

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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				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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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										
Status	Change	Date	Name	Standard	Version		Index	Repl. by					10070 - CD		Rev.	G	Sheet 4
																Next	1
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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					

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

				Date	17/11-2021	CNP Freire MBarí				Termination list				
	Updated Term. after CP02 removed	28.11.2022	ANP	User	GSK									
	Updated after adding WP03	21.11.2022	ANP	Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070- TL	Rev. G	Sheet 11 Next 12	

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

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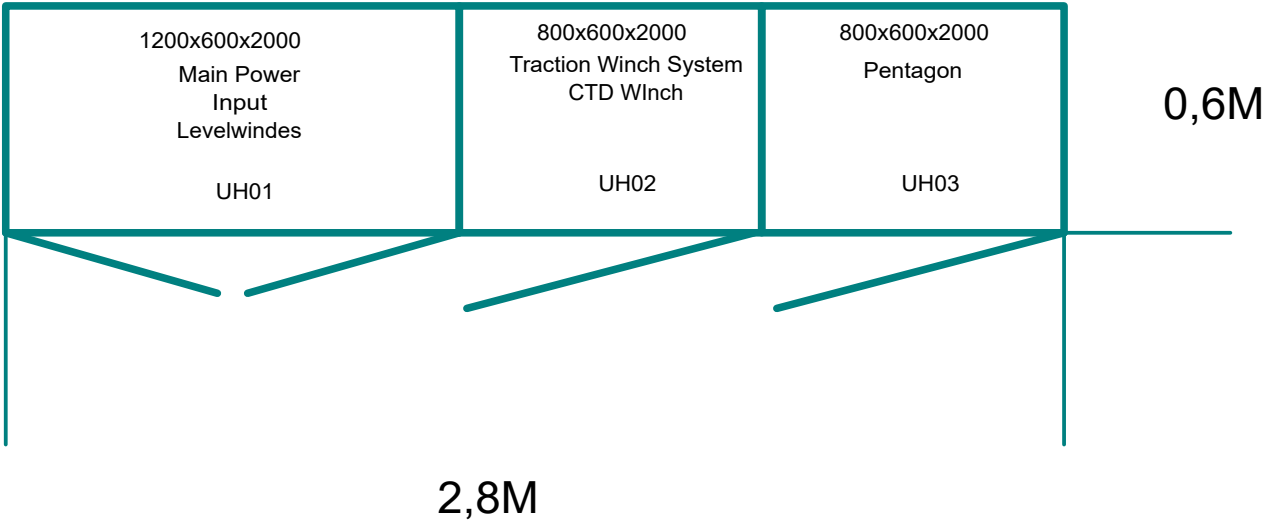
Location Overview System Equipment

- =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

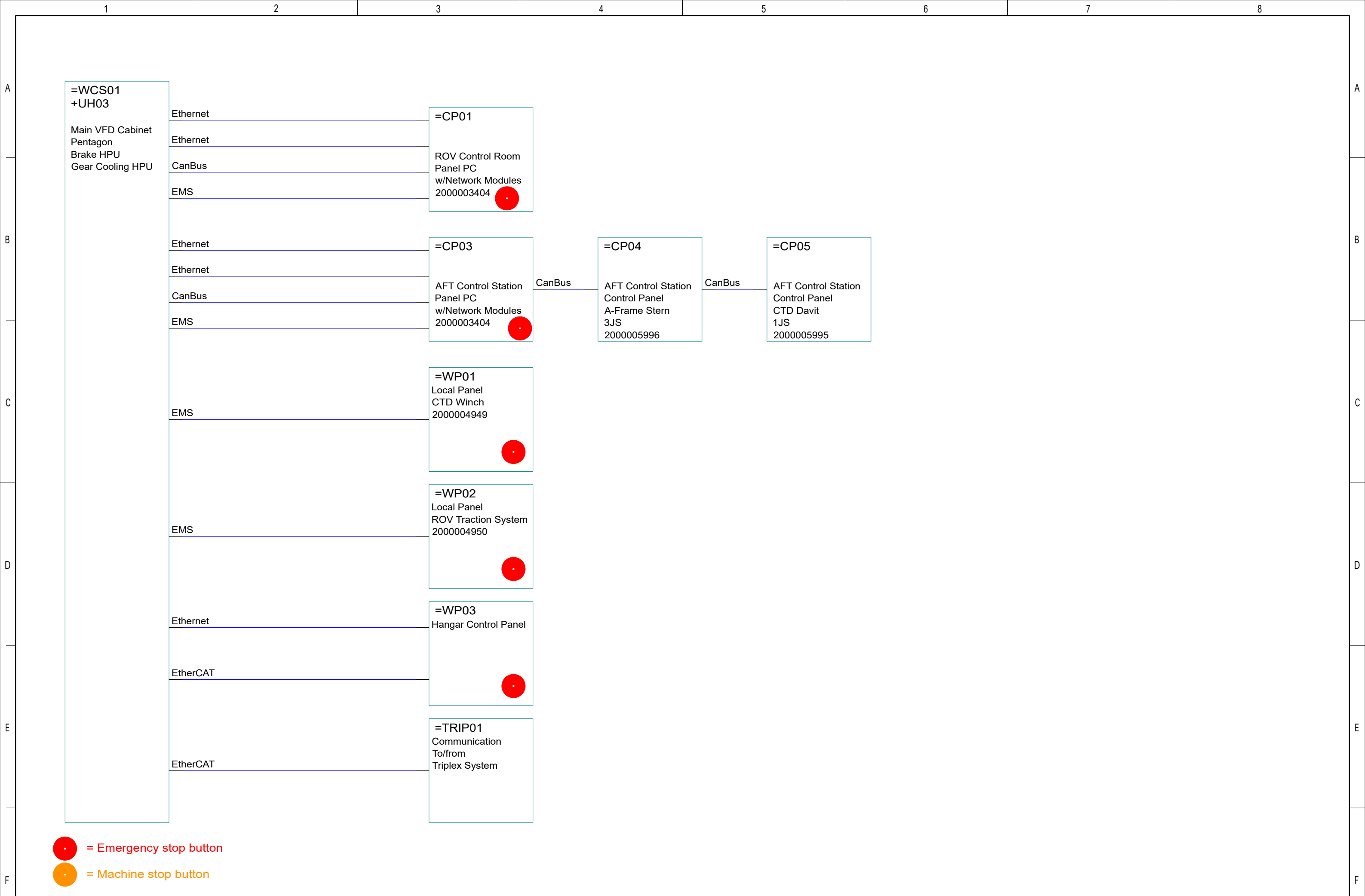
				Date	17/11-2021	CNP Freire MBari				Locations System Equipment Overview				
	Removed CP02	28.11.2022	ANP	User	GSK									
	Added WP03 panel	21.11.2022	ANP	Approved	RAJ									
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Cabinet Overview

WCS01
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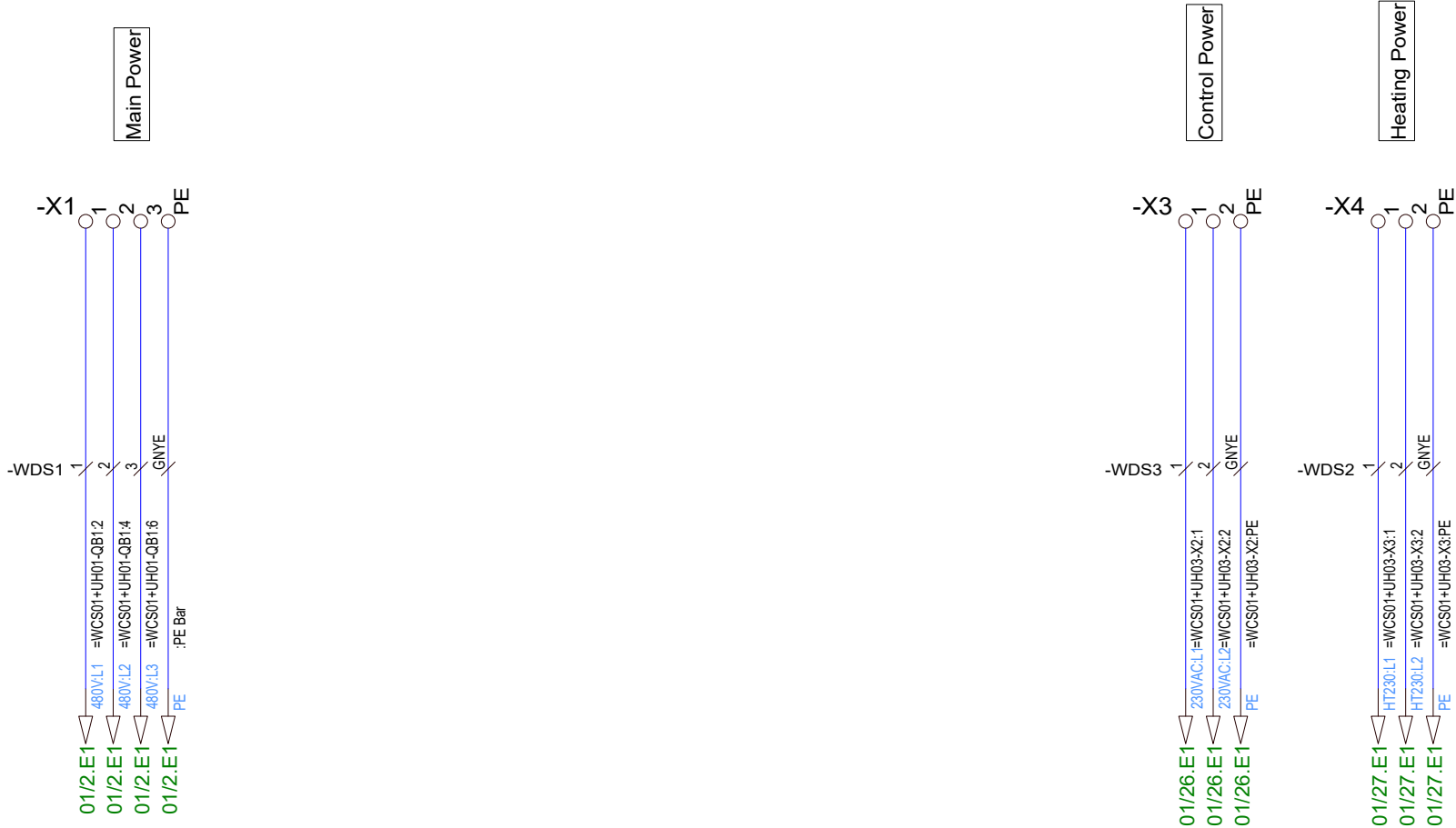
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				Approved	RAJ													
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				Date	17/11-2021	CNP Freire MBarí					Locations Network Topology Emergency Stop		10070-00LO		Rev. G		Sheet 3 Next 1	
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	Added WP03 panel	21.11.2022	ANP	Approved	RAJ													
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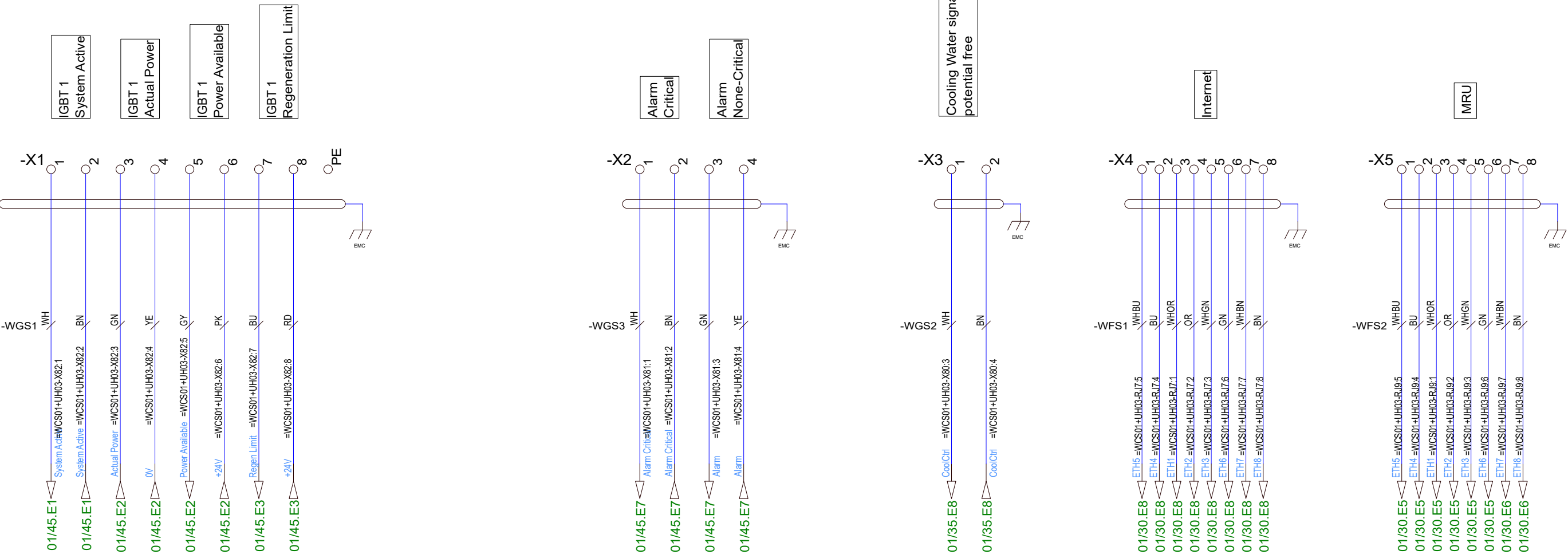
Yard Connections

Terminals not verified

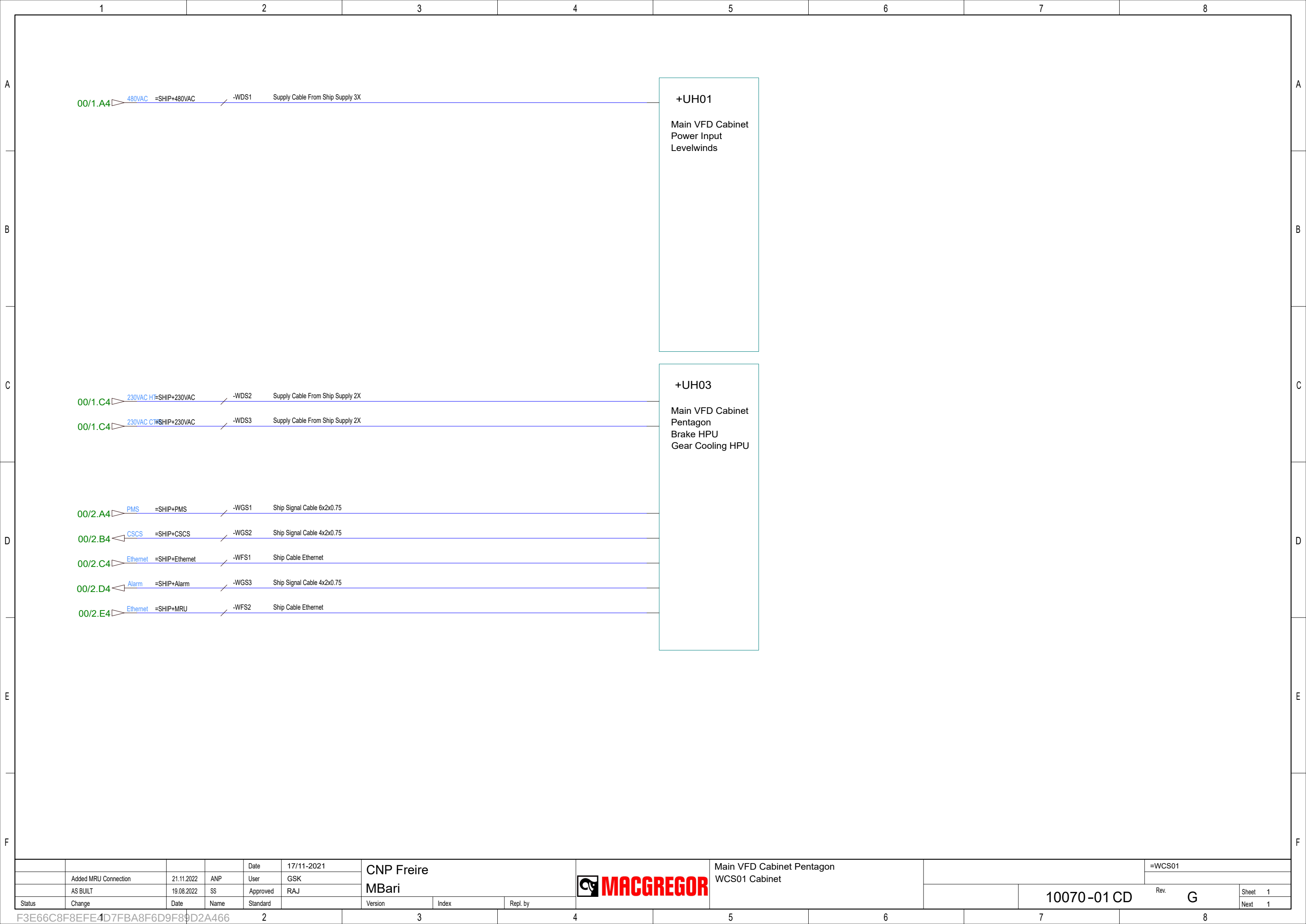


				Date	17/11-2021	CNP Freire MBar				Ship Connections Power Connections 440VAC, 230VAC				=SHIP	
				User	GSK									+Power	
				Approved	RAJ									Rev. G	
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Yard Connections
To be verified

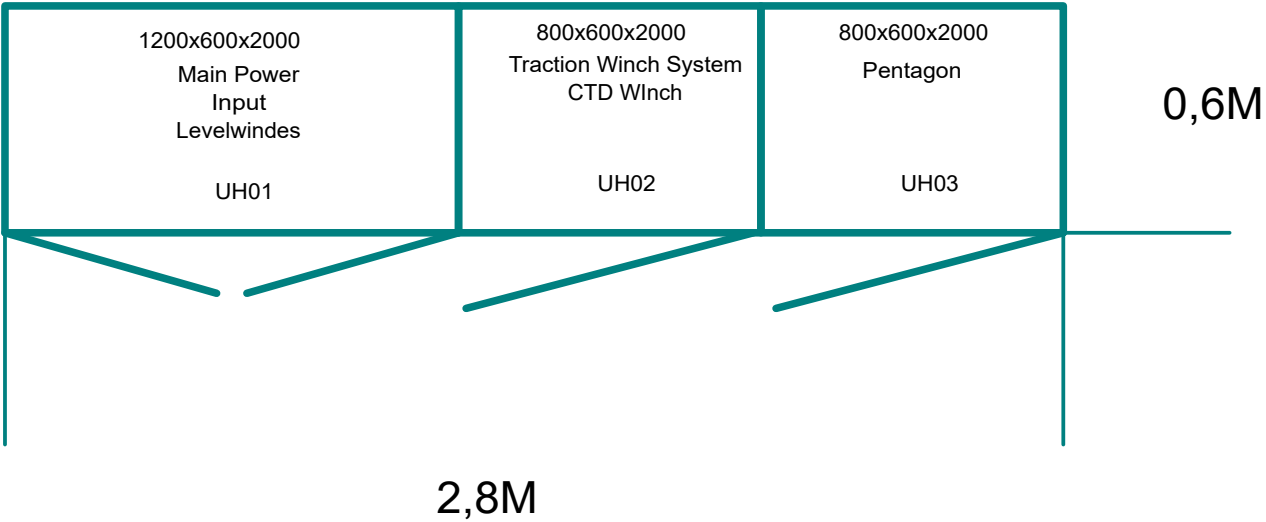


				Date	17/11-2021	CNP Freire				Ship Connections PMS, Alarm, Internet Optional Alarm			=SHIP		
				User	GSK								+Signal		
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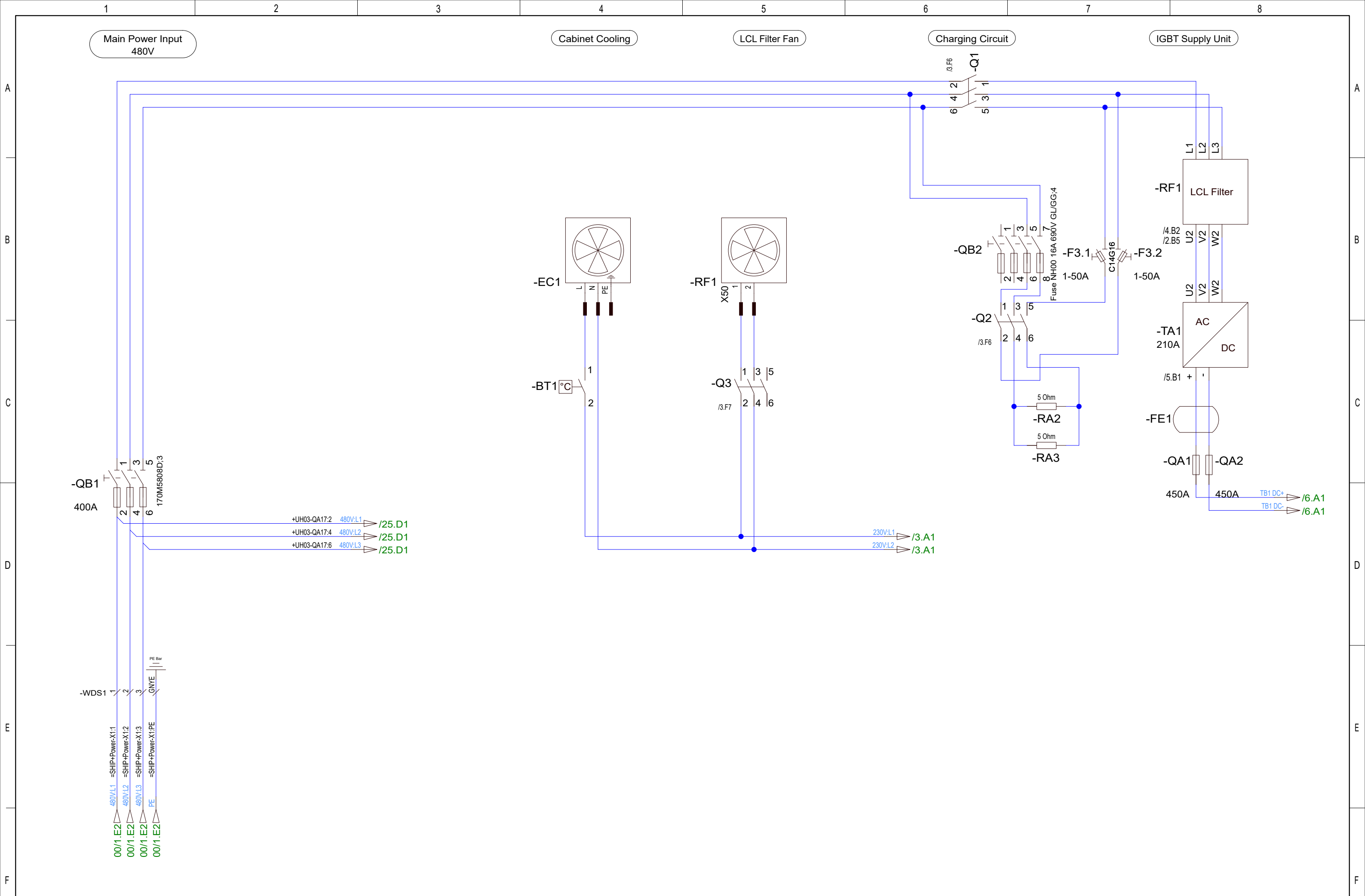


Cabinet Overview

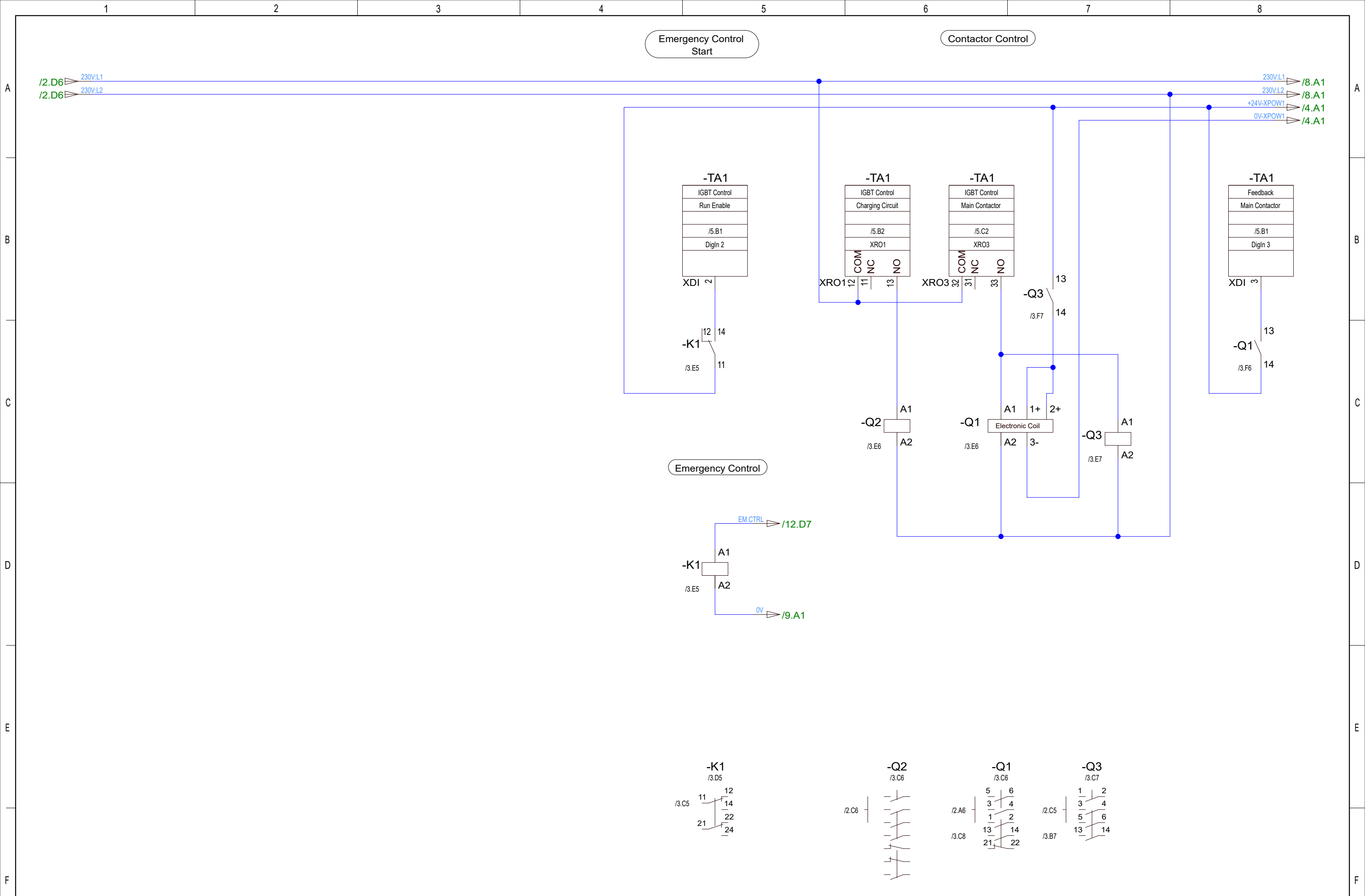
WCS01
2000005807



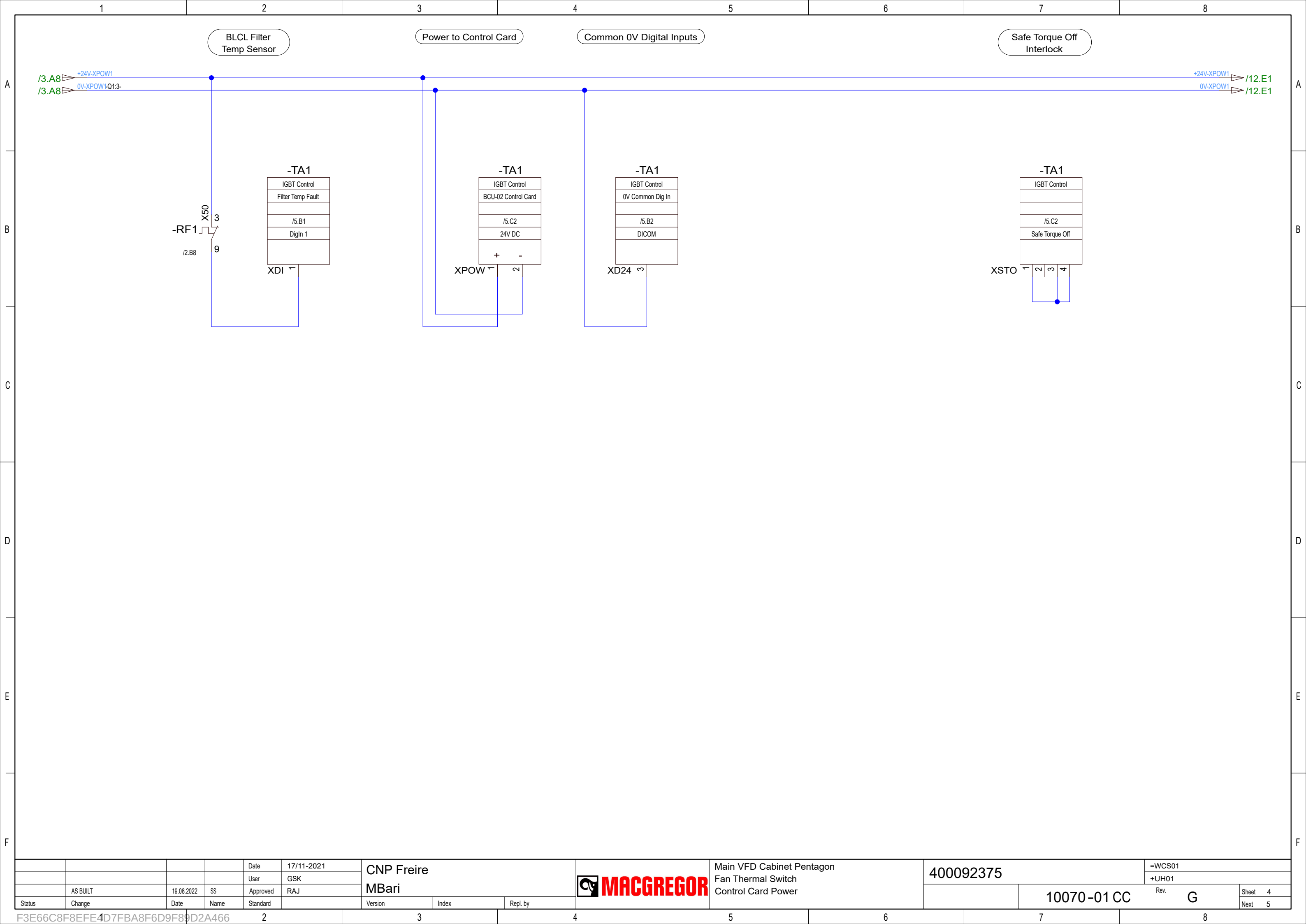
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				User	GSK									
	AS BUILT	19.08.2022	SS	Approved	RAJ							10070-01 CC	Rev. G	Sheet 1
Status	Change	Date	Name	Standard		Version	Index	Repl. by						Next 2

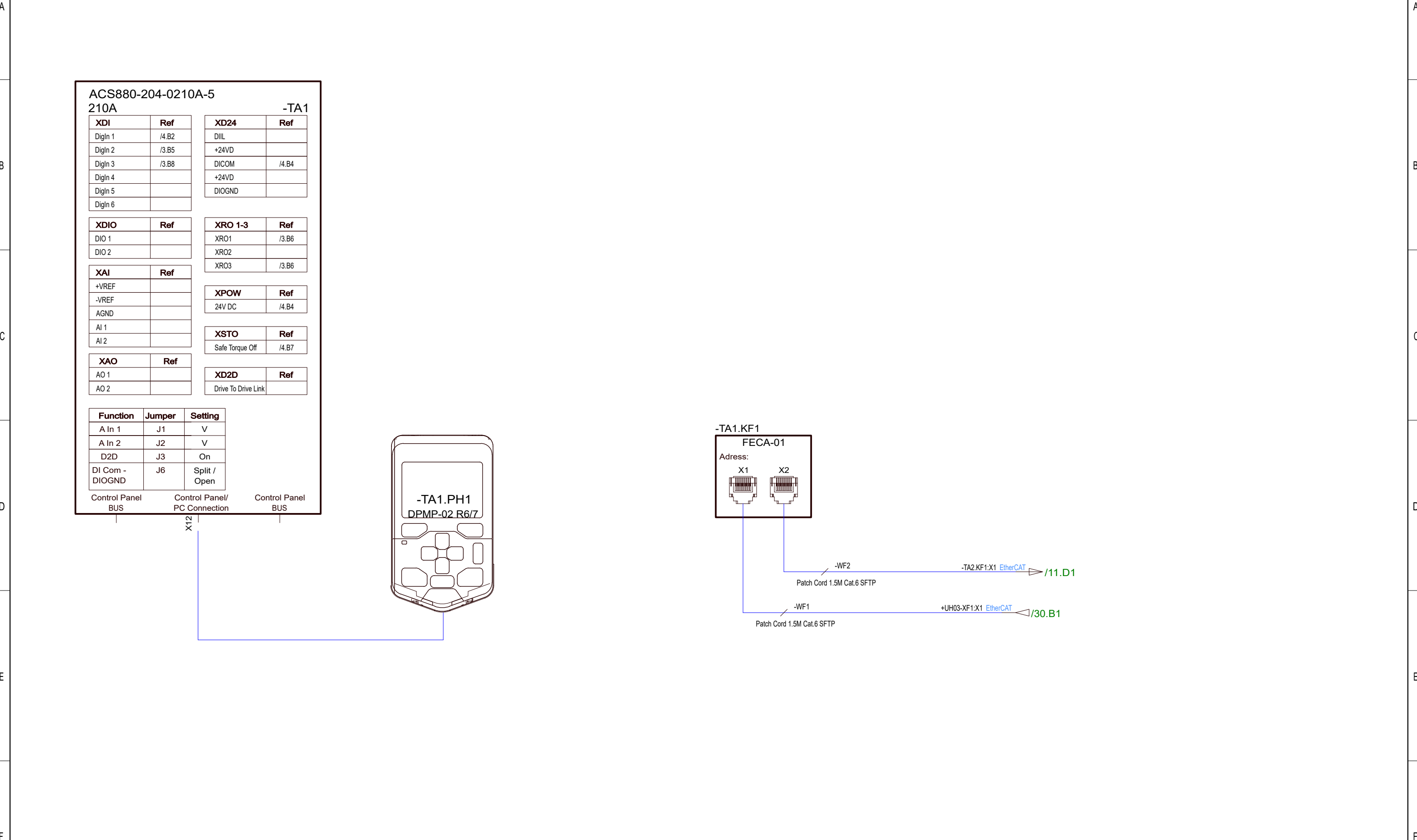


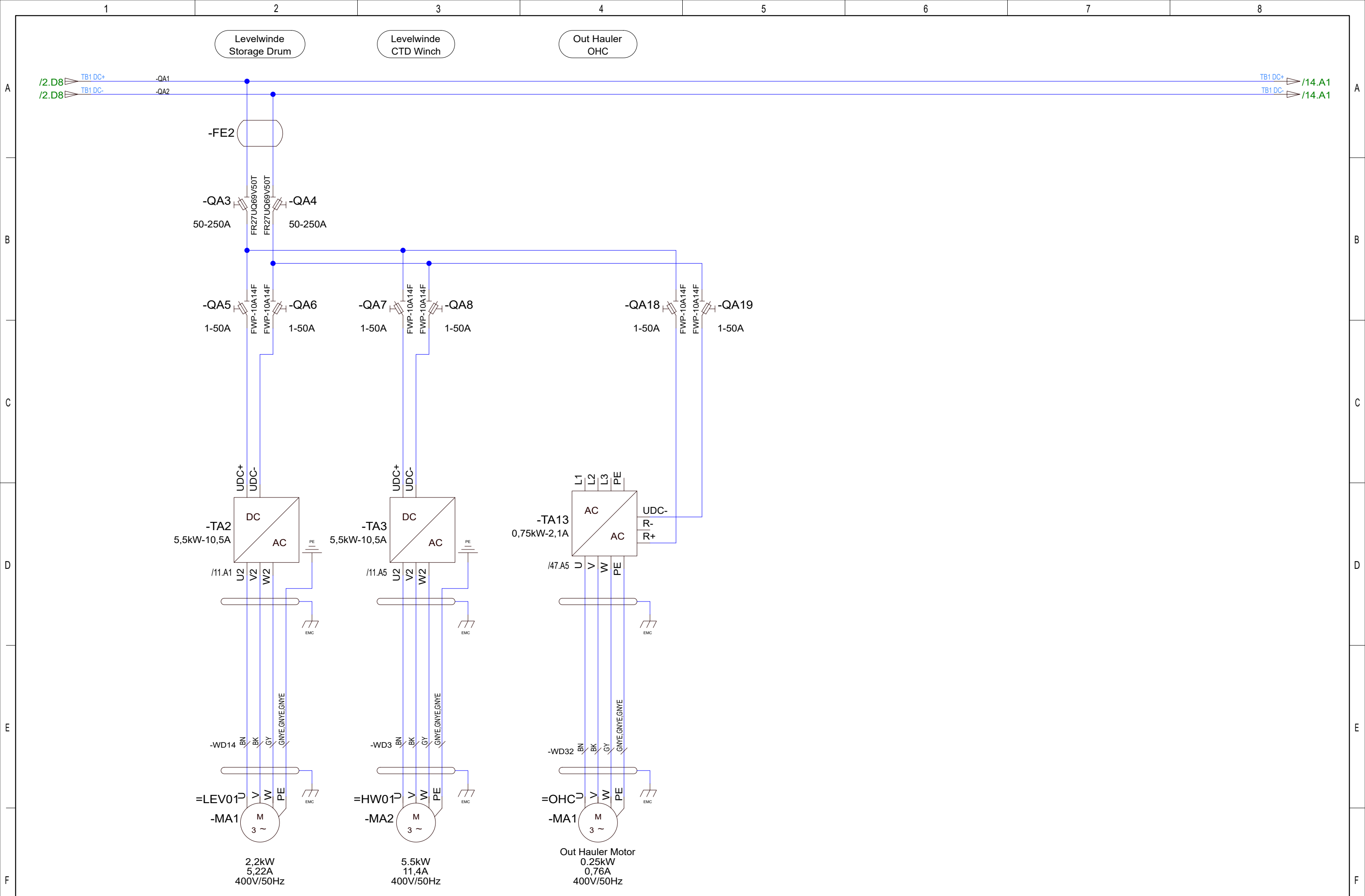
				Date	17/11-2021	CNP Freire MBarí			Main VFD Cabinet Pentagon Main Power input 1 Control Power, Charging Circuit IGBT Modules		400092375		=WCS01 +UH01	
				User	GSK								Rev. G	
Status	AS BUILT	19.08.2022	SS	Approved	RAJ	Version	Index	Repl. by	10070-01 CC		Sheet 2		Next 3	



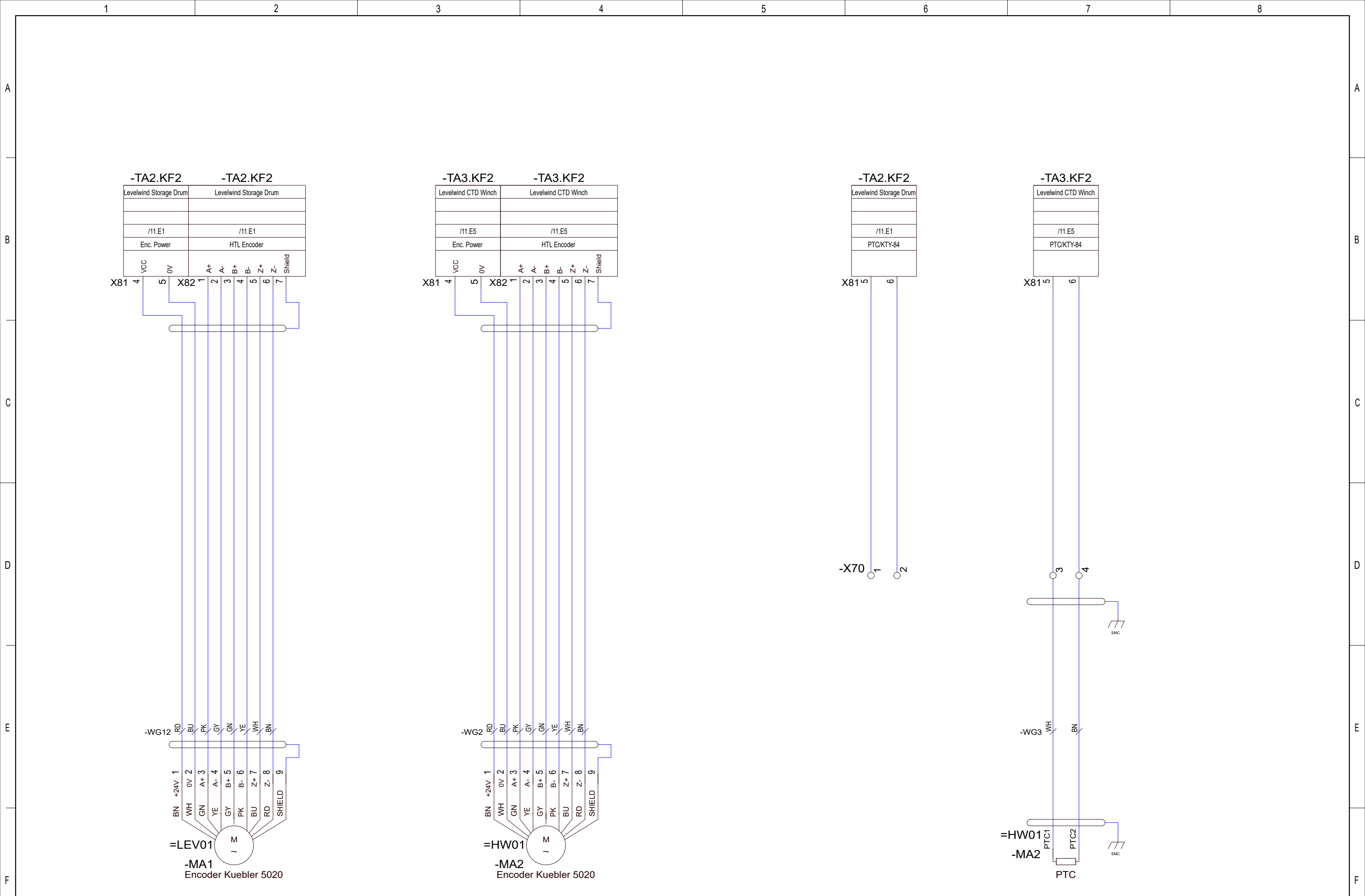
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				User	GSK									+UH01	
	AS BUILT	19.08.2022	SS	Approved	RAJ									Rev.	G
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-01 CC		Sheet	3
														Next	4

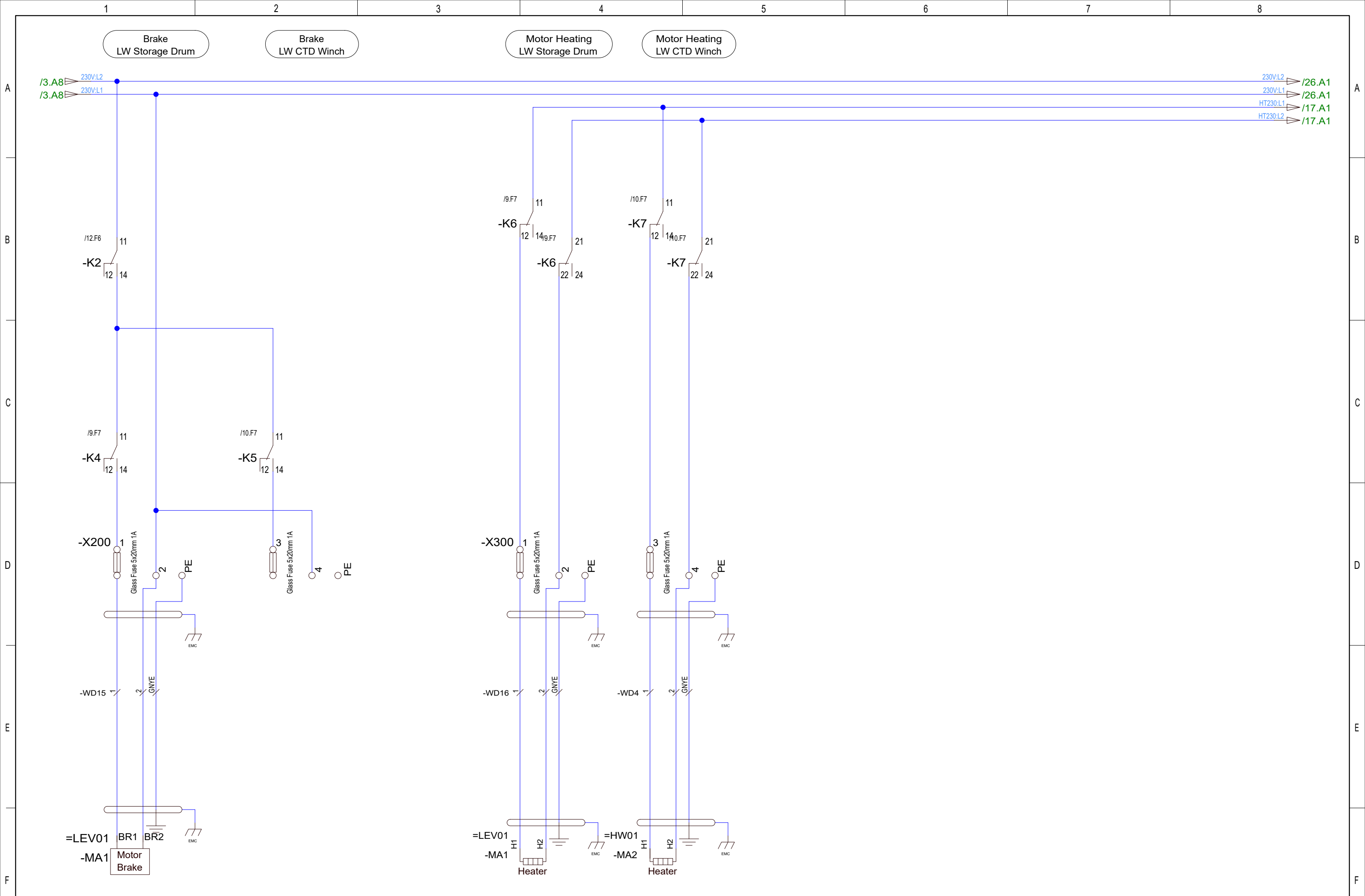




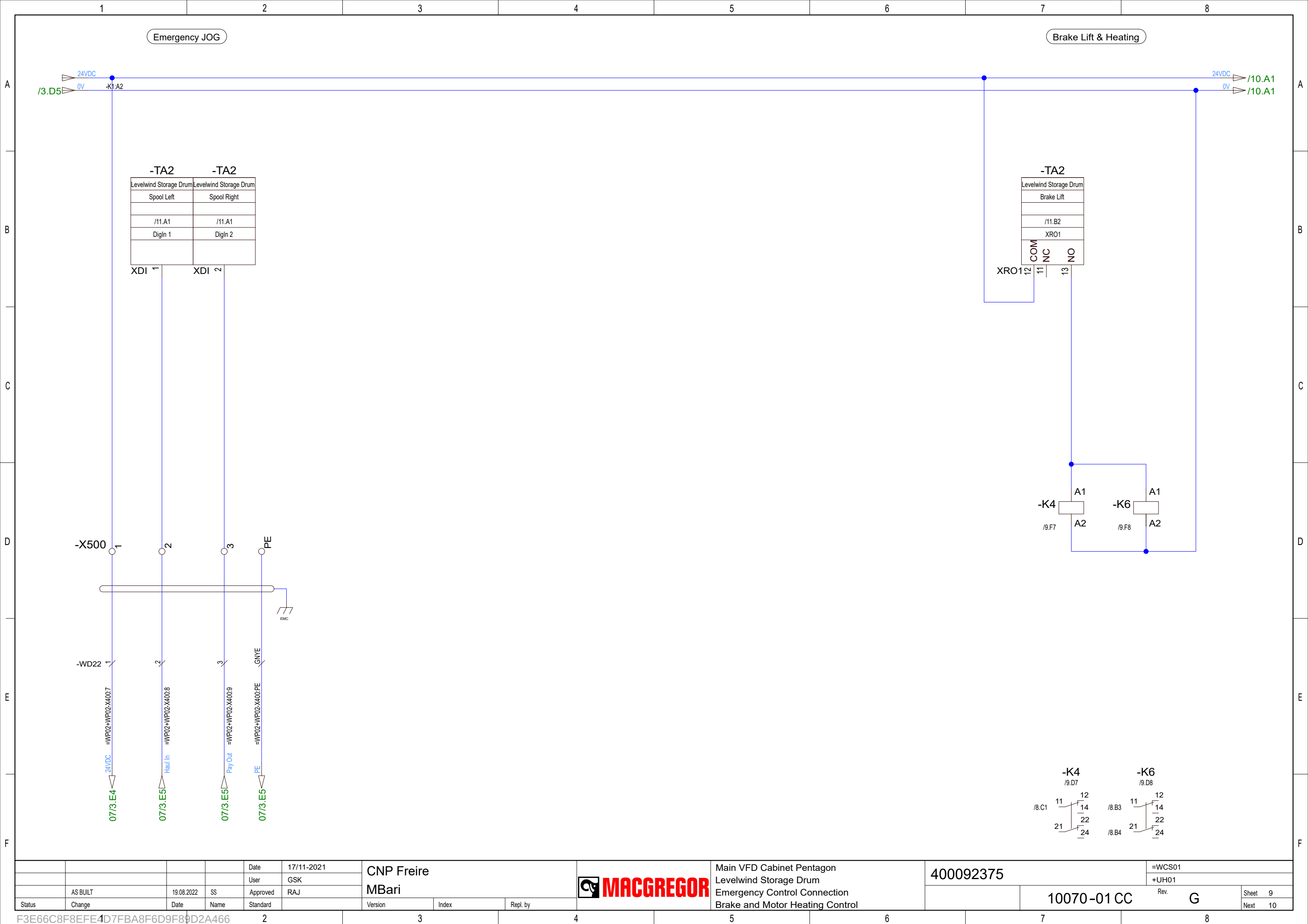


				Date	17/11-2021	CNP Freire MBarí				Main VFD Cabinet Pentagon Levelwindes Frequency Inverter	400092375		=WCS01	
			User	GSK	+UH01									
	AS BUILT	19.08.2022	SS	Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-01 CC	Rev. G	Sheet 6 Next 7



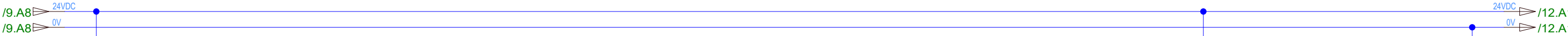


				Date	17/11-2021	CNP Freire MBarí				Main VFD Cabinet Pentagon Levelwindes Brakes & Heating	400092375		=WCS01	
			User	GSK	+UH01									
	AS BUILT	19.08.2022	SS	Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-01 CC			Next 9



Emergency JOG

Brake Lift & Heating



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

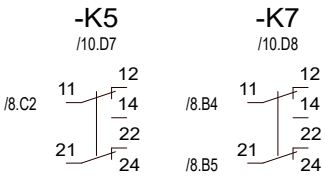
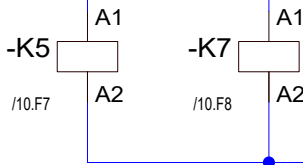
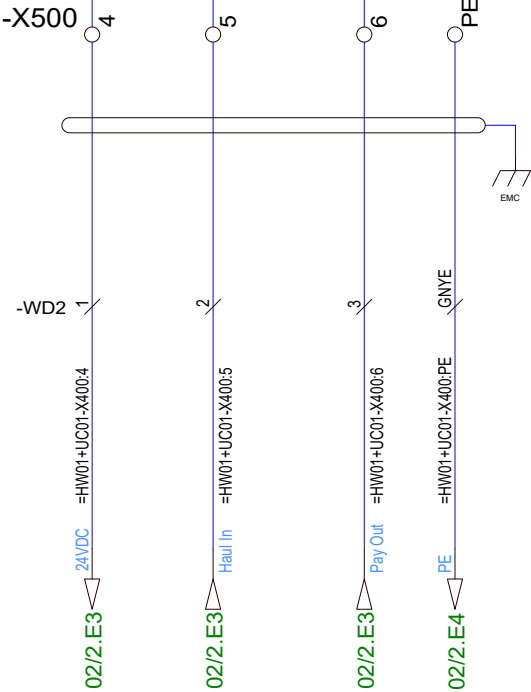
XDI ↖

XDI ↗

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

XRO1 ↖

XRO1 ↗



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



Levelwinde
Storage Drum

Levelwinde
CTD Winch

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

-TA2

XDI	Ref
DigIn 1	/9.B1
DigIn 2	/9.B2
DigIn 3	/12.B6
DigIn 4	
DigIn 5	
DigIn 6	

XD24	Ref
DIIL	
+24VD	
DICOM	/12.B1
+24VD	
DIOGND	

XDIO	Ref
DIO 1	
DIO 2	

XRO 1-3	Ref
XRO1	/9.B7
XRO2	
XRO3	

XAI	Ref
+VREF	
-VREF	
AGND	
AI 1	
AI 2	

XPOW	Ref
24V DC	/12.E1

XSTO	Ref
Safe Torque Off	/13.B1

XAO	Ref
AO 1	
AO 2	

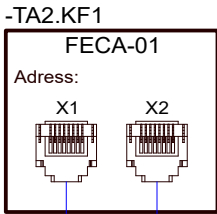
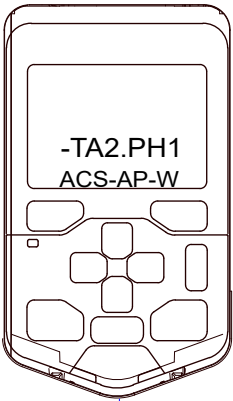
XD2D	Ref
Drive To Drive Link	

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



/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

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

-TA3

XDI	Ref
DigIn 1	/10.B1
DigIn 2	/10.B2
DigIn 3	/12.B7
DigIn 4	
DigIn 5	
DigIn 6	

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

XDIO	Ref
DIO 1	
DIO 2	

XRO 1-3	Ref
XRO1	/10.B7
XRO2	
XRO3	

XAI	Ref
+VREF	
-VREF	
AGND	
AI 1	
AI 2	

XPOW	Ref
24V DC	/12.E2

XSTO	Ref
Safe Torque Off	/13.B3

XAO	Ref
AO 1	
AO 2	

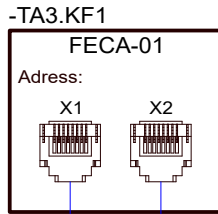
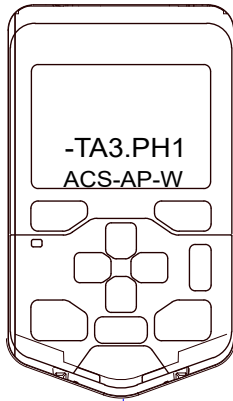
XD2D	Ref
Drive To Drive Link	

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



FEN-31

-TA3.KF2

X81	Ref
Power Latch	/12.B4
Enc. Power	/7.B1
PTC/KTY-84	/7.B6

X22	Ref
TTL Encoder	

X82	Ref
HTL Encoder	/7.B2

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

X81	Ref
Power Latch	/12.B4
Enc. Power	/7.B3
PTC/KTY-84	/7.B7

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
				User	GSK
	AS BUILT	19.08.2022	SS	Approved	RAJ
Status	Change	Date	Name	Standard	

CNP Freire
MBarí

Version	Index	Repl. by
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Main VFD Cabinet Pentagon
Levelwindes Storage Drum & CTD Winch
Frequency Inverter References

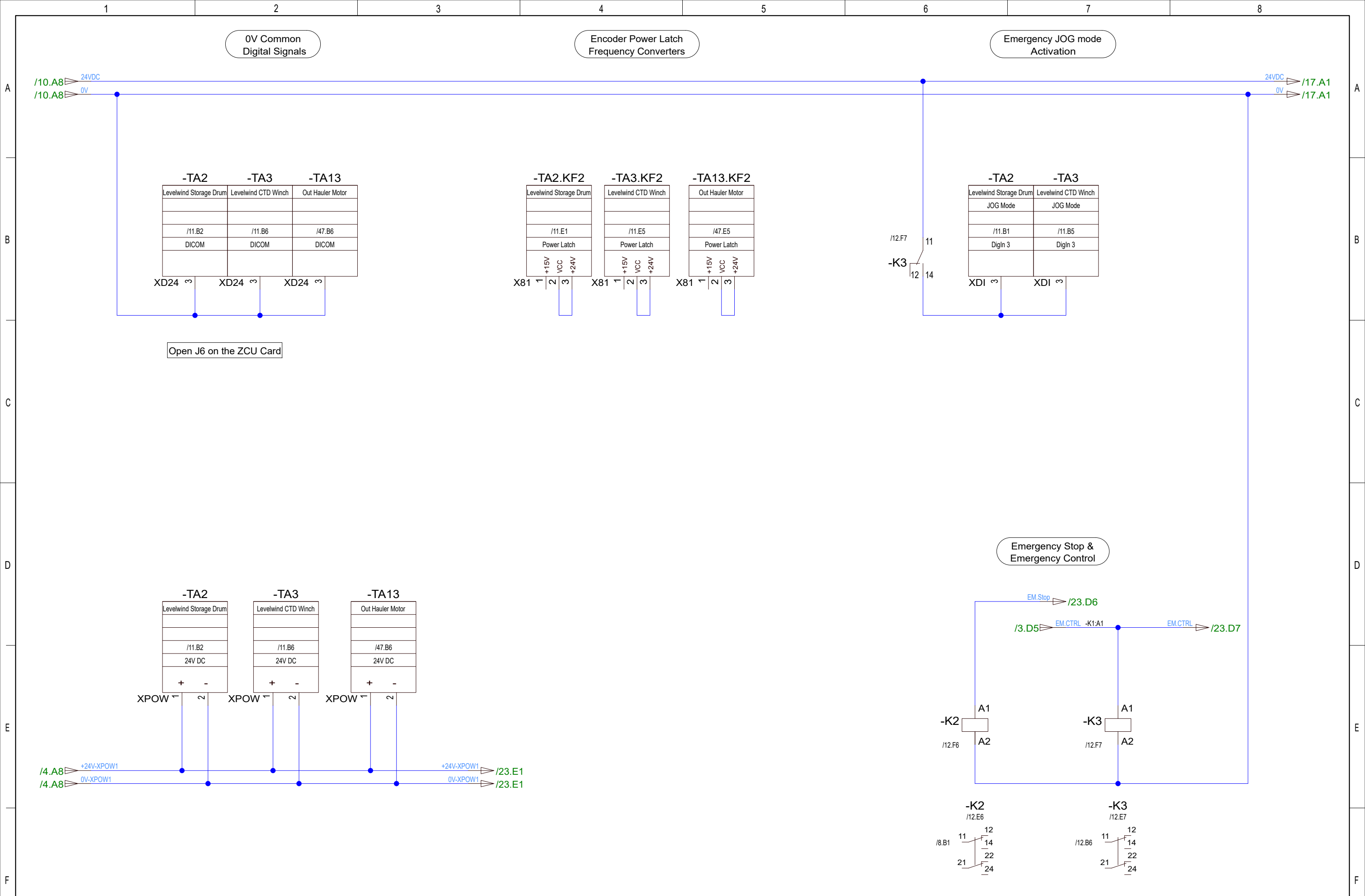
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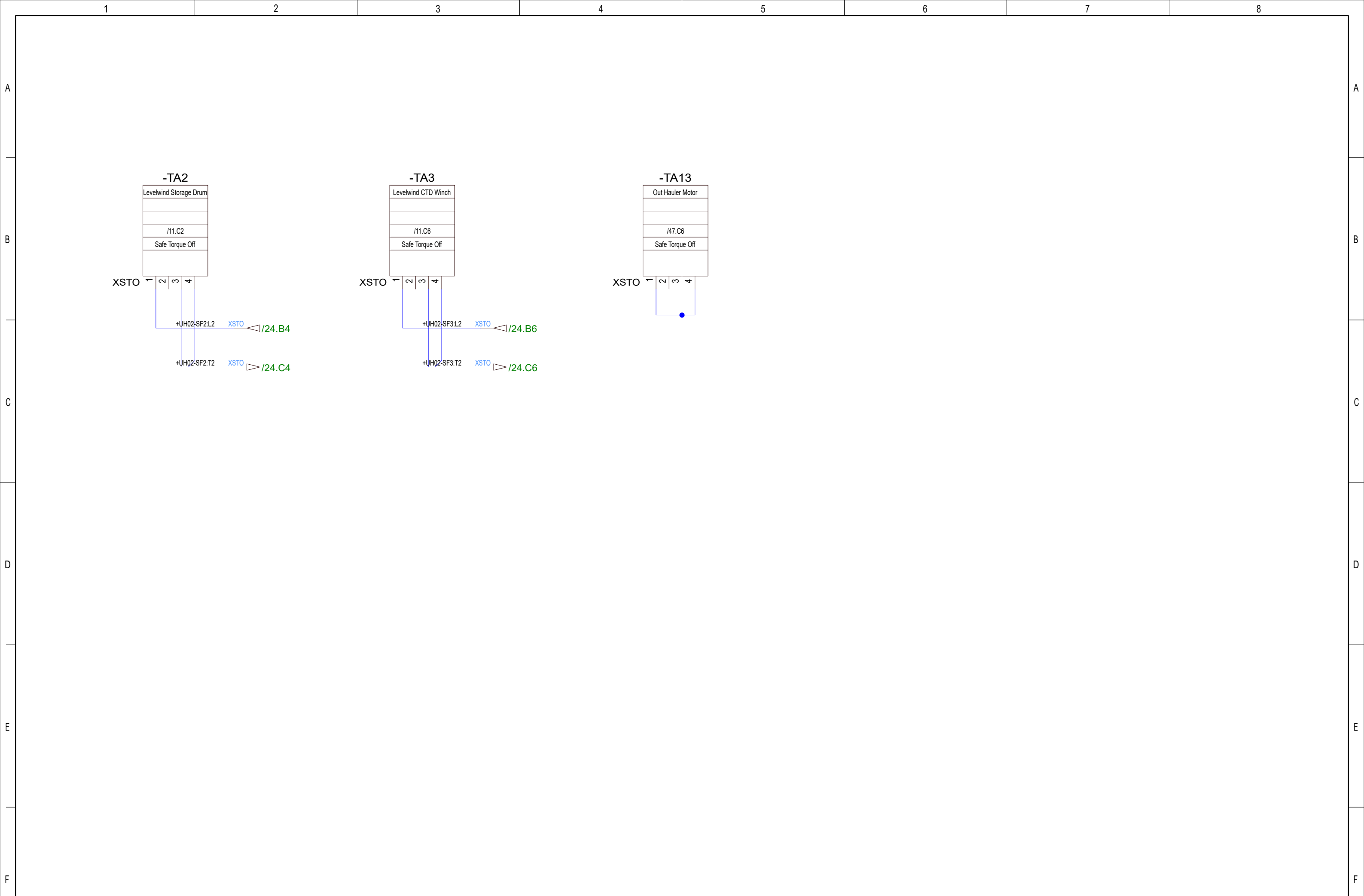
10070-01 CC

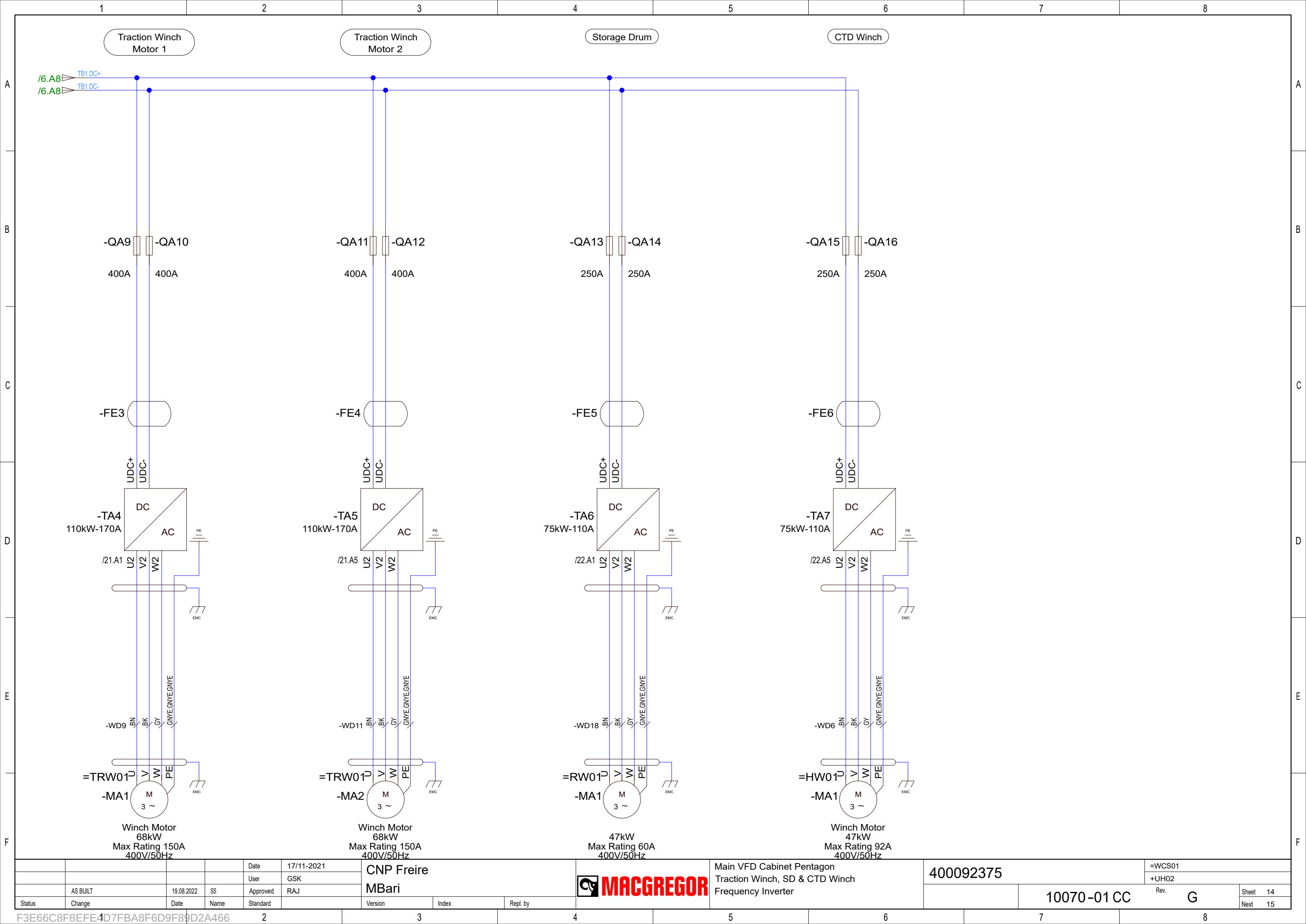
=WCS01
+UH01

Rev. G

Sheet 11
Next 12

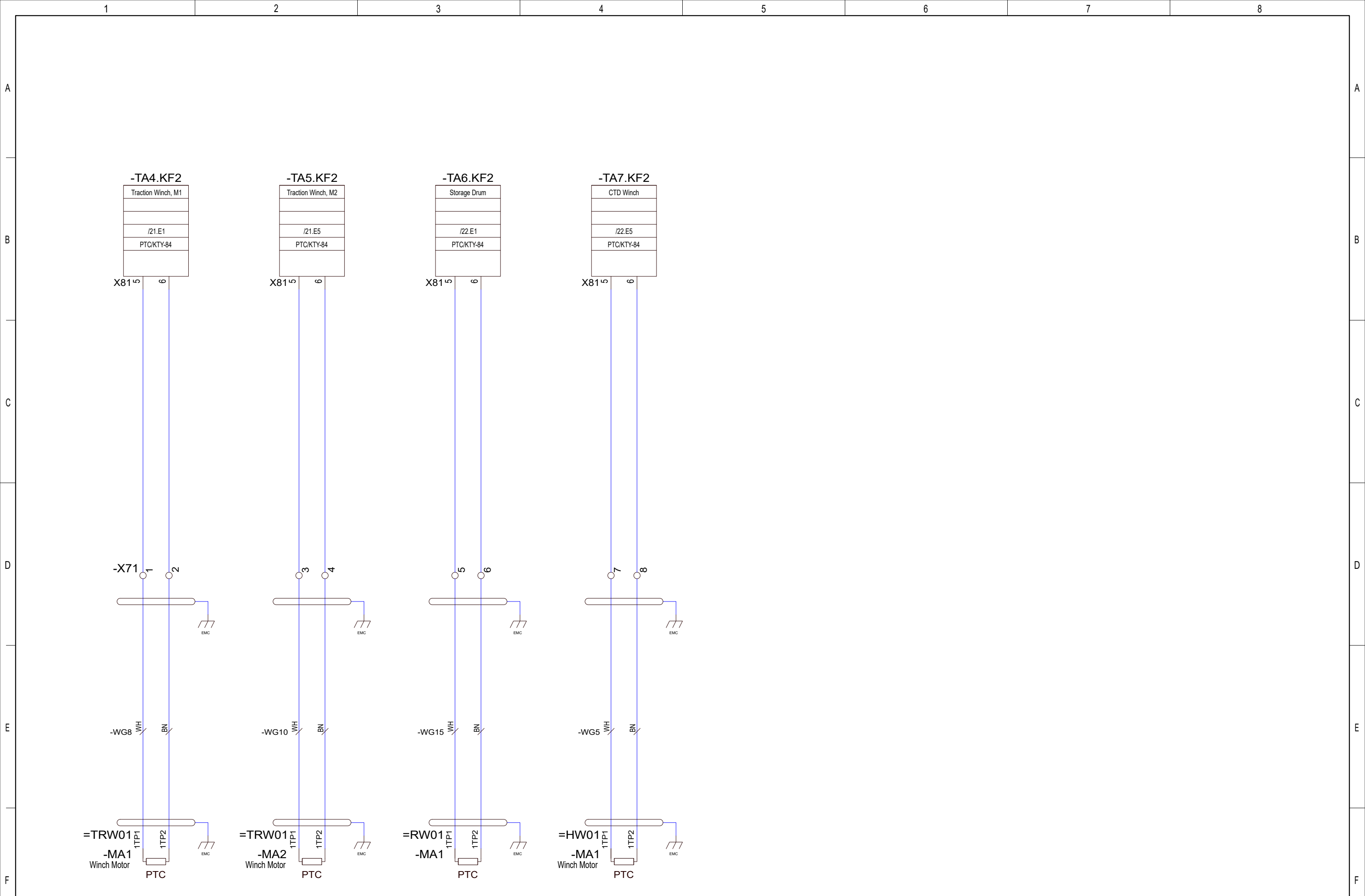




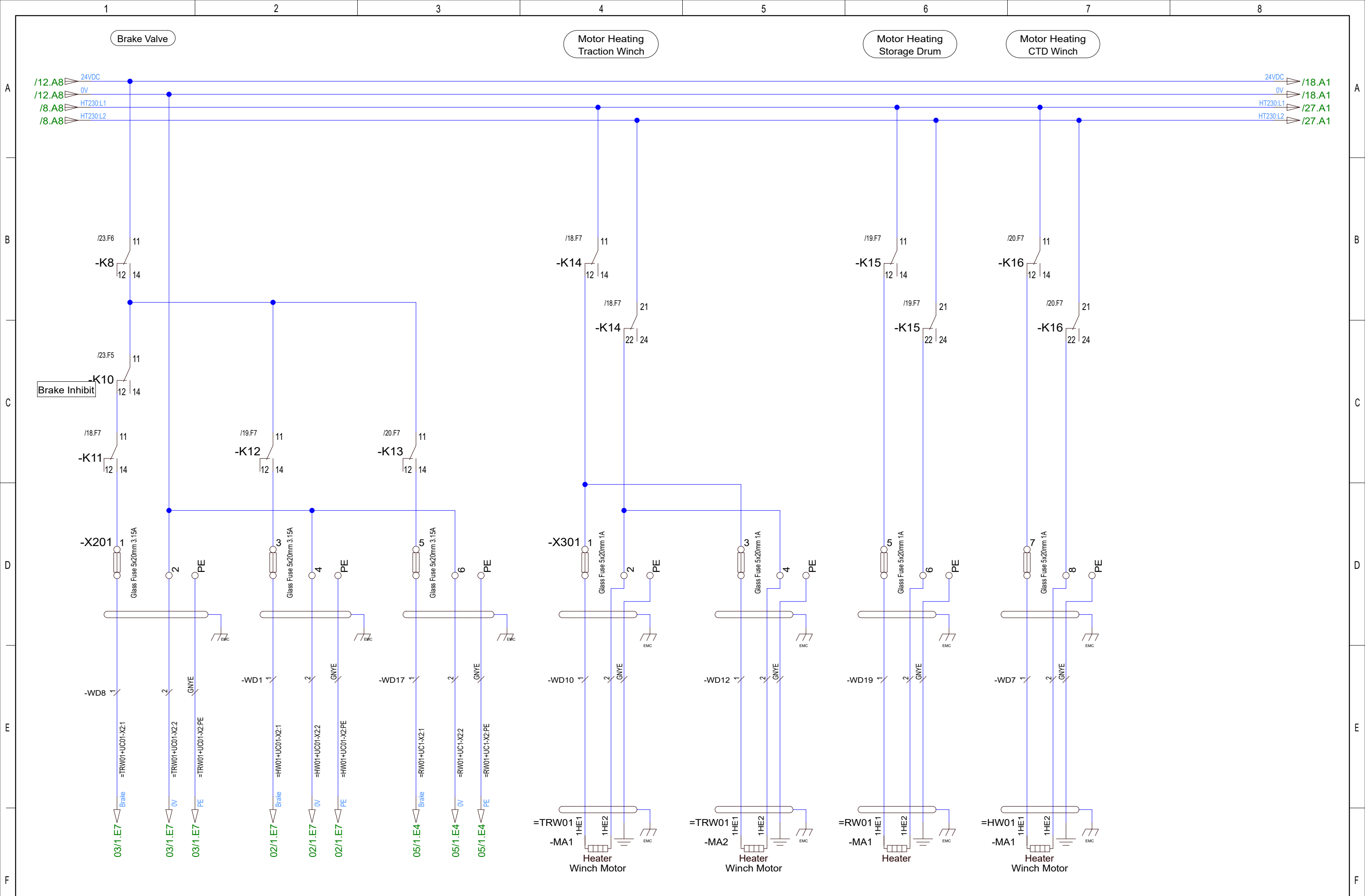


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				User	GSK								+UH02		
	AS BUILT	19.08.2022	SS	Approved	RAJ										
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-01 CC	Rev.	G	Sheet	14
														Next	15

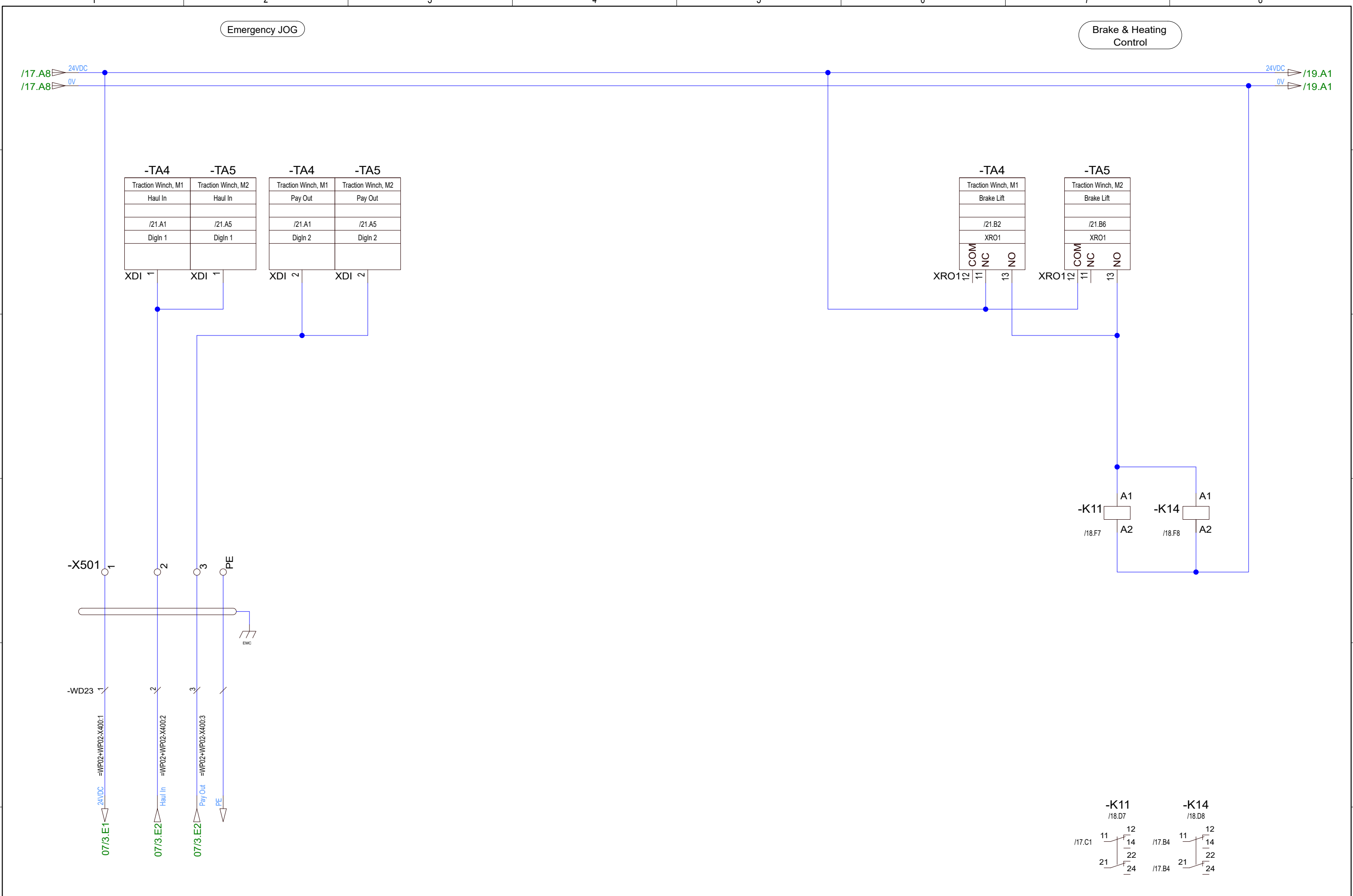
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				User	GSK								+UH02	
	AS BUILT	19.08.2022	SS	Approved	RAJ								Rev.	G
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-01 CC		Sheet	16
F3E66C8F8EFE4D7FBA8F6D9F89D2A466													Next	17



				Date	17/11-2021	CNP Freire MBarí				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
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	
Status	AS BUILT	19.08.2022	SS	Approved	RAJ	Version	Index	Repl. by	10070-01 CC		Rev.	G	Sheet 19
Change		Date	Name	Standard									Next 20

F3E66C8F8EFE4D7FBA8F6D9F89D2A466

Emergency JOG

Brake & Heating
Control



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

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			

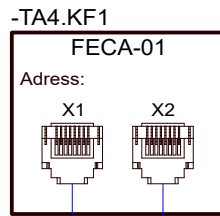
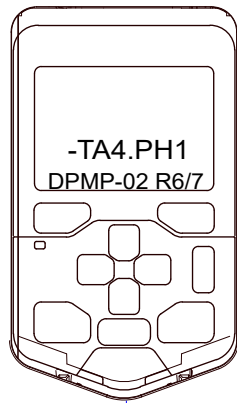
XDIO	Ref	XRO 1-3	Ref
DIO 1		XRO1	/18.B6
DIO 2		XRO2	
		XRO3	

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			

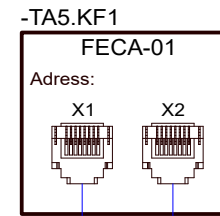
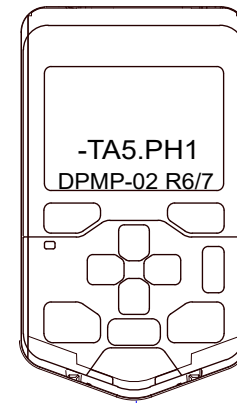
XDIO	Ref	XRO 1-3	Ref
DIO 1		XRO1	/18.B7
DIO 2		XRO2	
		XRO3	

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			

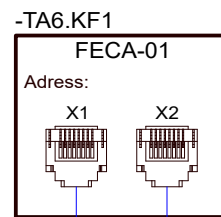
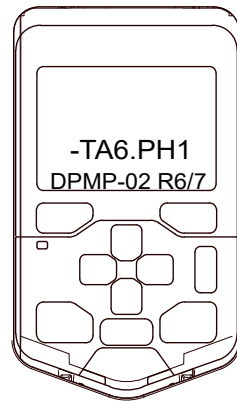
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DIO 1		XRO1	/19.B7
DIO 2		XRO2	
		XRO3	

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			

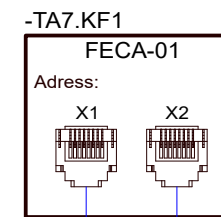
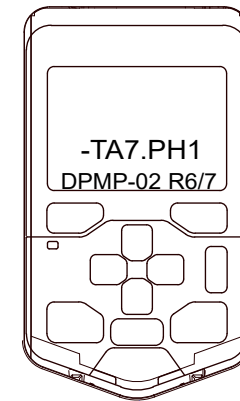
XDIO	Ref	XRO 1-3	Ref
DIO 1		XRO1	/20.B7
DIO 2		XRO2	
		XRO3	

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
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

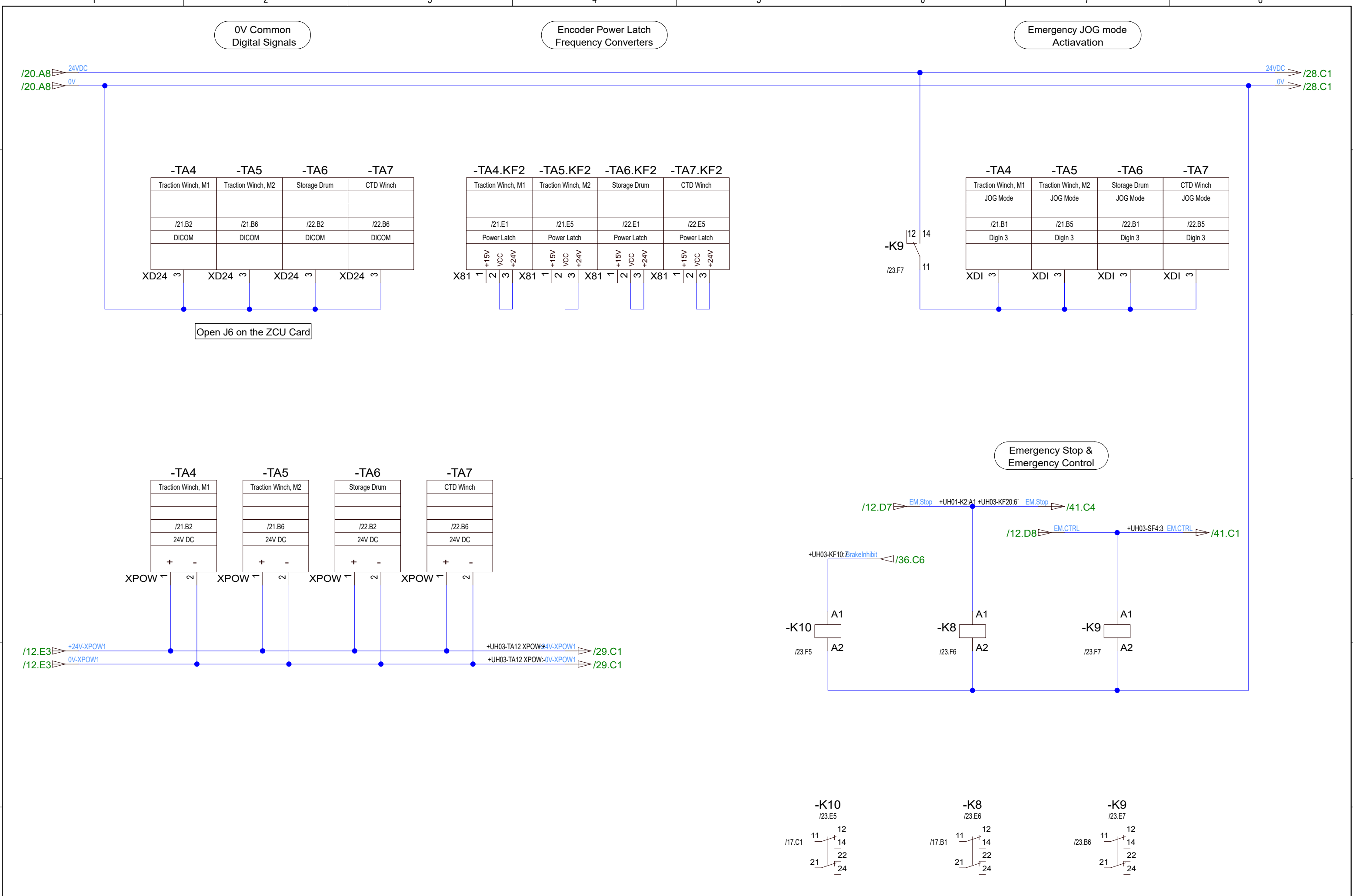
FEN-31 -TA7.KF2

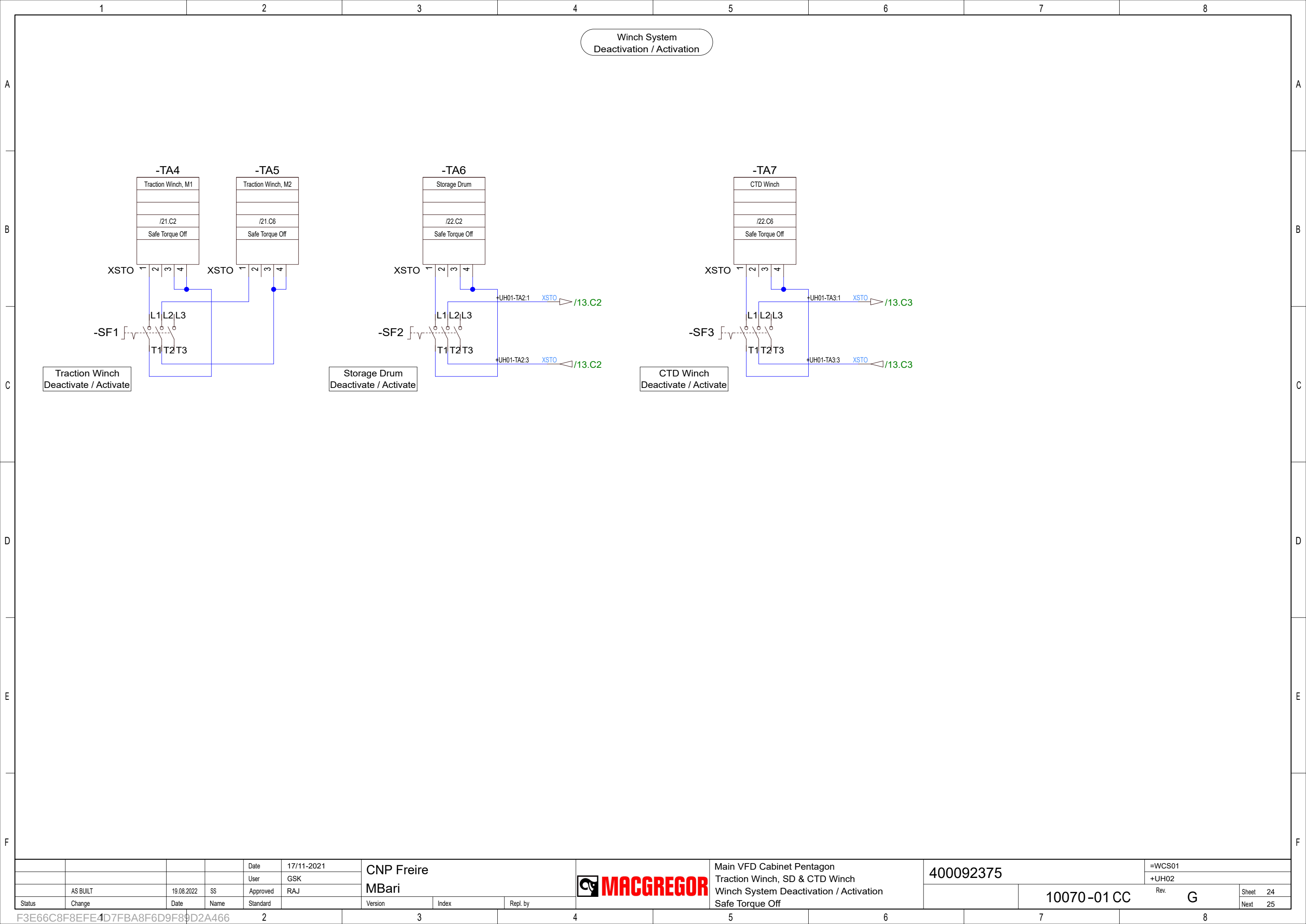
X81	Ref	X22	Ref
Power Latch	/23.B5	TTL Encoder	
Enc. Power	/15.B7		
PTC/KTY-84	/16.B4		

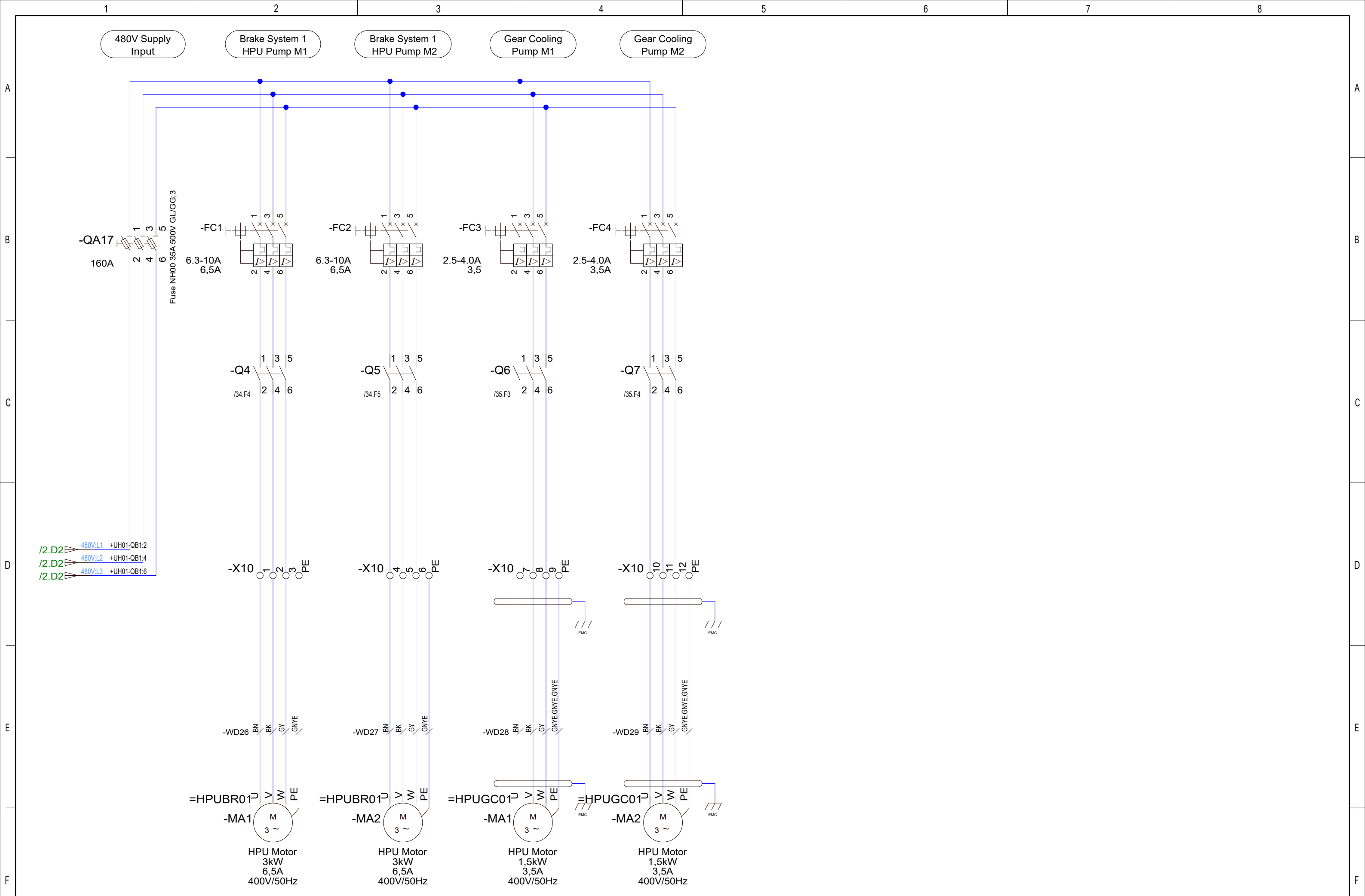
X82	Ref	X84	Ref
HTL Encoder	/15.B7	Power	
		Dig In 1	
		Dig In 2	

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

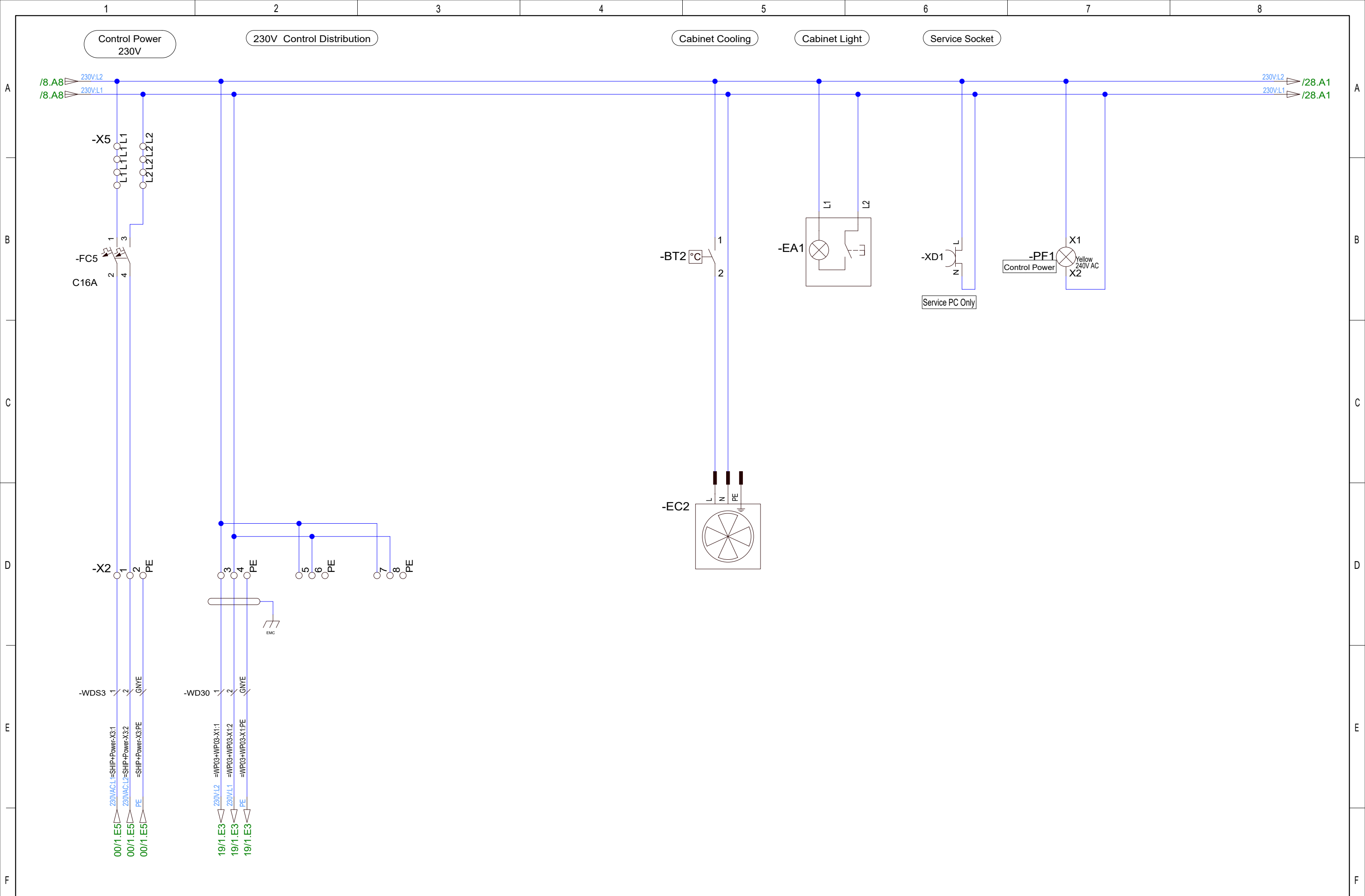
Internal Pull-Up Resistor
DIP Switches
Located under plastic cover
Default position 0



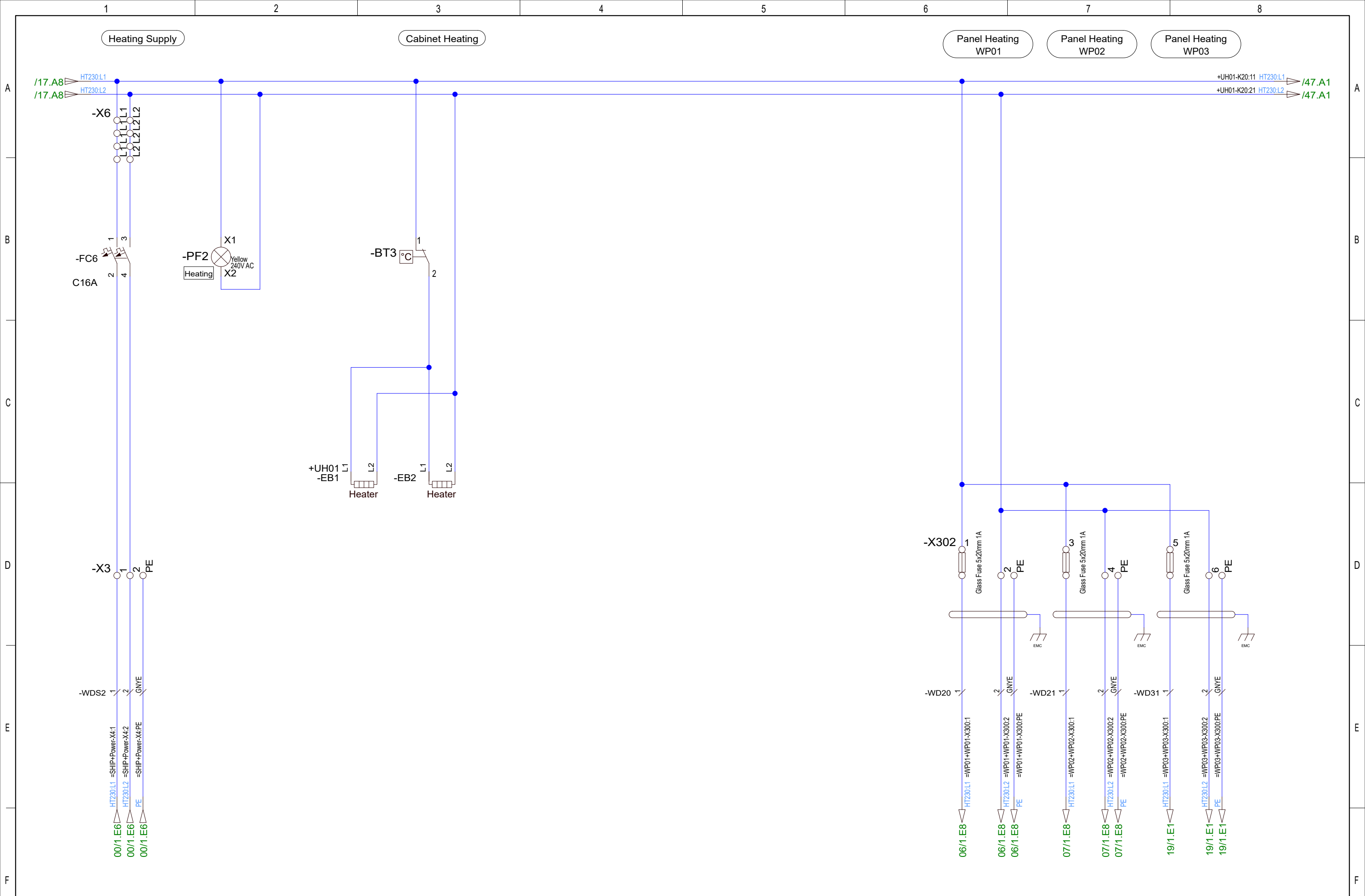




				Date	17/11-2021	CNP Freire MBarí			Main VFD Cabinet Pentagon Pentagon Control Cabinet Main Power Connections			400092375		=WCS01	
				User	GSK									+UH03	
Status	AS BUILT	19.08.2022	SS	Approved	RAJ									Rev. G	
Change		Date	Name	Standard		Version	Index	Repl. by				10070-01 CC		Sheet 25	Next 26

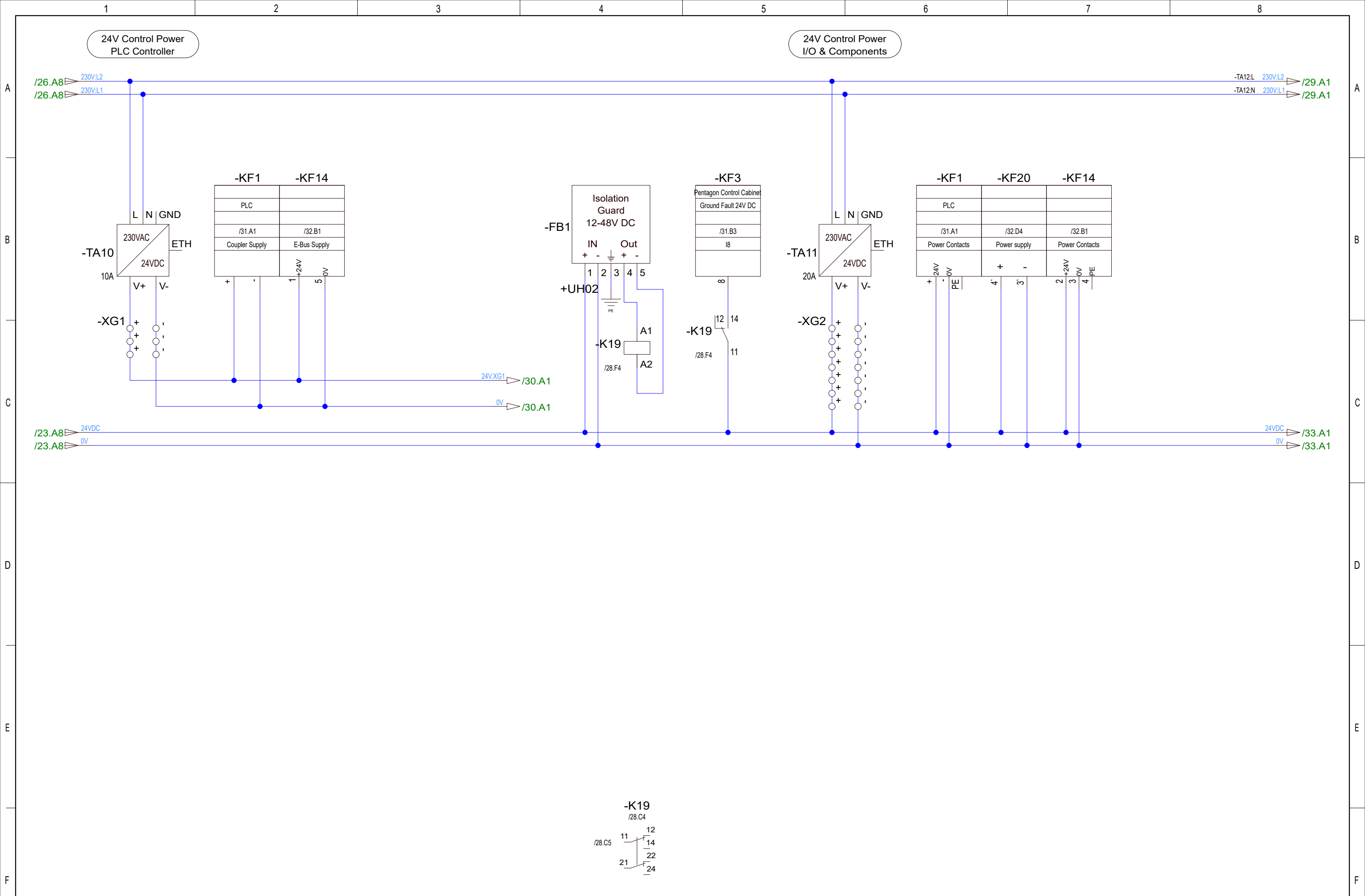


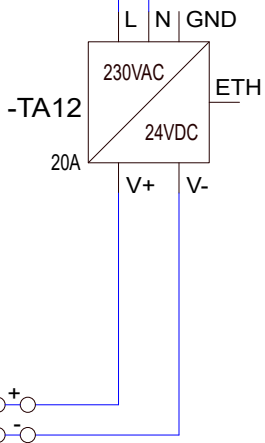
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Added WP03 connections		21.11.2022	ANP	User										
AS BUILT		19.08.2022	SS	Approved	RAJ								Rev. G	
Status	Change	Date	Name	Standard			Version	Index	Repl. by			10070-01 CC		Sheet 26 Next 27



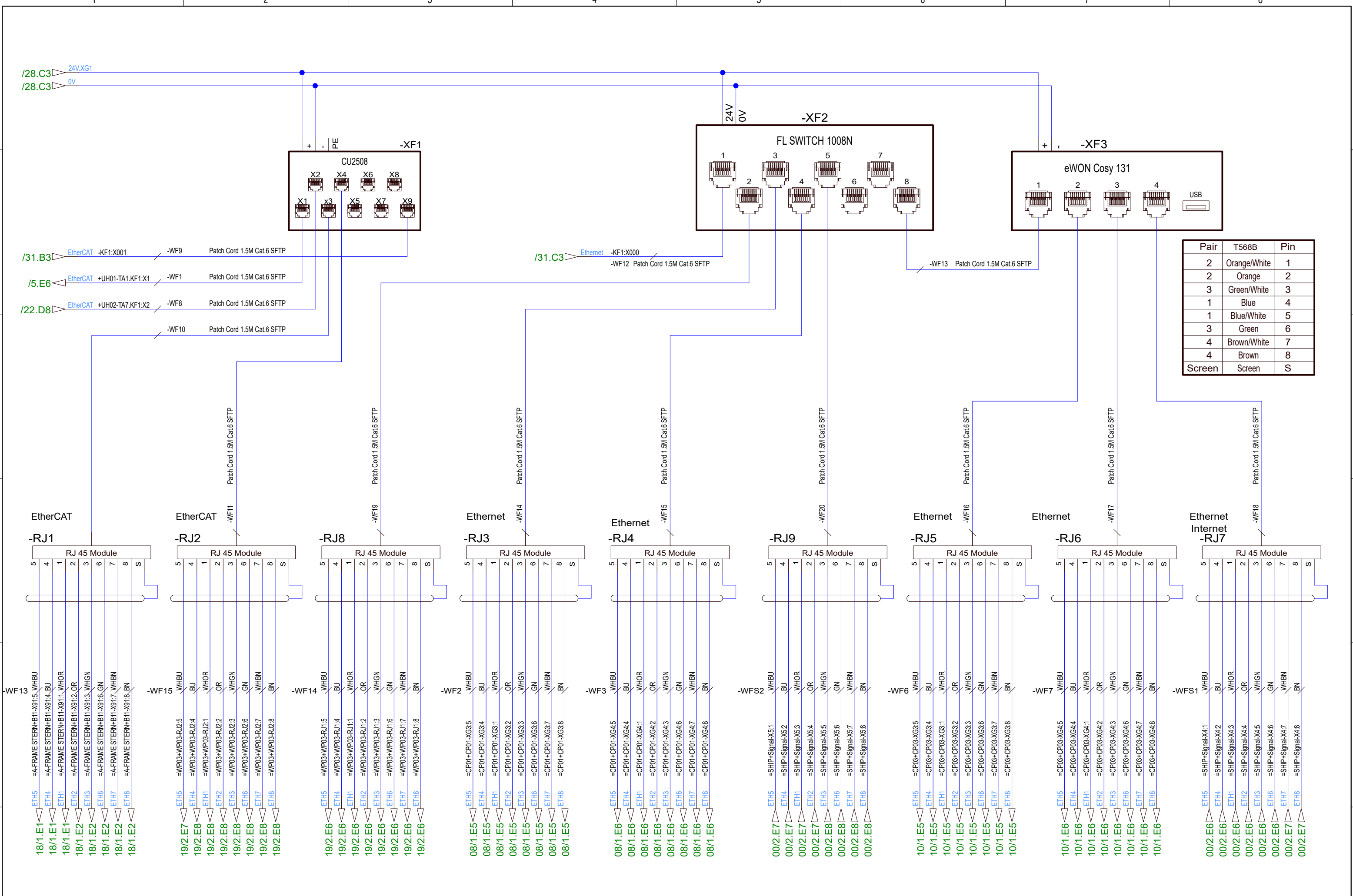
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	Added WP03 connections	21.11.2022	ANP	User	GSK								+UH03	
	AS BUILT	19.08.2022	SS	Approved	RAJ								Rev.	G
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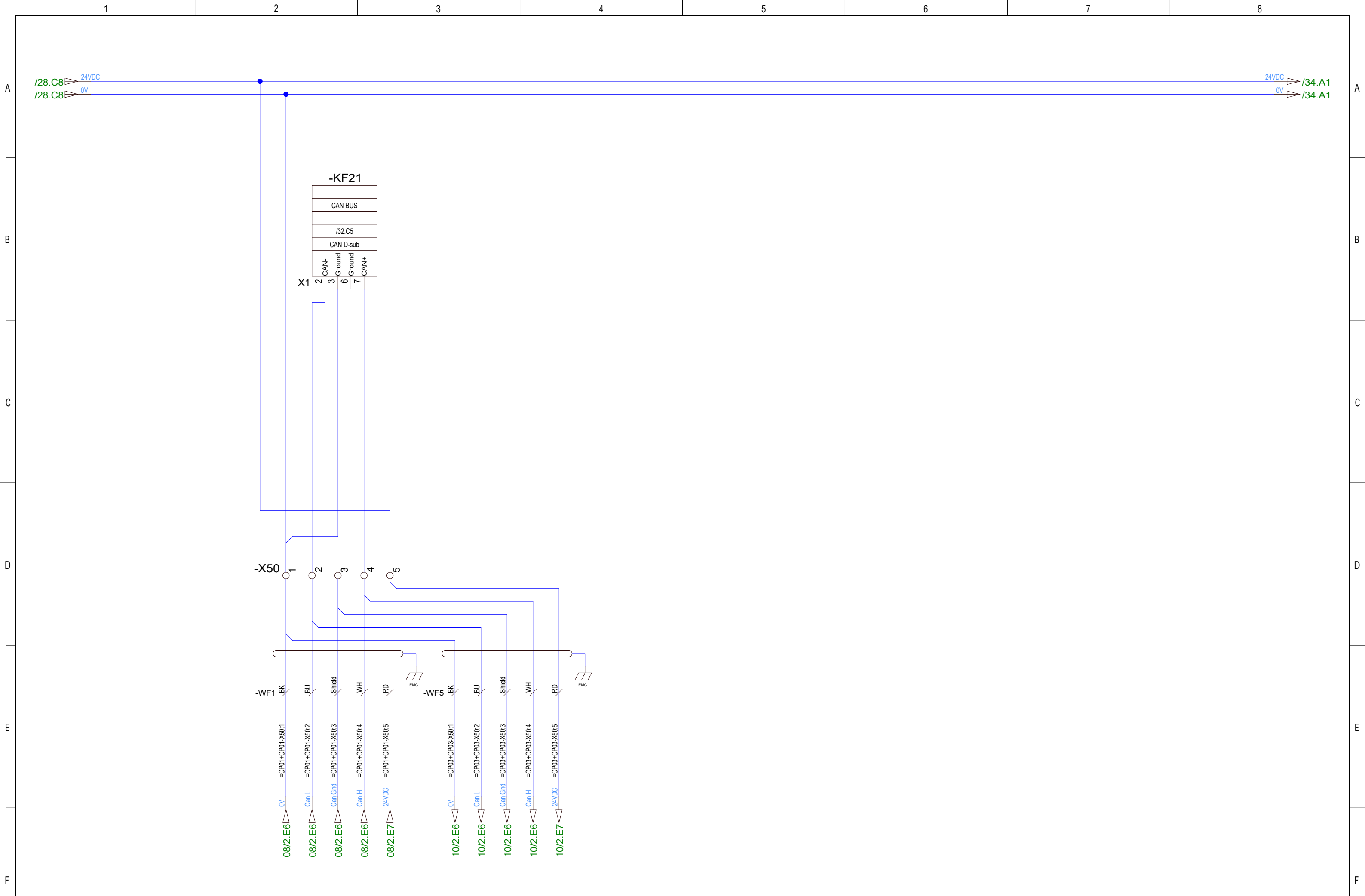


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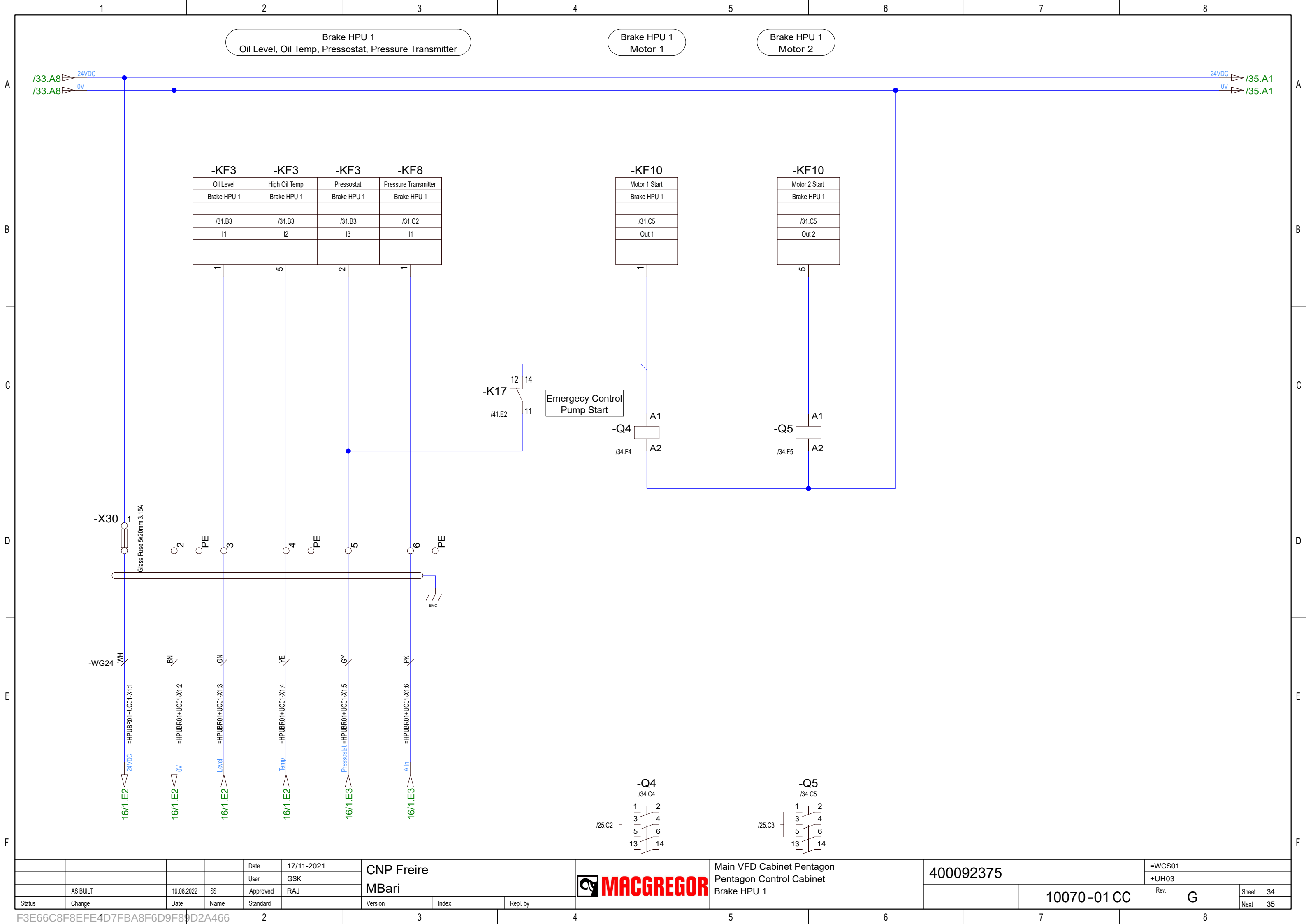


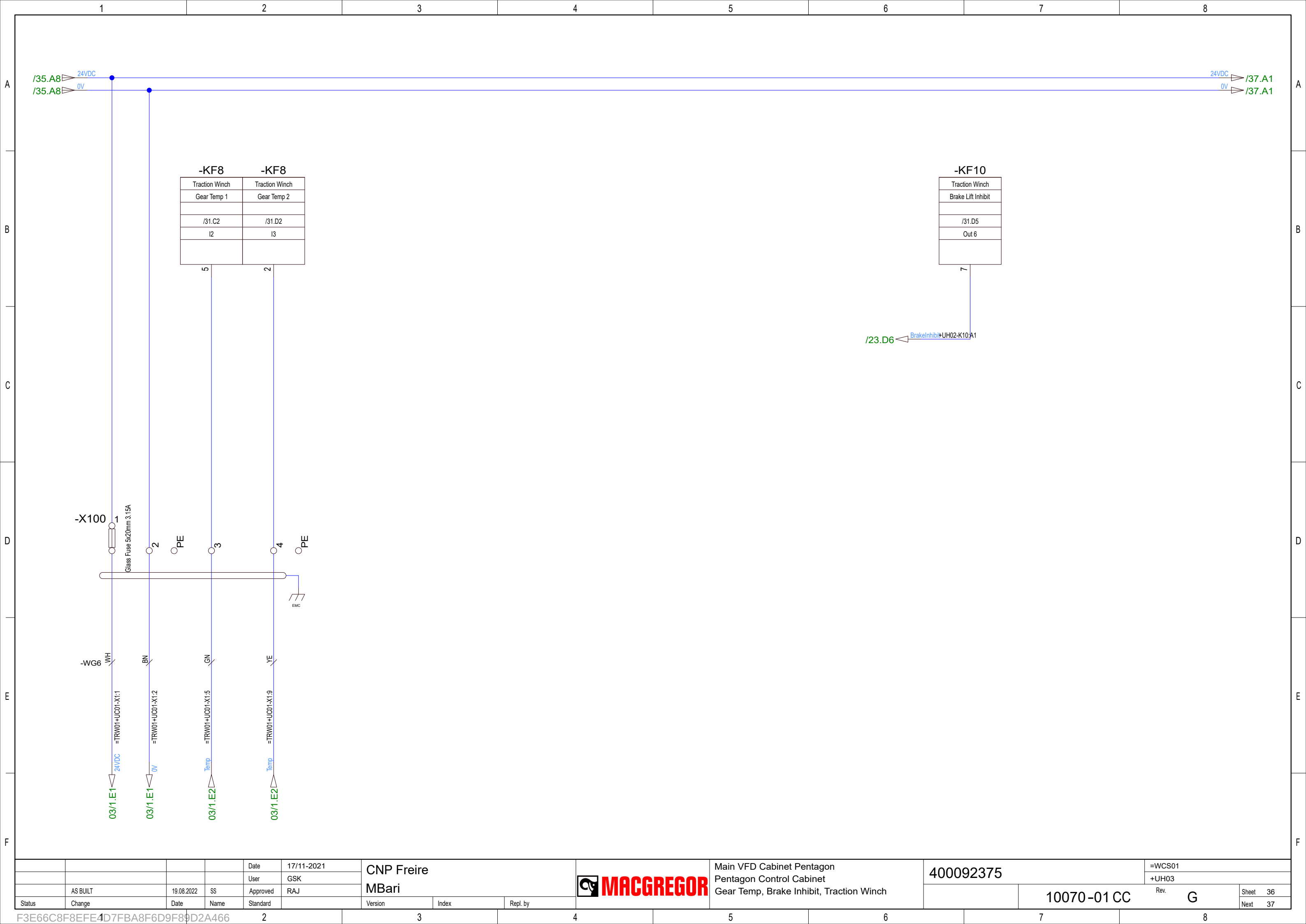
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	AS BUILT	19.08.2022	SS	Approved	RAJ									Rev. G	
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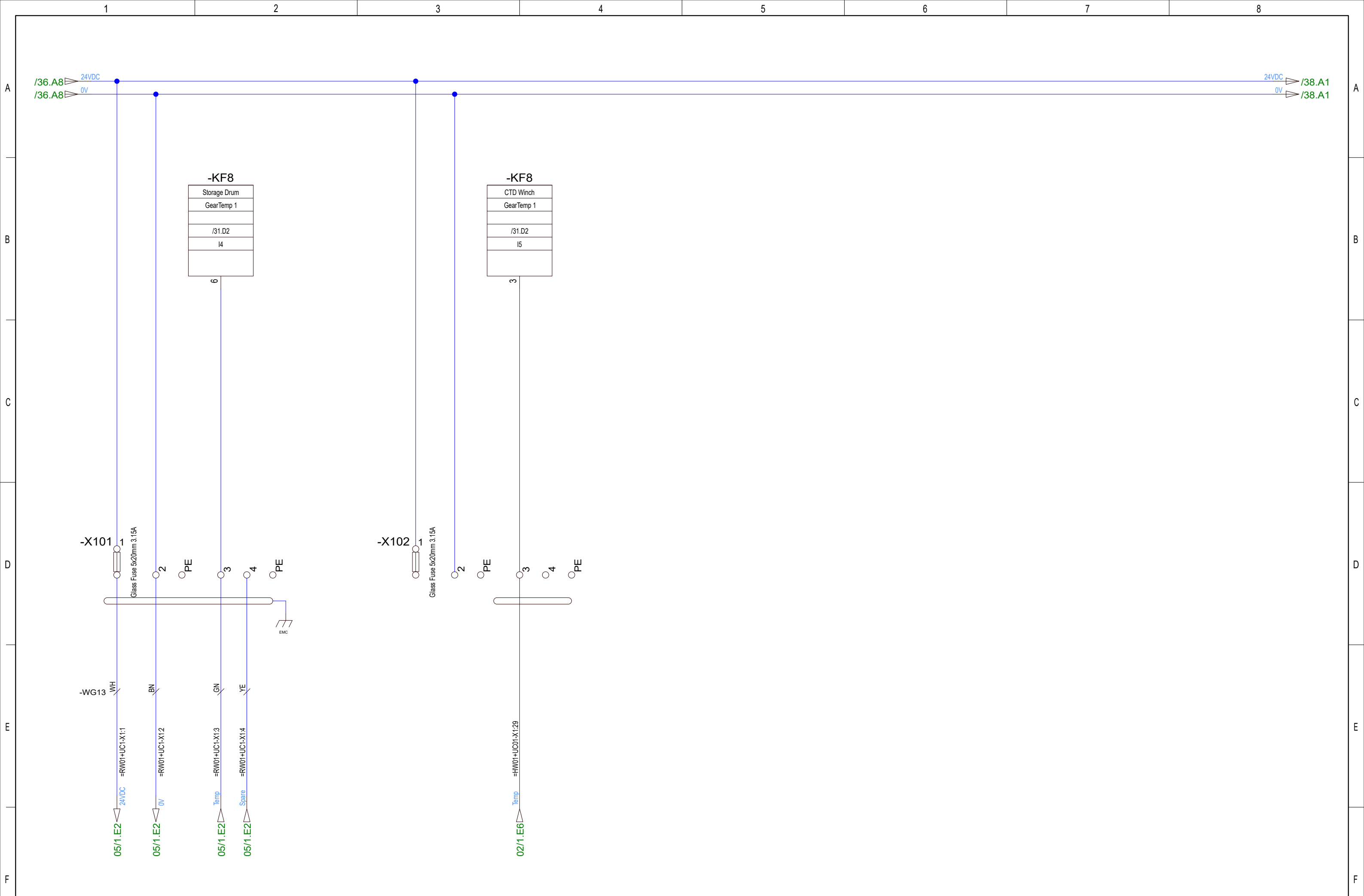
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-KF14 EL9410 E-Bus Supply /28.B2 Power Contacts /28.B7 -KF15 EL2535-0002 2 PWM Outputs <table><tr><th>I/O</th><th>Ref</th><th>Adress</th><th>Description</th></tr><tr><td>PWM 1</td><td>/38.B6</td><td></td><td>SWC Valve</td></tr><tr><td>PWM 2</td><td></td><td></td><td></td></tr><tr><td>I1</td><td></td><td></td><td></td></tr><tr><td>I2</td><td></td><td></td><td></td></tr></table> -KF16 EL4024 4-ch analog out 4...20 mA <table><tr><th>Outputs</th><th>Ref</th><th>Adress</th><th>Description</th></tr><tr><td>Output 1</td><td>/45.B2</td><td></td><td>Actual Power</td></tr><tr><td>Output 2</td><td></td><td></td><td></td></tr><tr><td>Output 3</td><td></td><td></td><td></td></tr><tr><td>Output 4</td><td></td><td></td><td></td></tr></table> -KF17 EL3054 4 Analog Inputs 4-20mA <table><tr><th>A-In</th><th>Ref</th><th>Adress</th><th>Description</th></tr><tr><td>I1</td><td>/45.B2</td><td></td><td>Power Available</td></tr><tr><td>I2</td><td>/45.B3</td><td></td><td>Regeneration Limit</td></tr><tr><td>I3</td><td></td><td></td><td></td></tr><tr><td>I4</td><td></td><td></td><td></td></tr></table>																I/O	Ref	Adress	Description	PWM 1	/38.B6		SWC Valve	PWM 2				I1				I2				Outputs	Ref	Adress	Description	Output 1	/45.B2		Actual Power	Output 2				Output 3				Output 4				A-In	Ref	Adress	Description	I1	/45.B2		Power Available	I2	/45.B3		Regeneration Limit	I3				I4																																																											
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-KF18 EL1918 8xDI TwinSAFE Adress <table><tr><th>I/O</th><th>Ref</th><th>Adress</th><th>Description</th></tr><tr><td>I1</td><td>/42.B4</td><td></td><td>Emergency Stop</td></tr><tr><td>I2</td><td>/42.B4</td><td></td><td>Emergency Stop</td></tr><tr><td>I3</td><td>/43.B4</td><td></td><td>Emergency Stop</td></tr><tr><td>I4</td><td>/43.B4</td><td></td><td>Emergency Stop</td></tr><tr><td>I5</td><td></td><td></td><td>Emergency Stop</td></tr><tr><td>I6</td><td></td><td></td><td>Emergency Stop</td></tr><tr><td>I7</td><td></td><td></td><td>Emergency Stop</td></tr><tr><td>I8</td><td></td><td></td><td>Emergency Stop</td></tr></table> -KF19 EL1918 8xDI TwinSAFE Adress <table><tr><th>I/O</th><th>Ref</th><th>Adress</th><th>Description</th></tr><tr><td>I1</td><td>/46.B1</td><td></td><td>Emergency Stop</td></tr><tr><td>I2</td><td>/46.B2</td><td></td><td>Emergency Stop</td></tr><tr><td>I3</td><td>/46.B3</td><td></td><td>Emergency Stop</td></tr><tr><td>I4</td><td>/46.B3</td><td></td><td>Emergency Stop</td></tr><tr><td>I5</td><td>/46.B5</td><td></td><td>Emergency Stop</td></tr><tr><td>I6</td><td>/46.B5</td><td></td><td>Emergency Stop</td></tr><tr><td>I7</td><td></td><td></td><td>Emergency Stop</td></tr><tr><td>I8</td><td></td><td></td><td>Emergency Stop</td></tr></table> -KF20 EL2911 4xDI, 1xOut TwinSAFE Adress <table><tr><th>I/O</th><th>Ref</th><th>Adress</th><th>Description</th></tr><tr><td>I1</td><td></td><td></td><td></td></tr><tr><td>I2</td><td></td><td></td><td></td></tr><tr><td>I3</td><td></td><td></td><td></td></tr><tr><td>I4</td><td></td><td></td><td></td></tr><tr><td>Power supply</td><td>/28.B7</td><td></td><td></td></tr><tr><td>Power supply</td><td></td><td></td><td></td></tr><tr><td>Safe Output 1</td><td></td><td></td><td></td></tr><tr><td>Safe Output 1</td><td>/41.B4</td><td></td><td>Emergency Stop</td></tr></table> -KF21 EL6751 CANopen <table><tr><th>I/O</th><th>Ref</th><th>Adress</th><th>Description</th></tr><tr><td>CAN D-sub</td><td>/33.B2</td><td></td><td>CAN BUS</td></tr></table> -KF22 Bus End Cover																I/O	Ref	Adress	Description	I1	/42.B4		Emergency Stop	I2	/42.B4		Emergency Stop	I3	/43.B4		Emergency Stop	I4	/43.B4		Emergency Stop	I5			Emergency Stop	I6			Emergency Stop	I7			Emergency Stop	I8			Emergency Stop	I/O	Ref	Adress	Description	I1	/46.B1		Emergency Stop	I2	/46.B2		Emergency Stop	I3	/46.B3		Emergency Stop	I4	/46.B3		Emergency Stop	I5	/46.B5		Emergency Stop	I6	/46.B5		Emergency Stop	I7			Emergency Stop	I8			Emergency Stop	I/O	Ref	Adress	Description	I1				I2				I3				I4				Power supply	/28.B7			Power supply				Safe Output 1				Safe Output 1	/41.B4		Emergency Stop	I/O	Ref	Adress	Description	CAN D-sub	/33.B2		CAN BUS
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Date 17/11-2021 AS BUILT 19.08.2022 SS Approved RAJ Status Change Date Name Standard CNP Freire MBarí Version Index Repl. by MACGREGOR Main VFD Cabinet Pentagon Pentagon Control Cabinet PLC & I/Os 400092375 10070-01 CC =WCS01 +UH03 Rev. G Sheet 32 Next 33																																																																																																																																			
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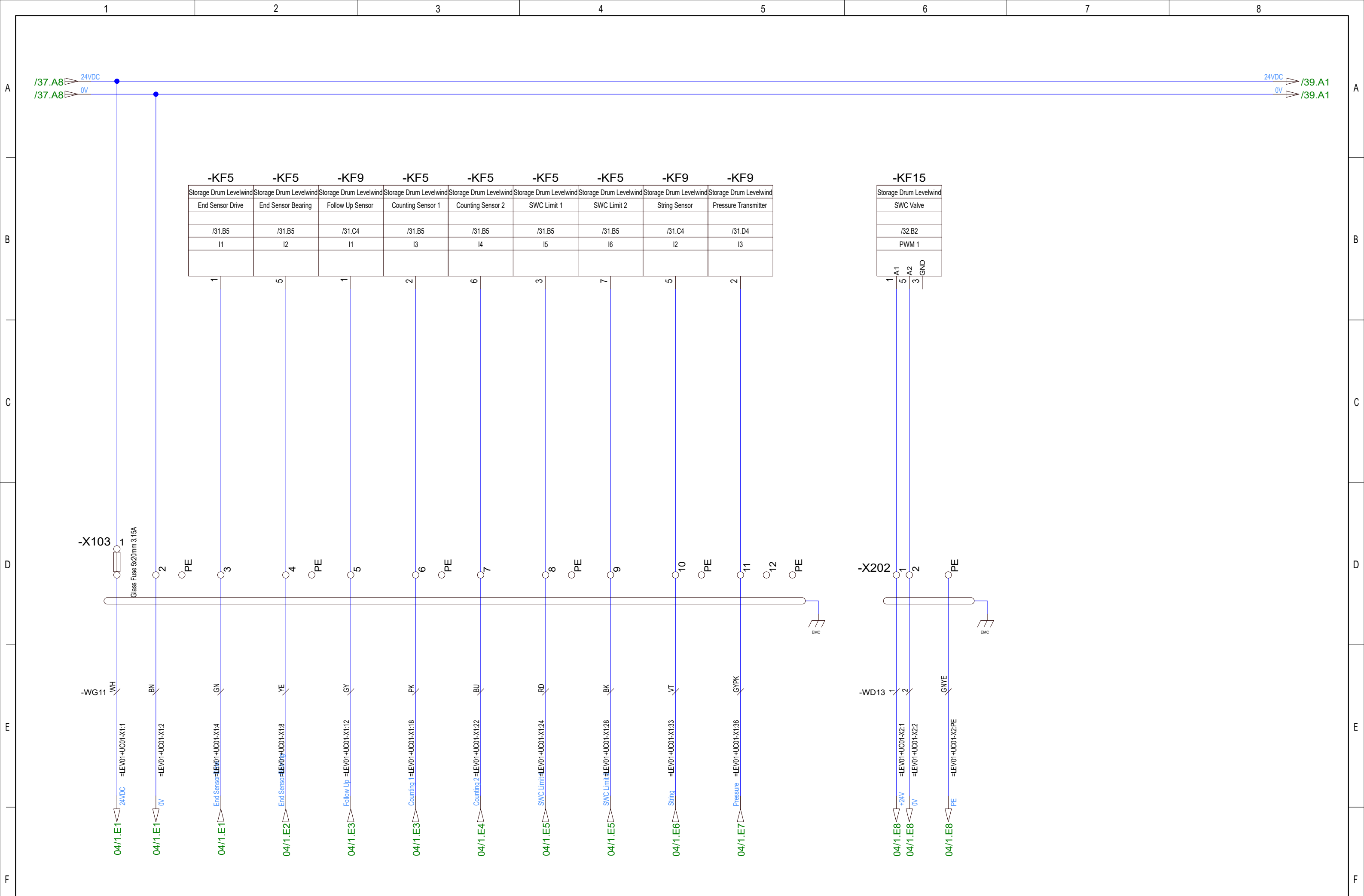
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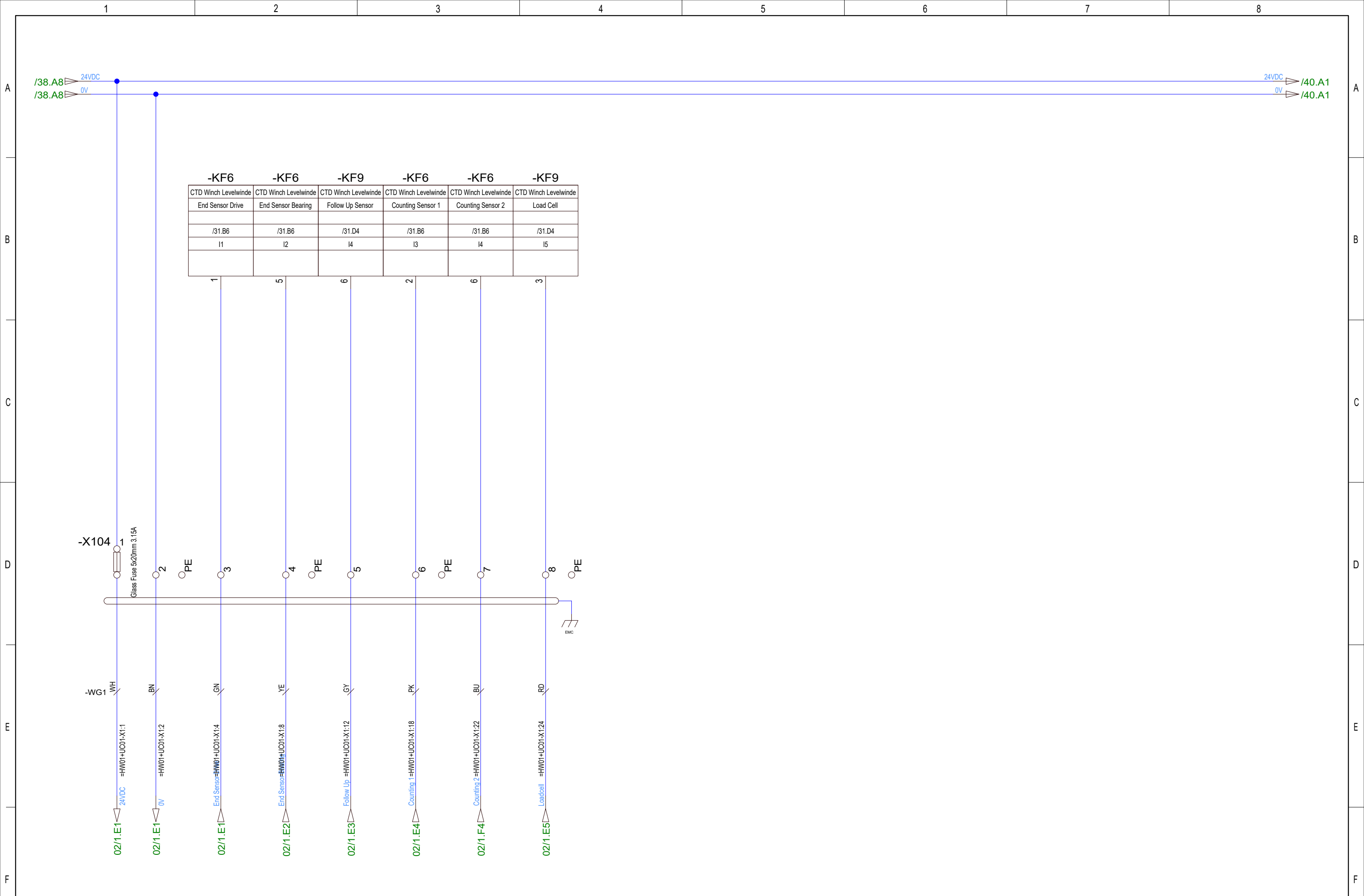


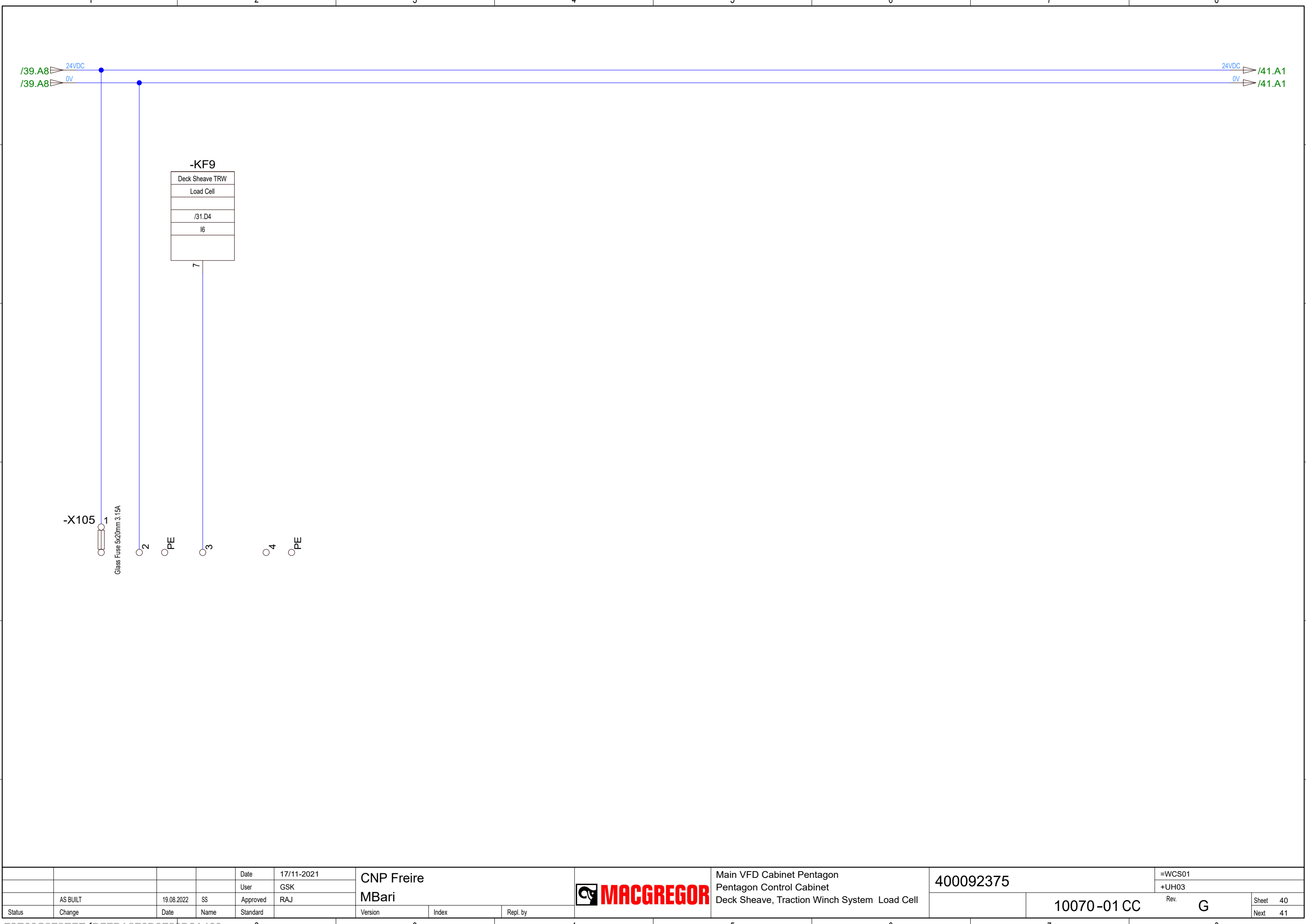


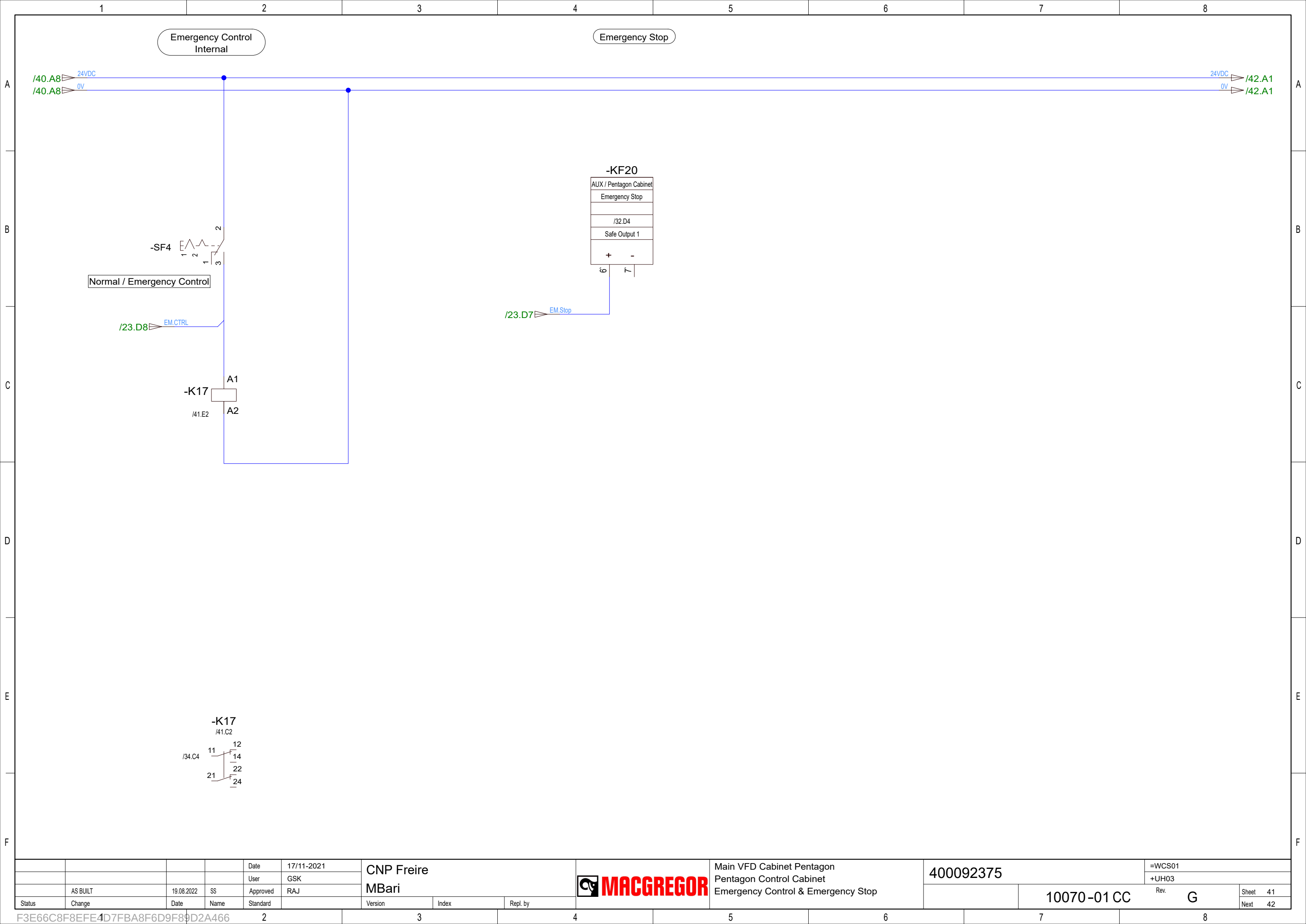


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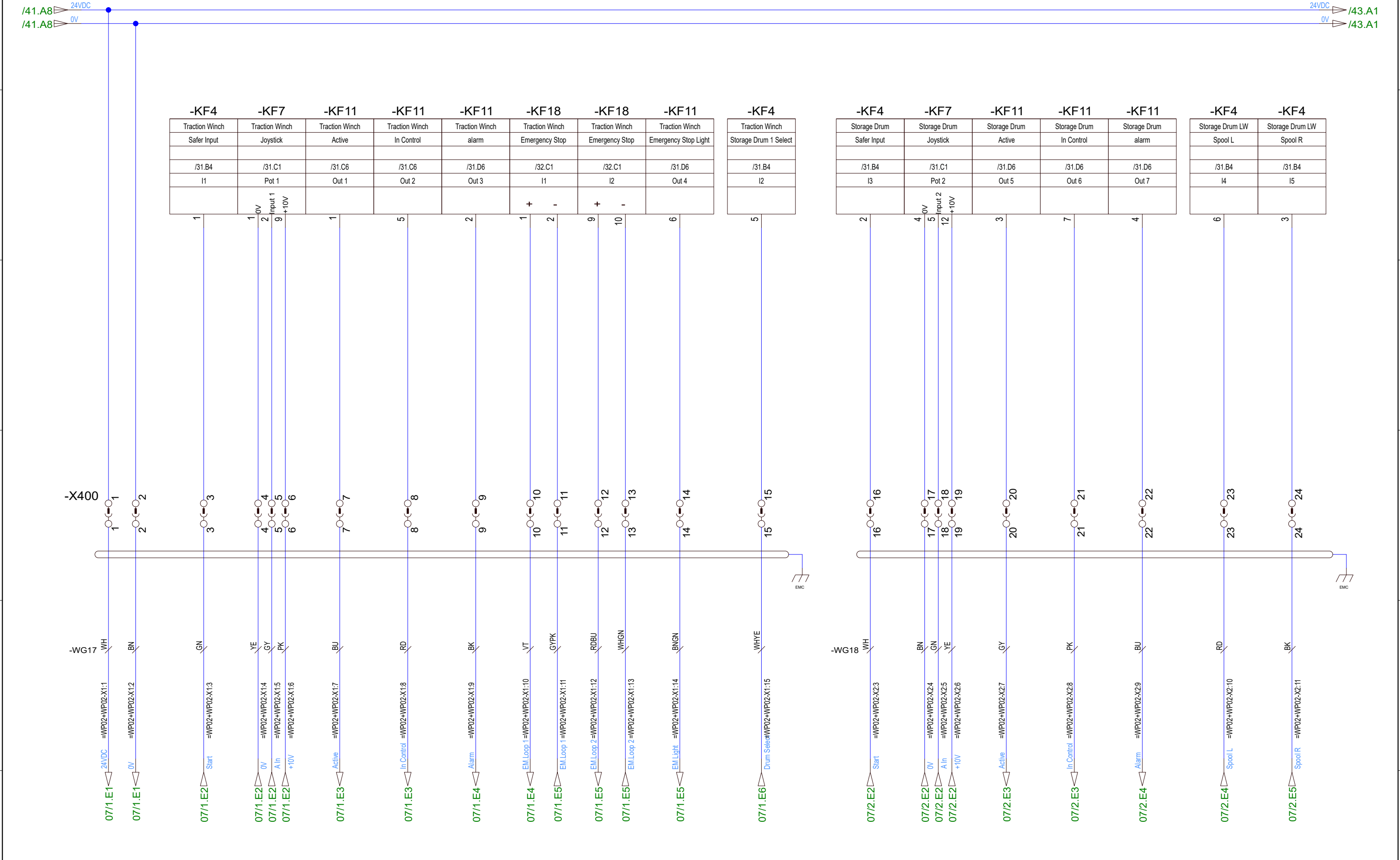


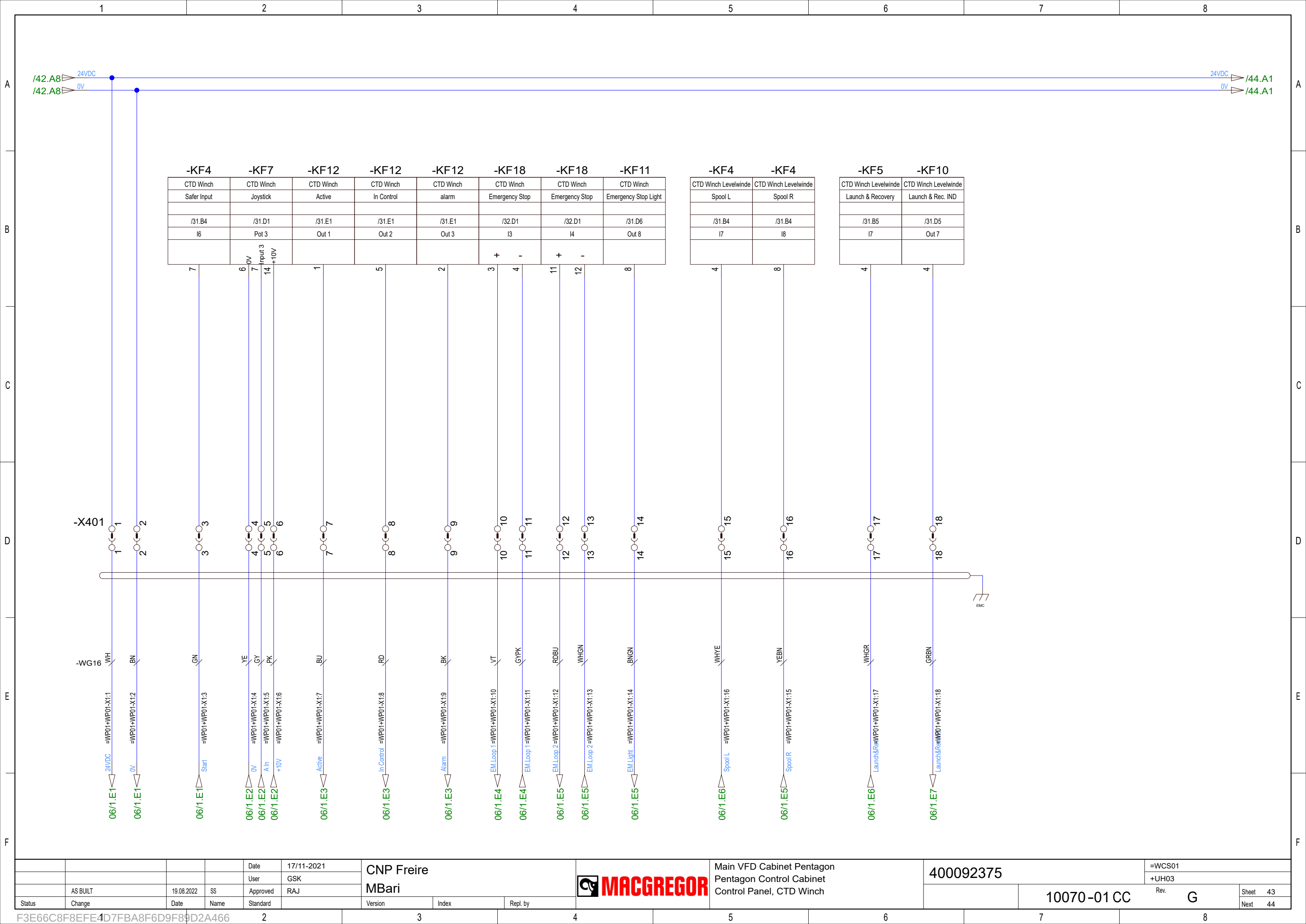


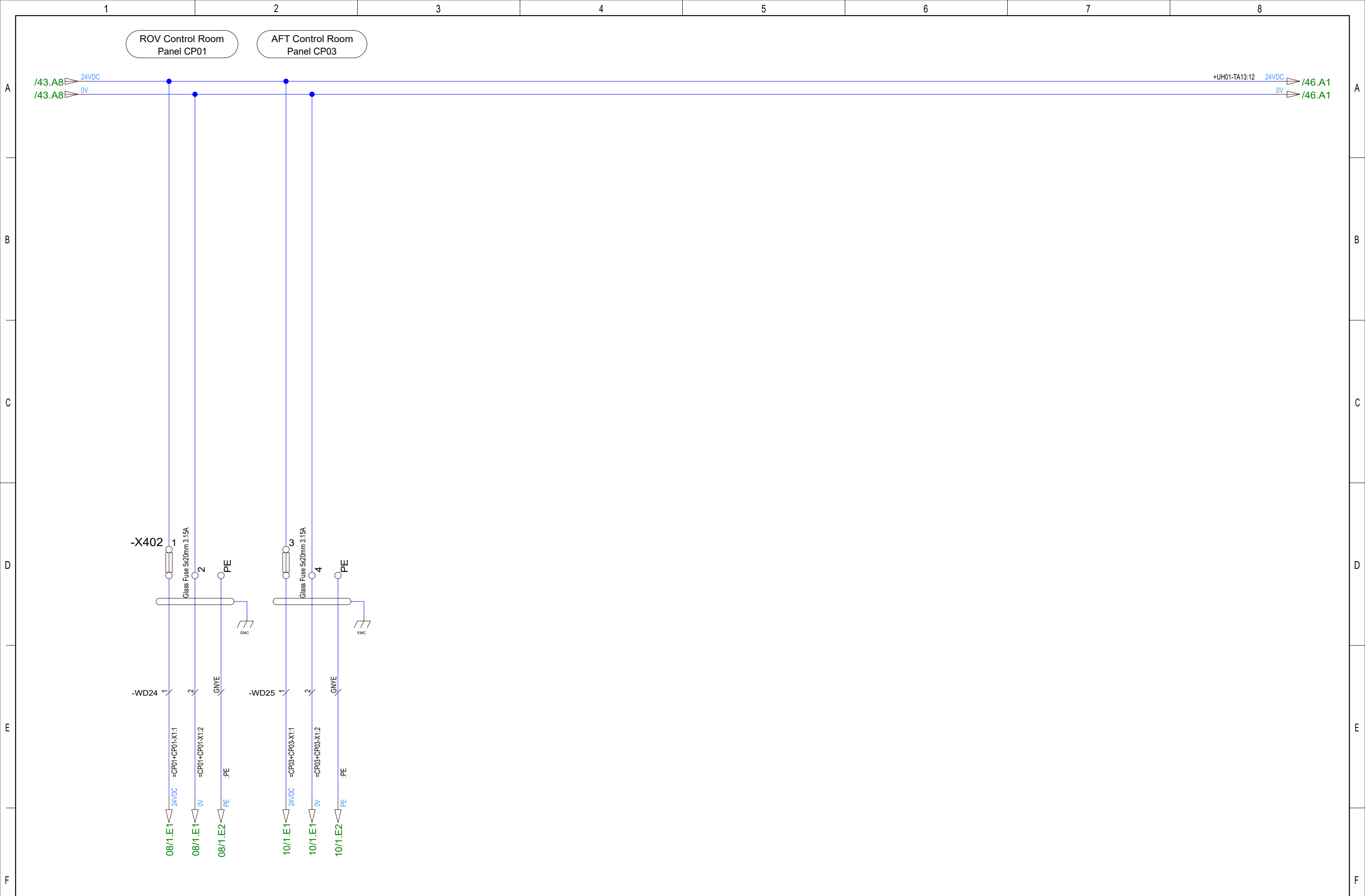




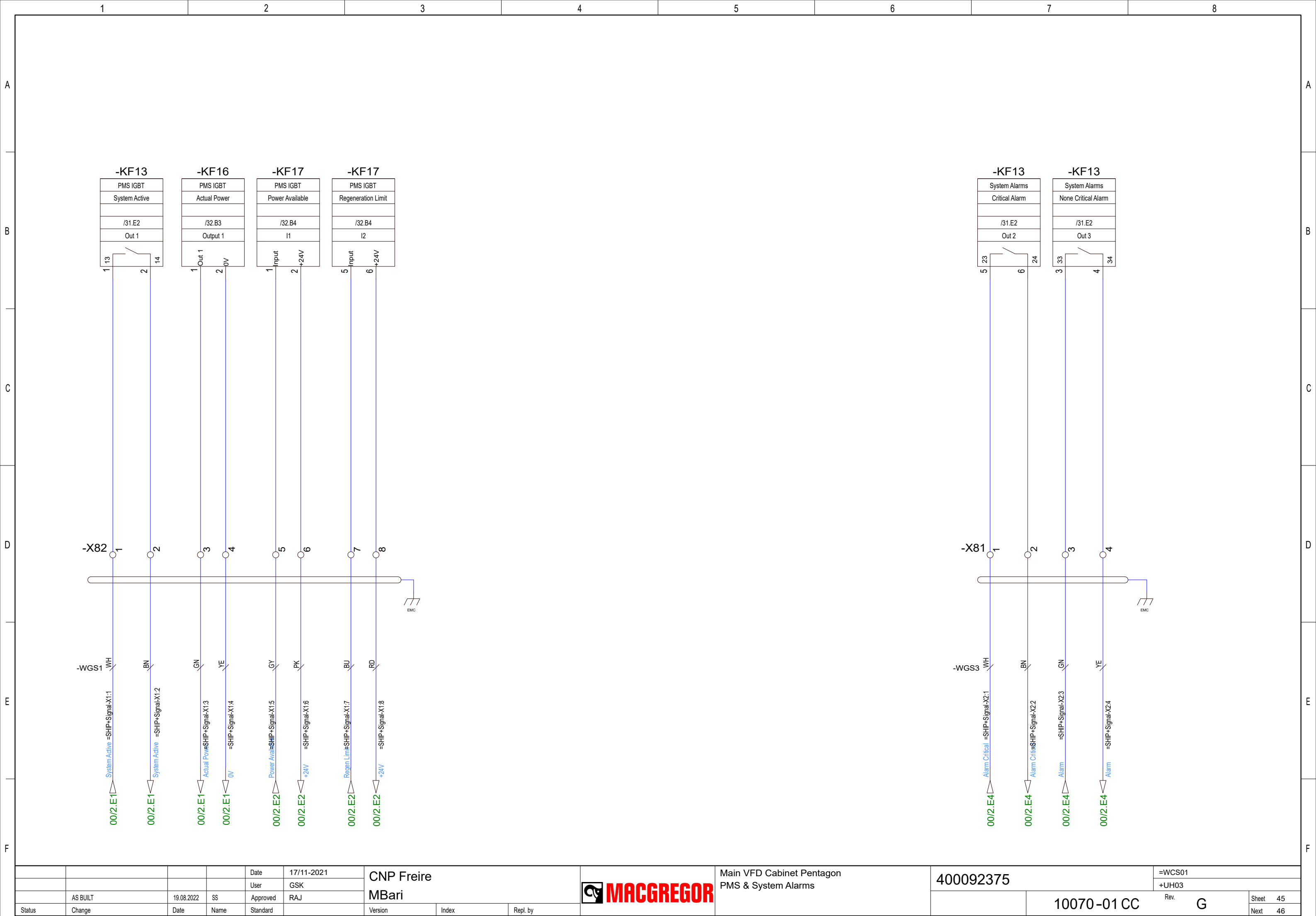
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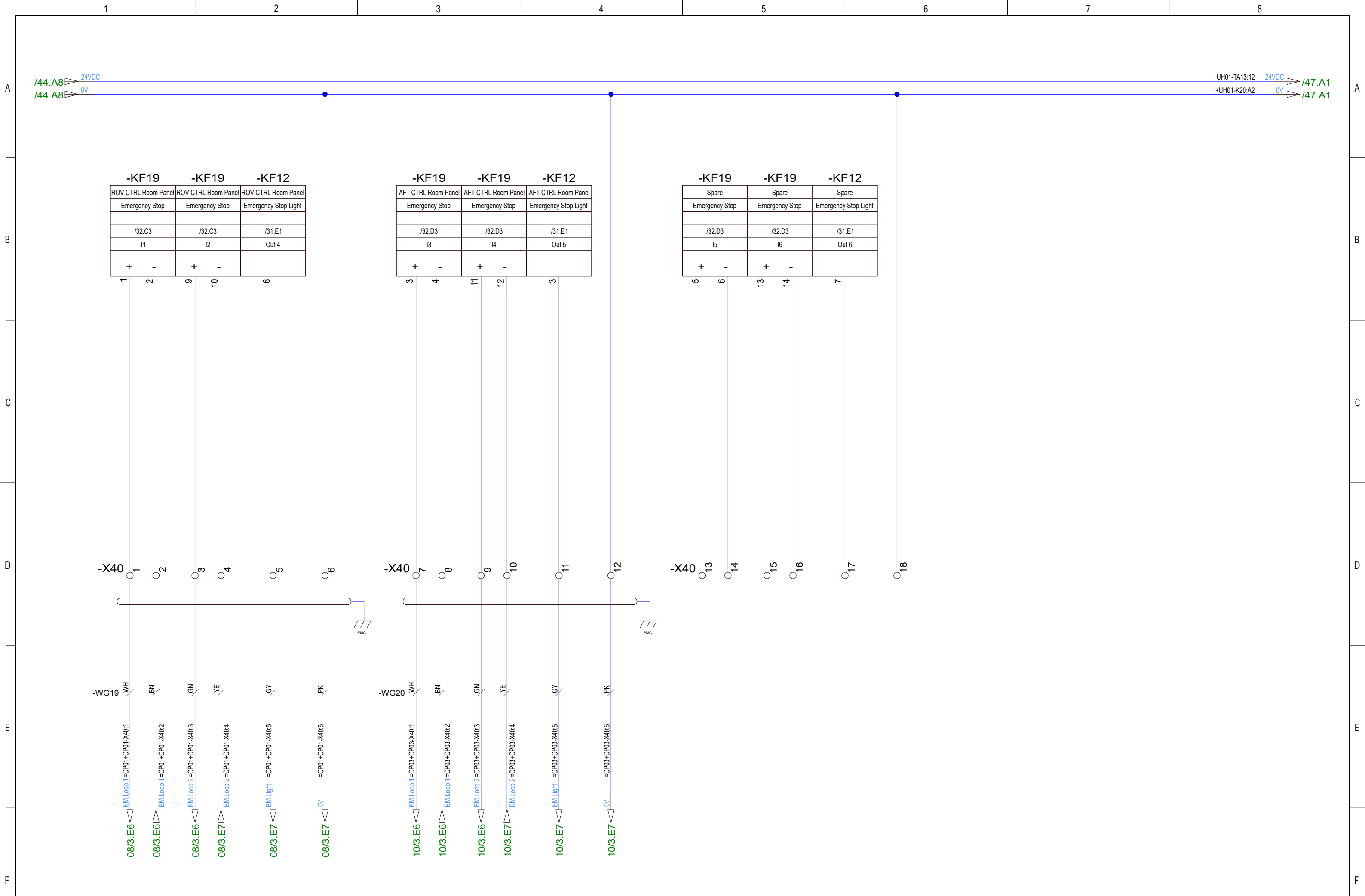


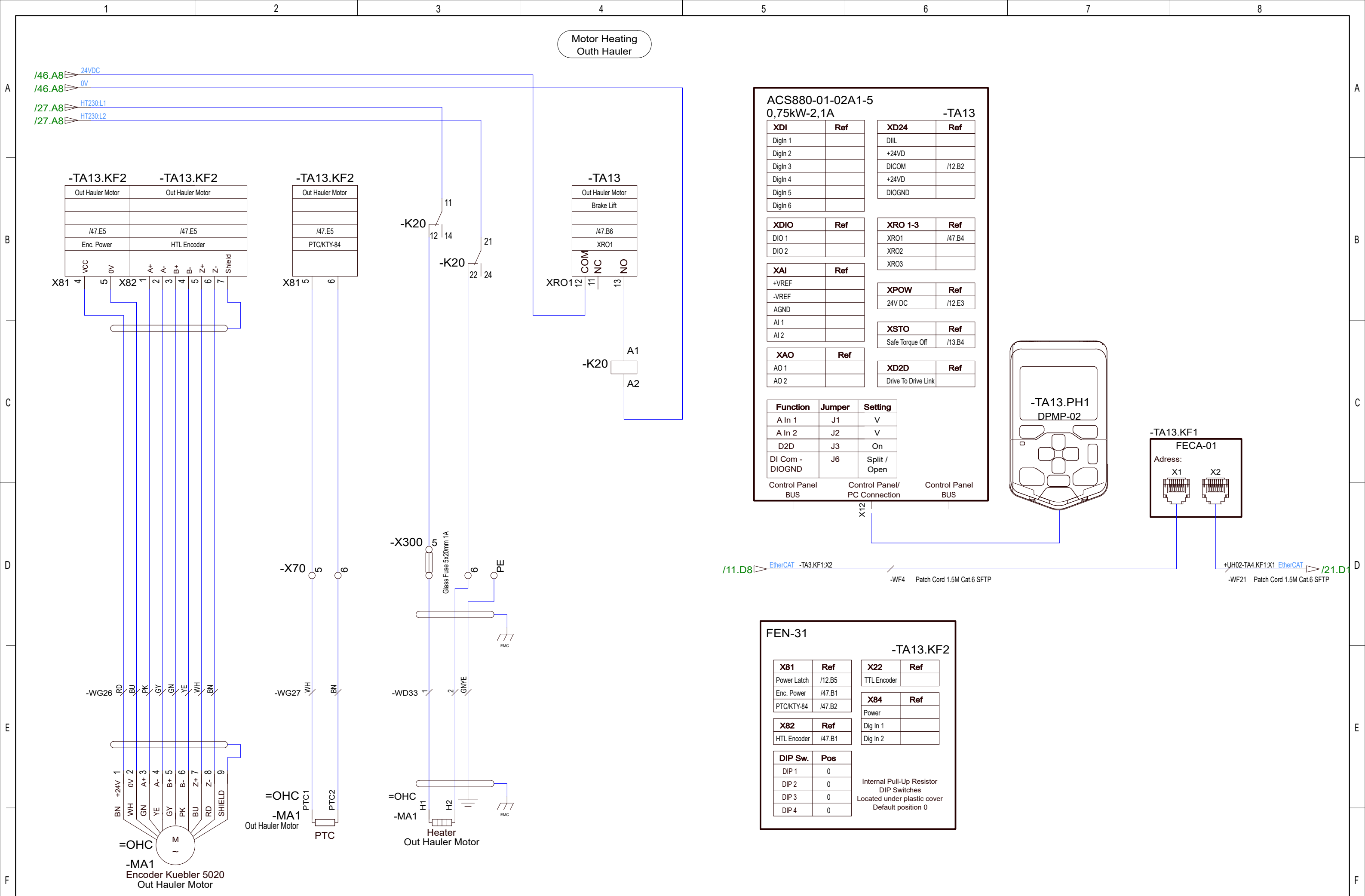


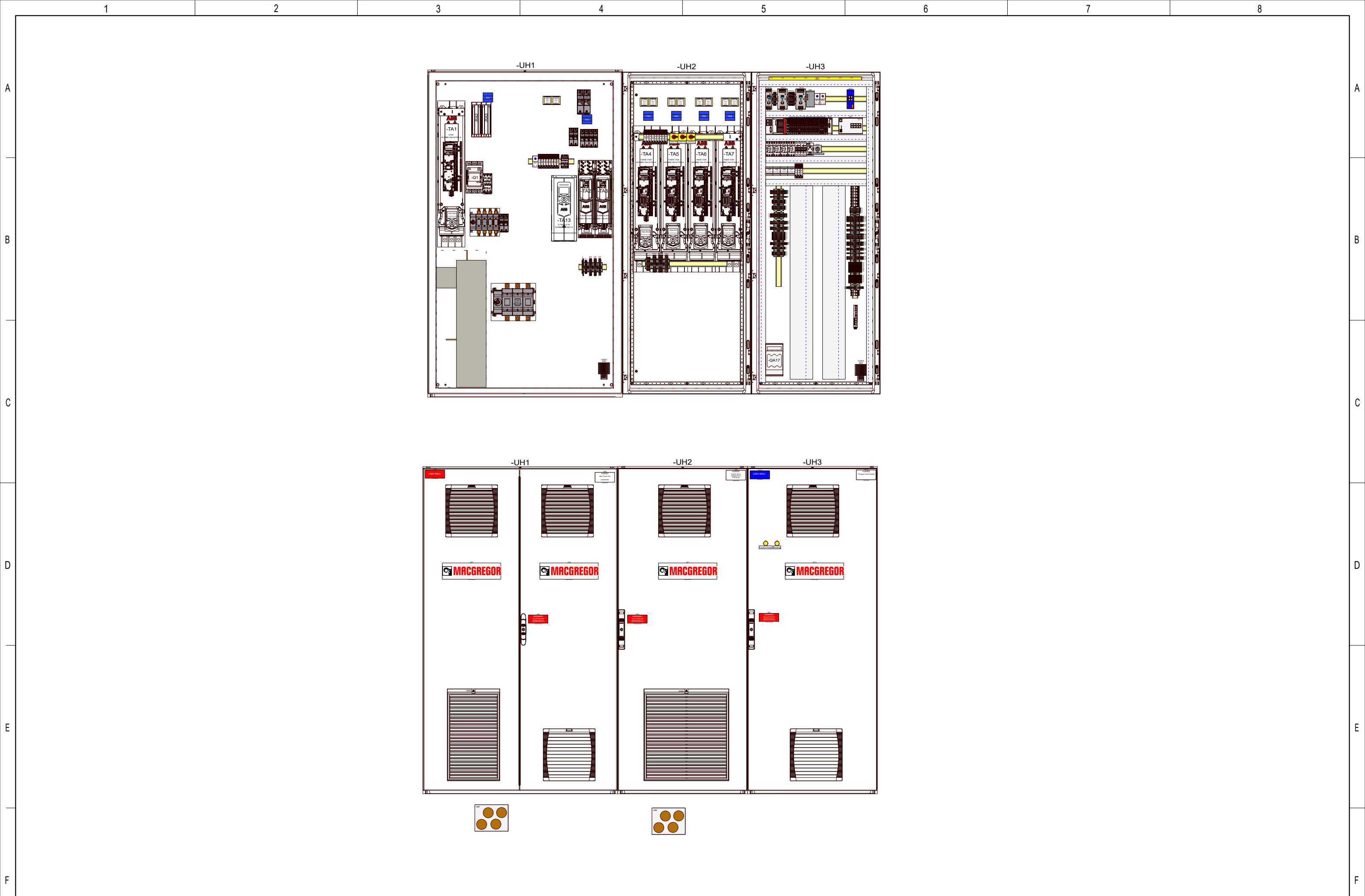


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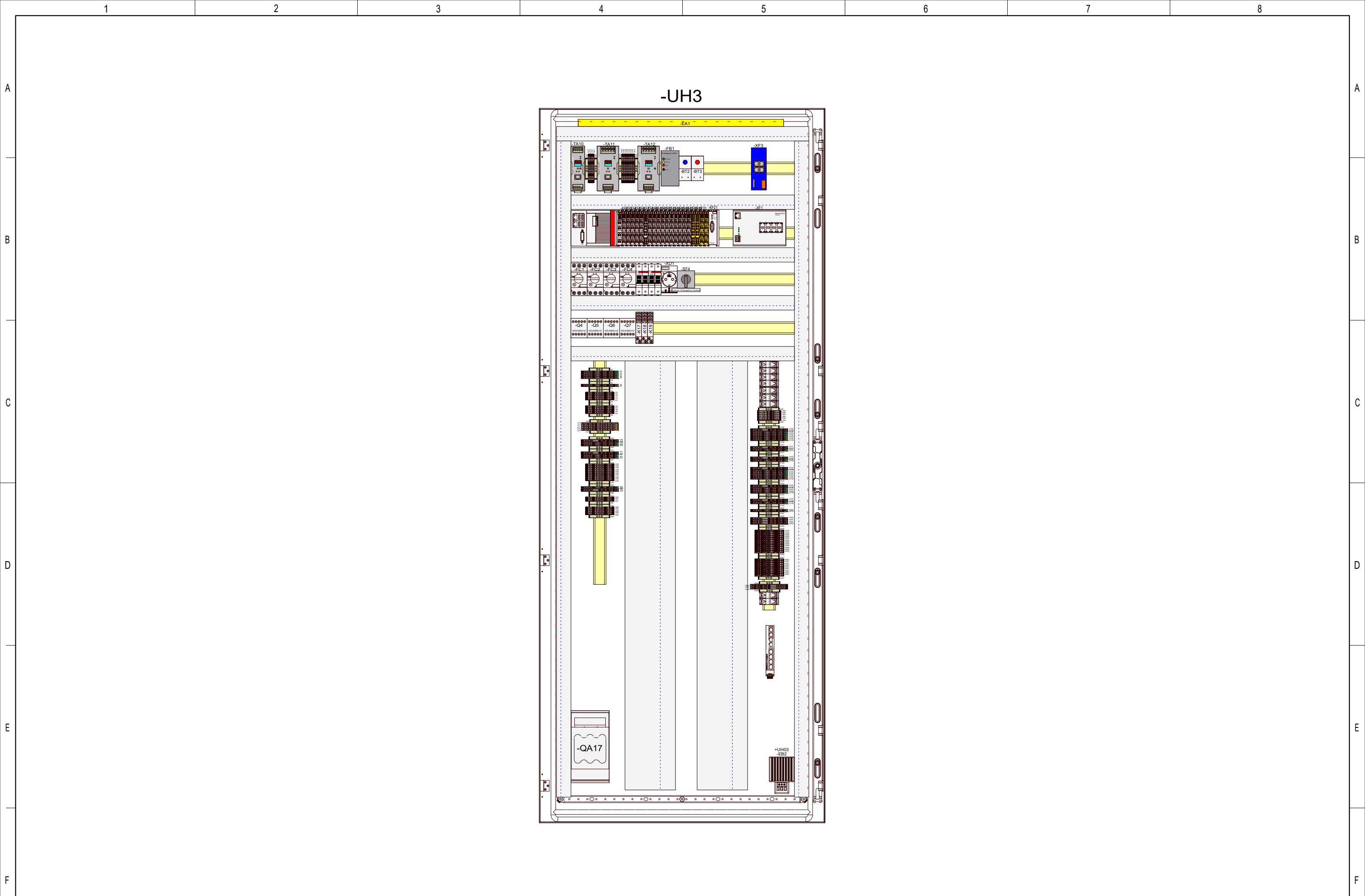








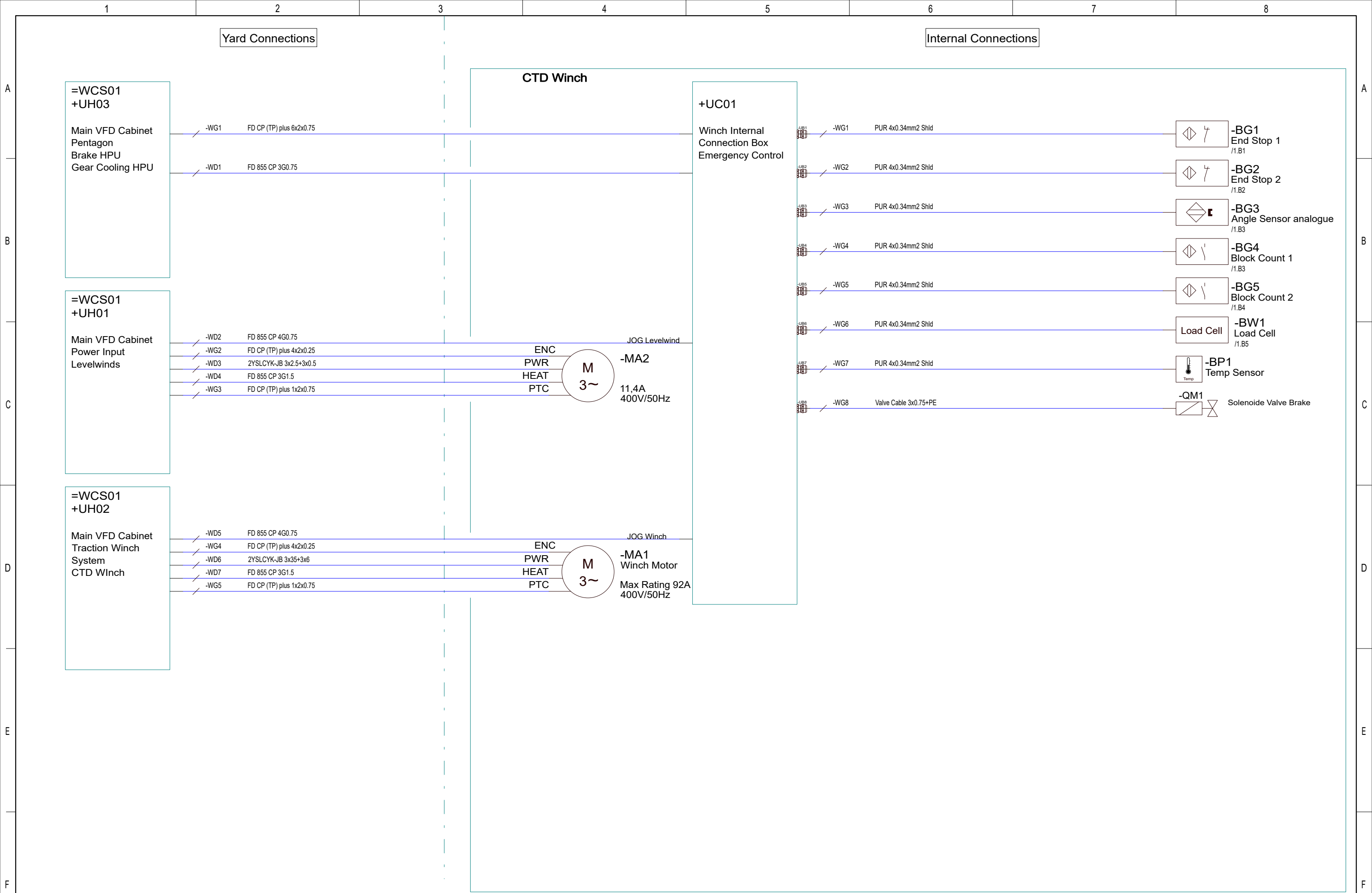
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Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-01 GA	Rev. G	Sheet 1	Next 2



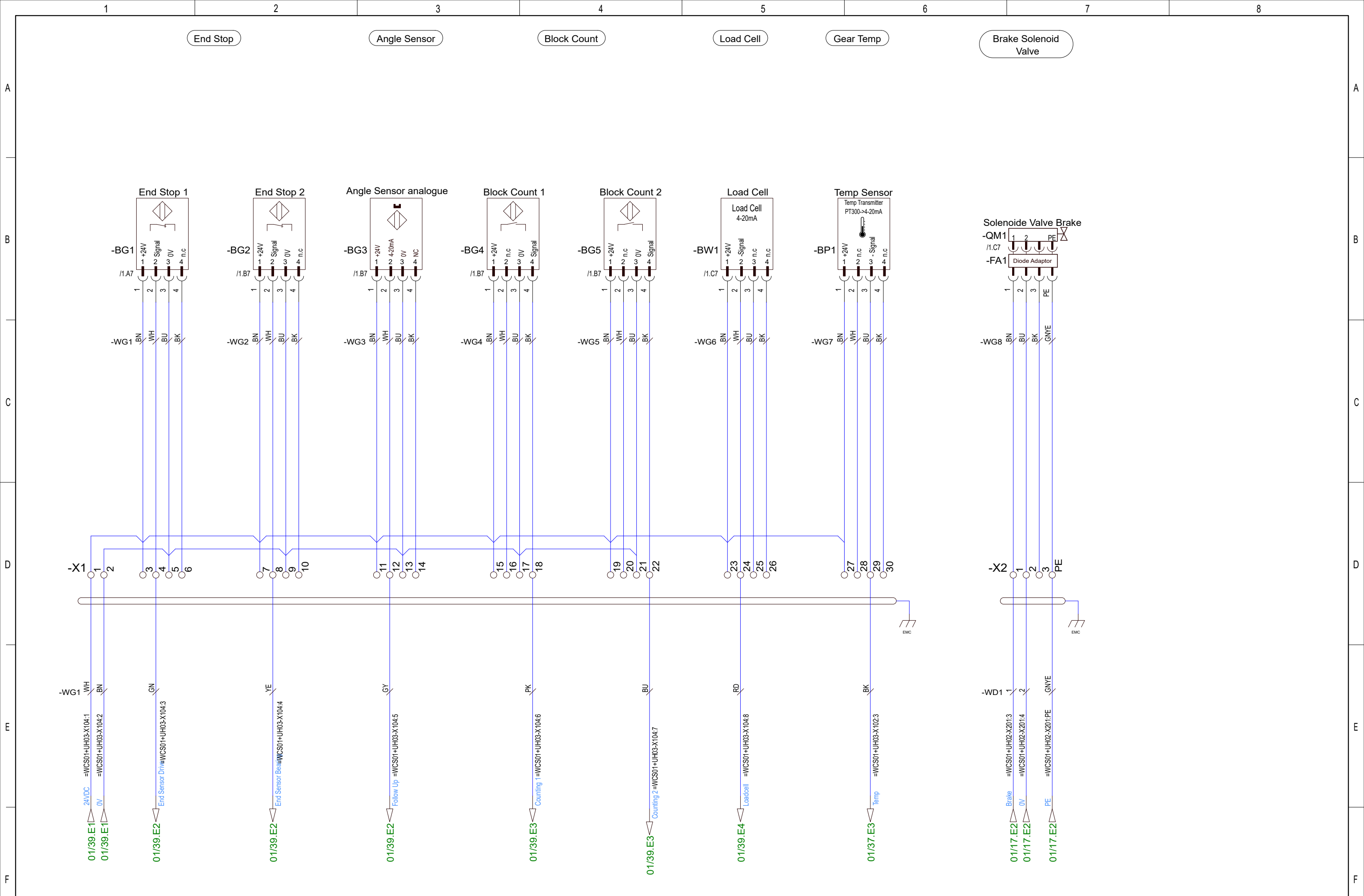
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	Added WP03 connections	21.11.2022	ANP	User	GSK									
	AS BUILT	19.08.2022	SS	Approved	RAJ								Rev.	G
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1		2		3		4		5		6		7		8			
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-AF1,-AF3,-AF6		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		A700000006914194.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					
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-K1..-K19		P2RF-08-PU		EACRE041		19	Pcs	Relay base		Omron		G2R-Relays.pdf					
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-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					
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			User		MBarí												
	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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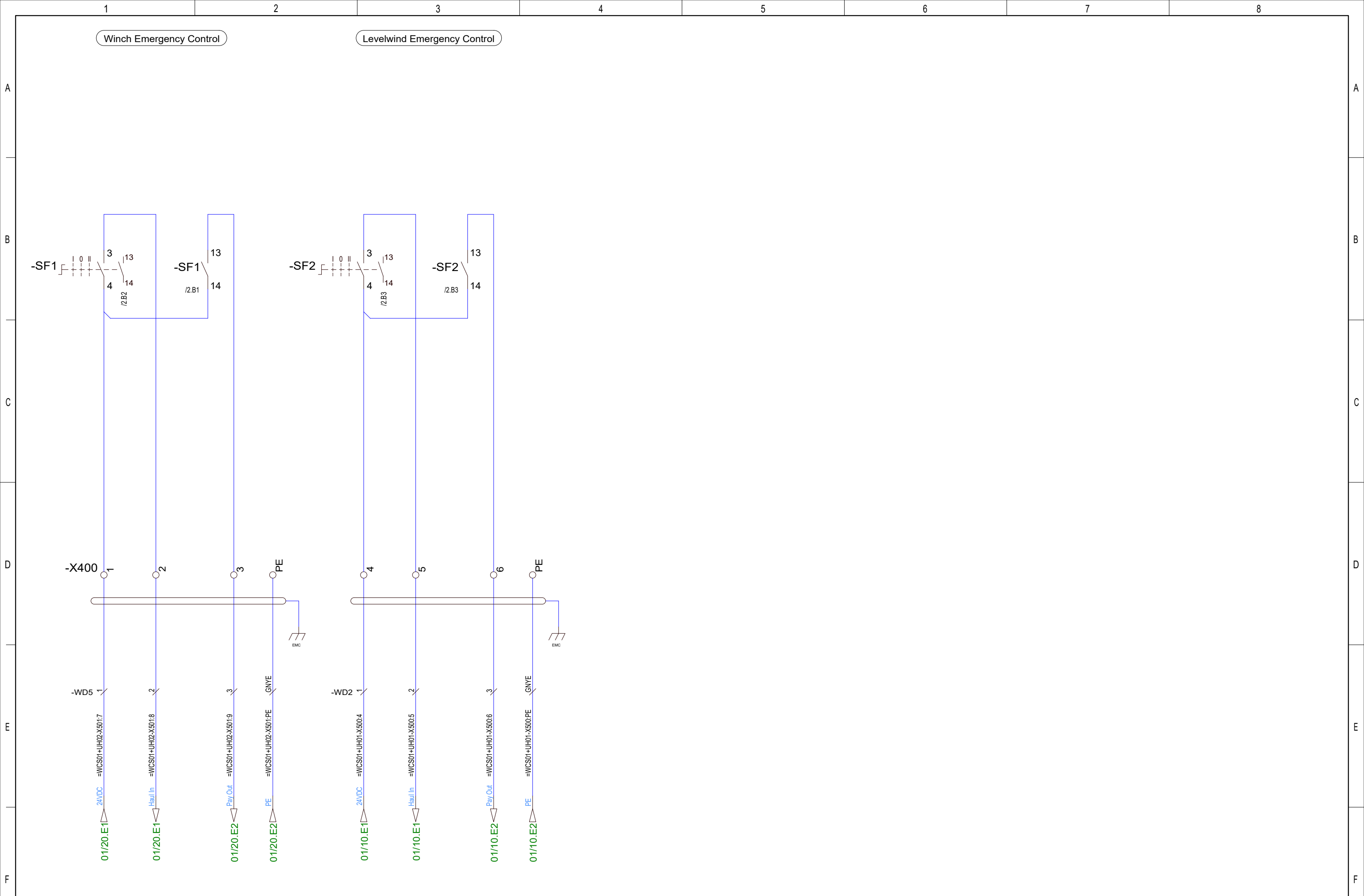
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Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-02 CD	Rev.	G	Sheet 1
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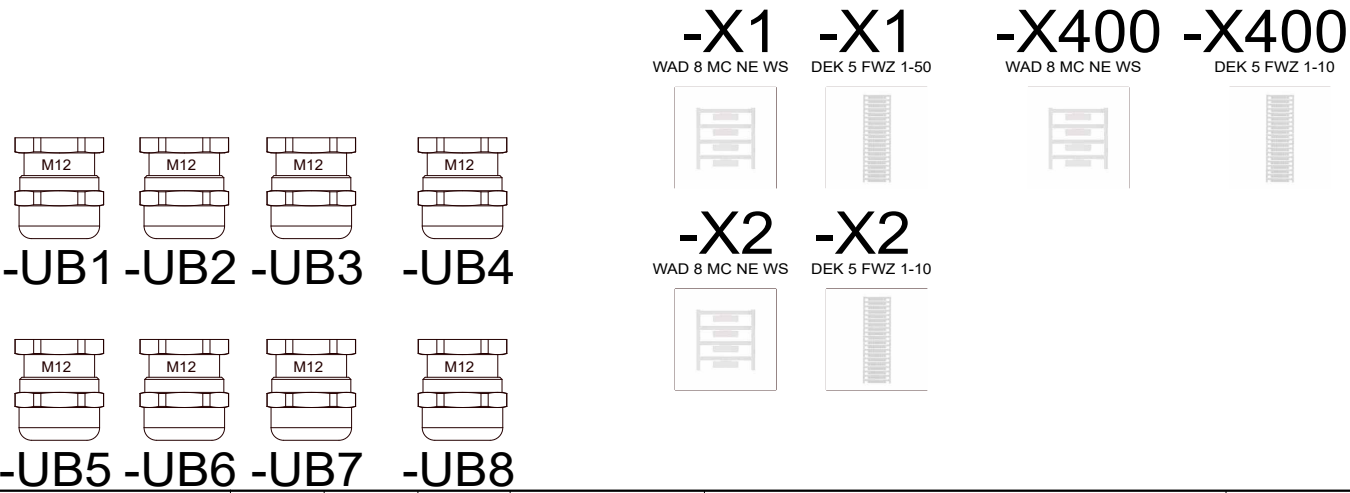
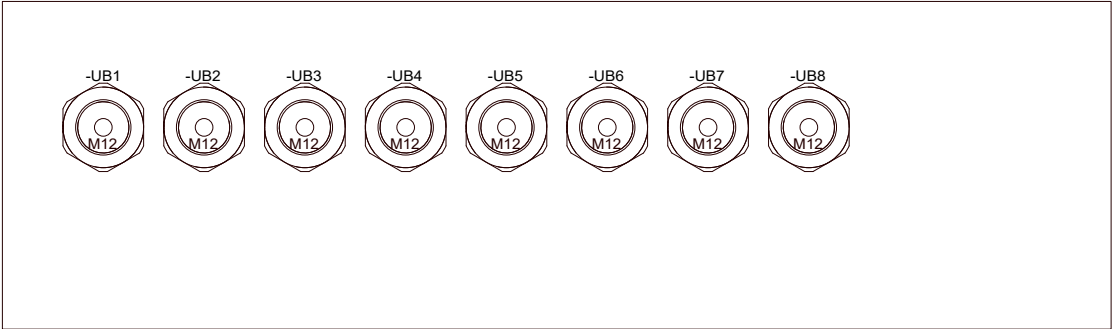
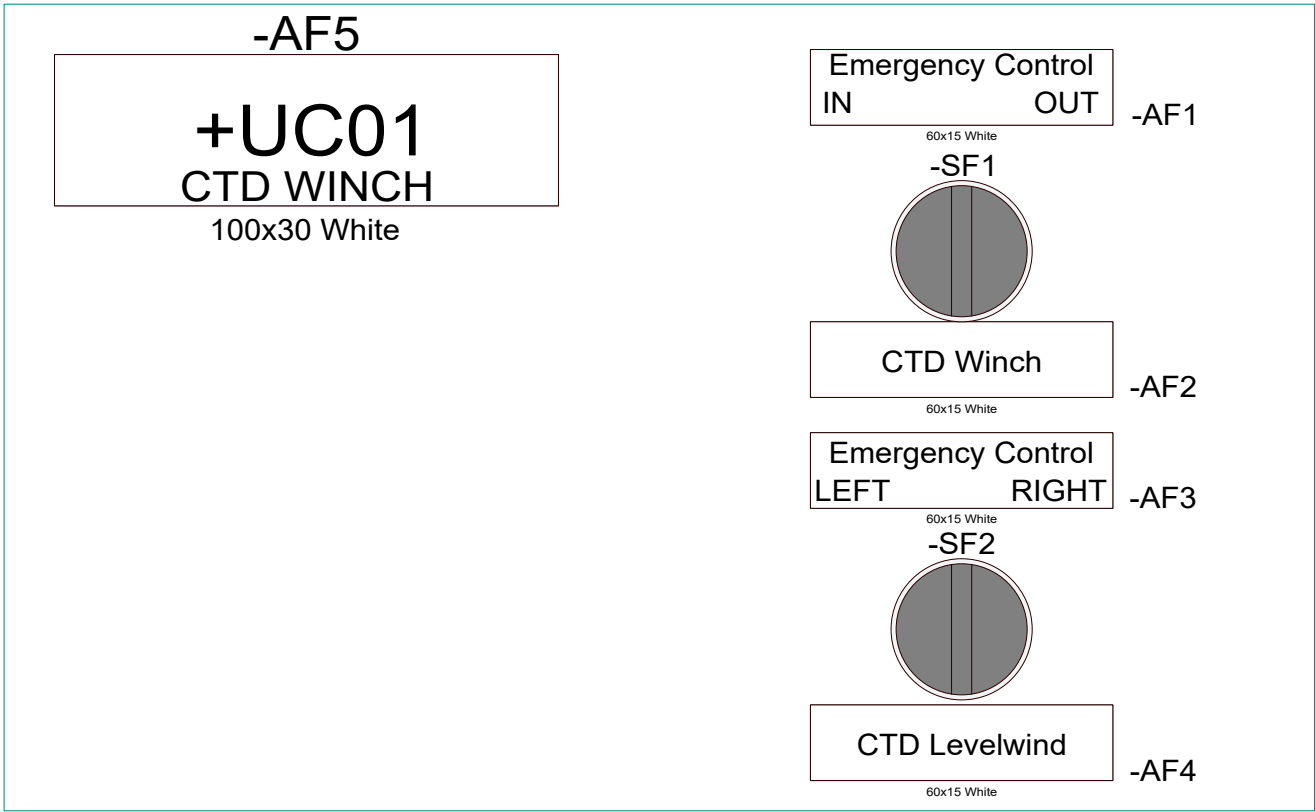
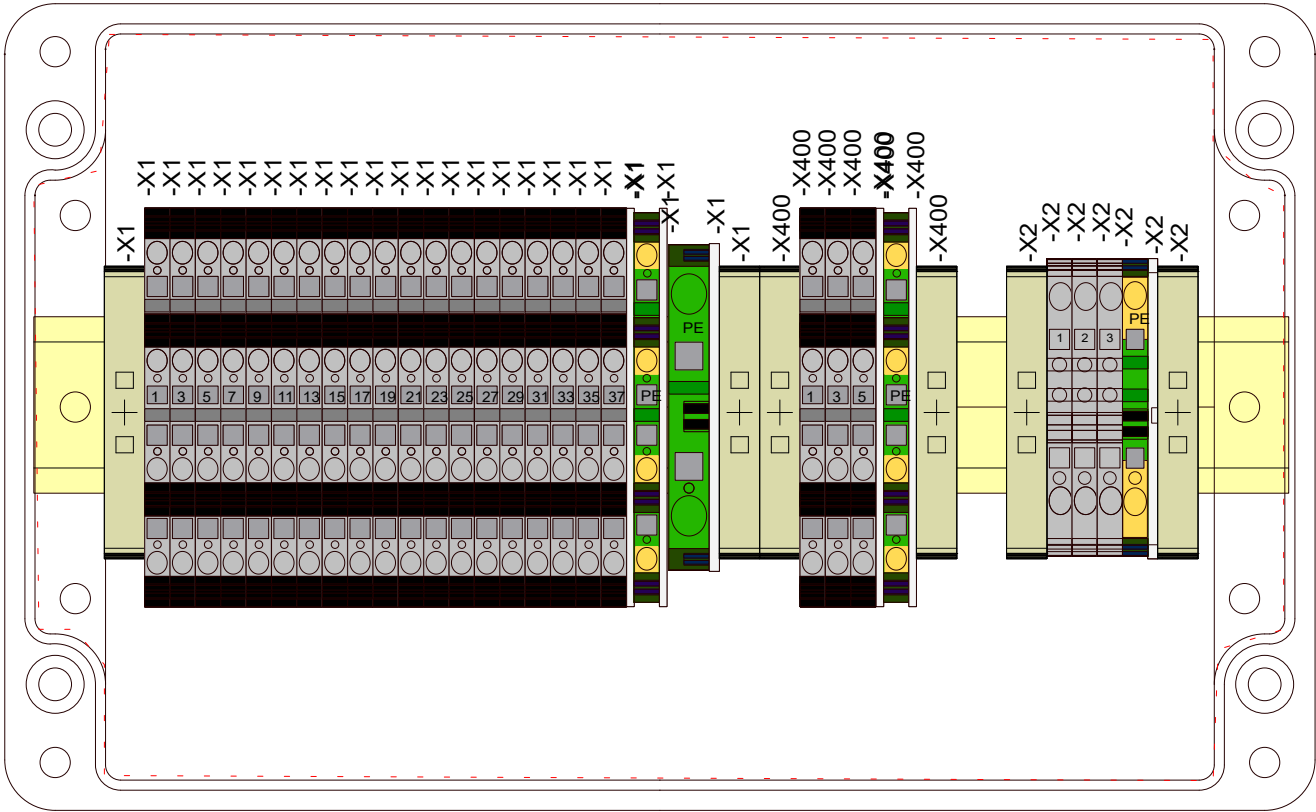


F3E66C8F8EFE4D7FBA8F6D9F89D2A466		17/11-2021		CNP Freire		CTD Winch		400182376		=HW01	
		GSK		MBar		Winch Internal Connection Box				+UC01	
		RAJ								Rev. G	
Status	Change	Date	Name	Standard	Version	Index	Repl. by	10070-02 CC		Sheet 1	Next 2

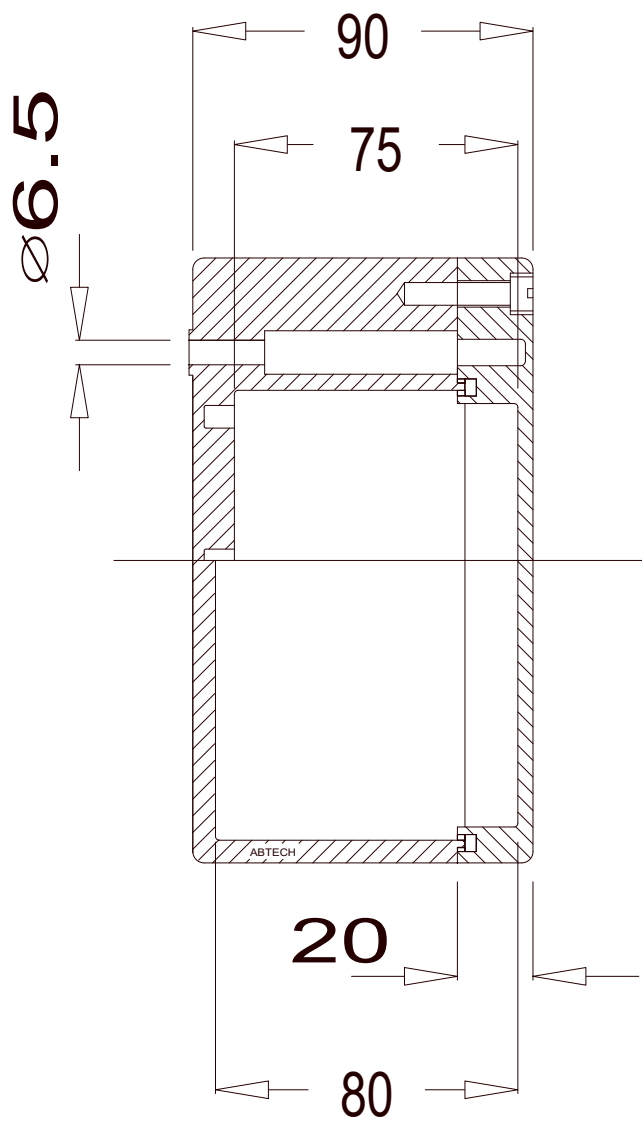
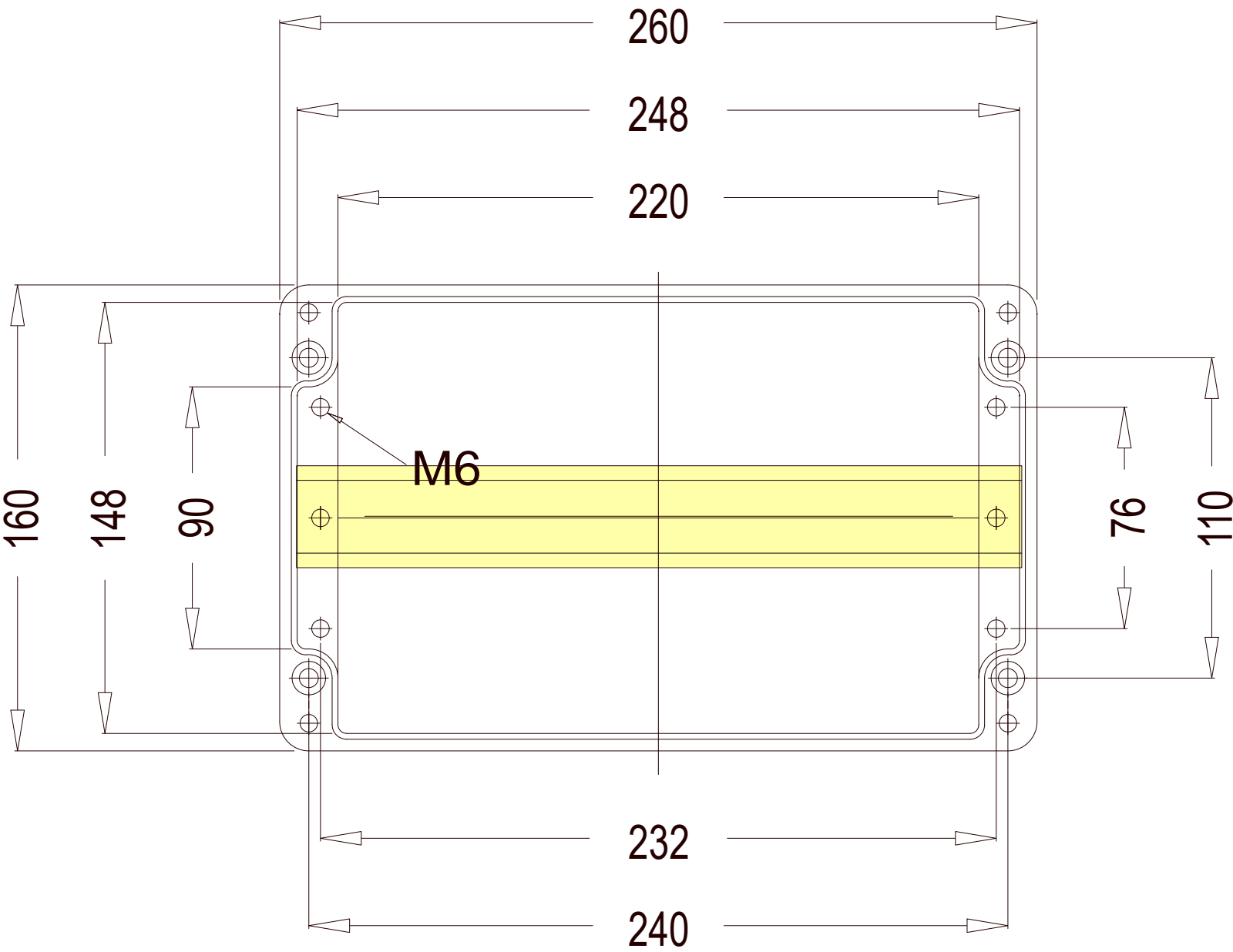


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				Approved	RAJ								Rev. G	
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-02 CC		Sheet 2	Next 1

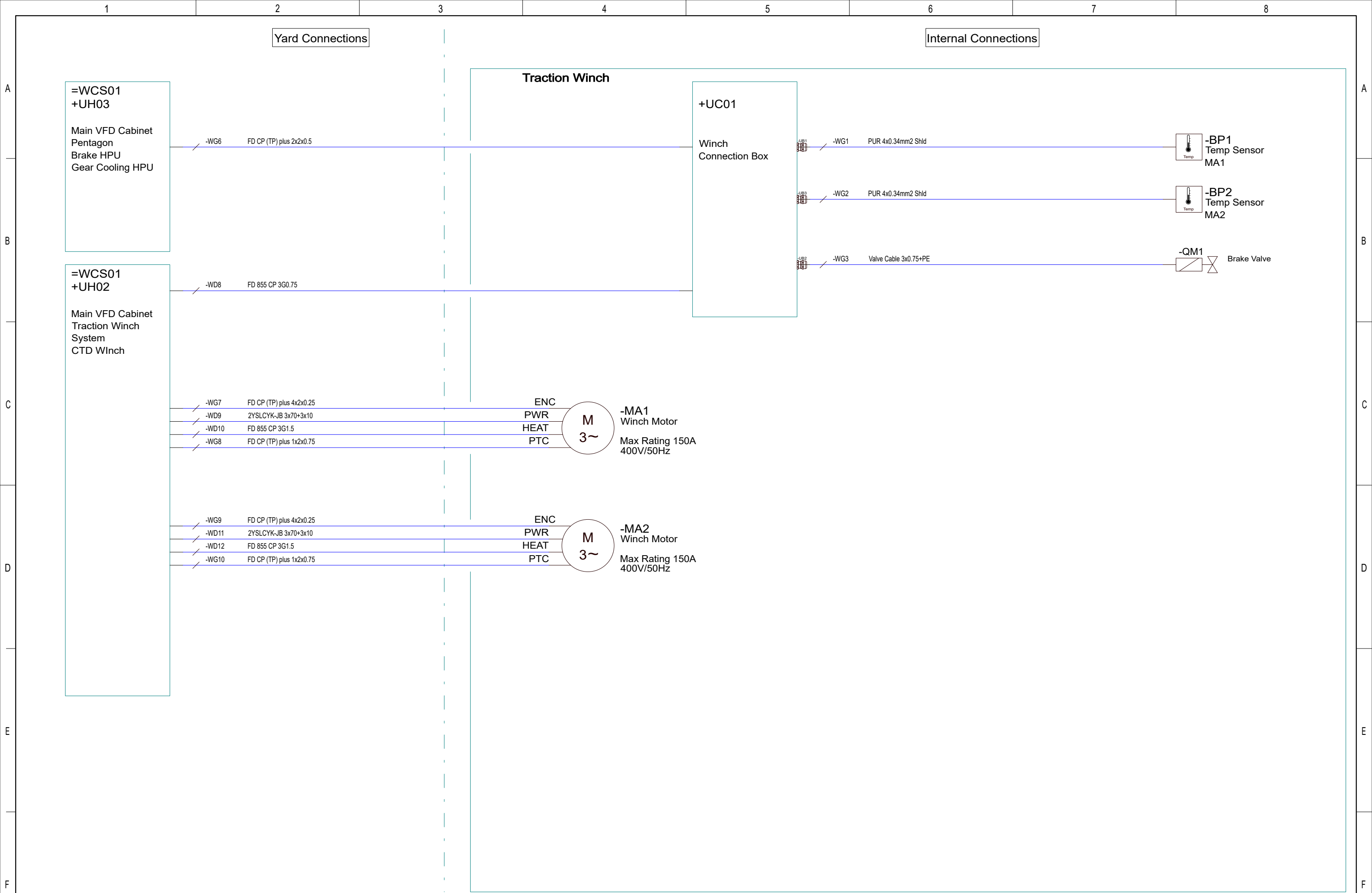
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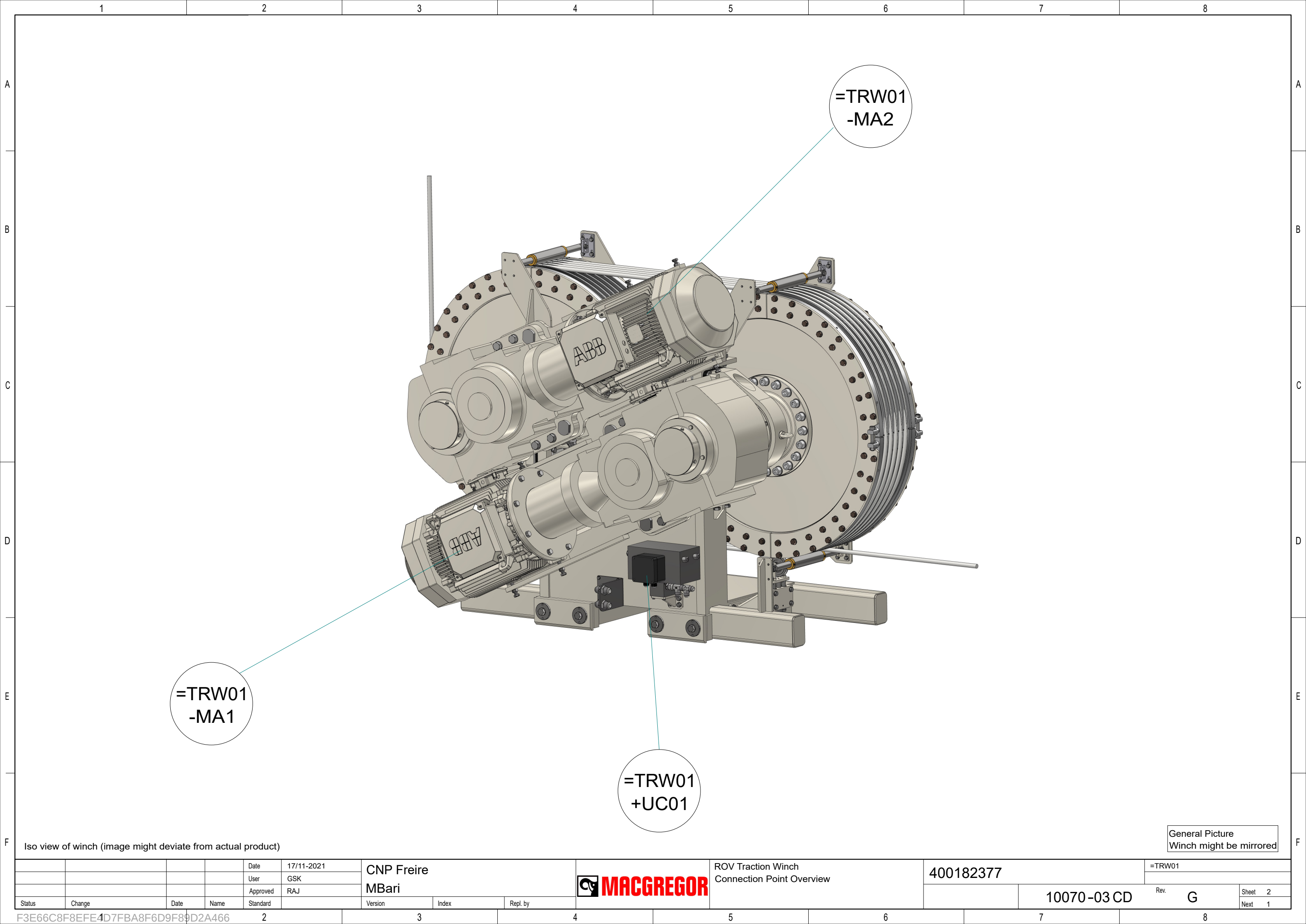
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				User	GSK									+UC01	
				Approved	RAJ									Rev. G	
Status	Change	Date	Name	Standard	Version	Index	Repl. by					10070-02 GA		Sheet 1	Next 2



				Date	17/11-2021	CNP Freire MBar				CTD Winch Winch Internal Connection Box	400182376	=HW01		
				User	GSK							+UC01		
				Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-02 GA	Rev. G	Sheet 2
														Next 1



				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
														Next 2



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

General Picture
Winch might be mirrored

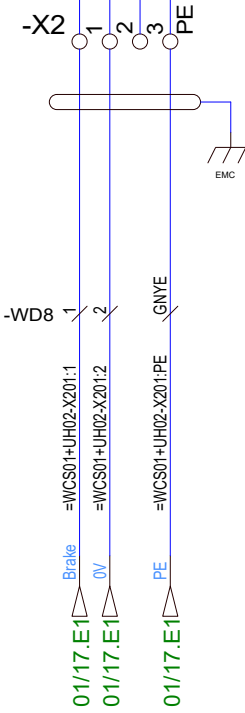
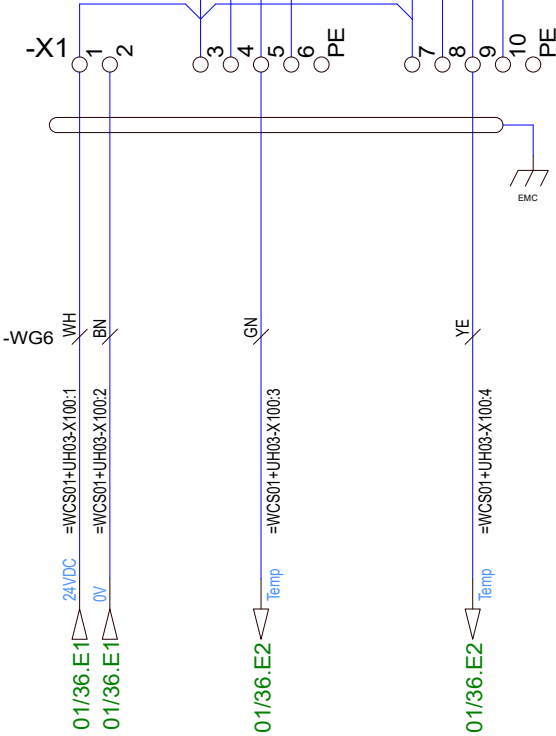
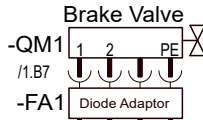
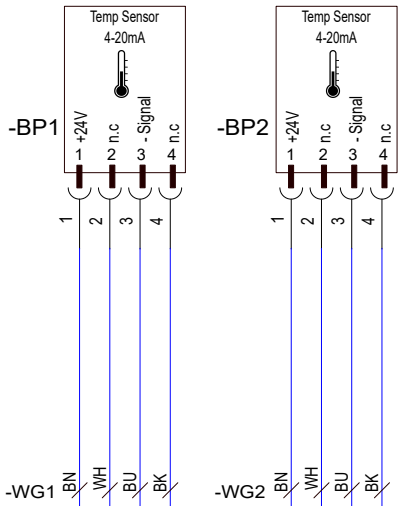
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				User	GSK									
				Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-03 CD		Rev. G	Sheet 2
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Gear Temp

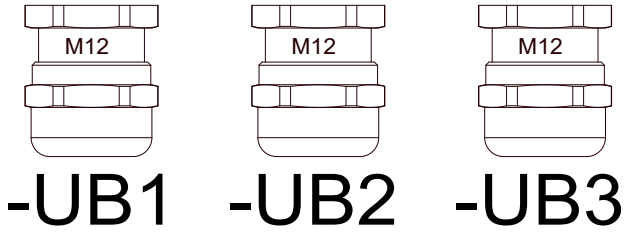
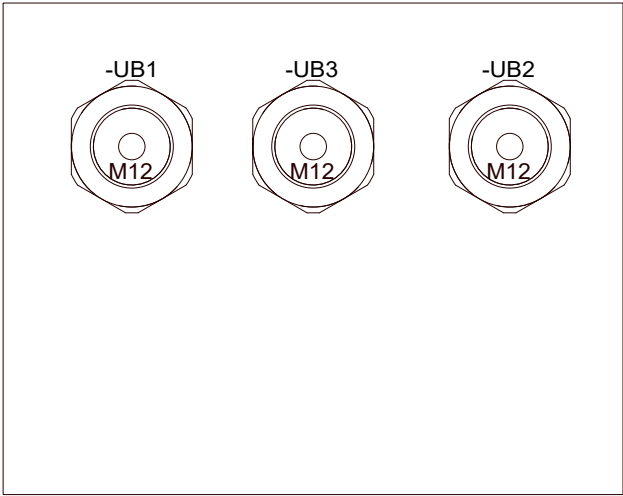
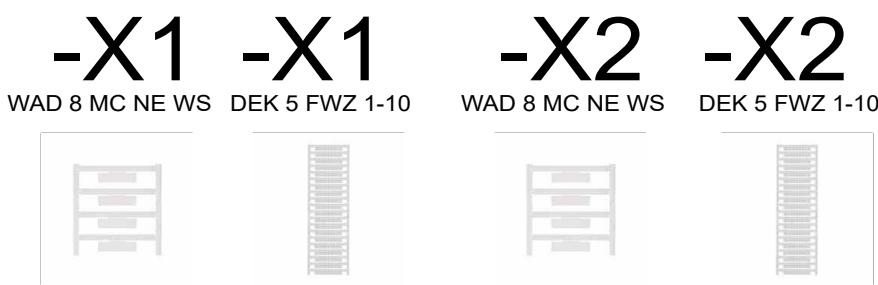
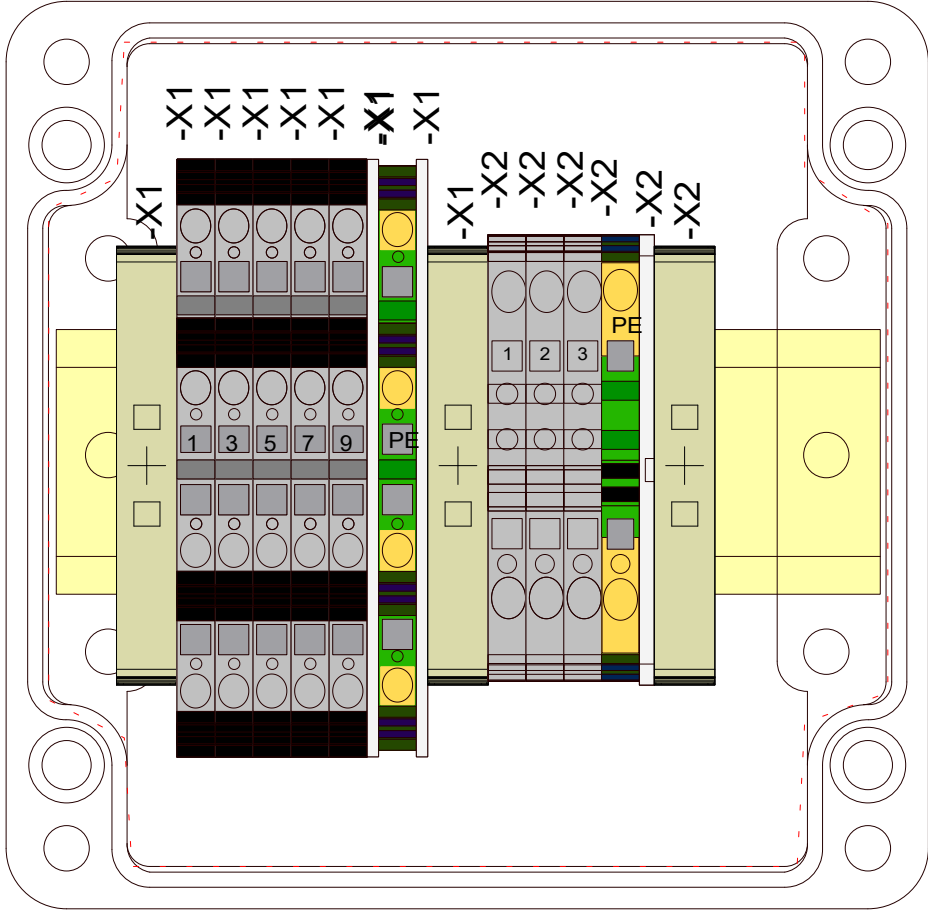
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Valve

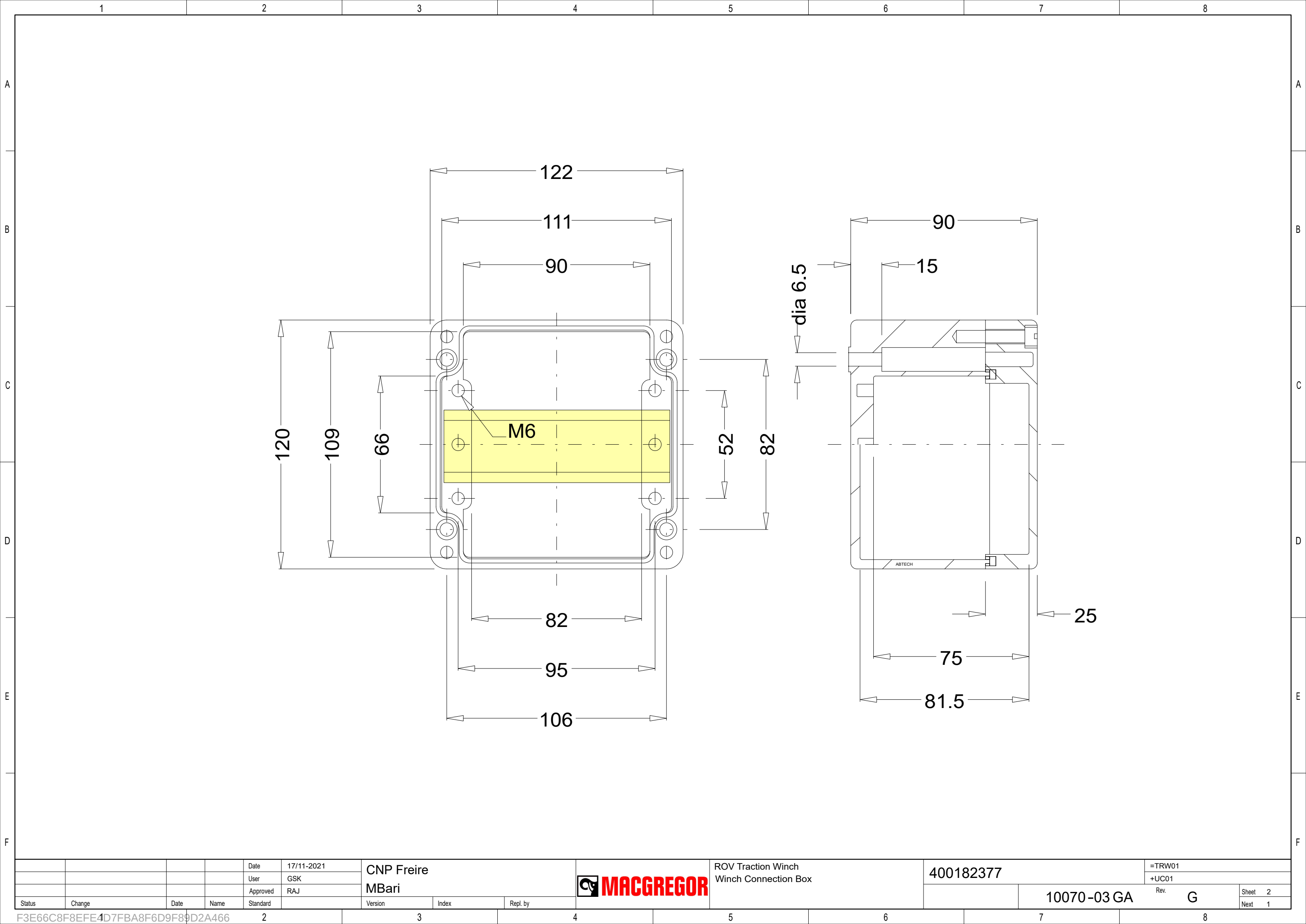
Temp Sensor
MA1

Temp Sensor
MA2

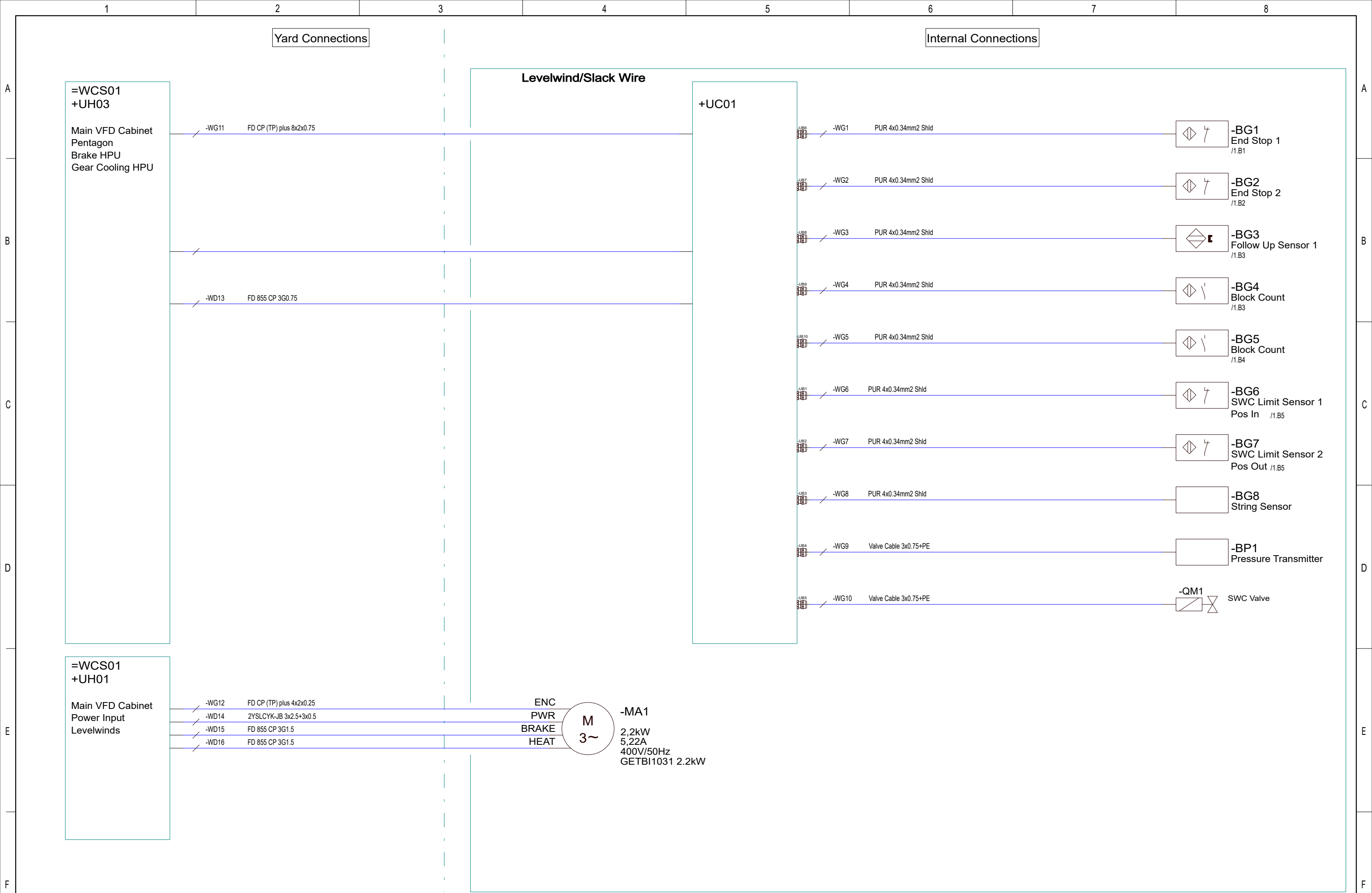


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				User	GSK							+UC01	
				Approved	RAJ							MBar	
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-03 CC	Rev. G	Sheet 1
													Next 1

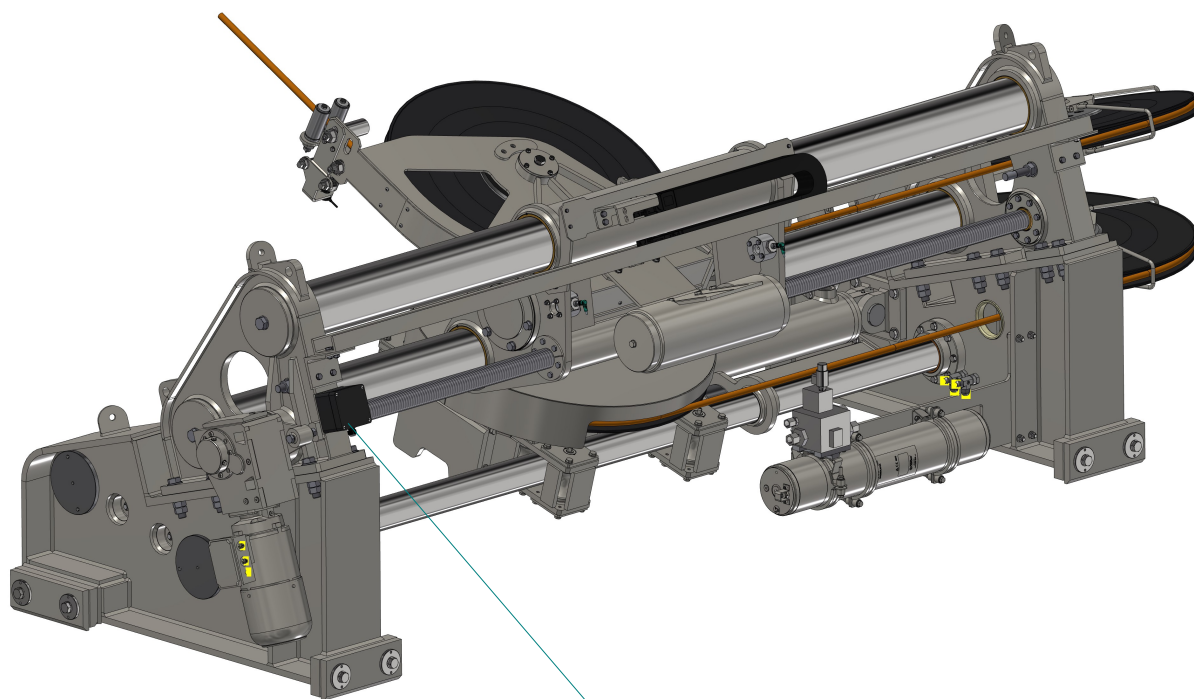




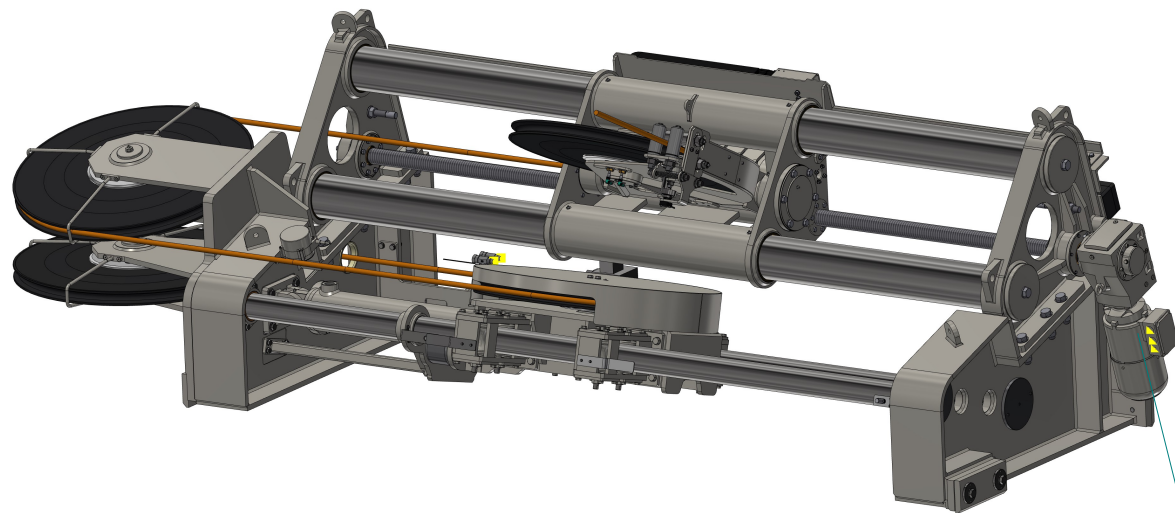
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				User	GSK							+UC01	
				Approved	RAJ								
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-03 GA	Rev. G	Sheet 2
													Next 1



				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

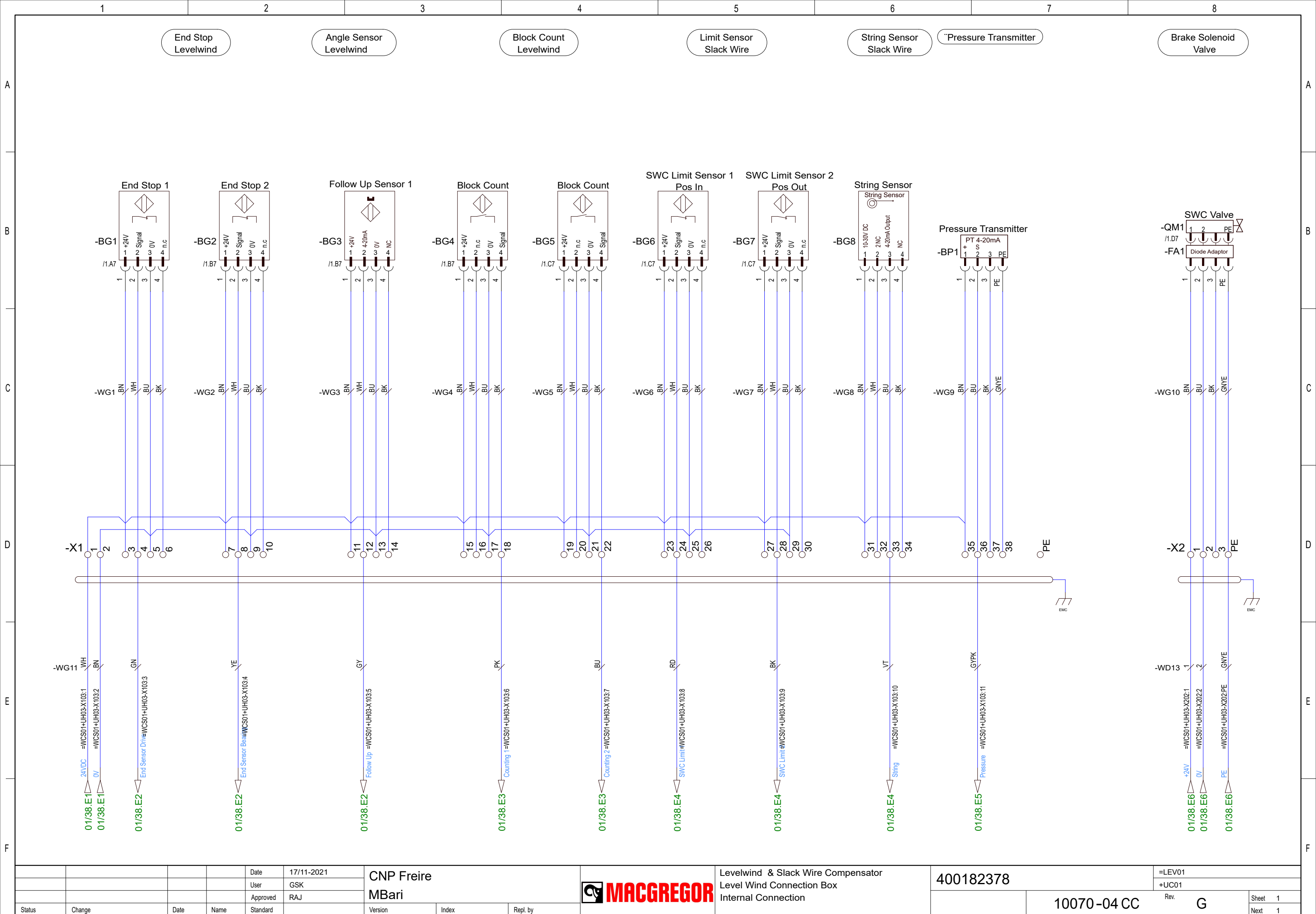


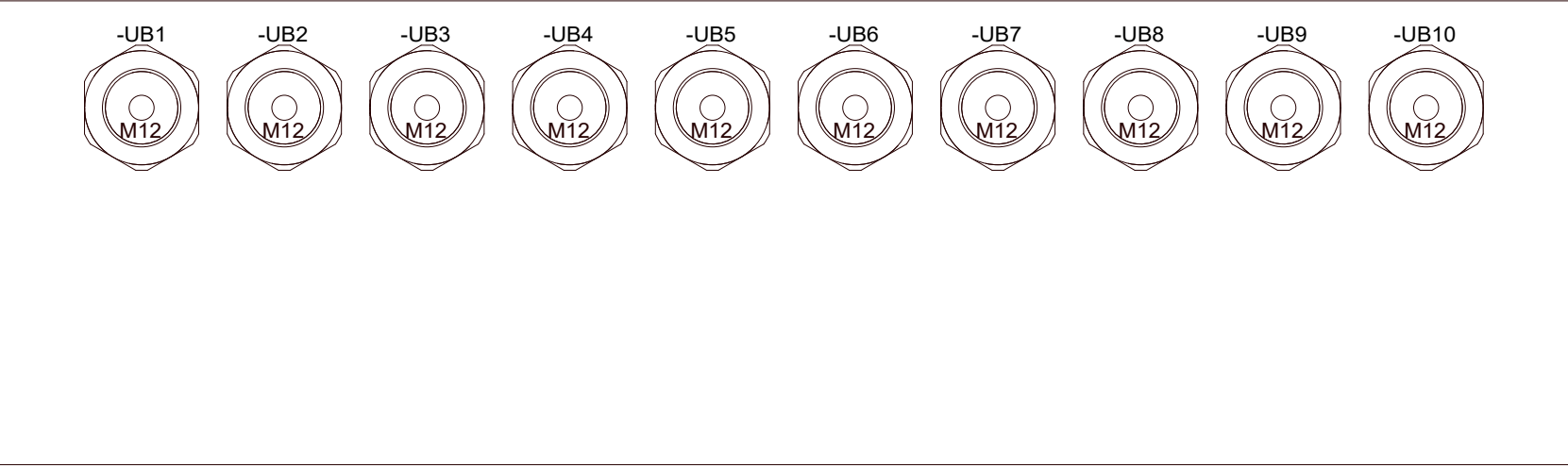
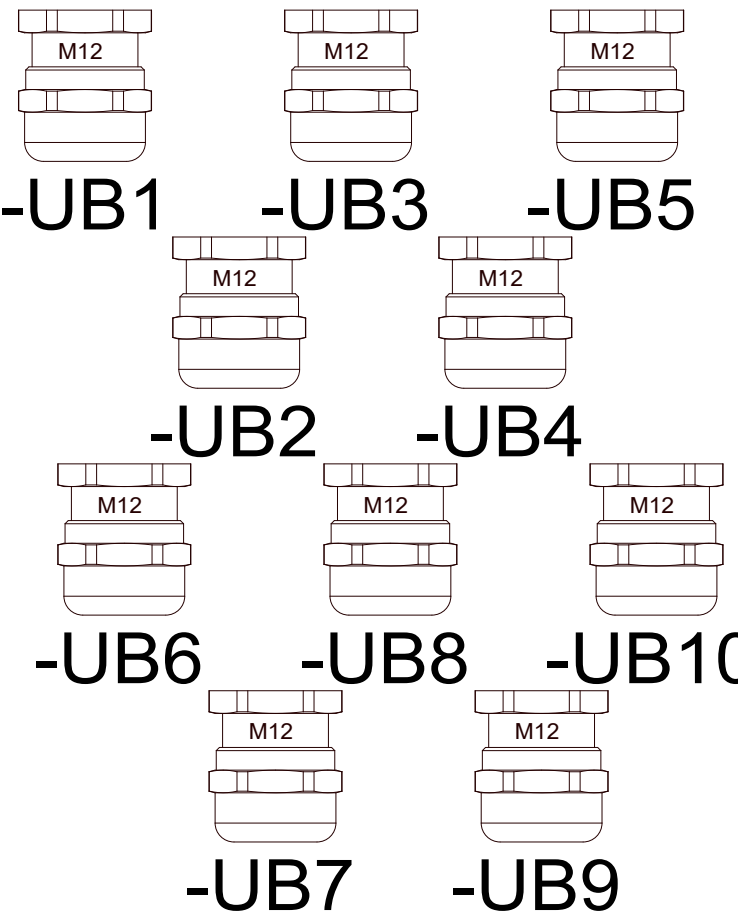
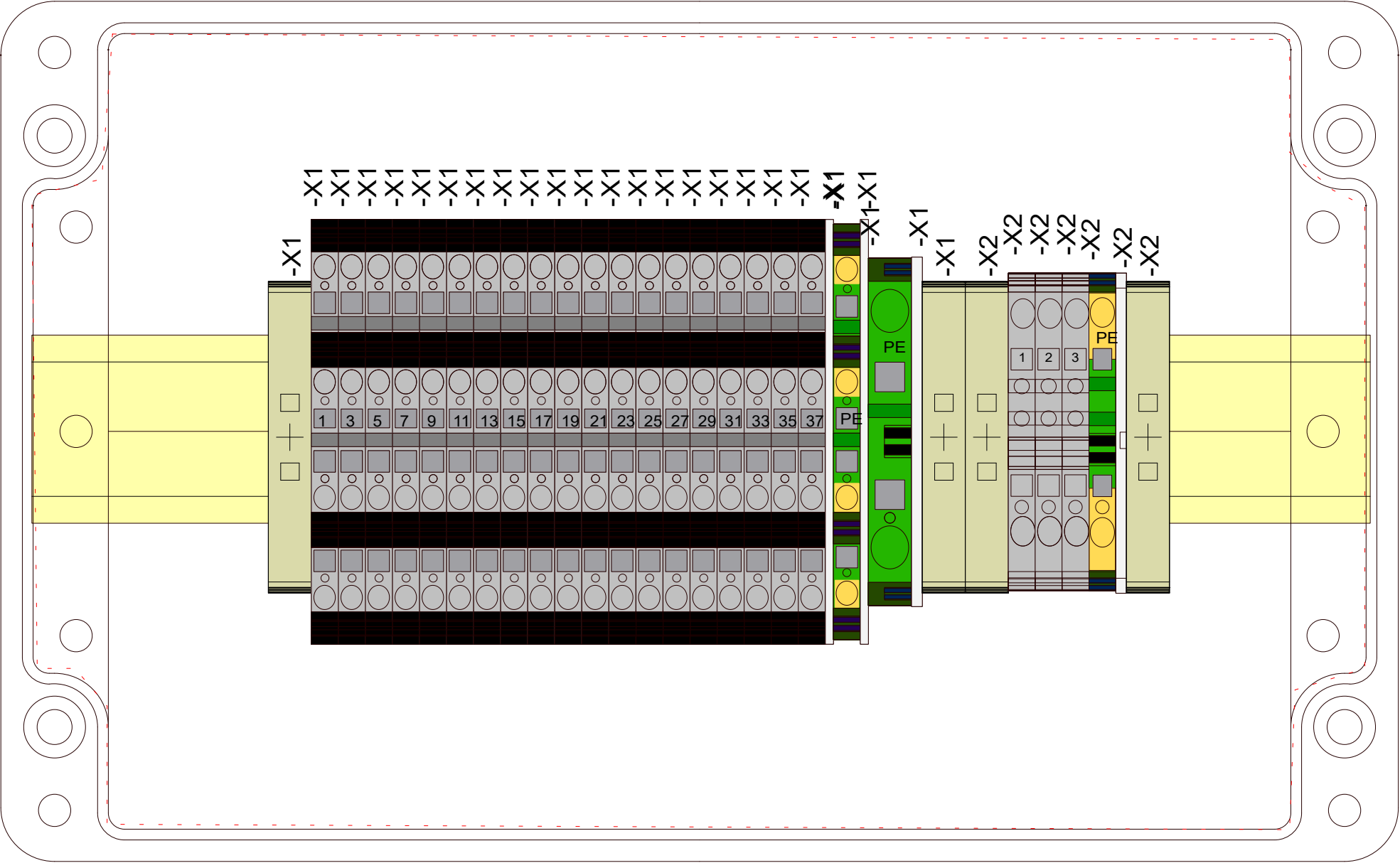
=LEV01
-MA1

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

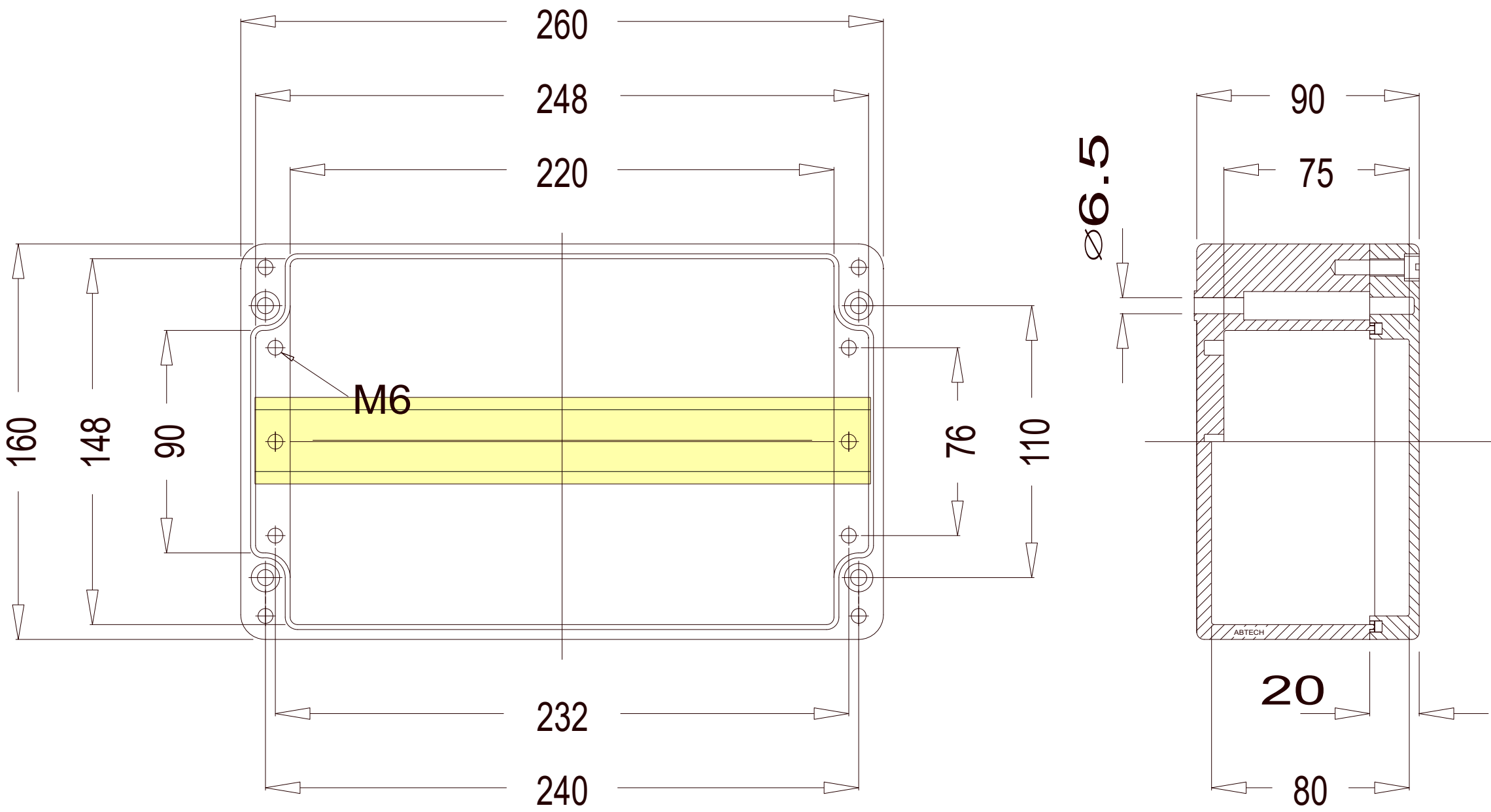
General Picture
Winch might be mirrored

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

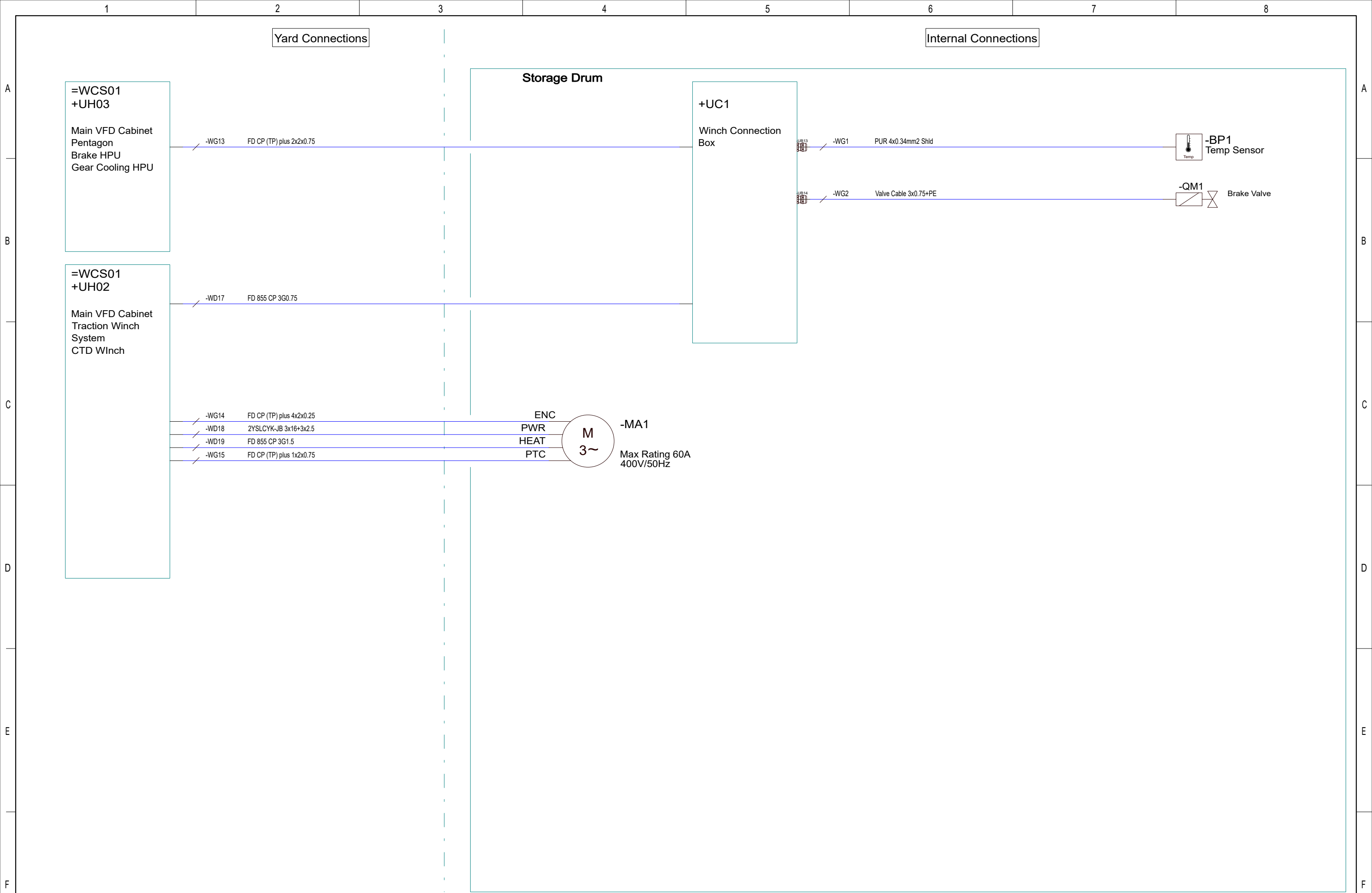




				Date	17/11-2021	CNP Freire MBarí				Levelwind & Slack Wire Compensator Level Wind Connection Box Internal Connection	400182378	=LEV01		
				User	GSK							+UC01		
				Approved	RAJ							Rev. G		
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-04 GA	Sheet 1	Next 2	



				Date	17/11-2021	CNP Freire				Levelwind & Slack Wire Compensator Level Wind Connection Box Internal Connection	400182378		=LEV01	
				User	GSK								+UC01	
				Approved	RAJ						MBarí			
Status	Change		Date	Name	Standard		Version	Index	Repl. by			10070-04 GA		Next 1



				Date	17/11-2021	CNP Freire MBarí			Storage Drum Storage Drum		400182467		=RW01	
				User	GSK									
				Approved	RAJ								Rev.	G
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-05 CD		Sheet	1
													Next	2

12345678

A

B

C

D

E

F

A

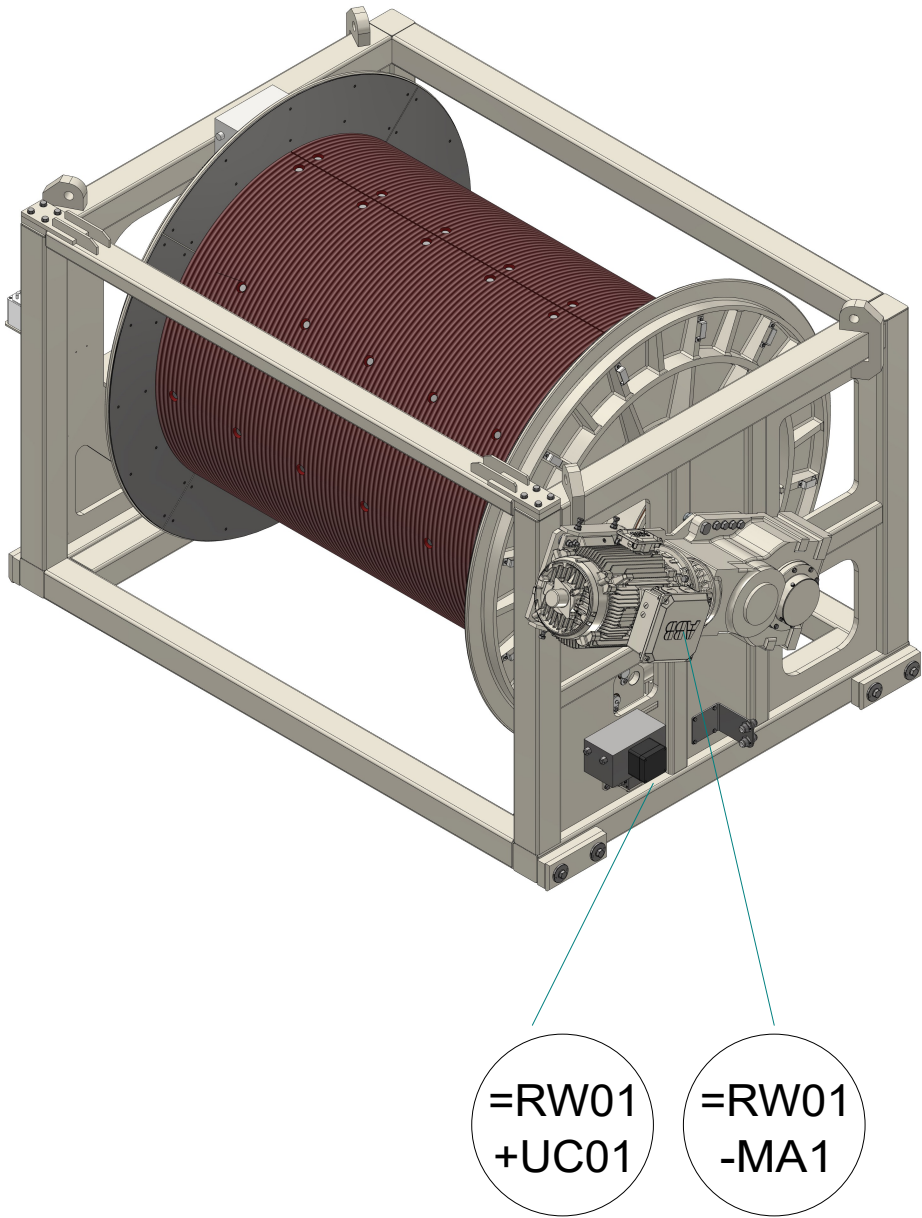
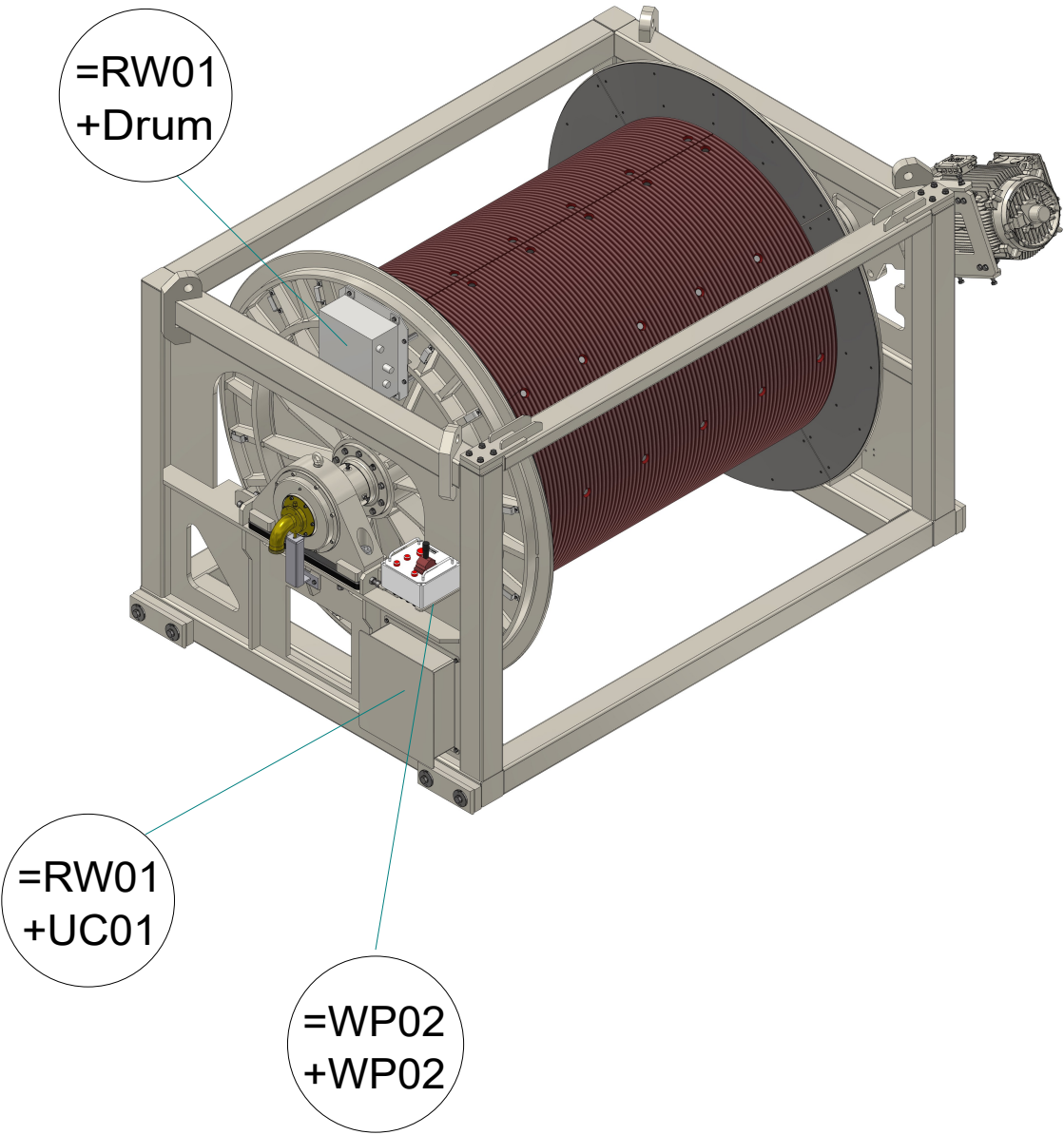
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C

D

E

F

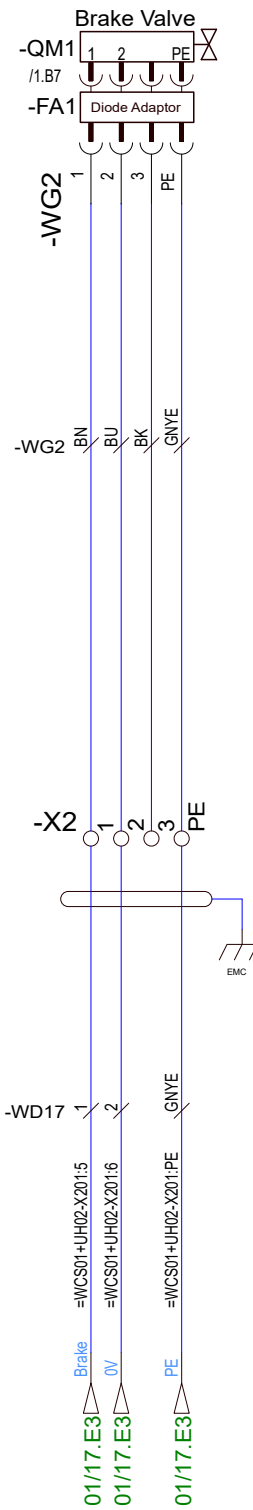
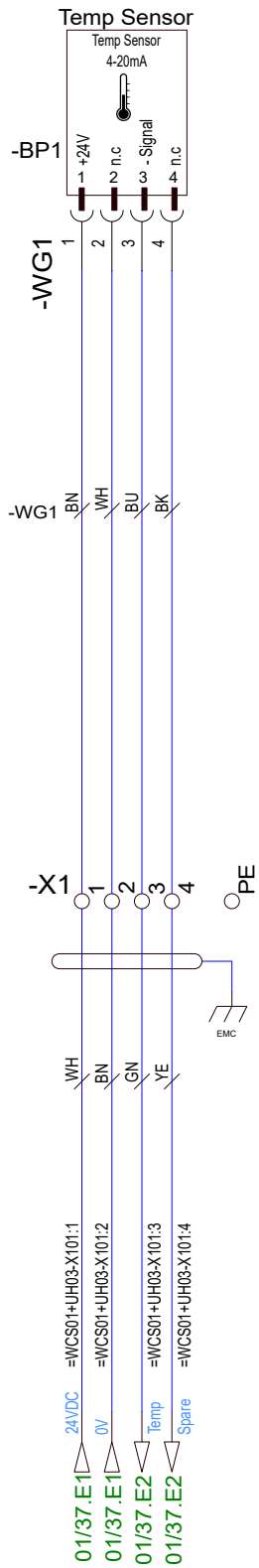


General Picture
Winch might be mirrored

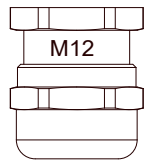
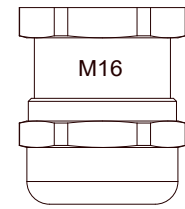
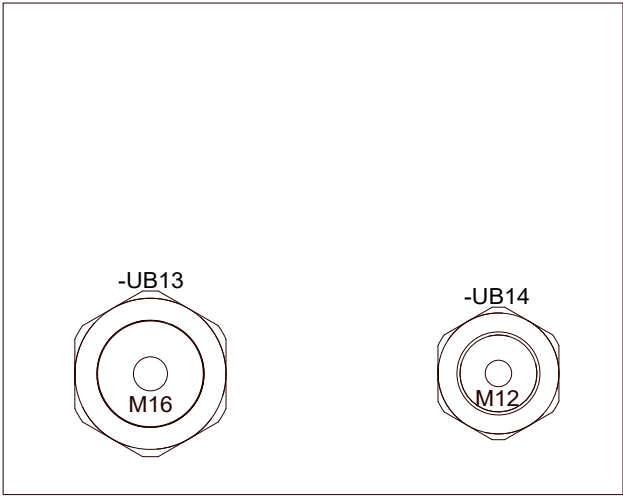
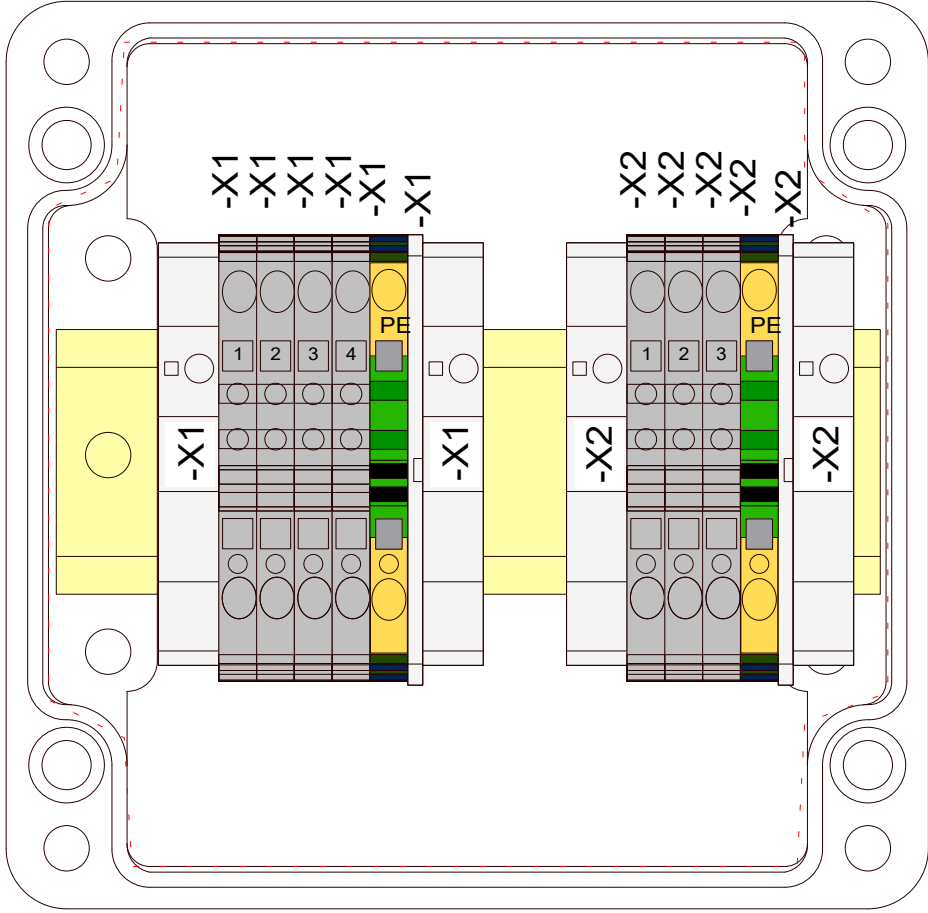
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				Approved	RAJ									
Status	Change	Date	Name	Standard	Version	Index	Repl. by					10070-05 CD	Rev. G	Sheet 2
														Next 1

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Gear Temp



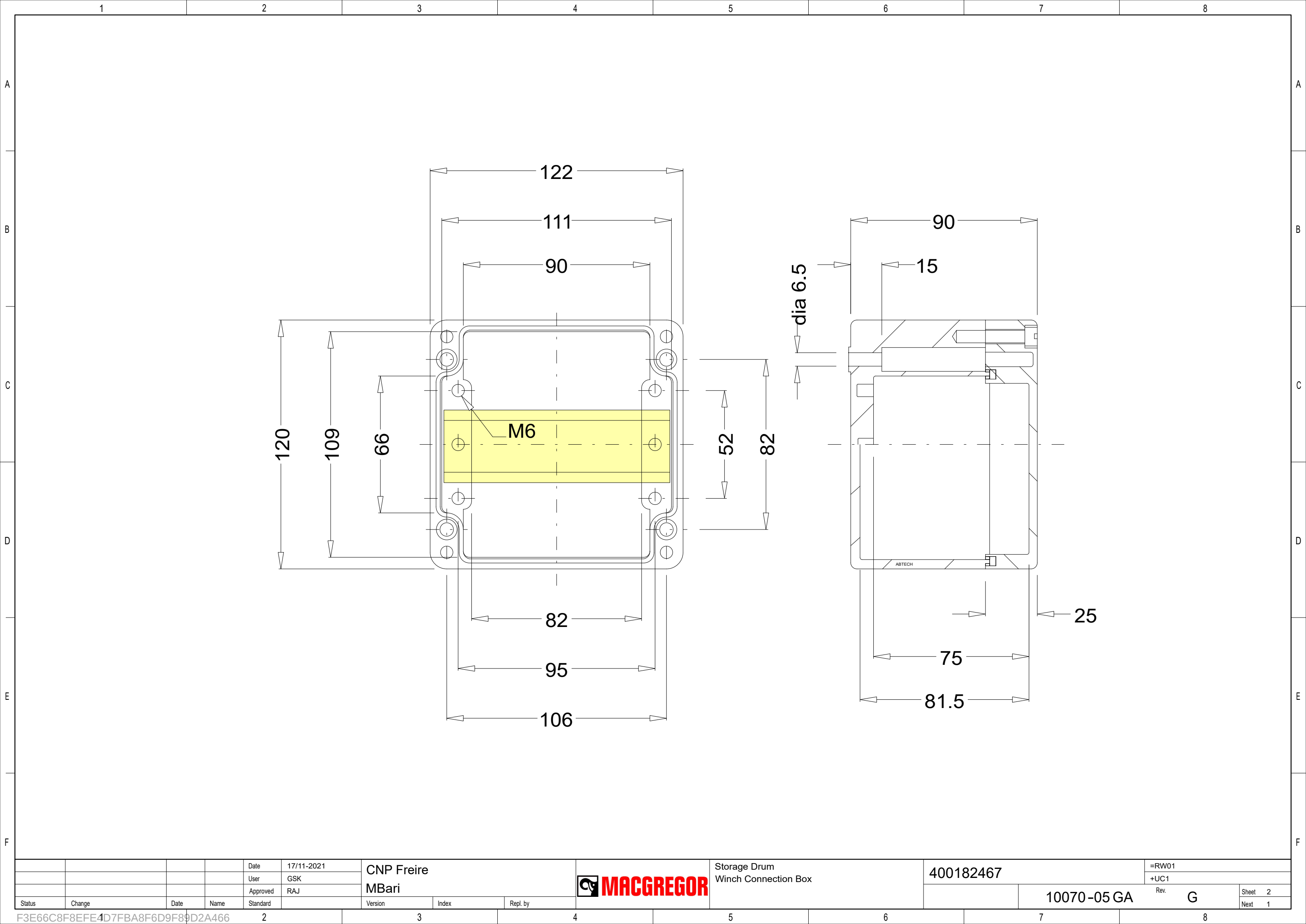
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				Approved	RAJ										Rev. G	
Status	Change	Date	Name	Standard		Version	Index	Repl. by						10070-05 CC	Sheet 1	Next 1



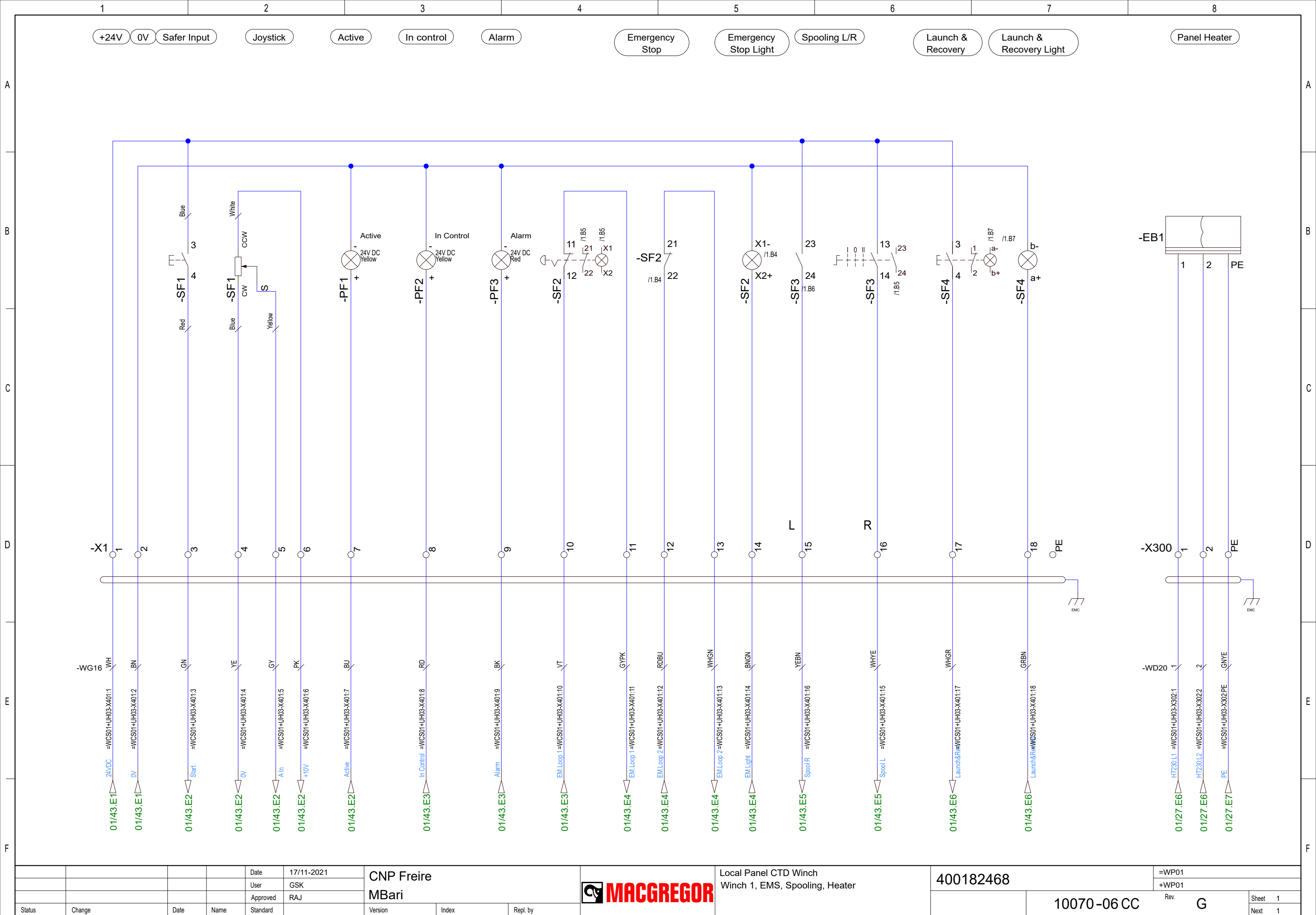
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-UB14

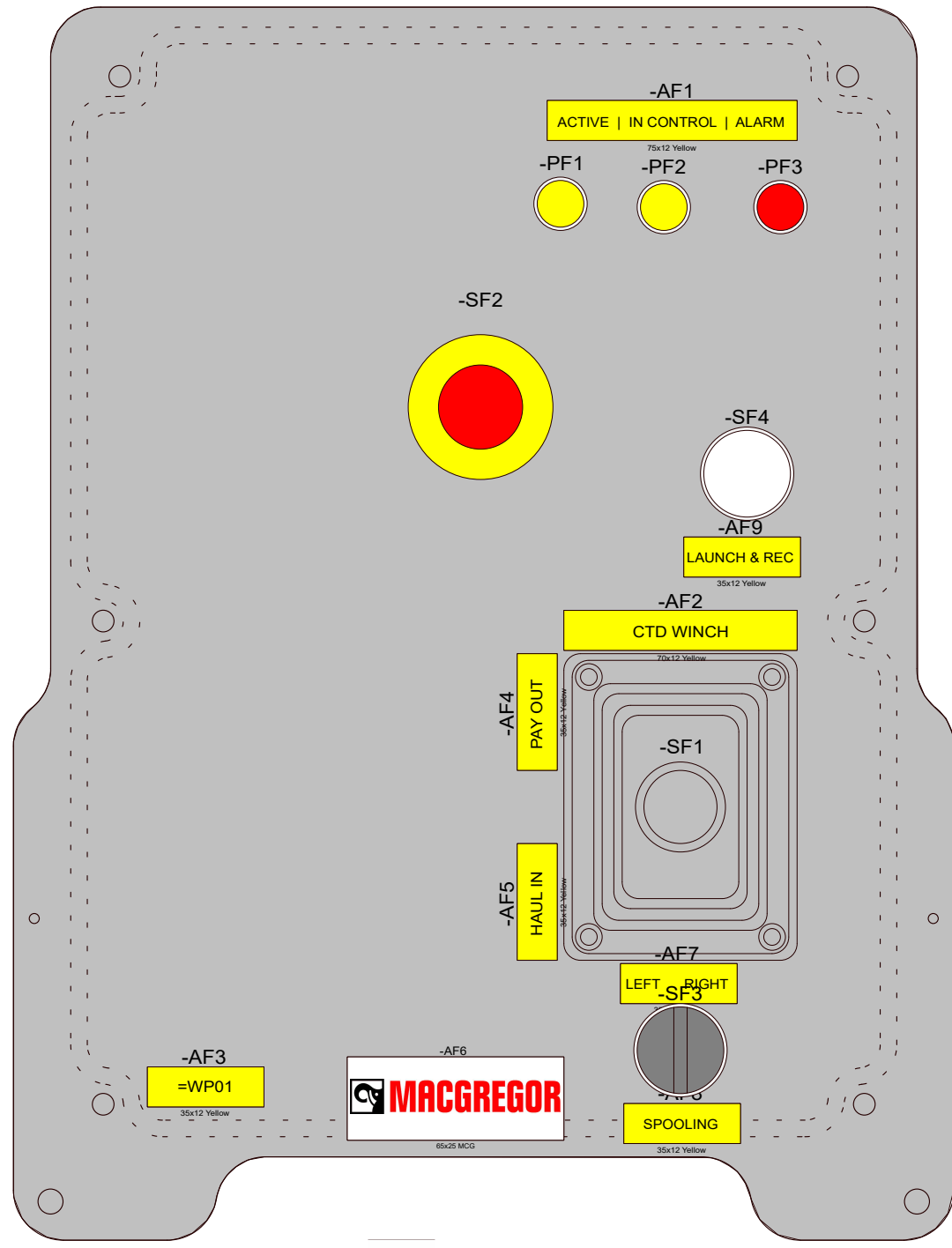
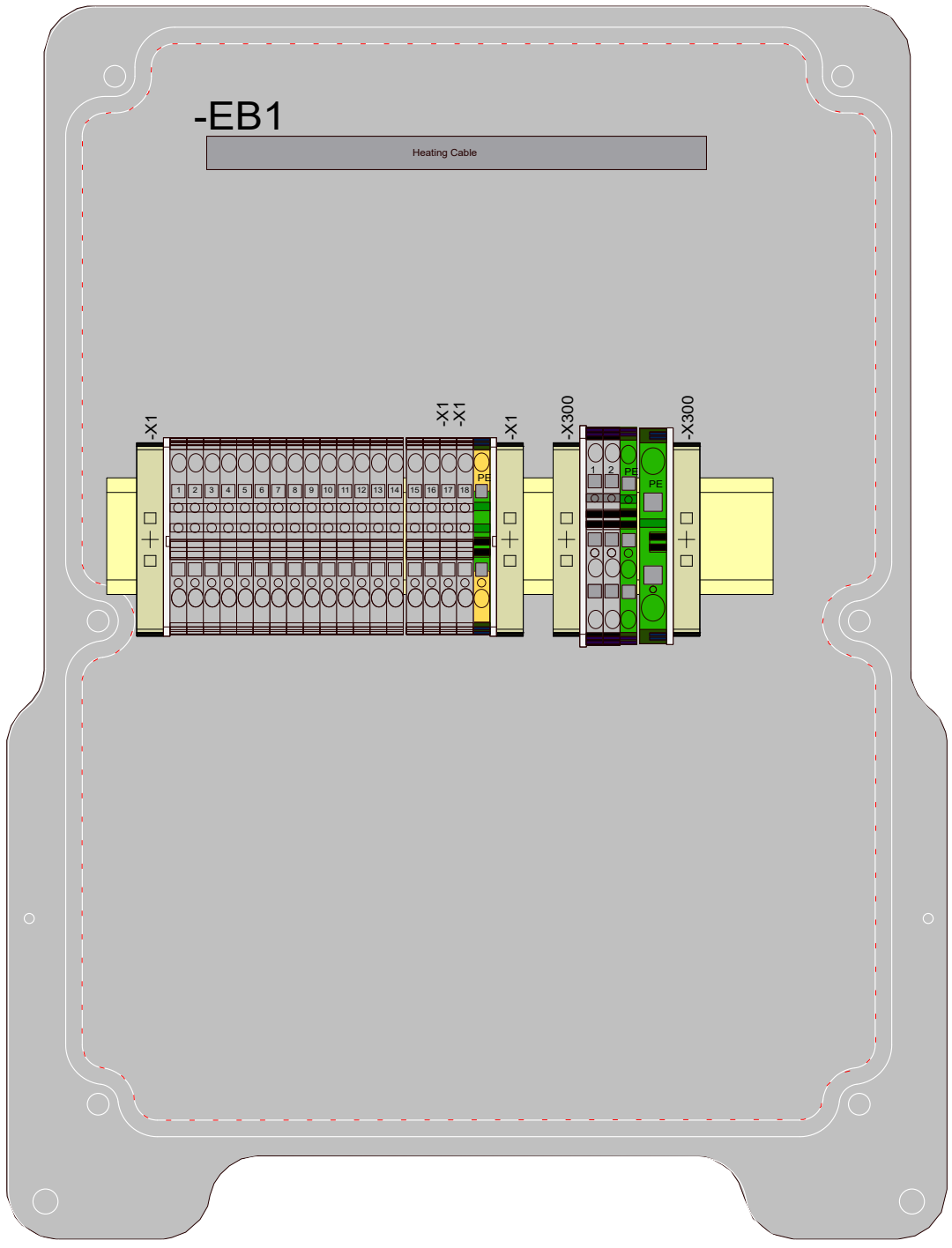
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				User	GSK							+UC1	
				Approved	RAJ								
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-05 GA	Rev. G	Sheet 1
													Next 2



				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



				Date	17/11-2021	CNP Freire MBarí				Local Panel CTD Winch Winch 1, EMS, Spooling, Heater	400182468		=WP01	
				User	GSK								+WP01	
				Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-06 CC		Rev. G	Sheet 1
														Next 1



Cables That Needs To Be Connected By Yard

=WCS01
+UH03

Main VFD Cabinet
Pentagon
Brake HPU
Gear Cooling HPU

+WP02

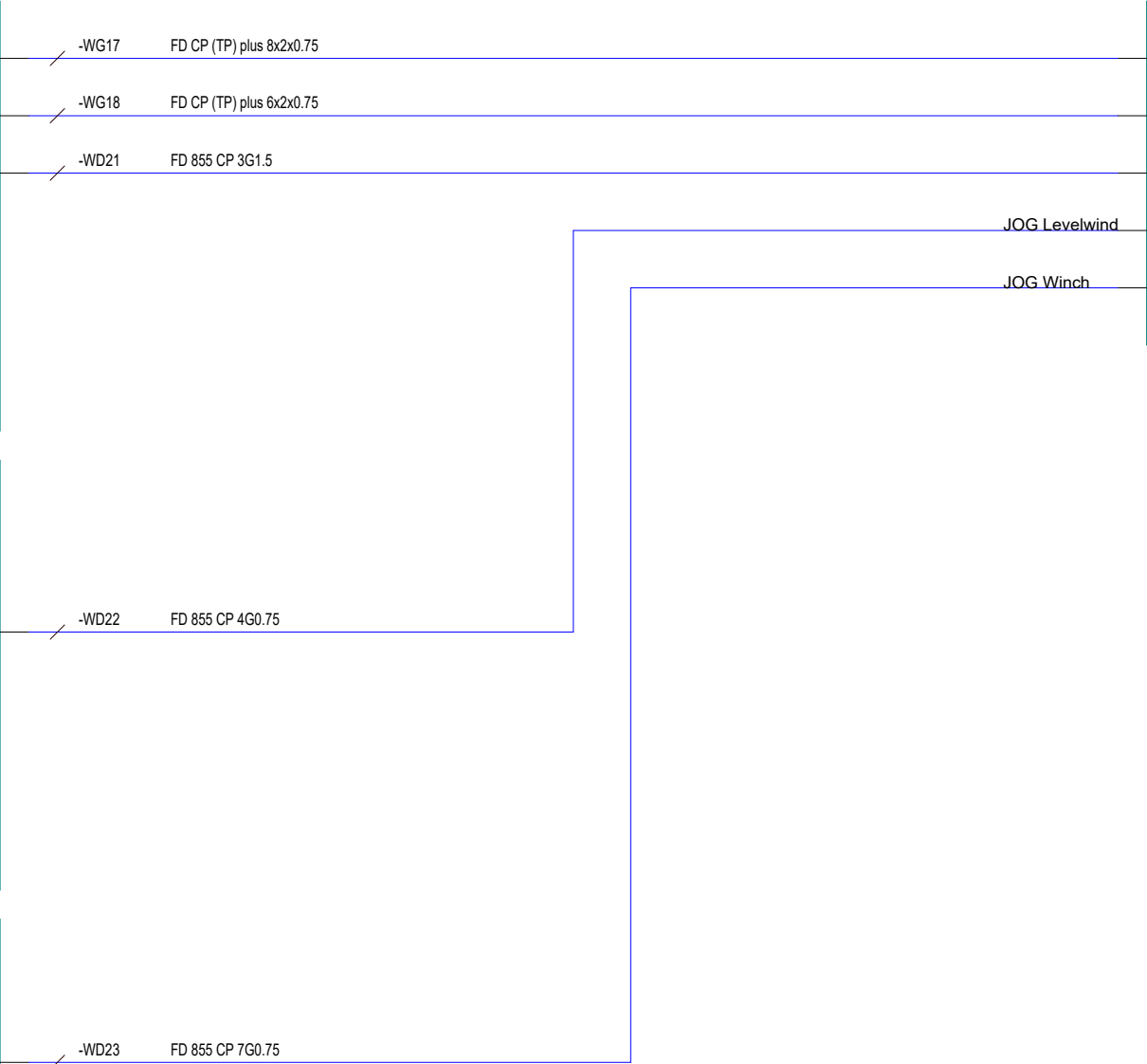
Local Panel
ROV Traction System
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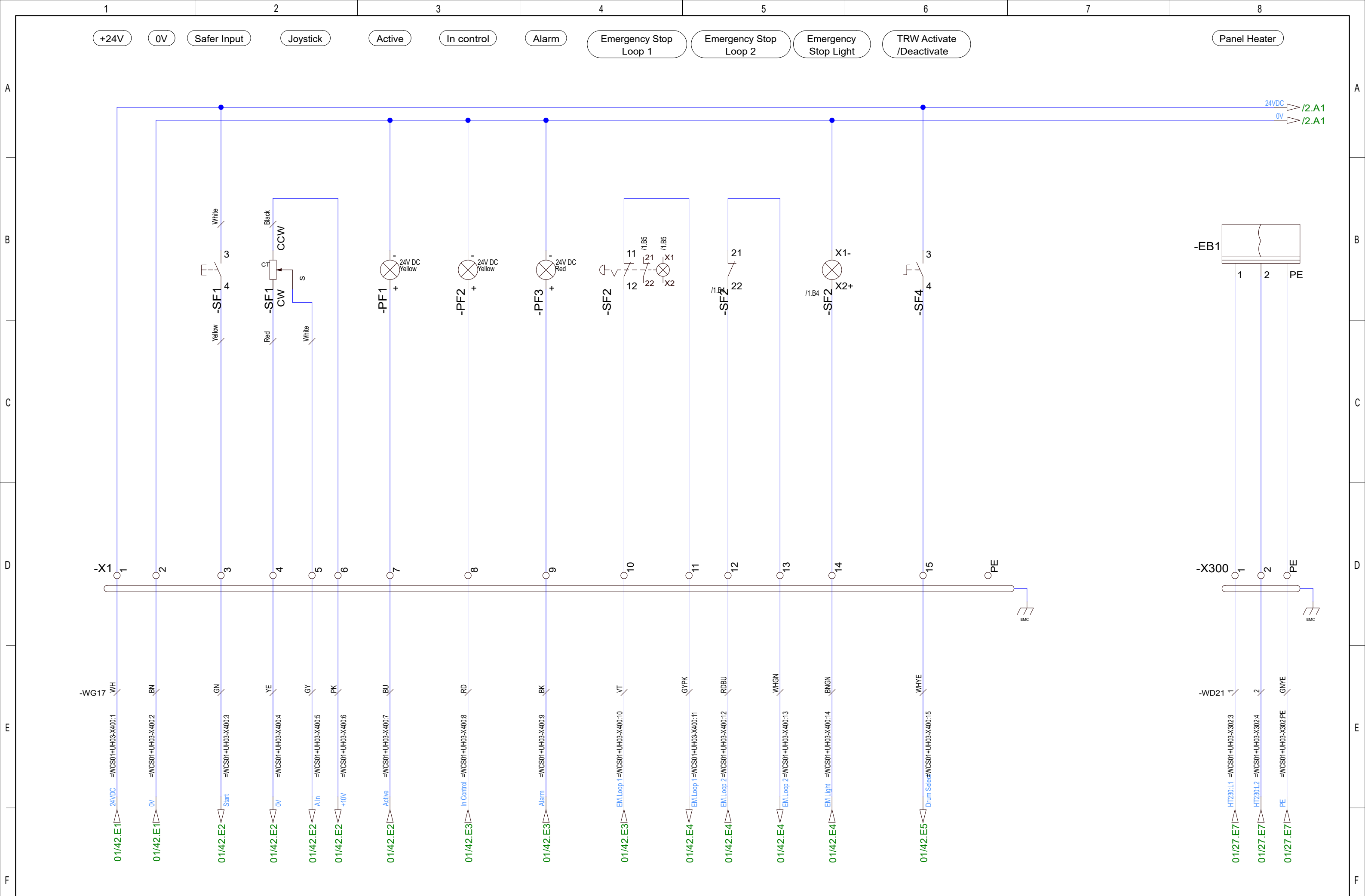
=WCS01
+UH01

Main VFD Cabinet
Power Input
Levelwinds

=WCS01
+UH02

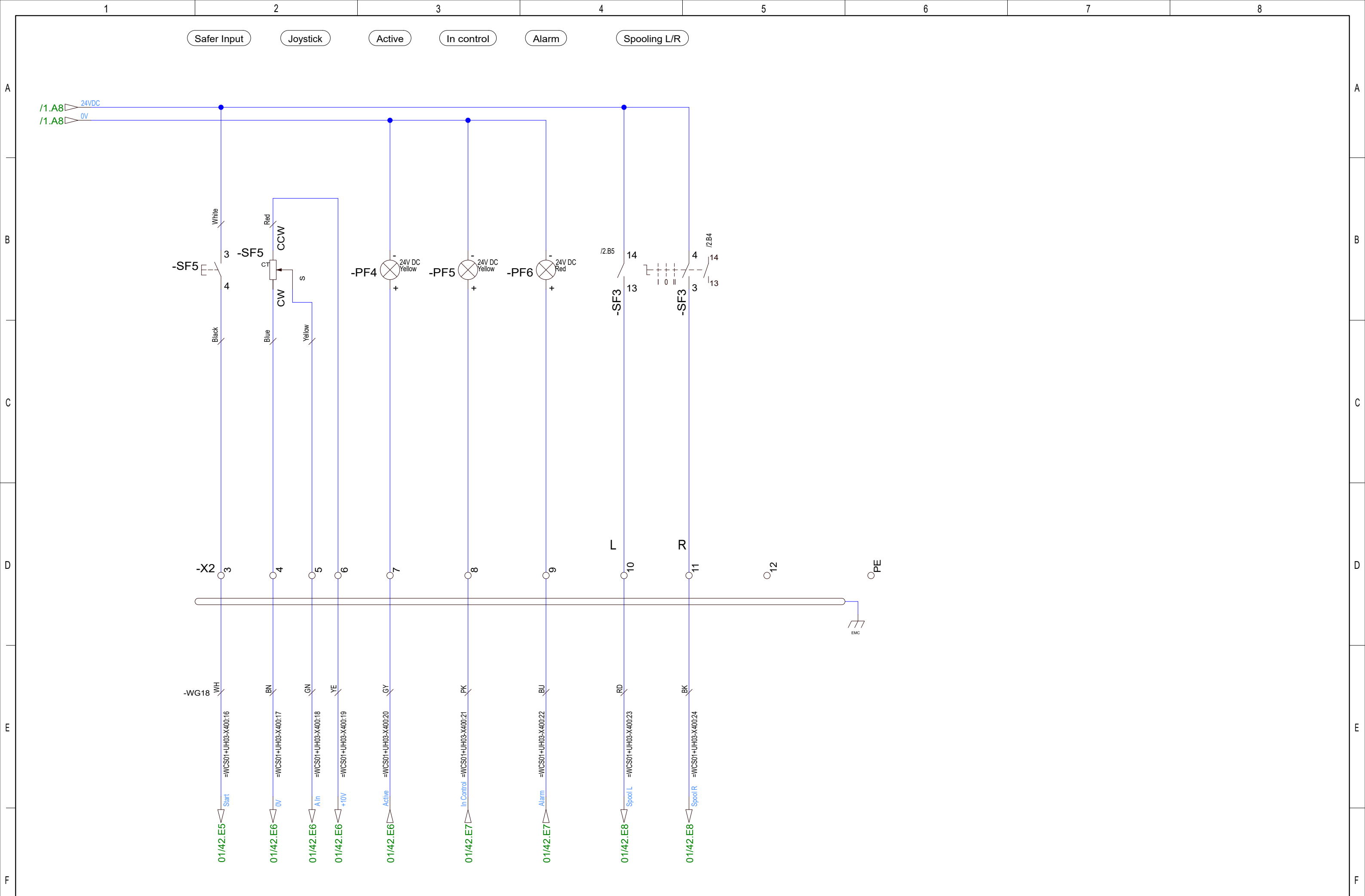
Main VFD Cabinet
Traction Winch
System
CTD Winch



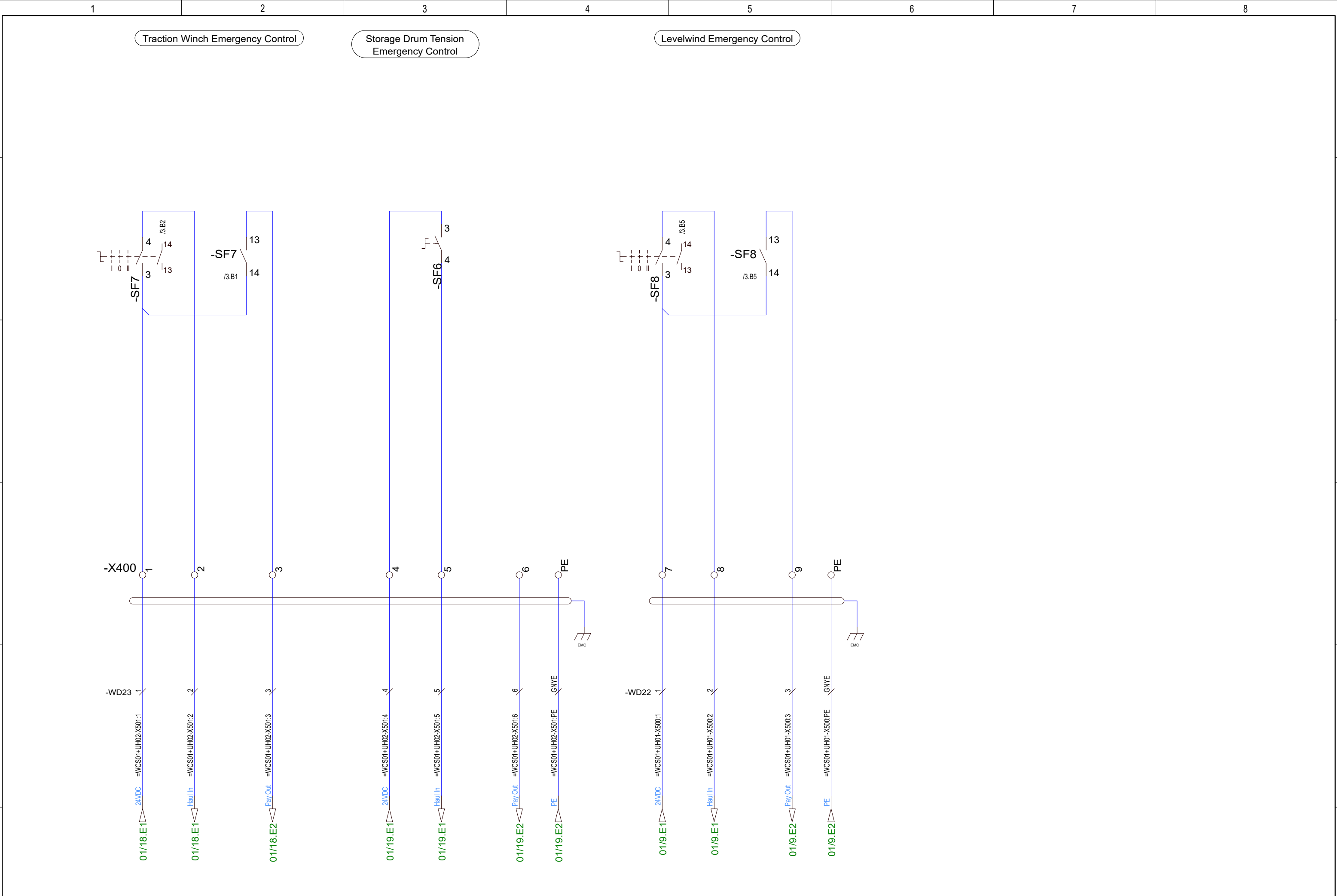


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				User	GSK								+WP02		
				Approved	RAJ								Rev.		G
Status	Change		Date	Name	Standard	Version	Index	Repl. by			10070-07 CC			Next	2

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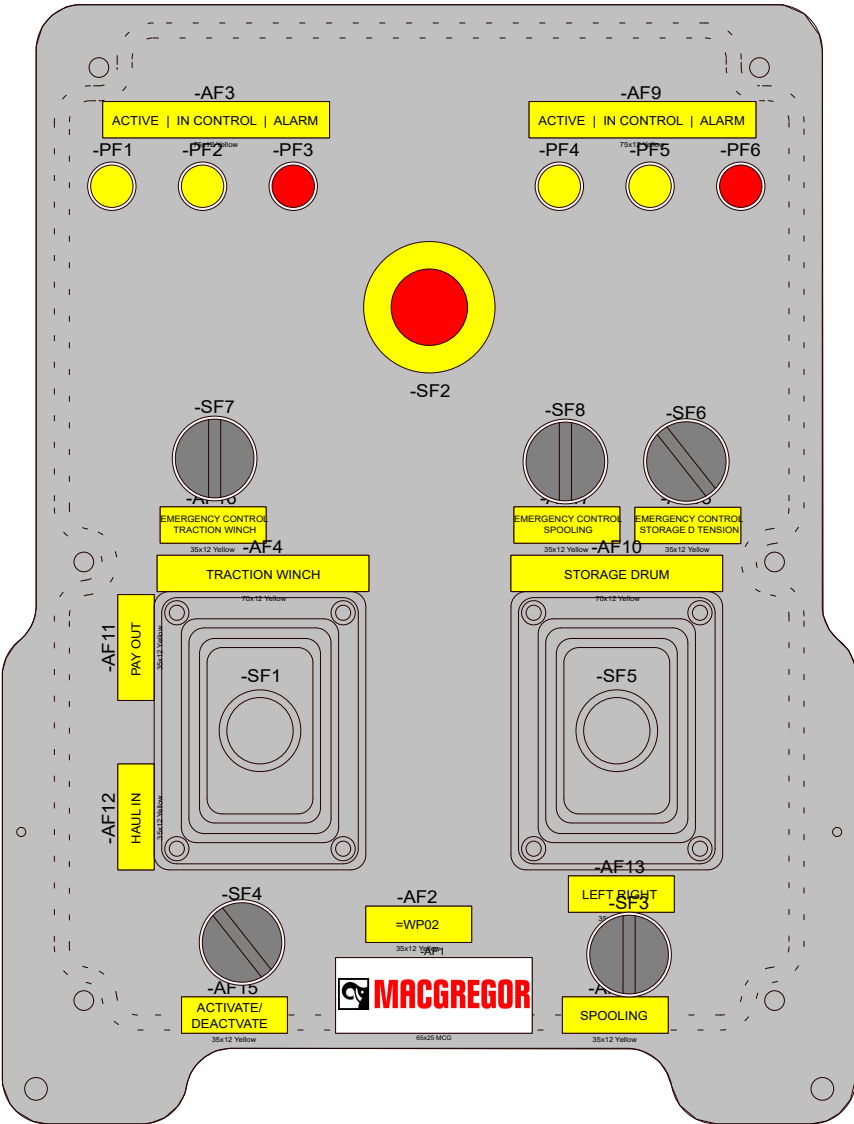
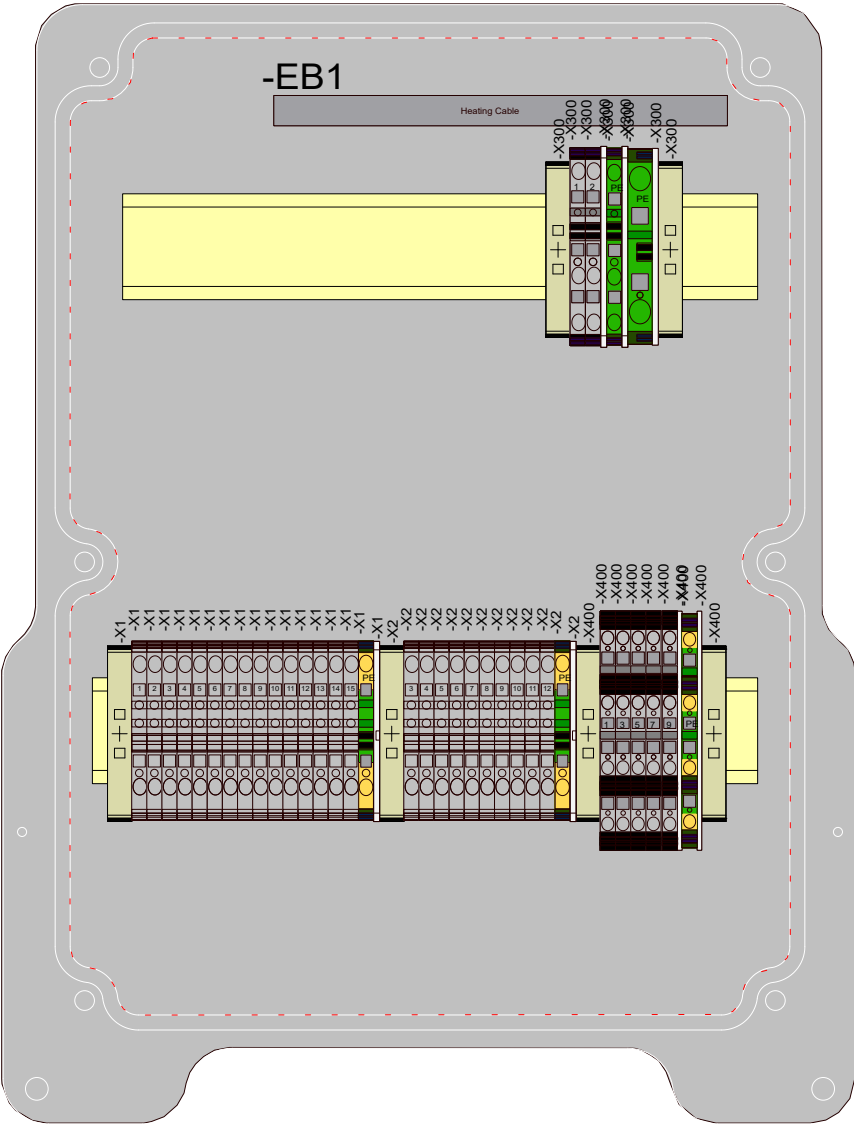


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				User	GSK								+WP02	
				Approved	RAJ								Rev. G	
Status	Change	Date	Name	Standard	Version	Index	Repl. by					10070-07 CC	Sheet 2	Next 3

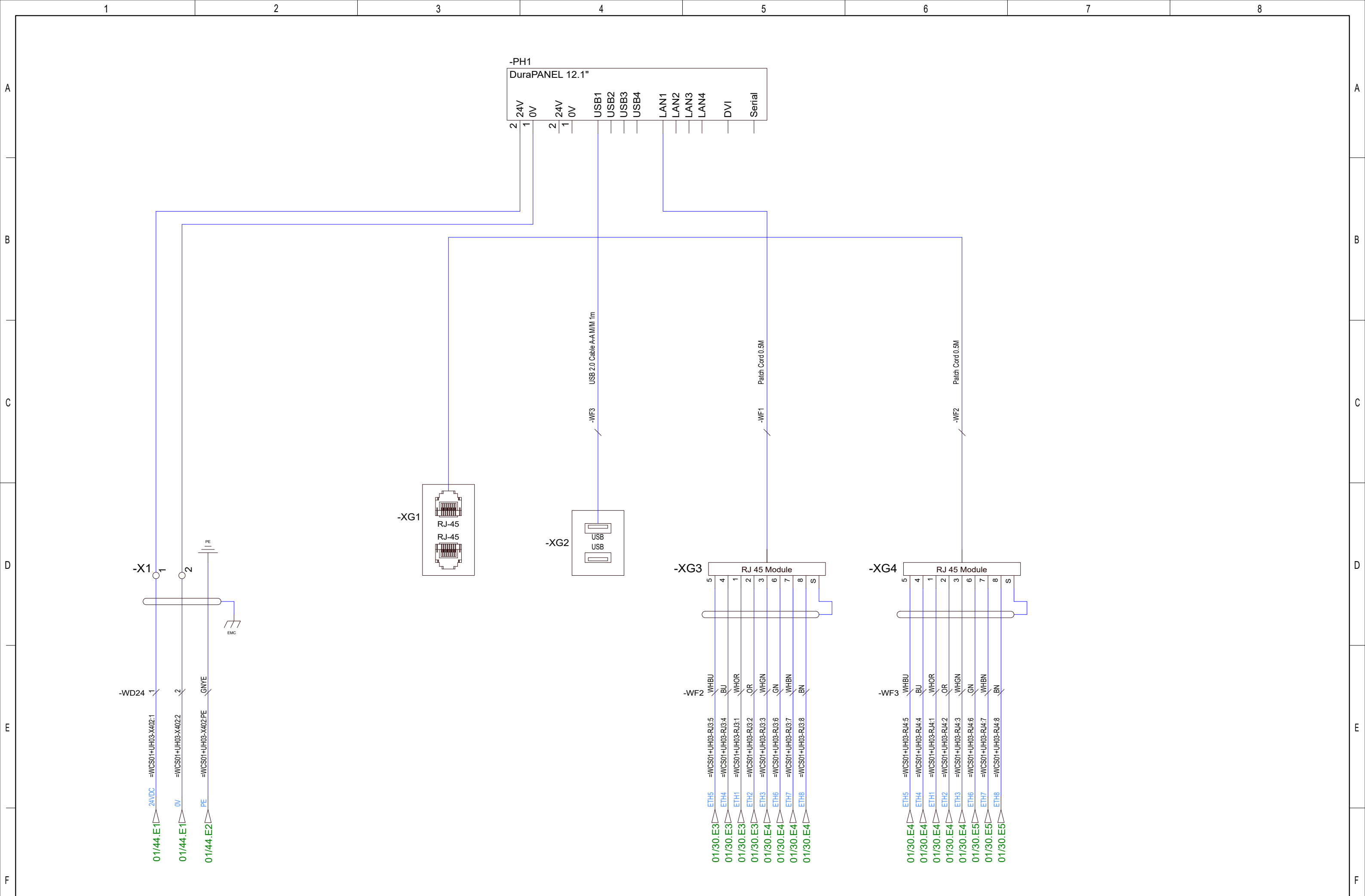


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Status	Change	Date	Name	Standard		Version	Index	Repl. by			Circuit Diagram		10070-07 CC		Sheet 3
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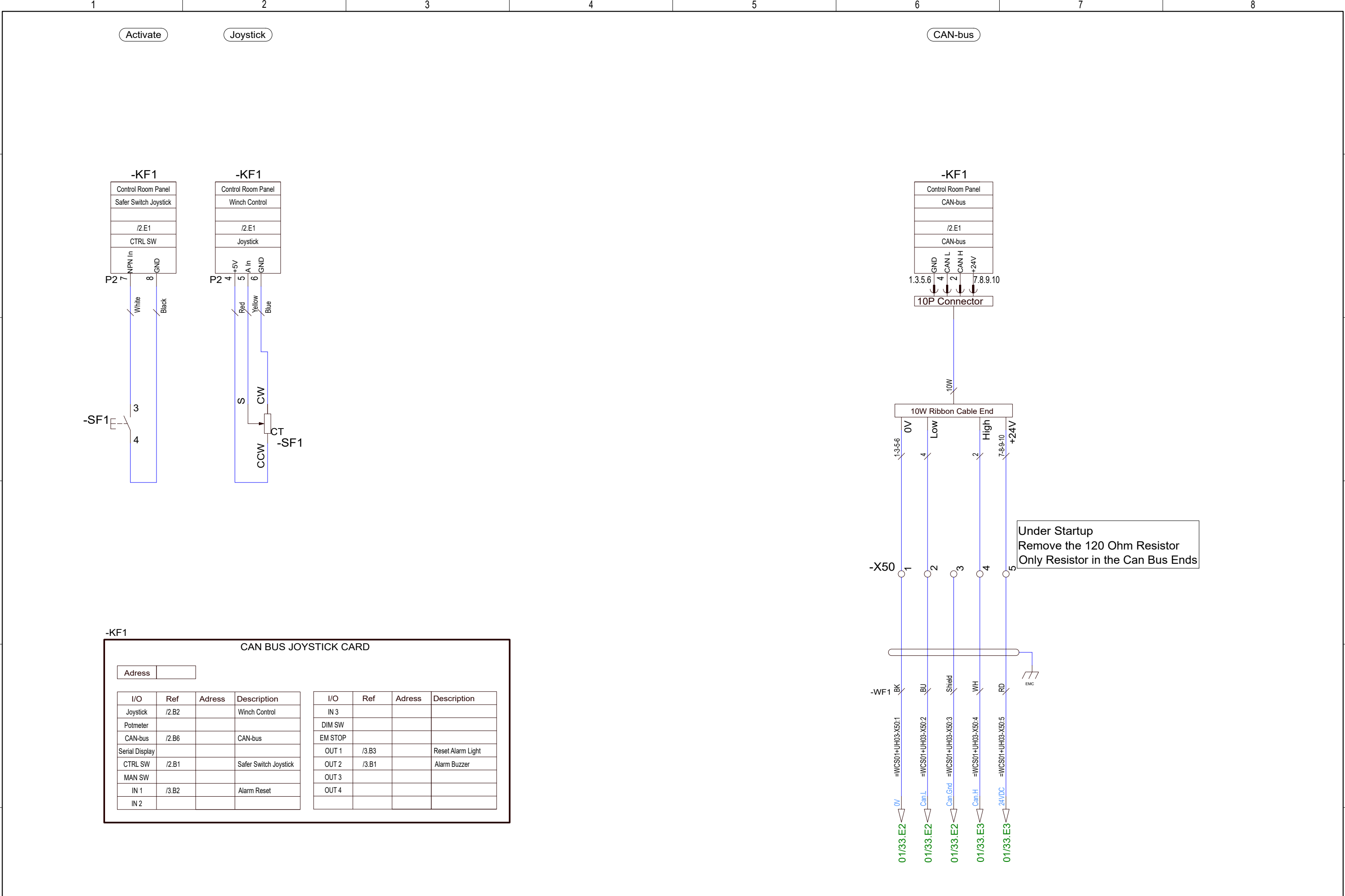
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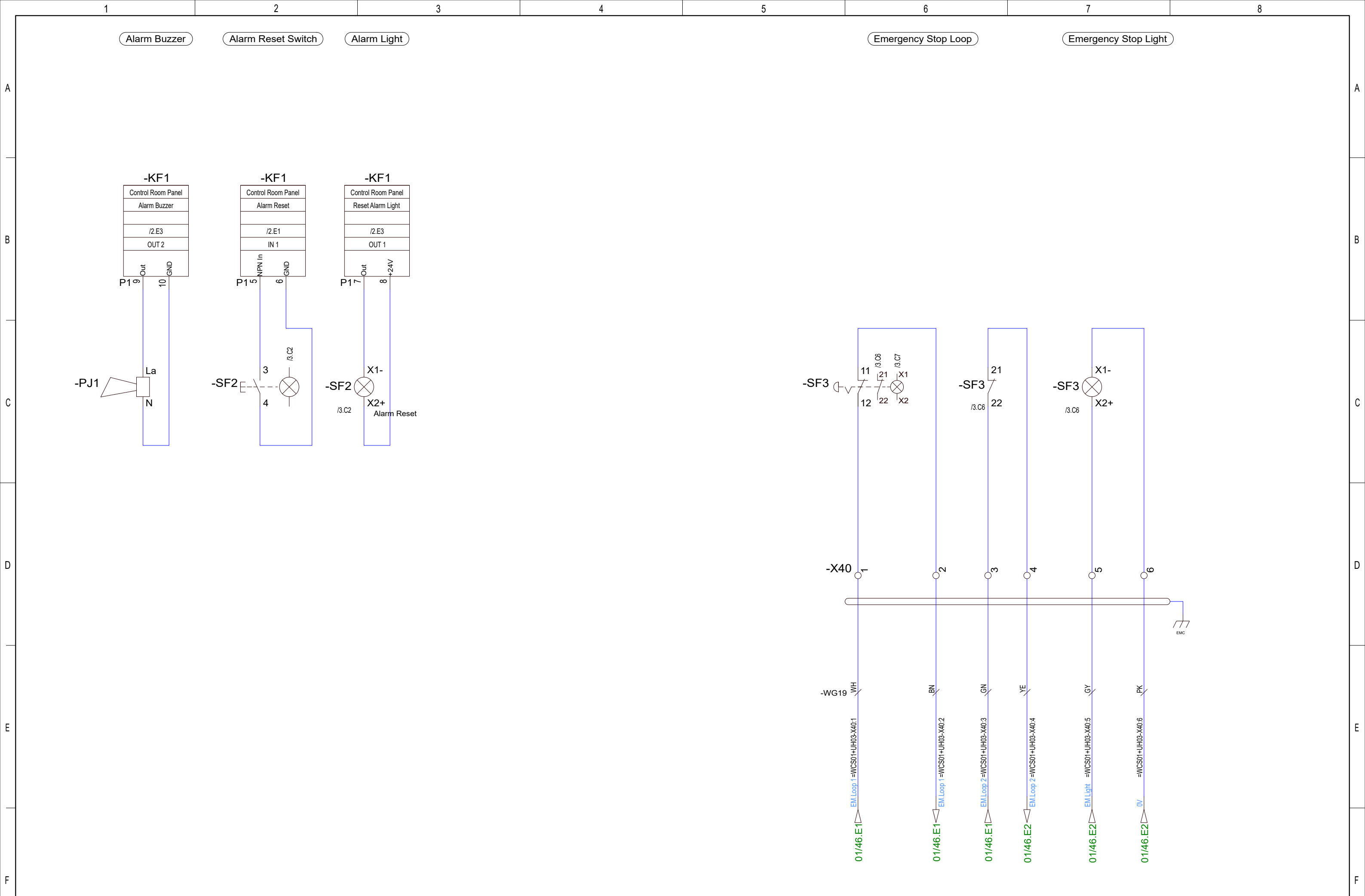


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				User	GSK							+WP02			
				Approved	RAJ							MBarí			
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-07 GA	Rev.	G	Sheet 1
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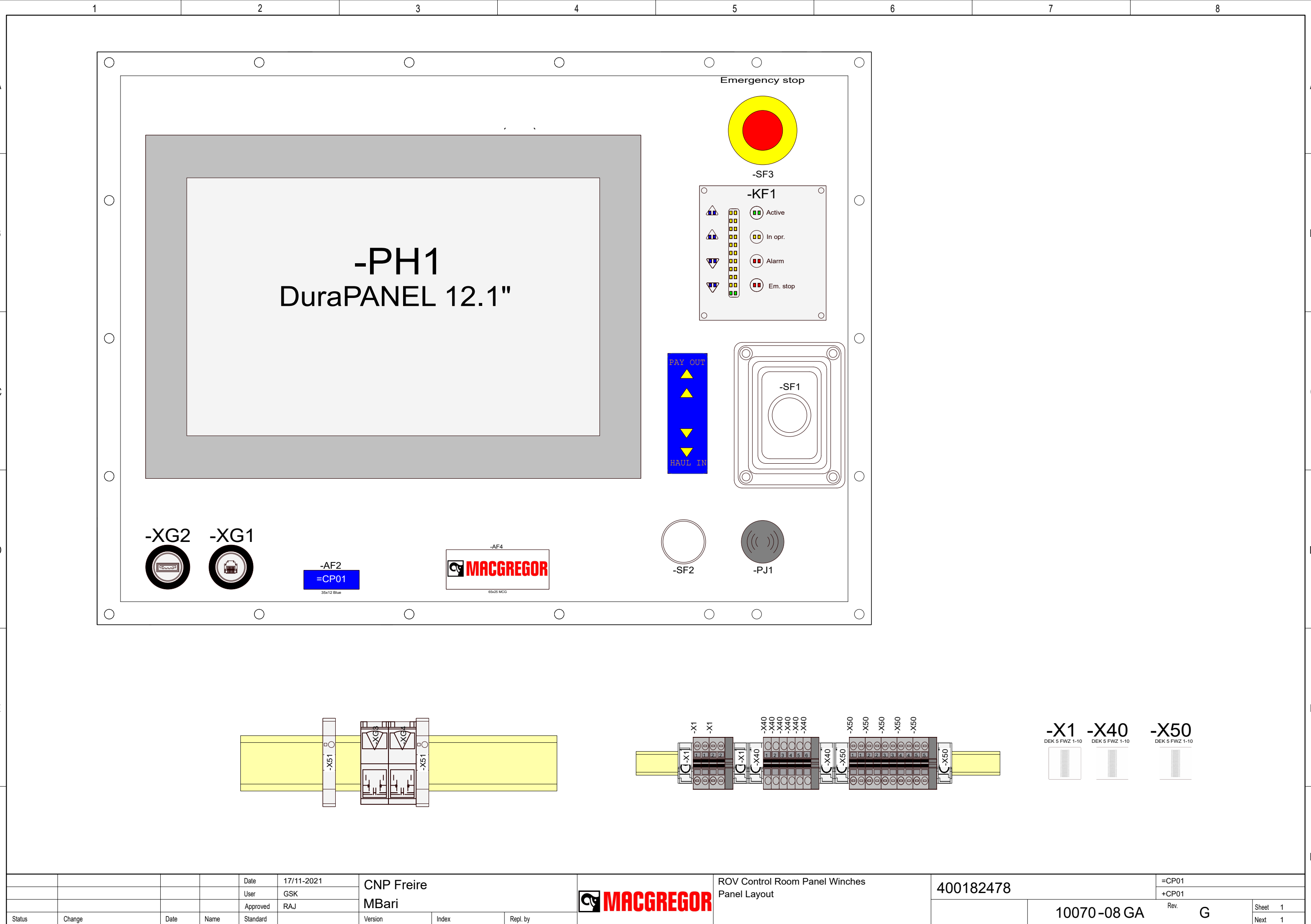


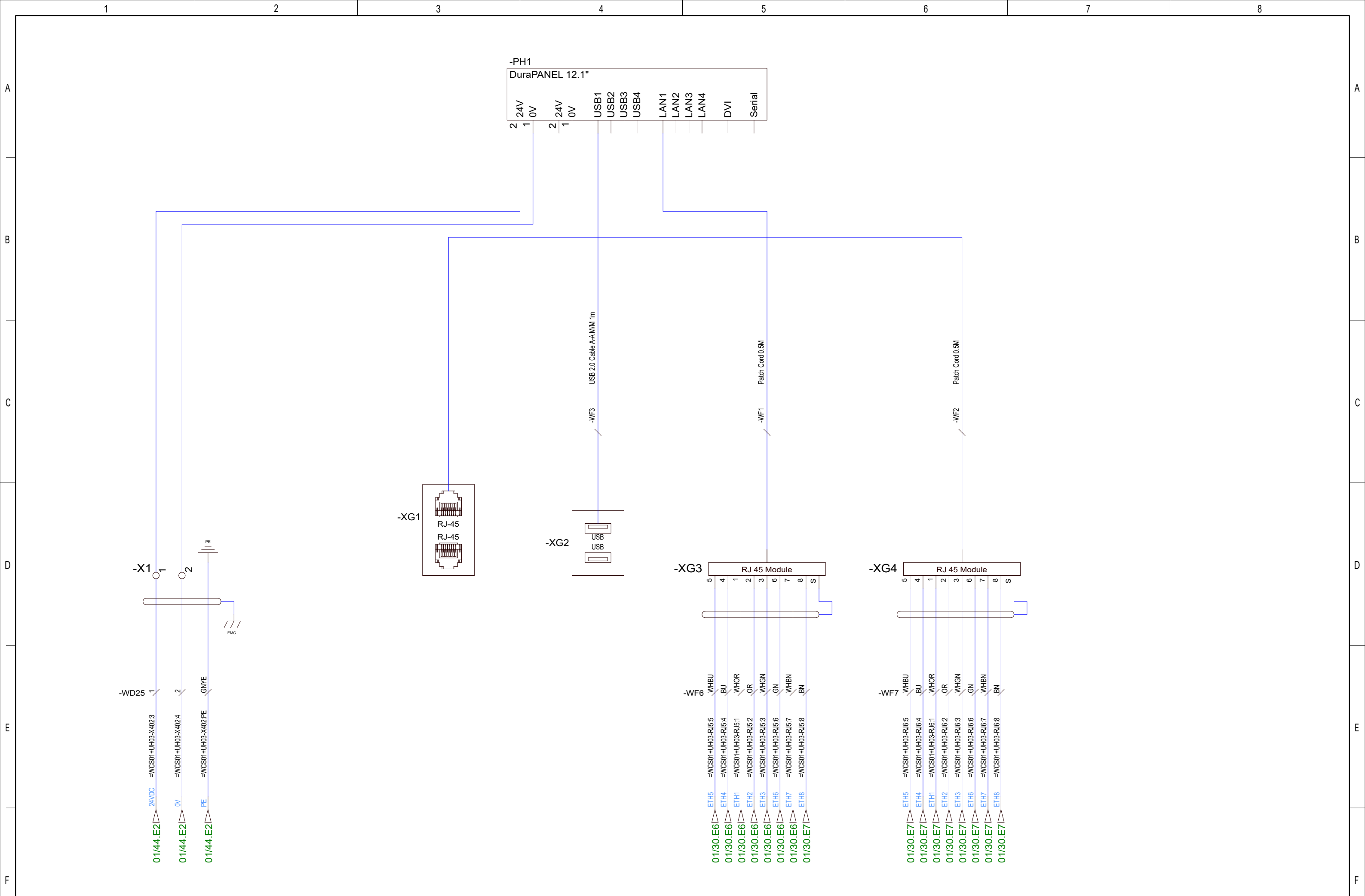
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				User	GSK								+CP01	
				Approved	RAJ						Rev.		G	Sheet 1
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-08 CC		Next 2	



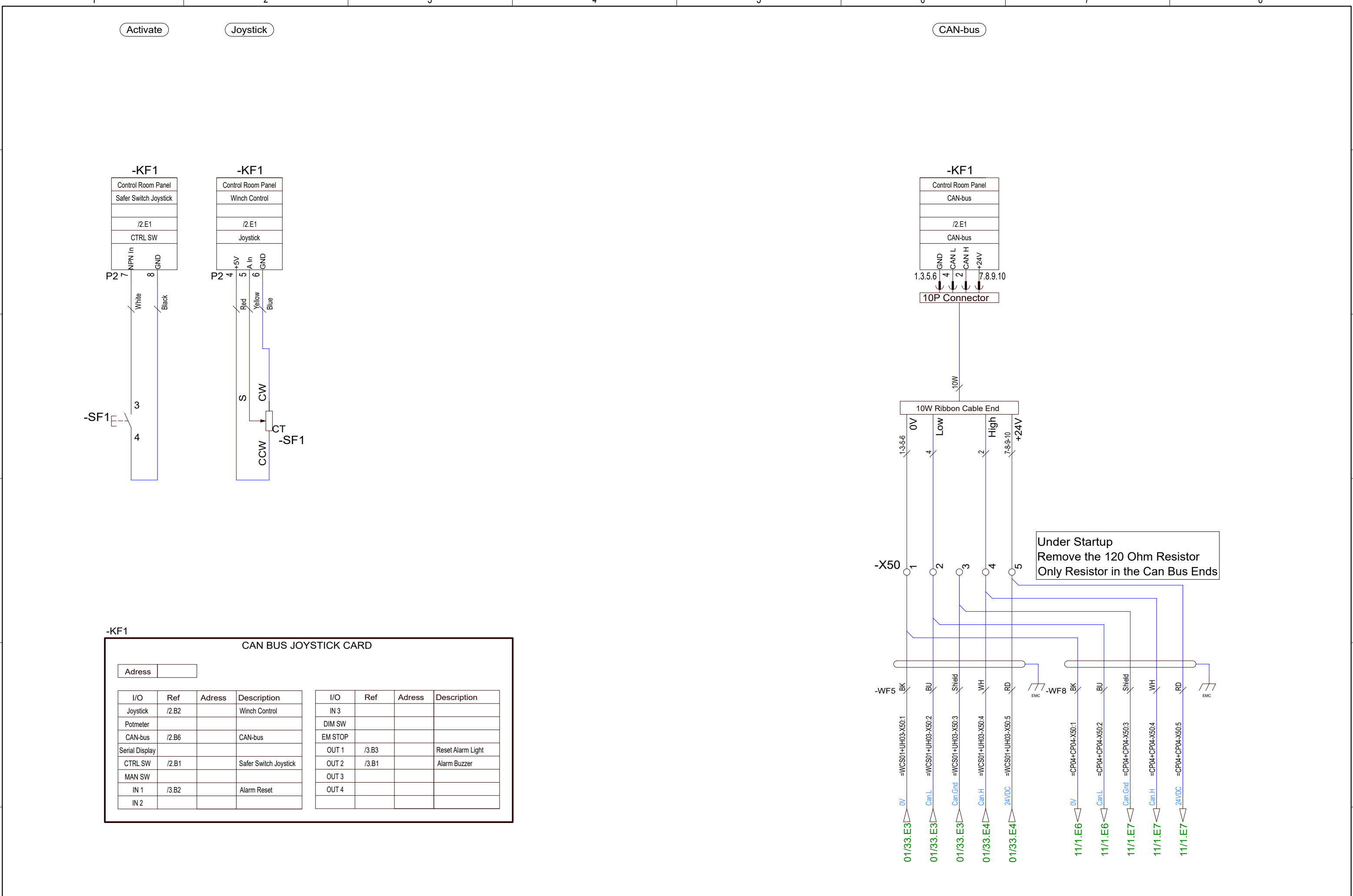


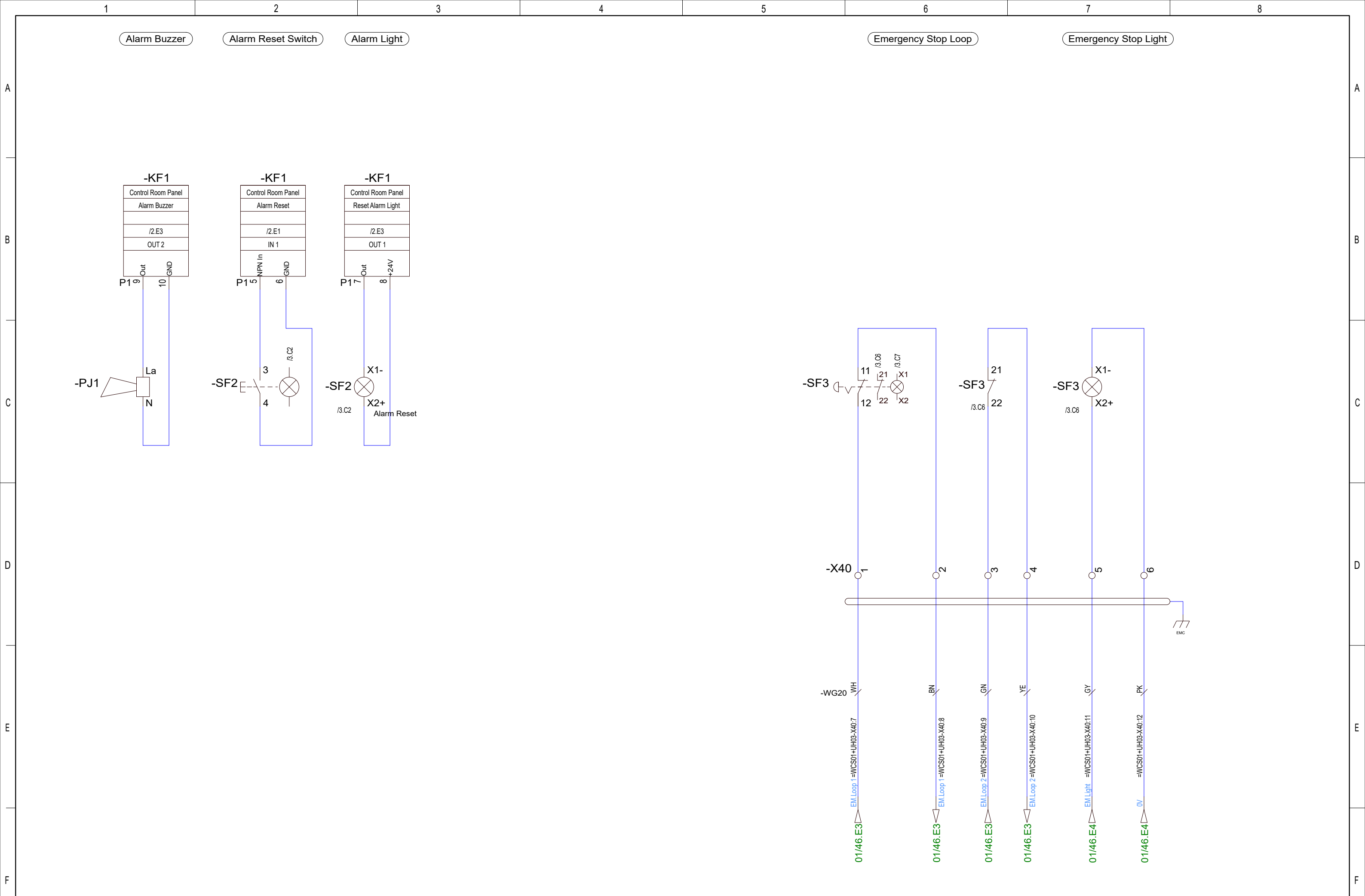
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				User	GSK								+CP01		
				Approved	RAJ										
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-08 CC	Rev.	G	Sheet 3
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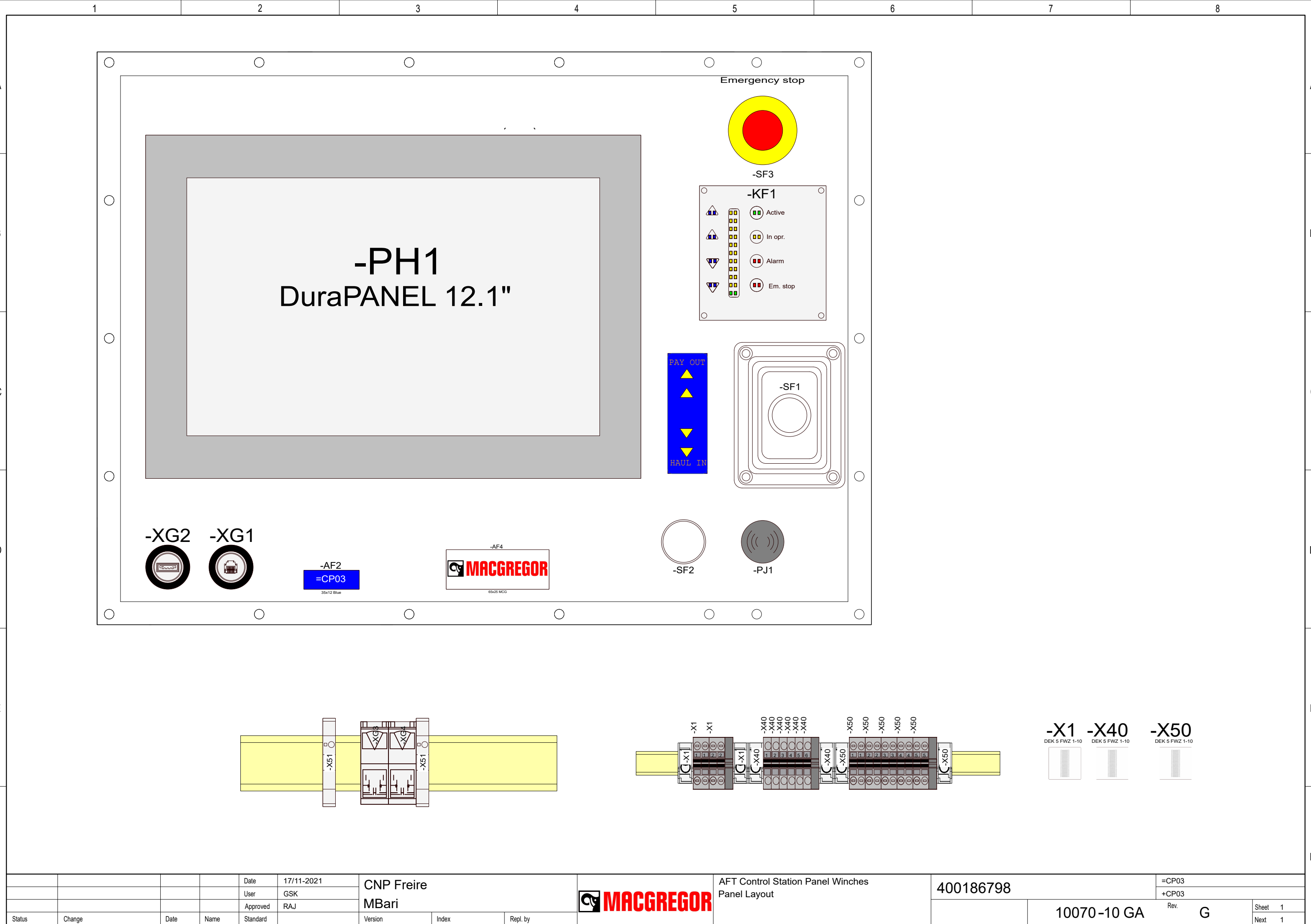
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				User	GSK							+CP03	
				Approved	RAJ							MBarí	
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-10 CC	Rev. G	Sheet 1
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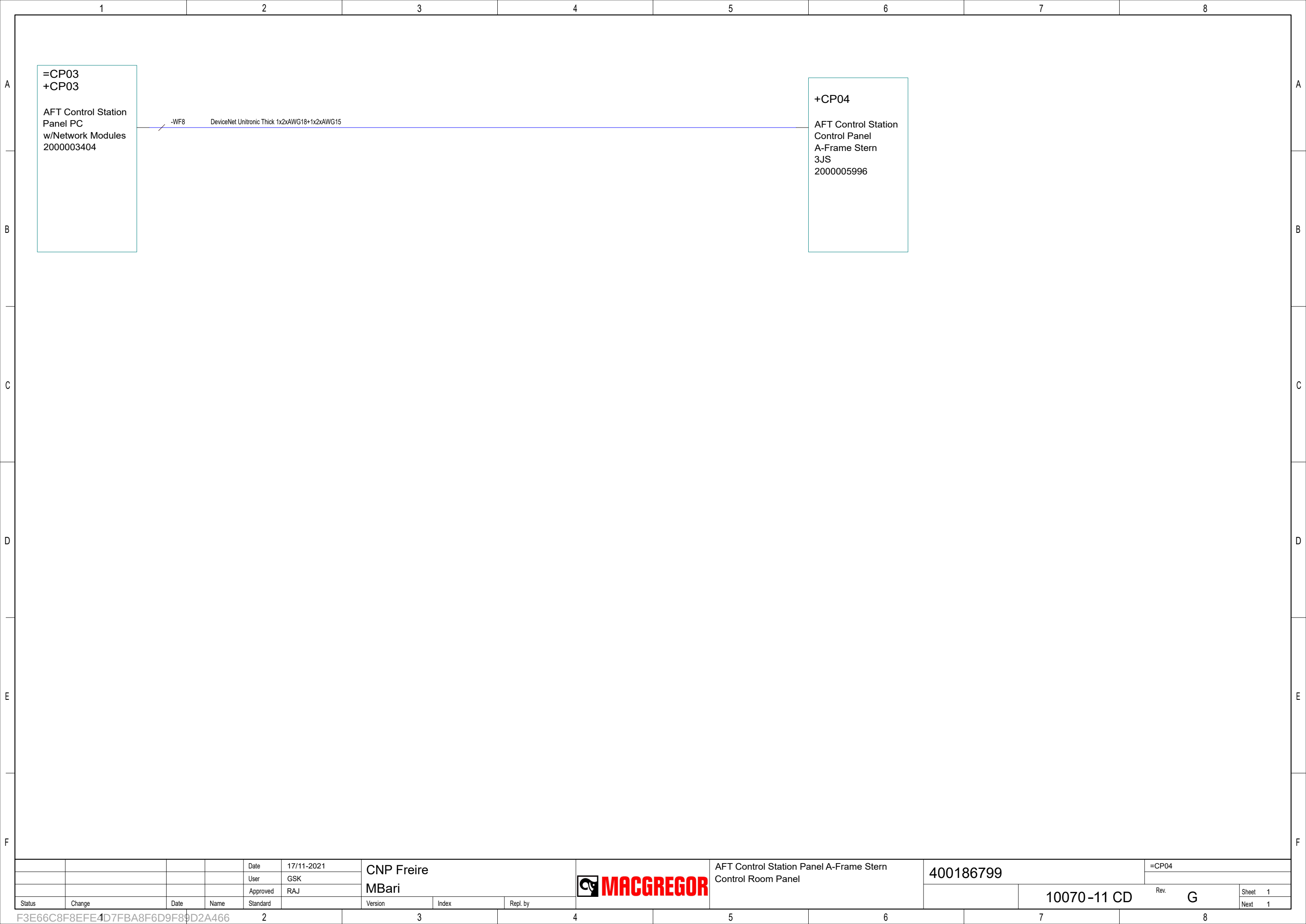


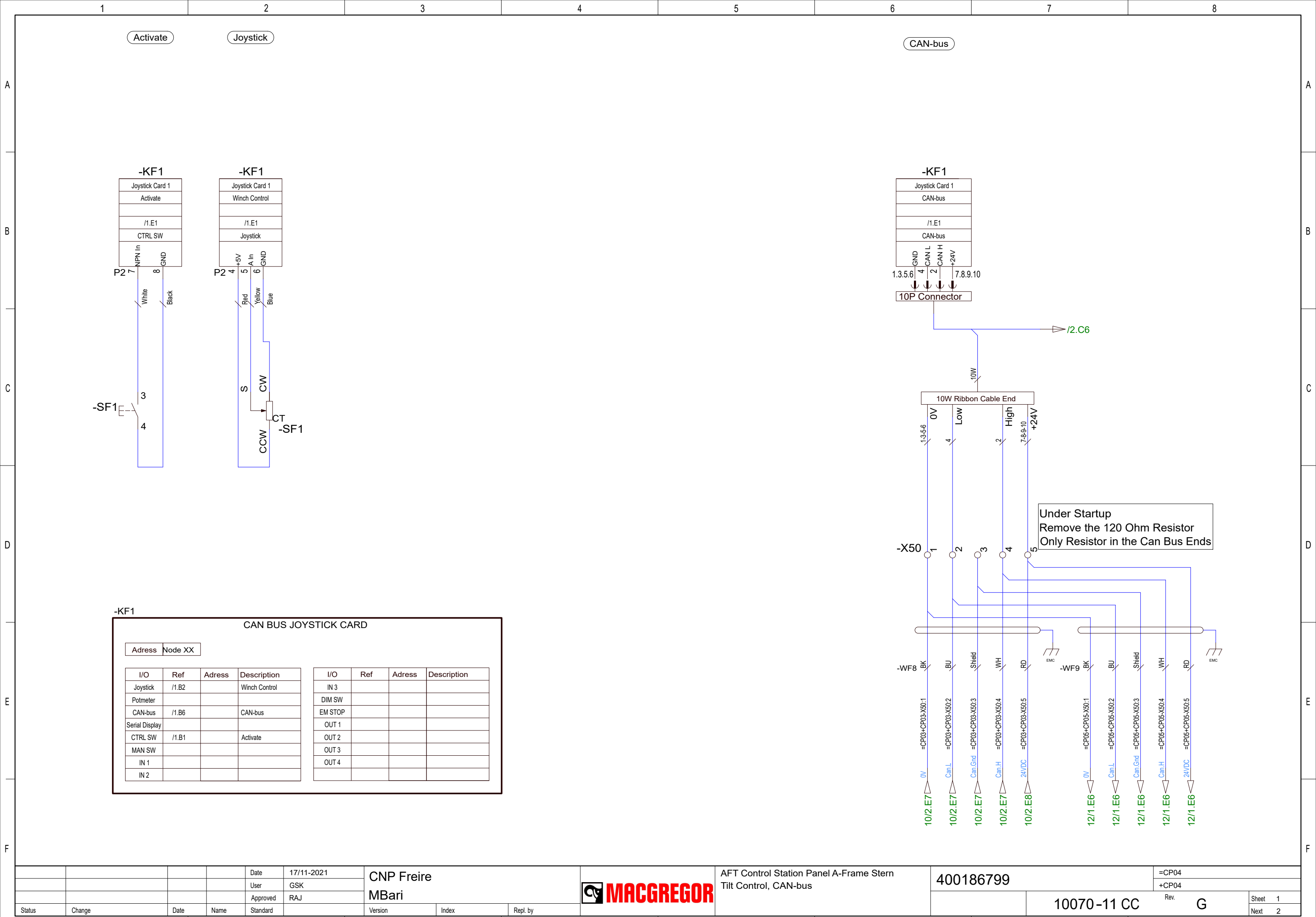


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				User	GSK								+CP03	
				Approved	RAJ								Rev.	
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-10 CC		Next	1

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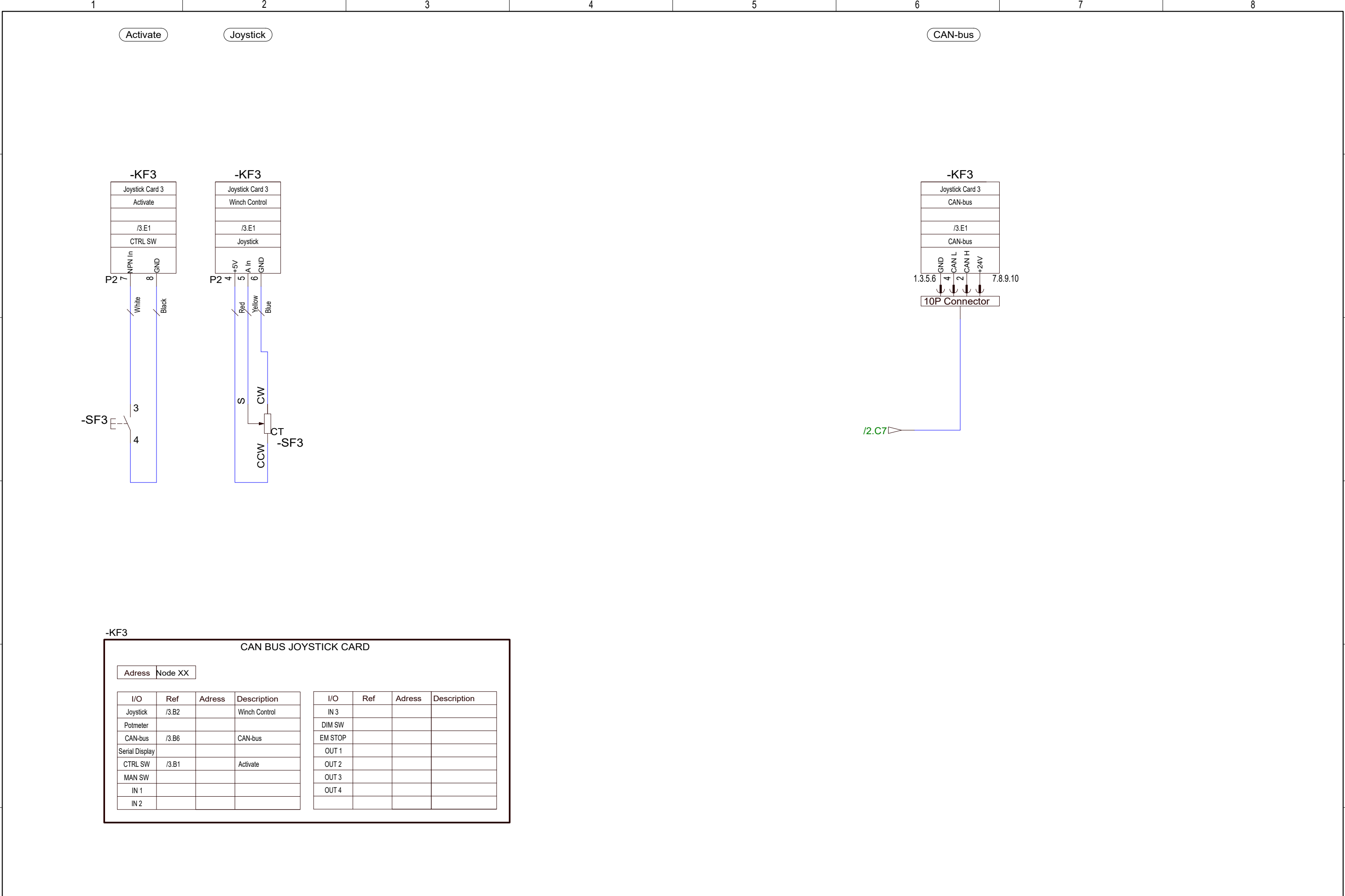




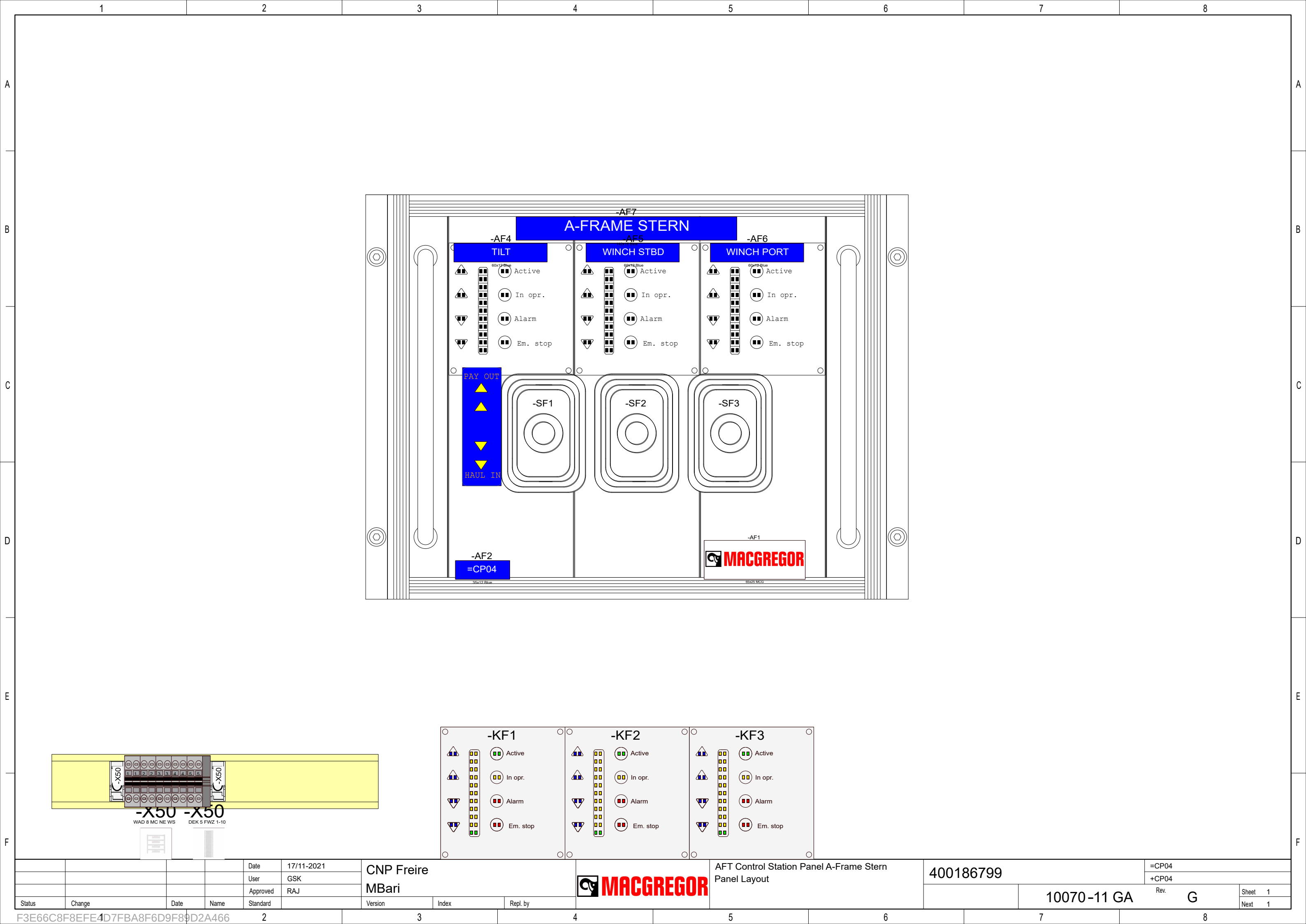


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				User	GSK	MBarì						+CP04		
				Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by			10070-11 CC	Rev.	G	Sheet 1
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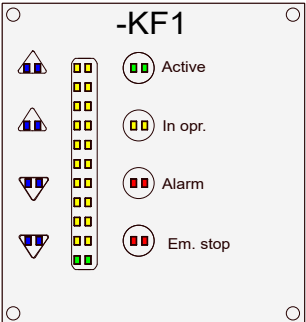
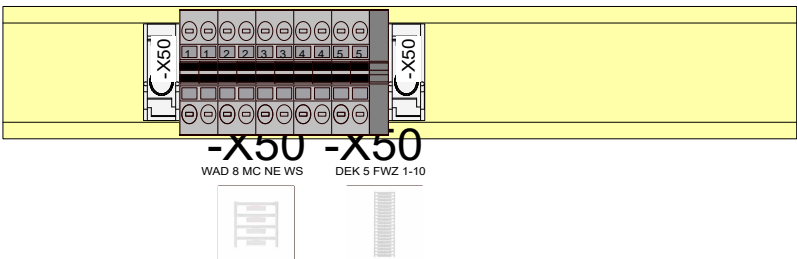
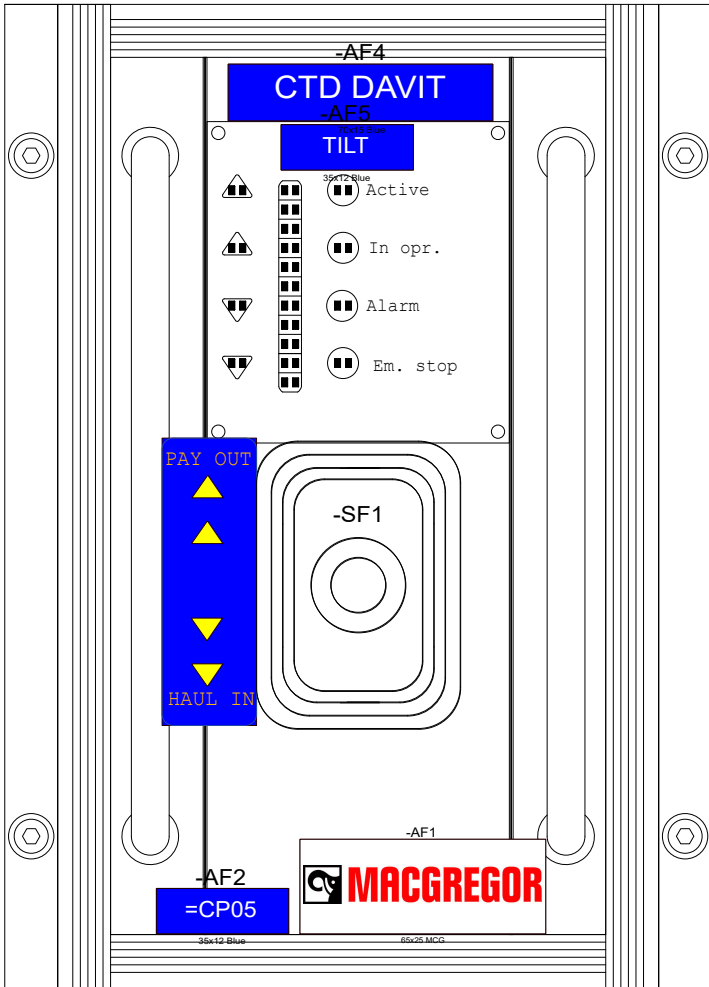


CAN BUS JOYSTICK CARD							
Address		Node XX					
I/O	Ref	Adress	Description	I/O	Ref	Adress	Description
Joystick	/3.B2		Winch Control	IN 3			
Potmeter				DIM SW			
CAN-bus	/3.B6		CAN-bus	EM STOP			
Serial Display				OUT 1			
CTRL SW	/3.B1		Activate	OUT 2			
MAN SW				OUT 3			
IN 1				OUT 4			
IN 2							

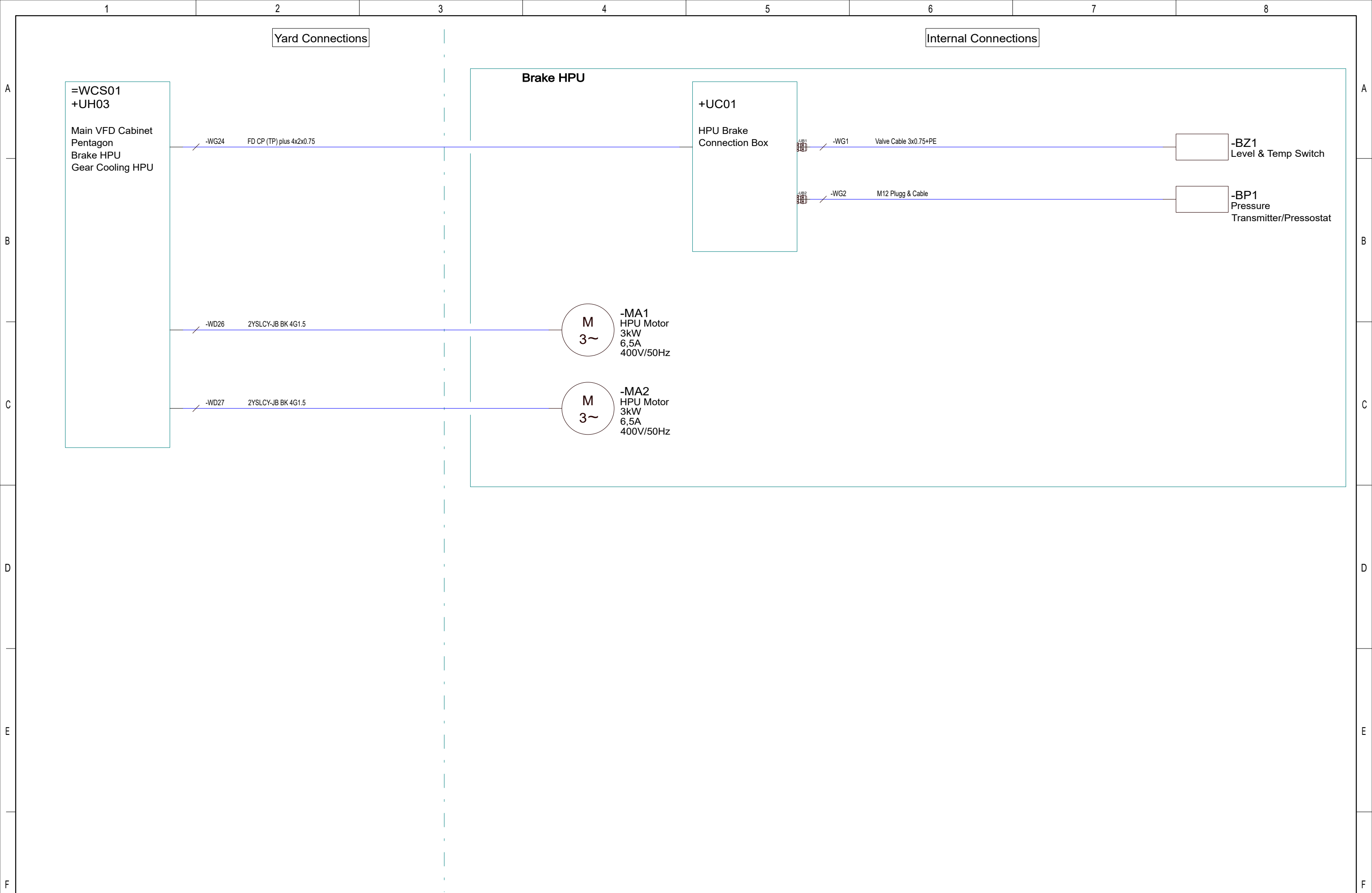


				Date	17/11-2021	CNP Freire MBarí				AFT Control Station Panel A-Frame Stern Panel Layout	400186799		=CP04	
				User	GSK								+CP04	
				Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-11 GA	Rev. G	Sheet 1
														Next 1

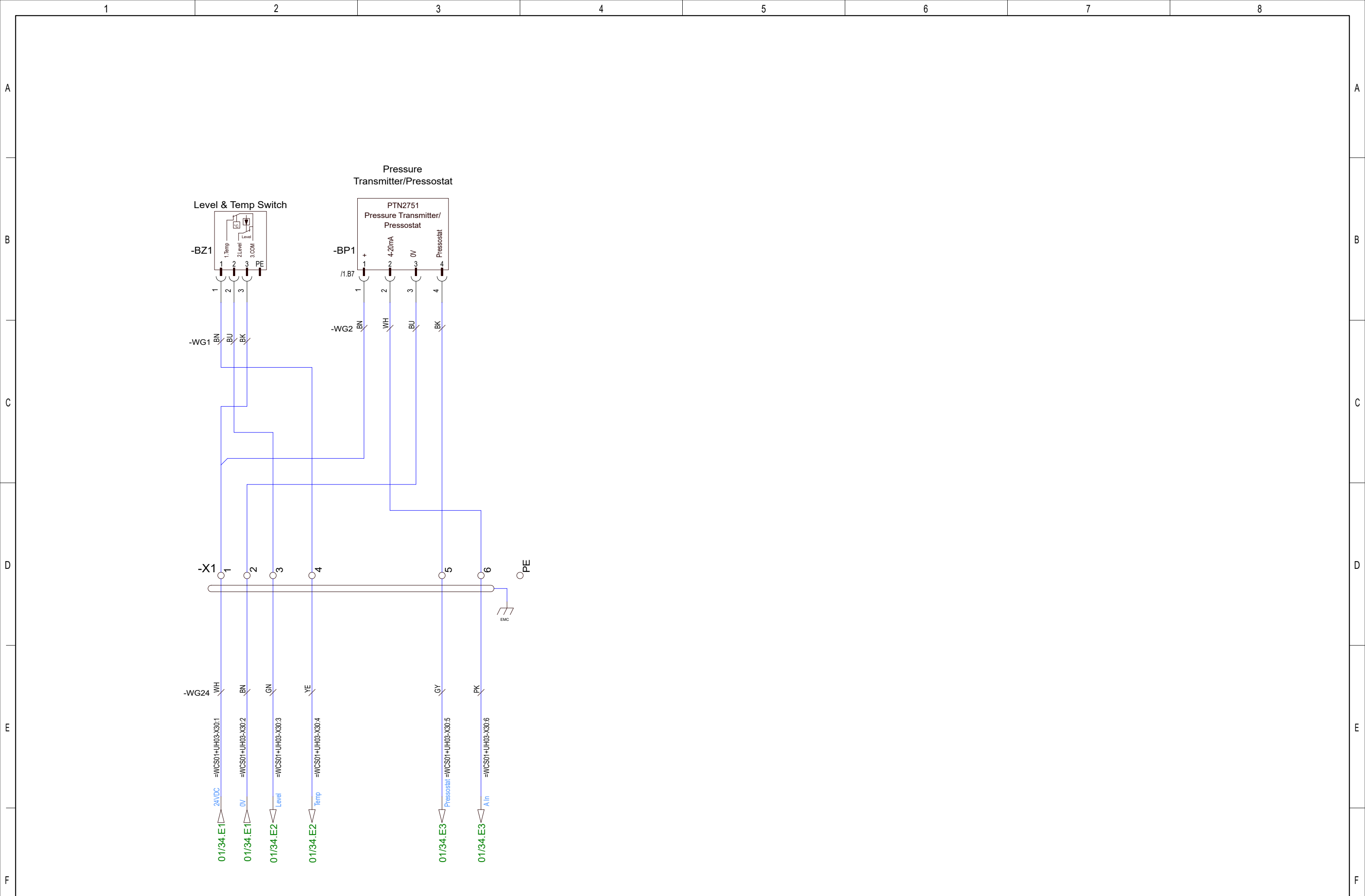
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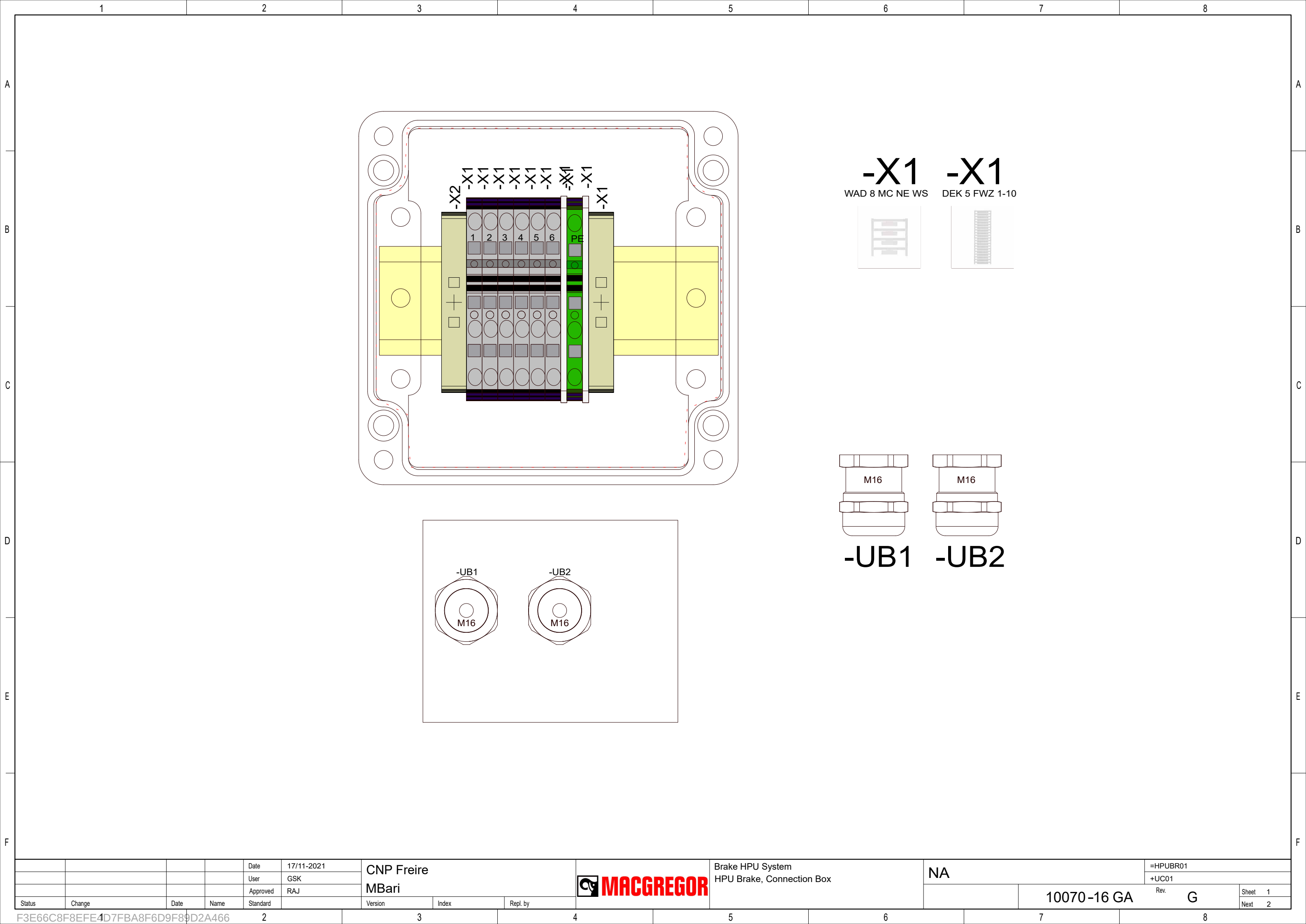
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				User	GSK								+CP05	
				Approved	RAJ									
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-12 GA	Rev. G	Sheet 1
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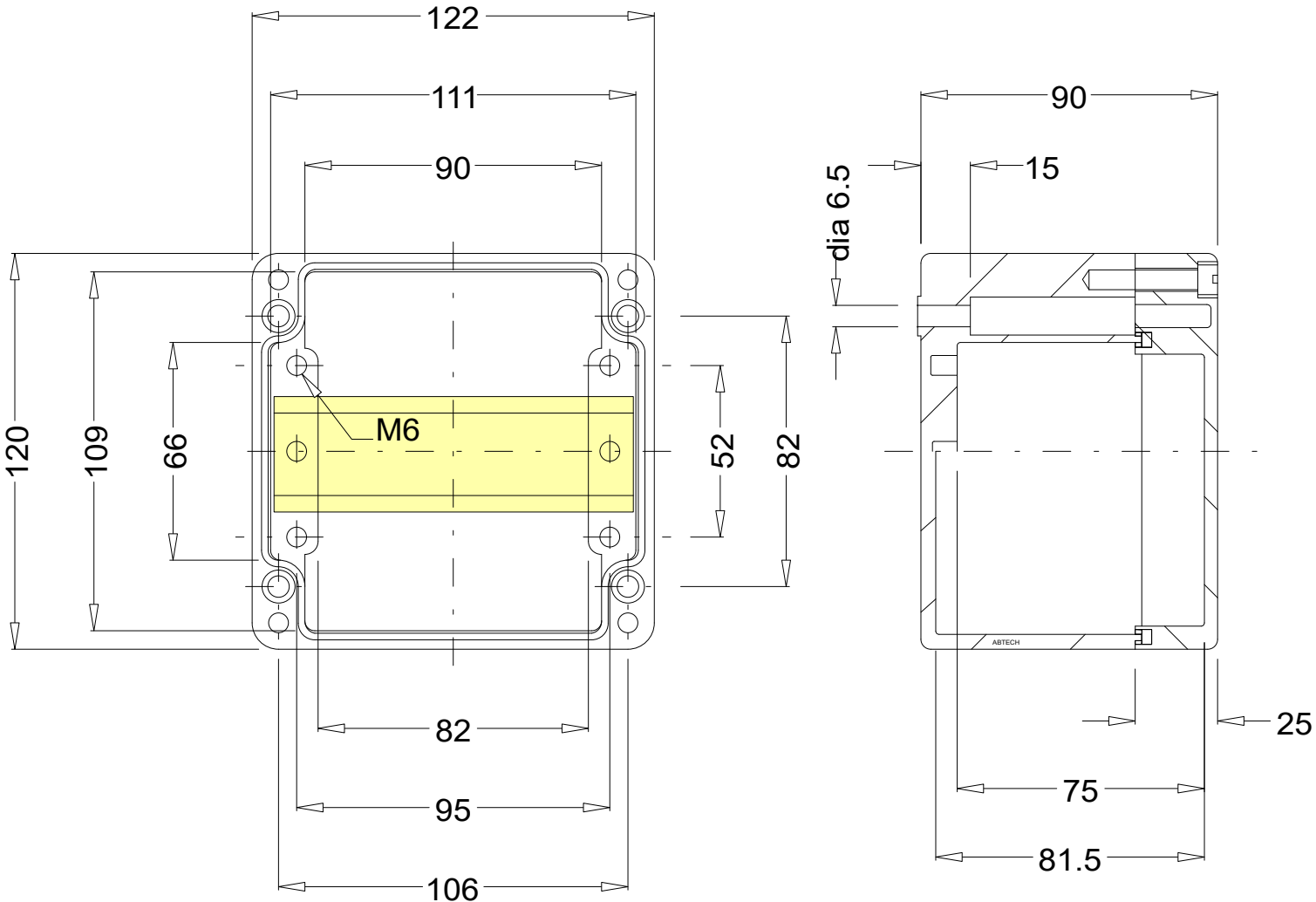
				Date	17/11-2021	CNP Freire				Brake HPU System Brake HPU System	NA		=HPUBR01	
				User	GSK									
				Approved	RAJ						MBarí			
Status	Change		Date	Name	Standard		Version	Index	Repl. by			10070-16 CD	Rev. G	Sheet 1
														Next 1



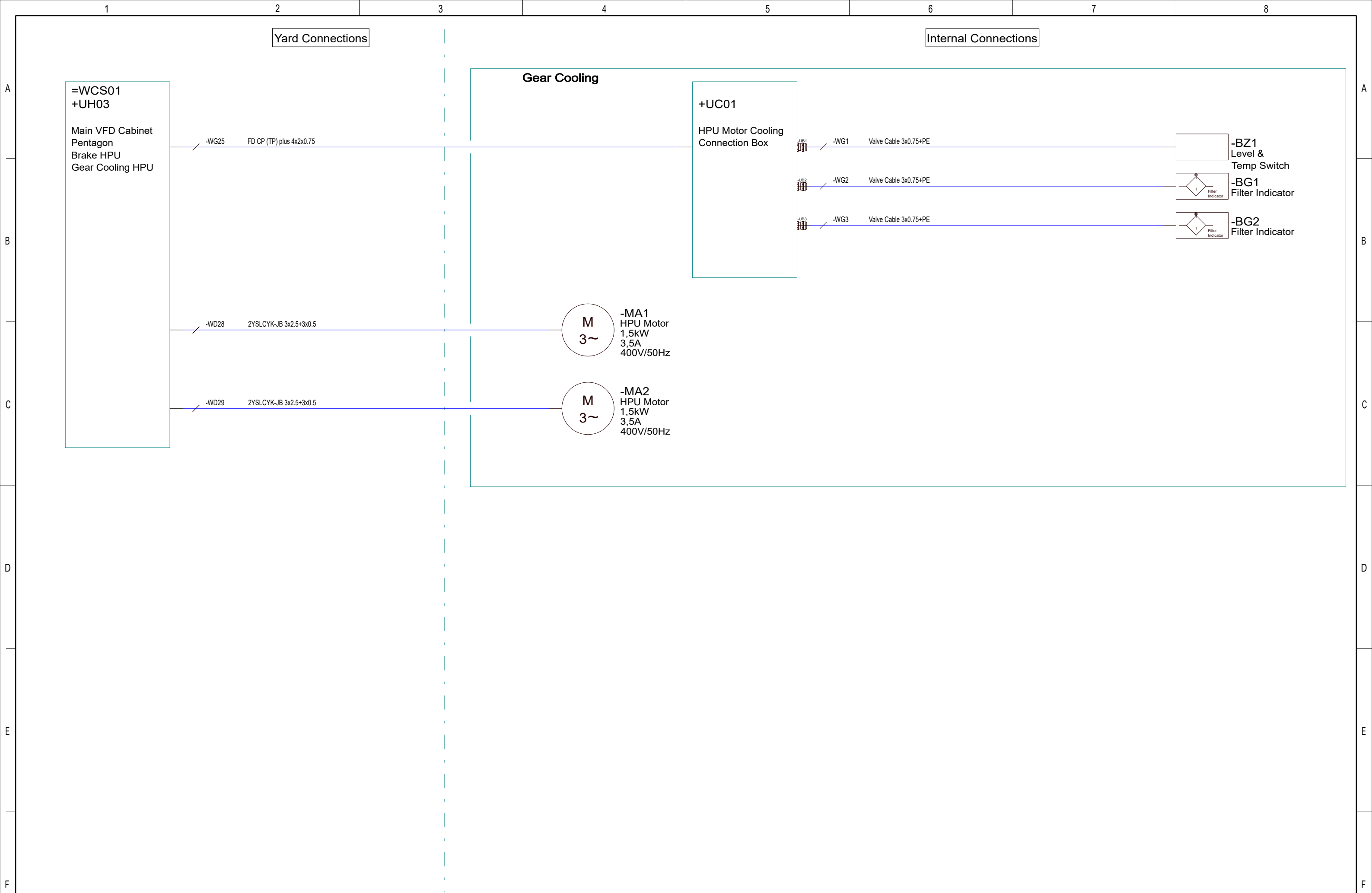
				Date	17/11-2021	CNP Freire MBarí				Brake HPU System HPU Brake, Connection Box	NA		=HPUBR01		
				User	GSK										+UC01
				Approved	RAJ										
Status	Change	Date	Name	Standard		Version	Index	Repl. by						10070-16 CC	Rev. G



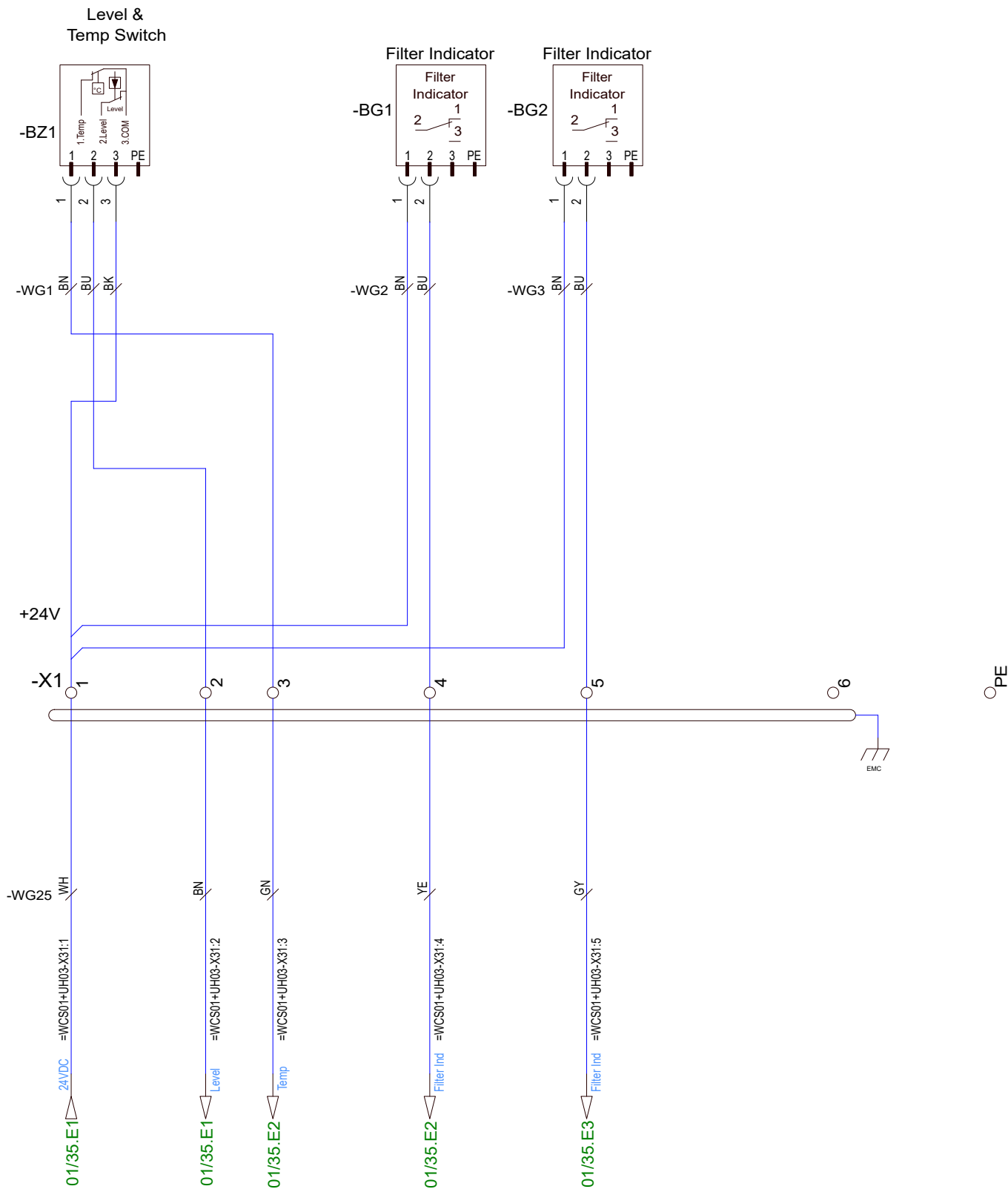
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				User	GSK								+UC01		
				Approved	RAJ						MBarí				
Status	Change		Date	Name	Standard		Version	Index	Repl. by			10070-16 GA			Next 2



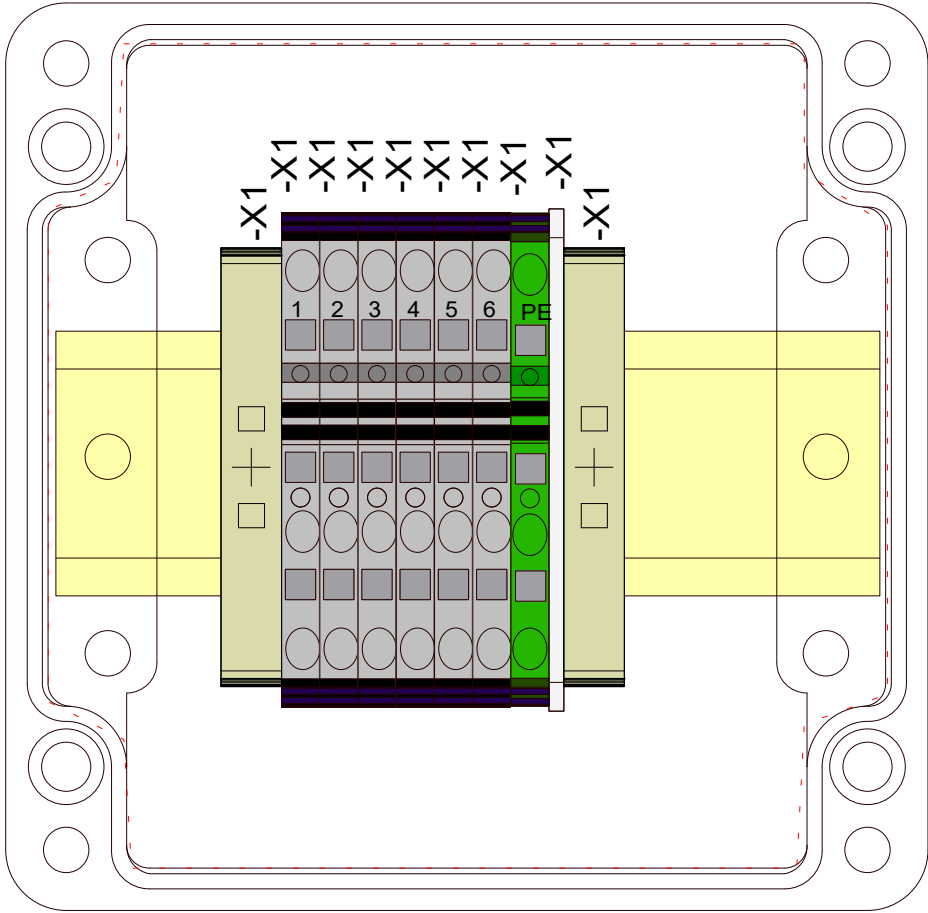
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				User	GSK								+UC01	
				Approved	RAJ						MBarí			
Status	Change		Date	Name	Standard	Version	Index	Repl. by			10070-16 GA			Next 1



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



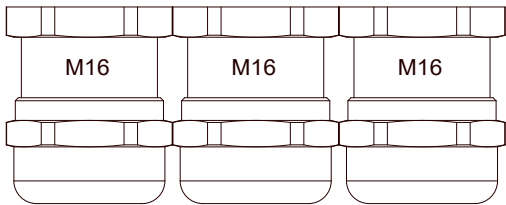
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				User	GSK							+UC01		
				Approved	RAJ							MBarí		
Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-17 CC	Rev. G	Sheet 1
														Next 1



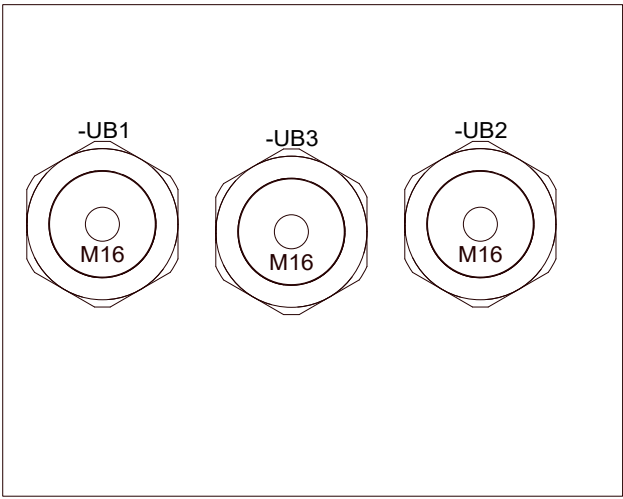
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WAD 8 MC NE WS



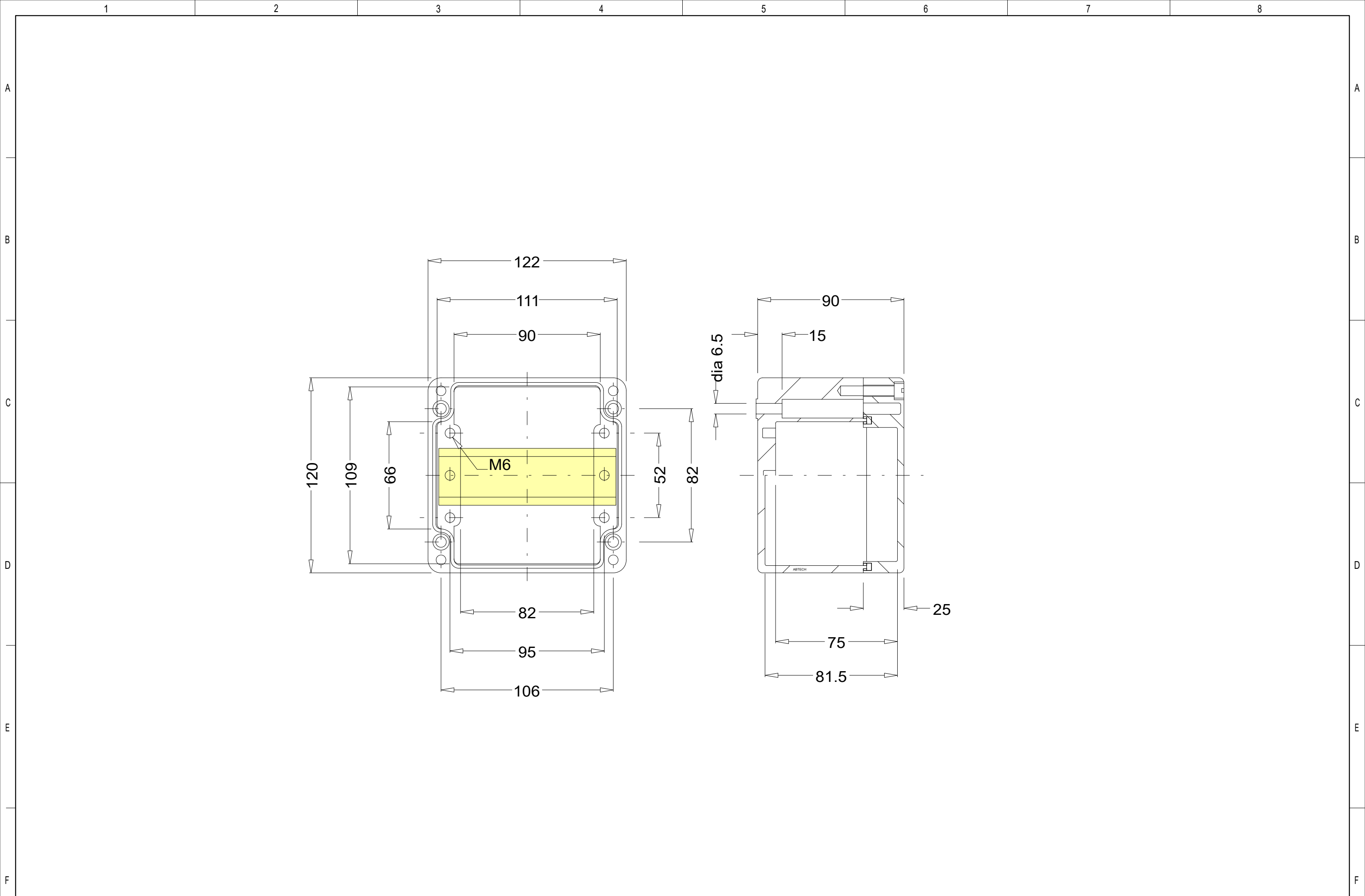
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DEK 5 FWZ 1-10



-UB1-UB2-UB3



				Date	17/11-2021	CNP Freire MBar			Gear Cooling HPU System HPU Gear Cooling Connection Box		NA		=HPUGC01	
				User	GSK								+UC01	
				Approved	RAJ									
Status	Change	Date	Name	Standard	Version	Index	Repl. by			10070-17 GA		Rev.	G	Sheet 1
														Next 2



				Date	17/11-2021	CNP Freire				Gear Cooling HPU System HPU Gear Cooling Connection Box	NA	=HPUGC01		
				User	GSK							+UC01		
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Status	Change	Date	Name	Standard		Version	Index	Repl. by				10070-17 GA	Rev. G	Sheet 2
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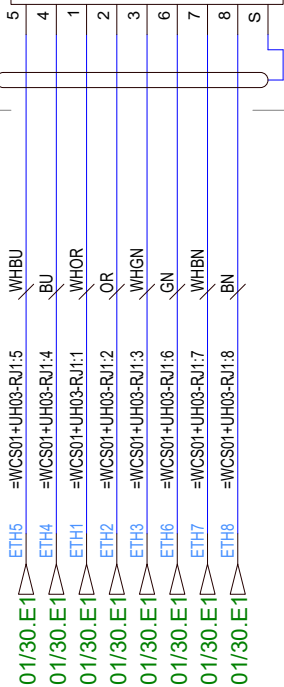
to TRIPLEX Handling System

=A-FRAME STERN
+B11
Control Cabinet

EtherCAT

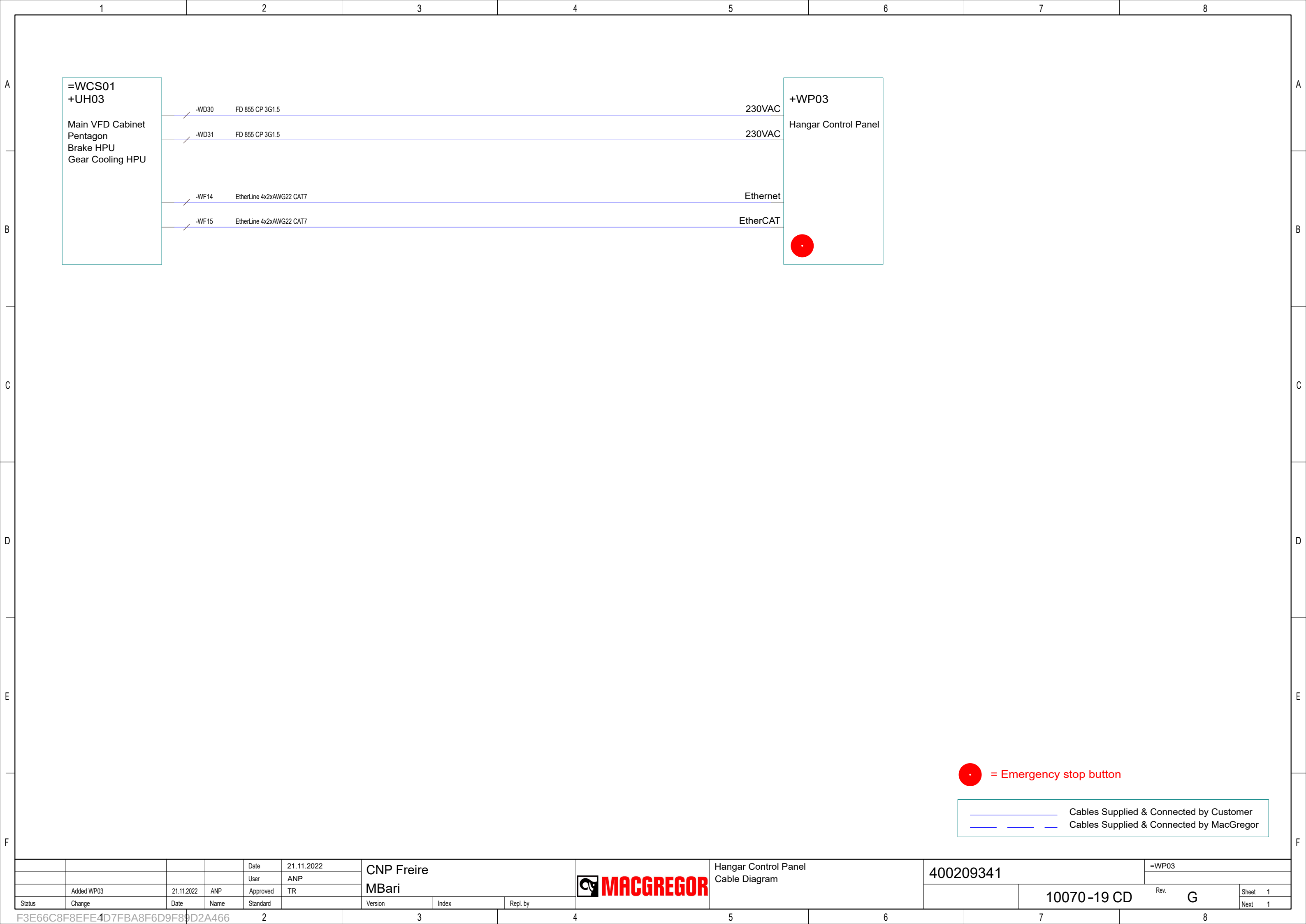
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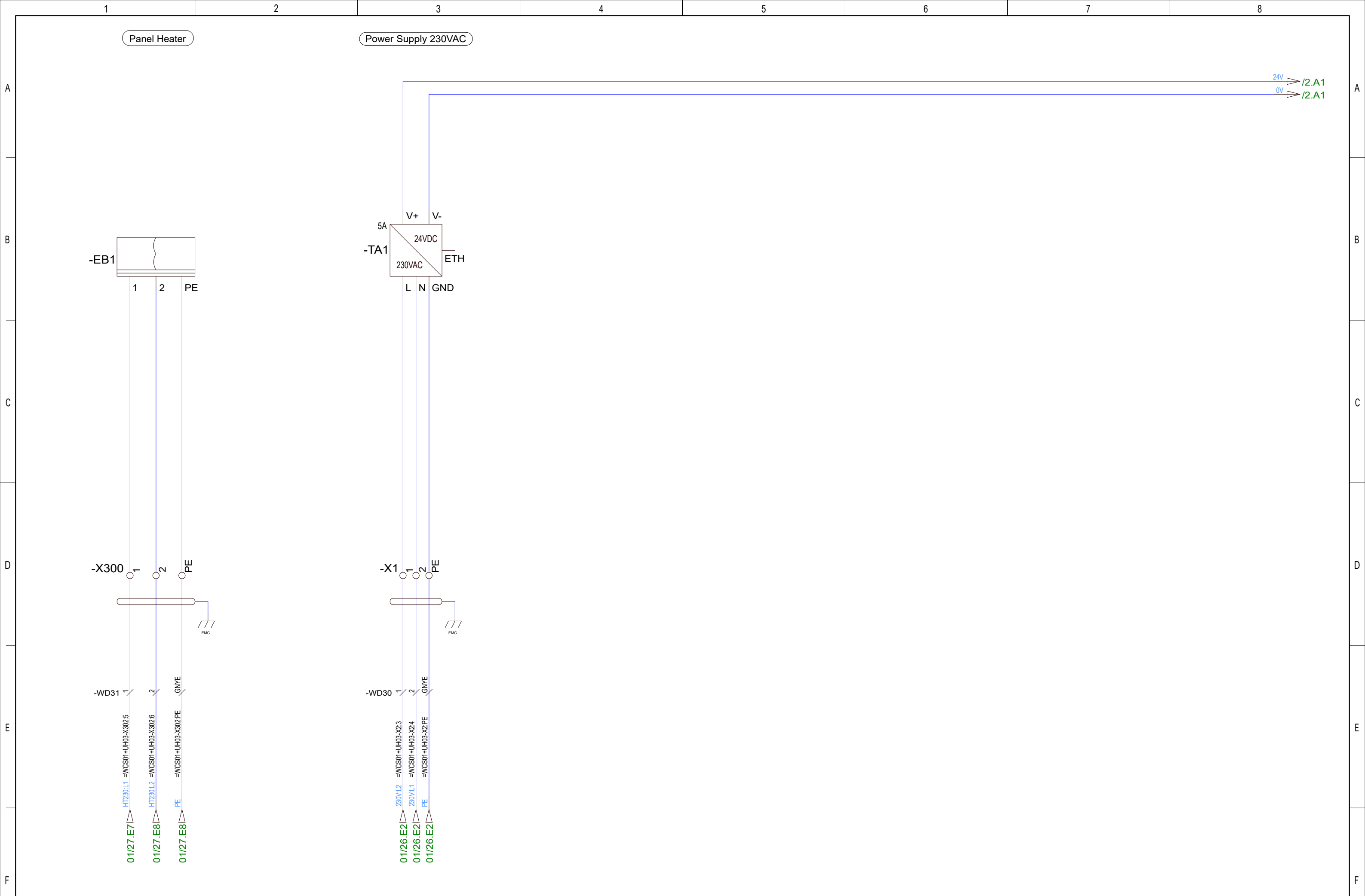
RJ 45 Module



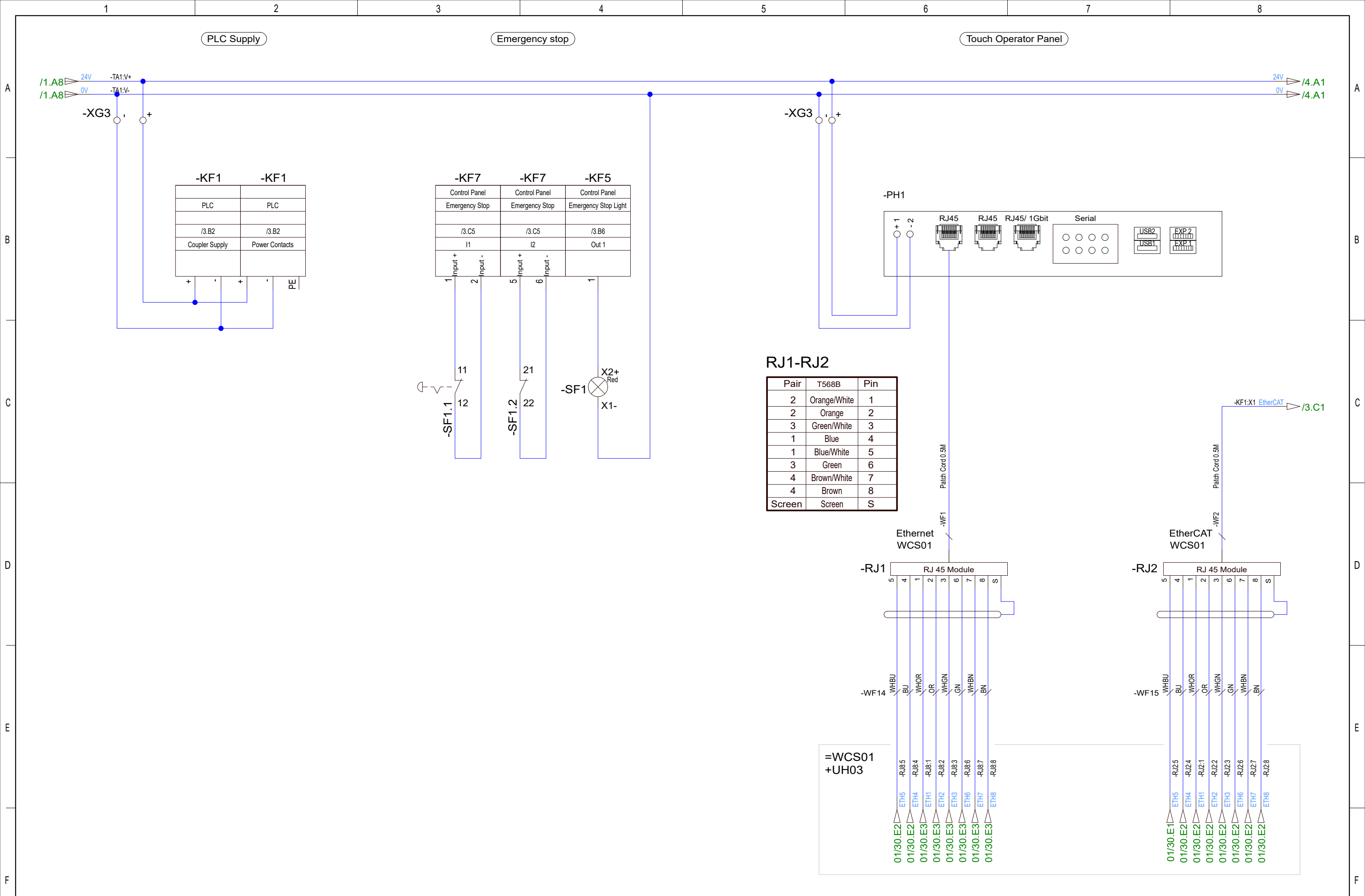
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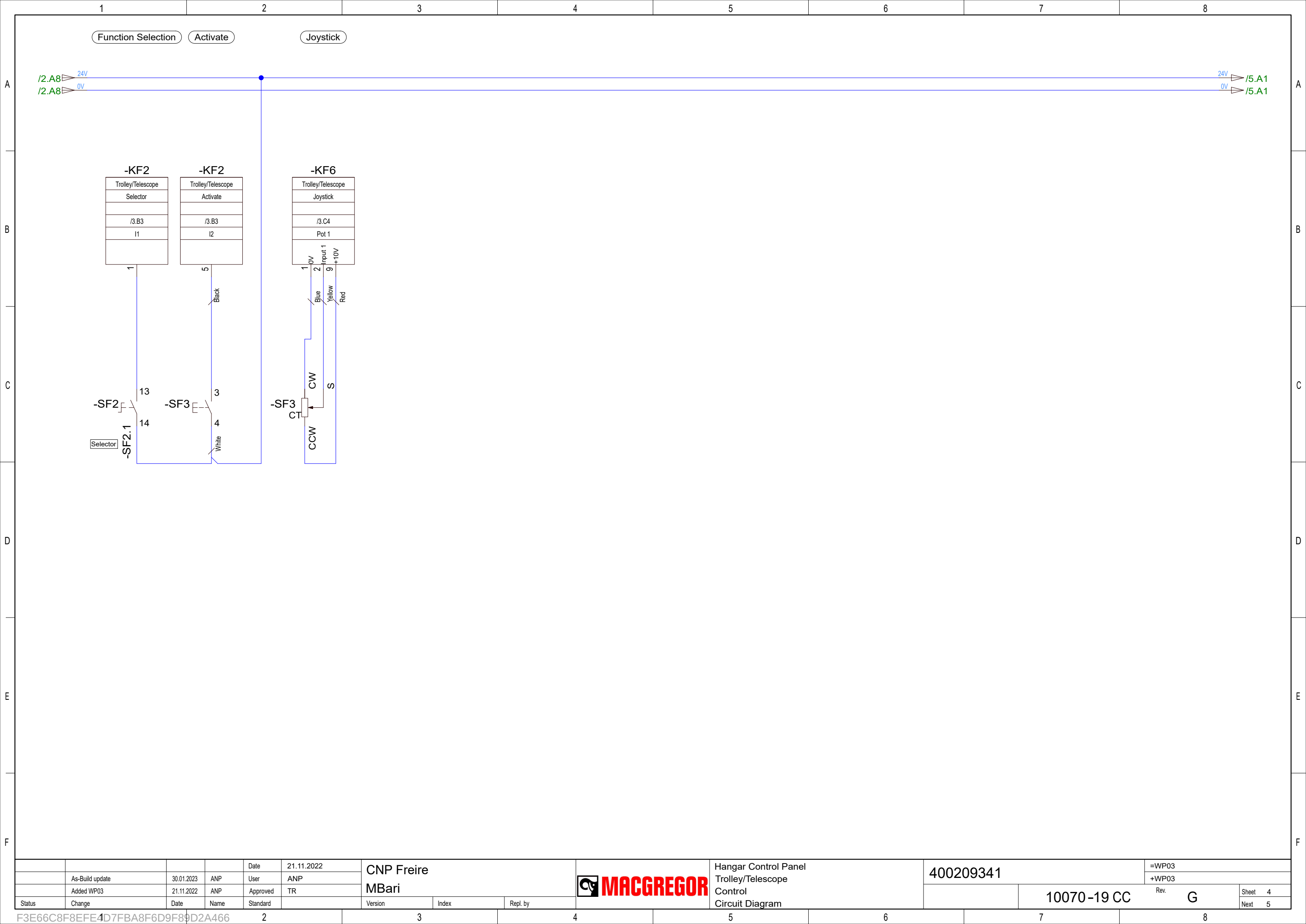
				Date	17/11-2021	CNP Freire MBarí			Signal Connections Systems Connection EtherCAT to TRIPLEX			NA		=TRIP01	
				User	GSK									+Signal	
	Updated acc. Triplex drawings	28.11.2022	ANP	Approved	RAJ									Rev.	G
Status	Change	Date	Name	Standard		Version	Index	Repl. by						10070-18 CC	Sheet 1
															Next 1





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





			Date	21.11.2022	CNP Freire				Hangar Control Panel		400209341		=WP03	
	As-Build update	30.01.2023	ANP	User	ANP				Trolley/Telescope		+WP03			
	Added WP03	21.11.2022	ANP	Approved	TR				Control		Rev. G			
Status	Change	Date	Name	Standard	Version	Index	Repl. by		Circuit Diagram		10070-19 CC		Sheet 4	
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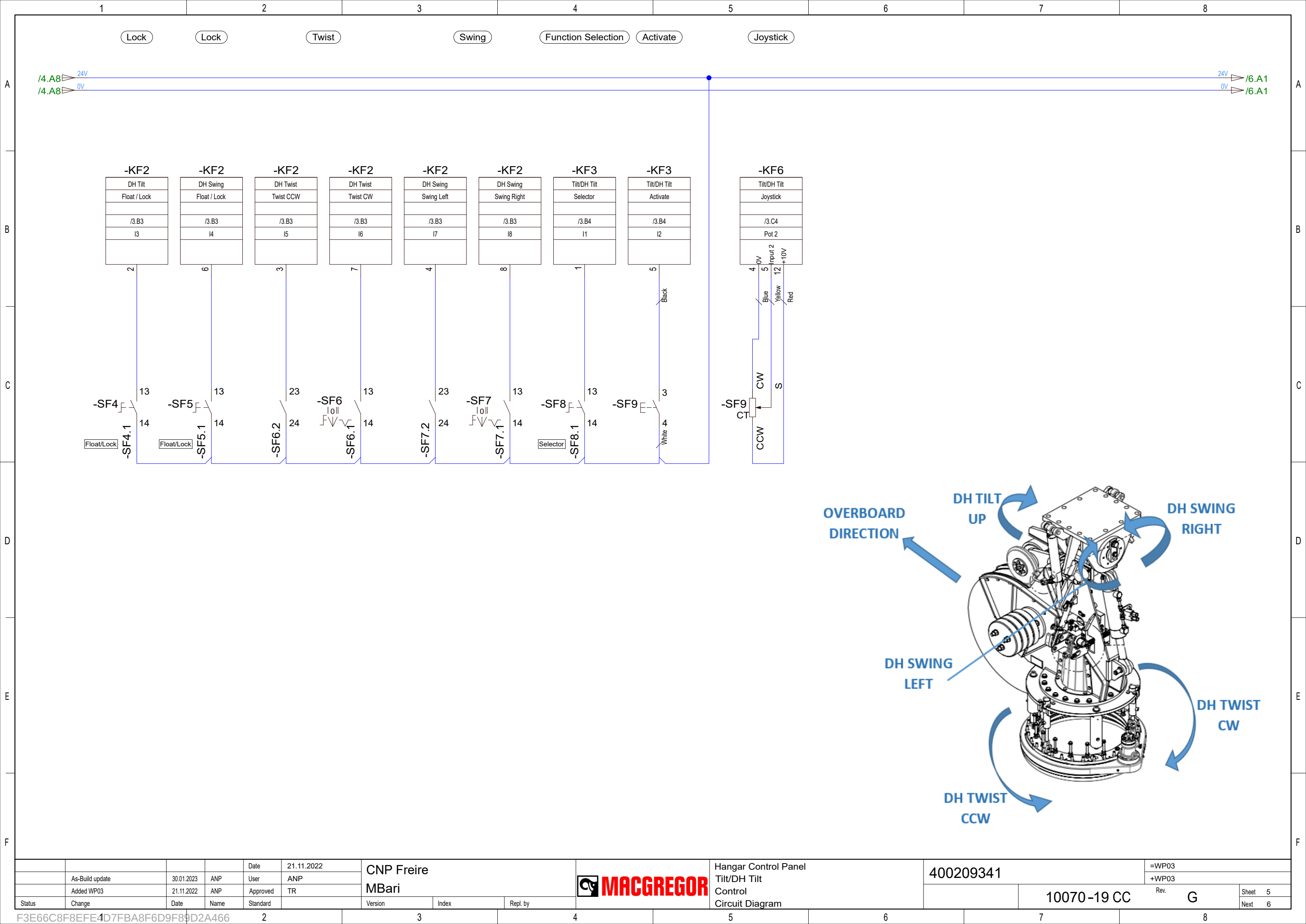
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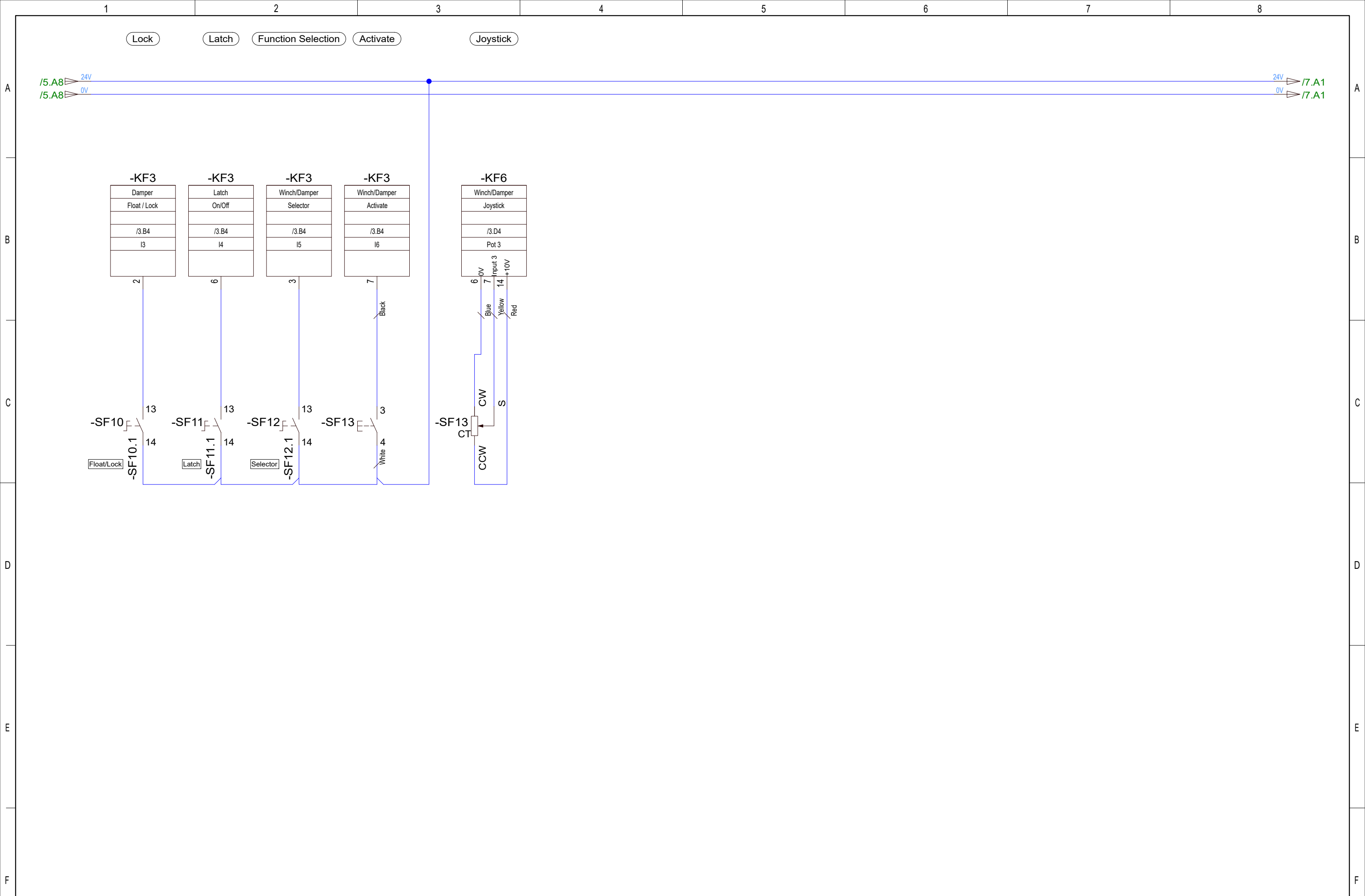
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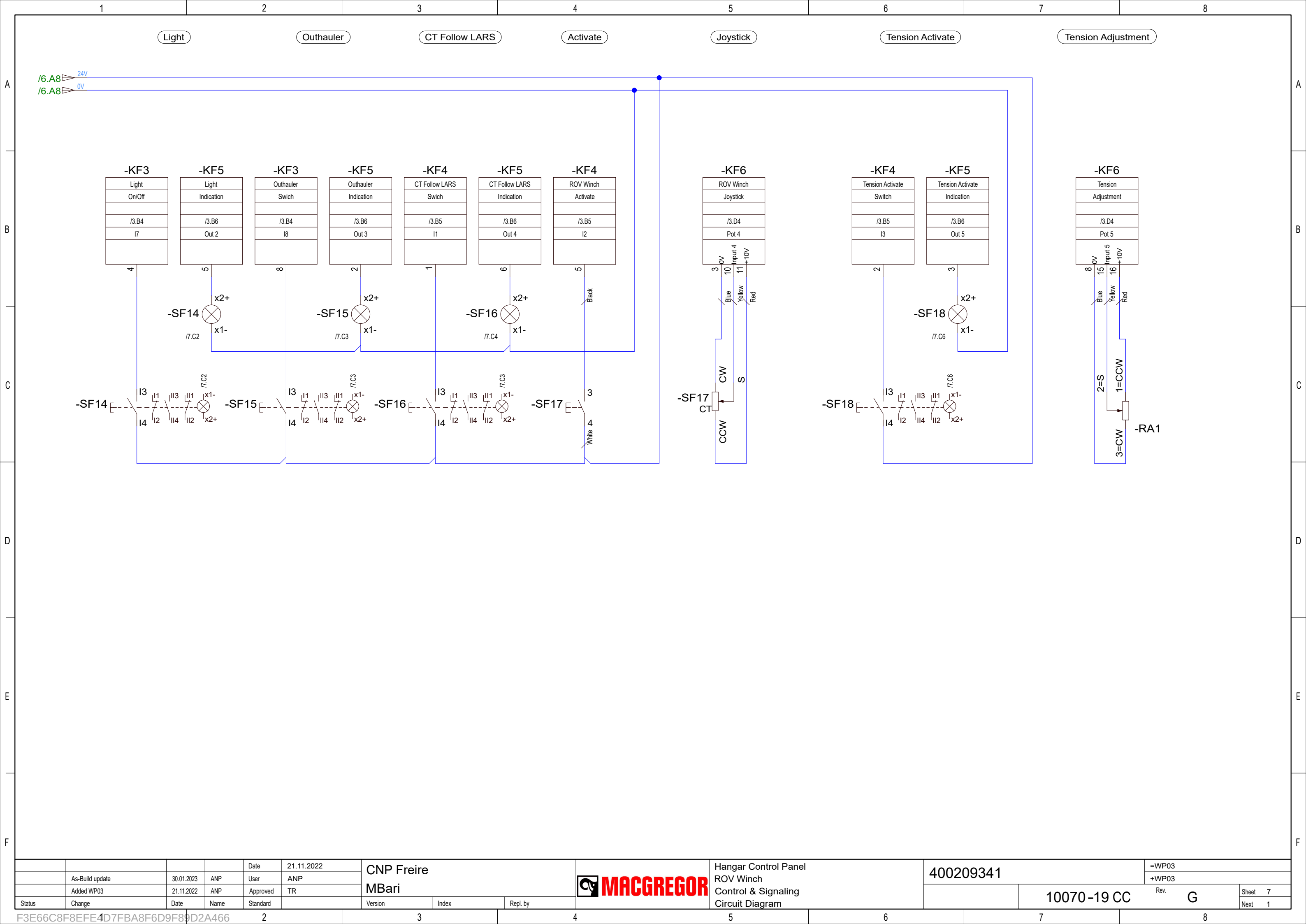
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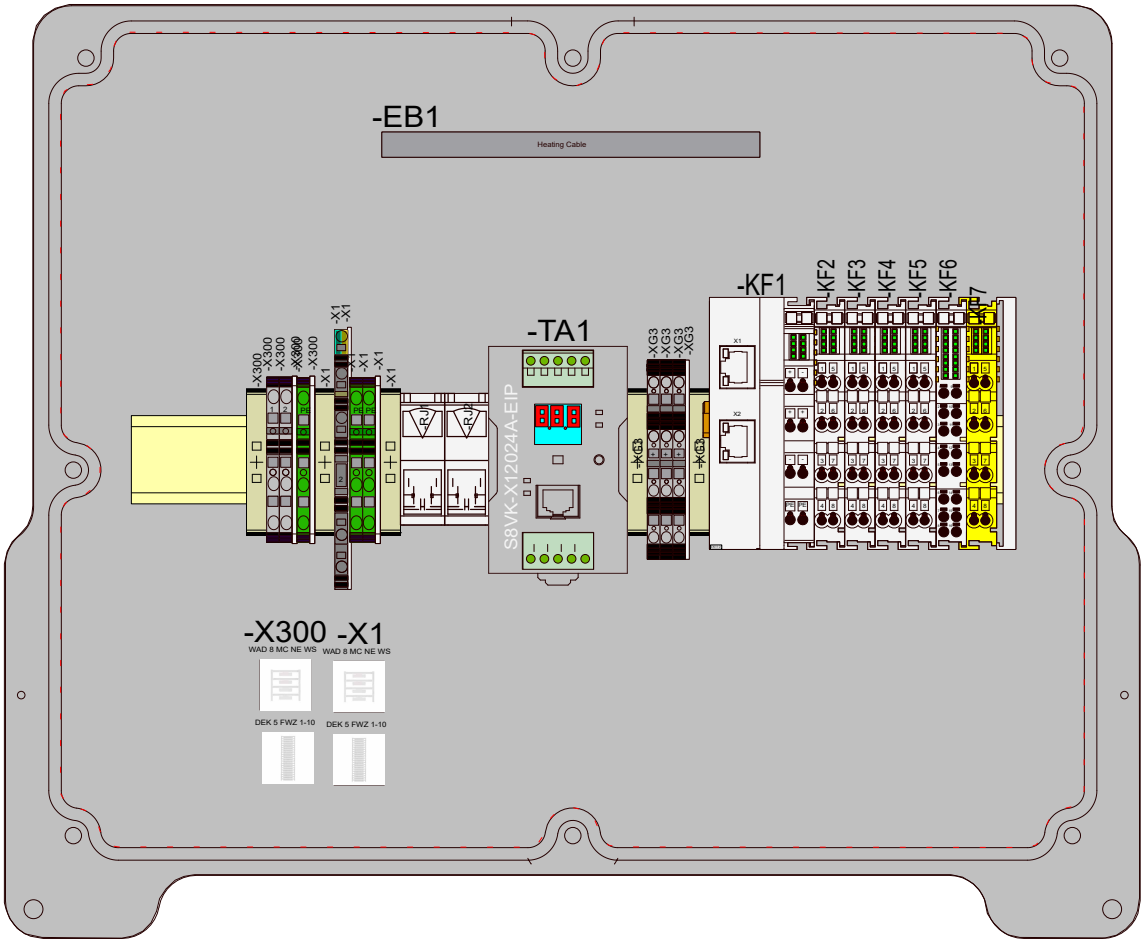




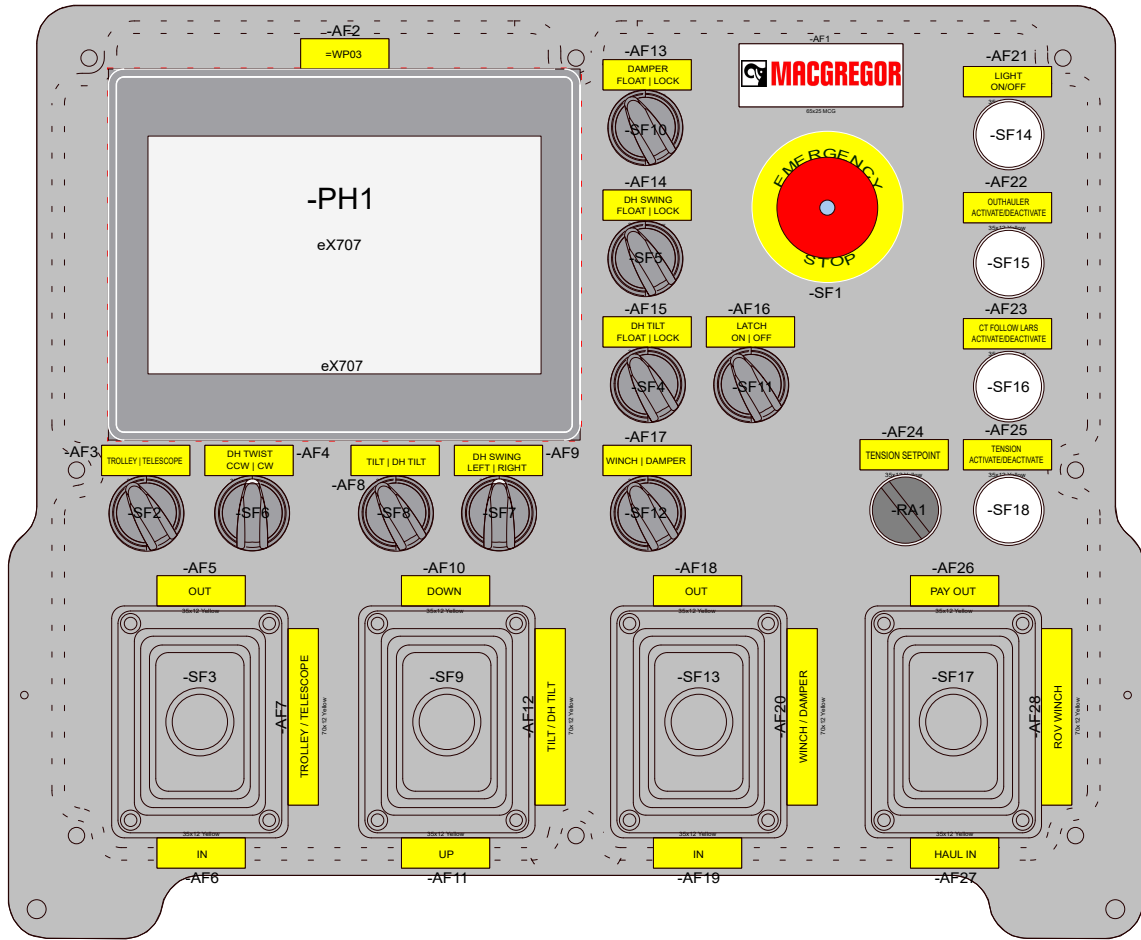
			Date	21.11.2022	CNP Freire MBar				Hangar Control Panel ROV Winch Control & Signaling Circuit Diagram	400209341	=WP03		
	As-Build update	30.01.2023	ANP	User							ANP	+WP03	
	Added WP03	21.11.2022	ANP	Approved							TR		
Status	Change	Date	Name	Standard		Version	Index	Repl. by		10070-19 CC	Rev. G	Sheet 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 ezeProtection-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	ExorI 7" Touch Panel		EXOR		ExorIeX700 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										Rev. G
Status	Change	Date	Name	Standard			Version	Index	Repl. by			10070-19 PL		Next 2	
F3E66C8F8EFE4D7FBA8F6D9F89D2A466		2		3		4		5		6		7		8	

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A <															

