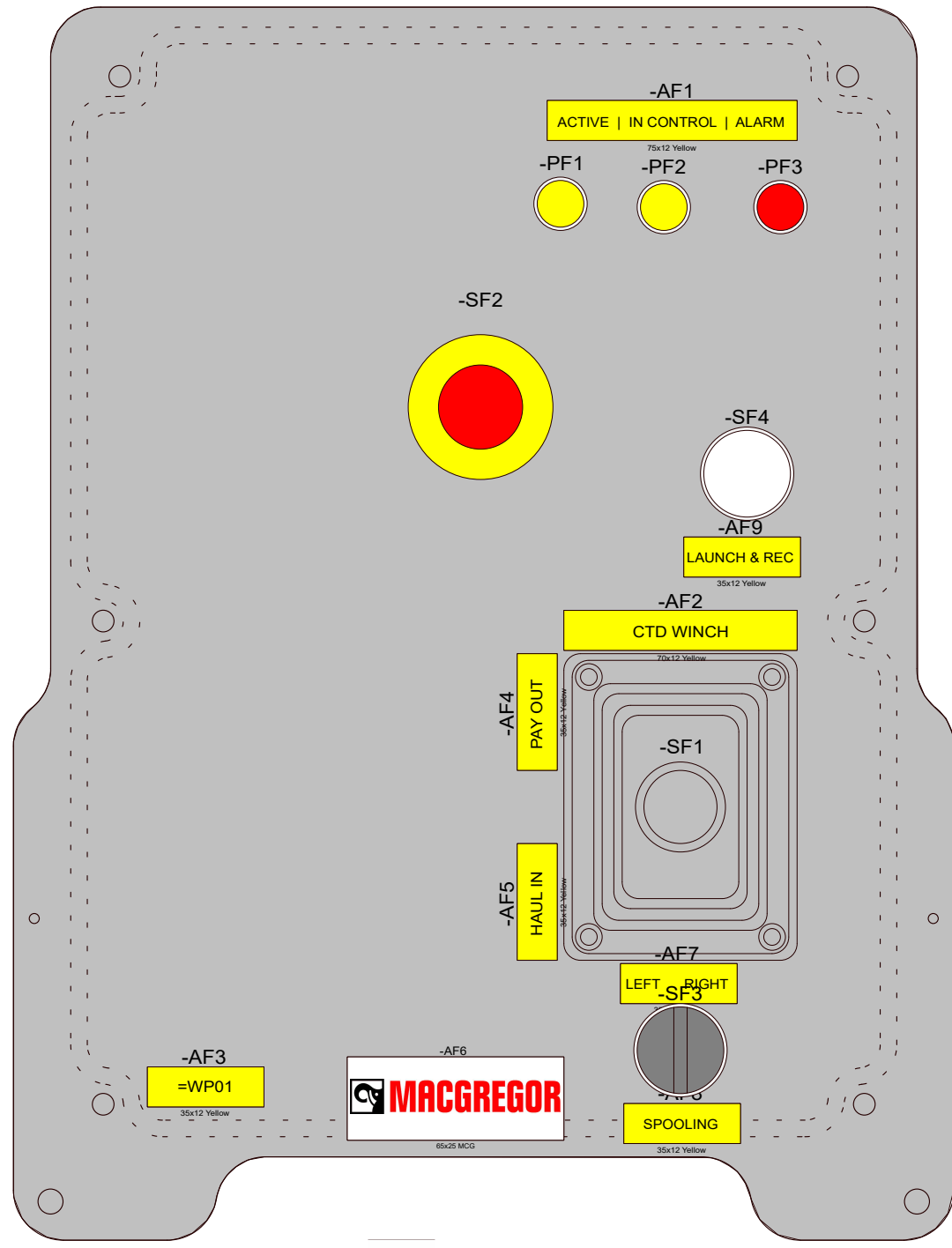
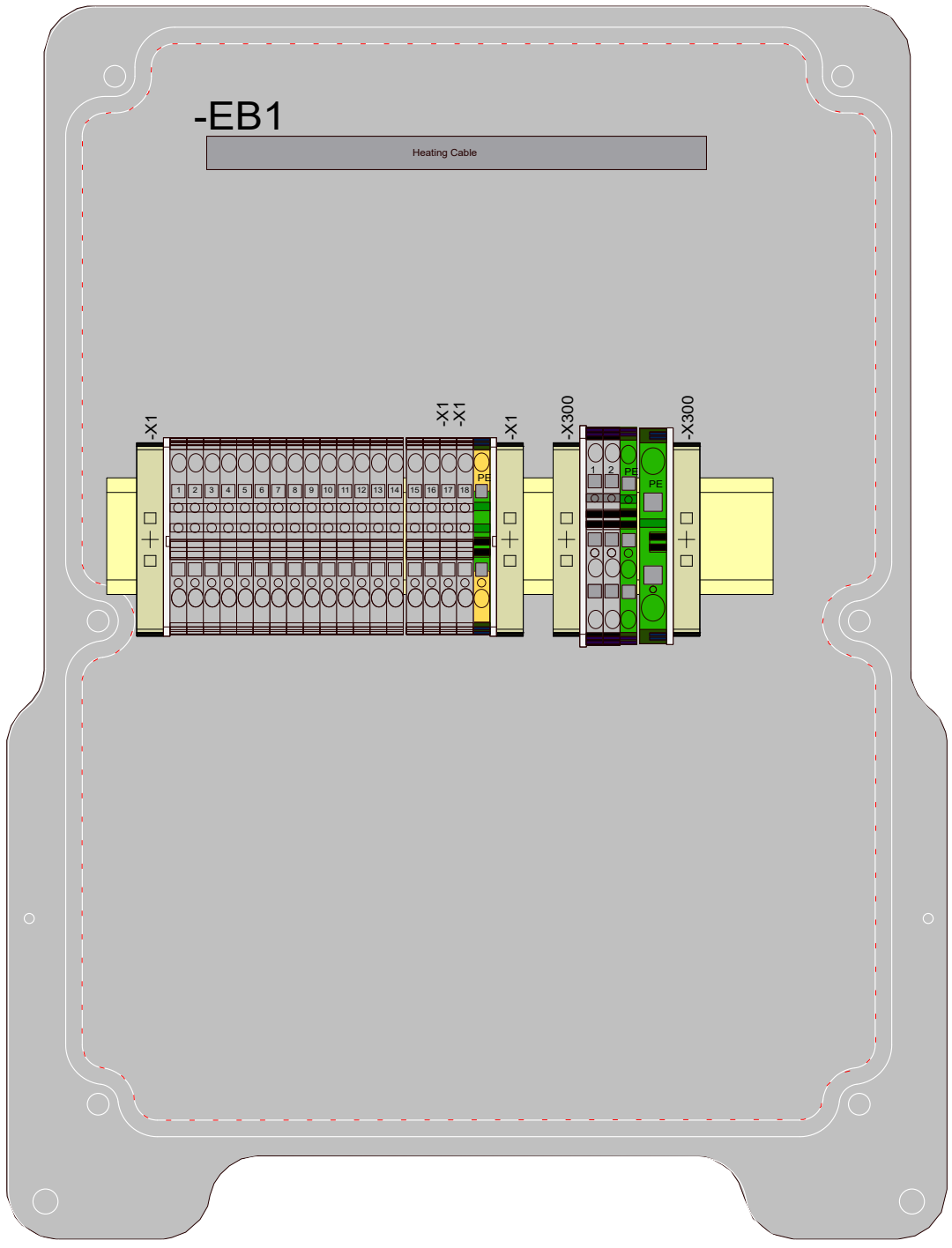
-UB14

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				Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-05 GA	Rev. G	Sheet 1
														Next 2



				Date	17/11-2021	CNP Freire				Storage Drum Winch Connection Box	400182467	=RW01		
				User	GSK							+UC1		
				Approved	RAJ							MBar		
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-05 GA	Rev. G	Sheet 2
														Next 1





Cables That Needs To Be Connected By Yard

=WCS01
+UH03

Main VFD Cabinet
Pentagon
Brake HPU
Gear Cooling HPU

+WP02

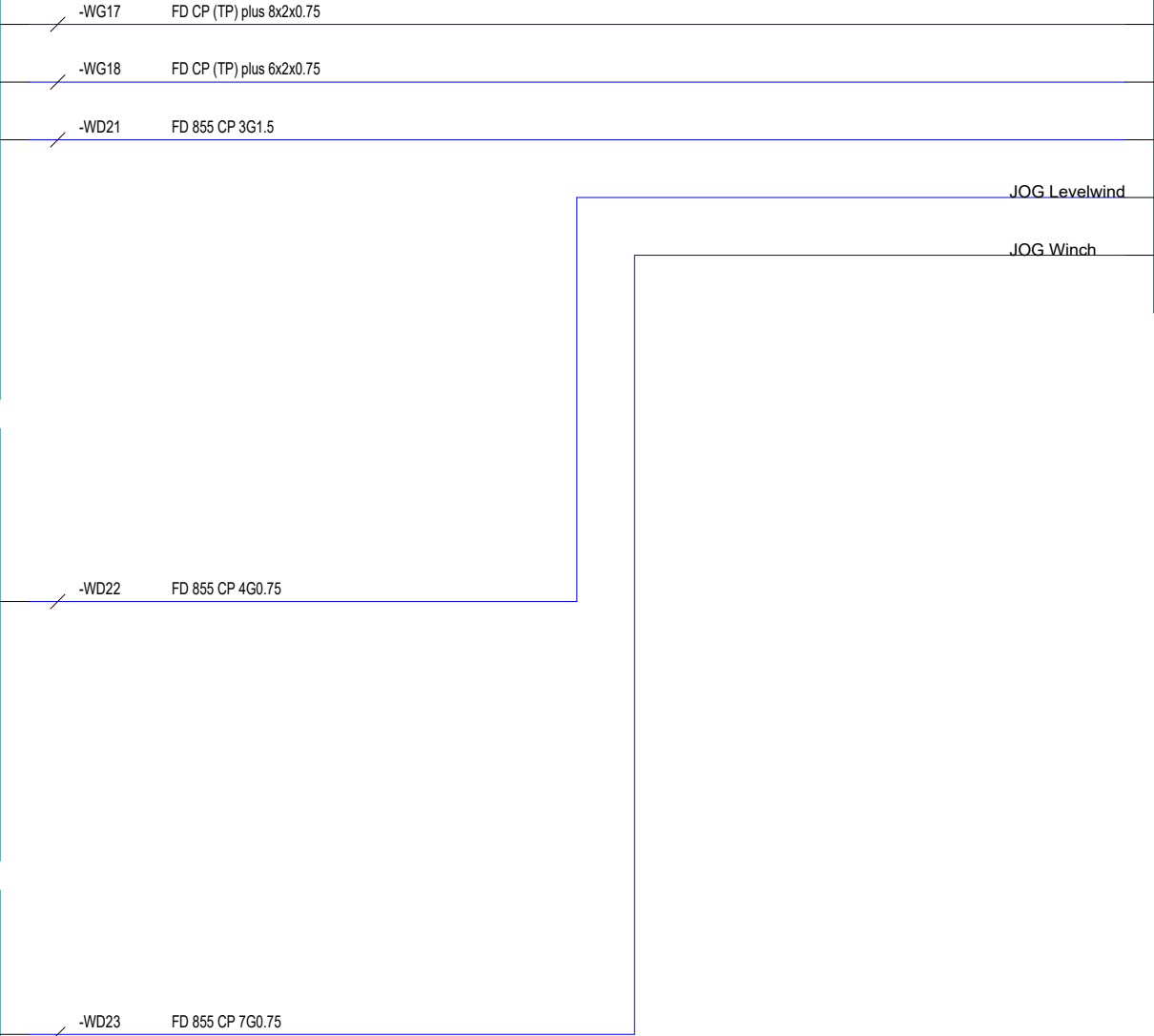
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ROV Traction System
2000004950

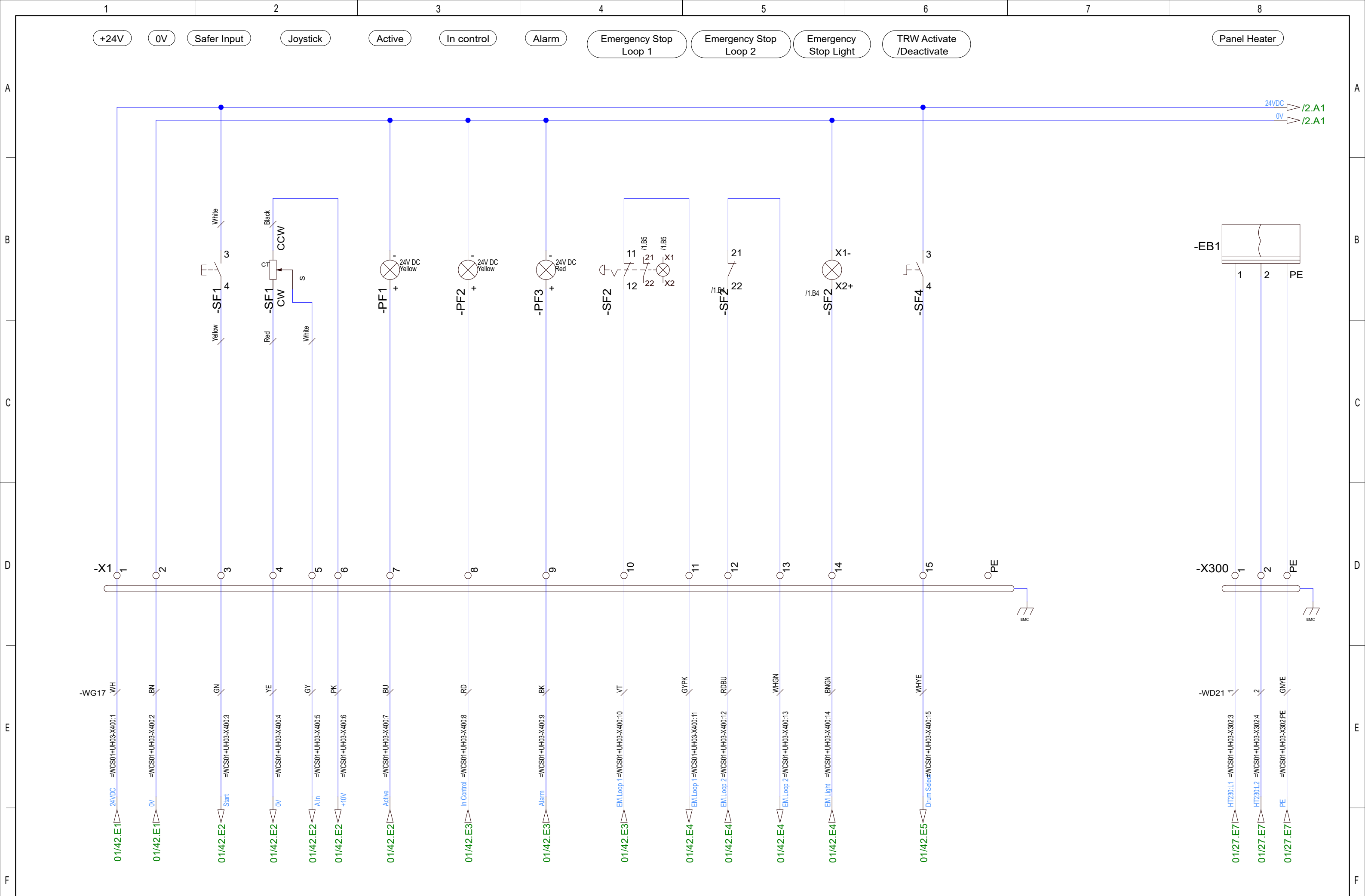
=WCS01
+UH01

Main VFD Cabinet
Power Input
Levelwinds

=WCS01
+UH02

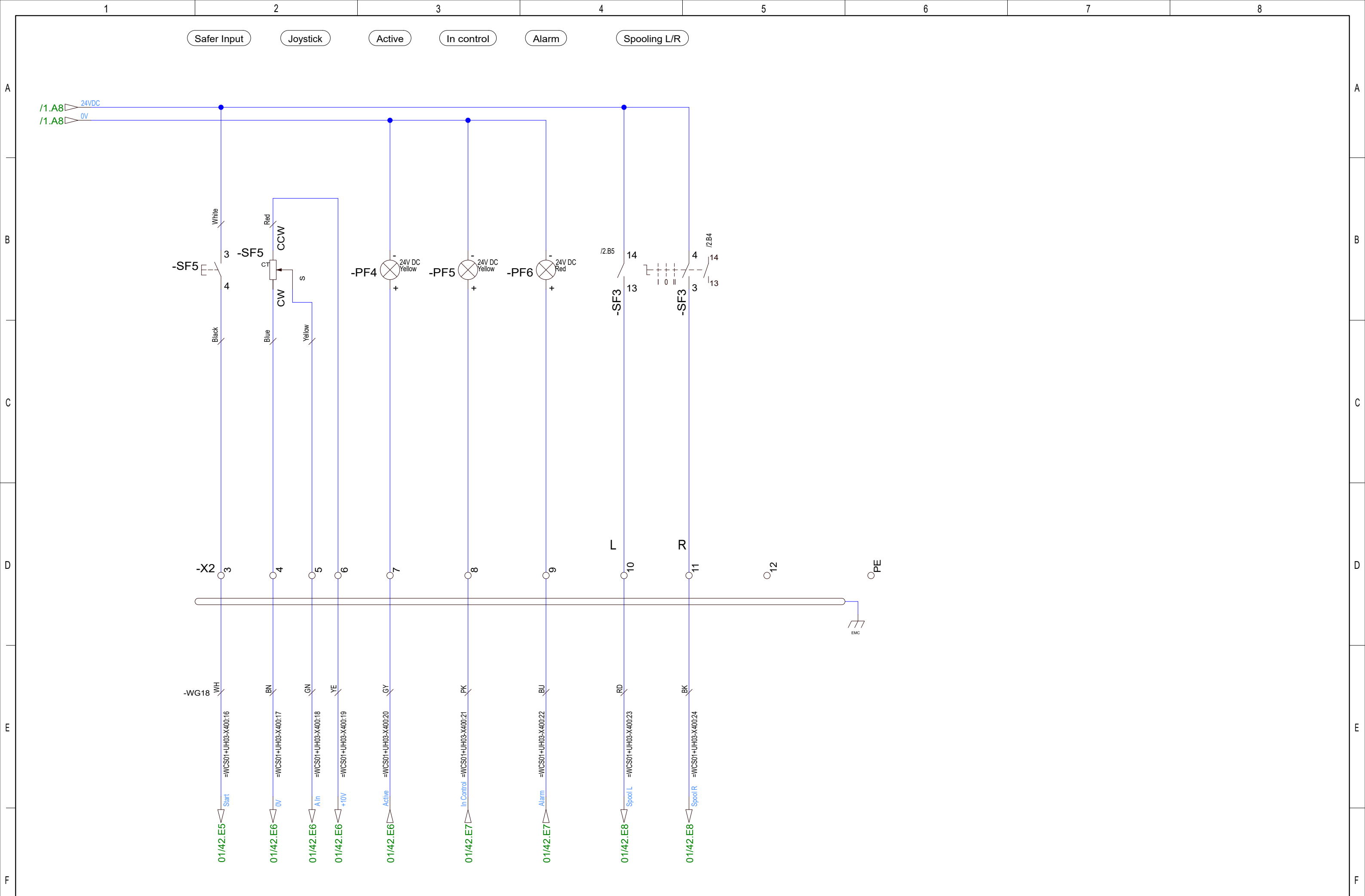
Main VFD Cabinet
Traction Winch
System
CTD Winch



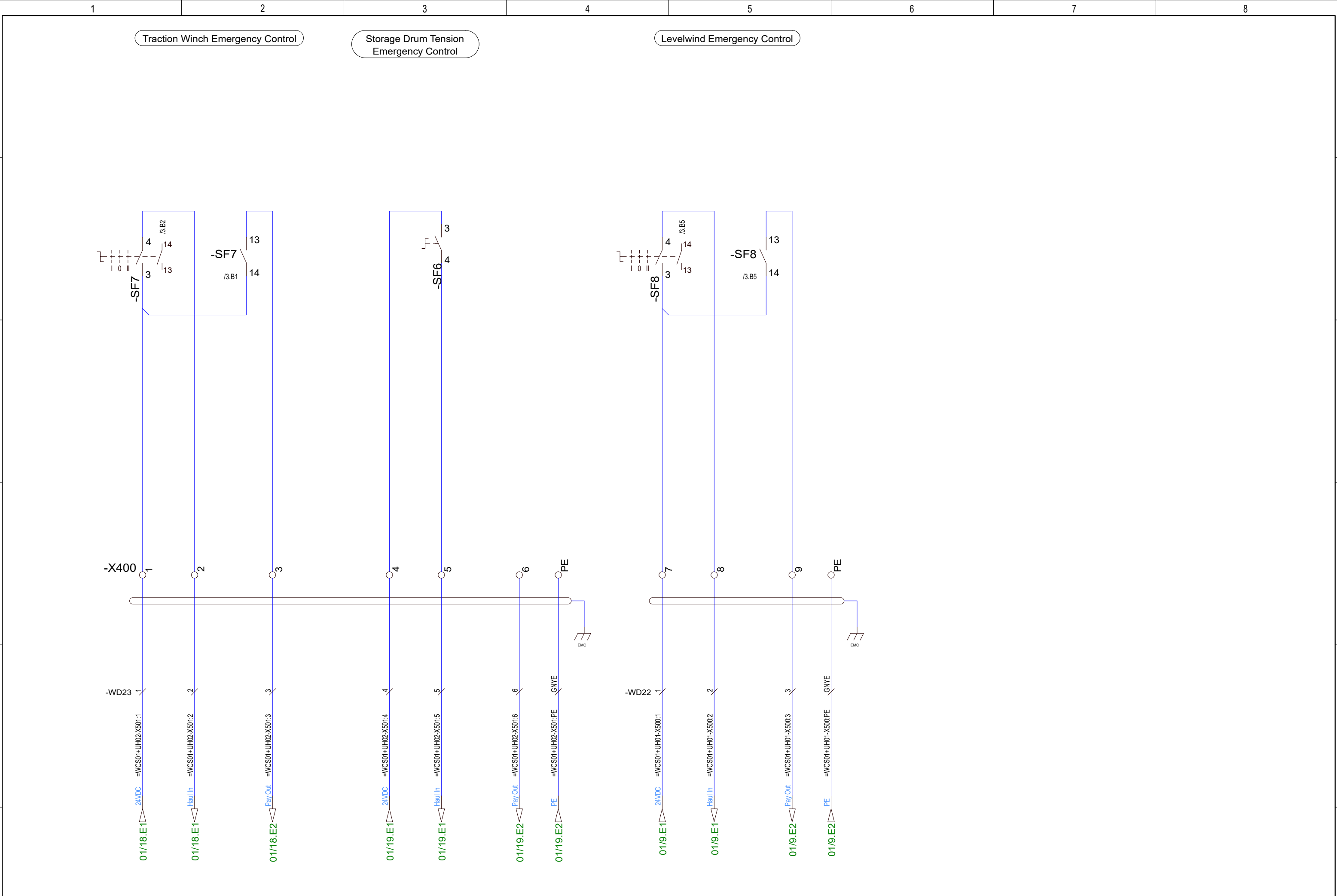


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				User	GSK								+WP02	
				Approved	RAJ						Rev.		G	Sheet 1
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-07 CC		Next 2	

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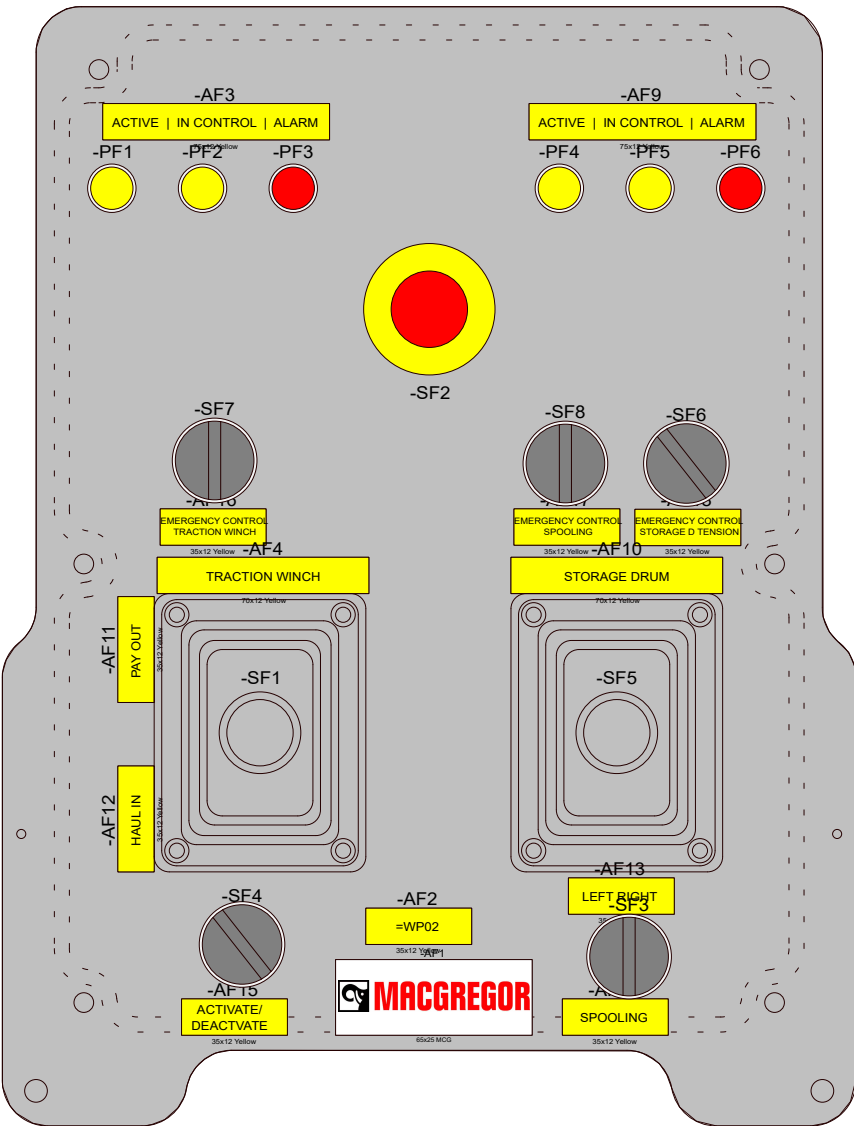
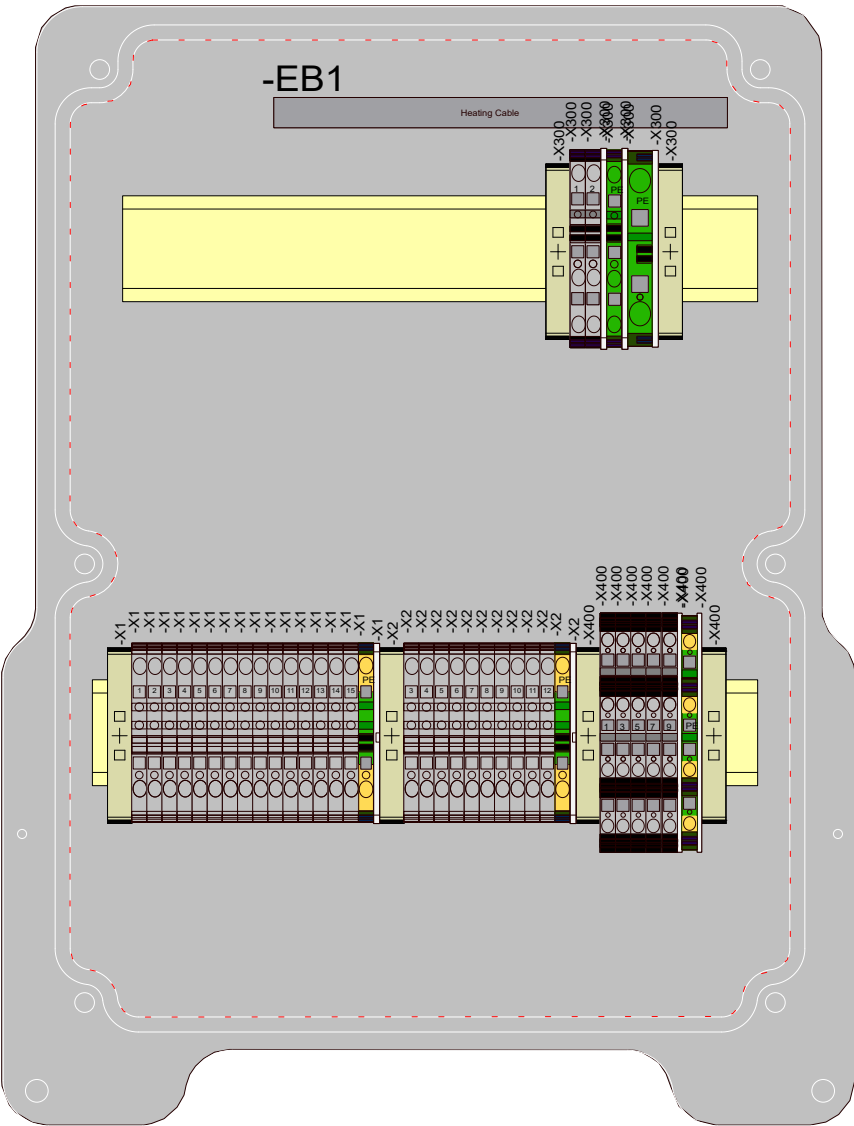


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				Approved	RAJ								Rev. G	
Status	Change	Date	Name	Standard	Version	Index	Repl. by					10070-07 CC	Sheet 2	Next 3

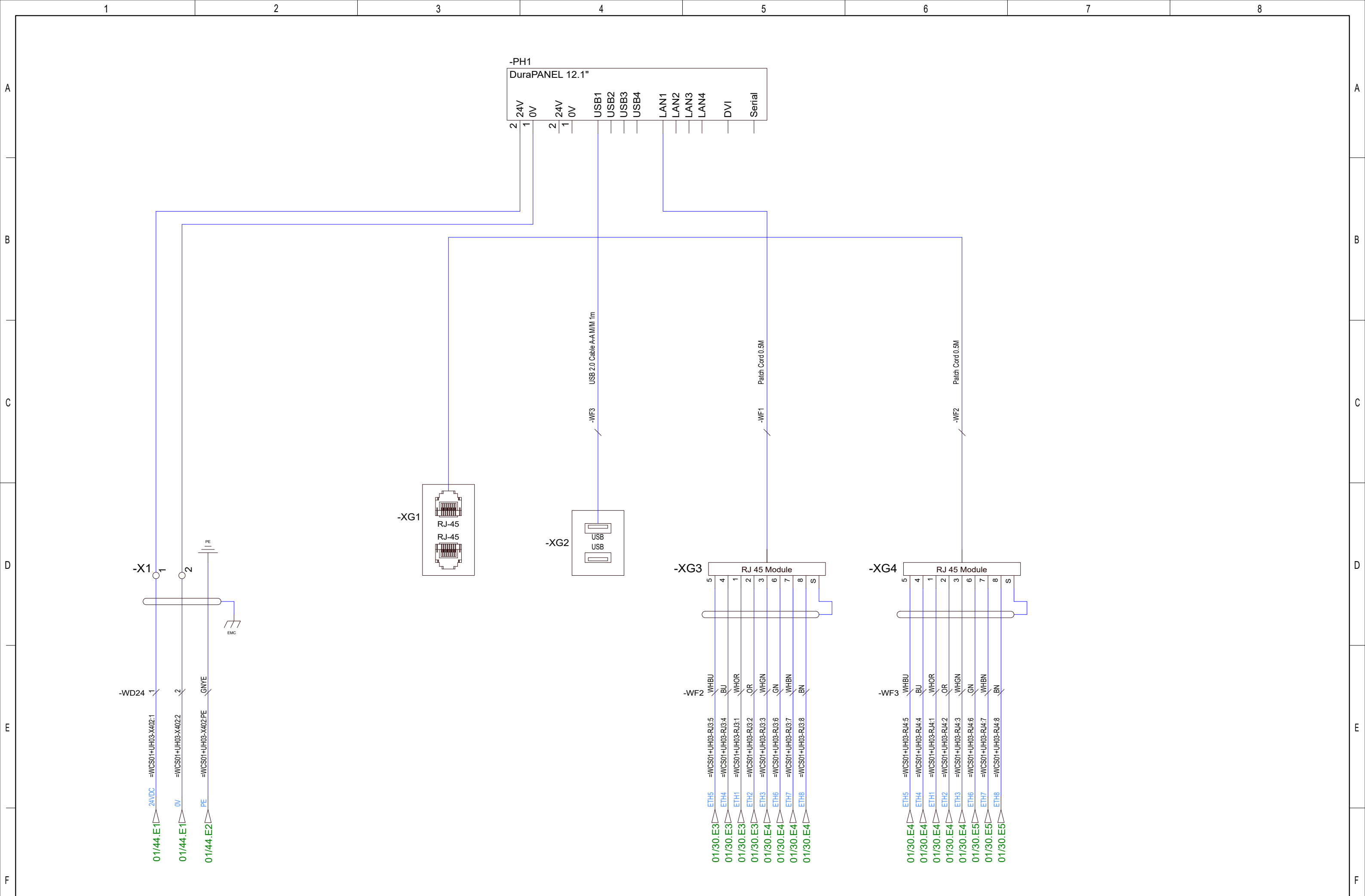


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				Approved	RAJ								Rev. G		
Status	Change	Date	Name	Standard		Version	Index	Repl. by			Circuit Diagram		10070-07 CC		Sheet 3
														Next 1	

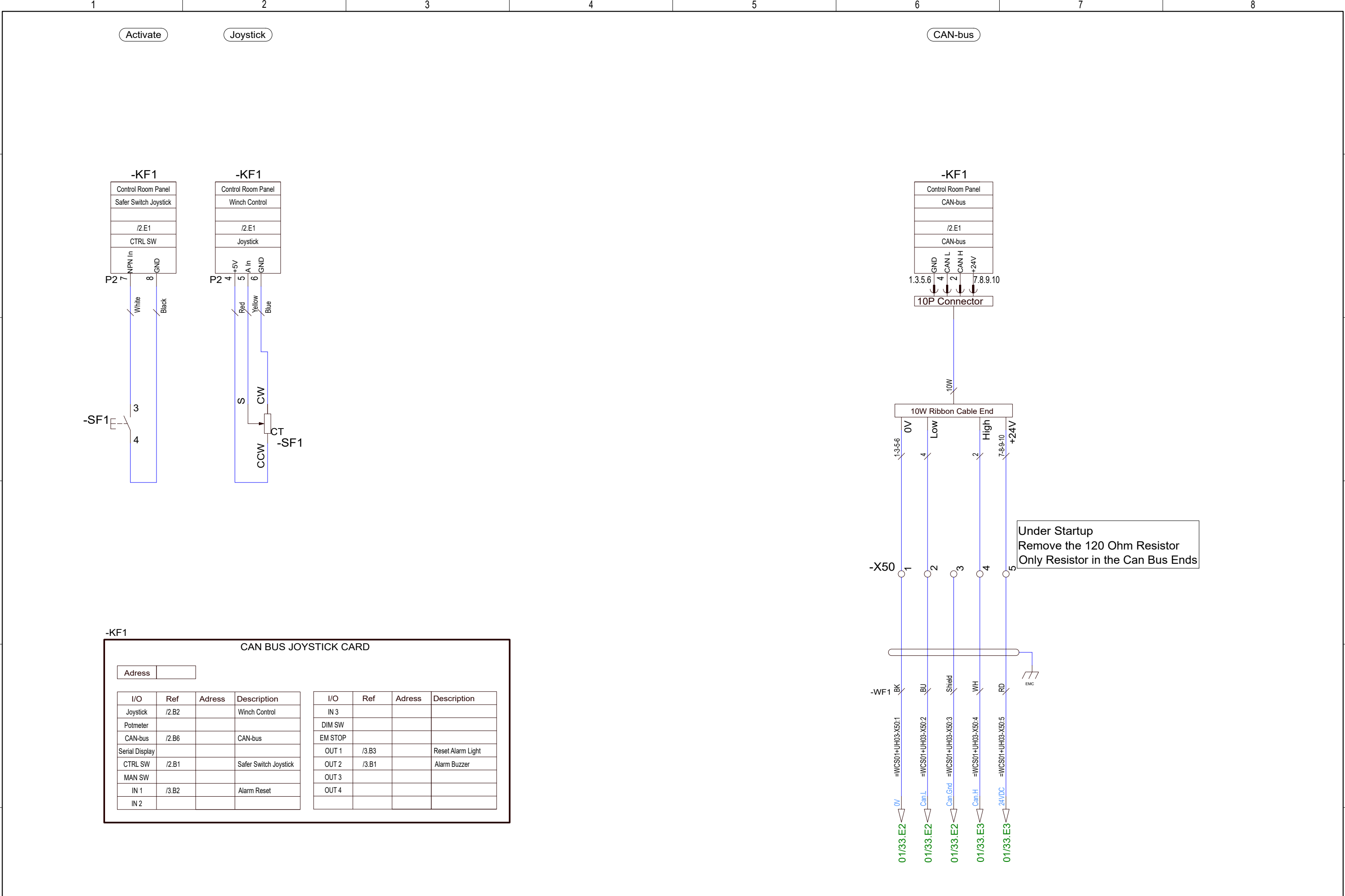
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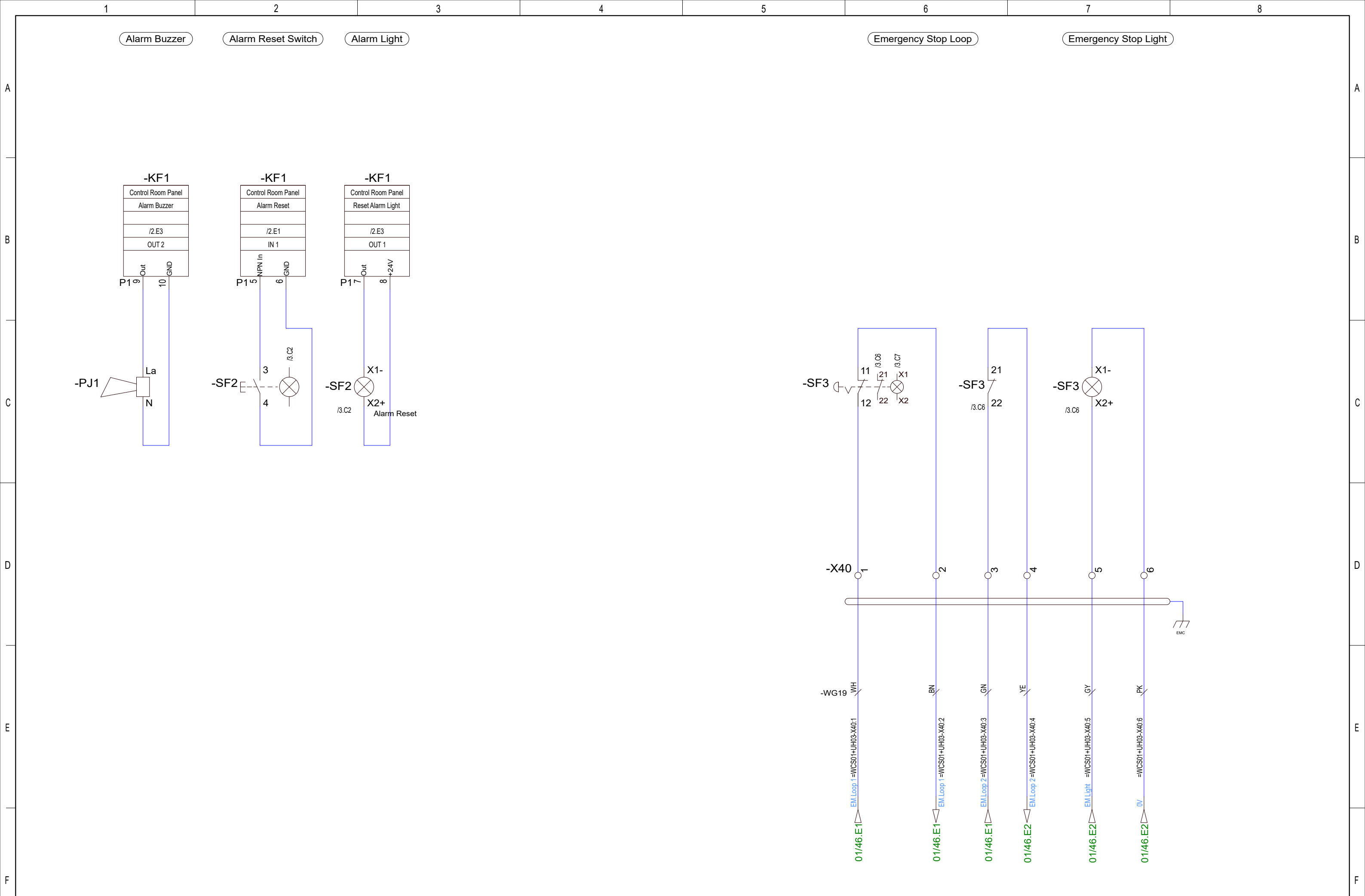


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				Approved	RAJ							MBar		
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-07 GA	Rev. G	Sheet 1
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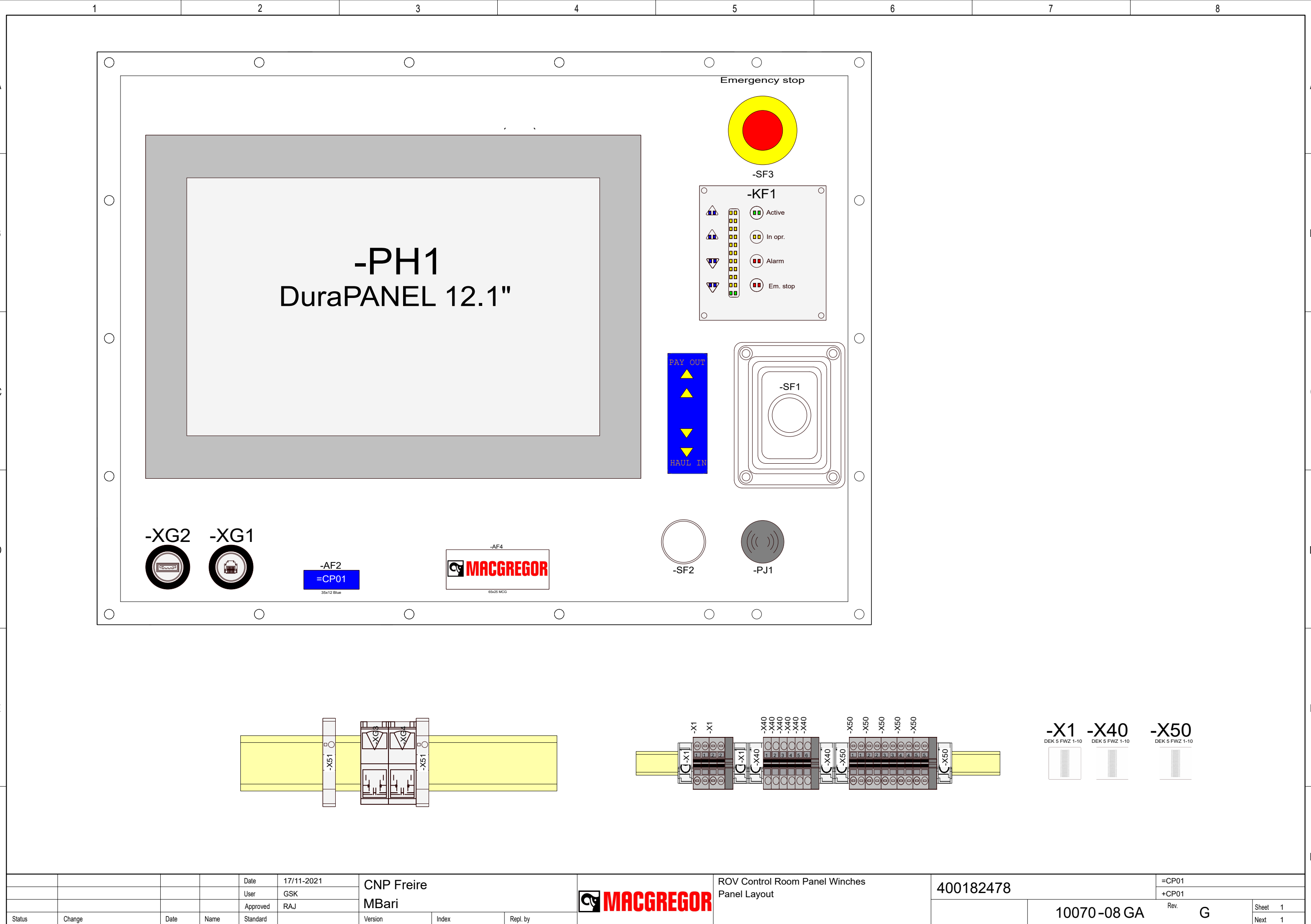


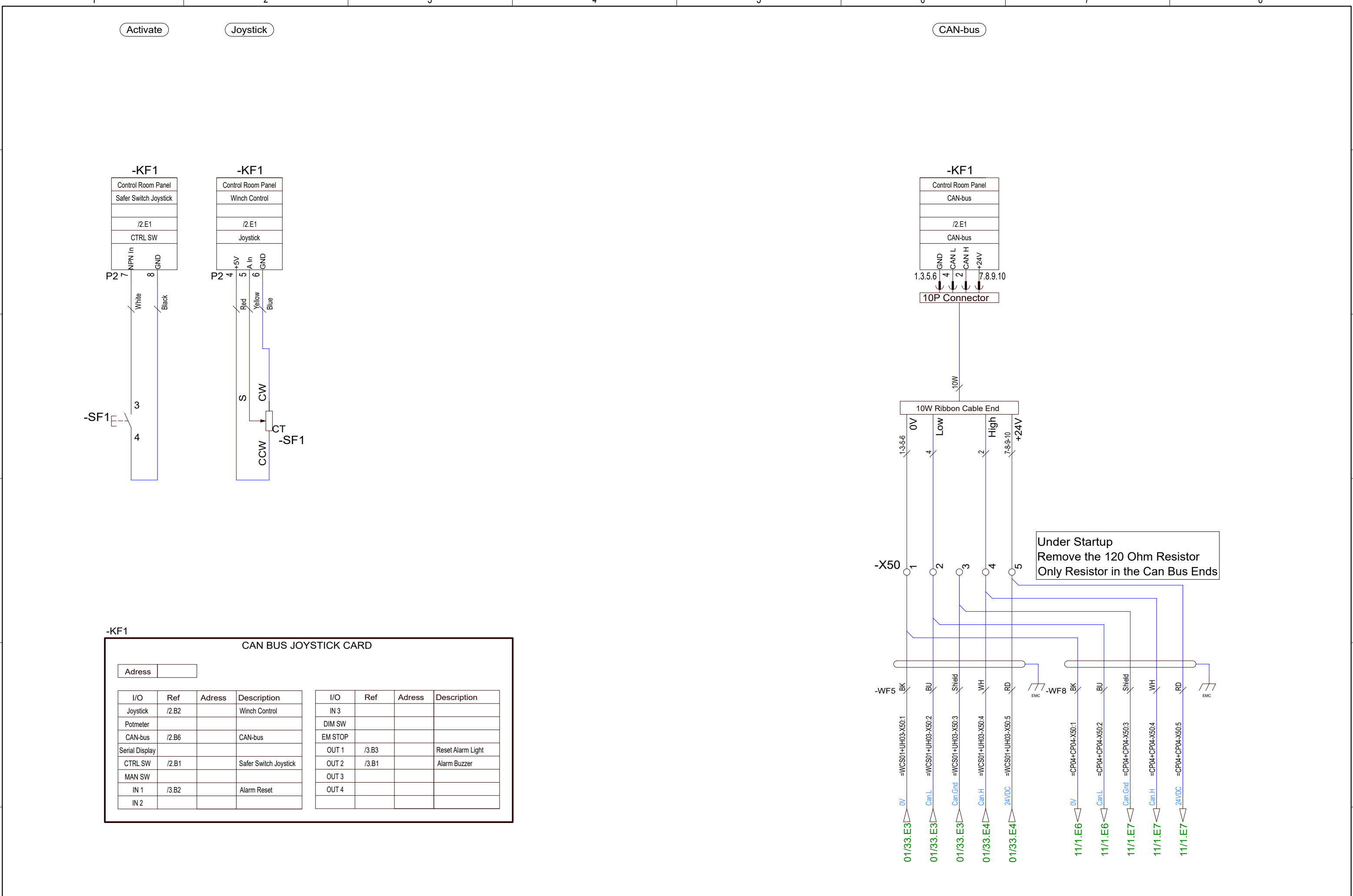
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				User	GSK							+CP01		
				Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-08 CC	Rev.	G	Sheet 1
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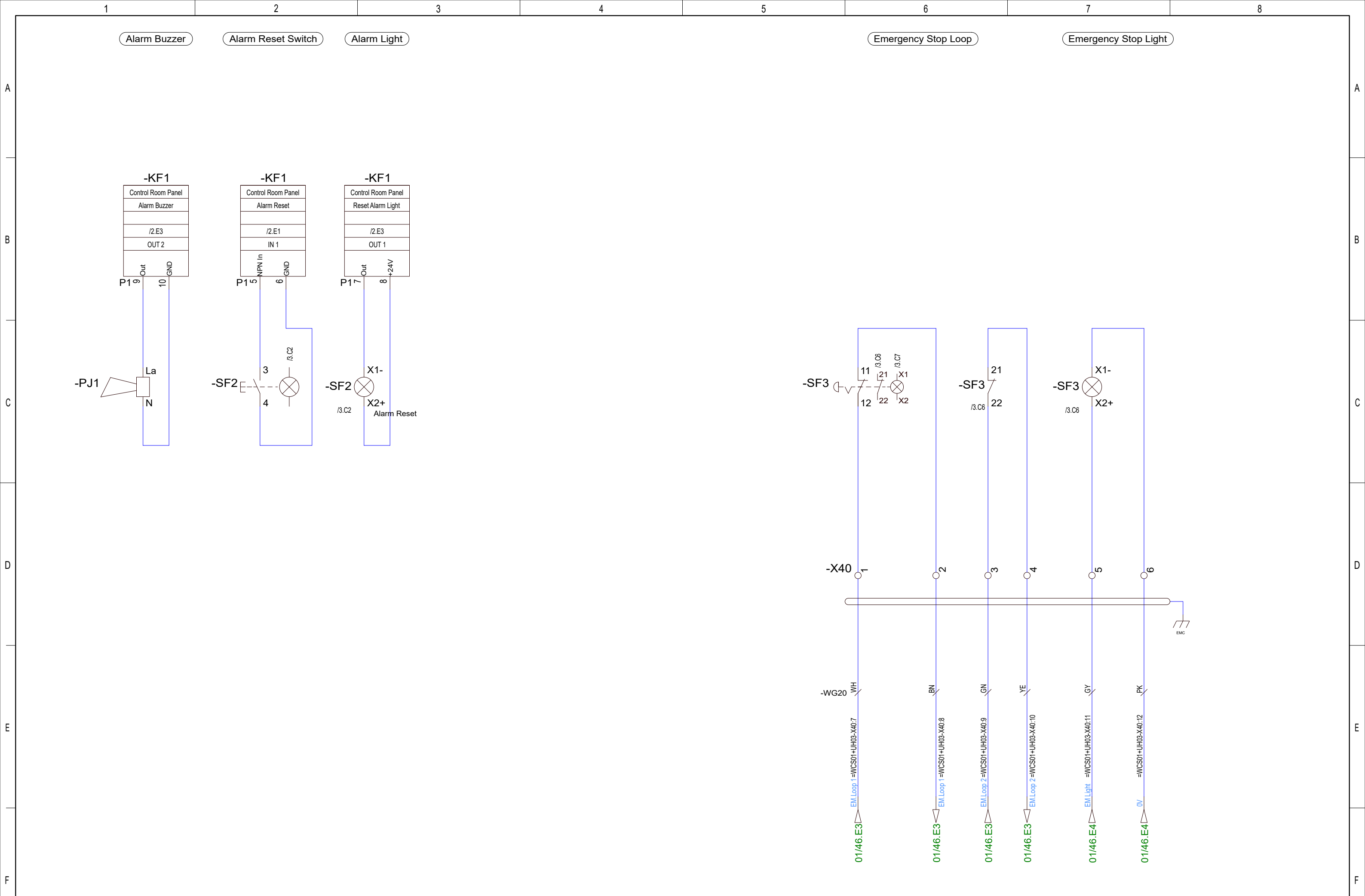




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Status	Change	Date	Name	Standard		Version	Index	Repl. by					10070-08 CC	Rev.	G	Sheet 3
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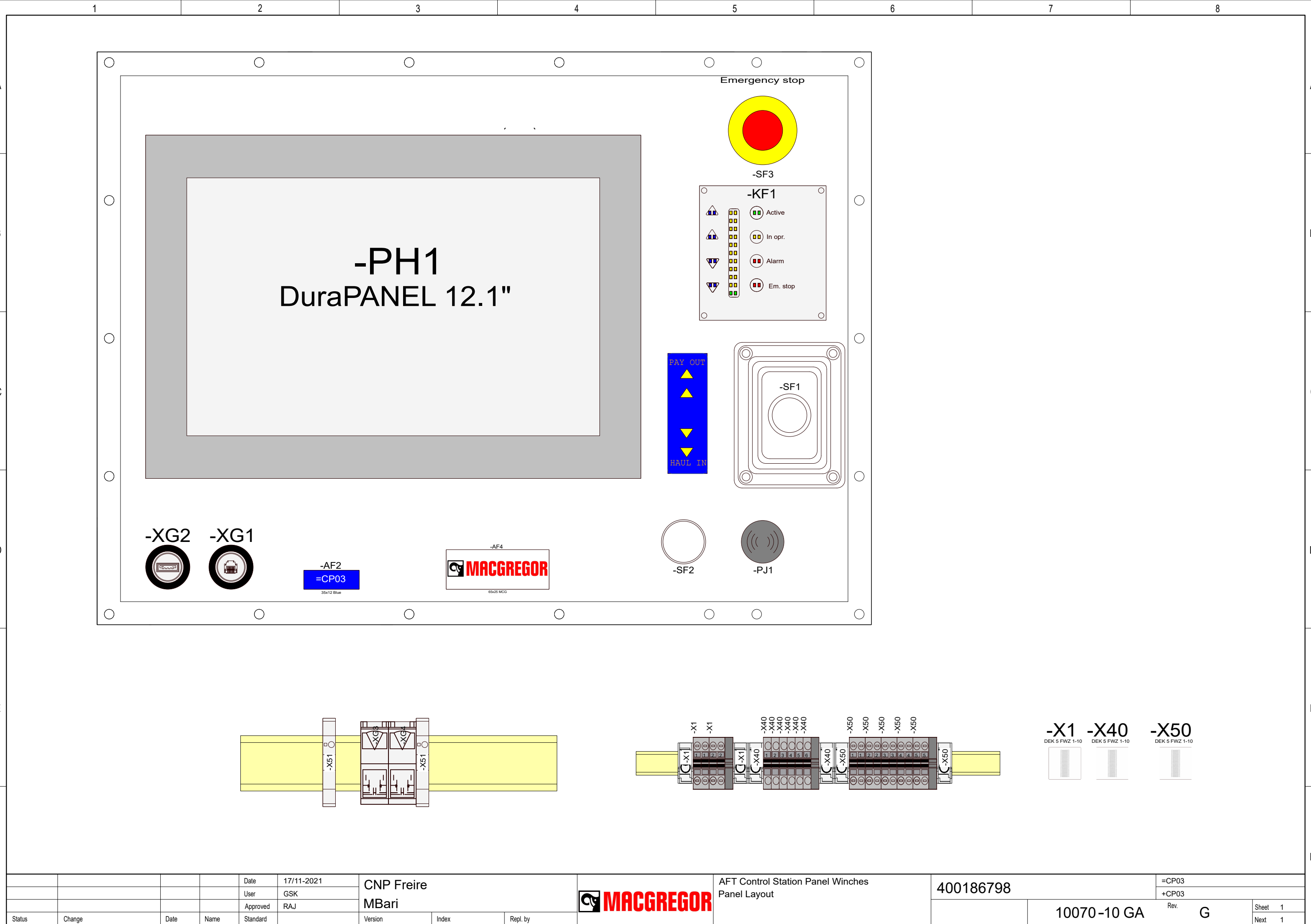


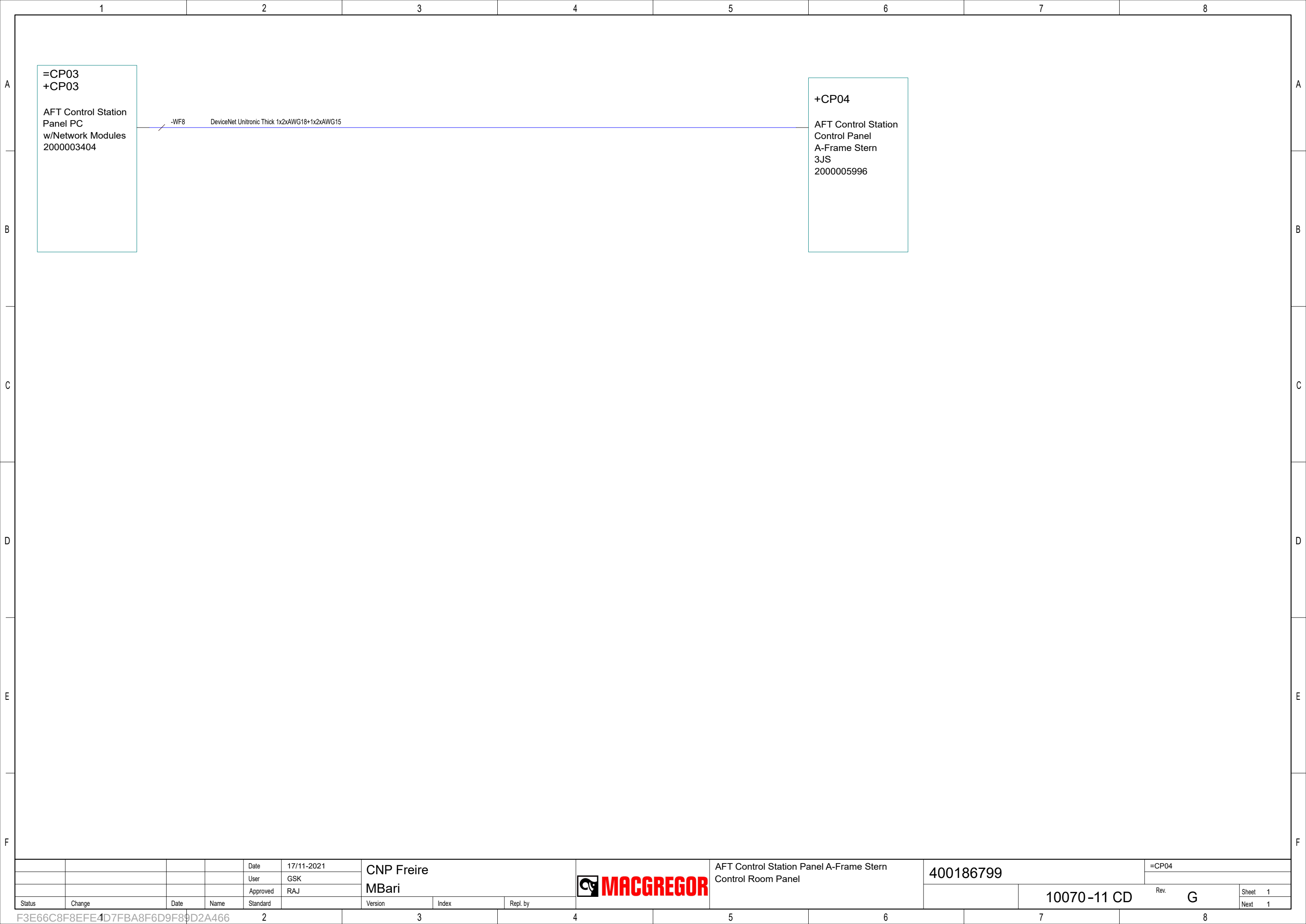


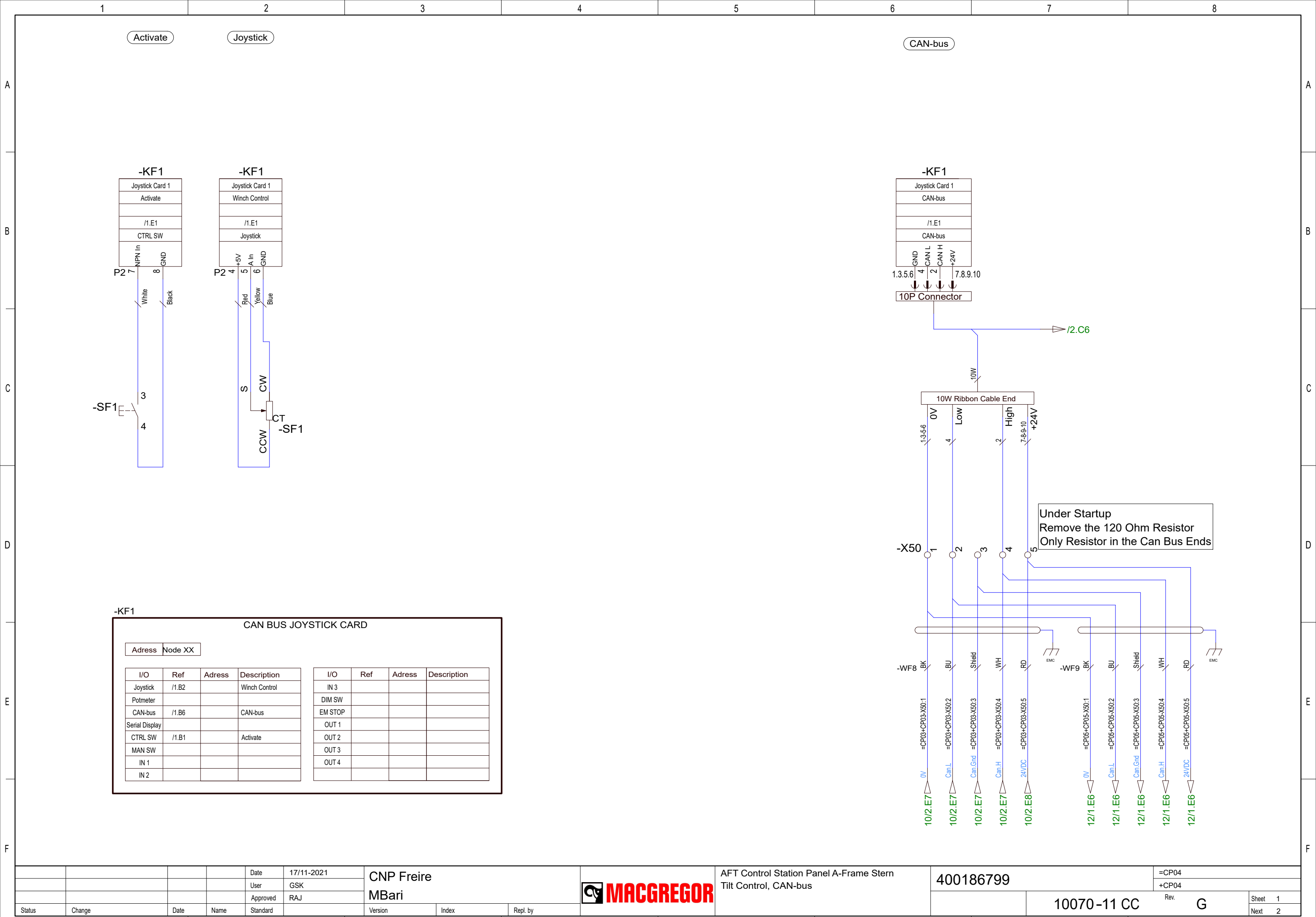


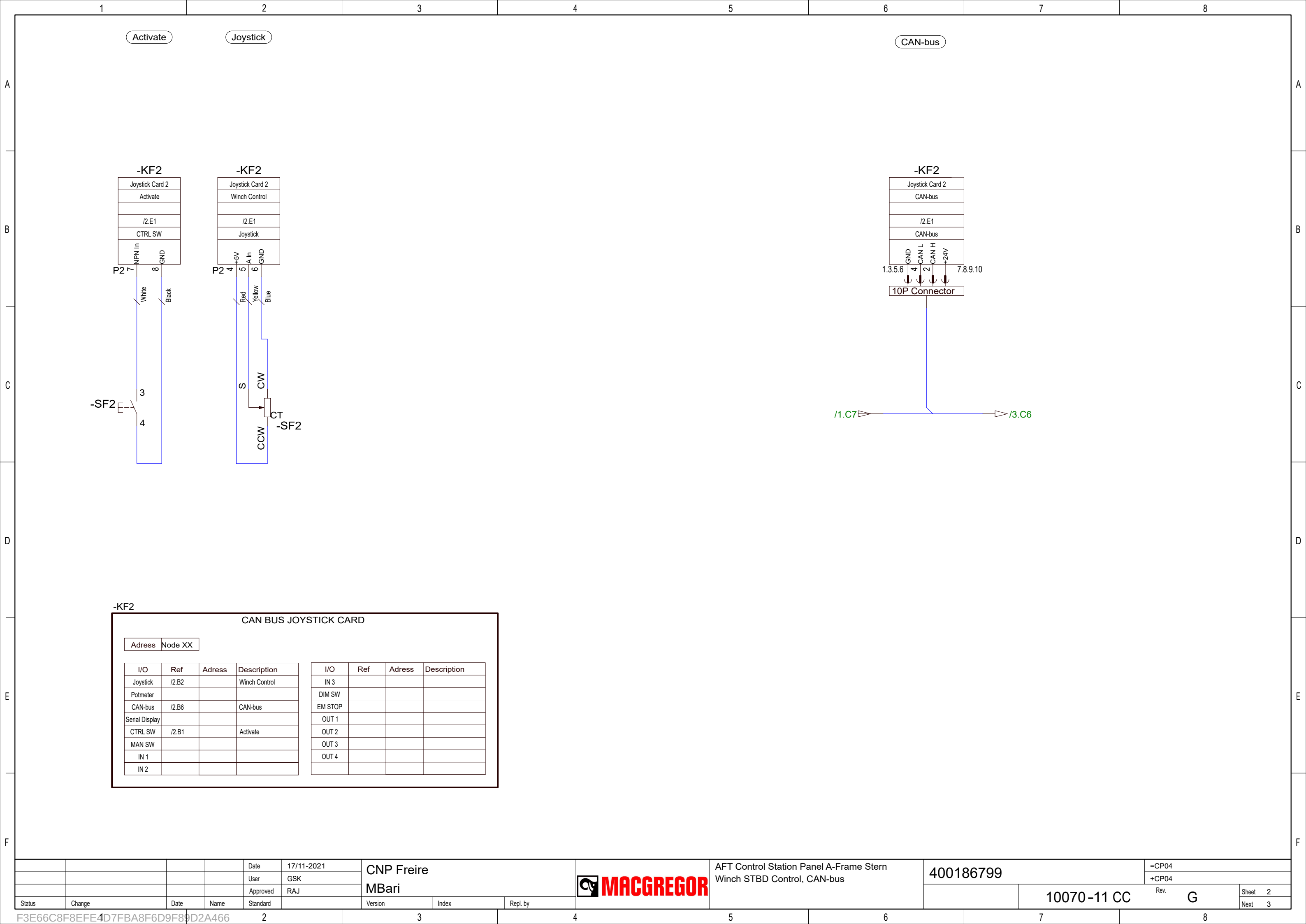
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				Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by					10070-10 CC	Rev. G

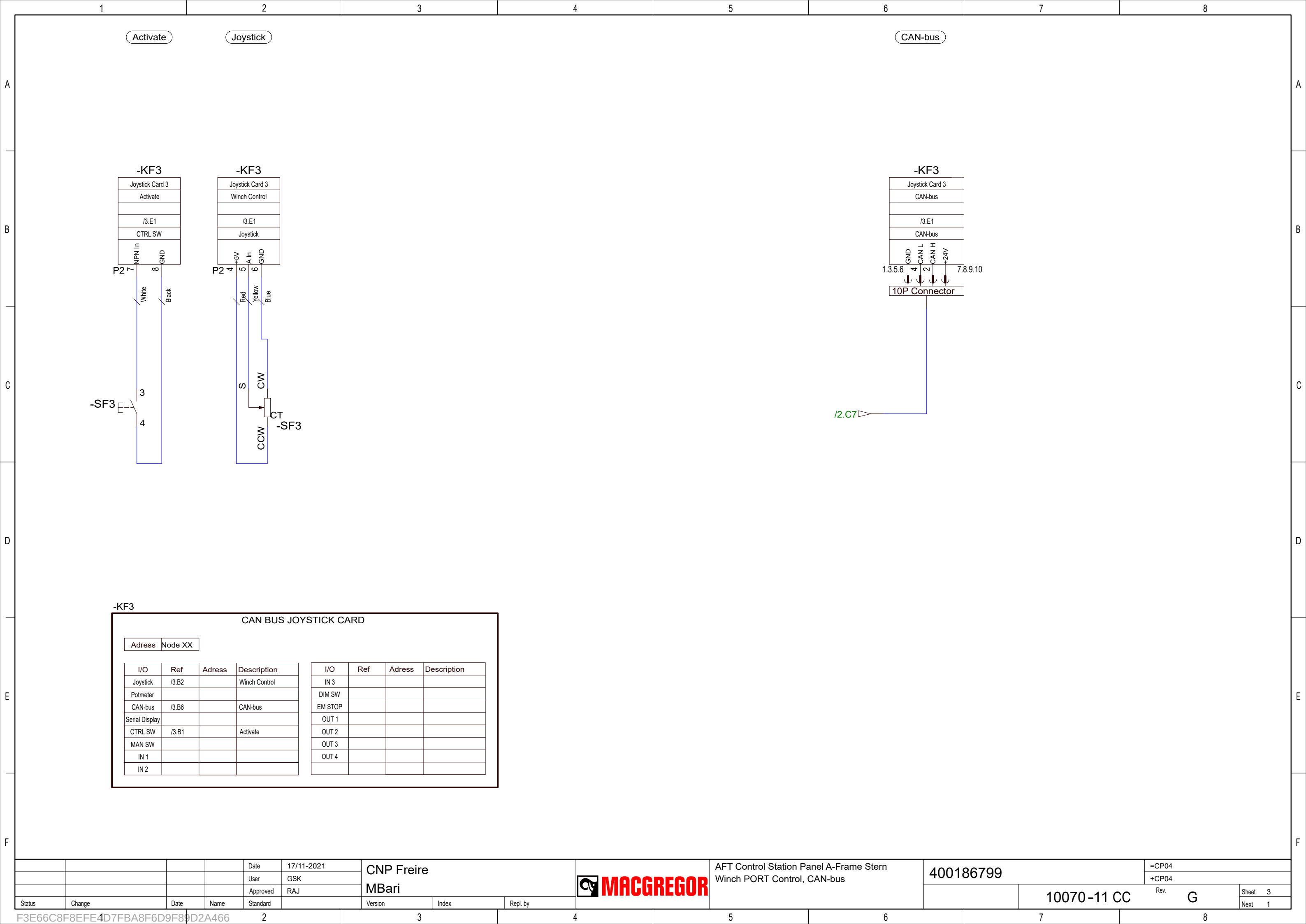
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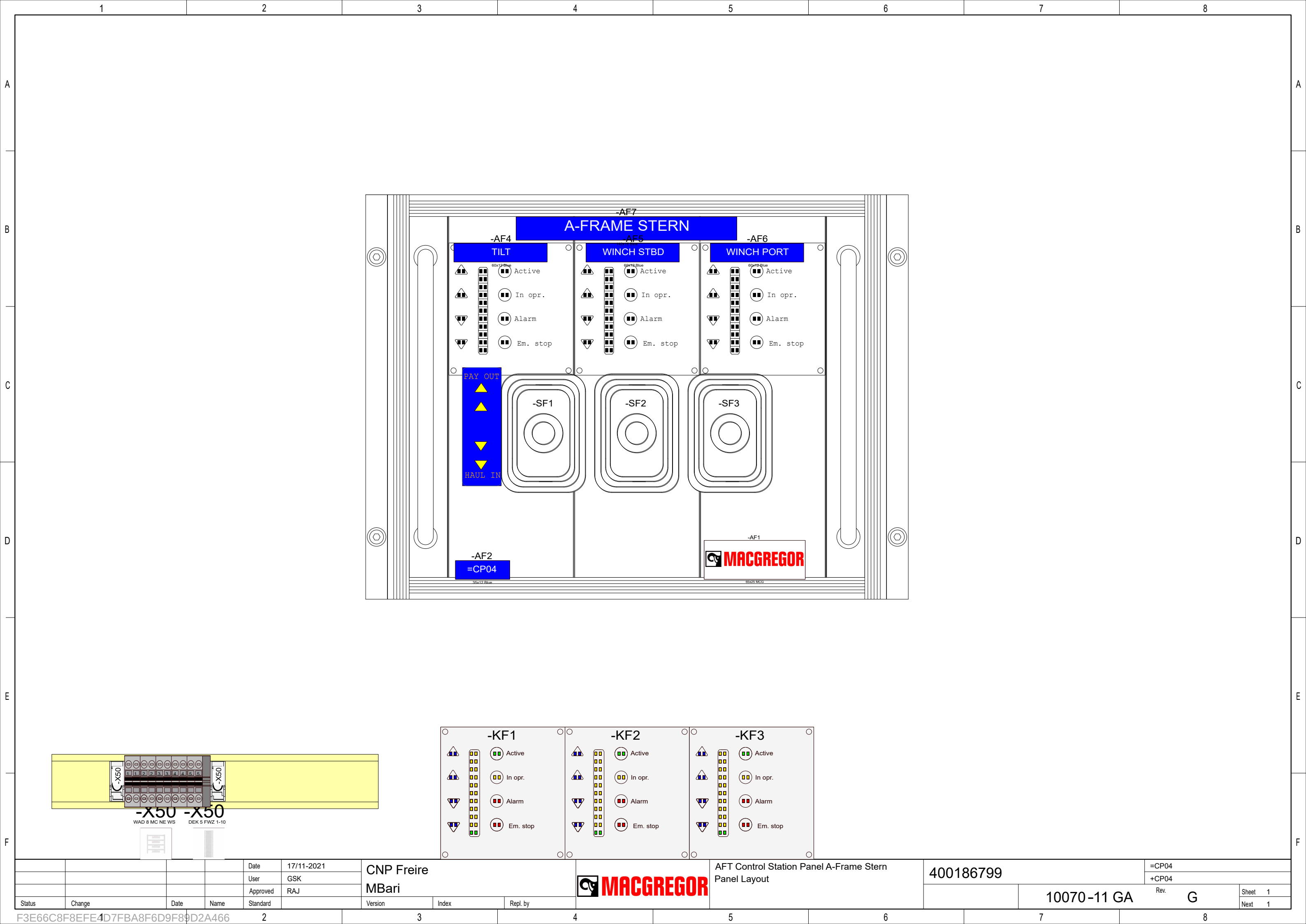






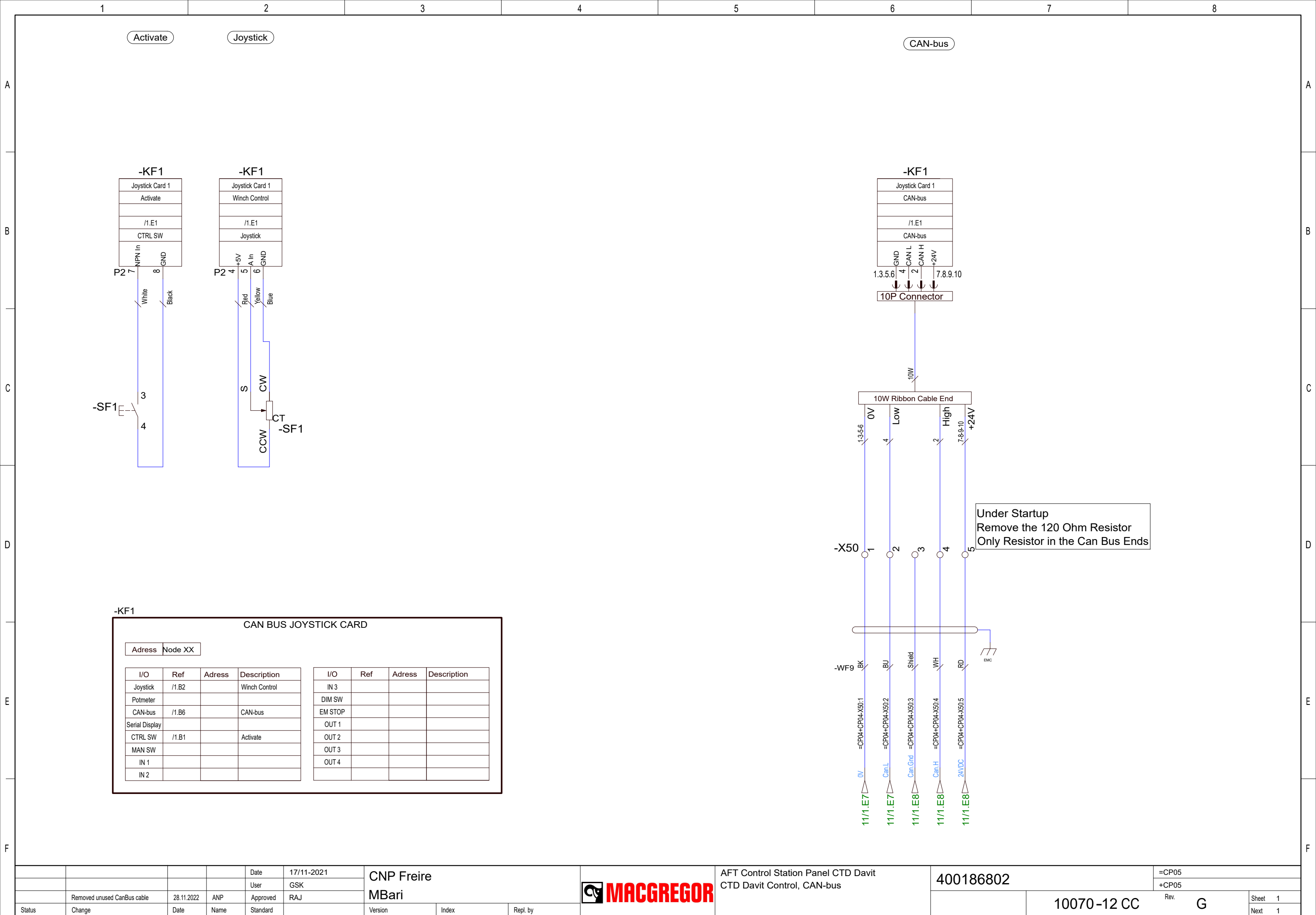


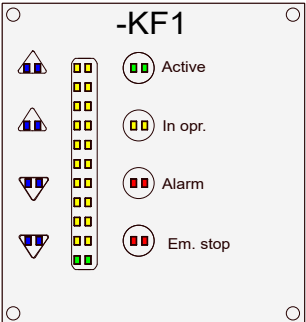
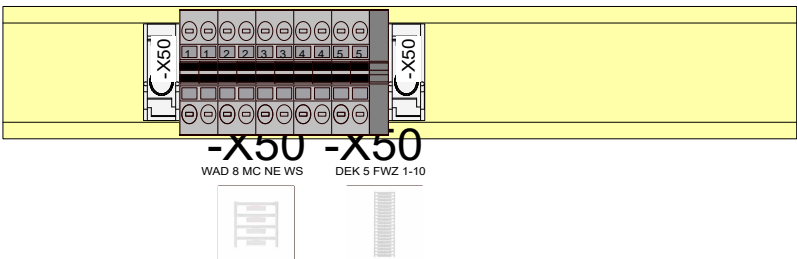
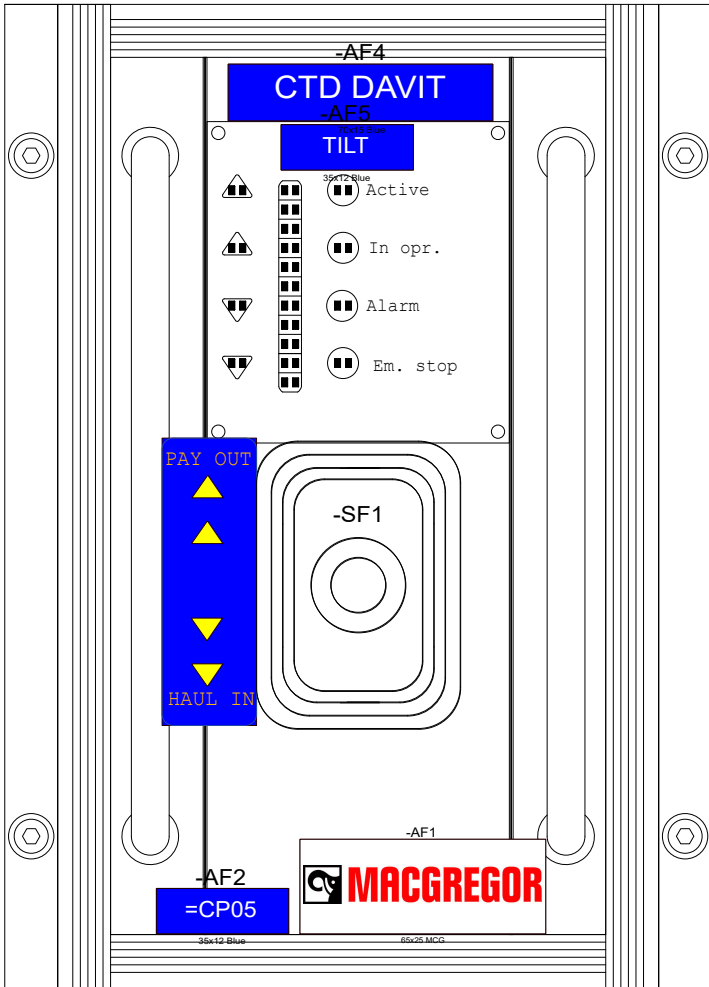




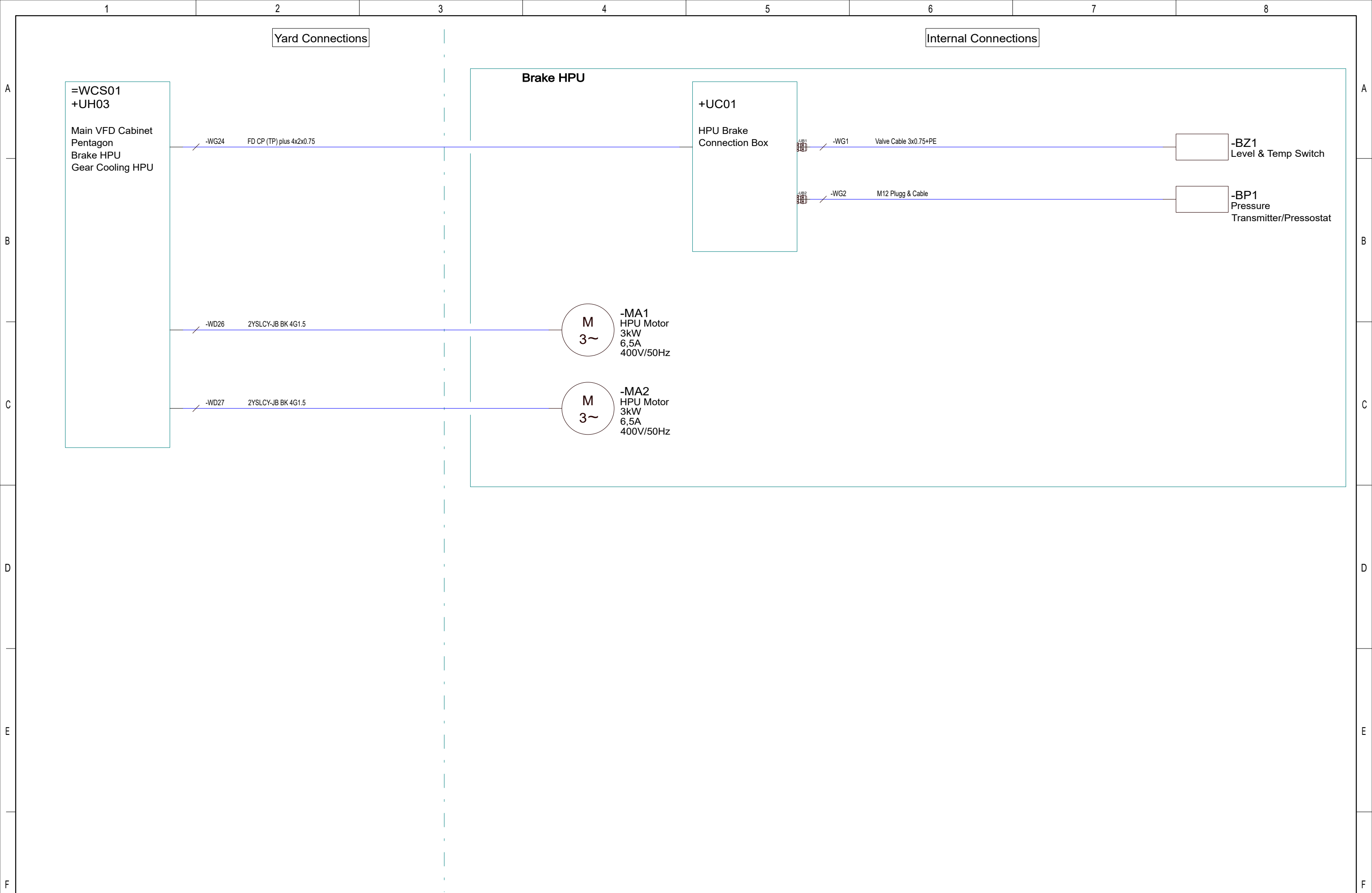
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Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-11 GA	Rev. G	Sheet 1
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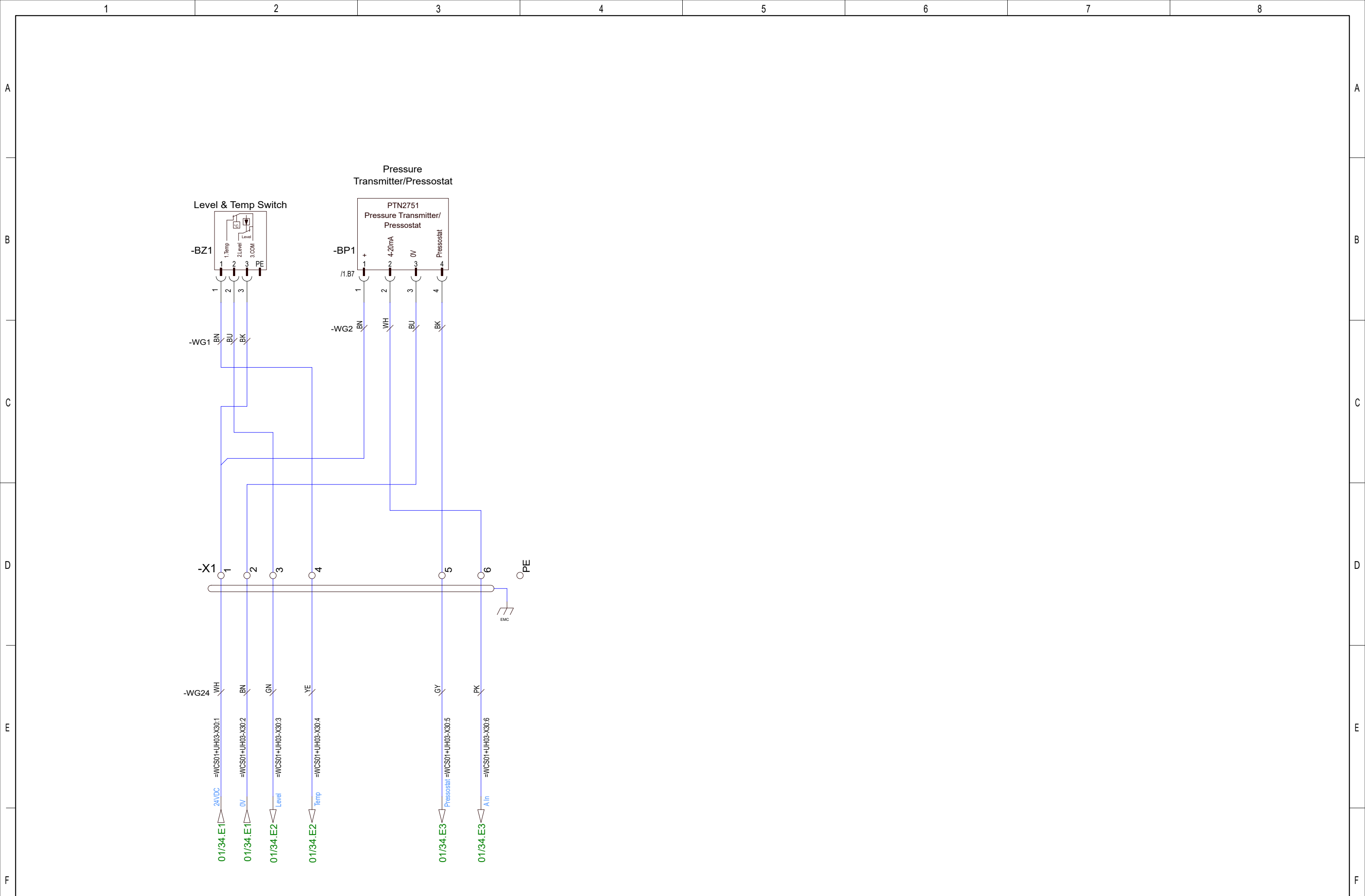




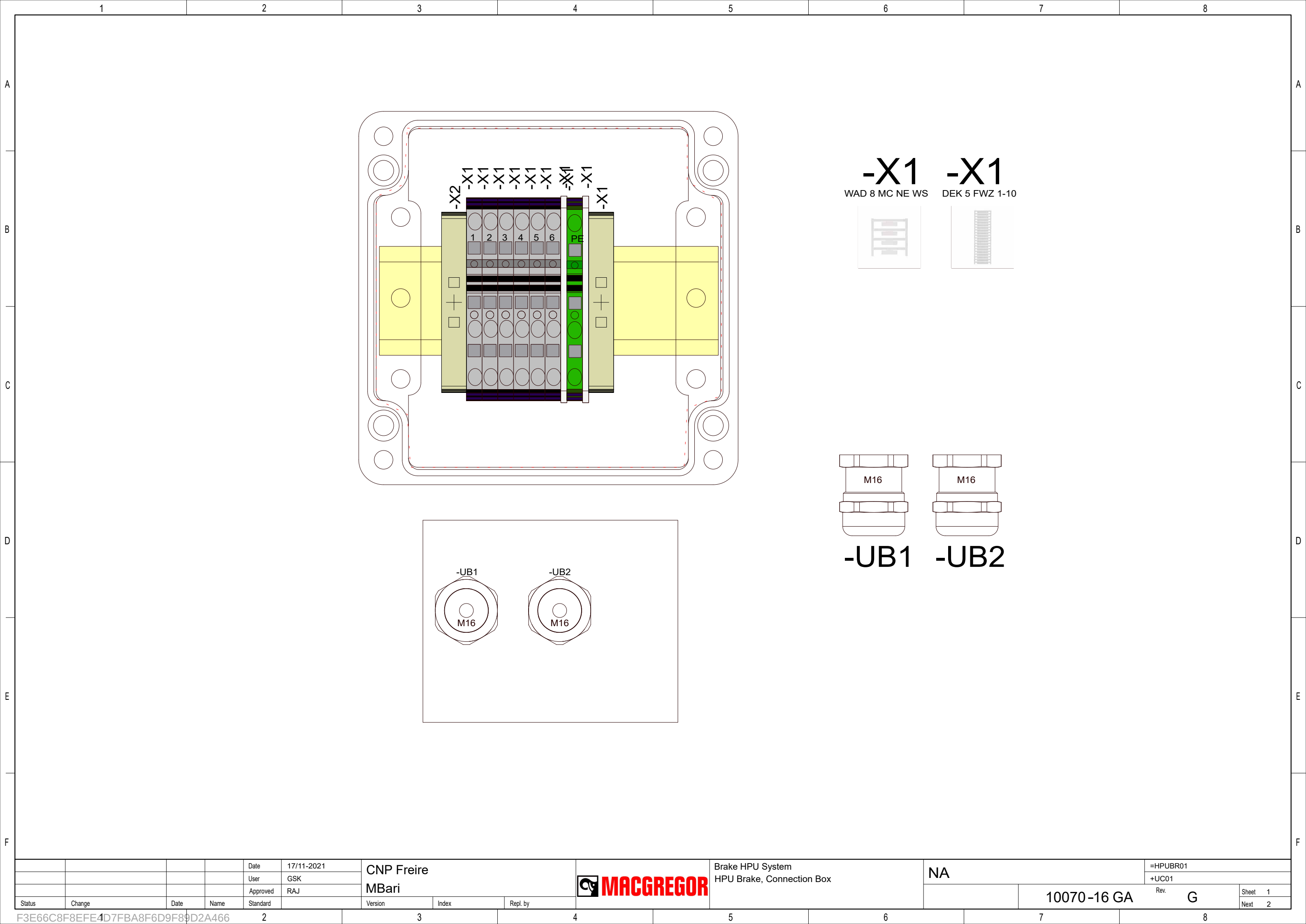
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Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-12 GA	Rev. G	Sheet 1
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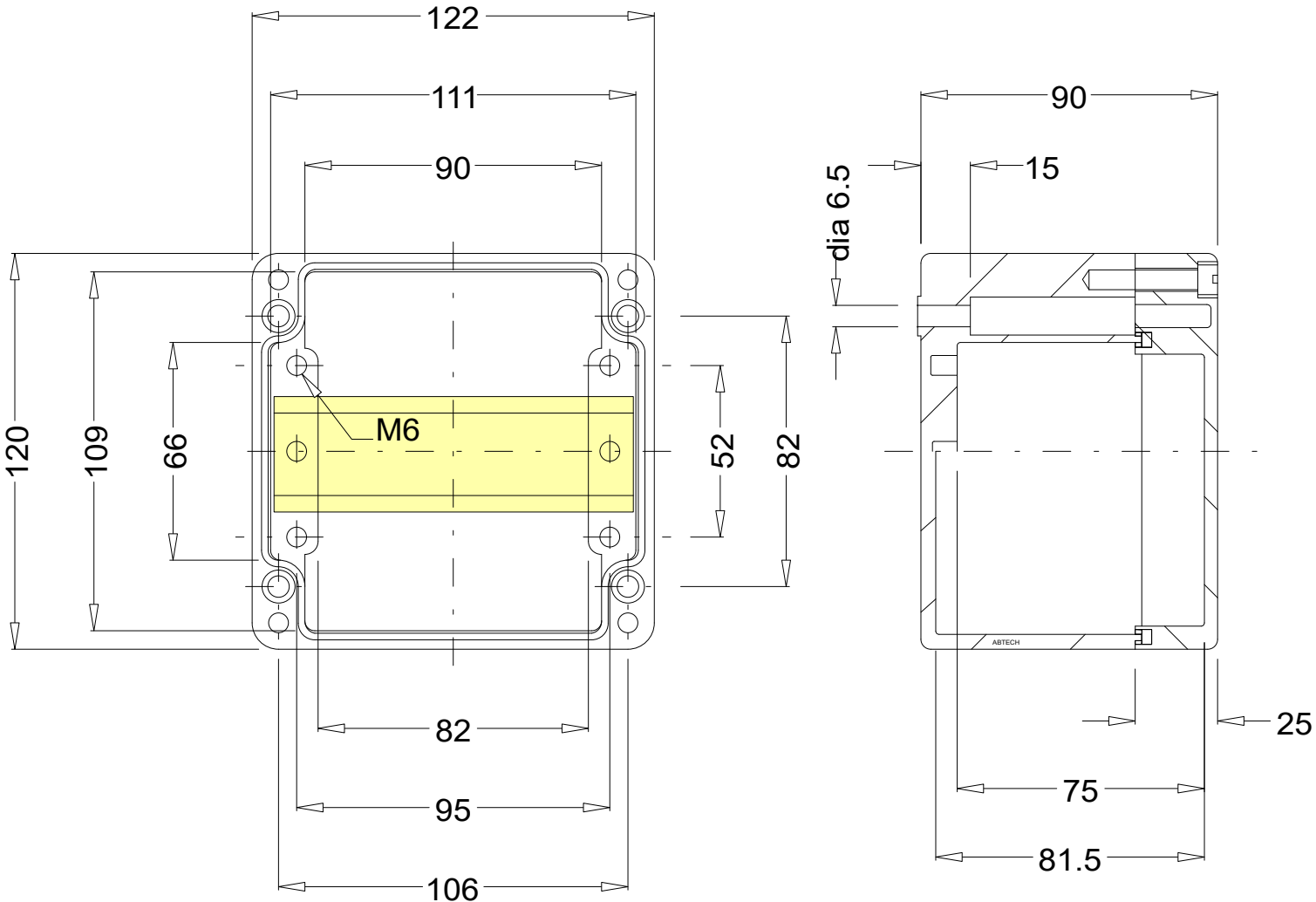
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Status	Change		Date	Name	Standard	Version	Index	Repl. by					10070-16 CD	Rev. G	Sheet 1
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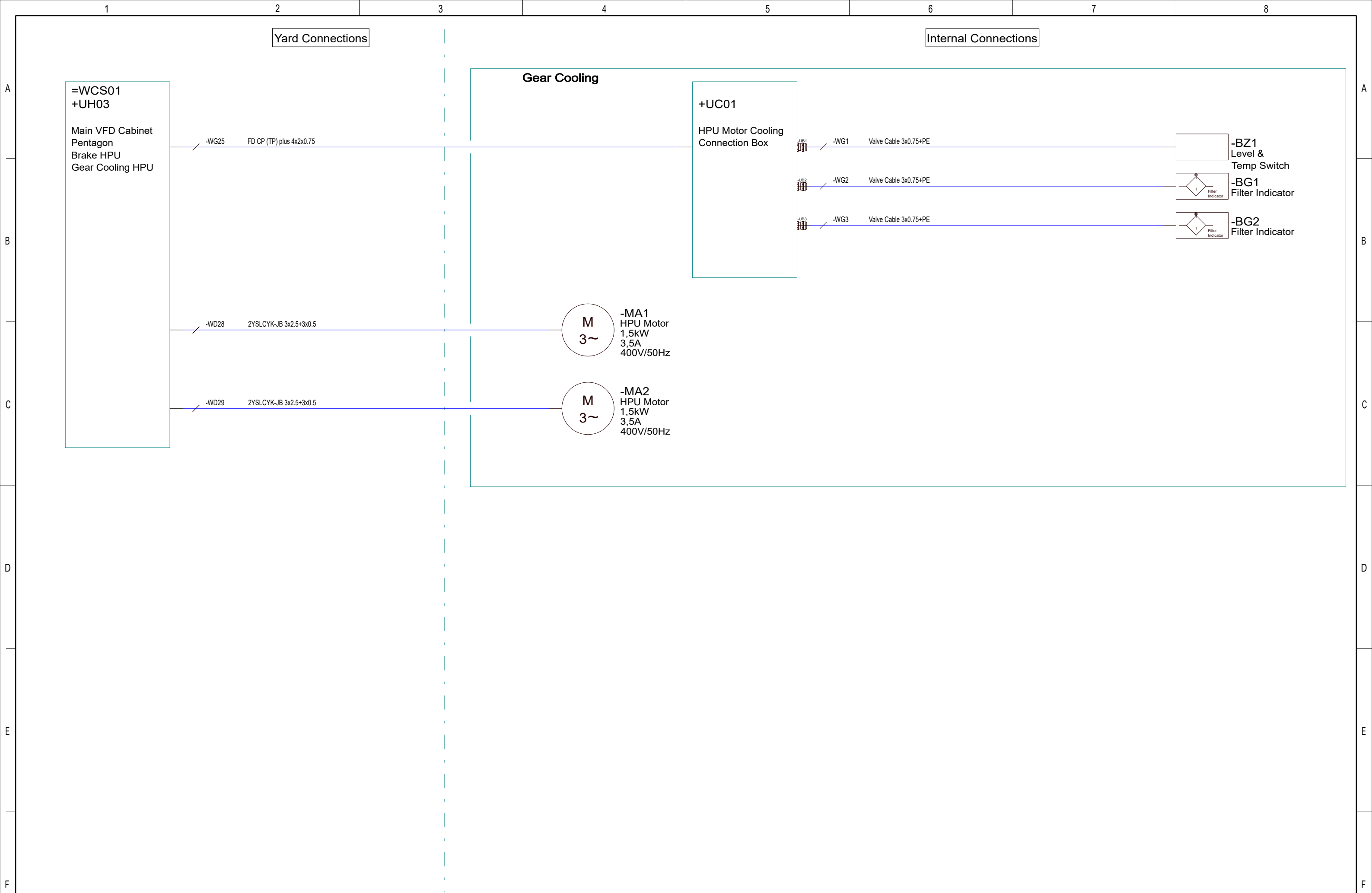
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Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-16 CC	Rev. G	Sheet 1
														Next 1



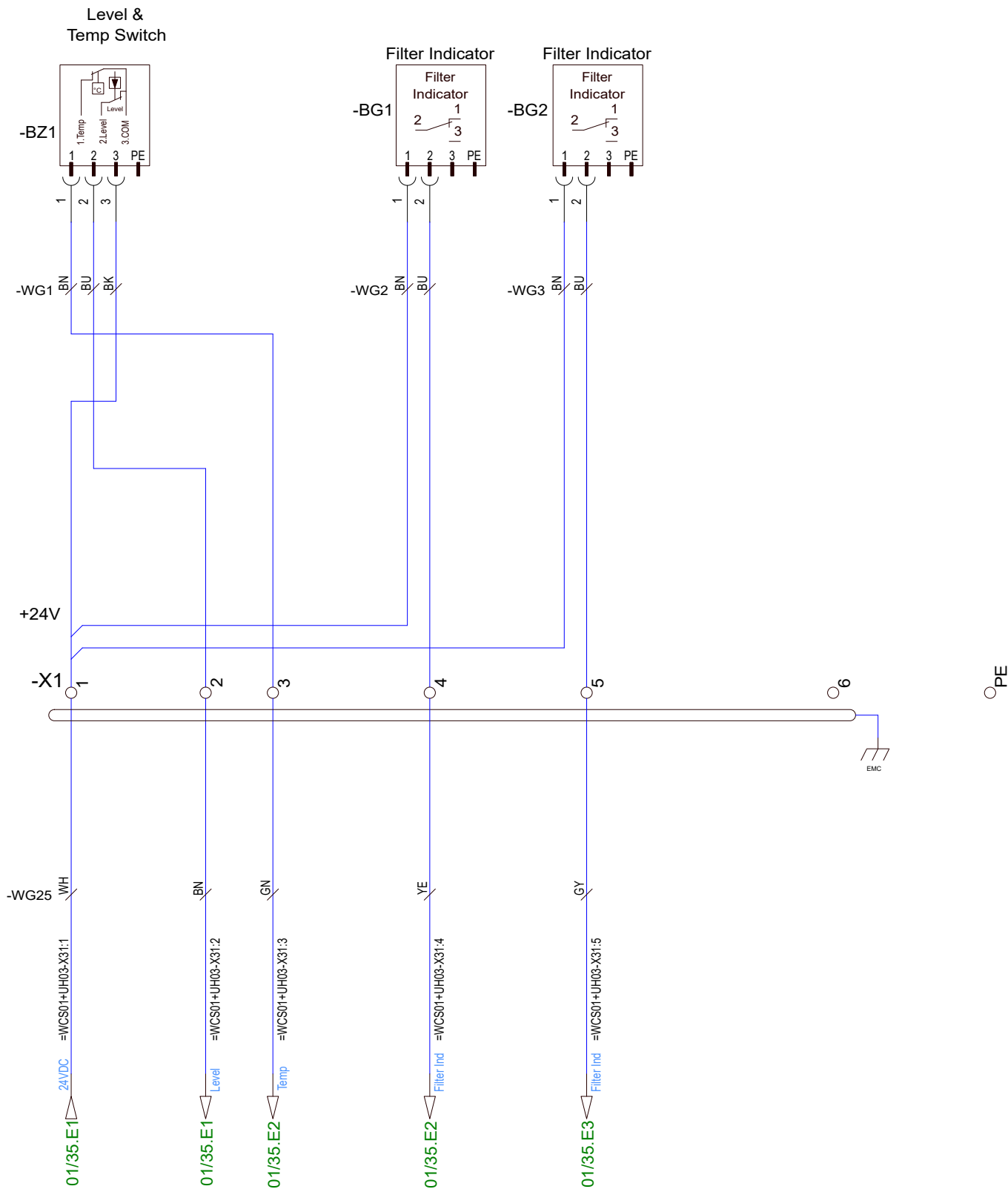
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Status	Change		Date	Name	Standard	Version	Index	Repl. by			10070-16 GA			Next 2



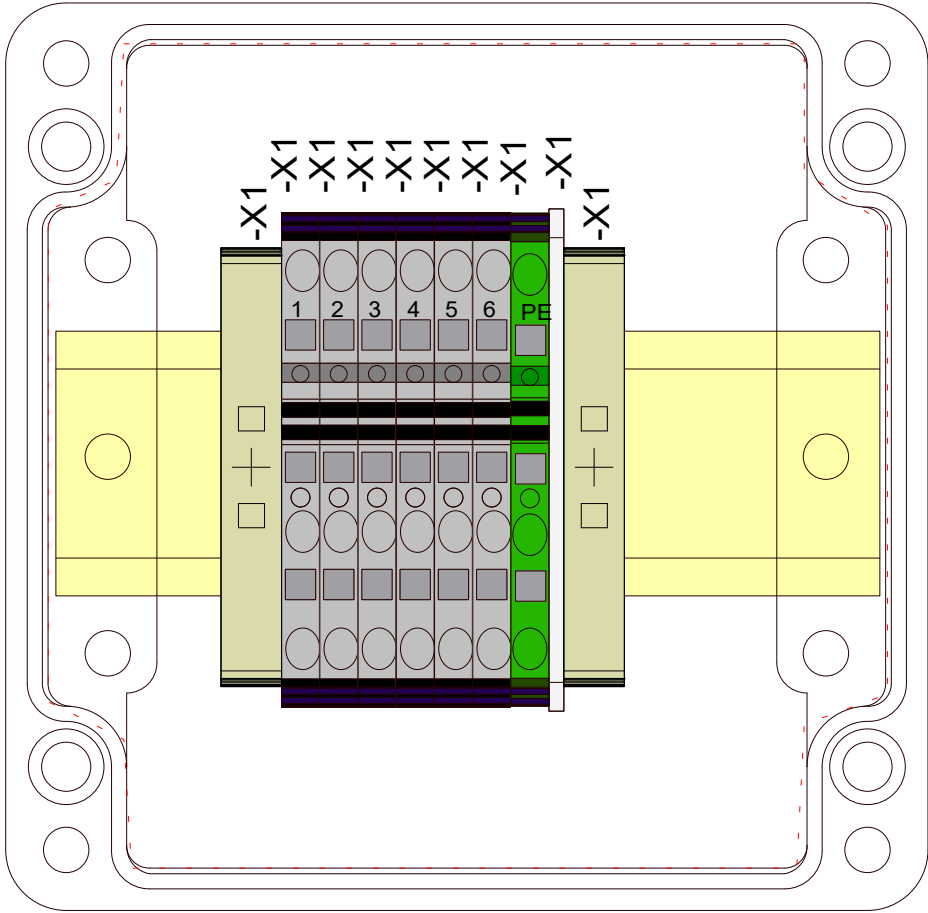
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Status	Change		Date	Name	Standard	Version	Index	Repl. by			10070-16 GA			Next 1



				Date	17/11-2021	CNP Freire				Gear Cooling HPU System Gear Cooling HPU System	NA	=HPUGC01		
				User	GSK									
				Approved	RAJ							MBar		
Status	Change		Date	Name	Standard	Version	Index	Repl. by				10070-17 CD	Rev. G	Sheet 1
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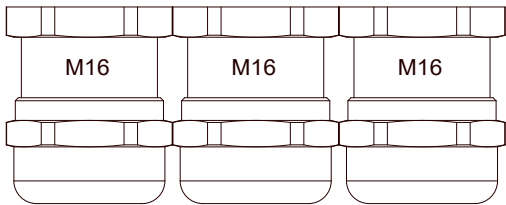
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Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-17 CC	Rev. G	Sheet 1
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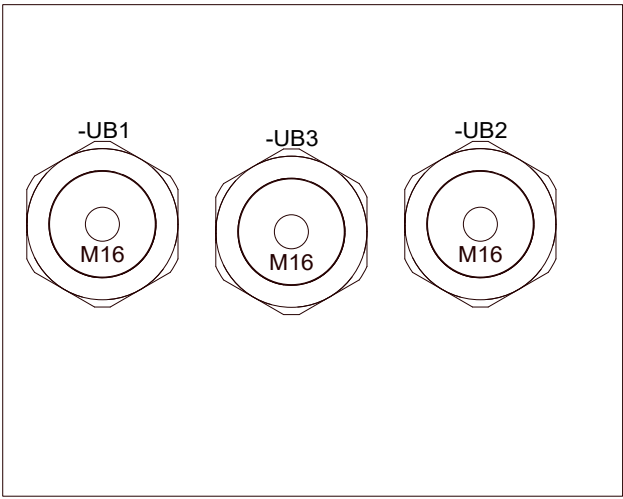
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WAD 8 MC NE WS



-X1
DEK 5 FWZ 1-10

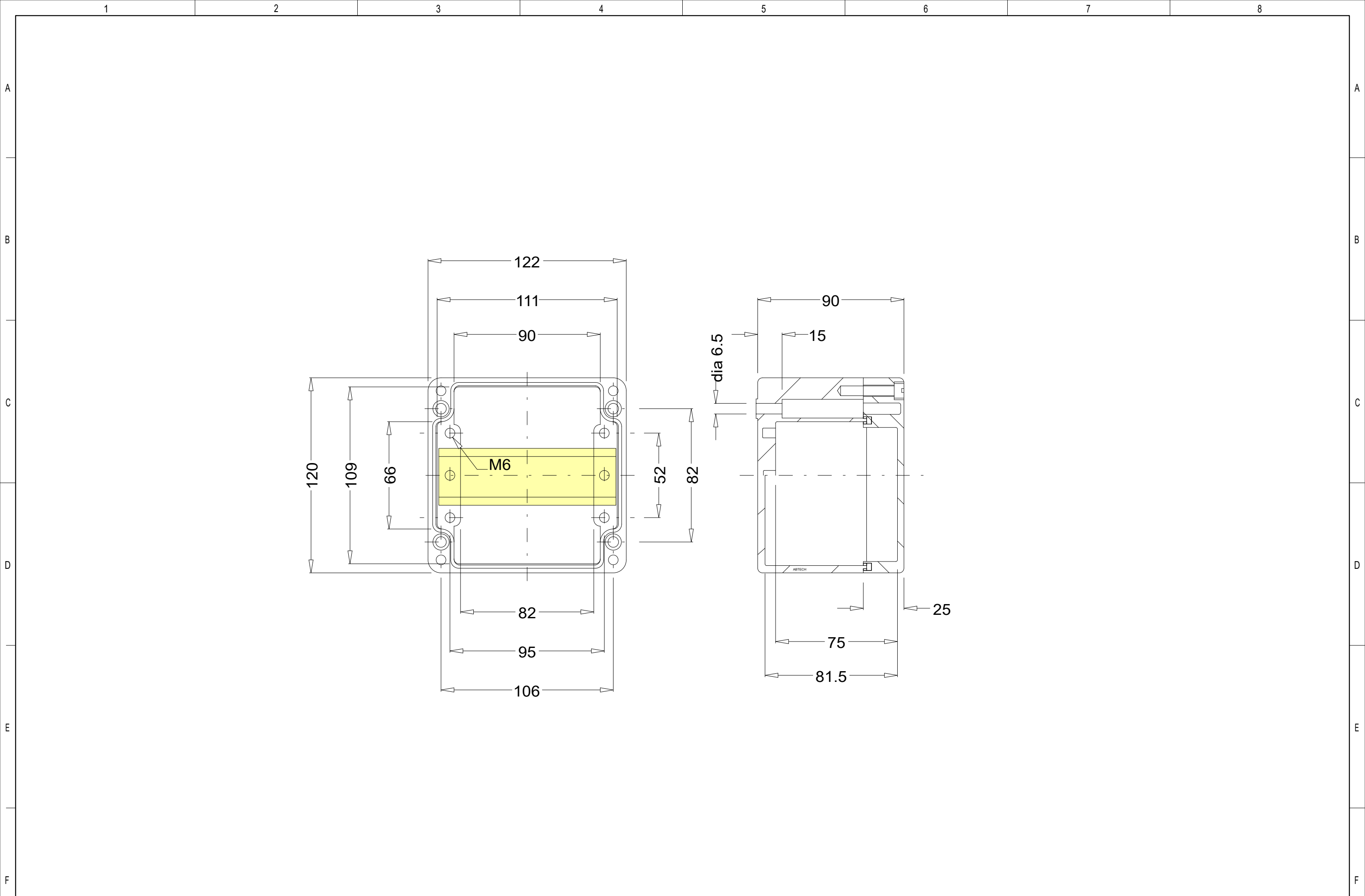


-UB1-UB2-UB3



				Date	17/11-2021	CNP Freire MBar			Gear Cooling HPU System HPU Gear Cooling Connection Box		NA		=HPUGC01	
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				Approved	RAJ									
Status	Change	Date	Name	Standard	Version	Index	Repl. by			10070-17 GA		Rev.	G	Sheet 1
														Next 2

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				User	GSK							+UC01		
				Approved	RAJ							MBarí		
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-17 GA	Rev. G	Sheet 2
														Next 1

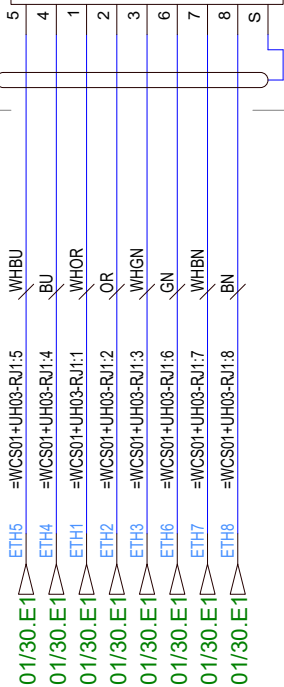
to TRIPLEX Handling System

=A-FRAME STERN
+B11
Control Cabinet

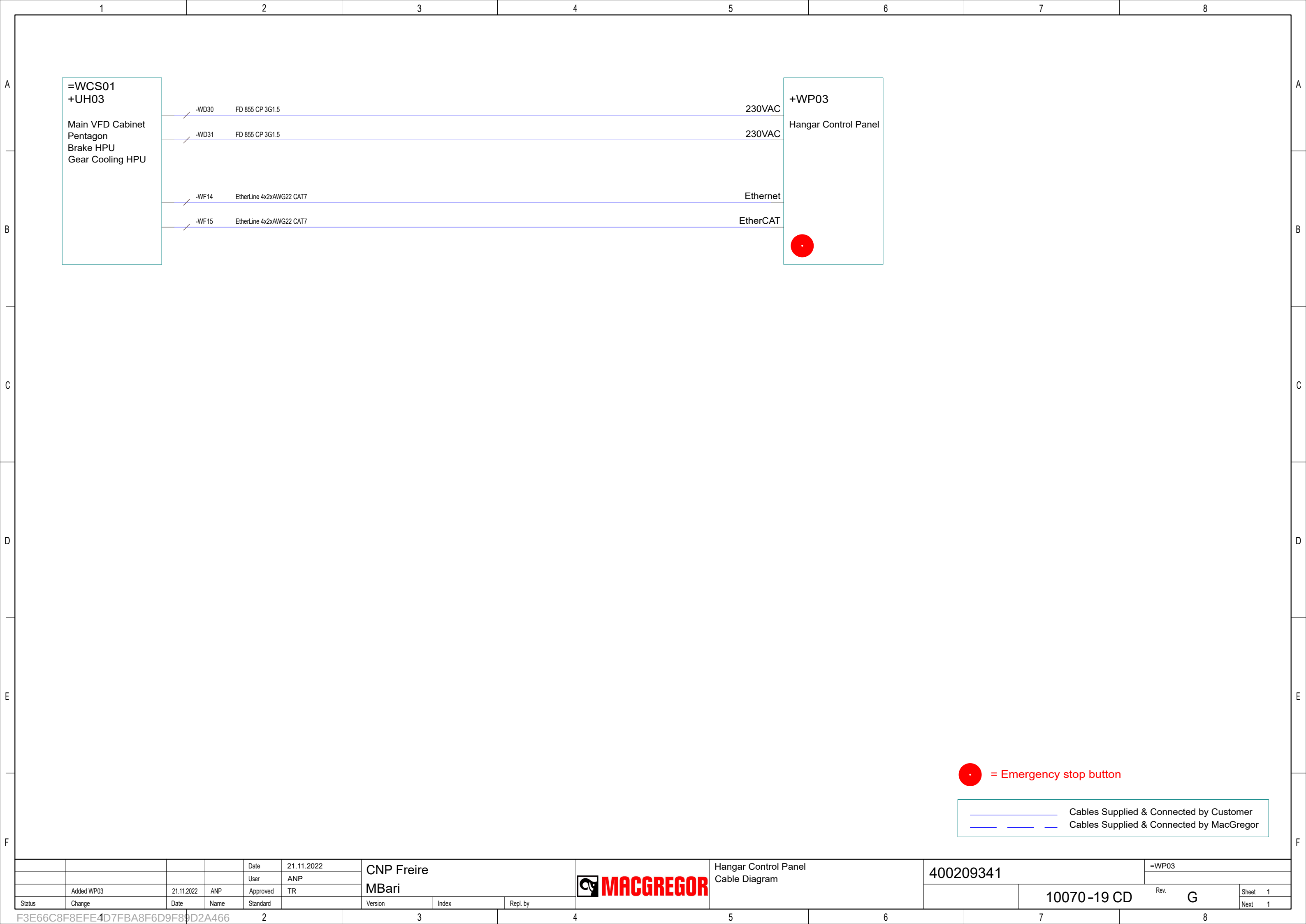
EtherCAT

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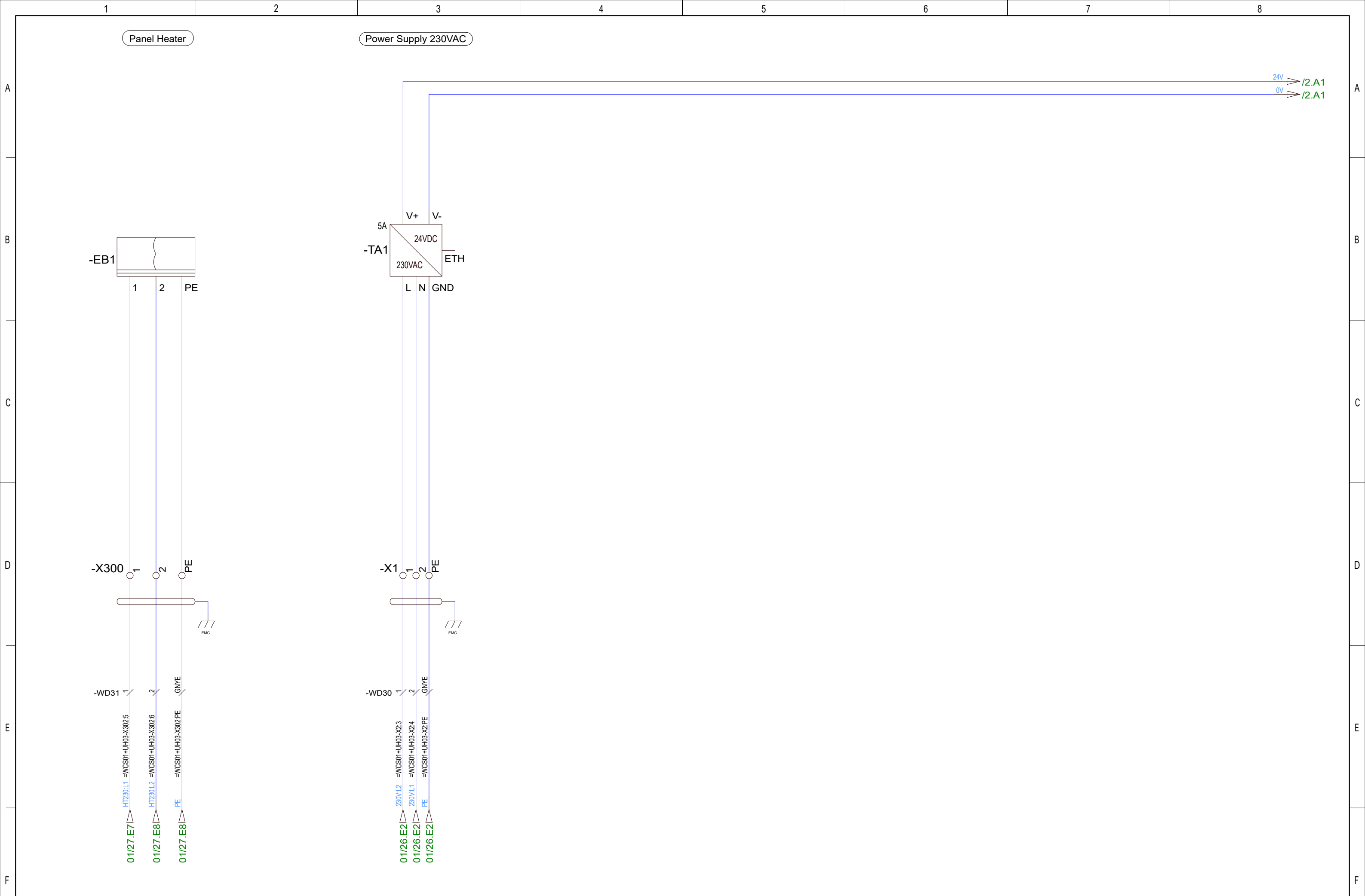
RJ 45 Module



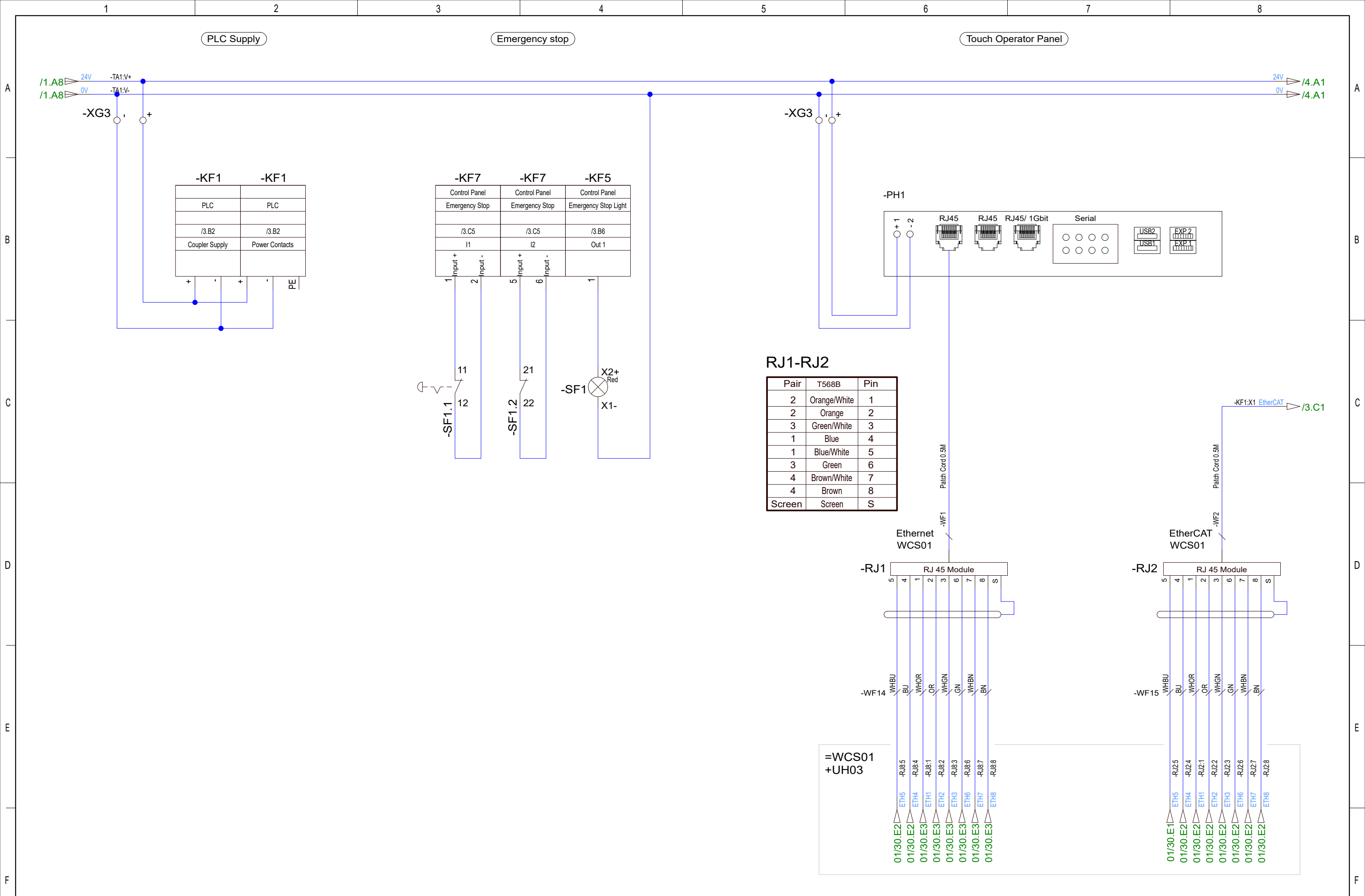
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Status	Change	Date	Name	Standard		Version	Index	Repl. by						10070-18 CC	Sheet 1
															Next 1

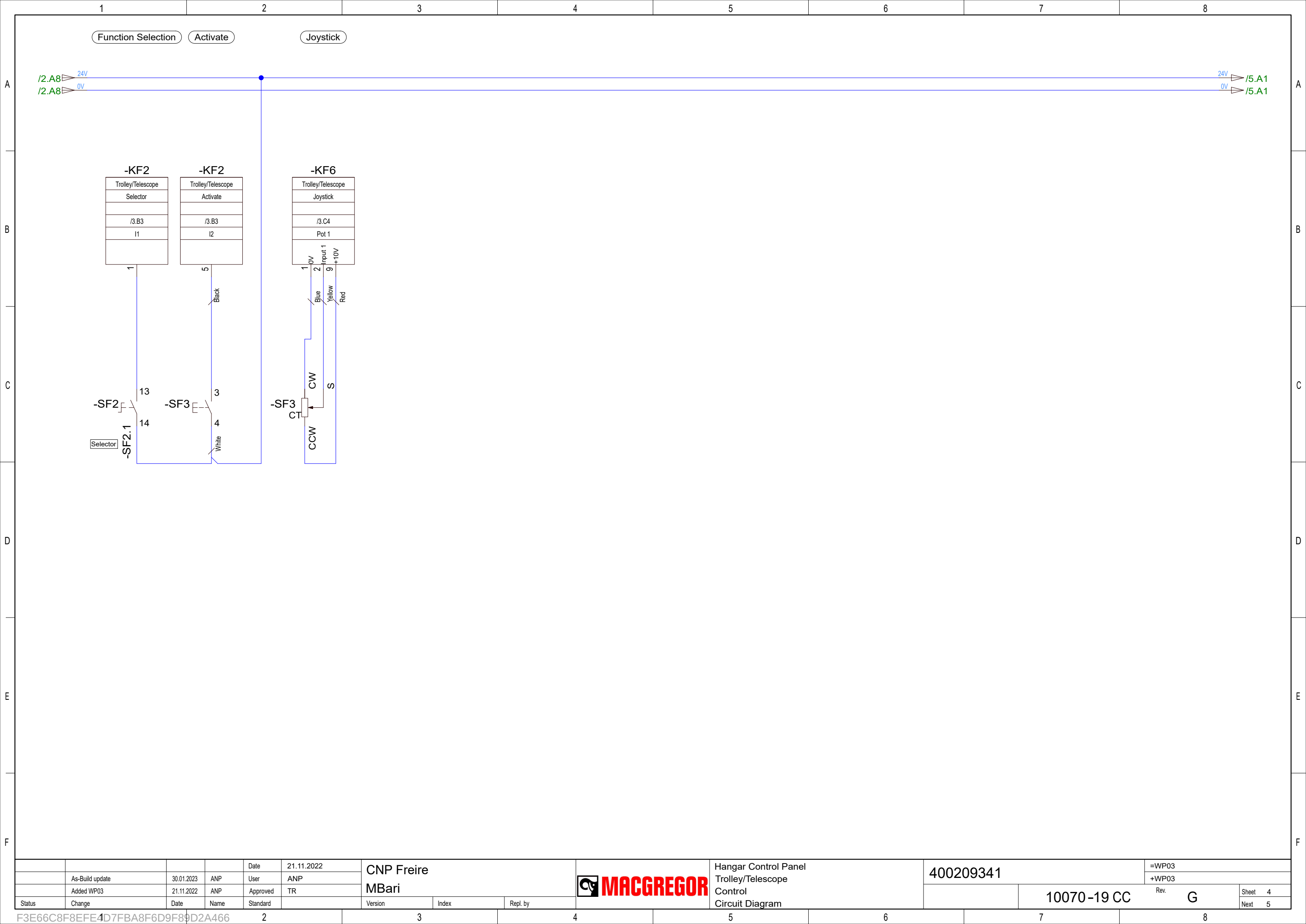


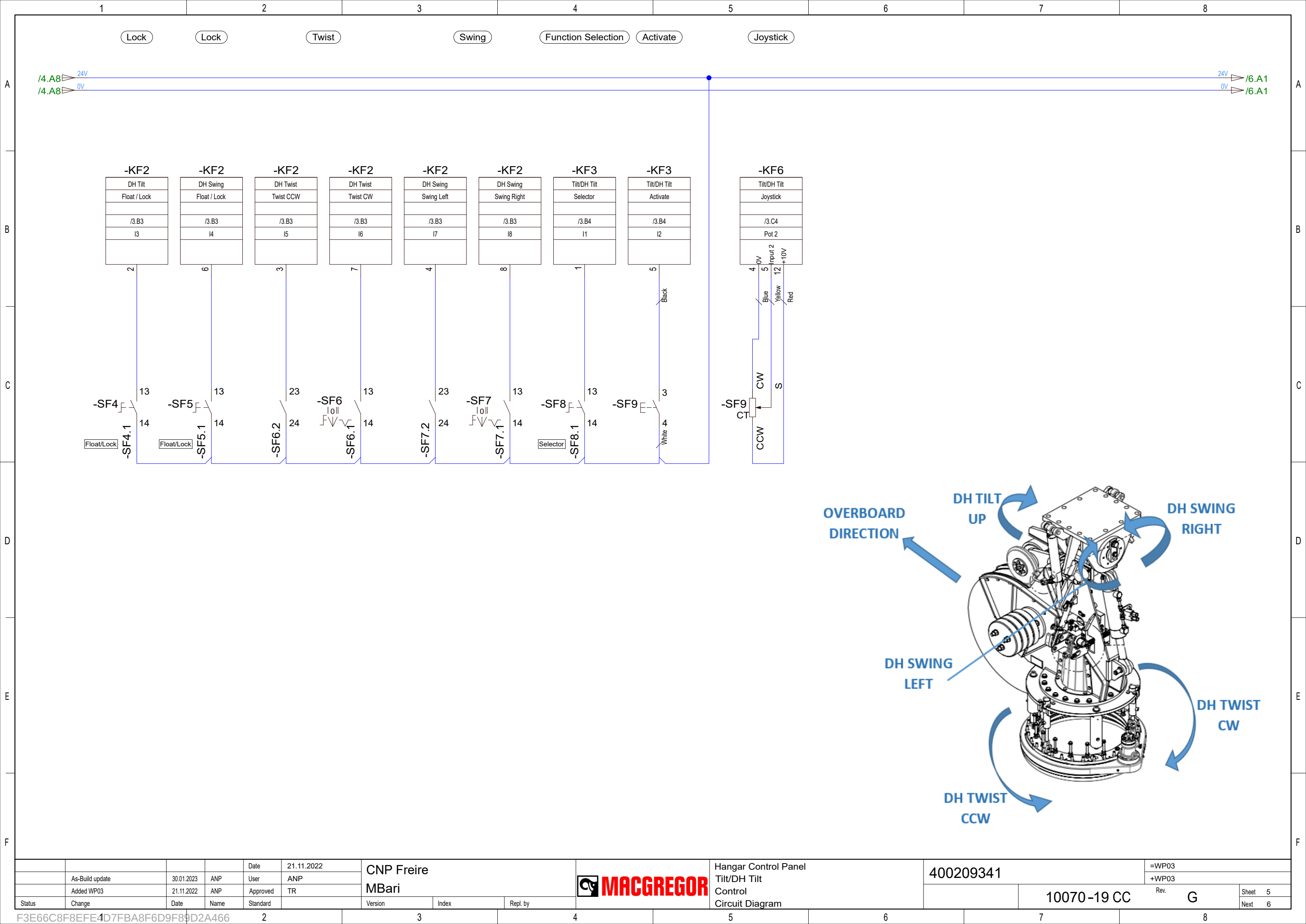
				Date	21.11.2022	CNP Freire				Hangar Control Panel Cable Diagram	400209341	=WP03		
				User	ANP									
	Added WP03	21.11.2022	ANP	Approved	TR	MBarí								
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-19 CD	Rev. G	Sheet 1
														Next 1

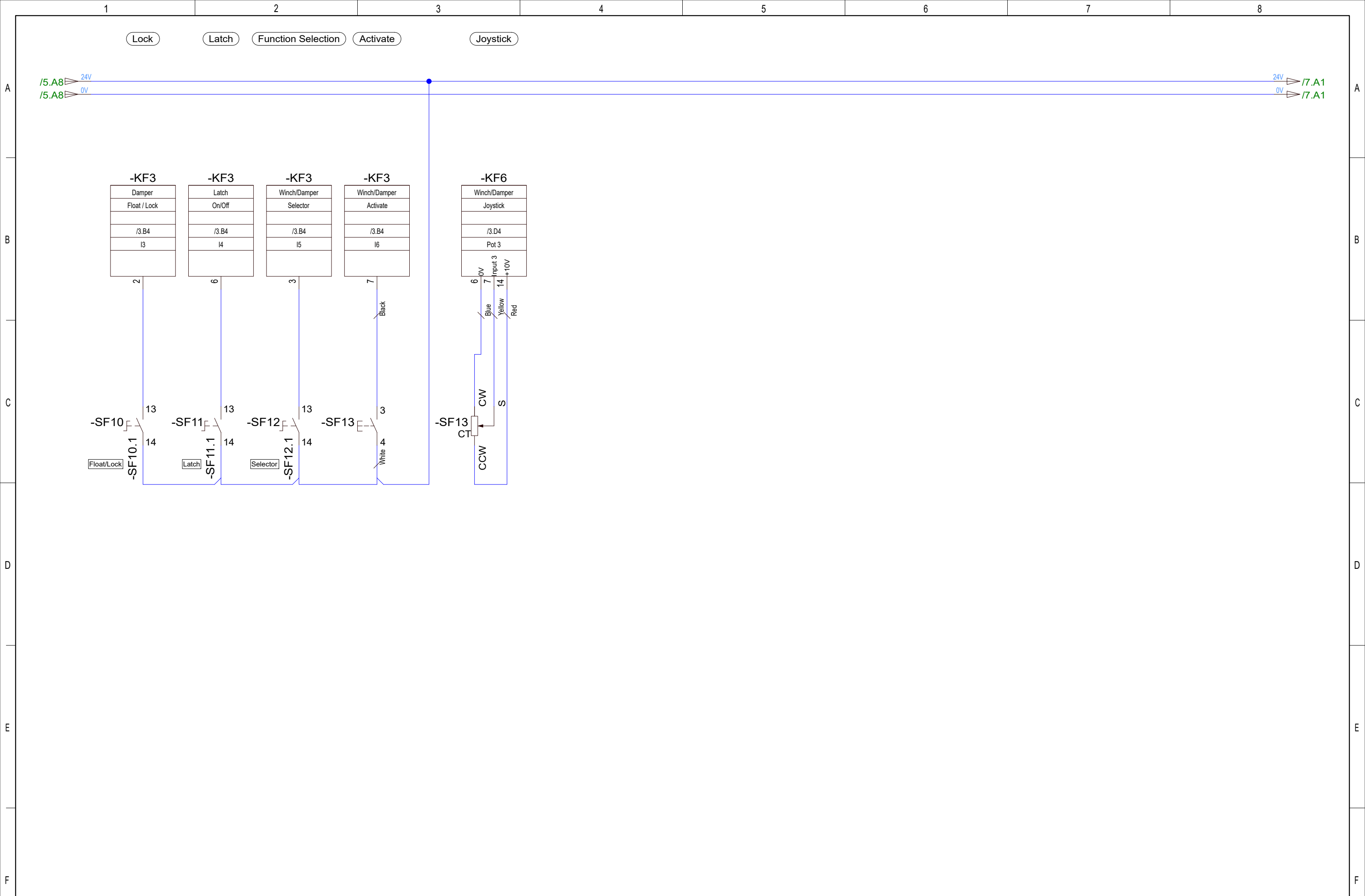


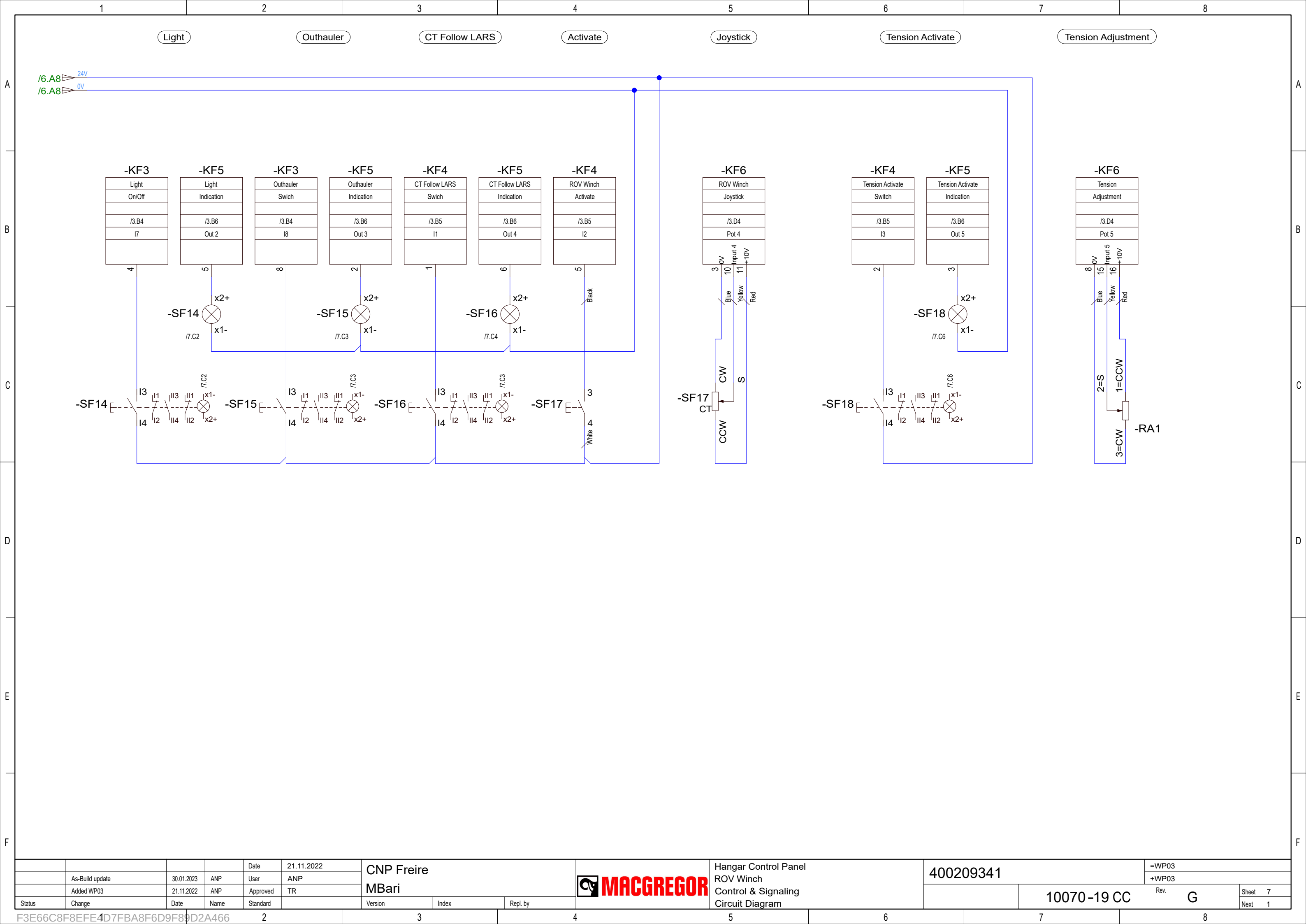
				Date	21.11.2022	CNP Freire MBarí			MACGREGOR		Hangar Control Panel Supply and Heating Circuit Diagram		400209341		=WP03	
				User	ANP										+WP03	
	Added WP03	21.11.2022	ANP	Approved	TR											
Status	Change	Date	Name	Standard		Version	Index	Repl. by					10070-19 CC		Rev. G	Sheet 1
																Next 2





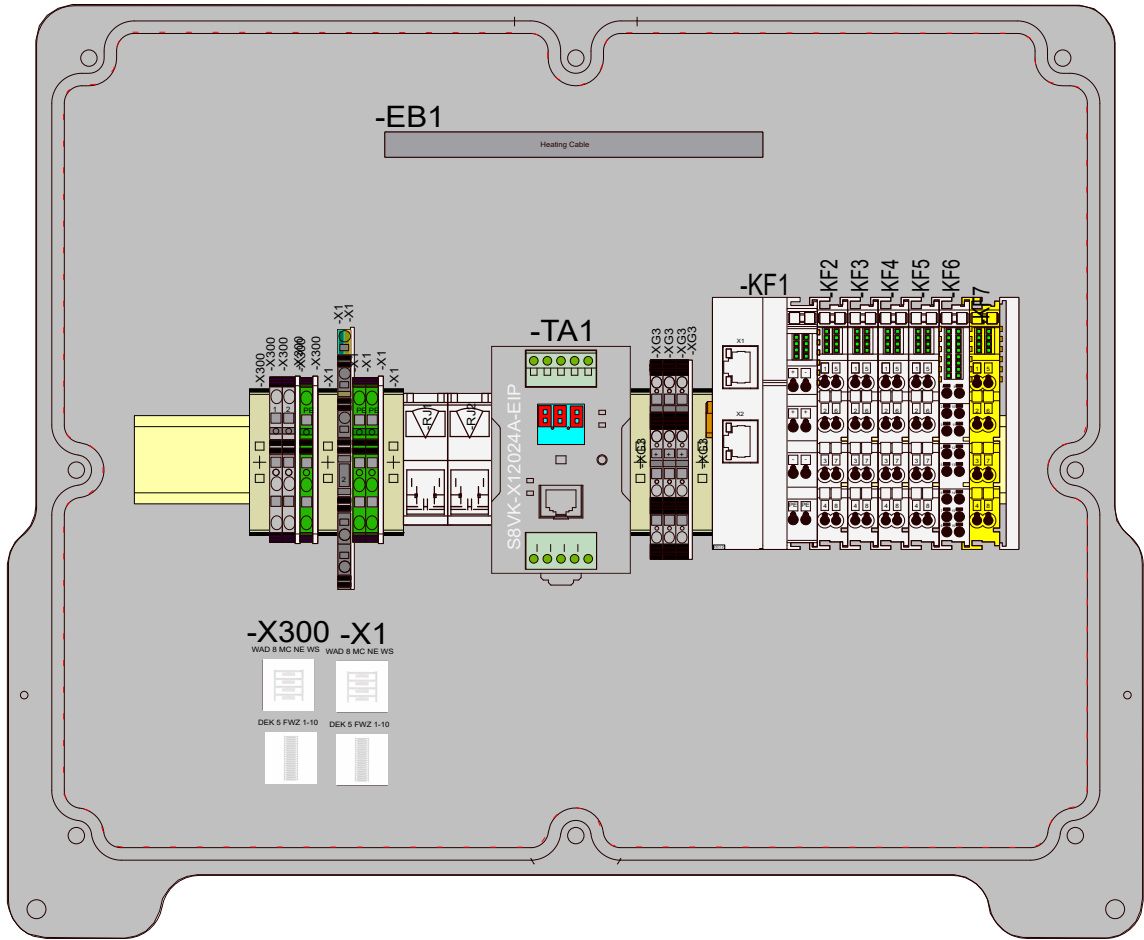




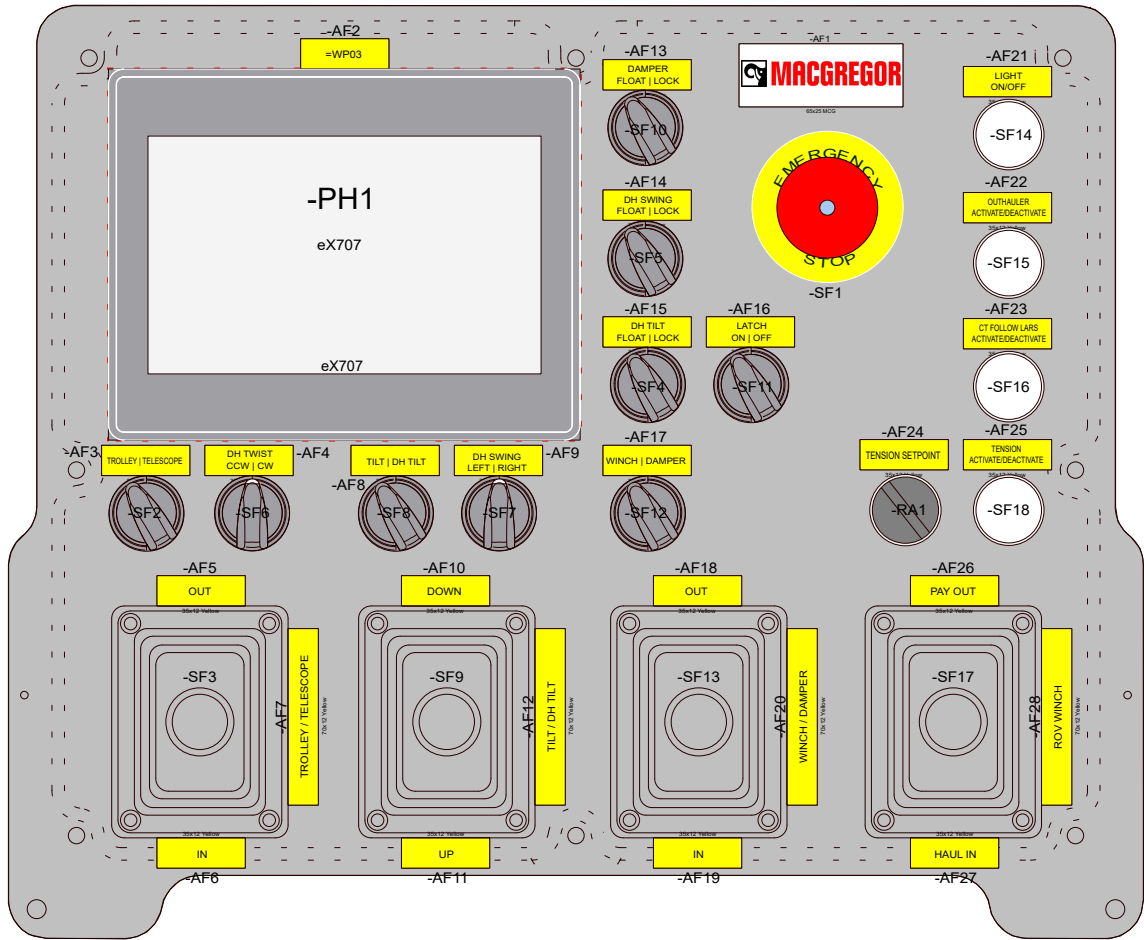


			Date	21.11.2022	CNP Freire MBari				Hangar Control Panel ROV Winch Control & Signaling Circuit Diagram	400209341	=WP03			
	As-Build update	30.01.2023	ANP	User							ANP	+WP03		
	Added WP03	21.11.2022	ANP	Approved							TR			
Status	Change	Date	Name	Standard		Version	Index	Repl. by		10070-19 CC	Rev.	G	Sheet 7	
													Next 1	

INNER VIEW



FRONT VIEW



NOTE: Dimension Sketch - PLM No. 2000012940

				Date	21.11.2022	CNP Freire MBarí				Hangar Control Panel Panel Layout	400209341	=WP03		
				User	ANP									
	Added WP03	21.11.2022	ANP	Approved	TR									
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-19 GA	Rev. G	Sheet 1
														Next 1

1		2		3		4		5		6		7		8		
Device ID		Device		Part Number		Qty	Unit	Description		Manufacturer		Datablad				
-AF1		65x25 MCG		CROMLOGO6		1	Pcs	65x25 Macgregor Logo								
-AF2..-AF6,-AF8..-AF11,-AF13..-AF19,-AF21..-AF27		35x12 Yellow		400090866		23	Pcs	35x12 Yellow Engraved Sign plate								
-AF7,-AF12,-AF20,-AF28		70x12 Yellow		400090867		4	Pcs	70x12 Yellow Engraved Sign plate								
-EB1		Heating Cable 5BTV2-CT 15W/M V/+10GR Assy		RHEACHE032		1	Pcs	Heating Cable 5BTV2-CT 15W/M V/ +10GR Assy 60cm		Raychem		EN-RaychemBTVpipefre eze protection-DS-H51086_tcm432-26253.pdf				
-KF1		EK1101		ECPPEB01		1	Pcs	EtherCAT Coupler w ID settings		Beckhoff		Datasheet				
-KF2..-KF4		EL1008		ECPPEB04		3	Pcs	8 Digital Inputs		Beckhoff		Datasheet				
-KF5		EL2008		ECPPEB06		1	Pcs	8 Digital Outputs		Beckhoff		Datasheet				
-KF6		EL3255		ECPPEB16		1	Pcs	5-Ch Input Potentiometer		Beckhoff		Datasheet				
-KF7		EL1904		400209336		1	Pcs	4-channel digital input, 24 V DC, TwinSAFE		Beckhoff		Datasheet				
-KF8		EL9011		ECPPEB02		1	Pcs	Bus end cap		Beckhoff						
-PH1		eX707		EPECC120		1	Pcs	Exorl 7" Touch Panel		EXOR		ExorleX700 Series.pdfManual				
-RA1		800FP-POT5A 5kohm IP66		EACPO012		1	Pcs	Potensiometre		Allen Bradley		800f-sg001_-en-p.pdf				
-RJ1,-RJ2		IE-XM-RJ45/IDC		400090935		2	Pcs	Mounting rail outlet, RJ45, RJ45 module, IP20, Cat.6A		Weidmuller		Datasheet				
-SF1		45-2D36.1920		EACSW0047		1	Pcs	E-Stop switch w/light IP69 Ø40mm		EAO		EAO_MC_45_Main-Catalogue_EN.pdf				
-SF1		45-320.1E16		400187718		1	Pcs	RED Illumination element 24 VAC/DC		EAO		Datasheet				
-SF1		45-2300.1000.000		400187718		1	Pcs	Holder for 3 elements EAO Serie 45		EAO		Datasheet				
-SF1		800F-15YE112		400187723		1	Pcs	Emergency Stop Lable Ø60mm		Allen Bradley		800f-sg001_-en-p.pdf				
-SF1.1,-SF1.2		45-312.1Z10		400187719		2	Pcs	Switching element NC 10A Front mounting		EAO		Datasheet				
-SF2.1,-SF4.1..-SF6.1,-SF6.2,-SF7.1,-SF7.2,-SF8.1,-SF10.1..-SF12.1		800F-X10		EACSW1142		11	Pcs	Contact Element NO		Allen Bradley		800f-sg001_-en-p.pdf				
-SF2,-SF4..-SF5,-SF8,-SF10..-SF12		800FP-SM22		EACSW114		7	Pcs	2-Pos Selector Switch 60*Maintained		Allen Bradley		800f-sg001_-en-p.pdf				
-SF2,-SF4..-SF8,-SF10..-SF12		800F-ALP		400188392		9	Pcs	Plastic Mounting Latch, Contact Block Holder		Allen Bradley		800f-sg001_-en-p.pdf"				
-SF3,-SF9,-SF13,-SF17		Joystick IP68+ w/ Topswitch Short		400212904		4	Pcs	Joystick IP68+ w/Topswitch Short Version								
-SF6,-SF7		800FP-SB32		400090891		2	Pcs	3-Pos Selector Switch, Spring Return		Allen Bradley		800f-sg001_-en-p.pdf				
As-Build New Joy.&Switch Types		18.01.2023	ANP	Date	21.11.2022		CNP Freire MBarí				Hangar Control Panel Part list		400209341		=WP03	
Updated As-Build		28.11.2022	ANP	User	ANP											
Added WP03		21.11.2022	ANP	Approved	TR											
Status	Change	Date	Name	Standard		Version	Index	Repl. by					10070-19 PL		Rev. G	Sheet 1
																Next 2
F3E66C8F8EFE4D7FBA8F6D9F89D2A466		2		3		4		5		6		7		8		

1		2		3		4		5		6		7		8	
Device ID		Device		Part Number		Qty	Unit	Description		Manufacturer		Datablad			
-SF14..-SF16,-SF18		10-2112.1069		EACBU014		4	Pcs	Single-Led Diode T5,5 24V White		EAO		Serie 10.pdf			
-SF14..-SF16,-SF18		14-132.0252		EACSW000122		4	Pcs	Illuminated pushbutton, IP 67, Momentary 2xNC+2xNO		EAO		Serie 14.pdf			
-SF14..-SF16,-SF18		704.600.2		EACSW0002		4	Pcs	Front Protective Ring IP67 (Transparent Silicone/Brass)		EAO		eao_704.600.2_-_Front_protective_ring.pdf			
-SF14..-SF16,-SF18		704.602.7		EACSW0003		4	Pcs	Lens Plastic Round Flat (Transparent), W/Difusor & Front Protective ring		EAO		Serie 14.pdf			
-SF14..-SF16,-SF18		704.609.9		EACSW0004		4	Pcs	Marking plate for lens round flat (Difusor)		EAO		Serie 14.pdf			
-TA1		S8VK-X12024A-EIP		EACTR034-10		1	Pcs	230/24V 5A Power Supply W/Display		Omron		S8VK-X.pdf			
-U1						0,35	M	MOUNT							
-UC1		Console Deck Panel 400x450x340		EACBO401		1	Pcs	400x450x340mm Control Panel BBQ type		Molstad		Dim Sketch			
-WF1,-WF2		Patch Cord 0.5M		ECPPE0471-1		2	M	Patch Cord 0.5M							
-X1		ZAP ZDL 2.5		EACPL02149-02		1	Pcs	End Plate For ZDL 2.5 Terminal		Weidmüller		ZAP ZDL2.5.pdf			
-X1 (1)		ZDL 2.5/L/L/PE		EACPL021411		1	Pcs	Terminal 2 Tier. +PE		Weidmüller		ZDL 2.5 L-L-PE.pdf			
-X1 (PE,PE),-X300 (PE)		ZPE 2.5/3AN		EACPL02025-1		3	Pcs	Terminal		Weidmüller		ZPE 2.5 3AN.pdf			
-X1,-X300		DEK 5 FWZ 1-10		EACPL020T1-10		2	Pcs	Terminal No 1-10 (Dekafix)		Weidmüller		DEK 5 FWZ 1-10.pdf			
-X1,-X300		WAD 8 MC NE WS		EACPL02150		2	Pcs	End Stop Label plate		Weidmüller		WAD 8 MC NE WS.pdf			
-X1,-X300		ZAP/TW 2		EACPL02148		3	Pcs	End Plate For ZDU/ZPE 2.5/3AN Terminals		Weidmüller		ZAP TW 2 DB.pdf			
-X1,-X300,-XG3		AEB 35 SC/1		EACPL0202-2		5	Pcs	AEB 35 SC/1 End Bracket		Weidmüller		Datasheet			
-X300 (1-2)		ZDU 2.5/3AN		EACPL02140		2	Pcs	Terminal		Weidmüller		ZDU 2.5 3AN.pdf			
-XG3		ZAP/TW ZDK2.5		400091997		1	Pcs	End Plate For ZDK2.5 Terminal		Weidmüller		Weidmuller\ZAP TW ZDK2.5.pdf			
-XG3 (+,+,+)		ZDK 2.5 +/-		EACPL02055		3	Pcs	Terminal 2 Levels +/- Marking		Weidmüller		ZDK 2.5.pdf			

