

EPLAN GmbH & Co. KG

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Company / customer

Project description Cabinet EPLAN drawing for Factory

Job number IEC_bas001

Commission **EPLAN**

Manufacturer (company) EPLAN GmbH & Co. KG

EPLAN sample project Path

Project name Factory_Cabinets

Make Type

Place of installation On Planet Earth

Responsible for project

Part feature

3/11/2023 Created on

3/19/2023 by (short name) sayad.hassan Number of pages Edit date 27

			Date	3/19/2023	EPLAN	
			Ed.	sayad.hassan		
			Appr.		Cabinet EPLAN drawing for Fa	ctory
Modification	Date	Name	Original		Replacement of	Replaced by

EPLAN GmbH & Co. KG

Title page / cover sheet

+ GEN

IEC_bas001

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Modification

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Page	Page description	supplementary page field	Date	Edited by	Х
==EE=Factory+GEN/1	Title page / cover sheet		3/19/2023	sayad.hassan	
==EE=Factory+GEN/2	Table of contents : ==EE=Factory+GEN/1 - ==EE=Factory+RE/10		3/19/2023	sayad.hassan	Х
==EE=Factory+GEN/3	Structure identifier overview		3/19/2023	sayad.hassan	
==EE=Factory+GEN/4	Technology overview		3/19/2023	sayad.hassan	
==EE=Factory+CAB_1/1	Power Supply		3/11/2023	sayad.hassan	
==EE=Factory+CAB_2/1	Power Distribution		3/19/2023	sayad.hassan	
==EE=Factory+CAB_3/1	230 VAC Power supply to the PLC cabinet		3/19/2023	sayad.hassan	
==EE=Factory+CAB_3/2	24 VDC power distribution		3/19/2023	sayad.hassan	
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==EE=Factory+CAB_3/4	CPU module overview		3/12/2023	sayad.hassan	
==EE=Factory+CAB_3/5	DI module overview		3/12/2023	sayad.hassan	
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==EE=Factory+CAB_3/7	AI module overview		3/12/2023	sayad.hassan	
==EE=Factory+CAB_3/8	DI module signal		3/19/2023	sayad.hassan	
==EE=Factory+CAB_3/8.a	DI module signal		3/19/2023	sayad.hassan	
==EE=Factory+CAB_3/9	DO module signal		3/19/2023	sayad.hassan	
==EE=Factory+CAB_3/10	AI module signal		3/19/2023	sayad.hassan	
==EE=Factory+RE/1	Cable overview : =Factory+FIELD-W1 - =Factory+FIELD-WS6		3/19/2023	sayad.hassan	
==EE=Factory+RE/2	Terminal diagram =Factory+CAB_1-X1		3/19/2023	sayad.hassan	
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==EE=Factory+RE/4	Terminal diagram =Factory+CAB_2-X11		3/19/2023	sayad.hassan	
==EE=Factory+RE/5	Terminal diagram =Factory+CAB_2-X12		3/19/2023	sayad.hassan	
==EE=Factory+RE/6	Terminal diagram =Factory+CAB_3-X1		3/19/2023	sayad.hassan	
==EE=Factory+RE/7	Terminal diagram =Factory+CAB_3-X1-DI		3/19/2023	sayad.hassan	
==EE=Factory+RE/8	Terminal diagram =Factory+CAB_3-X1-DO		3/19/2023	sayad.hassan	
==EE=Factory+RE/9	Terminal diagram =Factory+CAB_3-X2-DO		3/19/2023	sayad.hassan	
==EE=Factory+RE/10	Terminal diagram =Factory+CAB_3-XM		3/19/2023	sayad.hassan	

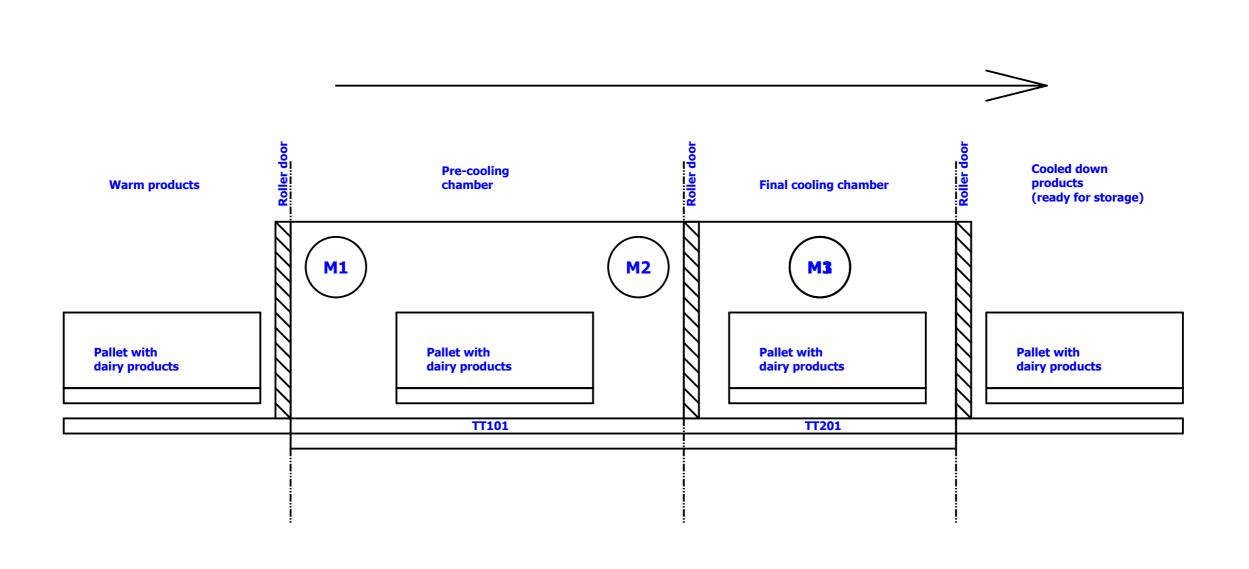
= Factory + GEN 3/19/2023 EPLAN GmbH & Co. KG Table of contents : ==EE=Factory+GEN/1 - ==EE=Factory+RE/10 sayad.hassan Cabinet EPLAN drawing for Factory Appr. IEC_bas001

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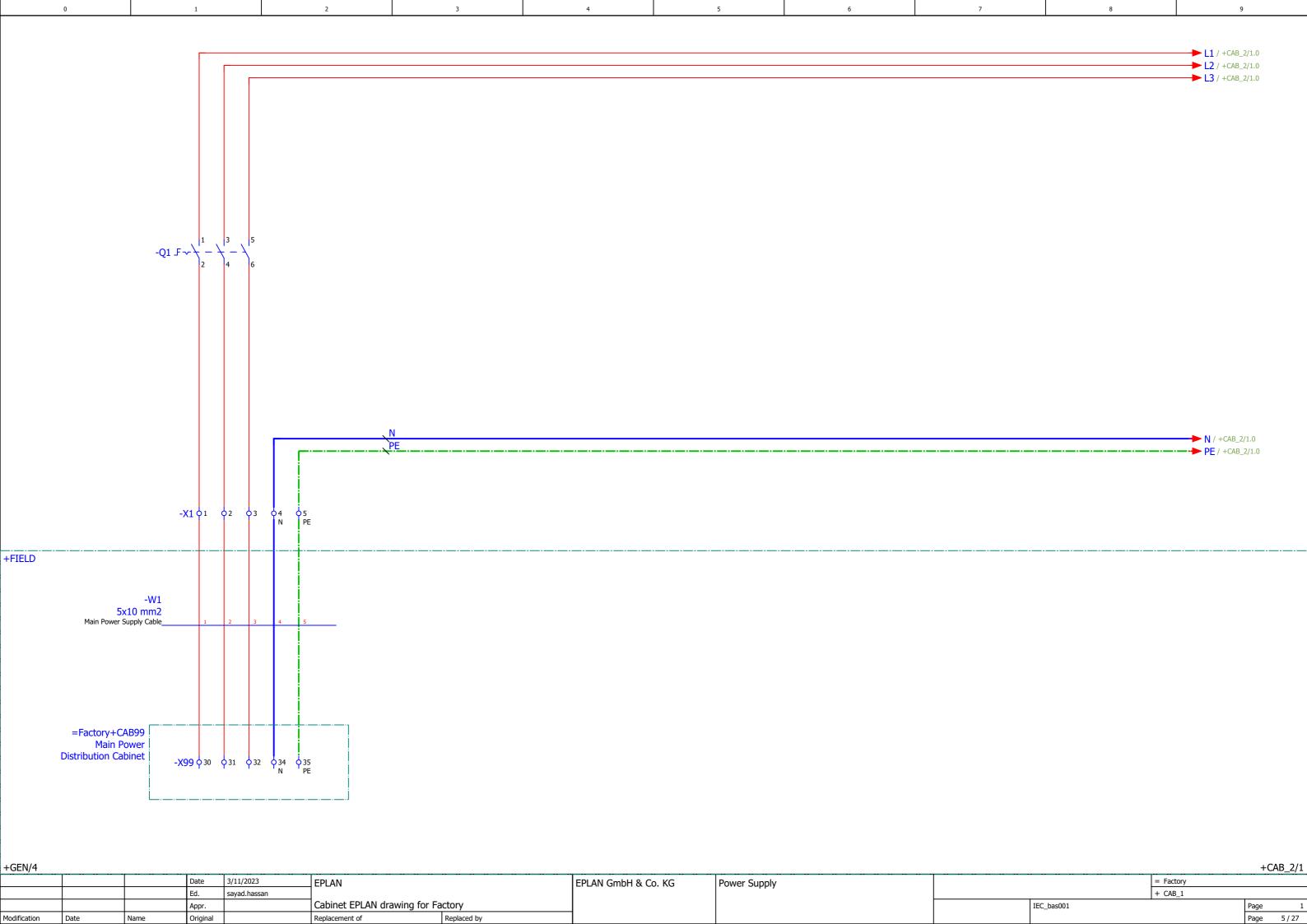
Structure identifier overview

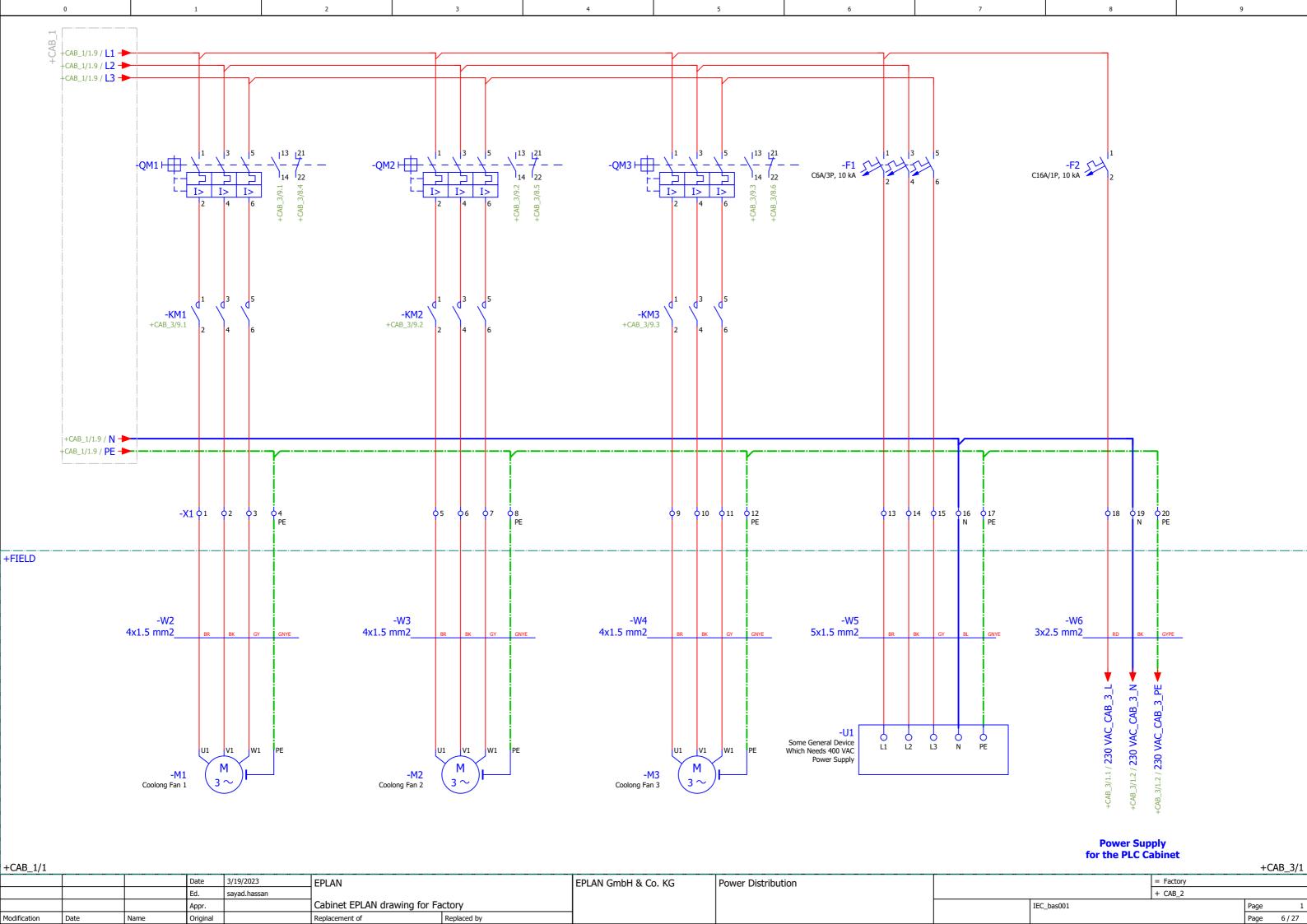
Full designation	Labeling	Structure description	Full designation	Labeling	Structure description
==EE	Functional assignment	Electrical Engineering			
=Factory	Function designation	Planet Earth			
+GEN	Location designation	Gerenal (Title page, Table of contents etc.))			
+CAB_1	Location designation	Power Supply cabinet			
+CAB_2	Location designation	Power Distribution Cabinet (motor, heaters etc.)			
+CAB_3	Location designation	PLC cabinet			
+RE	Location designation	Reports			
+FIELD	Location designation	Equipment Field			
+CAB99	Location designation	Main Power Distribution Cabinet			
+CAB57	Location designation	Higher Level Control System (Conveyor system)			
	•	•	·		•

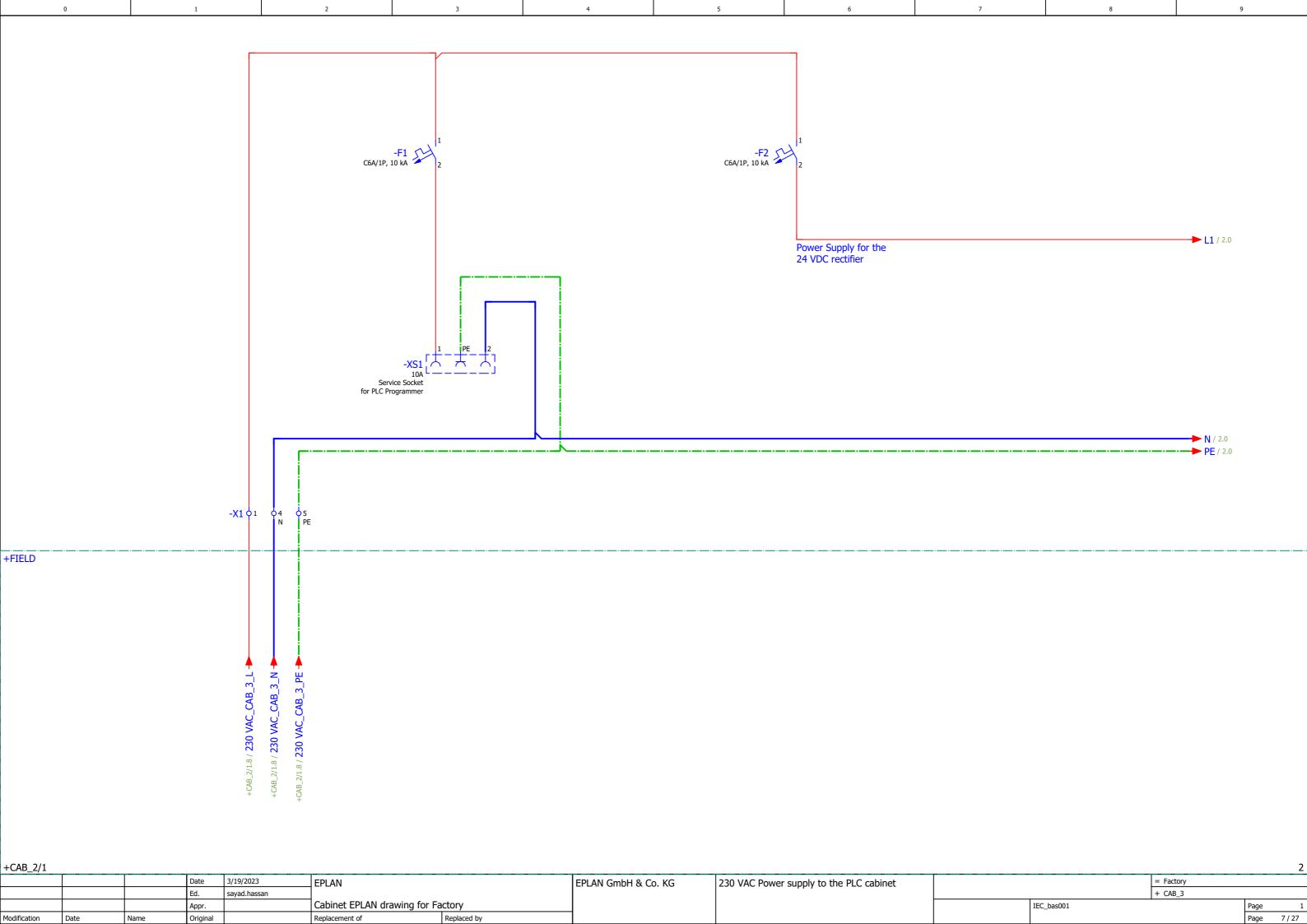
| Date | 3/19/2023 | EPLAN | EPLAN GmbH & Co. KG | Structure identifier overview | | Factory | F

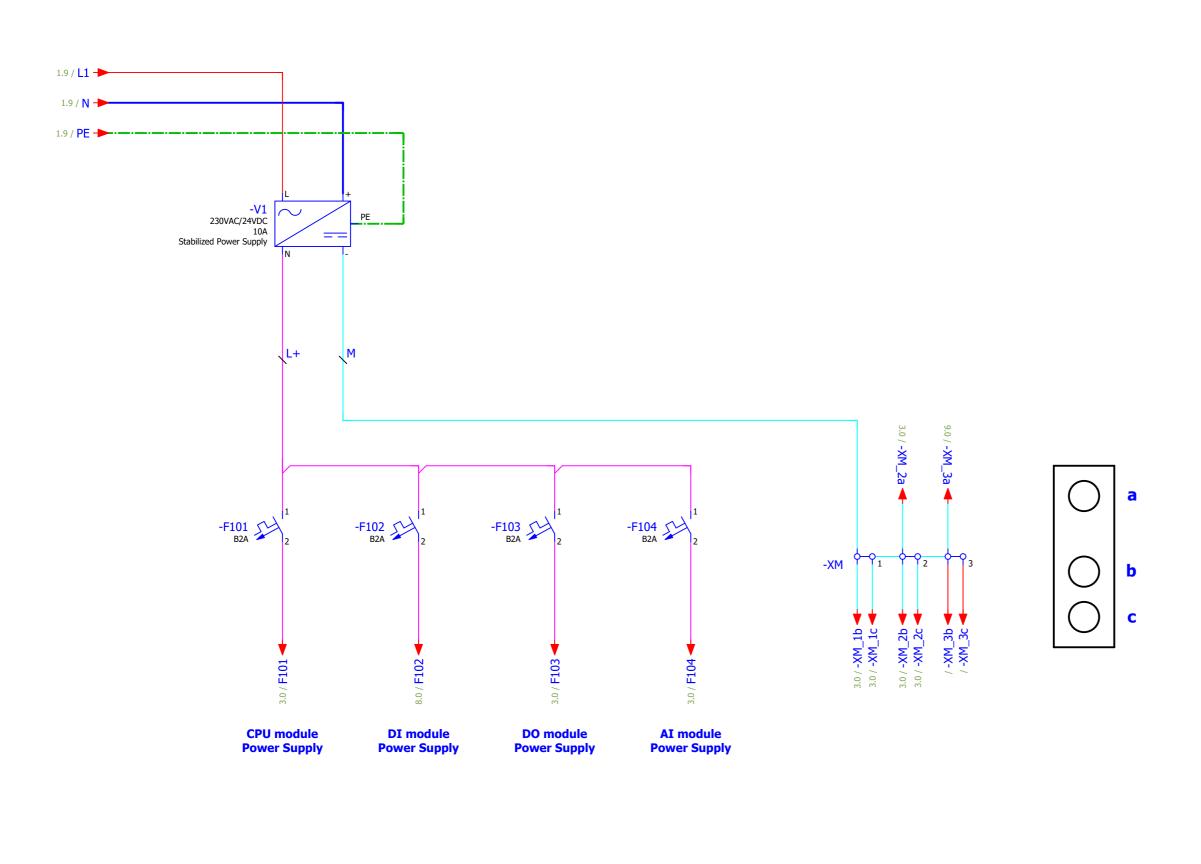


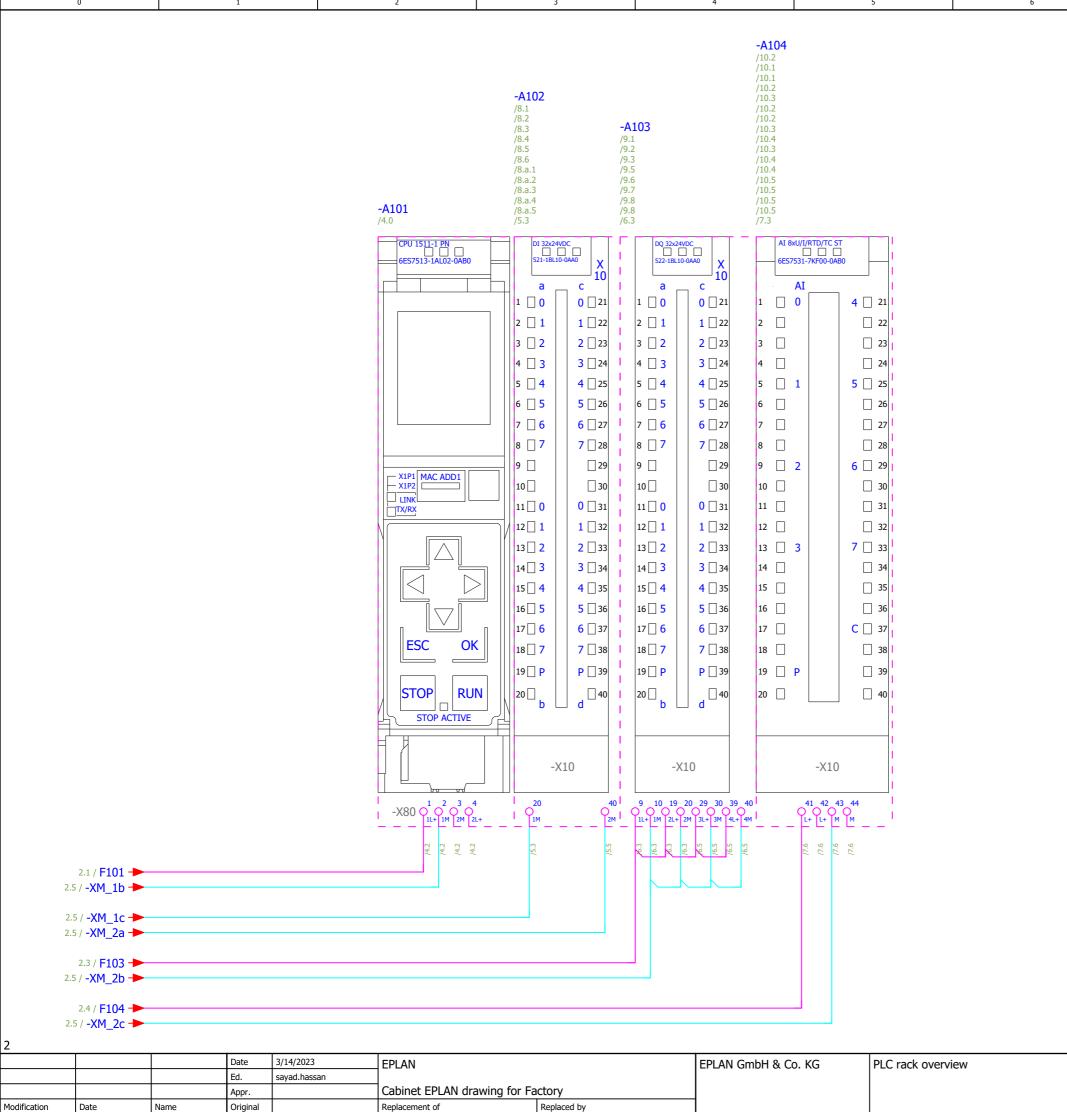
+CAB_1/1











-A101 /3.2 S7-1500 CPU 1513-1 PN SIEMENS X1P1 R:PN PN X1P2 R:PN PN

6ES7513-1AL02-0AB0

-A102 /3.3

			S7-1500 DI 32x24VDC	BA	 SIEMENS
Motor M1 running	m1_running	/8.1	-X10:1 - O IX.0		-X10:21 IX+2.0 O
Motor M2 running	m2_running	/8.2	DI a -X10:2 -I IX.1 DI a		 -X10:22 IX+2.1 O DI c
Motor M3 running	m3_running	/8.3	-X10:3 		 -X10:23 IX+2.2 O
Motor M1 fault	m1_fault	/8.4	-X10:4 		 -X10:24 IX+2.3 O
Motor M2 fault	m2_fault	/8.5	-X10:5 		 -X10:25 IX+2.4 O
Motor M3 fault	m3_fault	/8.6	-X10:6 	•	-X10:26 IX+2.5 O
External Permission (safety)		/8.a.1	-X10:7 		-X10:27 IX+2.6 O
Start Cooling in Chamber 1 (pre-cooling)		/8.a.2	-X10:8 	•	-X10:28 IX+2.7 O
Start Cooling in Chamber 2 (final-cooling)		/8.a.3	-X10:11 		 -X10:31 IX+3.0 O
		/8.a.4	-X10:12 ————————————————————————————————————		 -X10:32 IX+3.1 O
		/8.a.5	-X10:13 		 -X10:33 IX+3.2 O
			-X10:14 		-X10:34 IX+3.3 O
			-X10:15 		-X10:35 IX+3.4 O
			-X10:16 	•	-X10:36 IX+3.5 O
			-X10:17 		-X10:37 IX+3.6 O
			-X10:18 -X10:18 IX+1.7 DI b -X10:19		-X10:38 IX+3.7 O DI d
			-X10.19 I O n.c. I -X10:20		 O—
		/3.3	I M		-X10:40 Om
			1		1
			1		
			1		
			 6ES7521-1BL1	0-0440	

= Factory + CAB_3 3/12/2023 EPLAN EPLAN GmbH & Co. KG DI module overview sayad.hassan Cabinet EPLAN drawing for Factory Page 5 Page 11 / 27 Appr. IEC_bas001 Modification Date Name Original Replaced by

-A103 /3.3 S7-1500 SIEMENS DQ 32x24VDC/0.5A BA -X10:1 O QX.0 -X10:21 QX+2.0 O DQ c Start/Stop M1 /9.1 -X10:2 —O QX.1 DQ a Start/Stop M2 /9.2 -X10:3 —O QX.2 DQ a Start/Stop M3 /9.3 -X10:4 —O QX.3 DQ a Cooling Started in Chamber 1 (pre-cooling) /9.5 Cooling Finished in Chamber 1 (pre-cooling) /9.6 -X10:6 —O QX.5 DQ a Cooling Started in Chamber 2 (pre-cooling) /9.7 -X10:7 — QX.6 DQ a Cooling Finished in Chamber 2 (pre-cooling) /9.8 -X10:28 QX+2.7 O DQ c System Fault (Production stopped) request for immediate inspection /9.8 -X10:9 /3.4 /3.4 -X10:10 _____ -X10:30 O 3M /3.4 /3.4 -X10:31 QX+3.0 O DQ d -X10:32 QX+3.1 O DQ d -X10:33 QX+3.2 O DQ d -X10:11 O QX+1.0 -X10:12 O QX+1.1 PQ b

-X10:13

-X10:14

-X10:14

-X10:15

-X10:15

-X10:15

-X10:16

-X10:17

-X10:17

-X10:18

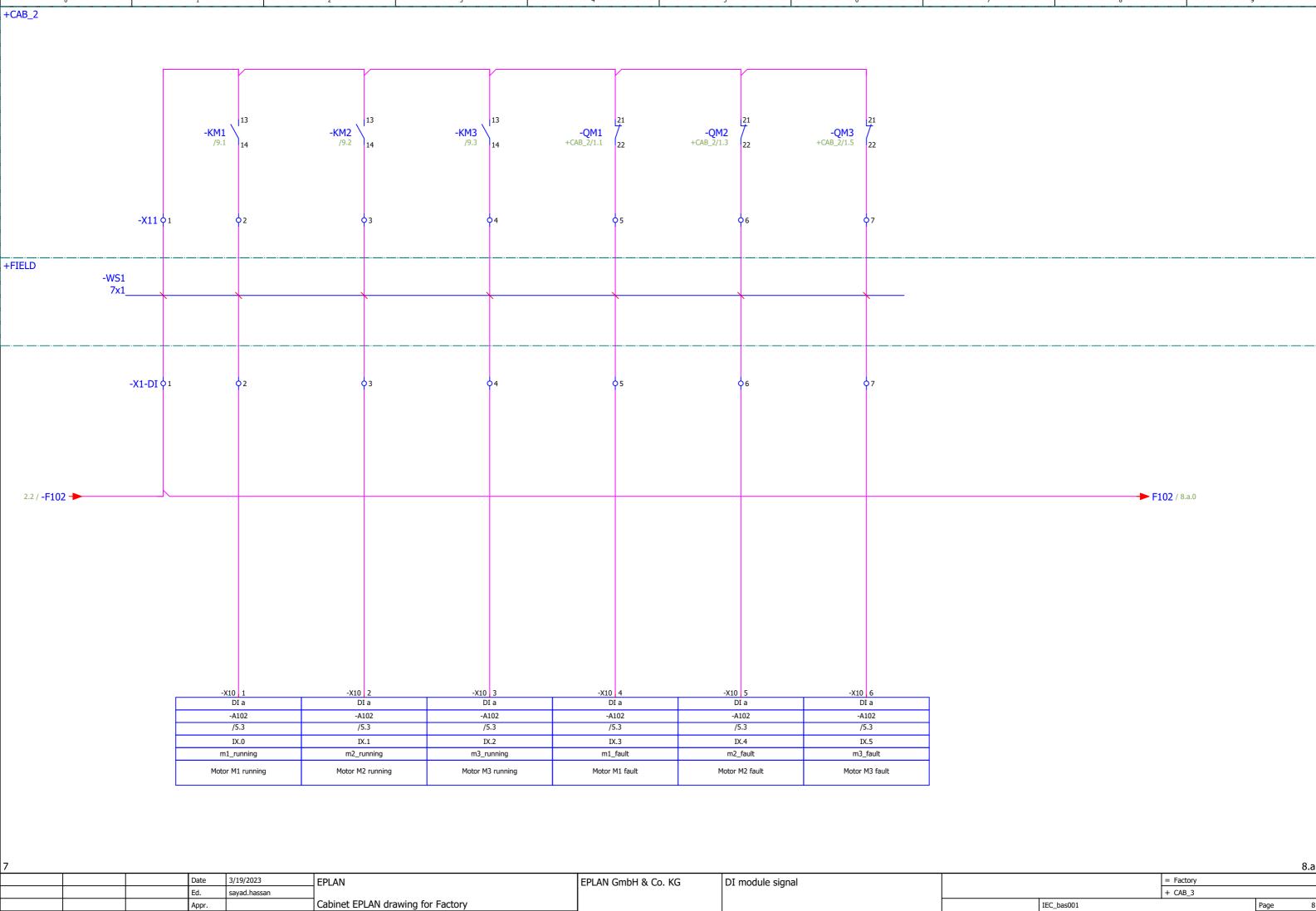
-X10:18

-X10:19 DQd -X10:34 QX+3.3 O DQd -X10:35 QX+3.4 O DQd -X10:36 QX+3.5 O DQd -X10:37 QX+3.6 O DQd -X10:38 QX+3.7 O DQd -X10:39 /3.4 /3.4 -X10:40 O /3.4 /3.4 6ES7522-1BL10-0AA0

3/12/2023 EPLAN = Factory EPLAN GmbH & Co. KG DO module overview sayad.hassan + CAB_3 Page 6 Page 12 / 27 Appr. Cabinet EPLAN drawing for Factory IEC_bas001 Modification Date Name Original Replaced by

-A104 /3.4 S7-1500 SIEMENS AI 8xU/I/RTD/TC ST -X10:1 UV0 -X10:21 | O______ /10.2 -X10:2 -X10:22 /10.1 -X10:23 -X10:3 /10.1 -X10:24 -X10:4 /10.2 -X10:5 -X10:25 /10.3 UV5 UV1 -X10:26 -X10:6 /10.2 I1+ -X10:27 -X10:7 /10.2 J5+_IC4+ U1+_IC0+ -X10:28 -X10:8 /10.3 U1-_I1-_IC0 -X10:9 -X10:29 /10.4 UV6 I UV2 -X10:30 -X10:10 /10.3 I2+ -X10:31 -X10:11 /10.4 J6+_M6+ U2+_M2+ -X10:32 -X10:12 /10.4 U2-_I2-_M2--X10:13 -X10:33 /10.5 I UV3)__ UV7 -X10:14 -X10:34 /10.5 13+ -X10:15 -X10:35 /10.5 J7+_IC6+ U3+_IC2+ -X10:16 -X10:36 /10.5 U3-_I3-_IC2--X10:17 -X10:37 -X10:18 -X10:38 -X10:19 -X10:39 -X10:20 -X10:40 -X10:41 O -X10:42 | O_L+ /3.5 -X10:43 | O_M | /3.5 -X10:44 | /3.5 6ES7531-7KF00-0AB0

3/12/2023 = Factory **EPLAN** EPLAN GmbH & Co. KG AI module overview sayad.hassan + CAB_3 Appr. Cabinet EPLAN drawing for Factory IEC_bas001 Page Modification Date Original Replaced by Page 13 / 27

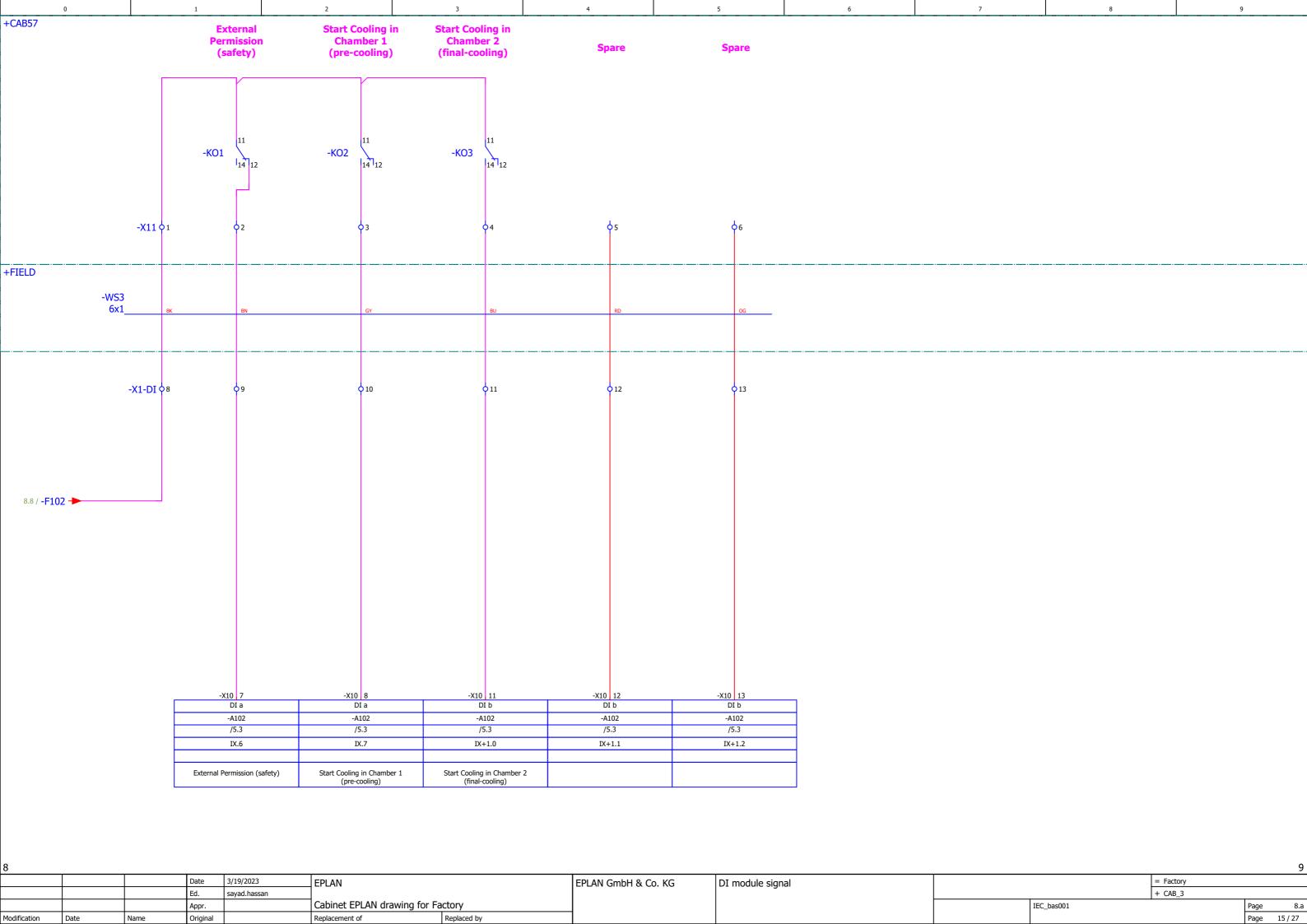


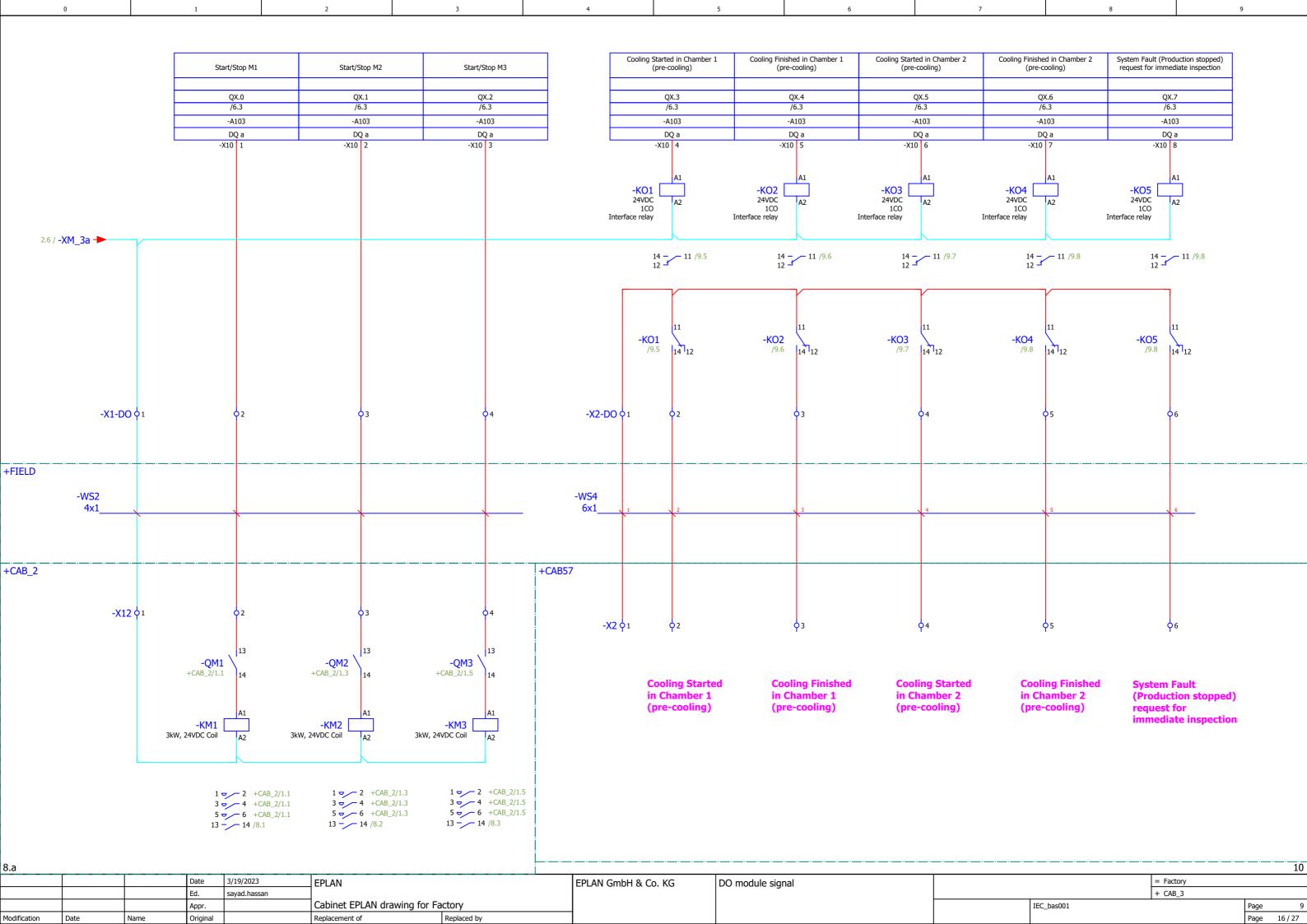
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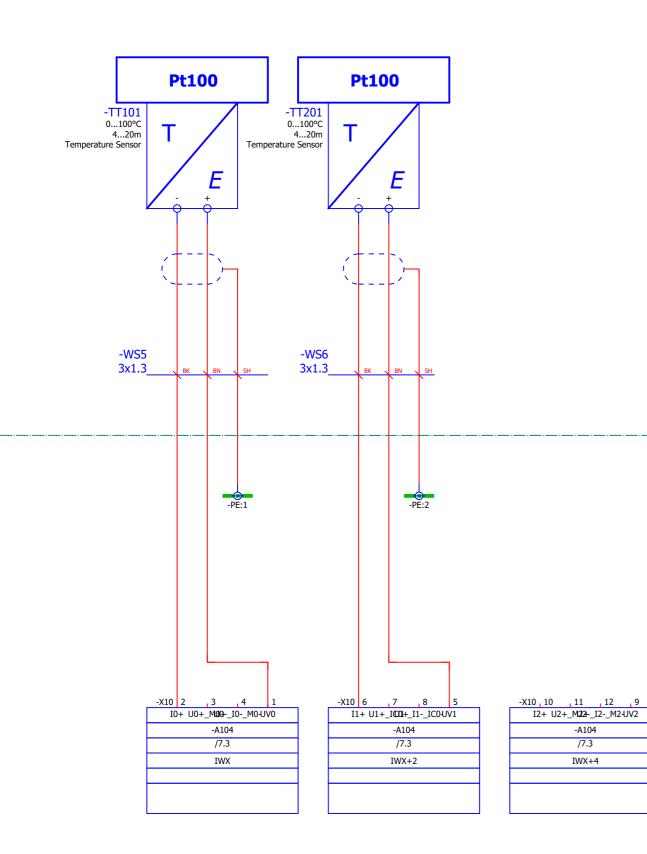
Original

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0 1 2 3 4 5 6 7 8 9 +FIELD



-X10 14 15 16 13
I3+ U3+_IC2+_I3IC2UV3
-A104
/7.3
IWX+6

+RE/1

| Figure | F

Cable overview

F10_001

Cable name	Source (from)	Target (to)	Cable type	all conductors	Conductors used	Cross-section [mm]	Length [m]	Function text	Graphical page of cable diagram
-FIELD-W1	+CAB_1-X1	+CAB99-X99		5	5	10 mm2		Main Power Supply Cable	
FIELD-W2	+CAB_2-X1	+FIELD-M1		4	4	1.5 mm2			
FIELD-W3	+CAB_2-X1	+FIELD-M2		4	4	1.5 mm2			
FIELD-W4	+CAB_2-X1	+FIELD-M3		4	4	1.5 mm2			
-FIELD-W5	+CAB_2-X1	+FIELD-U1		5	5	1.5 mm2			
-FIELD-W6	+CAB_2-X1	+CAB_3-X1		3	3	2.5 mm2			
+FIELD-WS1	+CAB_2-X11	+CAB_3-X1-DI		7	7	1			
+FIELD-WS2	+CAB_2-X12	+CAB_3-X1-DO		4	4	1			
+FIELD-WS3	+CAB_3-X1-DI	+CAB57-X11		6	6	1			
+FIELD-WS4	+CAB_3-X2-DO	+CAB57-X2		6	6	1			
+FIELD-WS5	+CAB_3-A104	+FIELD-TT101		3	2	1.3			
		+CAB_3-PE							
+FIELD-WS6	+CAB_3-A104	+FIELD-TT201		3	2	1.3			
		+CAB_3-PE							
				+					
				+					

+CAB_3/10 3/19/2023 EPLAN sayad.hassan Cabinet EPLAN drawing for Factory Appr. Modification Replaced by

EPLAN GmbH & Co. KG

Cable overview : =Factory+FIELD-W1 - =Factory+FIELD-WS6

= Factory + RE IEC_bas001

Terminal diagram

	+FIELD-W1	Cable name	Strip =Factory+CAB_1-X1							
Function text		Cable type	Target designation	Connection point	Terminal	Jumper	Target designation	Connection point	Cable type	Page / column
	1		+CAB99-X99	30	1	•	-Q1	2		==EE/1.1
	2		+CAB99-X99	31	2	•	-Q1	4		==EE/1.1
	3		+CAB99-X99	32	3	•	-Q1	6		==EE/1.1
	4	_	+CAB99-X99	34	4	•	+CAB_2-X1	16		==EE/1.2
	5		+CAB99-X99	35	5	1	+CAB_2-X1	4		==EE/1.2
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| Part |

Terminal diagram

F13_001

	+FIELD-W6	+FIELD-W5	+FIELD-W4	+FIELD-W3	+FIELD-W2	Cable name	=	=Fac	_2-X1	Cable name			
Function text						Cable type	Target designation	Connection point	Terminal	Jumper	Connection point Target designation	Cable type	Page / column
					BR		+FIELD-M1	U1	1		-KM1 2		==EE/1.1
					BK		+FIELD-M1	V1	2		-KM1 4	1	==EE/1.1
					GY		+FIELD-M1	W1	3		-KM1 6	1	==EE/1.1
					GNYE		+FIELD-M1	PE	4	•	+CAB_1-X1 5	1	==EE/1.2
				BR			+FIELD-M2	U1	5	•	-KM2 2		==EE/1.3
				ВК			+FIELD-M2	V1	6	•	-KM2 4		==EE/1.3
				GY			+FIELD-M2	W1	7	•	-KM2 6		==EE/1.3
				GNYE			+FIELD-M2	PE	8	•		1	==EE/1.3
			BR				+FIELD-M3	U1	9		-KM3 2	1	==EE/1.5
			BK				+FIELD-M3	V1	10		-KM3 4	1	==EE/1.5
			GY				+FIELD-M3	W1	11		-KM3 6		==EE/1.5
			GNYE				+FIELD-M3	PE	12				==EE/1.5
		BR					+FIELD-U1	L1	13		-F1 2		==EE/1.6
		ВК					+FIELD-U1	L2	14		-F1 4		==EE/1.6
		GY					+FIELD-U1	L3	15		-F1 6	1	==EE/1.7
		GNYE					+FIELD-U1	PE	17				==EE/1.7
		BL					+FIELD-U1	N	16	•1	+CAB_1-X1 4		==EE/1.7
	RD						+CAB_3-X1	1	18		-F2 2		==EE/1.8
	GYPE						+CAB_3-X1	5	20	-		1	==EE/1.8
	ВК				$\overline{}$		+CAB_3-X1	4	19			1	==EE/1.8
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Terminal diagram

	T. T. CA. CT. T. T. C. T	Cable name		Fact	Cable name					
		name		i acc	name					
Function text		Cable type	Target designation	Connection point	Terminal	Jumper	Target designation	Connection point	Cable type	Page / column
			+CAB_3-X1-DI	1	1		-KM1	13		==EE+CAB_3/8.1
		:	+CAB_3-X1-DI	2	2		-KM1	14	1	==EE+CAB_3/8.1
	3	_	+CAB_3-X1-DI	3	3		-KM2	14	1	==EE+CAB_3/8.2
	В	IJ	+CAB_3-X1-DI	4	4	•	-KM3	14		==EE+CAB_3/8.3
	R	D	+CAB_3-X1-DI	5	5	•	-QM1	22		==EE+CAB_3/8.4
		G	+CAB_3-X1-DI	6	6	•	-QM2	22		==EE+CAB_3/8.5
	Y	E	+CAB_3-X1-DI	7	7	•	-QM3	22		==EE+CAB_3/8.6
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Terminal diagram

	Cable name	Strip =Factory+CAB_2-X12							+FIELD-WS2	
Function text	Cable type	Target designation	Connection point	Terminal	Jumper	Target designation	Connection point	Cable type		Page / column
		-KM1	A2	1		+CAB_3-X1-DO	1		ВК	==EE+CAB_3/9.1
		-QM1	13	2	•	+CAB_3-X1-DO	2]	BN	==EE+CAB_3/9.1
		-QM2	13	3	•	+CAB_3-X1-DO	3		GY	==EE+CAB_3/9.2
		-QM3	13	4	•	+CAB_3-X1-DO	4		BU	==EE+CAB_3/9.3
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Terminal diagram

	+FEELD-W6	Cable name	:	=Fac	Cable name				
Function text		Cable type	Target designation	Connection point	Terminal	Jumper	Connection point Target designation	Cable type	Page / column
	RI		+CAB_2-X1	18	1	•	-F1 1		==EE/1.1
	BI GY	_	+CAB_2-X1 +CAB_2-X1	19 20	5		-XS1 2 -XS1 PE		==EE/1.2 ==EE/1.2
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Terminal diagram

rerminai diagram											F13_001
		Cable name	=	Strip =Factory+CAB_3-X1-DI							
Function text		Cable type	Target designation	Connection point	Terminal	Jumper	Connection point Target designation	Cable type			Page / column
			-F102	2	1	г	+CAB_2-X11 1		1		==EE/8.1
			-A102	-X10:1	2	1.	+CAB_2-X11 2		2		==EE/8.1
			-A102	-X10:2	3	.	+CAB_2-X11 3	\neg	3		==EE/8.2
			-A102	-X10:3	4	<u> </u>	+CAB_2-X11 4		BU		==EE/8.3
			-A102	-X10:4	5		+CAB_2-X11 5		RD		==EE/8.4
			-A102	-X10:5	6	•	+CAB_2-X11 6		OG		==EE/8.5
			-A102	-X10:6	7	·	+CAB_2-X11 7		YE		==EE/8.6
					8	L _e	+CAB57-X11 1			BK	==EE/8.a.1
External Permission (safety)			-A102	-X10:7	9	•	+CAB57-X11 2			BN	==EE/8.a.1
Start Cooling in Chamber 1 (pre-cooling)			-A102	-X10:8	10	•	+CAB57-X11 3			GY	==EE/8.a.2
Start Cooling in Chamber 2 (final-cooling)			-A102	-X10:11	11	•	+CAB57-X11 4			BU	==EE/8.a.3
Spare			-A102	-X10:12	12	•	+CAB57-X11 5			RD	==EE/8.a.4
=			-A102	-X10:13	13	•	+CAB57-X11 6			OG	==EE/8.a.5
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					+FIELD-WS2	Cable name	=F	- acto	Cable name						
Function text						Cable type	Target designation	Connection point	Terminal	Jumper	Target designation	Connection point	Cable type		Page / column
					BK		+CAB_2-X12	1	1		-XM	3:a		-	==EE/9.1
					וטוע		. G. D_E ALE	1		•	-XI ^N -K01	A2	1	-	
					BN		+CAB_2-X12	2	2		-A103	-X10:1	1		==EE/9.1
					GY		+CAB_2-X12	3	3	•	-A103	-X10:2	1		==EE/9.2
					BU		+CAB_2-X12	4	4	•	-A103	-X10:3	1		==EE/9.3
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Terminal diagram

				+FIELD-WS4	Cable name	=F	acto	Cable name							
Function text					Cable type	Target designation	Connection point	Terminal	Jumper	Target designation	Connection point	Cable type		Page / column	1
				1		+CAB57-X2	1	1	•	-KO1	11			==EE/9.4	
Cooling Started in Chamber 1 (pre-cooling)				2		+CAB57-X2	2	2	•	-KO1	14			==EE/9.5	
Cooling Finished in Chamber 1 (pre-cooling)				3		+CAB57-X2	3	3	•	-KO2	14			==EE/9.6	
Cooling Started in Chamber 2 (pre-cooling)	_			4		+CAB57-X2	4	4	•	-KO3	14	-		==EE/9.7	
Cooling Finished in Chamber 2 (pre-cooling)				5		+CAB57-X2	5	5	•	-KO4	14			==EE/9.8	
System Fault (Production stopped) request for immediate inspection	-			6		+CAB57-X2	6	6	•	-K05	14	1		==EE/9.8	
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Terminal diagram

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Function text					Cable type		Target designation	Connection point	Terminal	Jumper	Target designation	Connection point	Cable type				Page / column
						\top	-A101	-X80:2	1	•	-V1	-					==EE/2.5
		\top				- ⊢	-A102	-X10:20									
						\vdash	-A103	-X10:10	2	•	-A102	-X10:40					==EE/2.5
							-A104	-X10:43]				
									3	•	-X1-DO	1					==EE/2.6
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