



User Manual Book

Smart System Lab

Jakarta 2023



USER MANUAL INSTRUCTION



Modul Edukasi Universitas Kristen Petra

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		USER MANUAL BOOK			
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PERHATIAN!

1. Buku ini disusun untuk memudahkan pengoperasian mesin.
2. Bacalah buku Petunjuk Pengoperasian Mesin sebelum mengoperasikan mesin.
3. Ikuti petunjuk yang terdapat pada buku petunjuk ini.
4. Jangan pernah melakukan modifikasi atau perubahan sambungan kabel tanpa pengetahuan yang lengkap tentang mesin.

5. Pengoperasian yang tidak sesuai dengan Buku Petunjuk Pengoperasian Mesin sangat BERBAHAYA !

6. Apabila terjadi kesulitan atau gangguan dalam pengoperasian mesin ini hubungi:

PT Surya Sarana Dinamika : (62-21) 6583 5077 - 78

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1.

MACHINE OVERVIEW

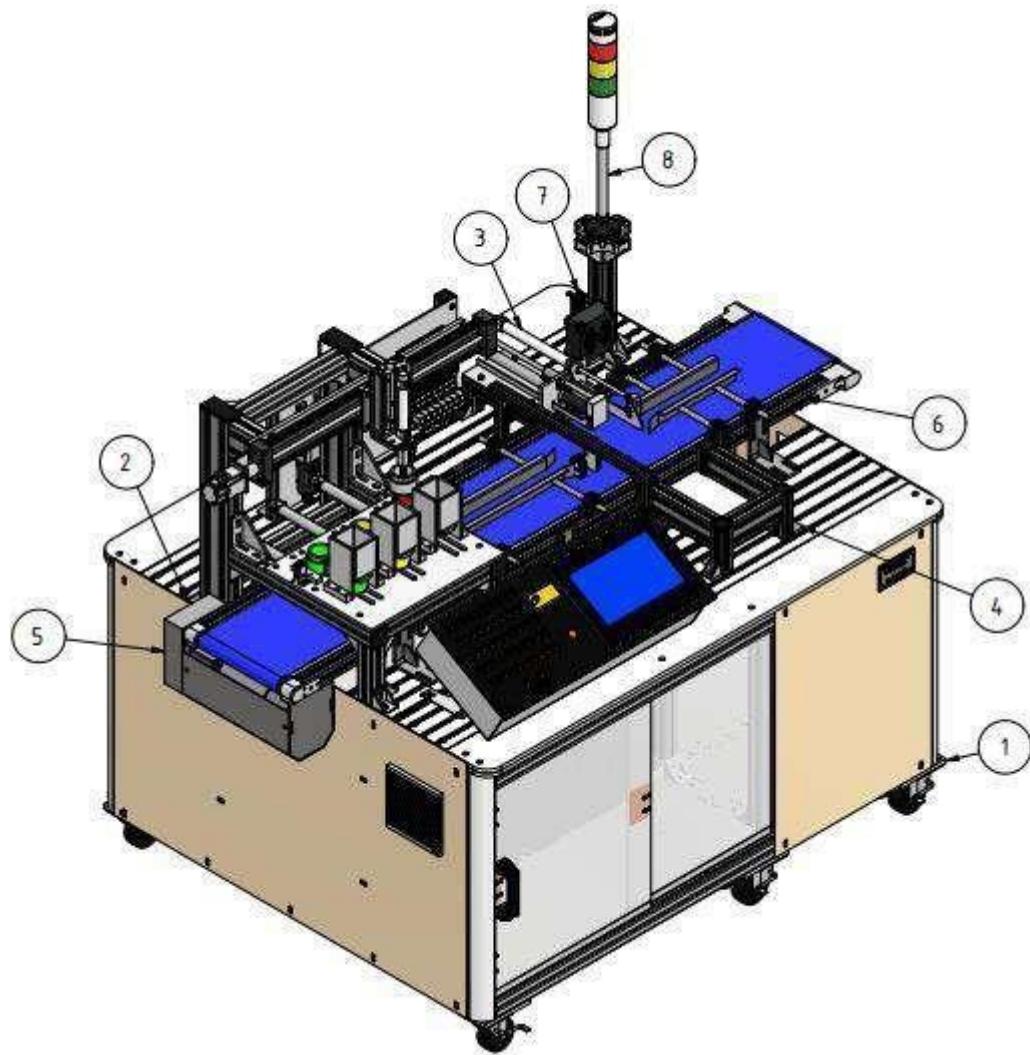
1.1 Deskripsi Mesin

Modul Edukasi Petra merupakan *Robot Collaborative* yang didesain dan diprogram untuk

1.2 Bagian-bagian Mesin

Berikut bagian-bagian pada mesin Modul Edukasi Petra yang dapat dilihat pada gambar dibawah ini :

- Station 1

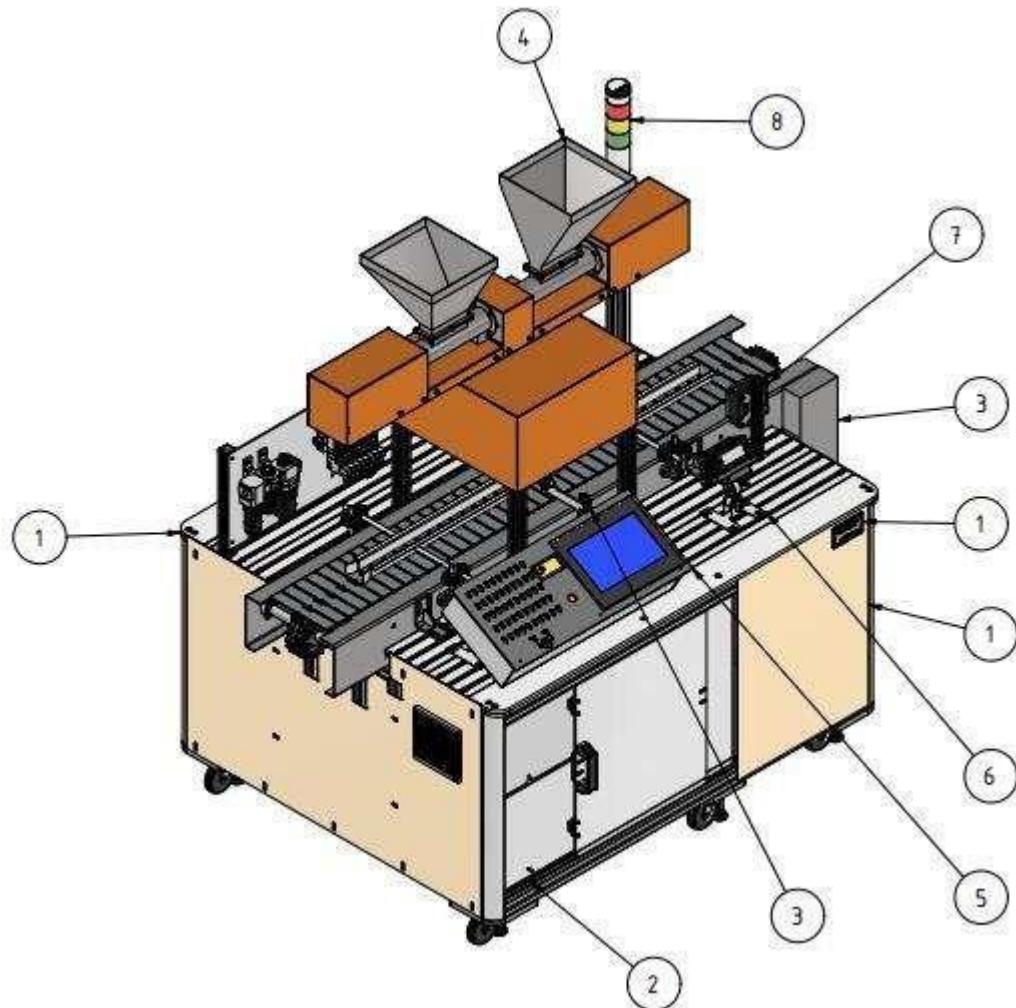


Gambar 1.1 Station 1 Modul Edukasi Petra

Keterangan :

- | | |
|-------------------------------|-------------------------|
| 1. Table station 1 | 5. Box reject container |
| 2. Magazine container | 6. Operation panel |
| 3. Pneumatic rejector & frame | 7. RFID and frame |
| 4. Box reject container | 8. Tower lamp & frame |

- Station 2

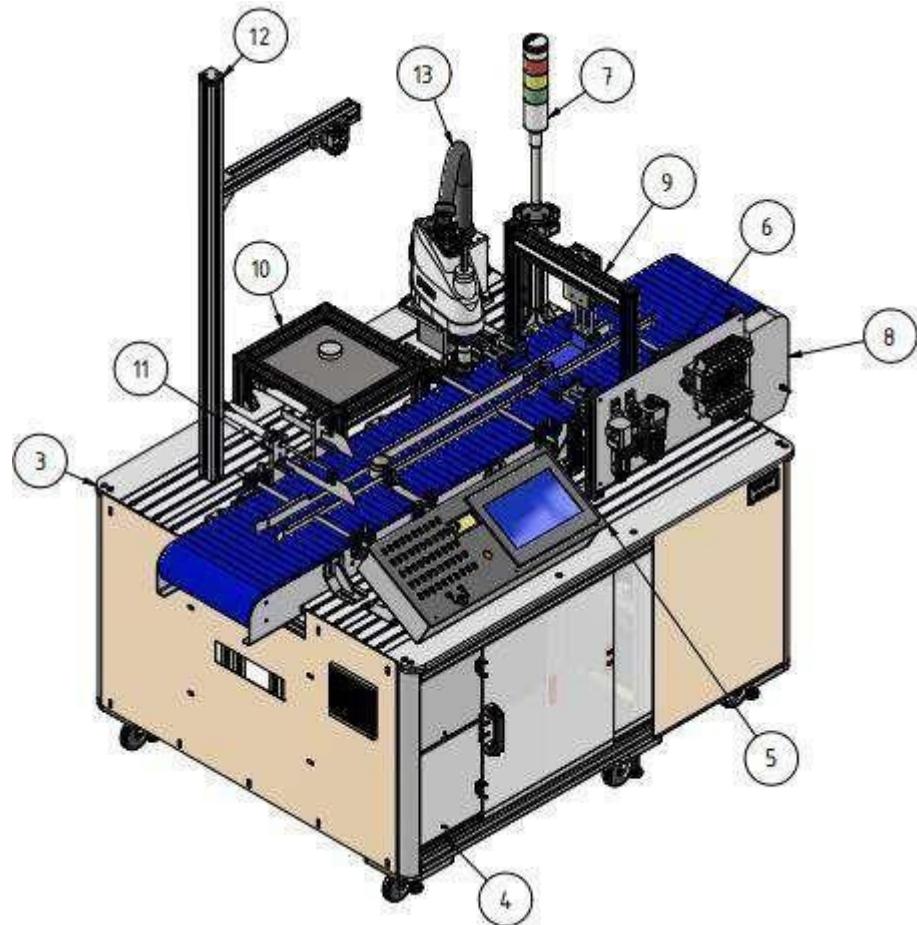


Gambar 1.2 Station 2 Modul Edukasi Petra

Keterangan :

- | | |
|-----------------------------|-----------------------|
| 1. Table station 2 | 5. Operation panel |
| 2. Sliding Door | 6. Modul Load Cell |
| 3. Table Top Chain Conveyor | 7. RFID and frame |
| 4. Filling System | 8. Tower lamp & frame |

- Station 3

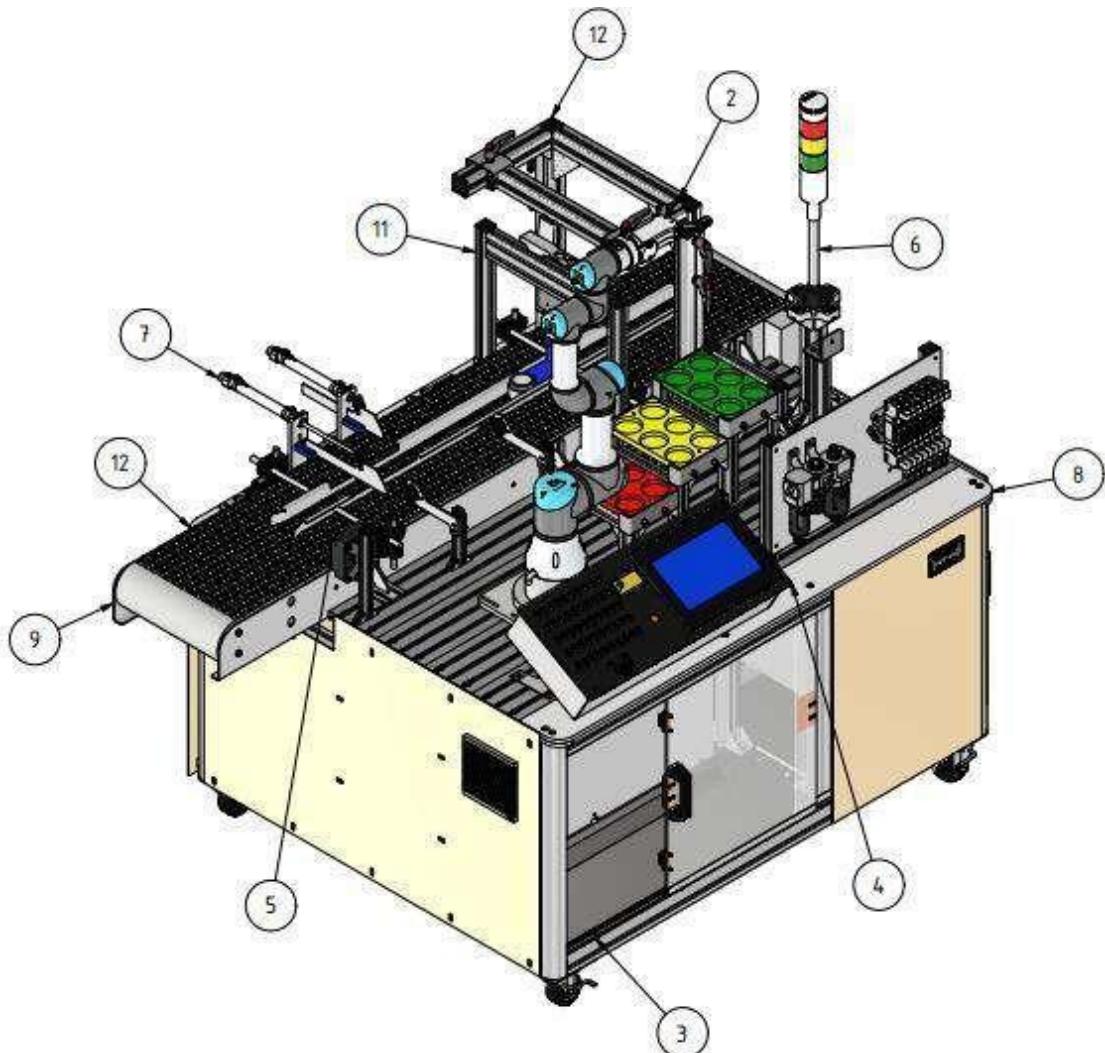


Gambar 1.3 Station 3 Modul Edukasi Petra

Keterangan :

- | | |
|----------------------------------|--------------------------------|
| 1. Kontrol Robot EPSON RC_90 | 8. Modular Conveyor Flat Top |
| 2. Kontrol Kamera EPSON CV2_Assy | 9. Stoper & Clamping Station 3 |
| 3. Table Top Chain Conveyor | 10. Box Caping |
| 4. Filling System | 11. Adjuster Stoper |
| 5. Operation Panel | 12. Kamera |
| 6. RFID And Frame | 13. Robot EPSON |
| 7. Tower Lamp & Frame | |

- Station 4



Gambar 1.4 Station 4 Modul Edukasi Petra

Keterangan :

- | | |
|-----------------------|----------------------------|
| 1. Kontrol Box UR | 7. Adjuster Stopper |
| 2. Robot UR 3 | 8. Table Station 4 |
| 3. Sliding Door | 9. Modular Conveyor |
| 4. Operation Panel | 10. Terminal Container |
| 5. RFID & Frame | 11. Stopper Station 4 |
| 6. Tower Lamp & Frame | 12. Frame Camera Station 4 |

1.3 Control Switch Mesin

Indikator Power



Selektor Power

Gambar 1.2 Assy Electrical Panel



Gambar 1.2 Nagara Switch



Gambar 1.3 Foot Switch



Push
Button

Emergency
Button

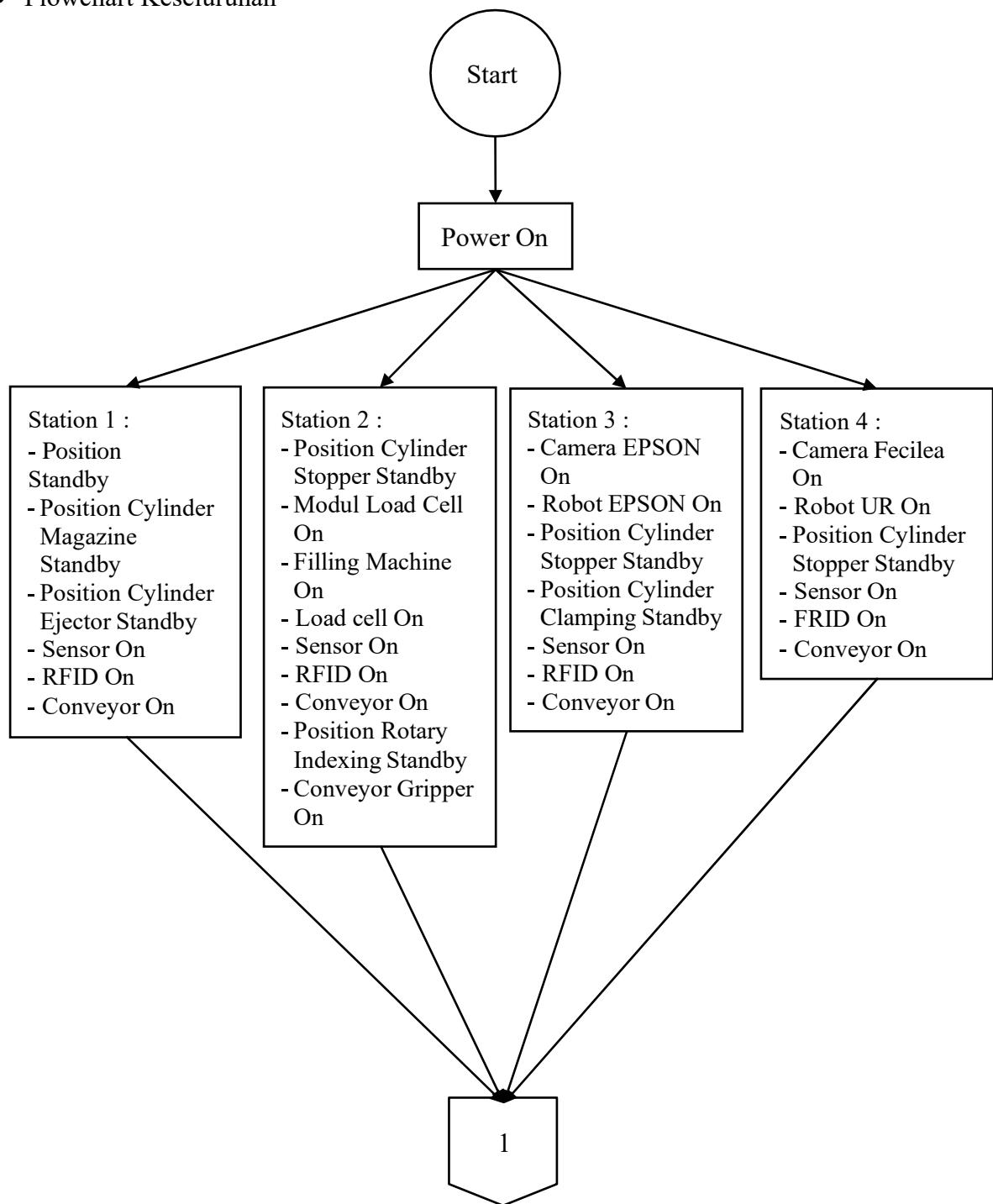
Gambar 1.4 Push Button & Emergency
Button

Keterangan :

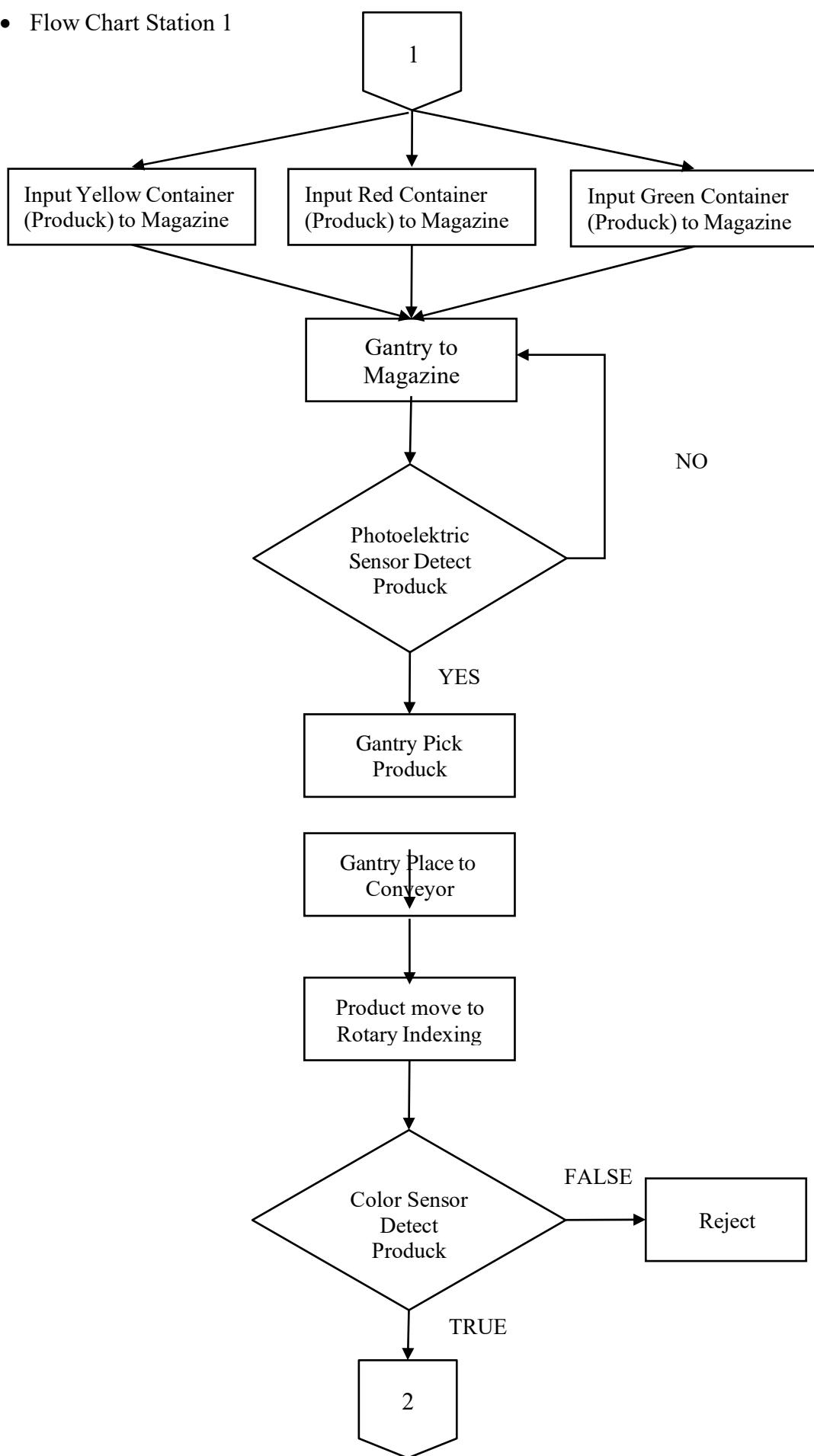
1. Selektor power (*cam-switch*) untuk memutus atau menghubungkan power utama.
2. Indikator power untuk memberi tahu kondisi panel dalam kondisi ON/OFF.
3. Push button untuk memberhentikan program robot.
4. Emergency button untuk interupsi program robot ketika terjadi keadaan abnormal.
5. Nagara switch untuk memulai system atau start program robot.
6. Footswitch untuk trigger clamp produk setelah proses selesai.

1.4 Flowchart Modul Edukasi Petra

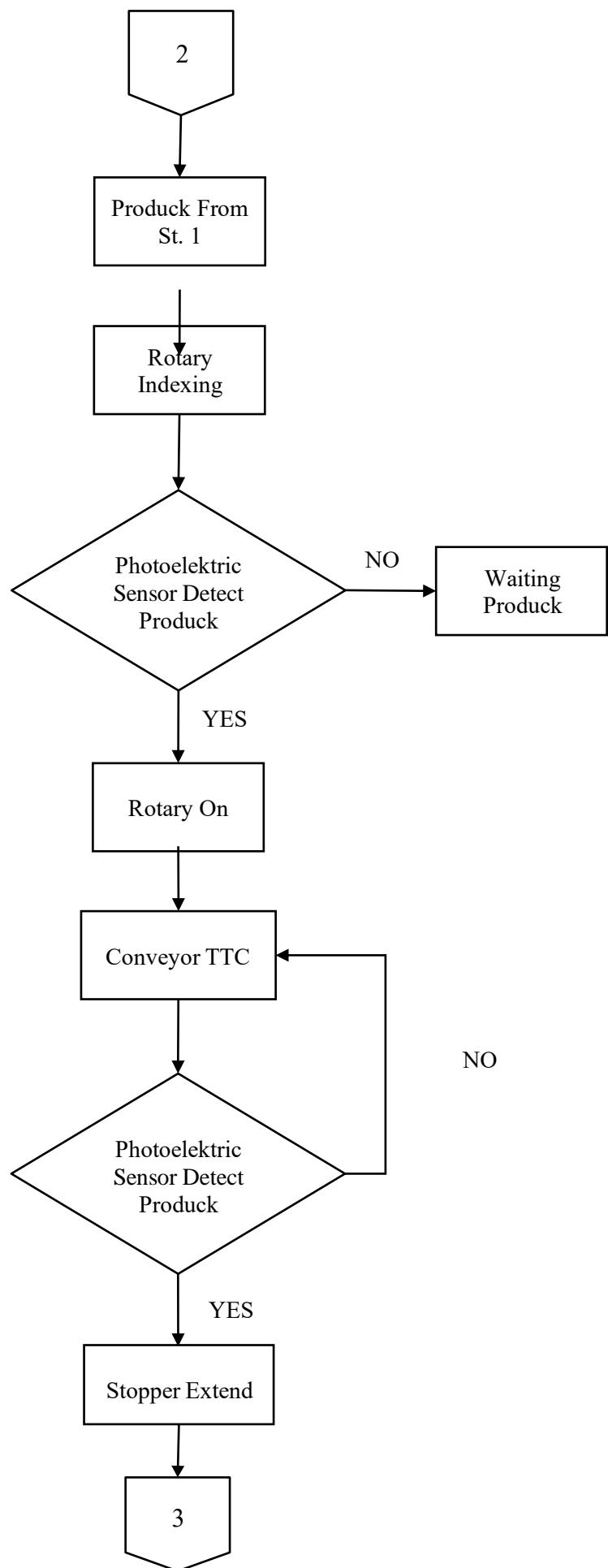
- Flowchart Keseluruhan

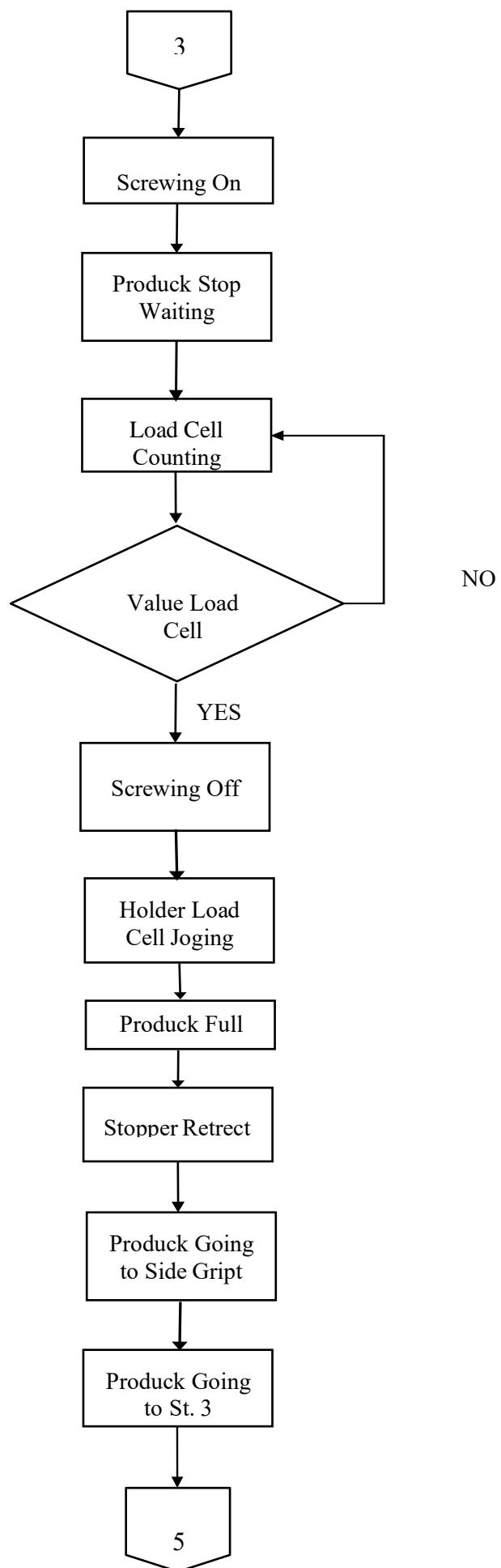


- Flow Chart Station 1

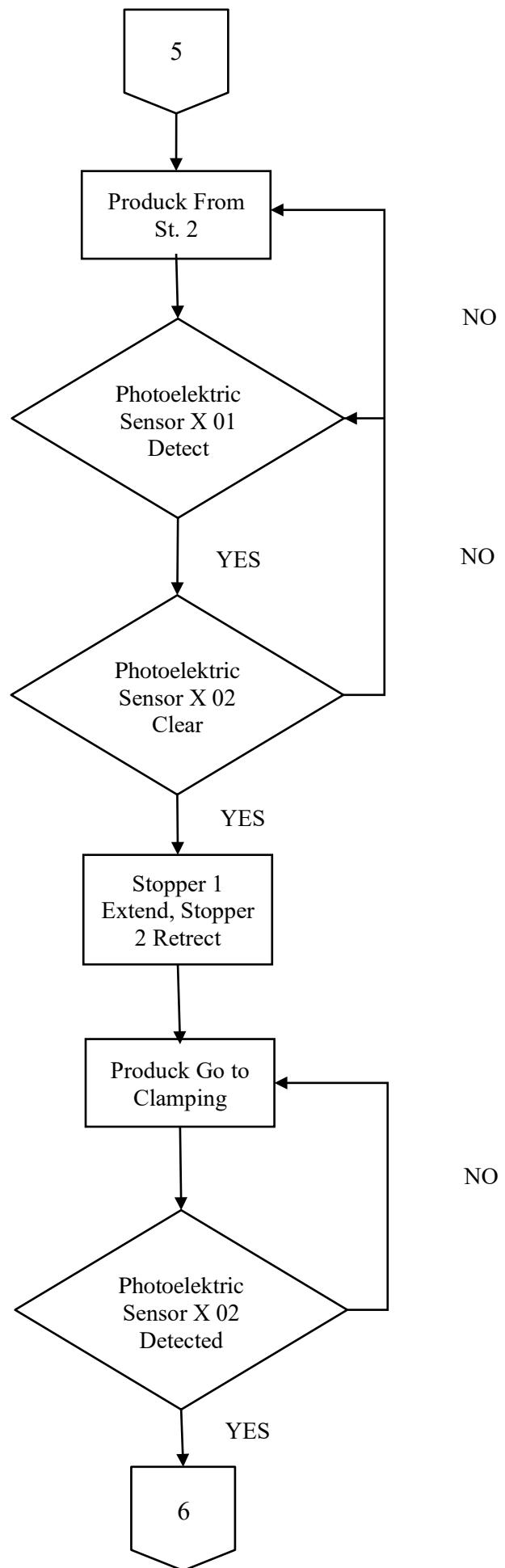


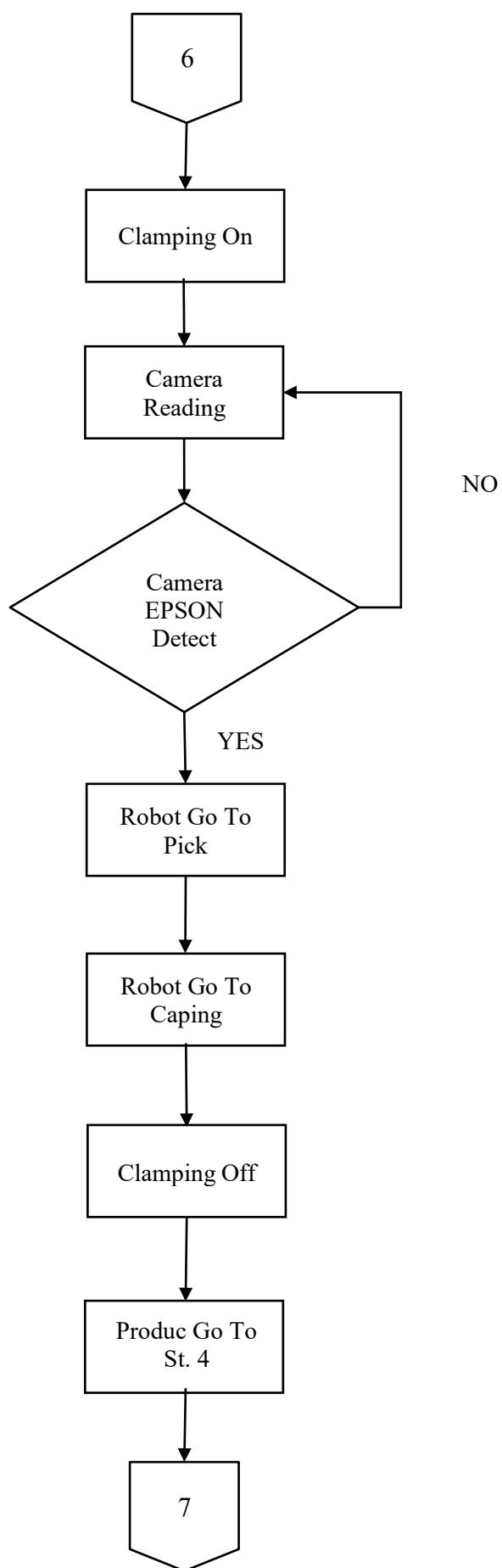
- Flow Chart Station 2



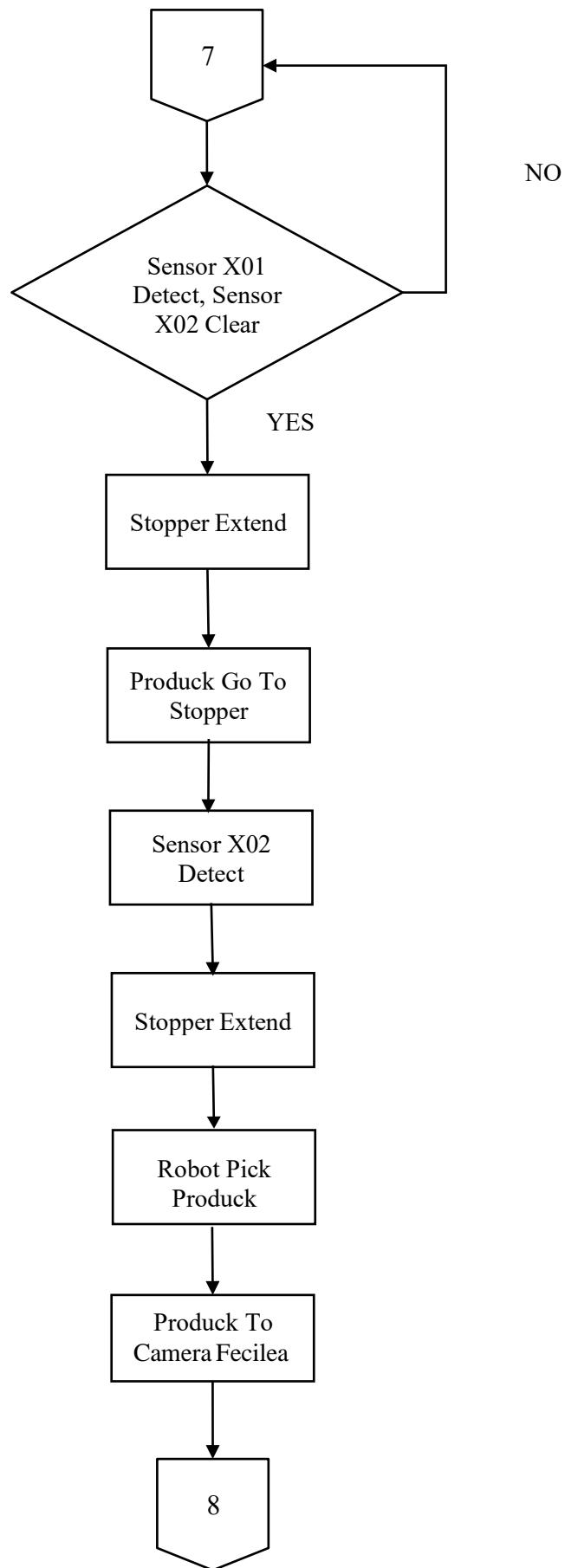


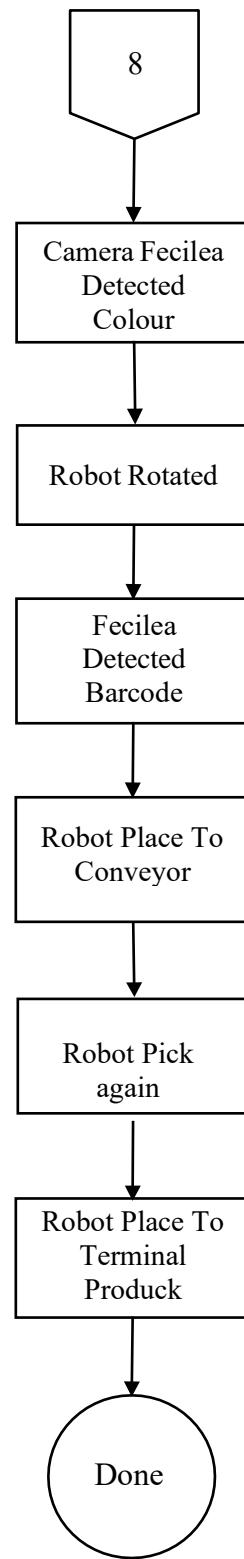
- Flow Chart Station 3





- Flow Chart Station 4





1.5 Safety Modul Edukasi Petra

1.5.1 Safety Robot

Robot UR10E merupakan *robot collaborative* yang aman bagi manusia yang berada disekitarnya. Untuk robot UR10E sendiri akan berhenti bekerja jika pergerakan dari robot tertahan baik itu jika mengenai manusia atau mengenai benda yang ada di sekitar robot UR10E.

1.5.2 Safety System

Selain *safety* dari robot UR10E, UR10E juga ditambahkan *sensor area* sebagai *safety guard* untuk memperkecil kemungkinan robot UR10E berbenturan dengan operator atau benda lainnya. Pada saat tangan operator atau benda lain memasuki daerah kerja robot dan mengenai *sensor area*, secara otomatis robot UR10E akan berhenti bekerja sampai benda yang terdeteksi oleh *sensor area* di hilangkan.

2.

OPERATIONS GUIDE

2.1 Cara Pemindahan Modul Edukasi Petra

2.1.1 Peralatan Yang Dibutuhkan

Peralatan yang dibutuhkan untuk memindahkan Modul Edukasi Petra yaitu :

1. *Wrench,*
2. *Hand pallette (Optional),*
3. *Plastic Wrap.*

2.1.2 Langkah Memindahkan Modul Edukasi Petra

Berikut langkah-langkah untuk memindahkan Modul Edukasi Petra yaitu :

1. Pastikan Smart System Laboratory dalam keadaan home position
2. Matikan robot , panel, dan regulator RFL semua station off
3. Lepaskan kabel power dari sumber daya
4. Lepaskan tubing air supply yang terhubung ke air regulator
5. Pastikan air filter regulator telah dikosongkan
6. Lindungi robot dan part penting lainnya dengan menggunakan plastic wrap
7. Putar/kendorkan brake roda keatas
8. Pindahkan perlahan Smart system laboratory dengan hati-hati
9. Apabila ingin memindahkan per station marking terlebih dahulu settingan rotary indexing dan conveyor side grip
10. Lepaskan masing-masing baut conector antar station
11. Dorong dengan hati-hati untuk memindahkan Smart System Laboratory

2.2 Persiapan Pengoperasian Mesin

2.2.1 Persiapan Mesin

Smart system laboratory adalah modul edukasi yang mencakup mechanical, elektrical, robotik dan system otomasi yang saling integrasi, sebelum dioperasikan operator harus mengetahui SOP terlebih dahulu, langkah - langkah sebelum mengoperasikan mesin sebagai berikut :

1. Pastikan supply angin untuk pneumatik 6-7 bar
2. Pastikan supply listrik Per station 220 V minimal 20 Ampere
3. Persiapkan Container
4. Persiapkan bijih plastik
5. Power ON
 - Pastikan Robot terkoneksi
 - Pastikan semua MCB pada panel utama ON
 - Pastikan pneumatik position standby
 - Pastikan sensor, kamera, lampu dan semua komponen elektrik keadaan ON
 - Pastikan conveyor 1-4, rotary dan side grip berfungsi dengan baik
6. Pastikan Conv 1-4 kondisi ON

7. Masukan settingn untuk warna container yang akan dipilih gantry pada station 1
8. Tekan tombol emergency jika terkait.

2.3 Pengoperasian Mesin

2.3.1 Proses Bekerja Mesin

- Station 1

Gantri akan mengambil container sesuai warna yang sudah di tentukan, gantry akan membawa kontainer ke conveyor, setelah bergerak dengan menggunakan conveyor akan di seleksi jika warna tidak sesuai, jika sesuai container bisa lanjut menuju rotary indexing.

- Station 2

Setelah container di holder rotary indexing maka sensor detect dan rotary indexing akan sehingga rotary induction “ work ” dan container menuju Station 2, Container berhenti di stopper dan mesin filling bekerja untuk menuangkan bijih plastik, setelah mencapai berat yang ditentukan maka screwing st. 2 akan berhenti, dan rotating holder work (menuang), maka terjadilah container terisi produk, setelah container terisi produk maka container lanjut ke st. 3 melewati side grip conveyor.

- Station 3

Container kearah clamping untuk proses caping, setelah container di clamping robot EPSON akan caping container sesuai warna container karena sudah di deteksi kamera . Setelah dicaping clamping dan stoper retract dan container lanjut ke St. 4.

- Station 4

Di Station 4 Container di stop oleh Stopper dan robot UR Pick container, Container diambil dan diarahkan ke kamera untuk pembacaan barcode, kemudian diletakan kembali ke conveyor, diambil kembali untuk di letakan ke terminal container sesuai warna station.

2.3.2 Kondisi Ketika Proses

Berikut adalah kondisi - kondisi yang harus diperhatikan ketika mesin beroprasi, diantaranya sebagai berikut :

1. Pilot lamp hijau bila mesin sedang berjalan auto dan tidak ada alarm
2. Warna merah dan bunyi alarm ketika ada yang abnormal/ketika dipencet emergency stop
3. Lampu Station 3 ON
4. Robot ON
5. Conveyor ON

3.

MAINTENANCE GUIDE

3.1 Maintenance Guide

3.1.1 Inspection

Tabel 3.1 *Inspection*

INSPECTION			
No	Activities	Standard	Frequency
1	Periksa keseluruhan tubing angin	1. Tidak ada kebocoran pada sambungan	Weekly
2	Periksa keseluruhan Kabel-kabel	1. Tidak rusak(gepeng,terkelupas,putus)	Weekly
3	Periksa Air Filter Regulator	1. Tidak ada kebocoran pada sambungan	Daily
		2. Pressure Gauge Berfungsi	
		3. Pastikan tekanan angin cukup (0,5-0,6 MPa)	
4	Periksa Inline Filter	1. Bersih Tidak ada sumbatan kotoran	Daily
		2. Tidak ada kebocoran pada sambungan	
5	Periksa Vacuum Pressure Switch	1. Pressure Indikator berfungsi	Daily
		2. tidak ada kebocoran pada sambungan	
6	Periksa Subassy Gripper & Vacuum Suction	1. Gerakan gripper tidak macet/seret	Daily
		2. Finger gripper rubber dalam kondisi baik (tidak sobek)	
		3. Vacuum suction cap dalam kondisi baik (tidak sobek)	
		4. Gripper dan Vacuum suction bersih dari kotoran dan debu	
7	Periksa Kondisi Robot	1. Bersih	Weekly
		2. Kabel-kabel terpasang erat	
		2. Gerakan Robot Normal	
8	Periksa Kondisi Control Box Robot	1. Bersih dan kering	Weekly
		2. Kabel-kabel terpasang erat	
		3. Filter box bersih	

3.1.2 Preventive Maintenance

Tabel 3.2 Preventive Maintenance

PREVENTIVE MAINTENANCE			
No	Activities	Standard	Frequency
1	Checking & Cleaning Pneumatic Vacuum System	WI Preventive Maintenance : Cleaning Vacum Ejector	2 Weeks
2	Cecking & Cleaning Gantry System	WI Preventive Maintenance : Cleaning Screwing Gantry	2 Weeks
3	Checking Sensor	WI Preventive Maintenance : Cleaning Sensor	1 Month
4	Checking Filling Machine	WI Preventive Maintenance : Cleaning and Check Screwing and Loadcell	1 Month
5	Checking Side Grip Conveyor	WI Preventive Maintenance : Cleaning and Check Side Grip Conveyor	
6	Checking n Cleaning Robot EPSON		1 Month
7	Check n Cleaning Robot UR	UR's Website : https://tinyurl.com/2p83tneb	1 Month
8	Checking Motor Conveyor	WI Preventive Maintenance : Cleaning and Check Temperatur, Vibration, and ampere motor	

4.

WORK INSTRUCTIONS

4.1 Work Instruction Station 1 (*Feeding Station*)

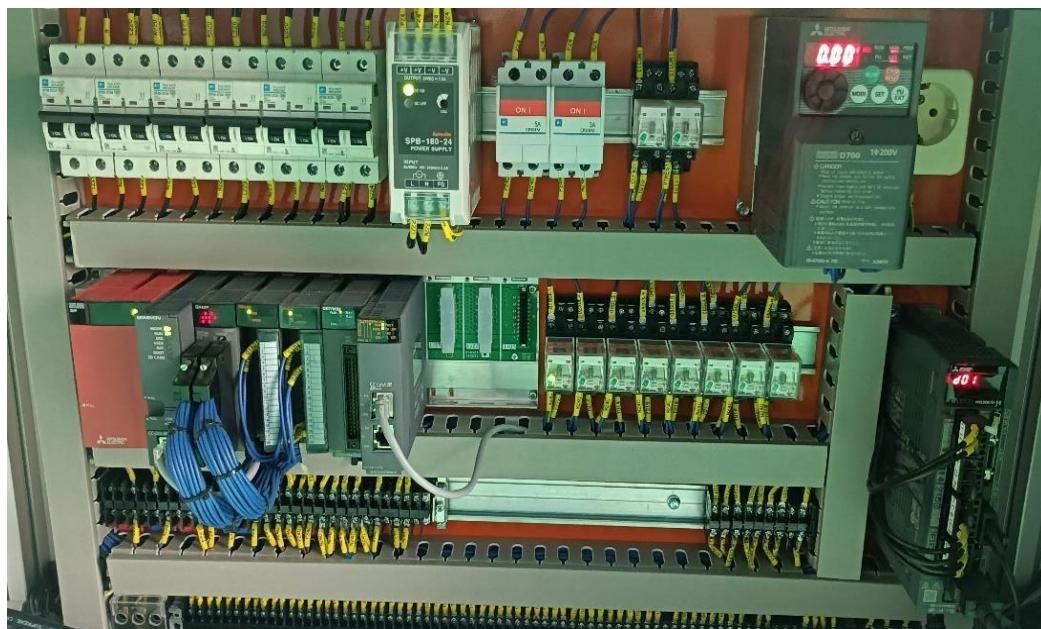
4.1.1 Preparation Pengoperasian *Feeding Station*

- Pastikan selang angin masuk dan regular angin sudah terisi minimal 0,4 MPa



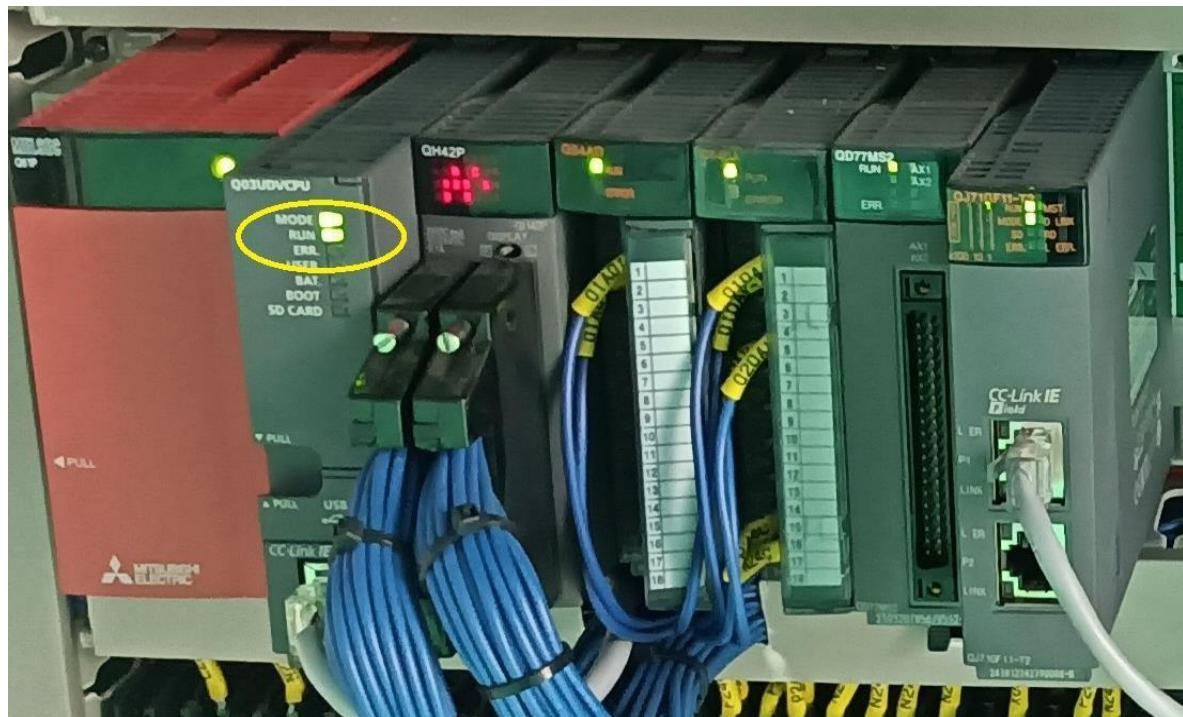
Gambar 1. Kondisi angin tidak terhubung

- Pastikan semua Power Listrik sudah terkoneksi dengan baik, dan semua MCB pada control panel dalam keadaan ON, dan semua device telah menyala



Gambar 2. Kondisi normal control panel setalah di power up

- c. Cek Kondisi CPU dari PLC apakah ada kondisi error, jika ada error indicator pada RUN akan mati dan indicator error akan merah blinking

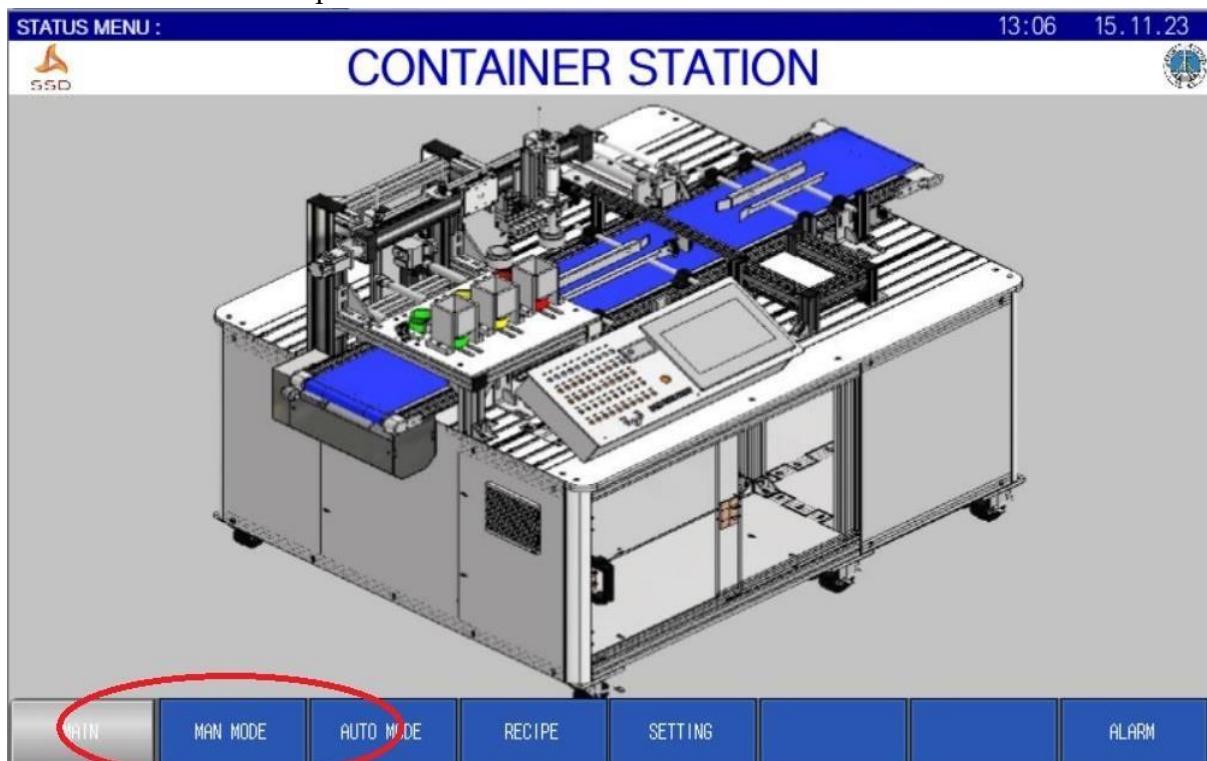


Gambar 3. Kondisi normal PLC

- d. Setelah semua kondisi sebelum ini sudah terpenuhi maka mesin ready untuk running manual, auto local, dan auto mes

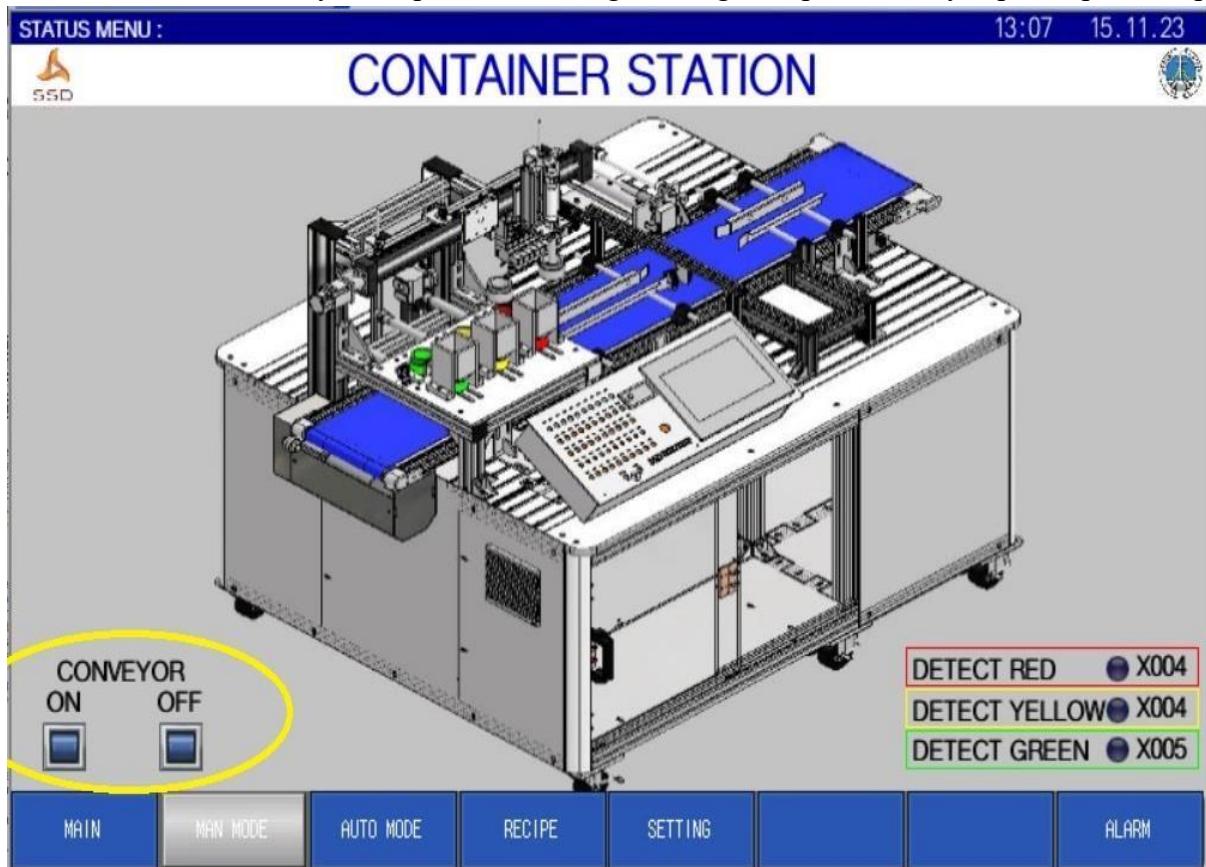
4.1.2 Operation Manual Feeding Station

- a. Klik menu man mode pada HMI



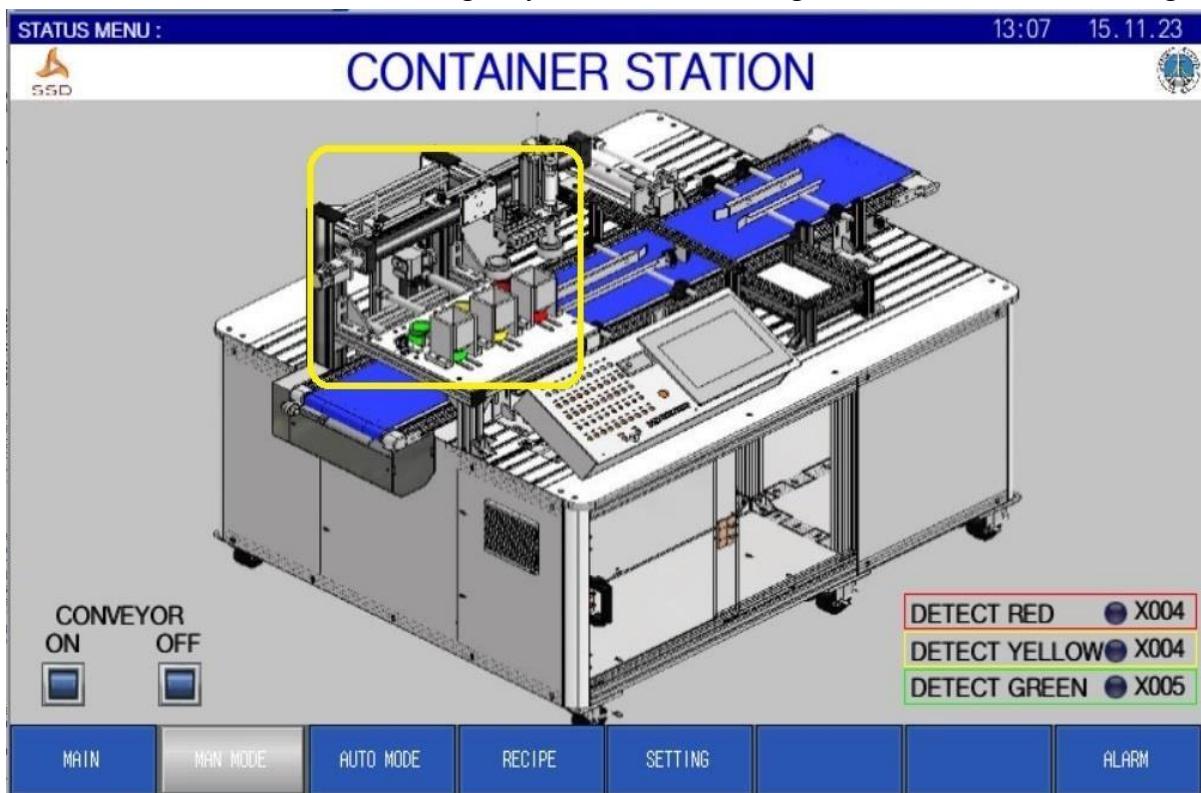
Gambar 4. Manual Mode pada menu HMI

- b. Kemudian conveyor bisa di run dengan menekan button conveyor on atau bisa di stop dengan menekan button conveyor off pada HMI, dengan mengatur speed conveyor pada operation panel



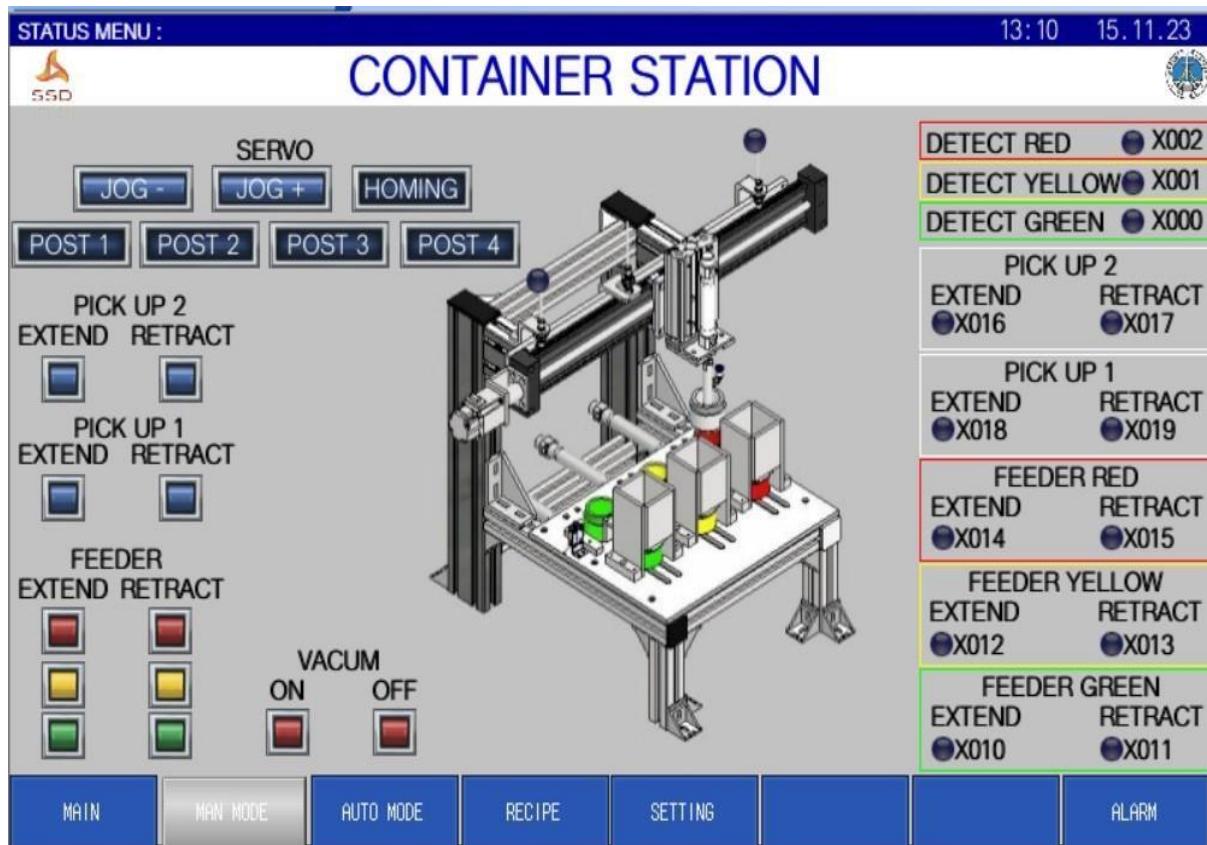
Gambar 5. Operasi conveyor secara manual

- c. Untuk control manual dari servo gantry bisa dilakukan dengan menekan area dari servo gantry



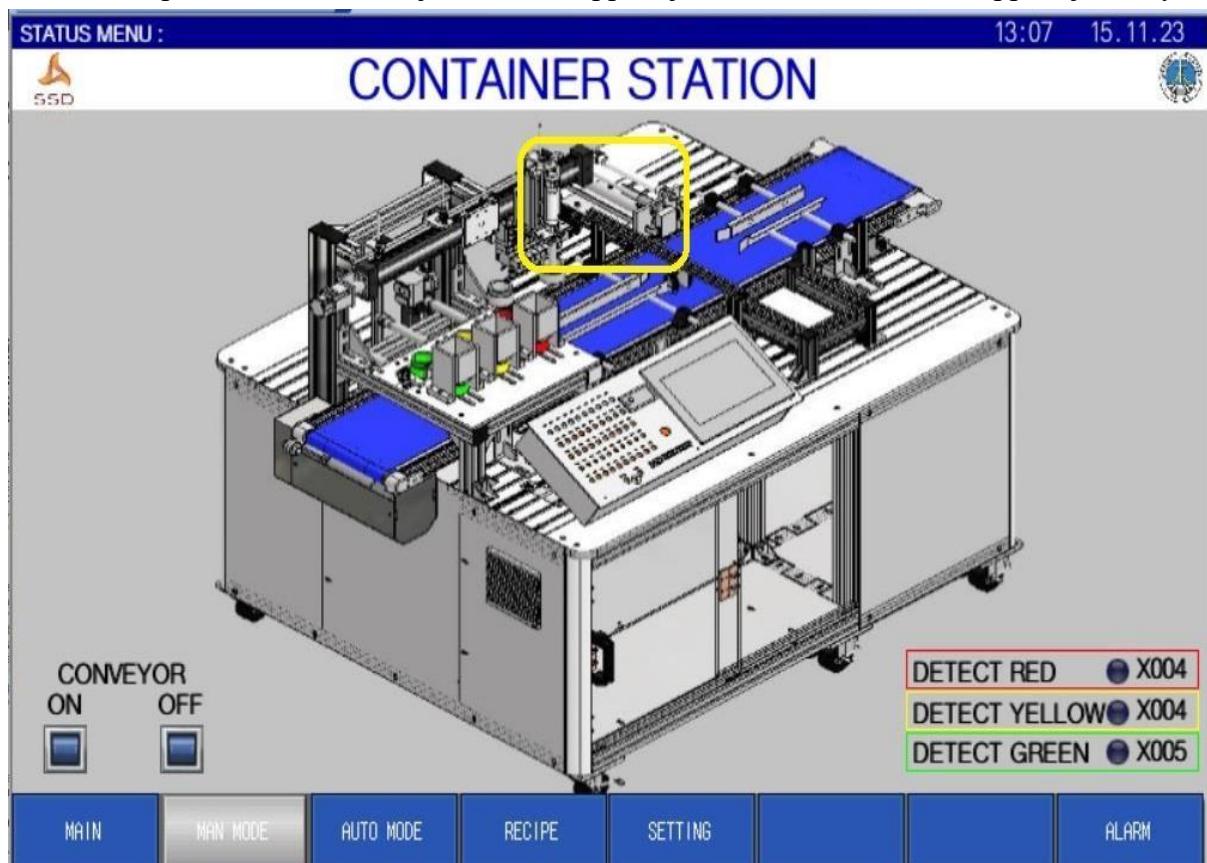
Gambar 6. Area operasi manual servo gantry

Setelah ditekan akan pidah ke screen control manual gantry



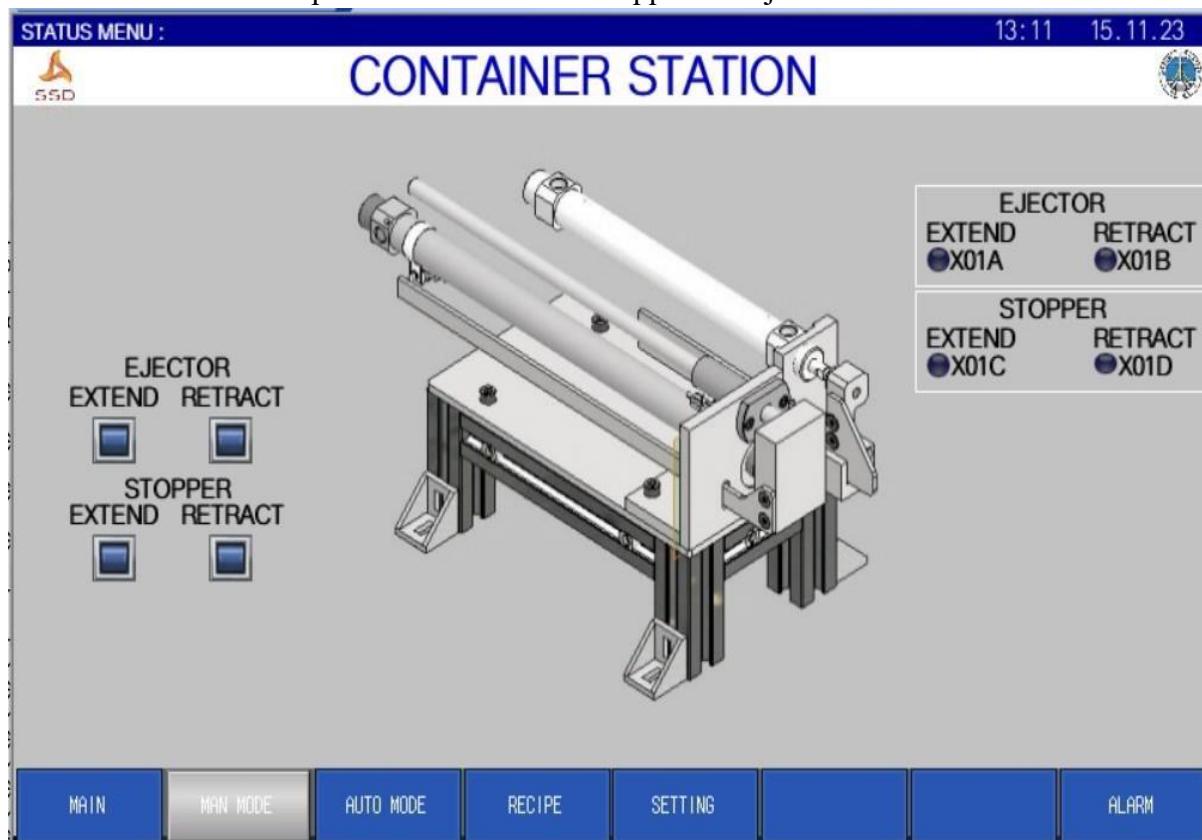
Gambar 5. Manual operasi gantry

d. Untuk operasi manual dari ejector dan stopper ejectornya tekan area dari stopper ejectornya



Gambar 6. Area operasi manual ejector

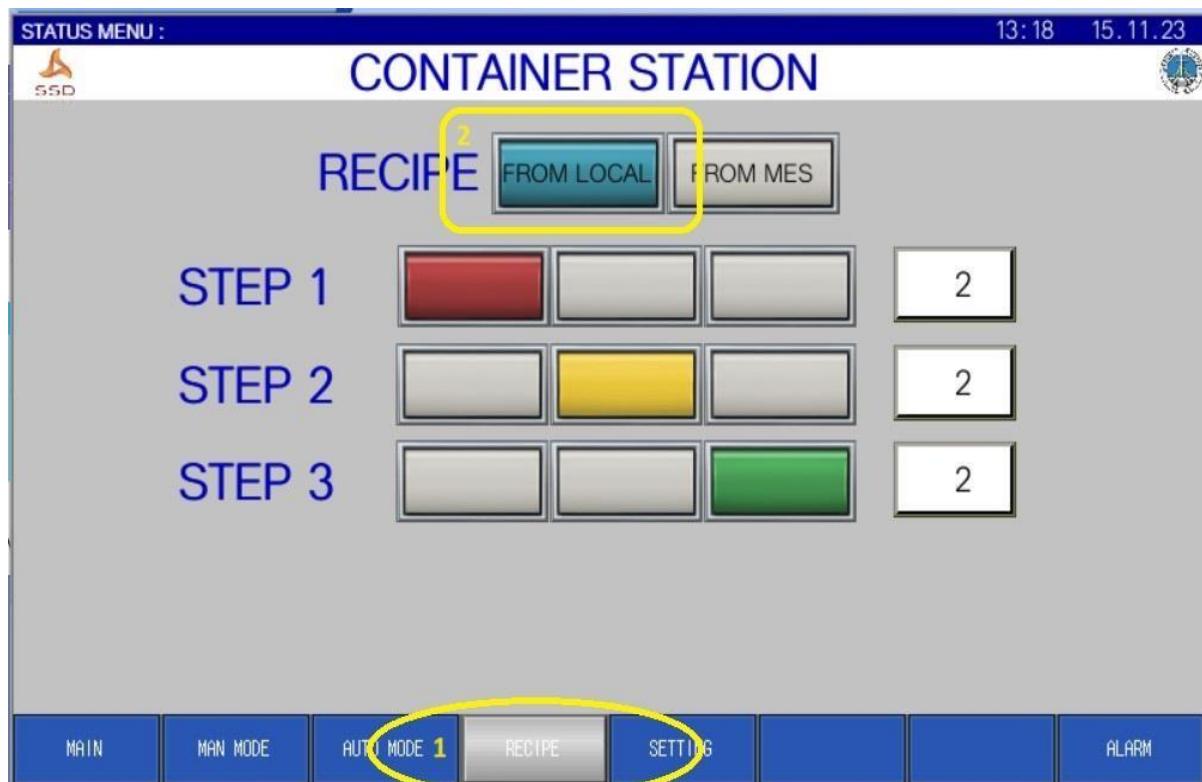
Setelah ditekan akan pindah screen ke area stopper dan ejector



Gambar 7. Manual operasi ejector dan stopper

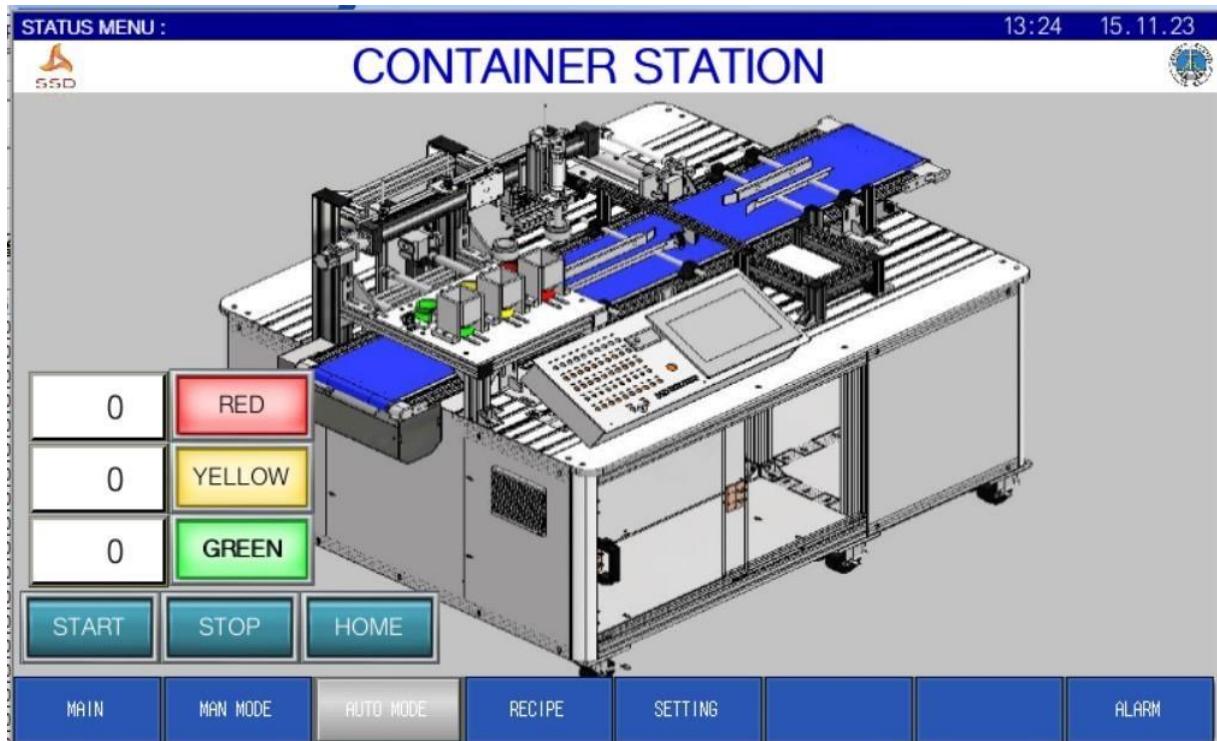
4.1.3 Operation Auto Local Feeding Station

- Setting recipe pada menu recipe, menu ini untuk set jumlah dan warna apa yang akan diproduksi



Gambar 8. Recipe menu pada HMI untuk setting jumlah dan warna yang akan diproduksi

- b. Setelah itu pindah pada menu auto mode, dan isi botol sesuai warna pada masingmasing magazine.

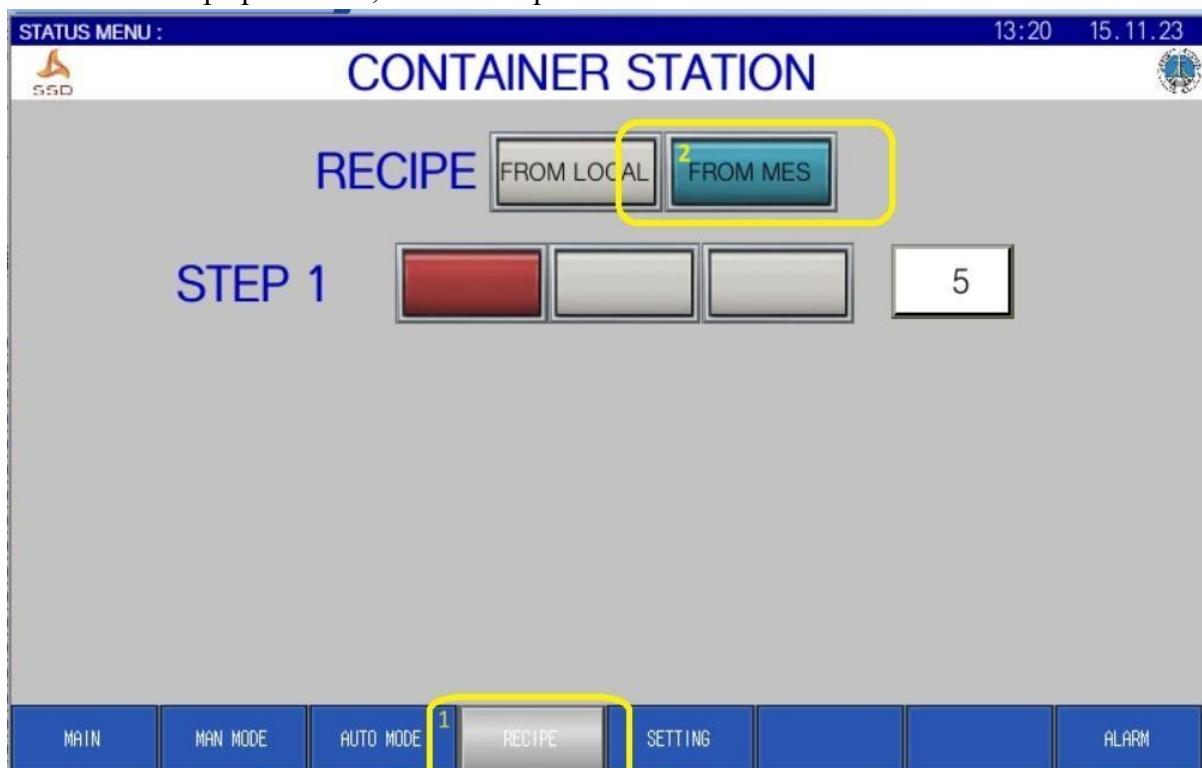


Gambar 9. Auto start HMI

Sebelum menekan start pada menu HMI, harus menekan home terlebih dahulu, kemudian menekan start. Dan stop untuk menghentikan proses mesin

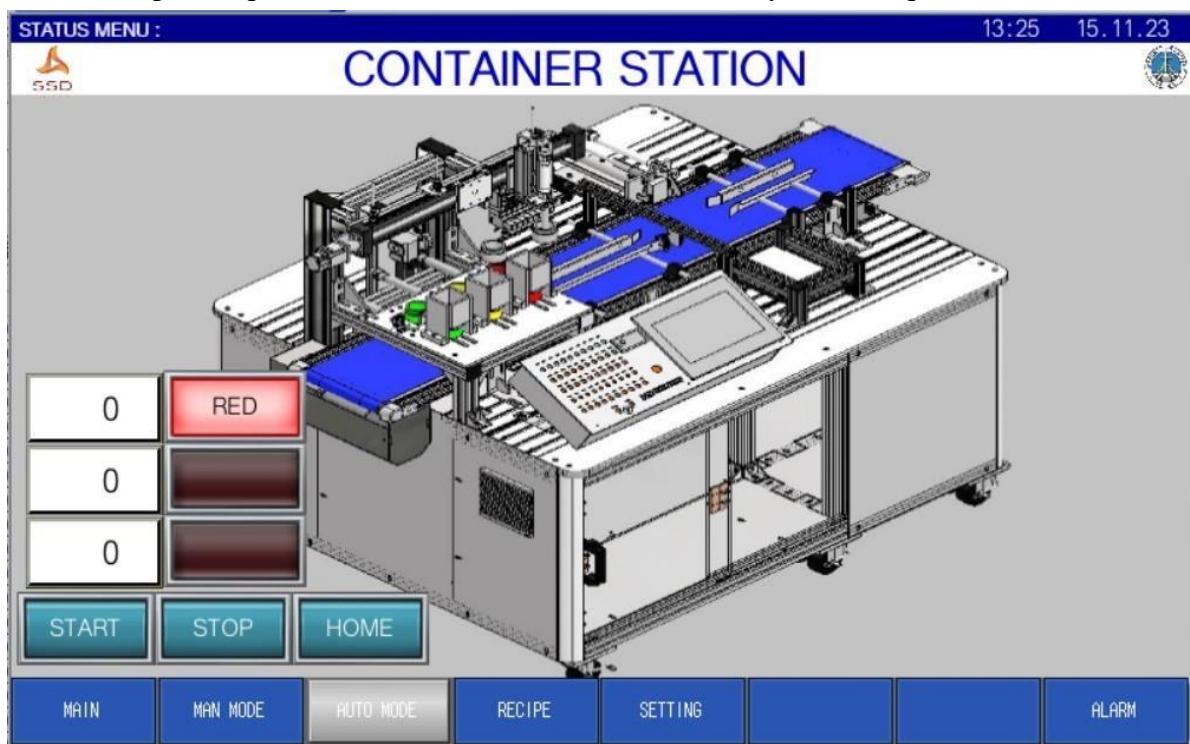
4.1.4 Operation Auto MES Feeding Station

- a. Pilih menu recipe pada HMI, dan set recipe dari MES



Gambar 10. Recipe dari mes

- b. Kemudian pindah pada menu auto mode, untuk auto start nya akan di proses oleh mes



Gambar 11. Auto start dari mes

4.2 Work Instruction Station 2 (*Filling Station*)

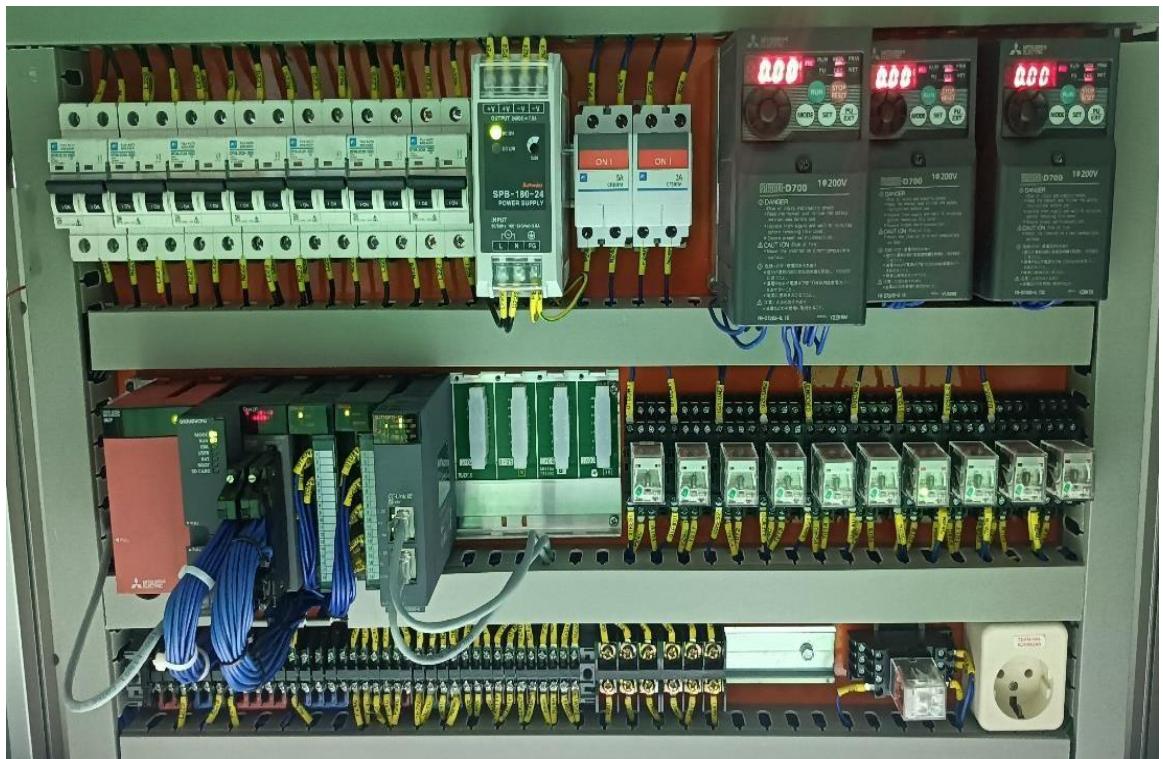
4.2.1 Preparation Pengoperasian *Filling Station*

- a. Pastikan selang angin masuk dan regular angin sudah terisi minimal 0,4 MPa



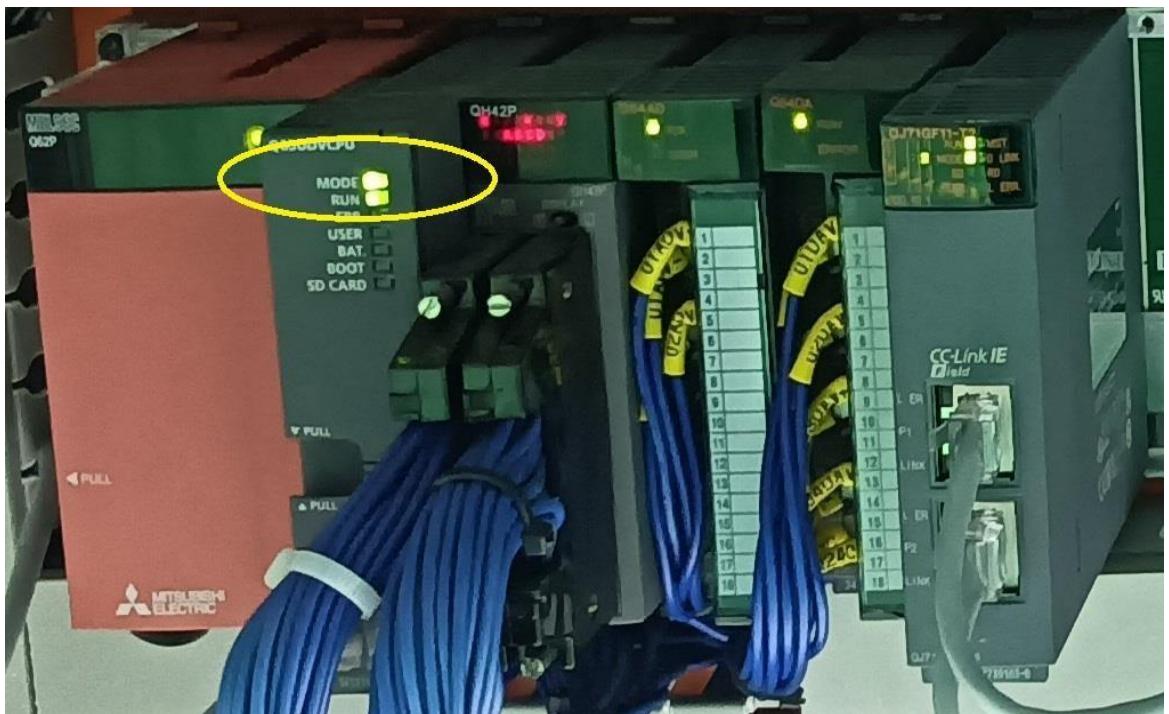
Gambar 1. Kondisi angin tidak terhubung

- b. Pastikan semua Power Listrik sudah terkoneksi dengan baik, dan semua MCB pada control panel dalam keadaan ON, dan semua device telah menyala



Gambar 2. Kondisi normal control panel setelah di power up

- c. Cek Kondisi CPU dari PLC apakah ada kondisi error, jika ada error indicator pada RUN akan mati dan indicator error akan merah blinking

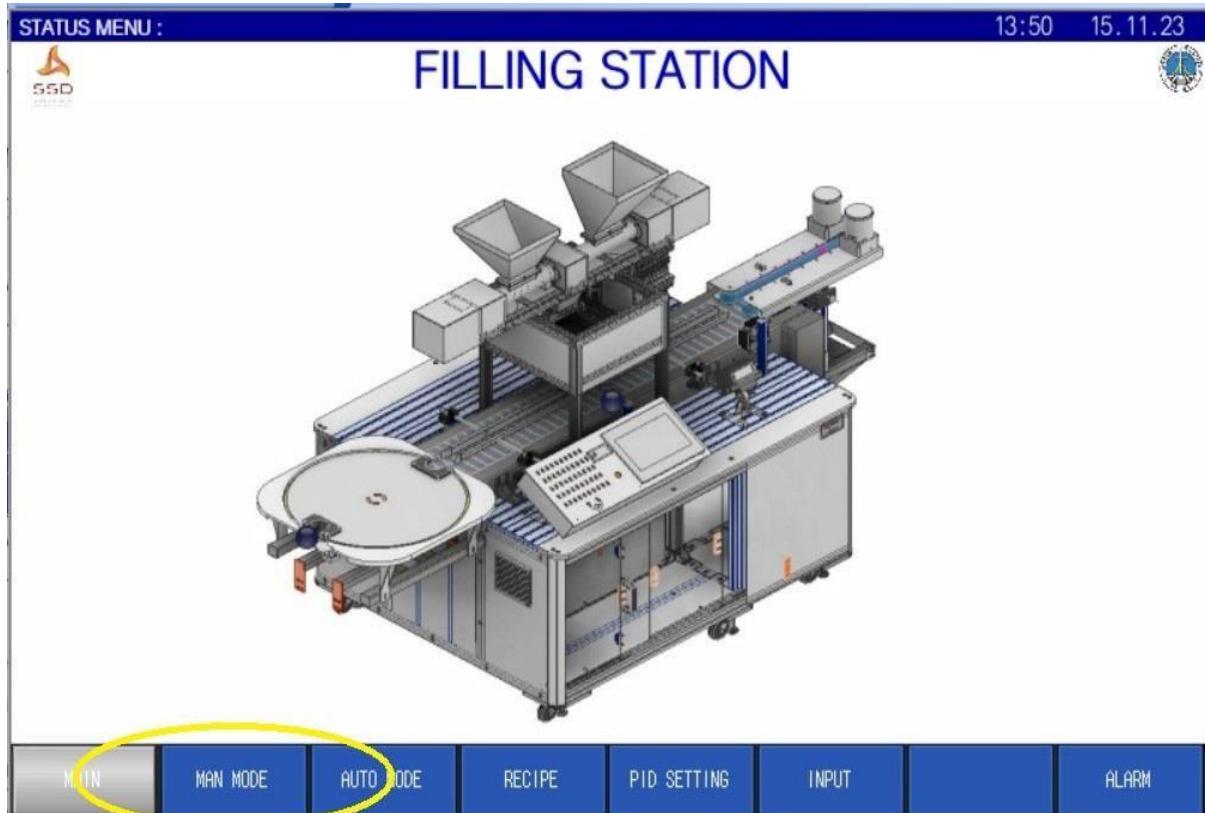


Gambar 3. Kondisi normal PLC

- d. Setelah semua kondisi sebelum ini sudah terpenuhi maka mesin ready untuk running manual, auto local, dan auto mes

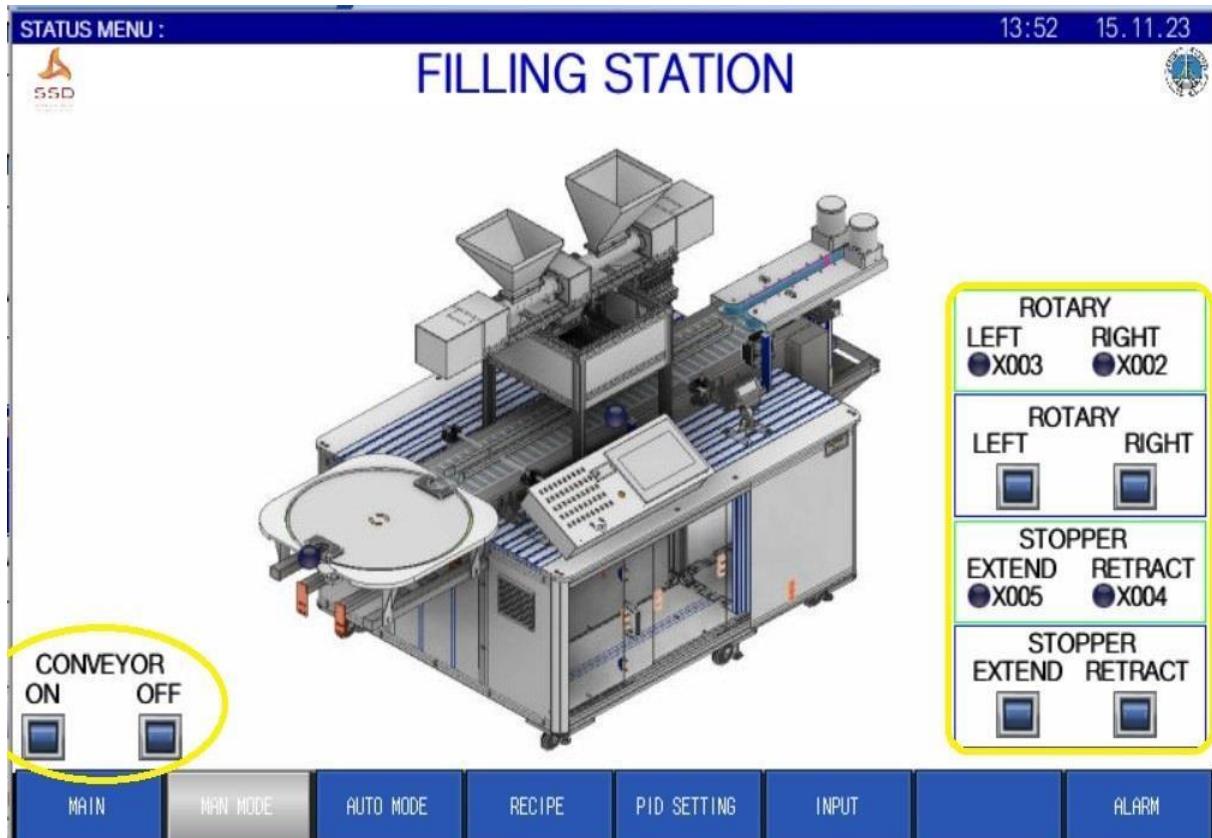
4.2.2 Operation Manual *Filling Station*

- Klik menu man mode pada HMI



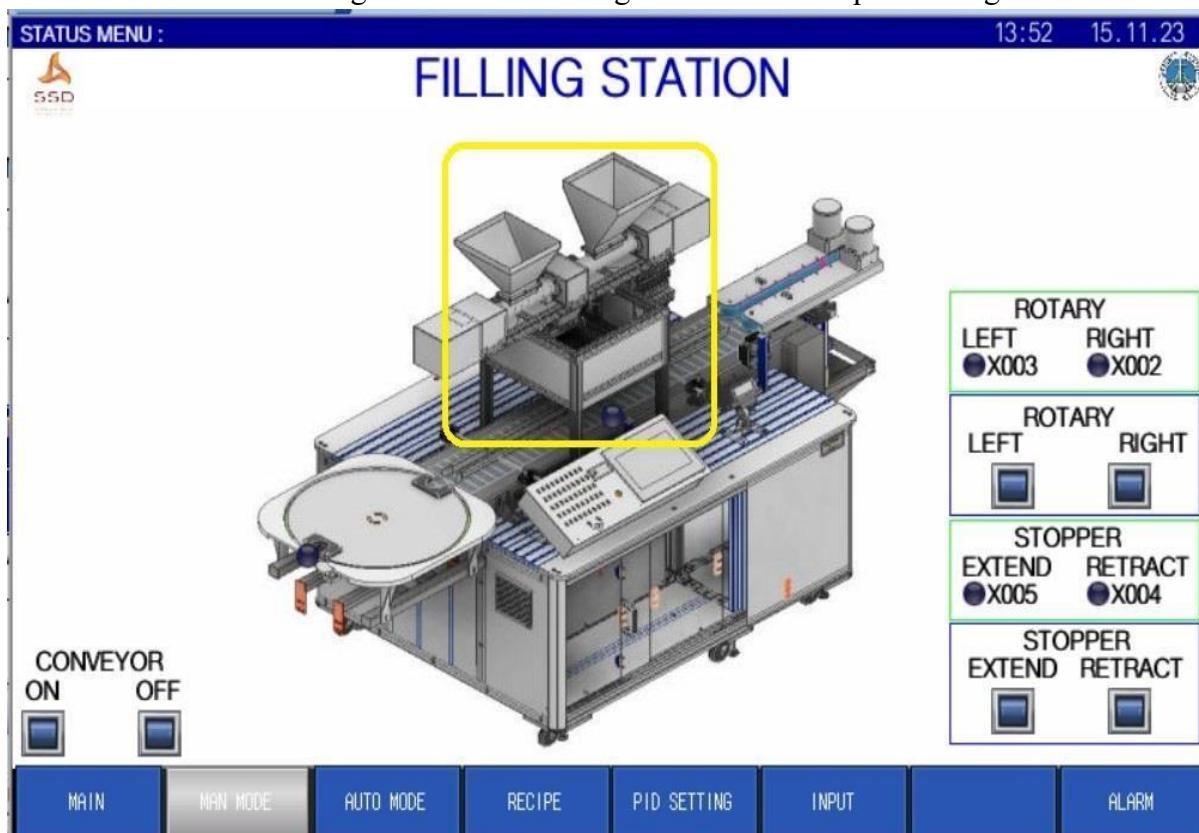
Gambar 4. Manual Mode pada menu HMI

- Kemudian conveyor bisa di run dengan menekan button conveyor on atau bisa di stop dengan menekan button conveyor off pada HMI, dengan mengatur speed conveyor pada operation panel



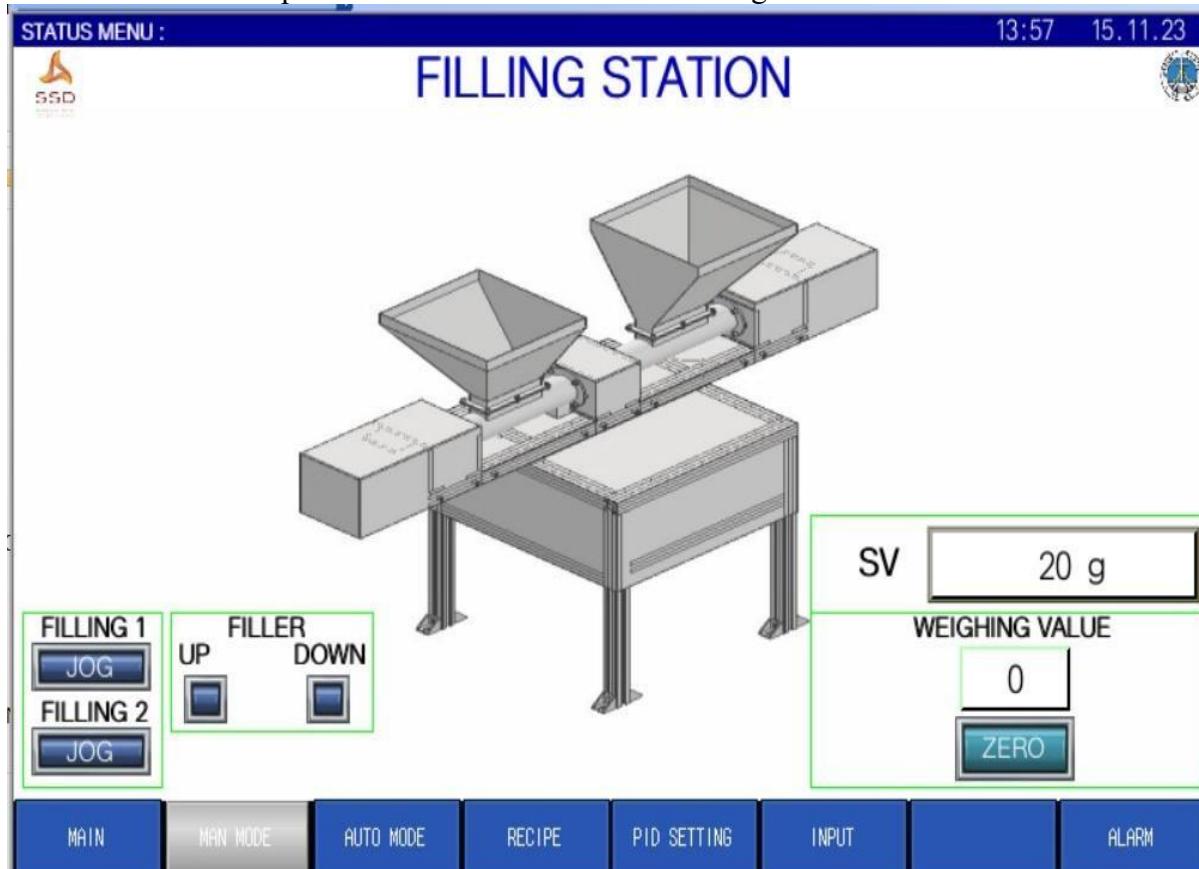
Gambar 5. Operasi conveyor secara manual

- c. Untuk control manual filling bisa dilakukan dengan menekan area pada filling



Gambar 6. Area operasi manual filling

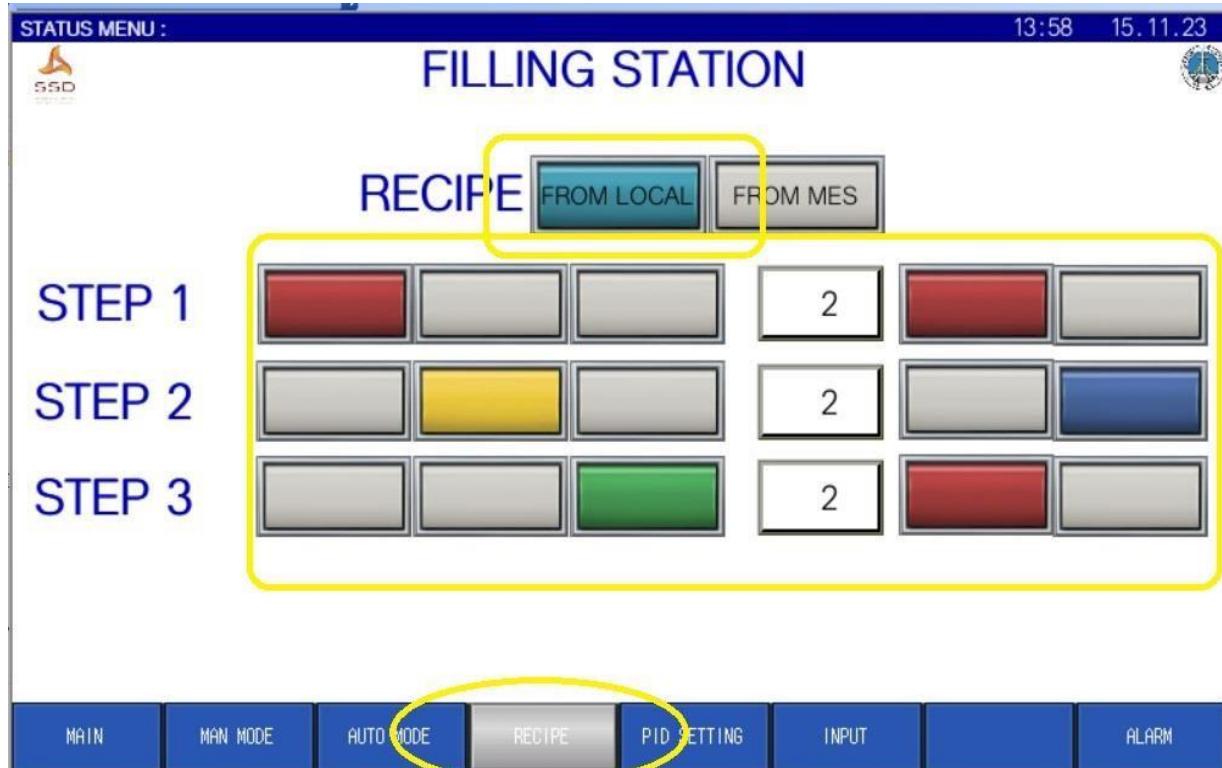
Setelah ditekan akan pidah ke screen control manual filling



Gambar 5. Manual operasi manual filling

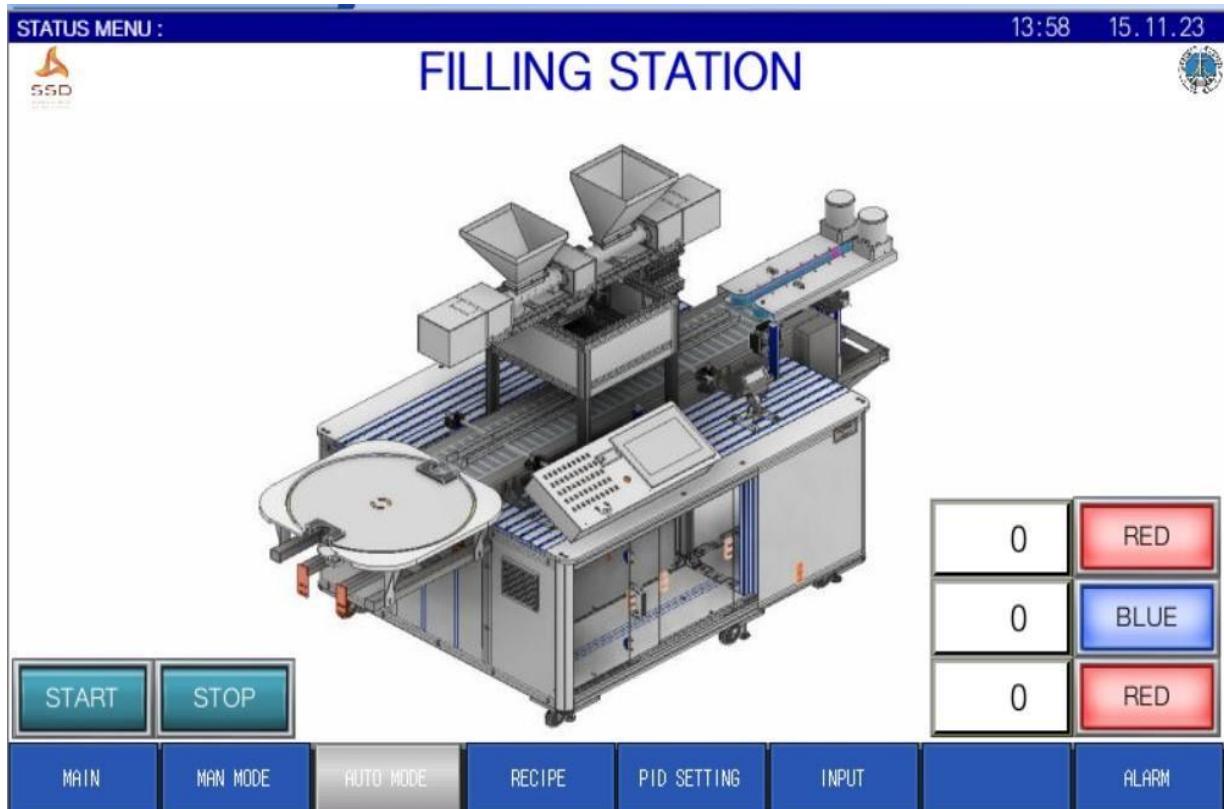
4.2.3 Operation Auto Local Filling Station

- a. Setting recipe pada menu recipe, menu ini untuk set jumlah dan warna apa yang akan diproduksi



Gambar 8. Recipe menu pada HMI untuk setting jumlah dan warna yang akan diproduksi

- b. Setelah itu pindah pada menu auto mode, dan persiapan material seperti biji plastic yang berwarna merah pada sisi kanan dan biru pada sisi kiri.

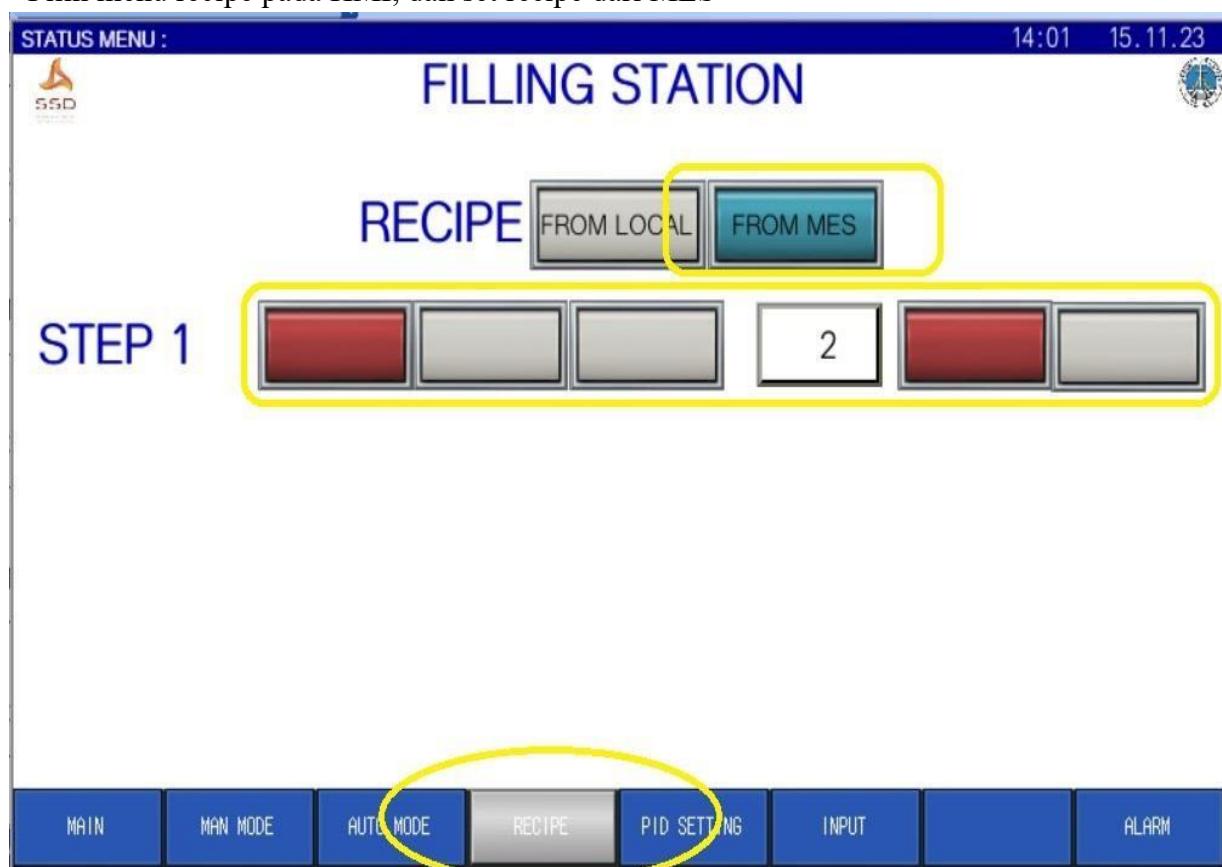


Gambar 9. Auto start HMI

Sebelum menekan start pada menu HMI, pastikan posisi dari weighing menghadap keatas agar proses mesin berjalan dengan semestinya.

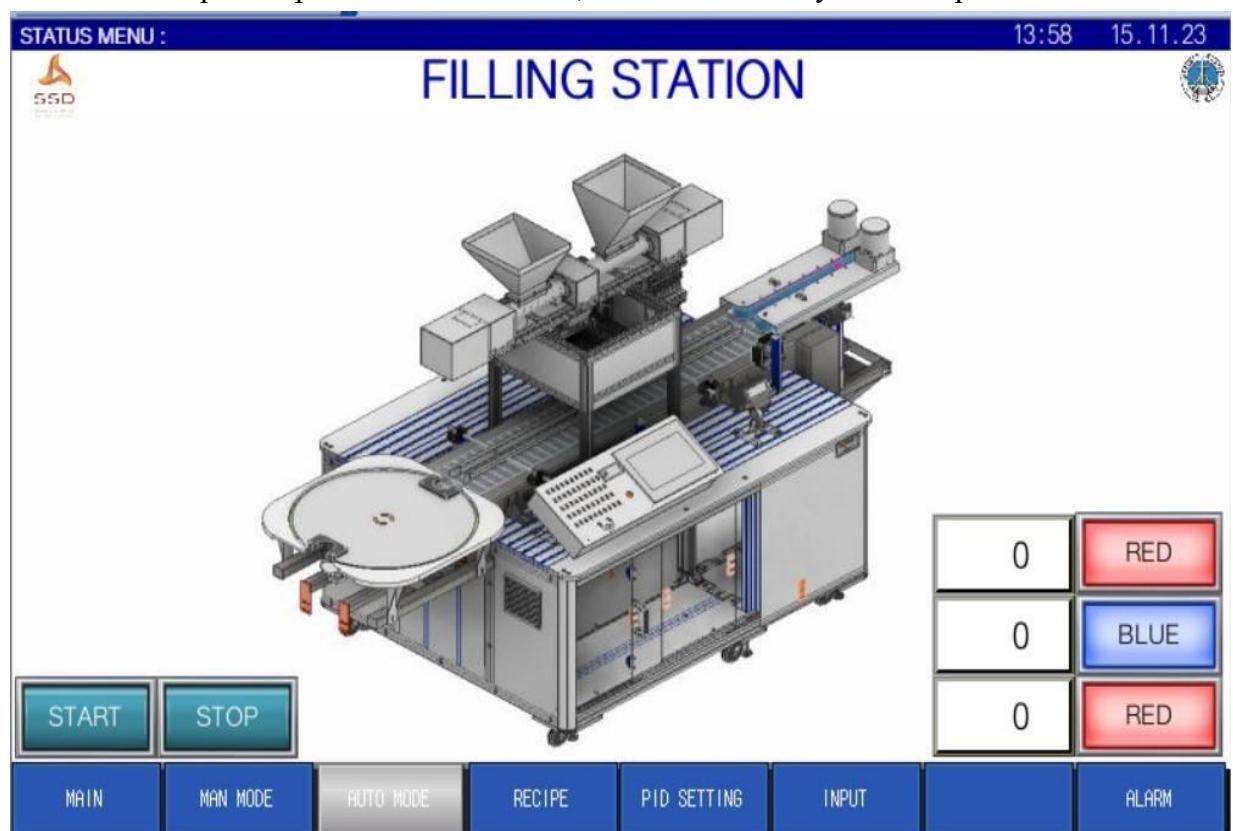
4.2.4 Operation Auto MES Filling Station

- Pilih menu recipe pada HMI, dan set recipe dari MES



Gambar 10. Recipe dari mes

- Kemudian pindah pada menu auto mode, untuk auto start nya akan di proses oleh mes



Gambar 11. Auto start dari mes

4.3 Work Instruction Station 3 (*Capping Station*)

4.3.1 Preparation Pengoperasian *Capping Station*

- Pastikan selang angin masuk dan regular angin sudah terisi minimal 0,4 MPa



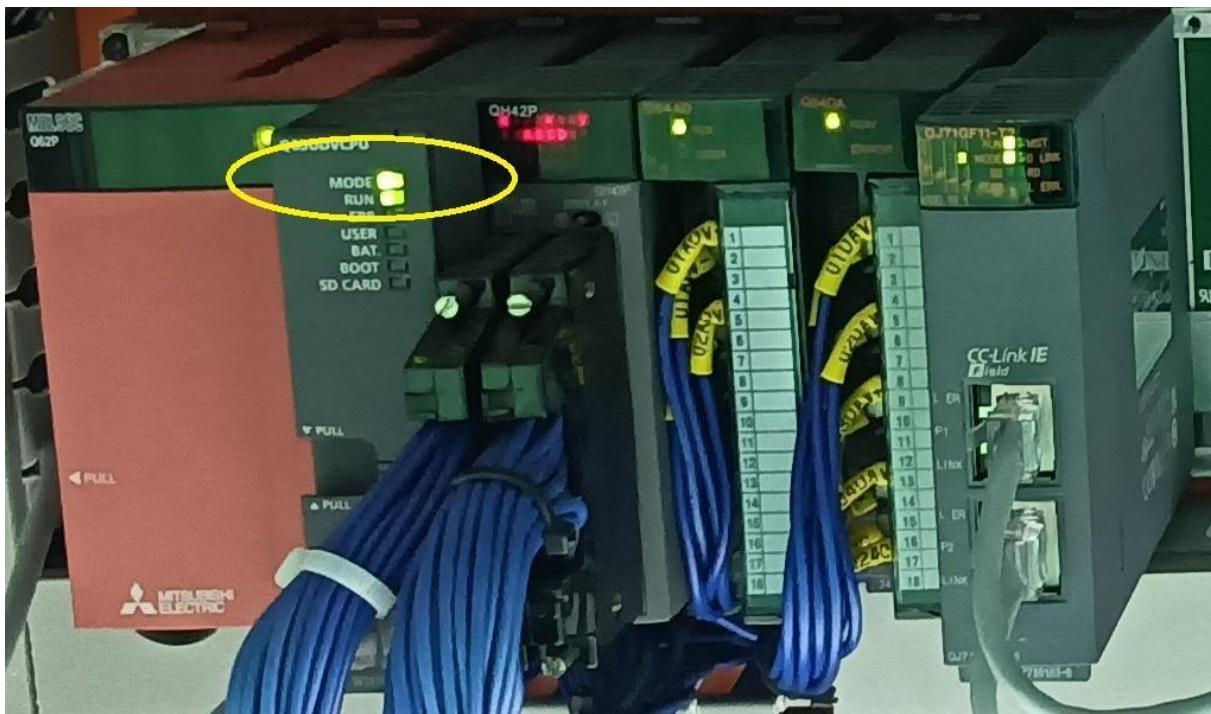
Gambar 1. Kondisi angin tidak terhubung

- Pastikan semua Power Listrik sudah terkoneksi dengan baik, dan semua MCB pada control panel dalam keadaan ON, dan semua device telah menyala



Gambar 2. Kondisi normal control panel setelah di power up

- c. Cek Kondisi CPU dari PLC apakah ada kondisi error, jika ada error indicator pada RUN akan mati dan indicator error akan merah blinking

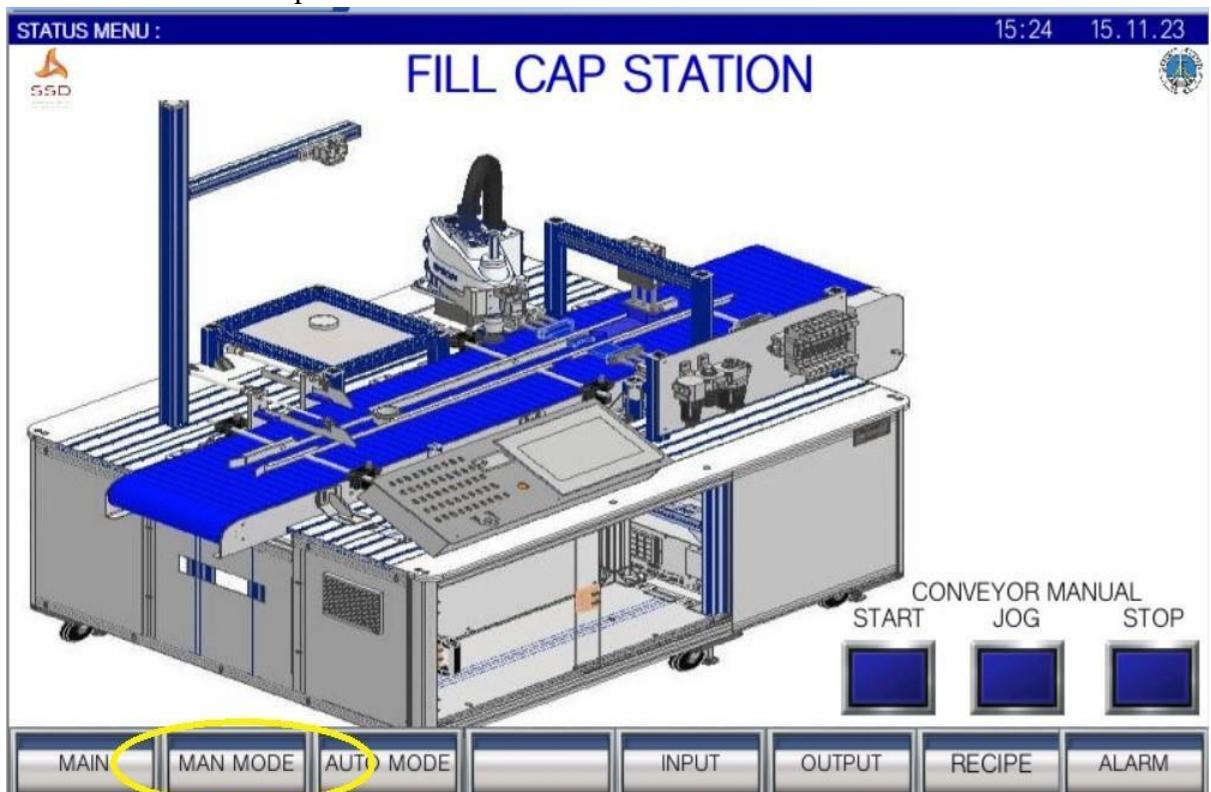


Gambar 3. Kondisi normal PLC

- d. Setelah semua kondisi sebelum ini sudah terpenuhi maka mesin ready untuk running manual, auto local, dan auto mes

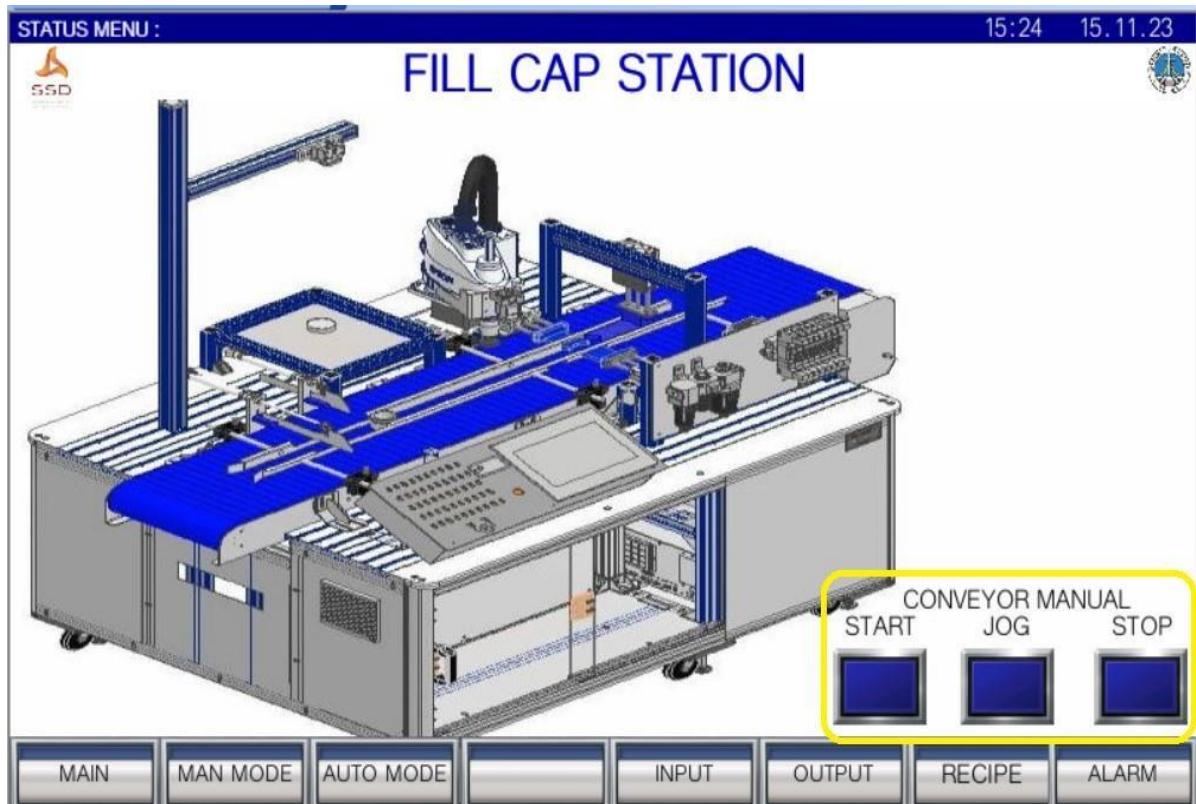
4.3.2 Operation Manual Capping Station

- a. Klik menu man mode pada HMI



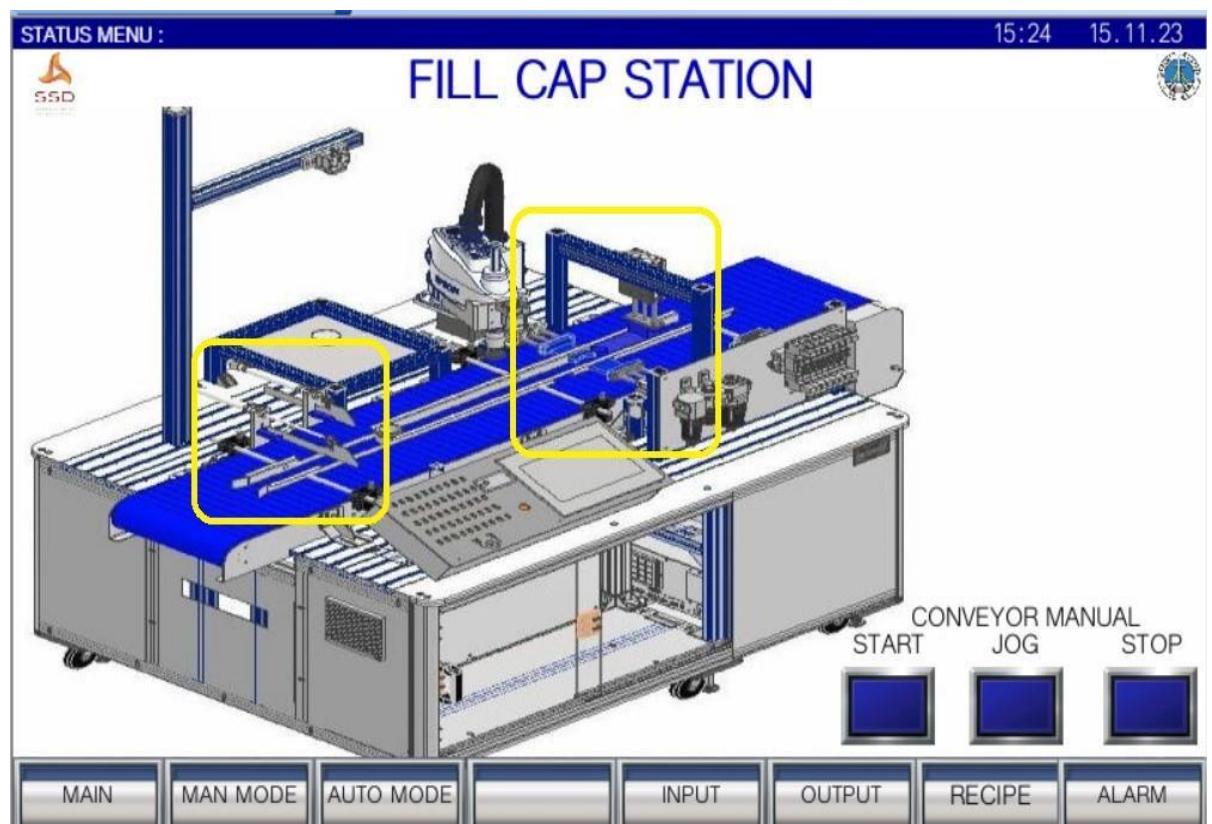
Gambar 4. Manual Mode pada menu HMI

- b. Kemudian conveyor bisa di run dengan menekan button conveyor on atau bisa di stop dengan menekan button conveyor off pada HMI, dengan mengatur speed conveyor pada operation panel



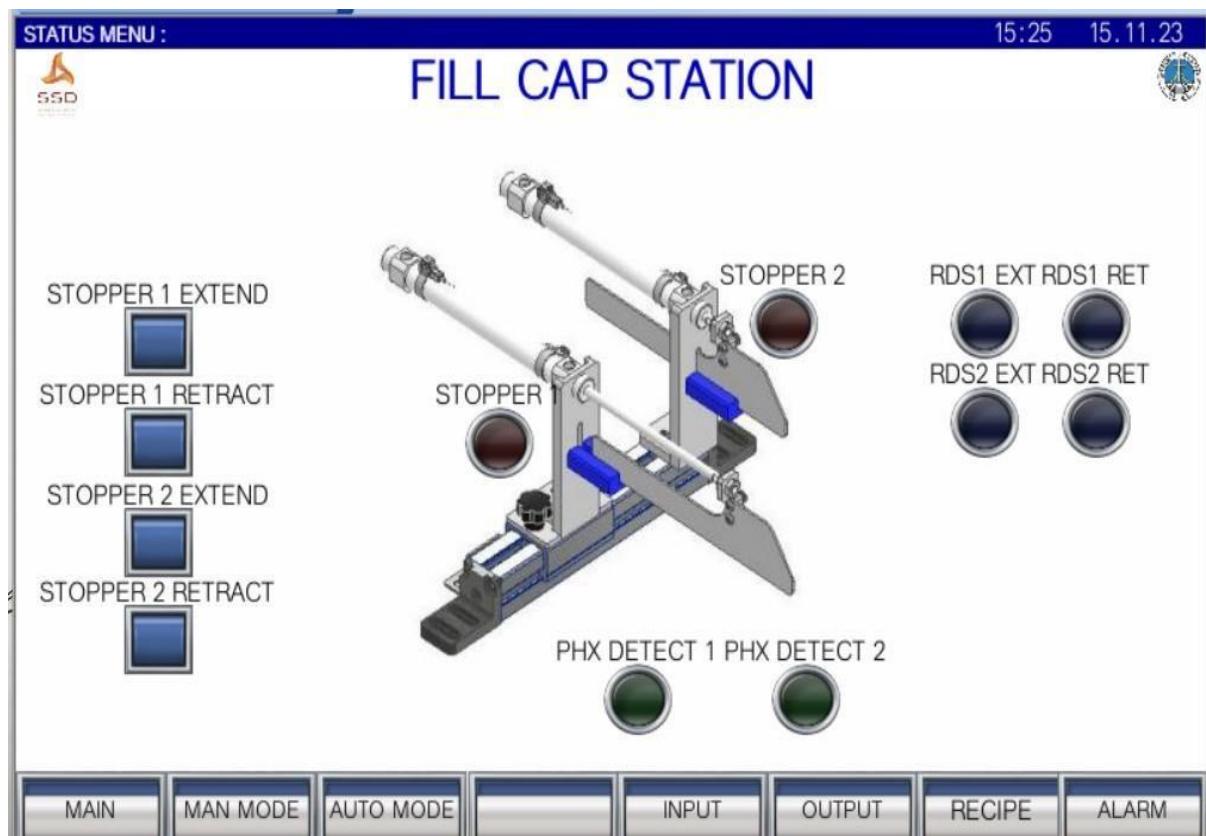
Gambar 5. Operasi conveyor secara manual

- c. Untuk control manual stopper pada mesin 3 bisa dilakukan dengan menekan area pada masing-masing stopper

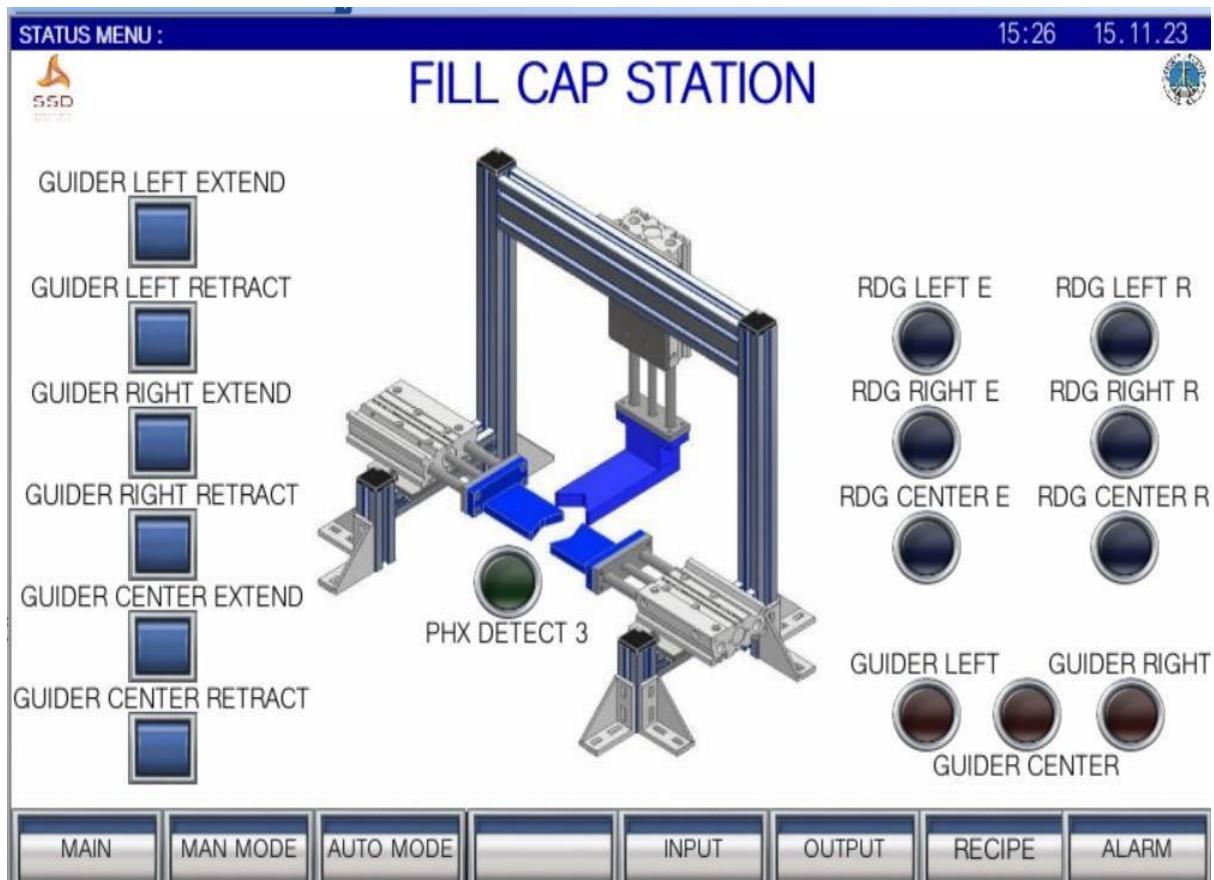


Gambar 6. Area operasi manual capping

Setelah ditekan akan pidah ke screen control manual capping



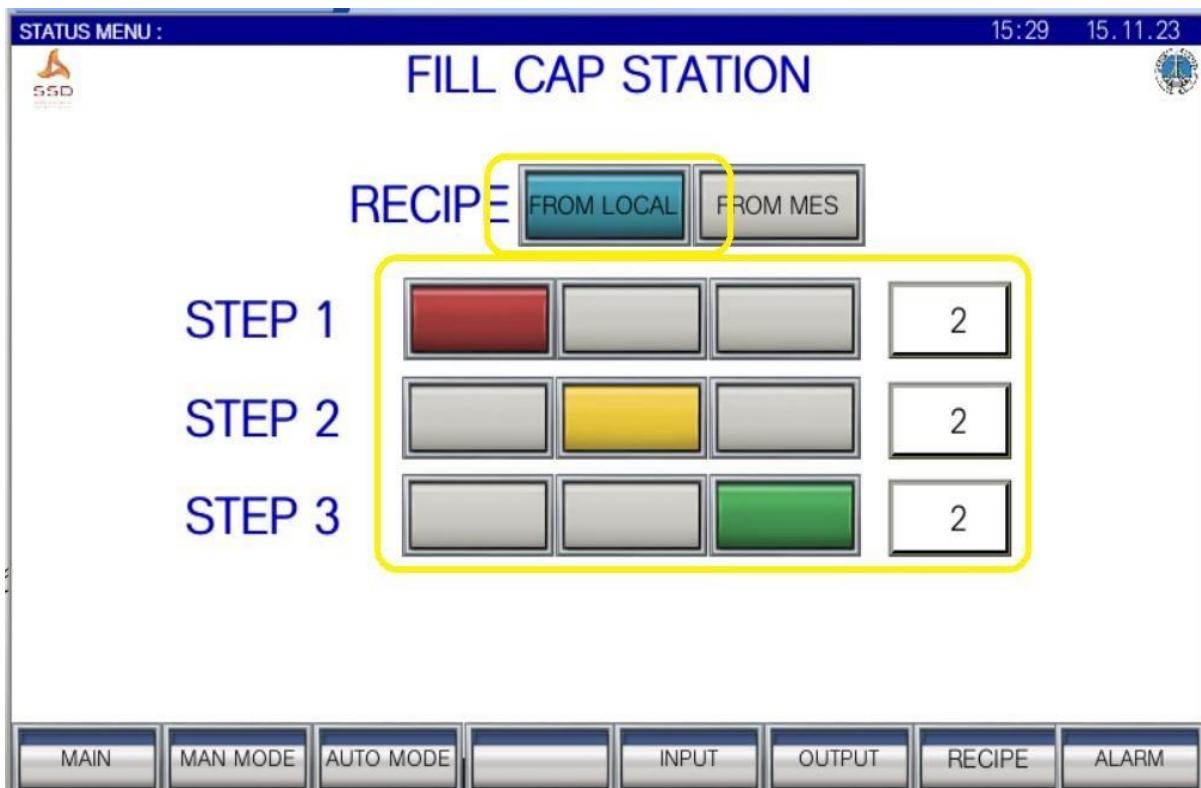
Gambar 5. Manual operasi manual capping



Gambar 6. Manual operasi manual capping

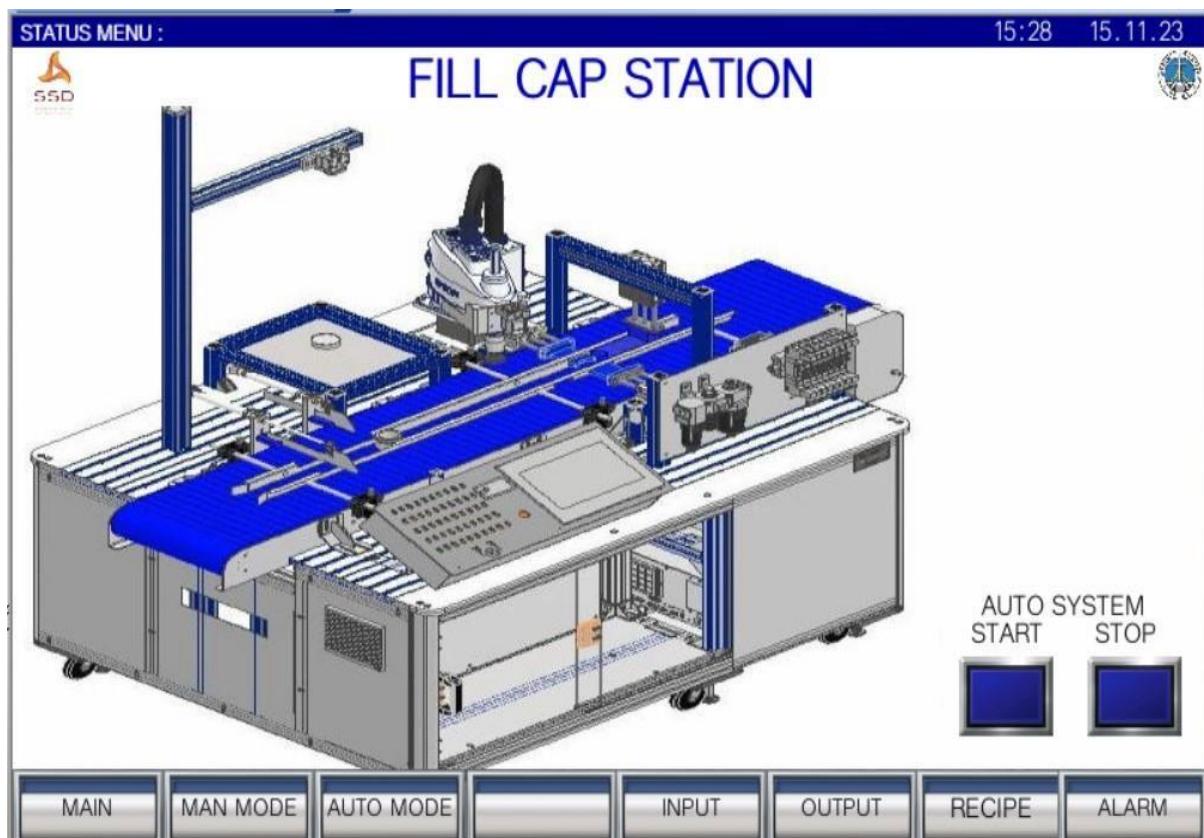
4.3.3 Operation Auto Local Capping Station

- Setting recipe pada menu recipe, menu ini untuk set jumlah dan warna apa yang akan diproduksi



Gambar 8. Recipe menu pada HMI untuk setting jumlah dan warna yang akan diproduksi

- Setelah itu pindah pada menu auto mode, dan persiapan cap product pada area yang akan di capture oleh camera robot.



Gambar 9. Auto start HMI

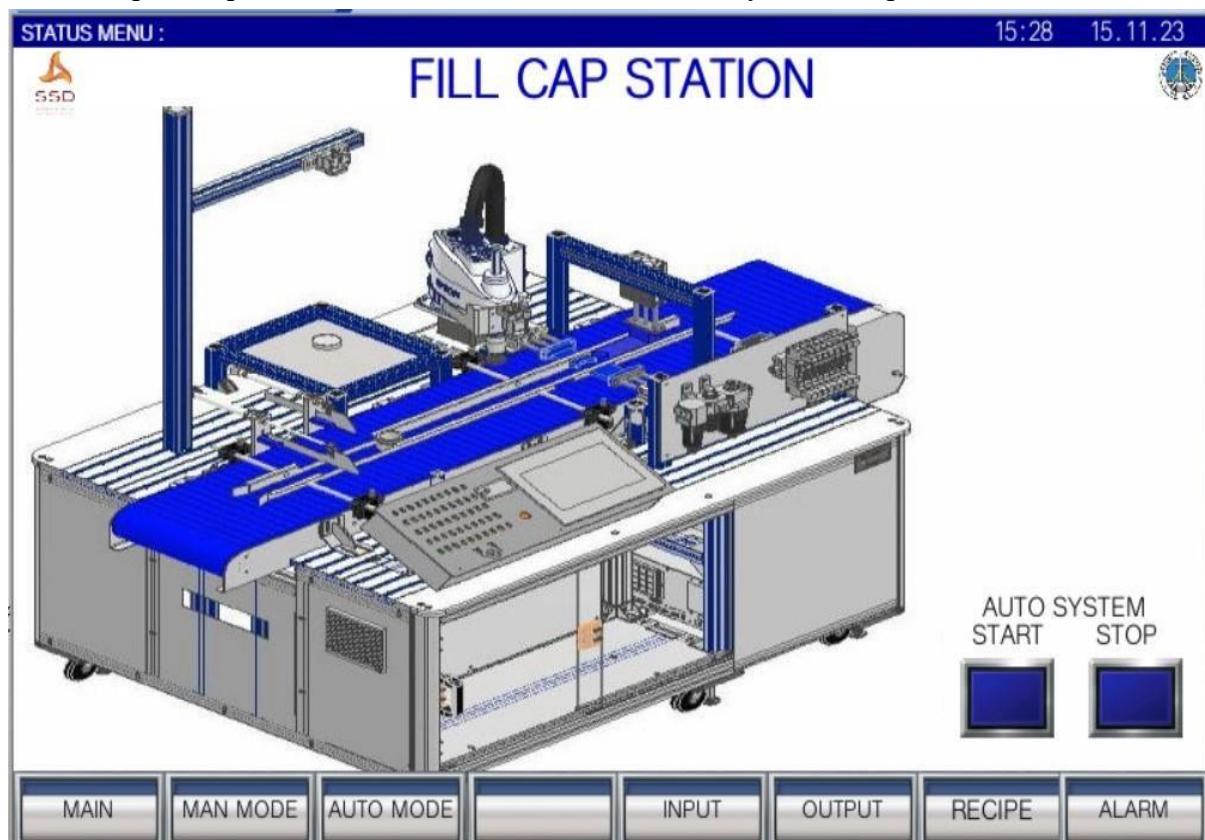
4.3.4 Operation Auto MES Capping Station

- Pilih menu recipe pada HMI, dan set recipe dari MES



Gambar 10. Recipe dari mes

- Kemudian pindah pada menu auto mode, untuk auto start nya akan di proses oleh mes



Gambar 11. Auto start dari mes

4.4 Work Instruction Station 4 (*Inspection and Storage Station*)

4.4.1 Preparation Pengoperasian *Inspection and Storage Station*

- Pastikan selang angin masuk dan regular angin sudah terisi minimal 0,4 MPa



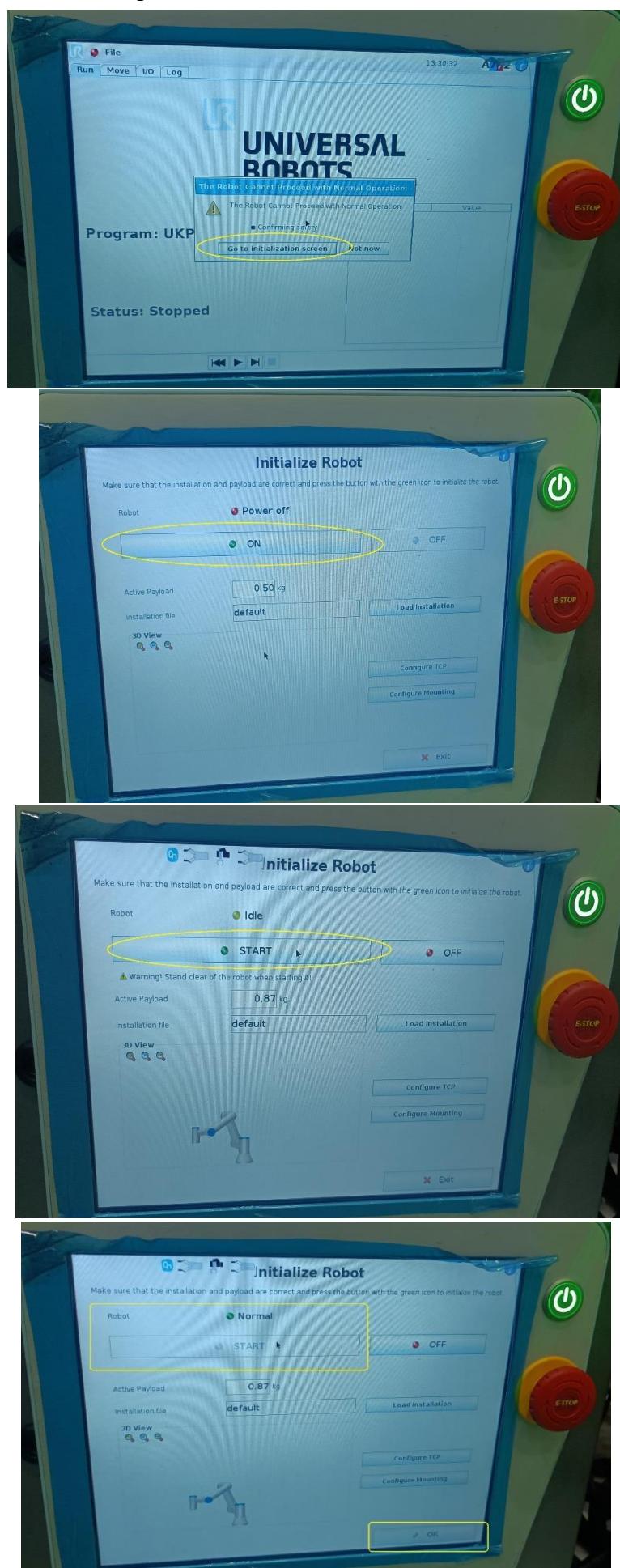
Gambar 1. Kondisi angin tidak terhubung

- Pastikan semua Power Listrik sudah terkoneksi dengan baik, dan semua MCB pada control panel dalam keadaan ON, dan semua device telah menyala



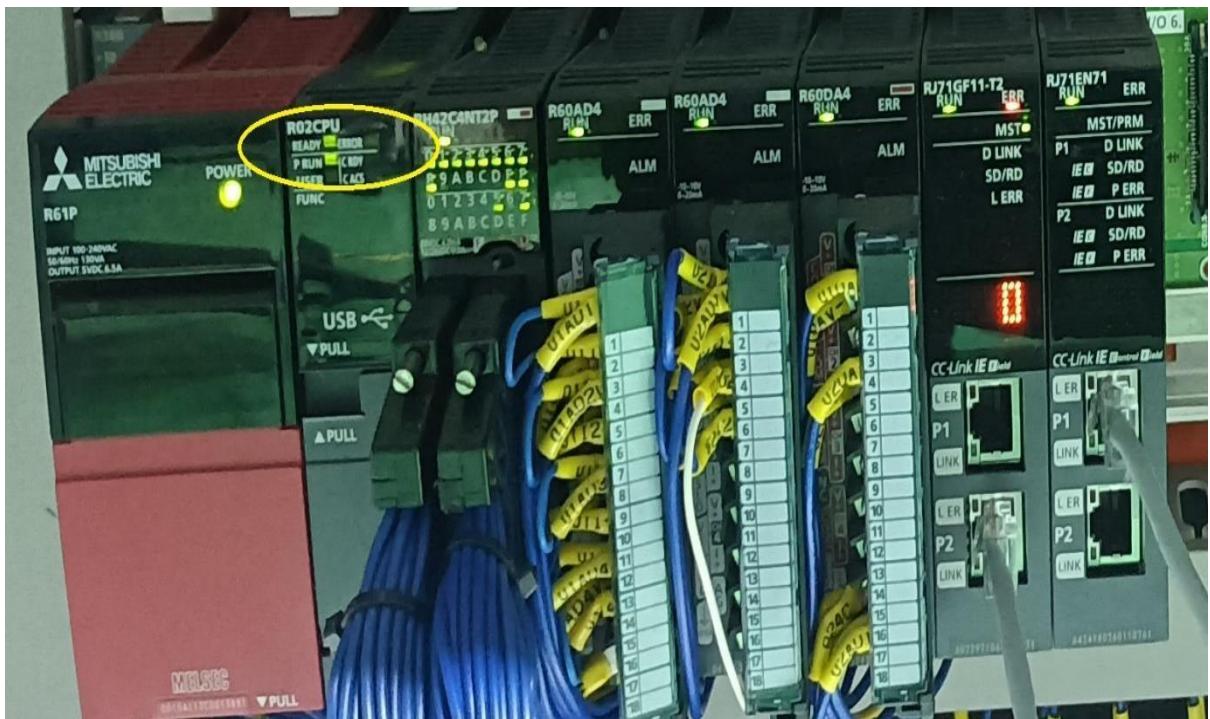
Gambar 2. Kondisi normal control panel setelah di power u

- c. Pastikan robot sudah di power on dan di inisialisai



Gambar 3. Tampilan Teachpendant

- d. Cek Kondisi CPU dari PLC apakah ada kondisi error, jika ada error indicator pada RUN akan mati dan indicator error akan merah blinking



Gambar 4. Kondisi normal PLC

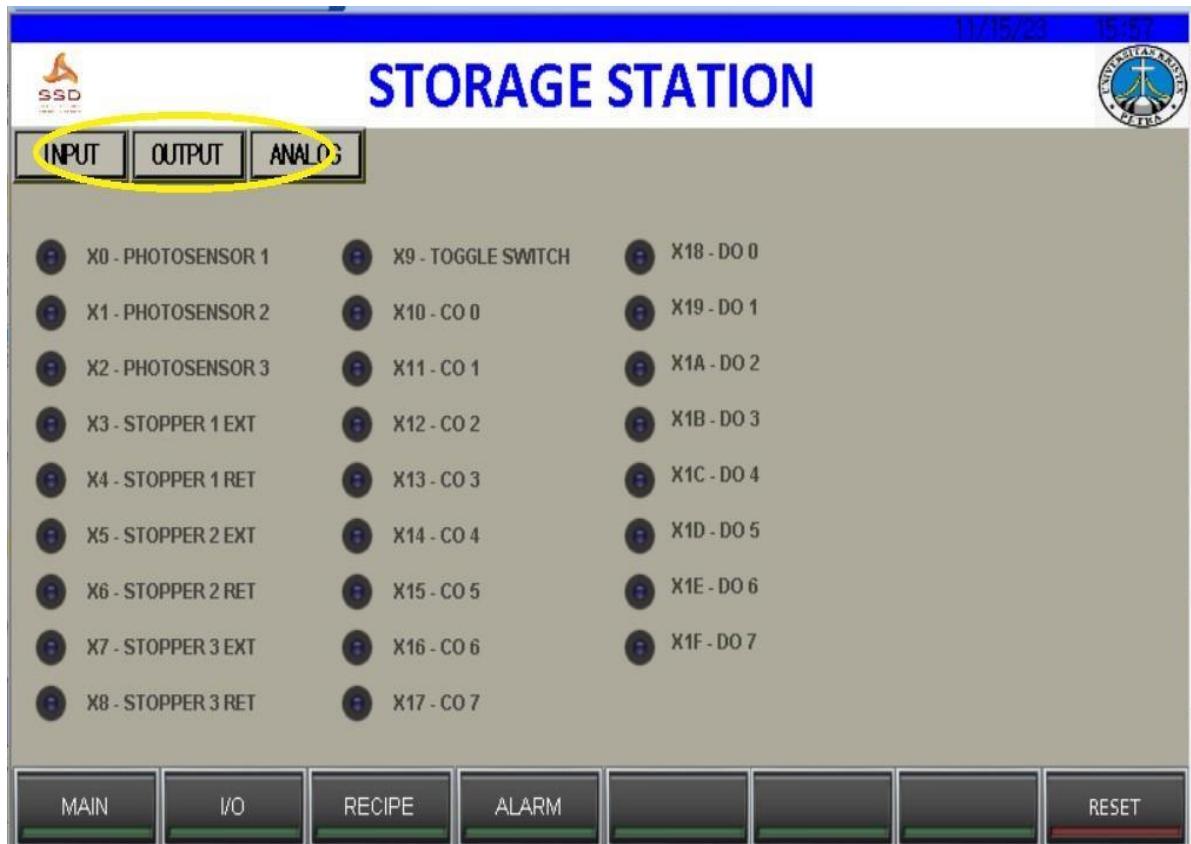
- e. Setelah semua kondisi sebelum ini sudah terpenuhi maka mesin ready untuk running manual, auto local, dan auto mes

4.4.2 Operation Manual Inspection and Storage Station

- a. Klik menu man mode pada HMI



Gambar 4. Manual Mode pada menu HMI



Gambar 5. Operasi conveyor dan device secara manual

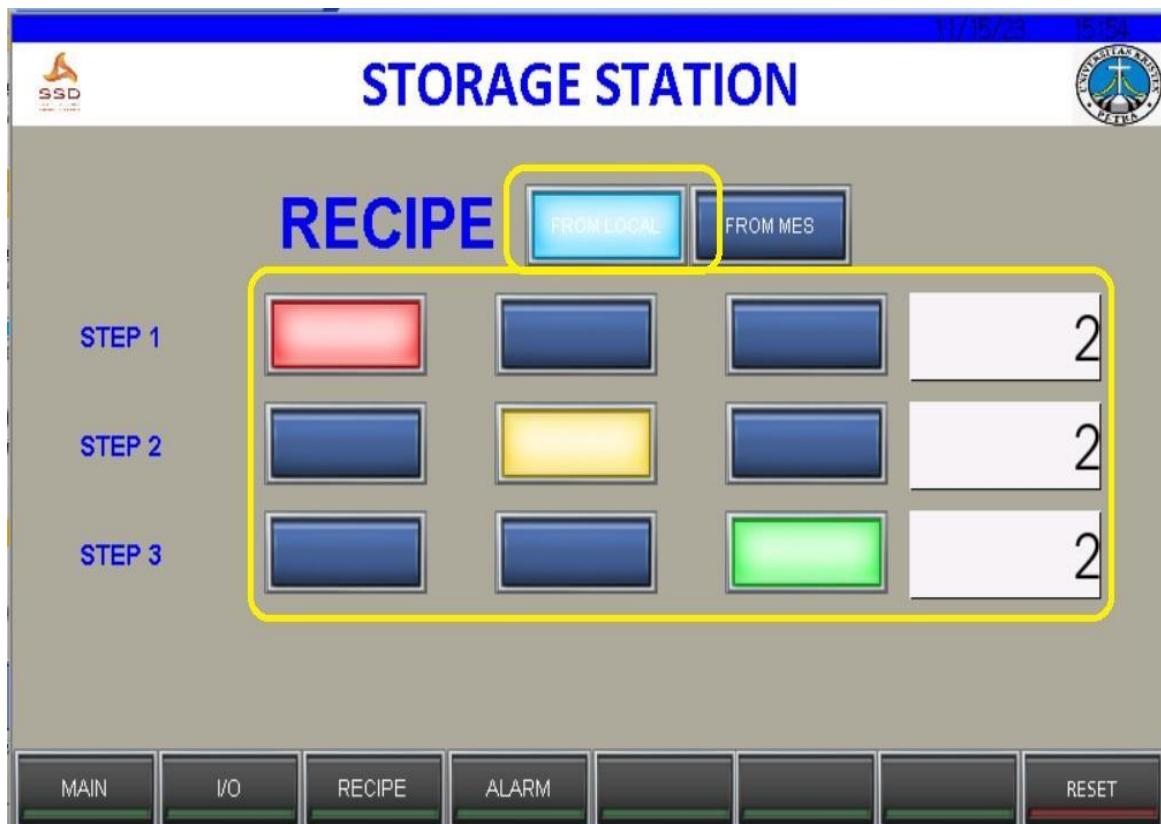
- b. Kemudian conveyor dan device lain bisa di run dengan menekan button manual kemudian conveyor on, atau device lain



Gambar 6. Operasi conveyor dan device secara manual

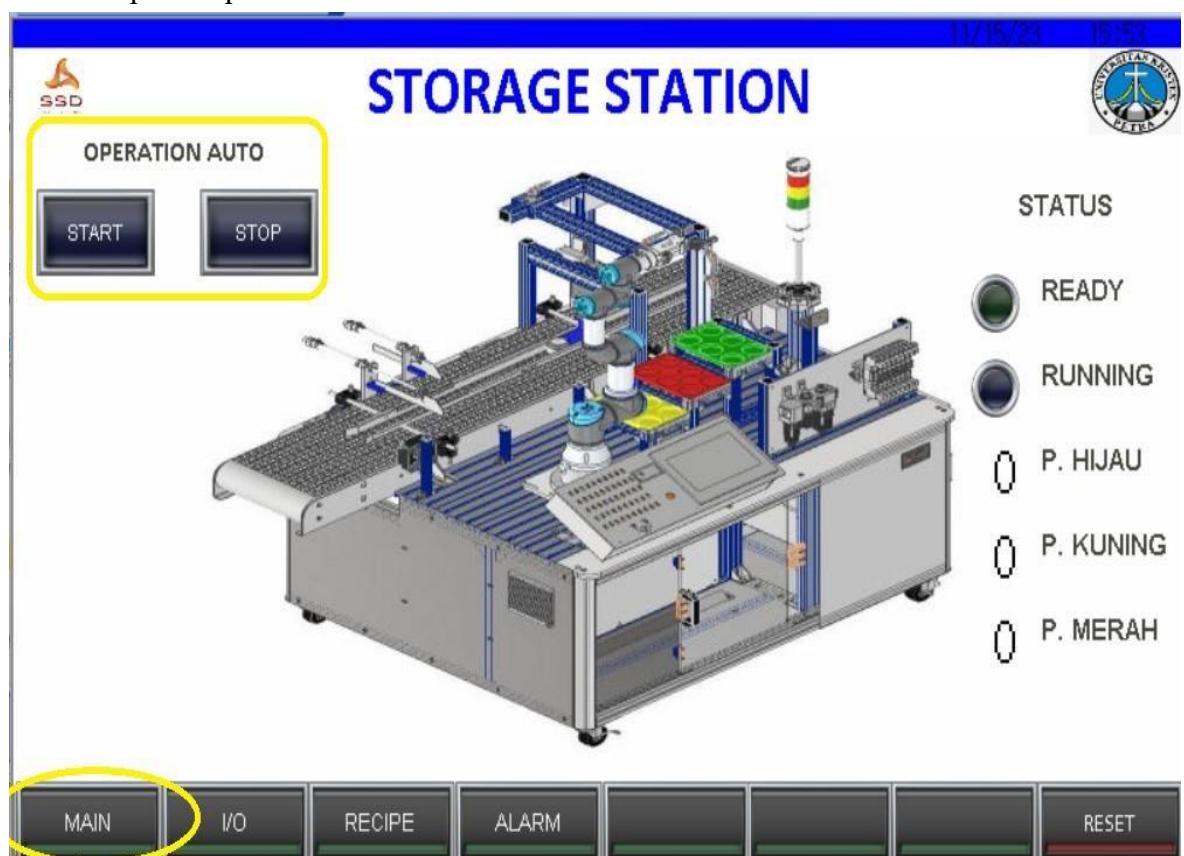
4.4.3 Operation Auto Local Inspection and Storage Station

- Setting recipe pada menu recipe, menu ini untuk set jumlah dan warna apa yang akan diproduksi



Gambar 8. Recipe menu pada HMI untuk setting jumlah dan warna yang akan diproduksi

- Setelah itu pindah pada menu main.



Gambar 9. Auto start HMI

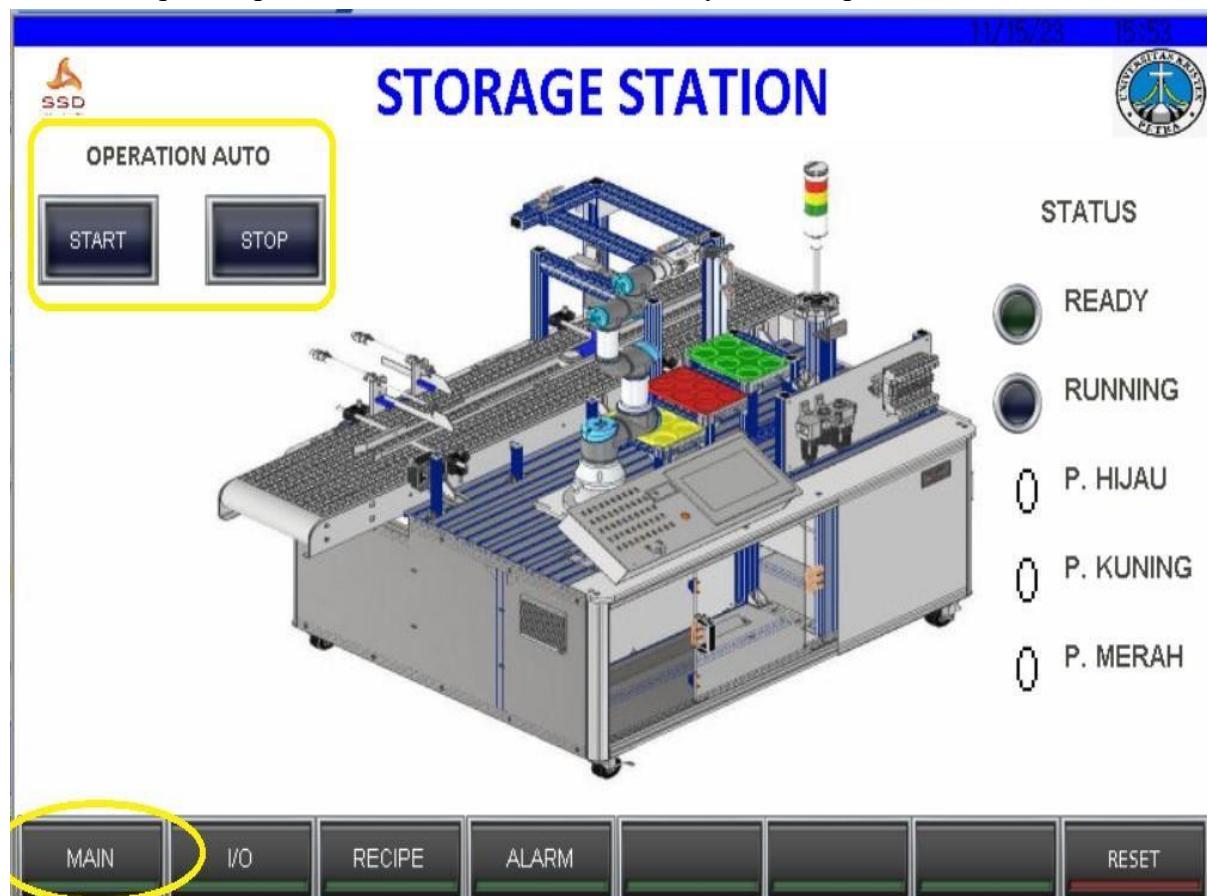
4.4.4 Operation Auto MES Inspection and Storage Station

- Pilih menu recipe pada HMI, dan set recipe dari MES



Gambar 10. Recipe dari mes

- Kemudian pindah pada menu main, untuk auto start nya akan di proses oleh mes



Gambar 11. Auto start dari mes

5.

***CRITICAL & CONSUMABLE
PART LIST***

5.1 Critical Part List

Tabel 6.1 Critical Part List

No	Item Code	Part Name	Brand	Qty	
1	ZPT25BN-A6	Vacum Pad	SMC	1	Pcs
2	VASB-40-1_4-SI-B	Vacum Pad	SMC	1	Pcs
3	DL_SAW_0086_2	Gantry Container	IGUS	1	Pcs
4	BJ100-DDT	Sensor Photo elektrik	Autonics	12	Pcs
5	BC15-LDT-C	Sensor Warna	Autonics	3	Pcs
6	CDRQ2BS30-180C-M9BW	Rotary Pneumatic	SMC	1	Pcs
7	CZL601-3KG	Loadcell	-	1	Pcs
8	CDRB2BW20-180SZ	Pneumatic Loadcell	SMC	1	Pcs
9	LS3-B40	Robot EPSON	EPSON	1	Pcs
10	CV2	Kamera EPSON	EPSON	1	Pcs
11	UR3	Robot UR 3	UR	1	Pcs
12	RG2 V2	Gripper UR	OnRobot	1	Pcs
13		Kamera Fecilea	Logitech		Pcs
14	VTV122	Vibrator	-	1	Pcs
15	RTD-PT-100-M6	Thermocouple Temperature	-	1	Pcs
16	Lampu St. 3			1	Pcs
17	Motor Conveyor	Motor Conveyor	Oriental	4	Pcs
18	Motor Side Grip	Motor Side Grip	Oriental		Pcs
19	5IK40GN-ST (40 WATT)	Motor Screwing	ORIENTAL	1	Pcs
20	ZH13BSA-08-10	Vacum Ejector St	SMC	2	Pcs

5.2 Consumable Part List

Tabel 6.2 Consumable Part List

CONSUMABLE PART LIST				
No	No Drawing	Part Name	Material	Desc
Nama Sub-Assy :				
1		Vacum Pad	SMC	ZPT25BN-A6
2		Vacum Pad	SMC	VASB-40-1_4-SI_B
3	AY-UKP01-6.1-R0 (Brake System)	Brake		
4	AY-UKP01-7.1-R0 (Vibration System)	Spring Vibrator		
5		Sticker Container		
6				
7				
8				
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6.

DRAWING MECHANICAL

6.1 Drawing Mechanical Modul Edukasi Feeding Station

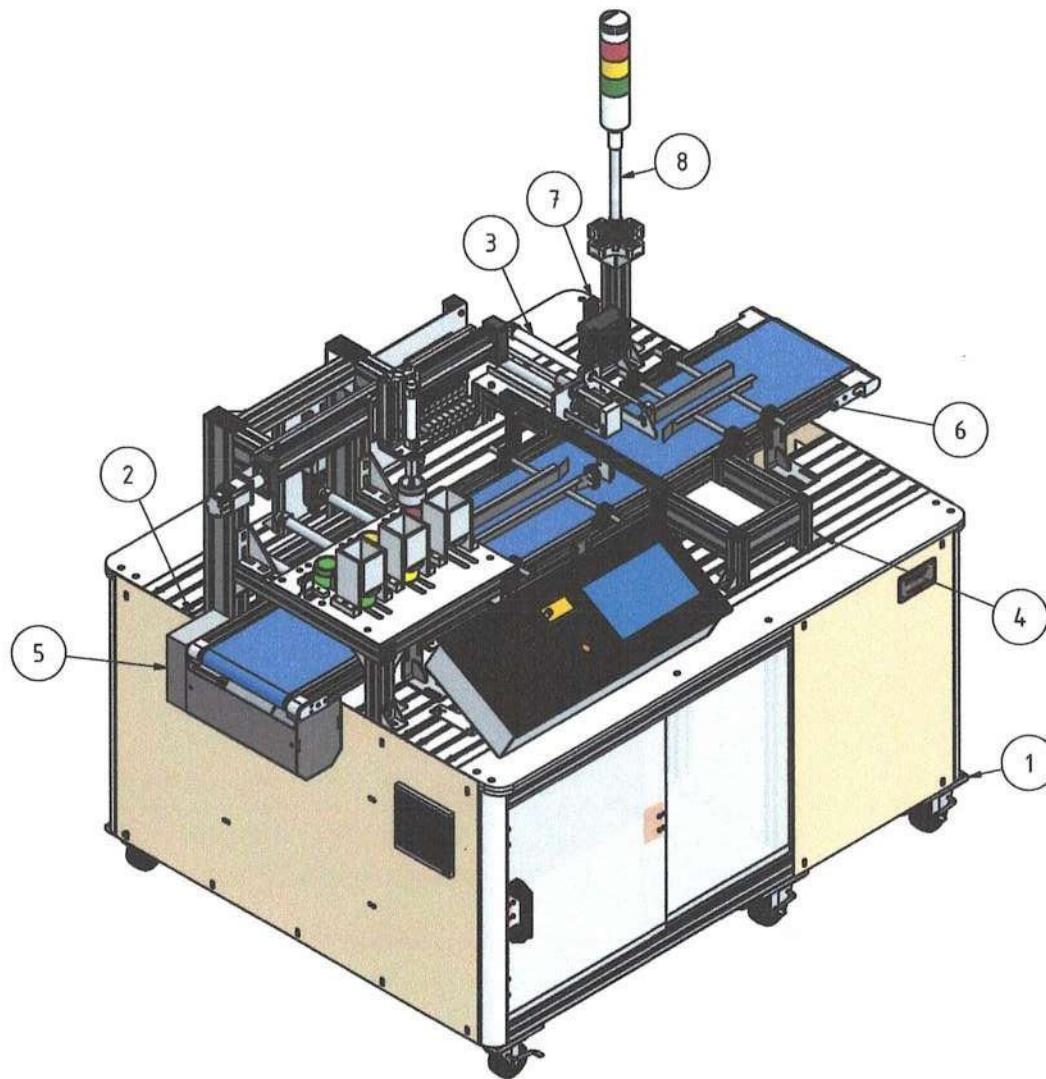
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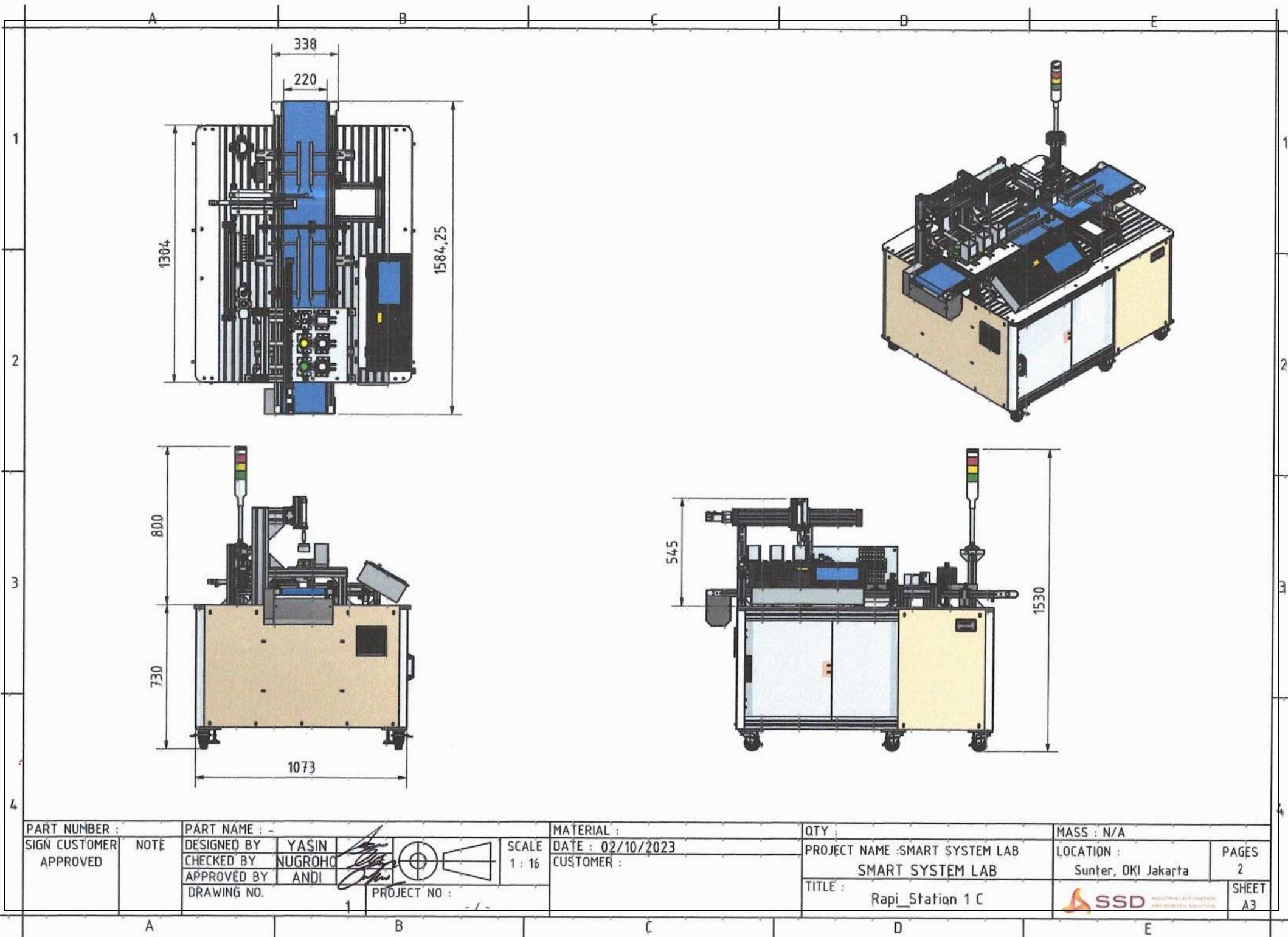
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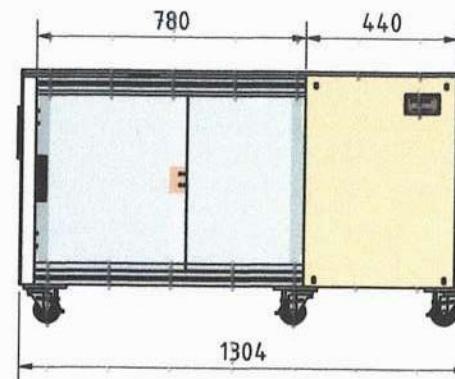
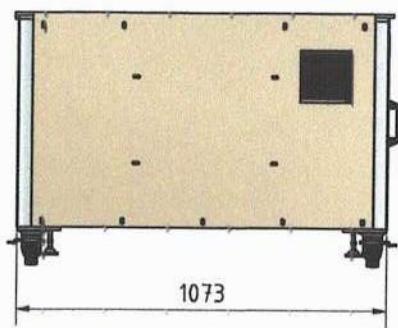
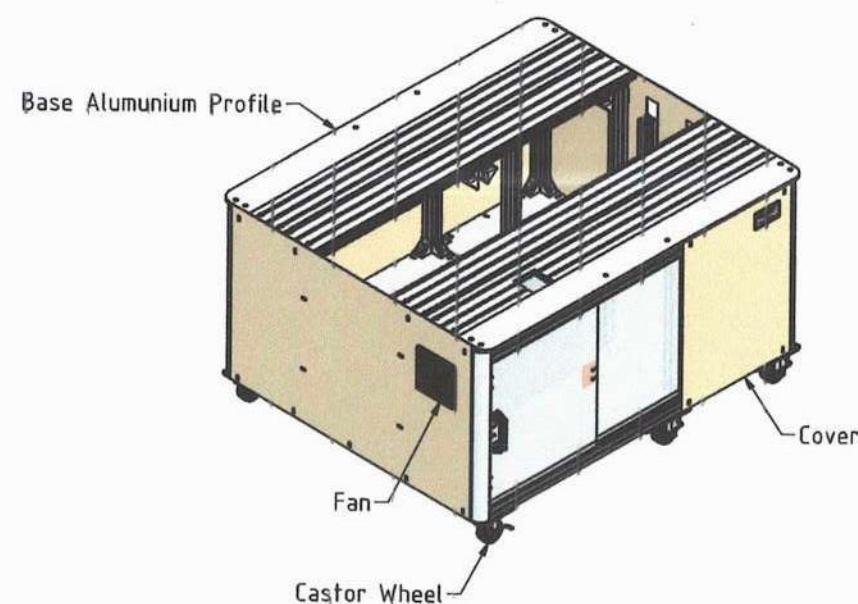
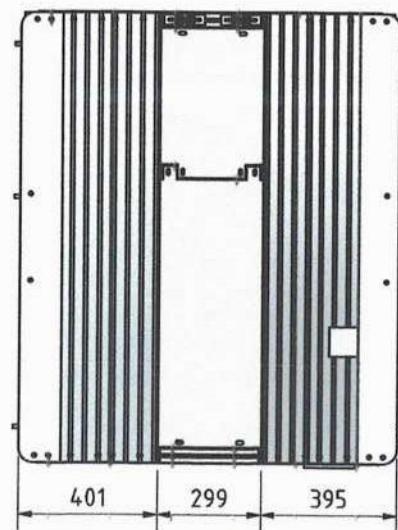
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ITEM	QTY	PART NAME	DESCRIPTION
8	1	Tower Lamp n Frame	See Dwg 1.8
7	1	RFID and Frame	See Dwg 1.7
6	1	Operation Panel	See Dwg 1.6
5	1	Belt conveyor	See Dwg 1.5
4	1	Box Reject Container	See Dwg 1.4
3	1	Pneumatic Rejector & Frame	See Dwg 1.3
2	1	Magazine Container	See Dwg 1.2
1	1	Table Station 1	See Dwg 1.1

PART NUMBER :		PART NAME :		MATERIAL :		QTY :		MASS : N/A	
SIGN	CUSTOMER	NOTE	DESIGNED BY	YASIN	SCALE	DATE : 02/10/2023	PROJECT NAME :		LOCATION :
APPROVED			CHECKED BY	NUGROHO	1 : 10	CUSTOMER :	SMART SYSTEM LAB		Sunter, DKI Jakarta
			APPROVED BY	ANDI			TITLE :		PAGES
			DRAWING NO.				Station 1_Feeding Station		1
			PROJECT NO.						SHEET
									A3





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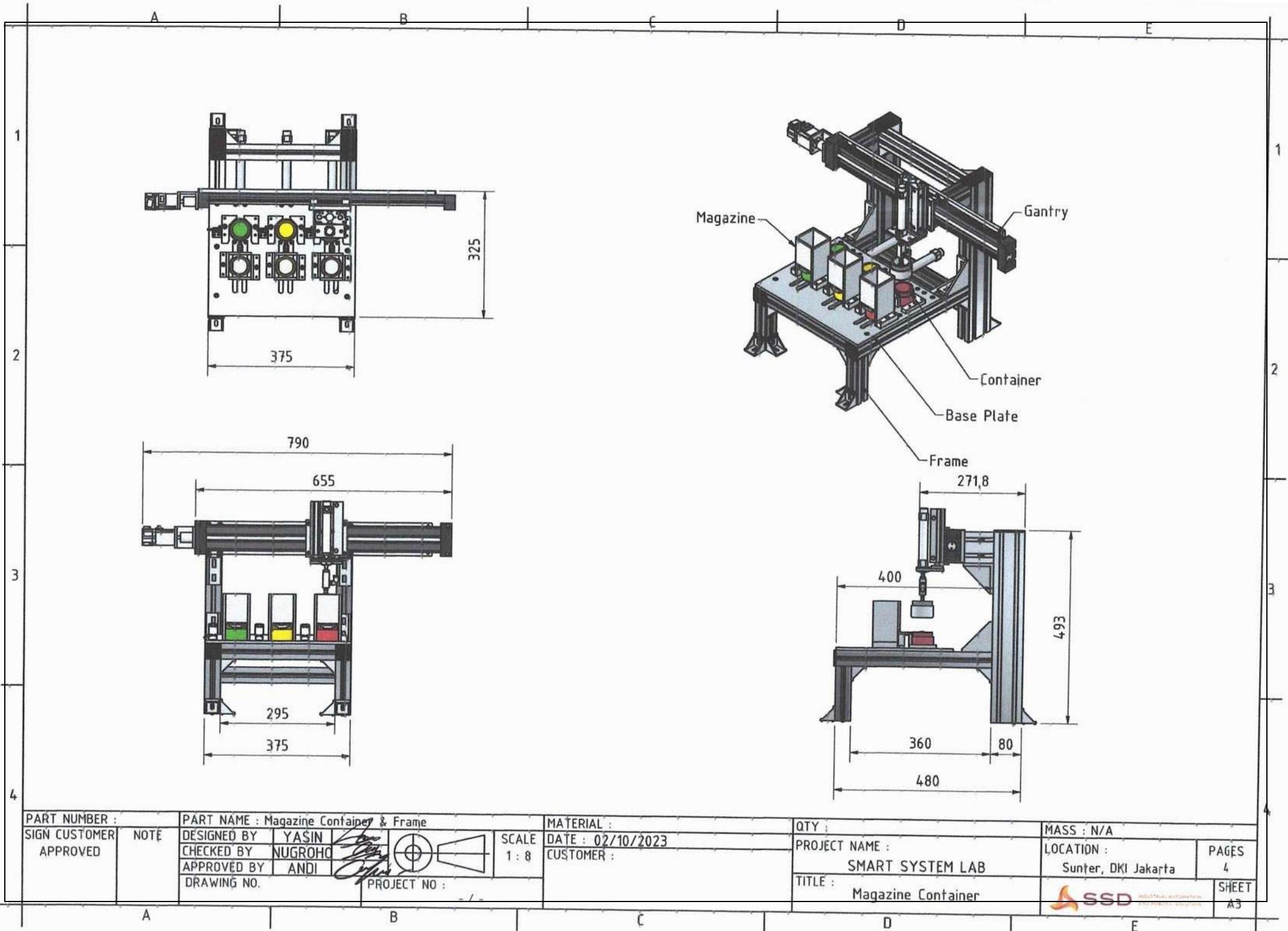
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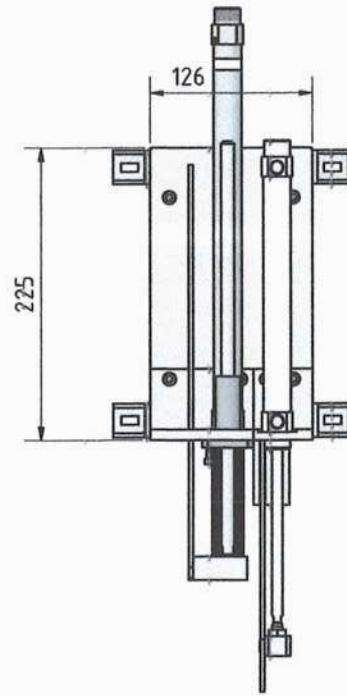
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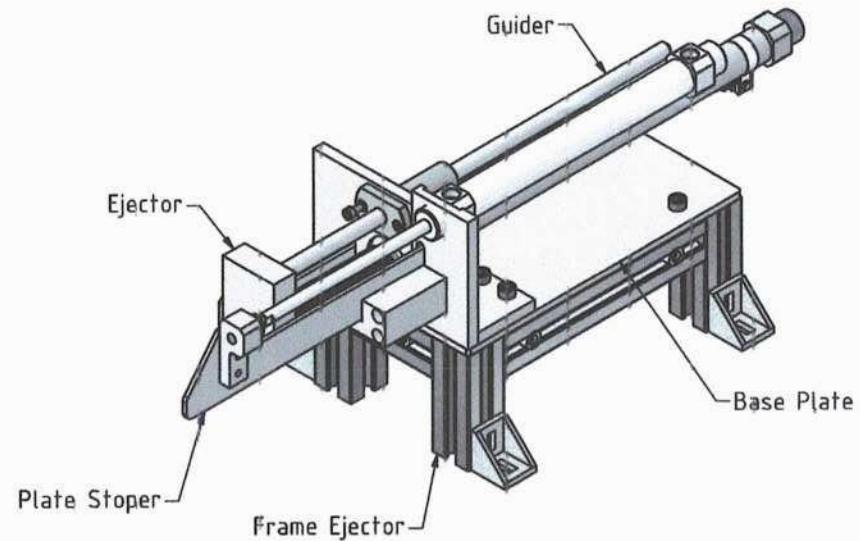
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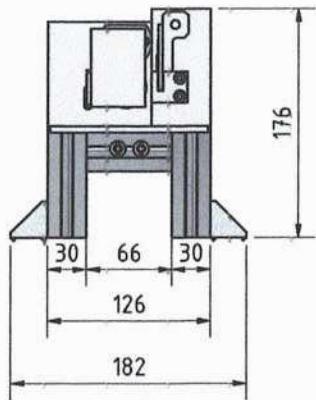
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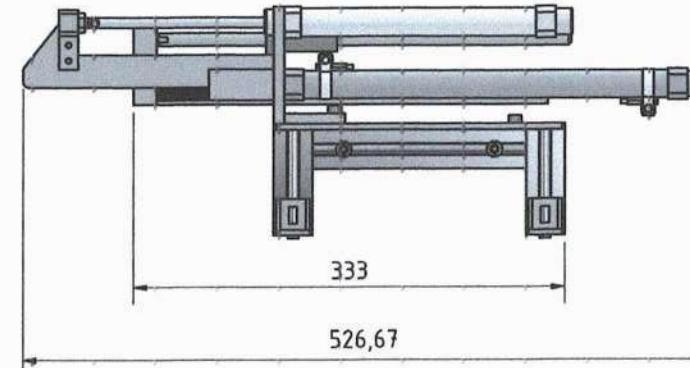
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APPROVED	NOTE	CHECKED BY	NUGROHO	SCALE	1 : 4	CUSTOMER	TITLE	PAGES	5
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									A3

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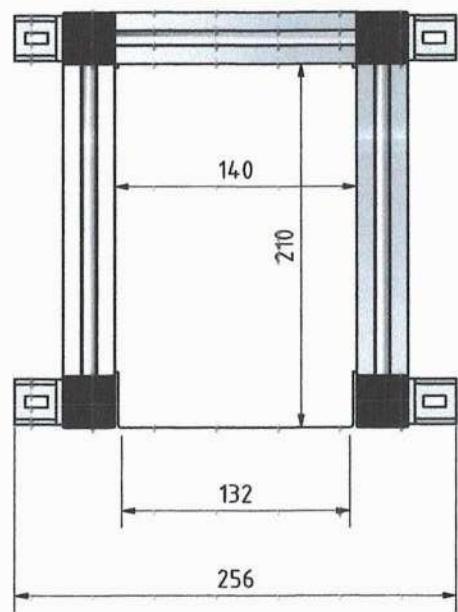
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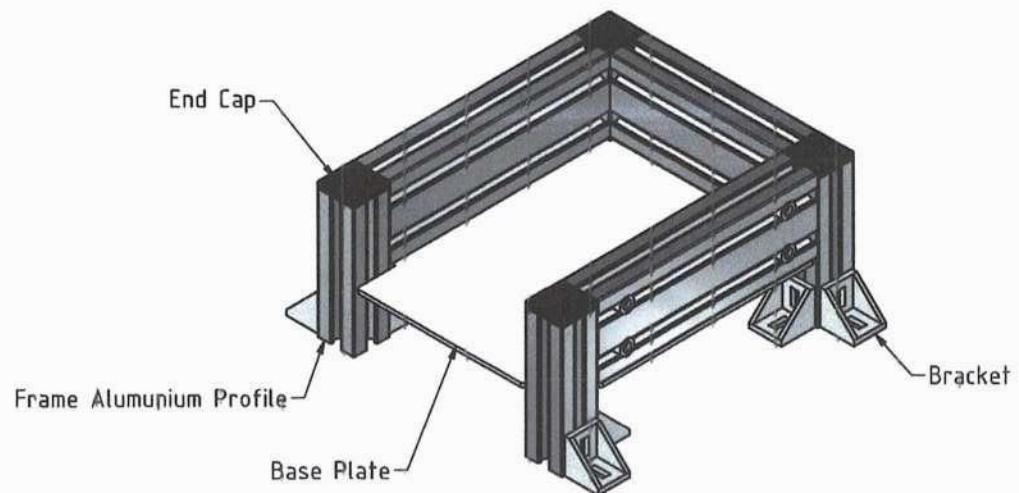
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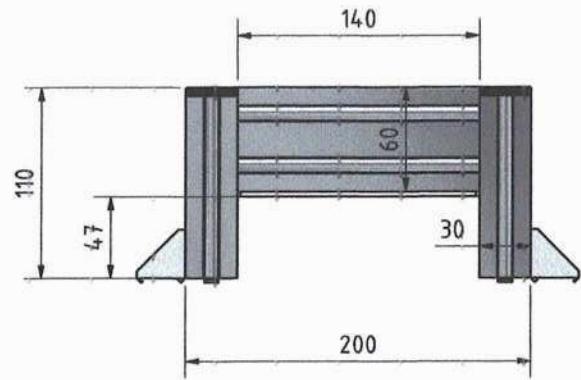
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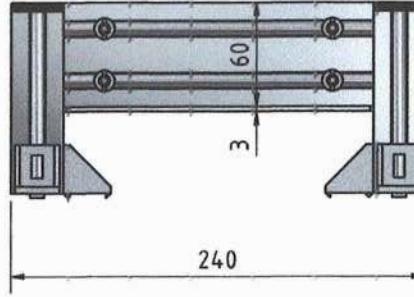


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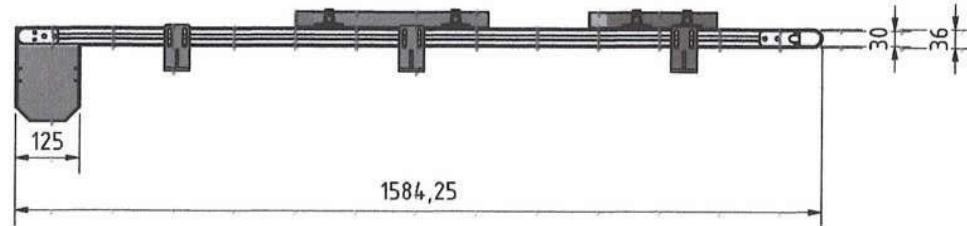
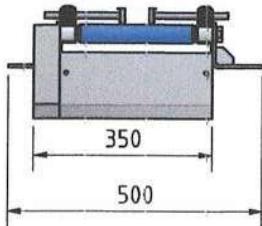
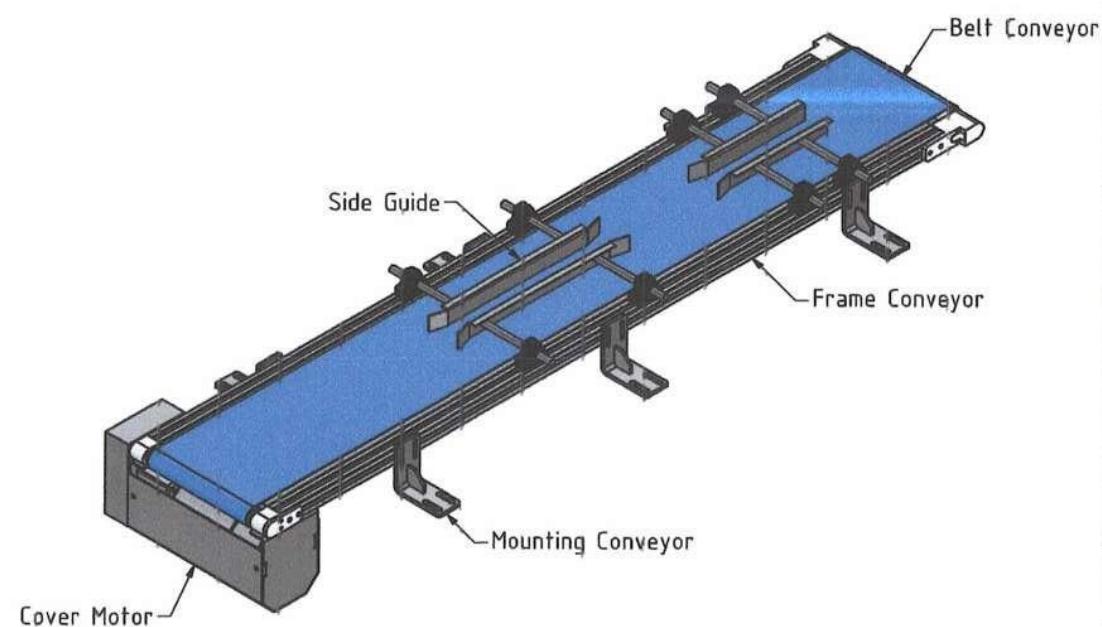
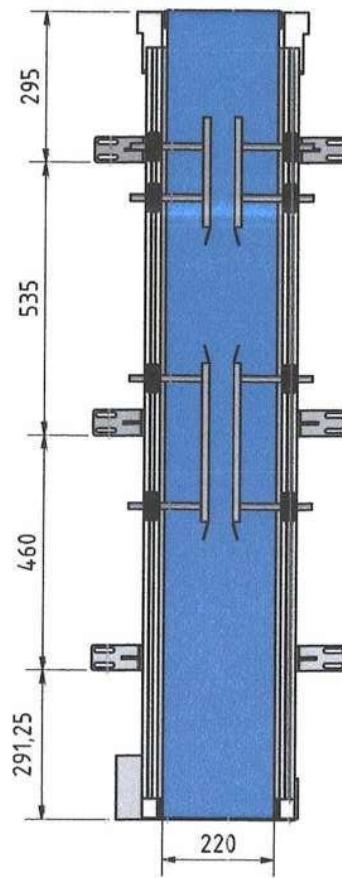


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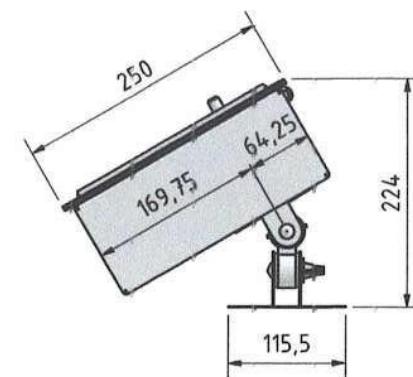
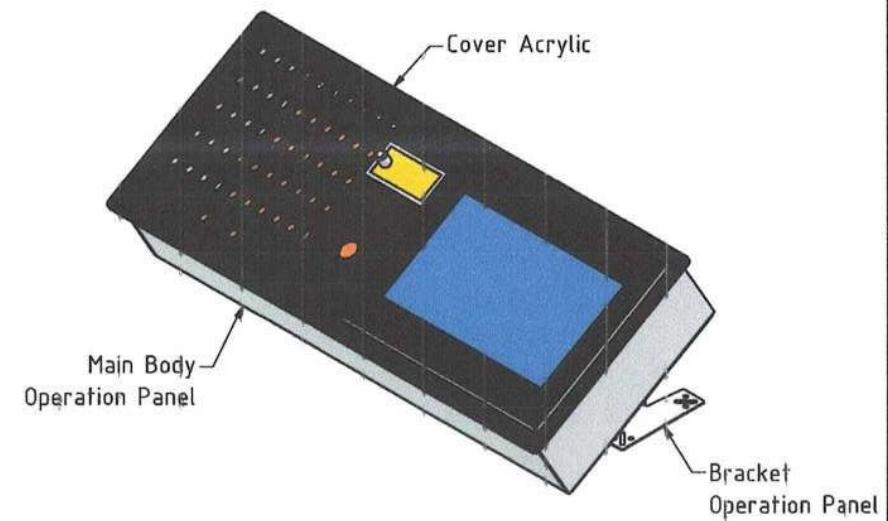
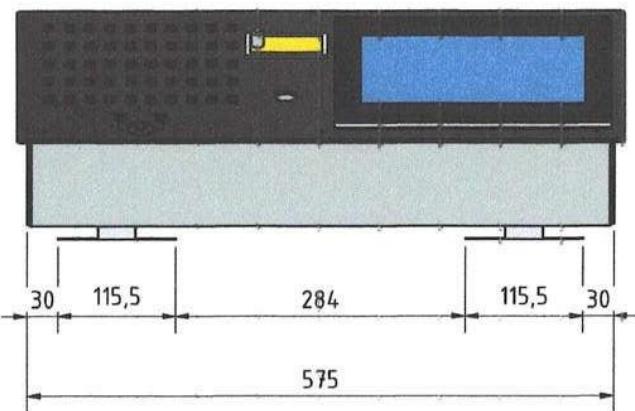
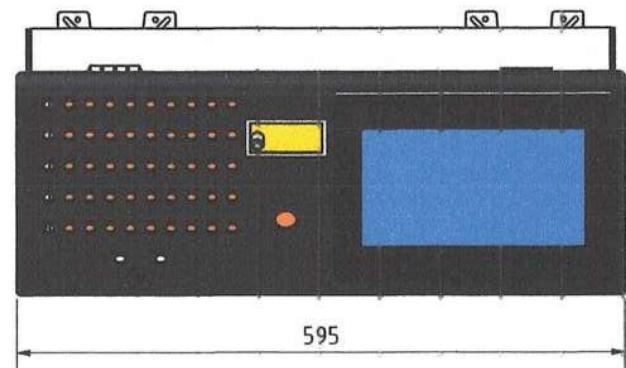
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			APPROVED BY ANDI			TITLE :	Box Reject Container		
			DRAWING NO.	PROJECT NO. - / -					



PART NUMBER :	PART NAME :		MATERIAL : Welded Aluminum-6061			QTY :	MASS : N/A
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			DRAWING NO.			Belt conveyor	7
			PROJECT NO.:	- / -			
A	B	C	D	E	SSD	INDUSTRIAL AUTOMATION AND ROBOTIC SOLUTION	SHEET A3



PART NUMBER :		PART NAME :		MATERIAL :		QTY :		MASS : N/A	
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								SMART SYSTEM LAB	Sunter, DKI Jakarta
			ANDI					TITLE : Operation Panel	PAGES 8
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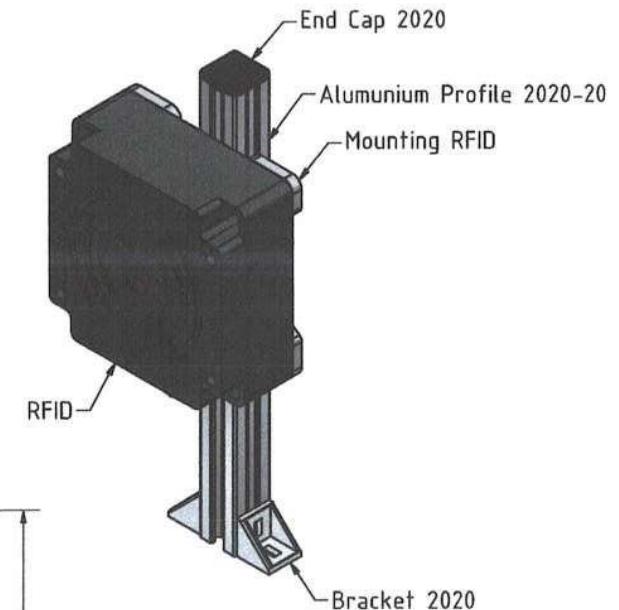
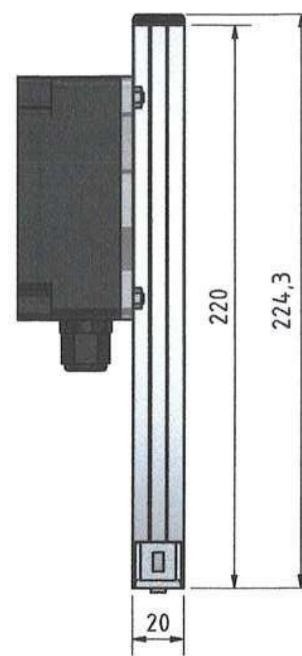
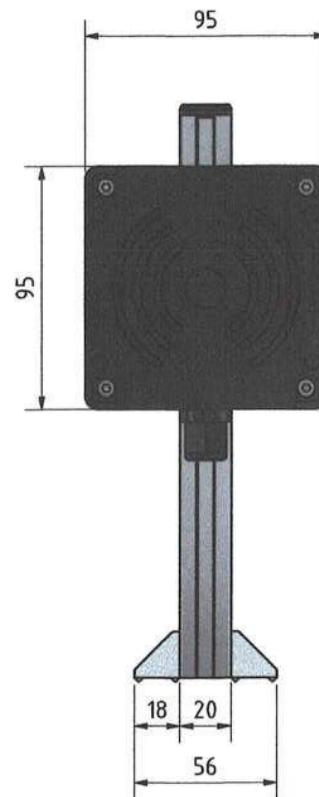
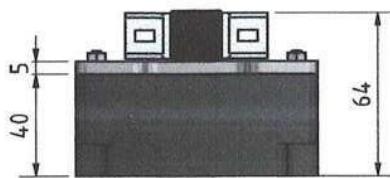
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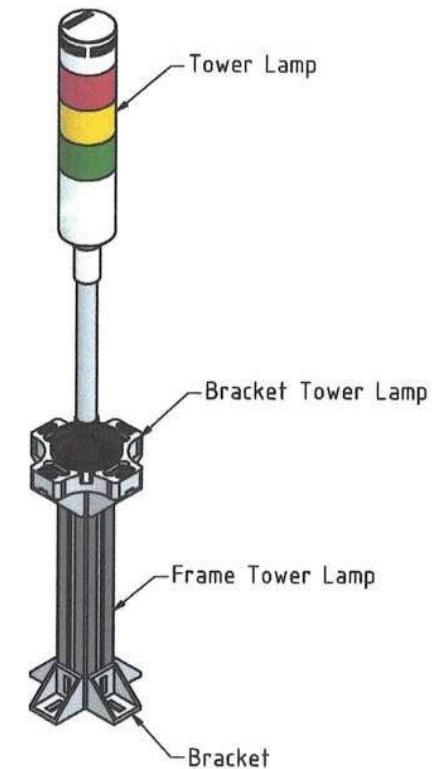
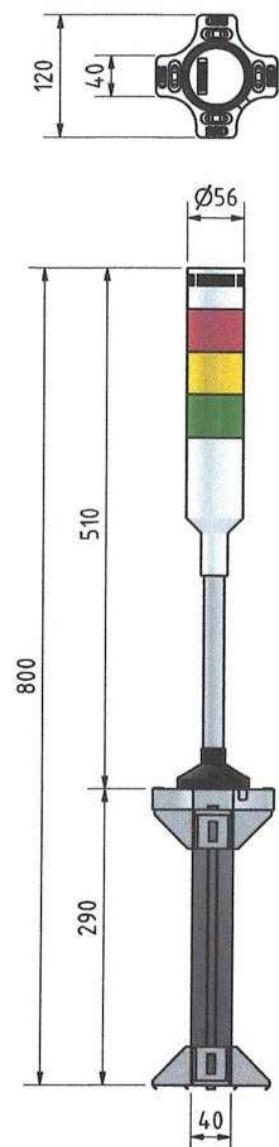
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APPROVED			CHECKED BY	NUGROHO		CUSTOMER		SMART SYSTEM LAB	Sunter, DKI Jakarta
			APPROVED BY	ANDI				TITLE	PAGES
			DRAWING NO.		PROJECT NO :	- / -	RFID and Frame	9	

A B C D E



PART NUMBER :		PART NAME :		MATERIAL :		QTY :		MASS : N/A	
SIGN	CUSTOMER	NOTE	DESIGNED BY	YASIN	SCALE	DATE : 02/10/2023	PROJECT NAME :	LOCATION :	PAGES
APPROVED			CHECKED BY	NUGROHO	1 : 5	CUSTOMER :	SMART SYSTEM LAB	Sunter, DKI Jakarta	10
			APPROVED BY	ANDI			TITLE :	Tower Lamp n Frame	
			DRAWING NO.			PROJECT NO. : - / -			

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6.2 Drawing Mechanical Modul Edukasi Filling Station

A

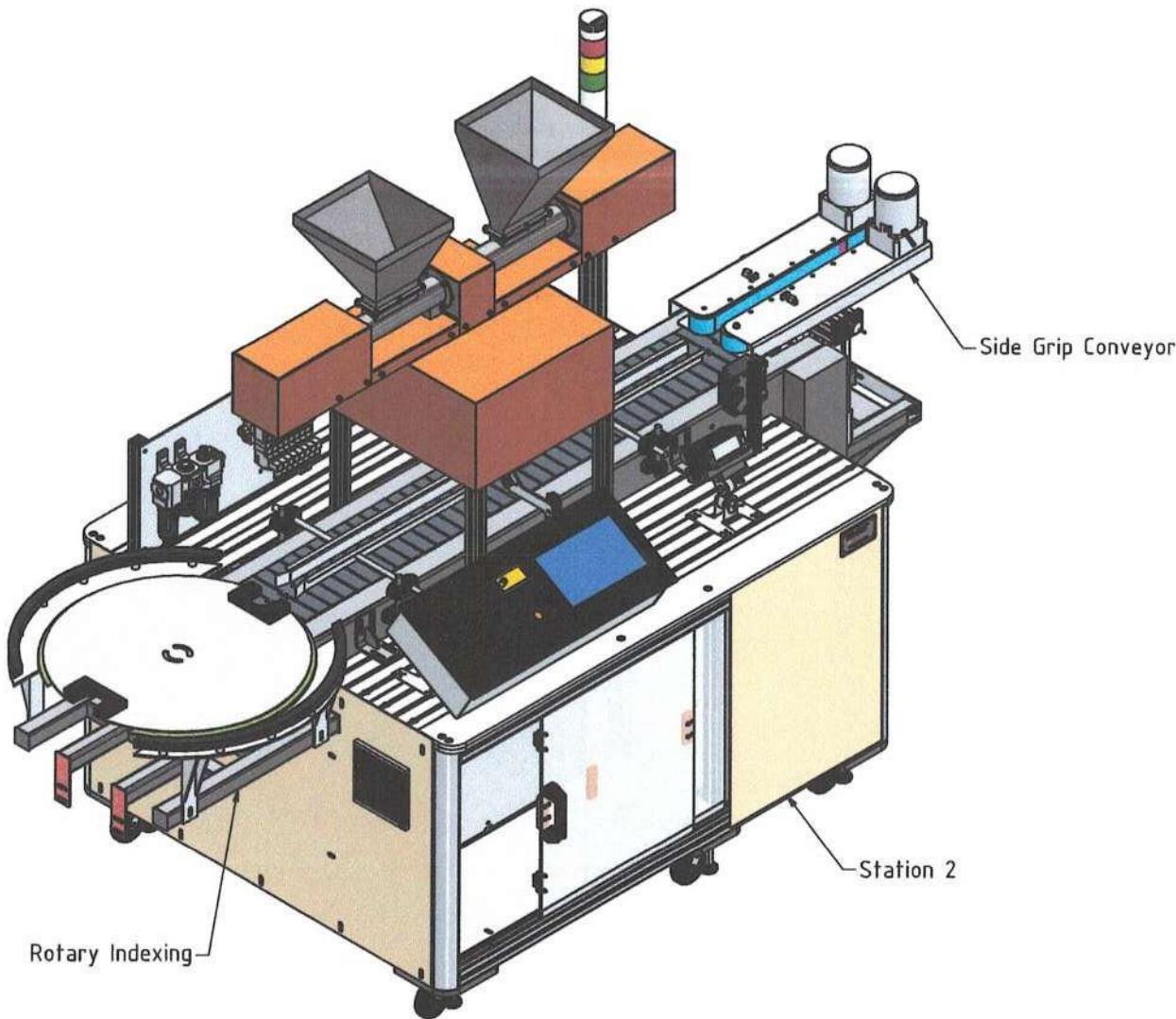
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1				1
2				2
3				3
4				4
PART NUMBER : SIGN CUSTOMER APPROVED	PART NAME : - DESIGNED BY YASIN CHECKED BY NUGROHO APPROVED BY ANDI DRAWING NO.	MATERIAL : DATE : 02/10/2023 CUSTOMER : PROJECT NO :	QTY : PROJECT NAME : SMART SYSTEM LAB TITLE : Station 3-b	MASS : N/A LOCATION : Sunter, DKI Jakarta PAGES : 1 SHEET : A3
A	B	C	D	E



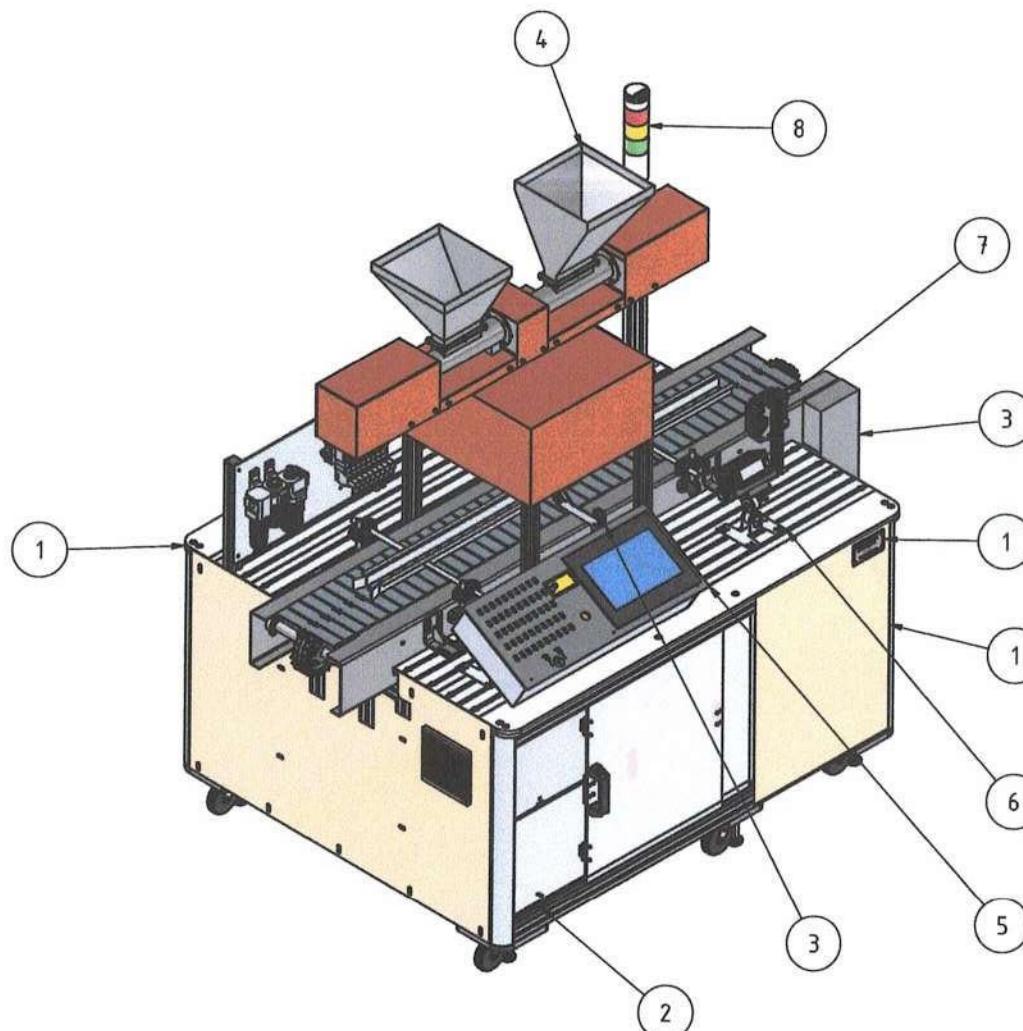
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ITEM	QTY	PART NAME	DESCRIPTION
8	1	Tower Lamp n Frame	See Dwg 1.8
7	1	RFID and Frame	See Dwg 1.7
6	1	Modul Load Cell	See Dwg 2.6
5	1	Operation Panel	See Dwg 1.6
4	1	Filling System	See Dwg 2.4
3	1	Table Top Chain Conveyor	See Dwg 2.3
2	1	Sliding Door St 1-4	See Dwg 2.2
1	1	Table Station	See Dwg 2.1

PART NUMBER :		PART NAME :			MATERIAL :		QTY :		MASS : N/A	
SIGN	CUSTOMER	NOTE	DESIGNED BY	YASIN	SCALE	DATE : 02/10/2023	PROJECT NAME :	LOCATION :	PAGES	
APPROVED		CHECKED BY		NUGROHO	1 : 12	CUSTOMER :	SMART SYSTEM LAB		Sunter, DKI Jakarta	
APPROVED BY		ANDI		PROJECT NO :	TITLE : Station 2_Filling Station		SSD INDUSTRIAL AUTOMATION AND ROBOTIC SOLUTION		SHEET A3	
DRAWING NO.		AY-UKP01-2.1-R0		- / -						

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A

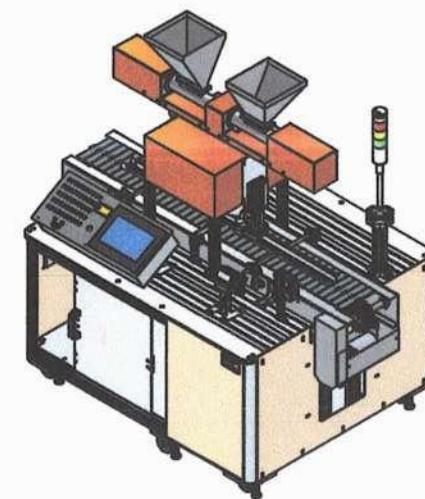
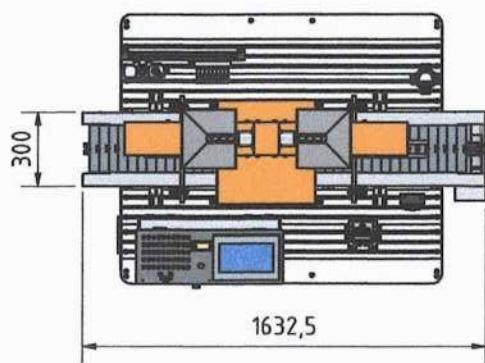
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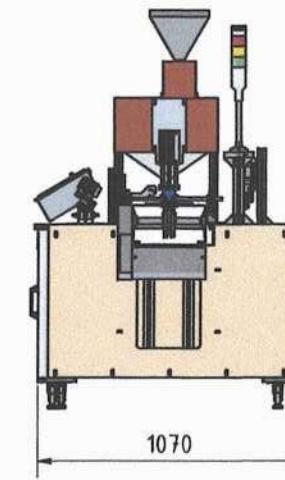
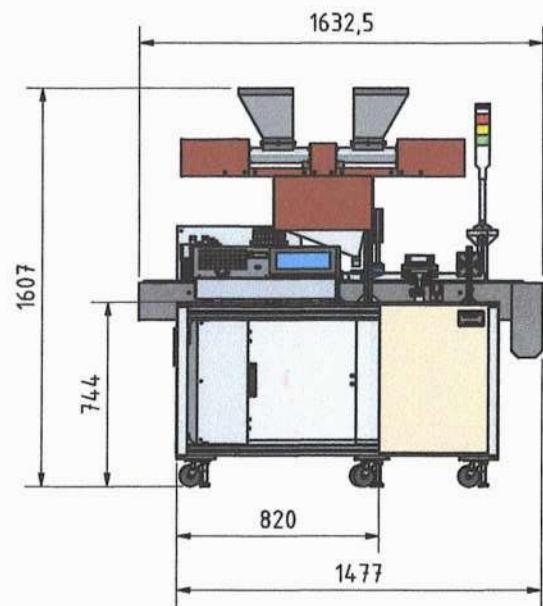
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PART NUMBER :		PART NAME :		MATERIAL :		QTY :		MASS : N/A	
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			APPROVED BY	ANDI				TITLE	PAGES
			DRAWING NO.	AY-UKP01-2.1-R0		PROJECT NO :	- / -	Station 2_Filling Station	3

A

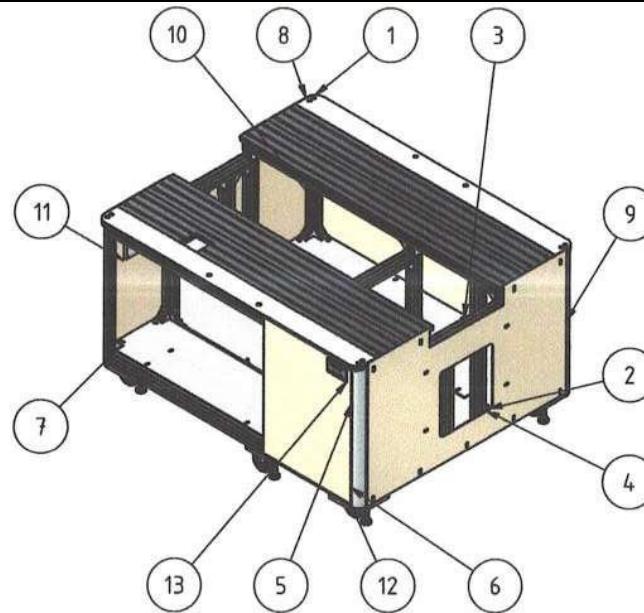
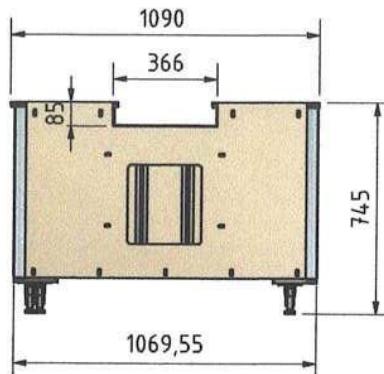
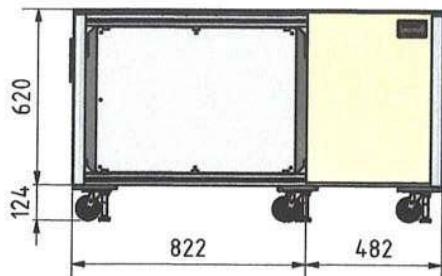
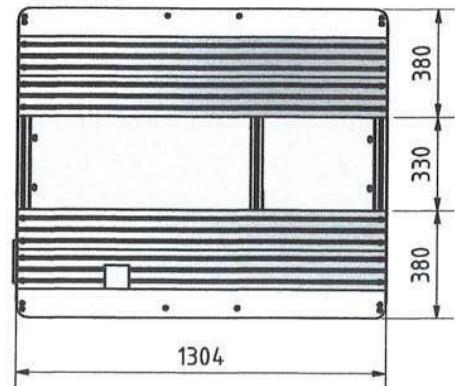
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A B C D E



ITEM	QTY	PART NAME	DESCRIPTION
13	1	Name Tag St. 2	
12	1	Front Cover St. 1 - 4	
11	1	Fan Filter GX-9803 SANKO	
10	1	Back Body Cover	
9	1	Side Body Cover St. 2B	
8	1	Side Body Cover St. 2A	
7	1	Plate Under Body Panel	
6	1	Plate Under Body Panel (Kecil)	
5	1	Plate Under Body Conveyor	
4	1	Plate Under Body Conveyor (Kecil)	
3	1	Plate Under Body Back	
2	1	Cover Under Body Back (Kecil)	
1	1	Frame Workstation 2	

PART NUMBER :		PART NAME :		MATERIAL :		QTY :		MASS : N/A	
SIGN	CUSTOMER	NOTE	DESIGNED BY	YASIN	SCALE	DATE : 02/10/2023	PROJECT NAME :	LOCATION :	PAGES
APPROVED			CHECKED BY	NUGROHO	1 : 18	CUSTOMER :	SMART SYSTEM LAB	Sunter, DKI Jakarta	4
			APPROVED BY	ANDI			TITLE :		
			DRAWING NO.				Table Station		
			PROJECT NO :					SSD	SHEET A3

A B C D E

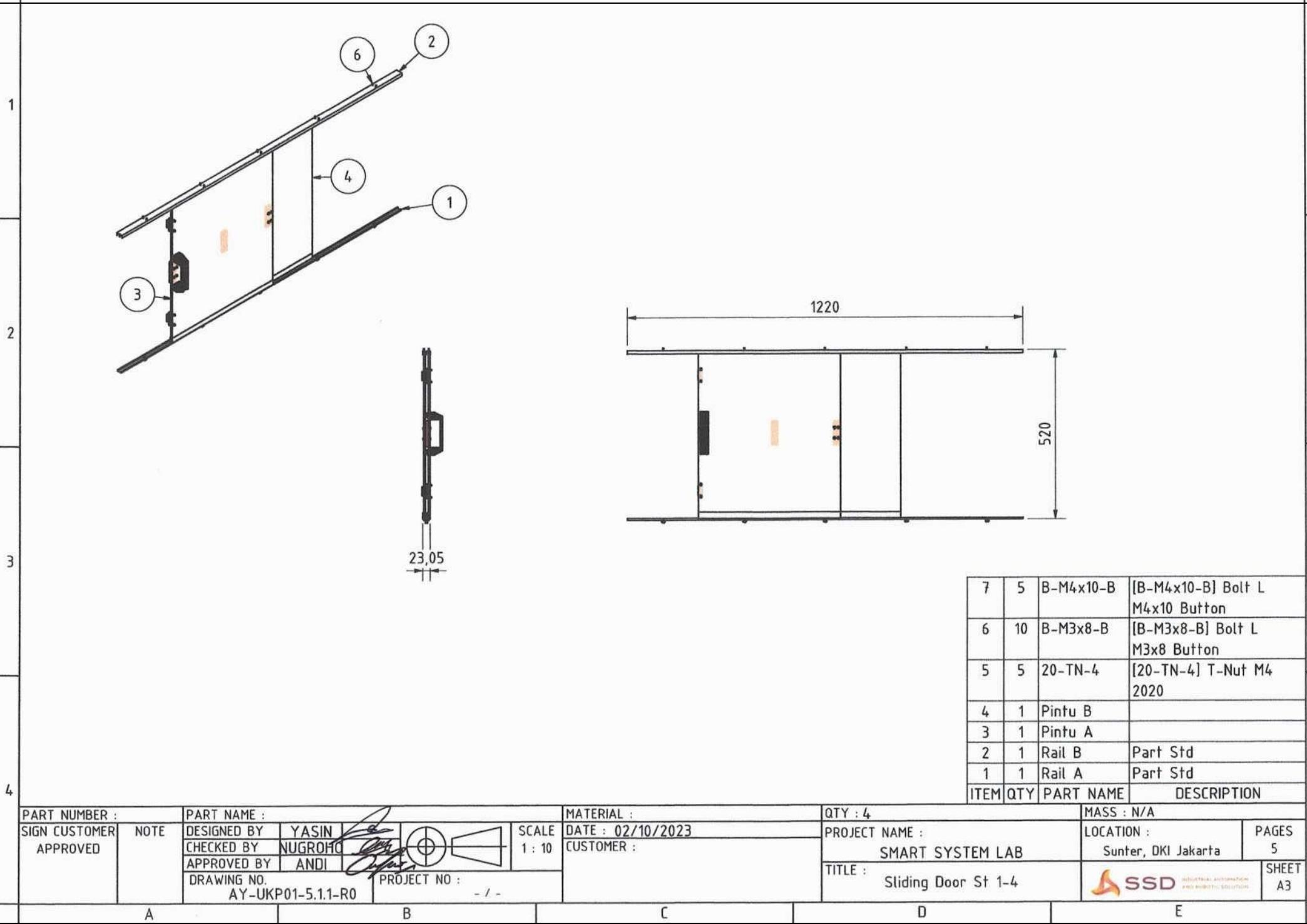
A

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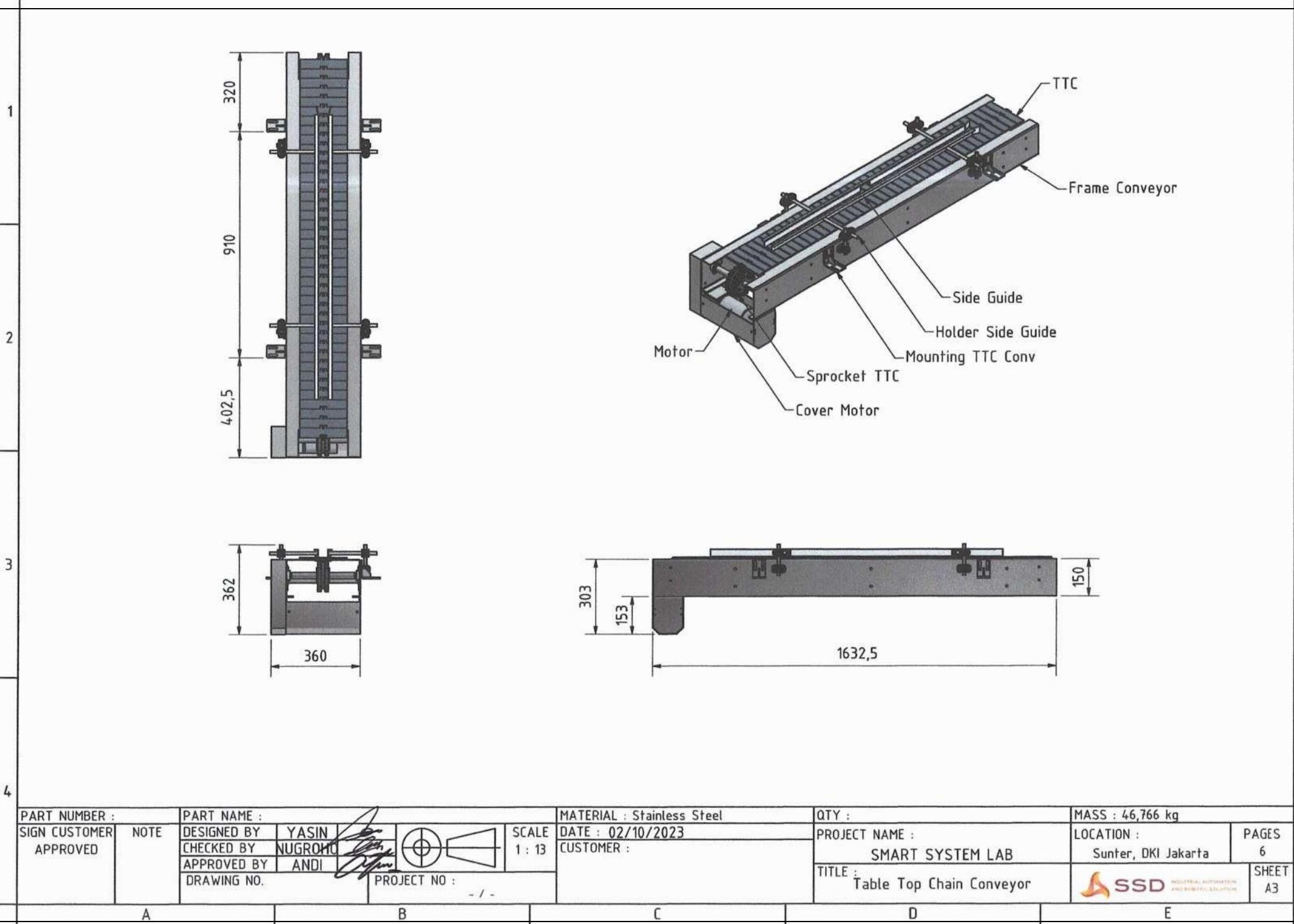
A

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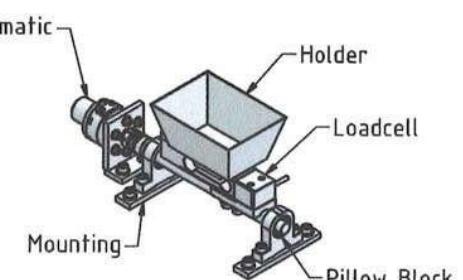
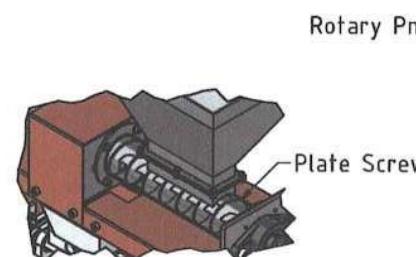
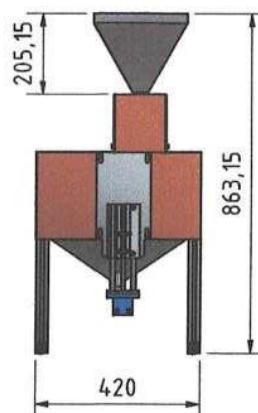
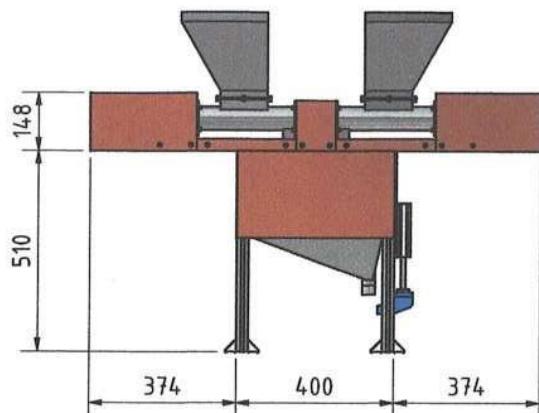
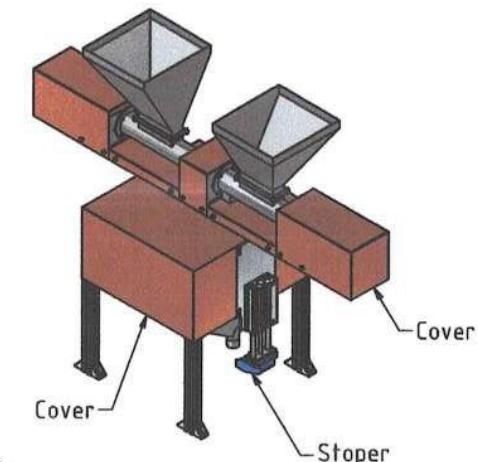
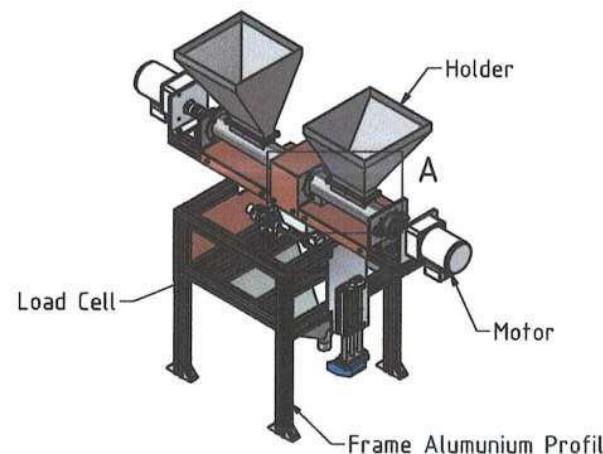
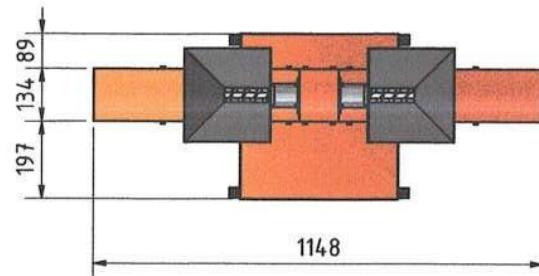
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Detail A

Detail LoadCell System

PART NUMBER :		PART NAME :		MATERIAL :		QTY :		MASS : N/A	
SIGN CUSTOMER APPROVED	NOTE	DESIGNED BY YASIN	CHECKED BY NUGROHO	SCALE 1 : 13	DATE : 02/10/2023 CUSTOMER :	PROJECT NAME : SMART SYSTEM LAB	LOCATION : Sunter, DKI Jakarta	PAGES 7	
		APPROVED BY ANDI	DRAWING NO. PROJECT NO : - / -			TITLE : Filling System			SHEET A3
									SSD INDUSTRIAL AUTOMATION AND MOBILE SOLUTION

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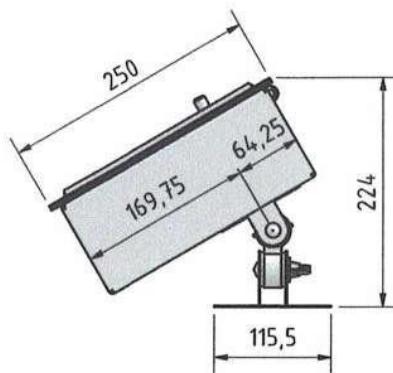
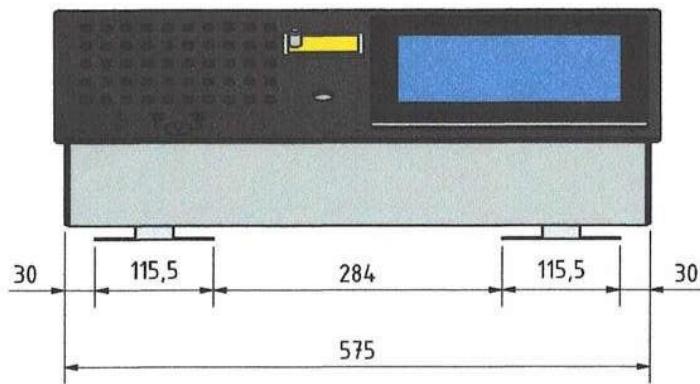
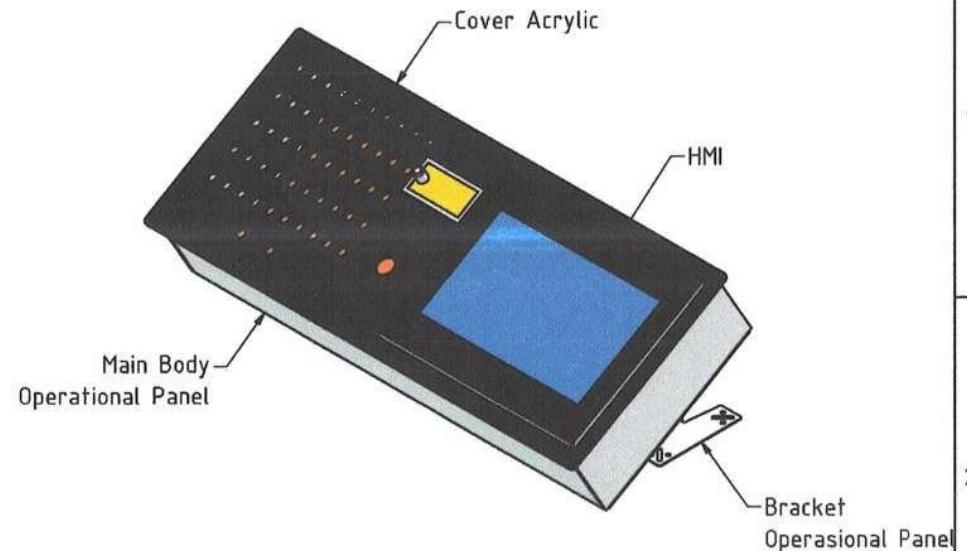
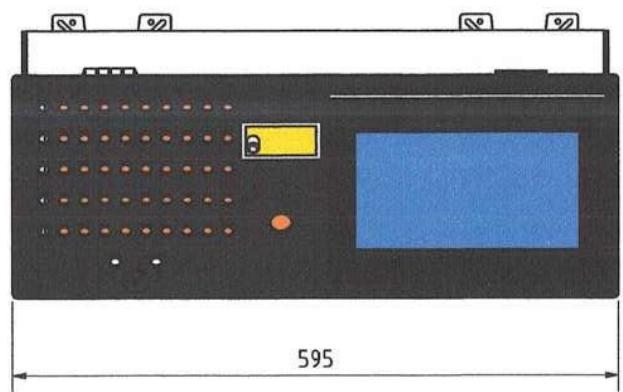
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PART NUMBER :		PART NAME :			MATERIAL :	QTY :	MASS : N/A	
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CHECKED BY NUGROHO		APPROVED BY ANDI			CUSTOMER :	TITLE : Operation Panel	PAGES 8	
DRAWING NO.		PROJECT NO.	- / -					SHEET A3

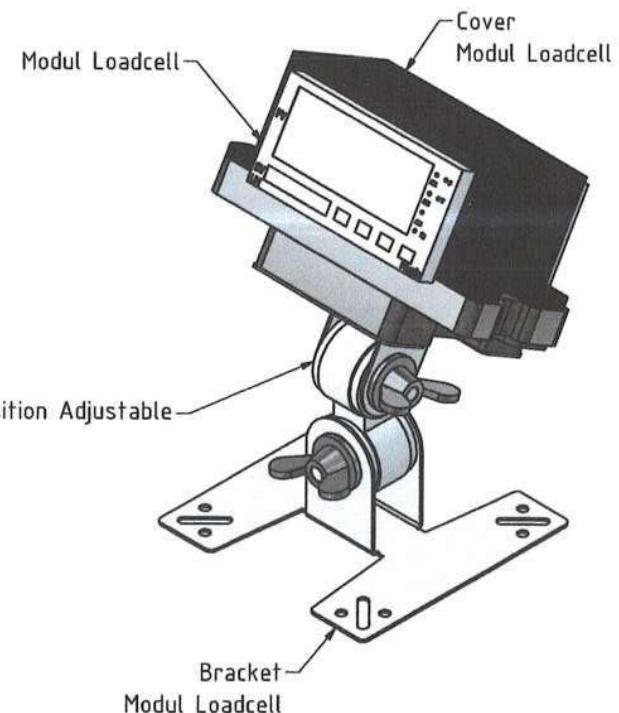
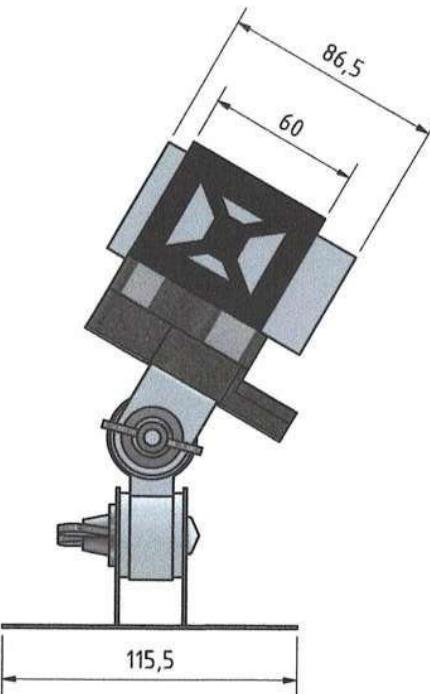
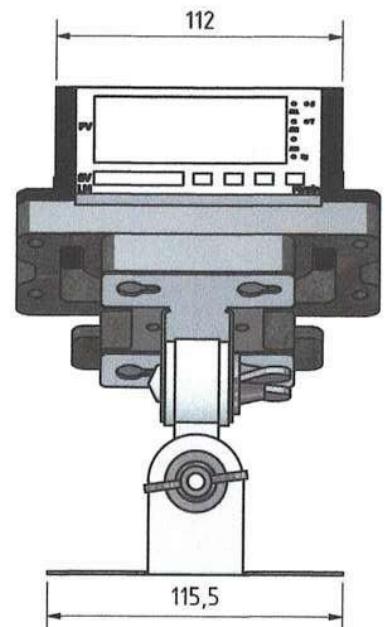
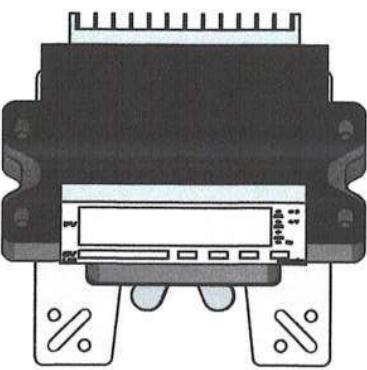
A

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PART NUMBER :	PART NAME :			MATERIAL :	QTY :	MASS : N/A
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APPROVED BY ANDI 	DRAWING NO.	PROJECT NO :	- / -		PROJECT NAME : SMART SYSTEM LAB	PAGES 9
					TITLE : Modul Load Cell	SHEET A3
A	B	C	D	E		

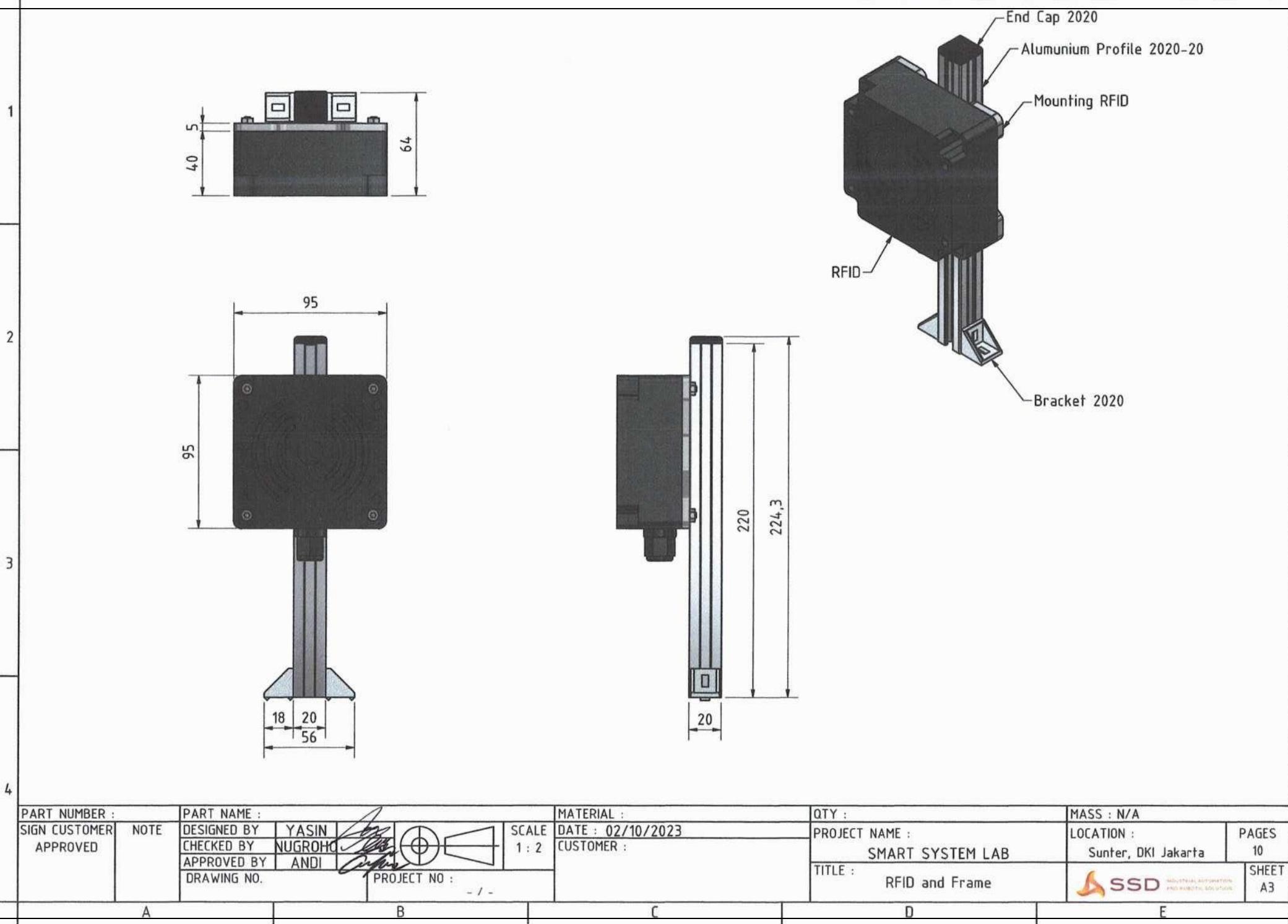
A

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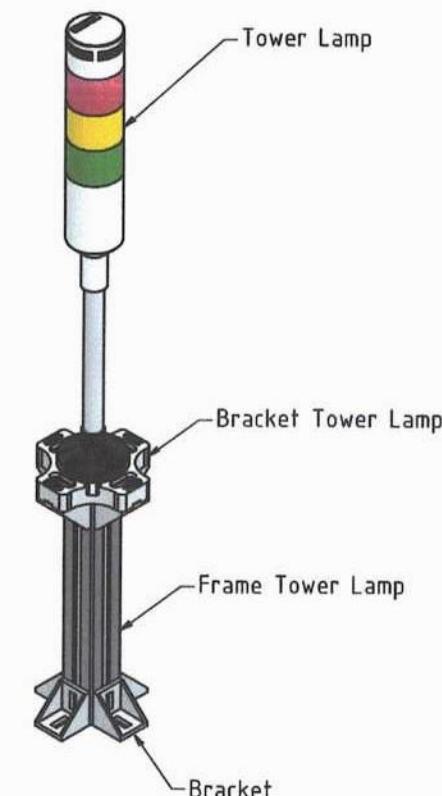
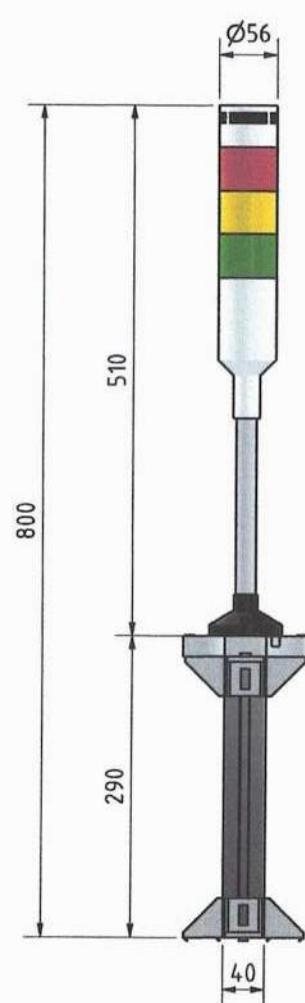
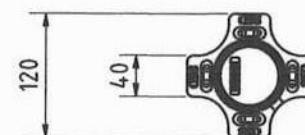
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PART NUMBER :		PART NAME :		MATERIAL :		QTY :		MASS : N/A	
SIGN CUSTOMER	NOTE	DESIGNED BY	YASIN	CHECKED BY	NUGROHO	SCALE	DATE : 02/10/2023	PROJECT NAME :	LOCATION :
APPROVED		APPROVED BY	ANDI	DRAWING NO.	PROJECT NO :	1 : 5	CUSTOMER :	SMART SYSTEM LAB	Sunter, DKI Jakarta
								TITLE : Tower Lamp n Frame	PAGES 11
								 SSD INDUSTRIAL AUTOMATION AND INNOVATION, SURABAYA	SHEET A3

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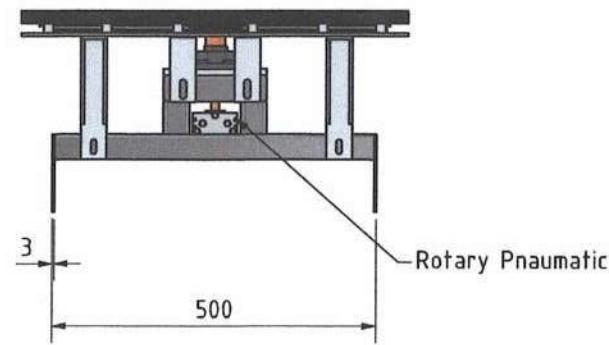
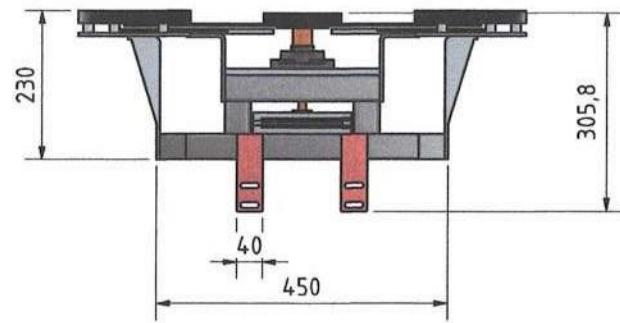
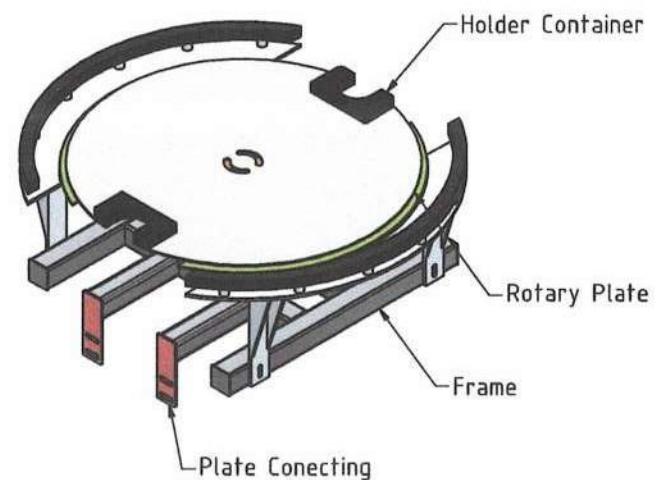
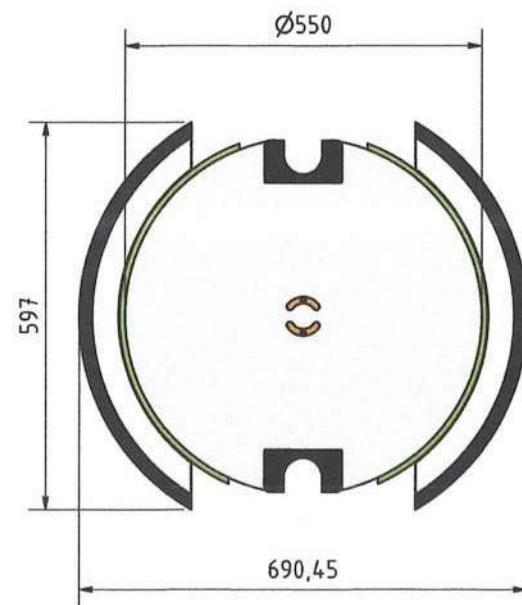
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DRAWING NO.	PROJECT NO.									
A	B	C	D	E						

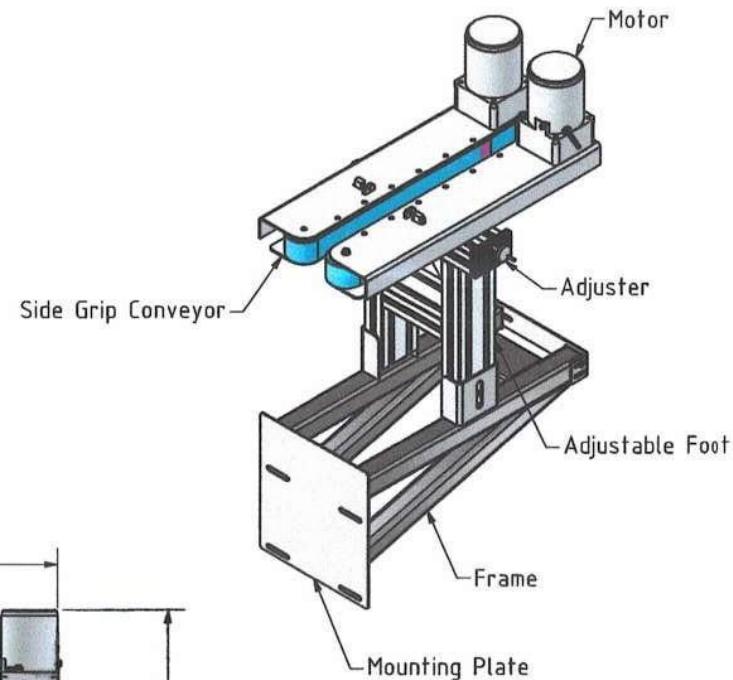
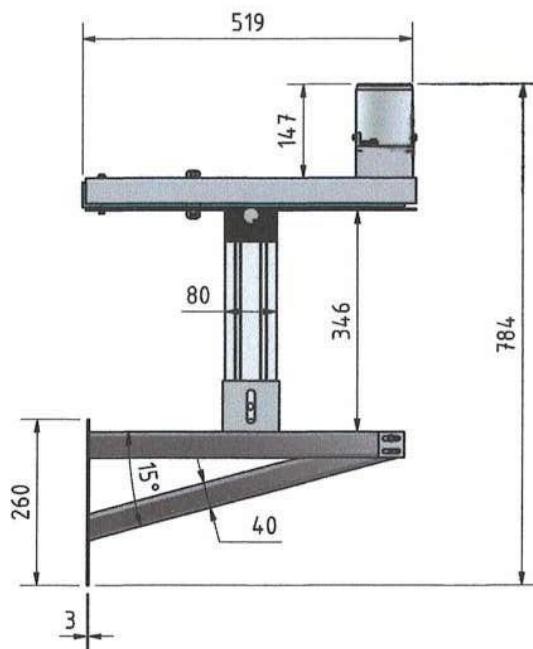
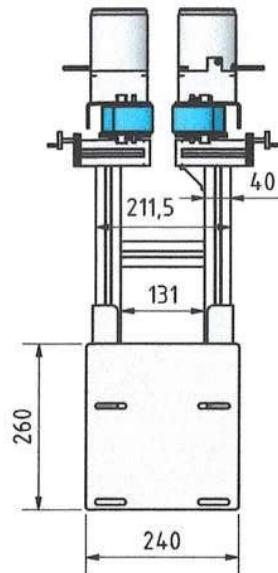
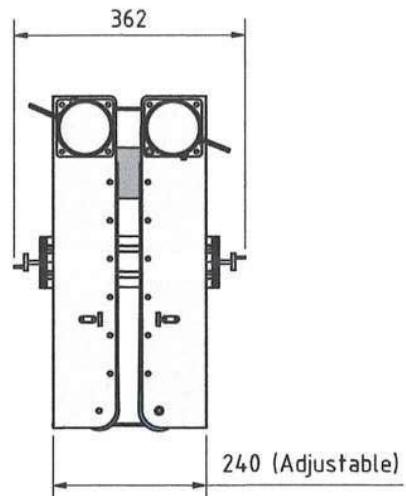
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PART NUMBER :		PART NAME : -			MATERIAL :		QTY :	MASS : N/A	
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			CHECKED BY	NUGROHO	1 : 8	CUSTOMER :	SMART SYSTEM LAB	Sunter, DKI Jakarta	13
			APPROVED BY	ANDI			TITLE :	Side Grip Conveyor	
			DRAWING NO.		PROJECT NO.:	- / -		 SSD	INDUSTRIAL AUTOMATION AND ANALYTIC SOLUTIONS

A

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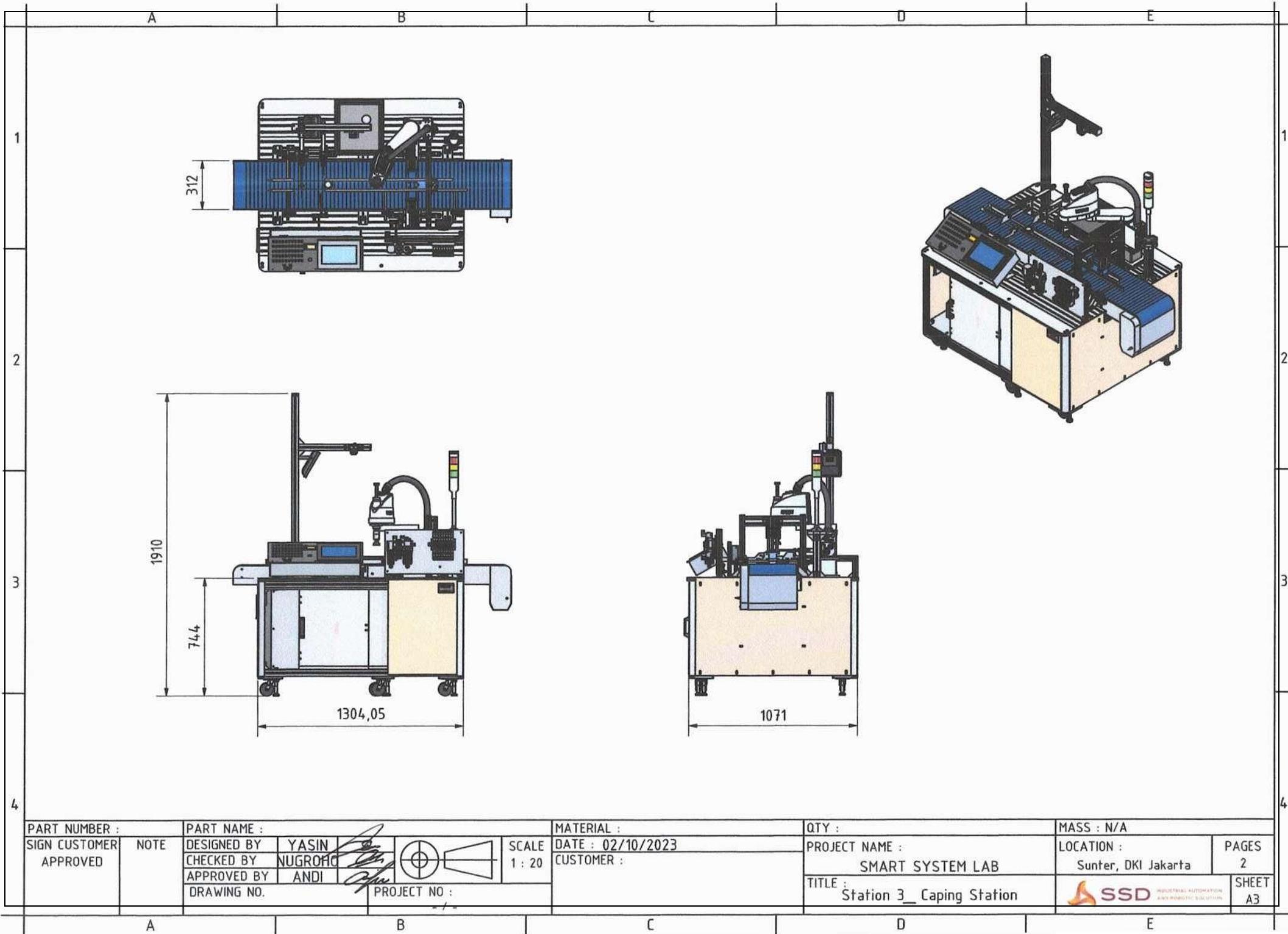
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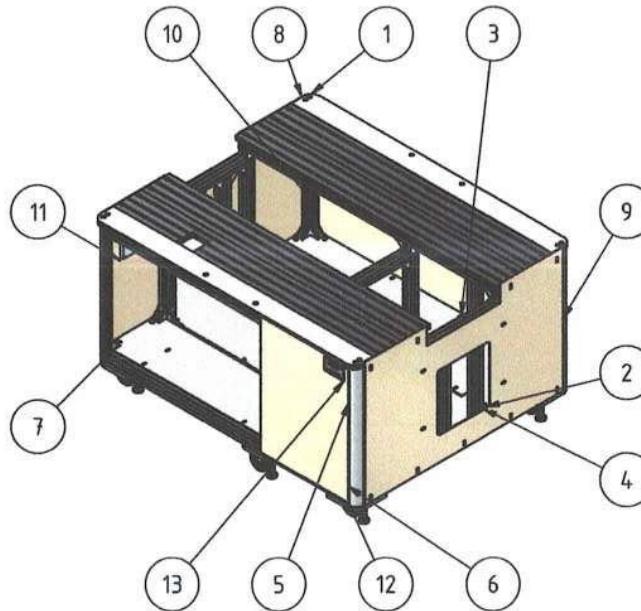
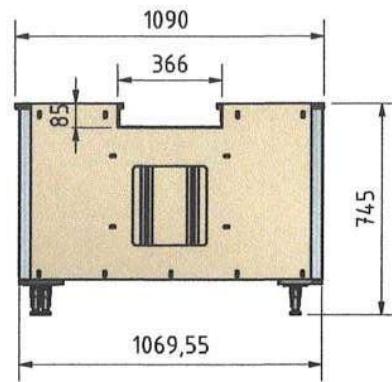
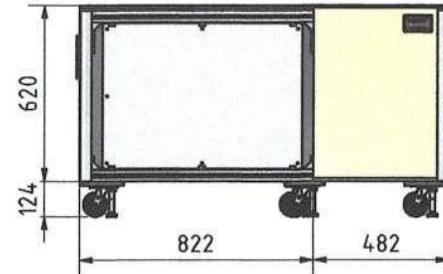
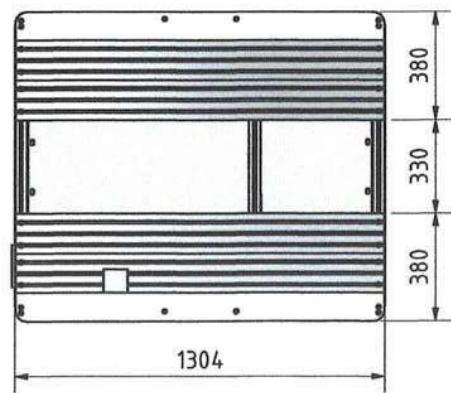
D

E

6.3 Drawing Mechanical Modul Edukasi Capping Station

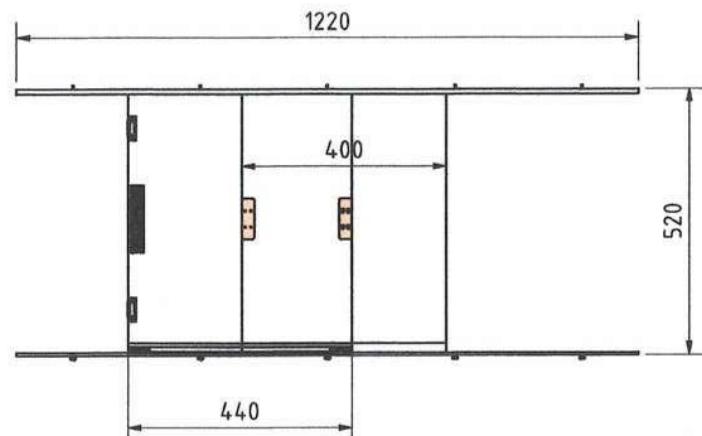
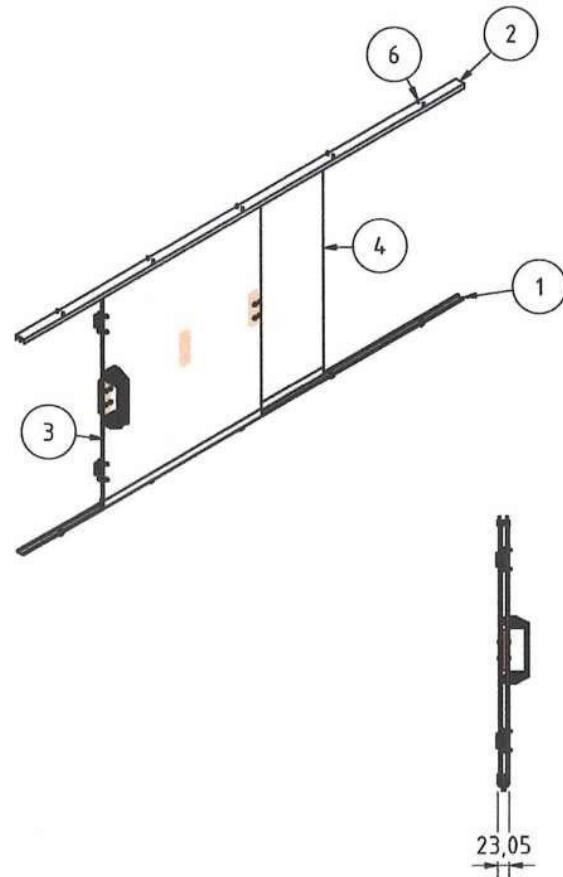
A	B	C	D	E	
1				1	
2				2	
3				3	
4				4	
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A	B	C	D	E	





ITEM	QTY	PART NAME	DESCRIPTION
13	1	Name Tag St. 2	
12	1	Front Cover St. 1 - 4	
11	1	Fan Filter GX-9803 SANKO	
10	1	Back Body Cover	
9	1	Side Body Cover St. 2B	
8	1	Side Body Cover St. 2A	
7	1	Plate Under Body Panel	
6	1	Plate Under Body Panel (Kecil)	
5	1	Plate Under Body Conveyor	
4	1	Plate Under Body Conveyor (Kecil)	
3	1	Plate Under Body Back	
2	1	Cover Under Body Back (Kecil)	
1	1	Frame Workstation 2	

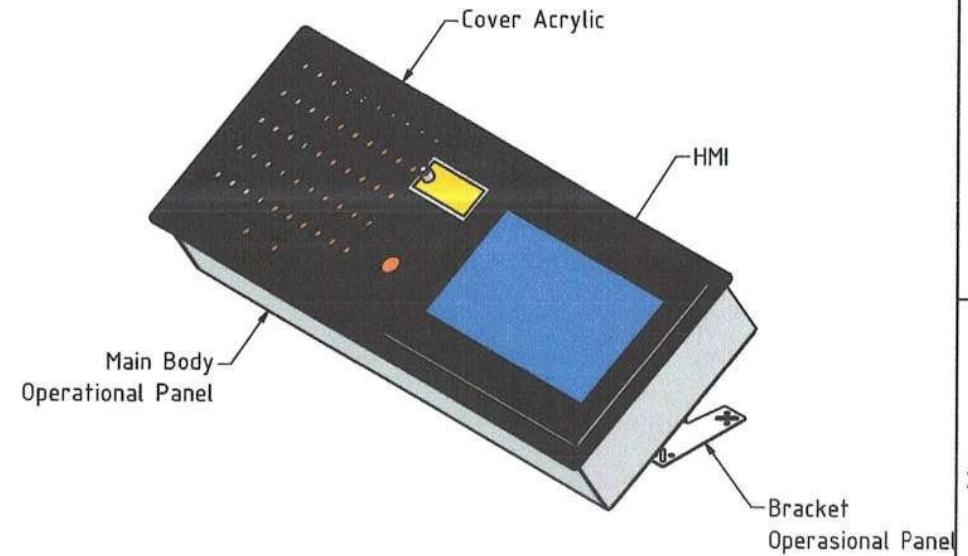
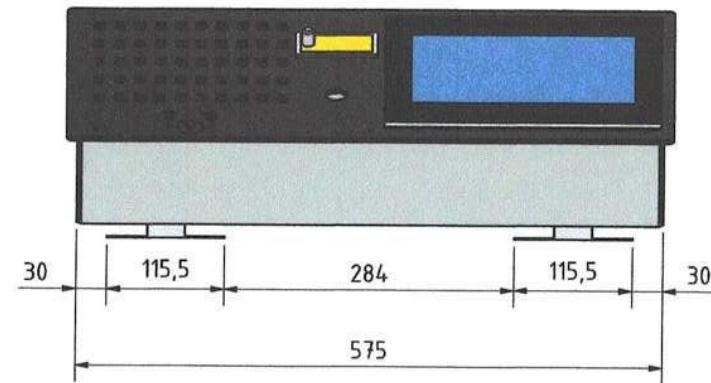
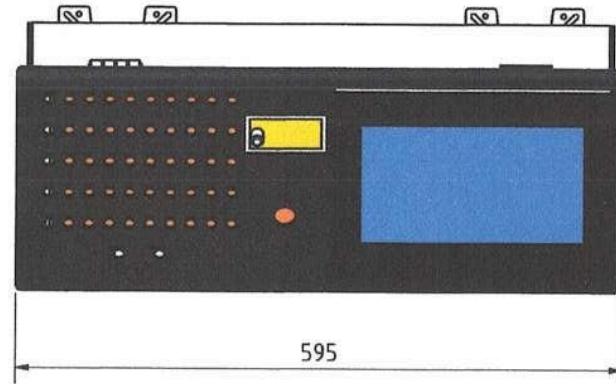
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SIGN	CUSTOMER	NOTE	DESIGNED BY	YASIN	SCALE	DATE : 02/10/2023	PROJECT NAME : SMART SYSTEM LAB	LOCATION :	PAGES
APPROVED			CHECKED BY	NUGROHO	1 : 18	CUSTOMER :	SMART SYSTEM LAB	Sunter, DKI Jakarta	3
			APPROVED BY	ANDI			TITLE :	Station 3 b	
			DRAWING NO.						
			PROJECT NO.						
			1	- / -					



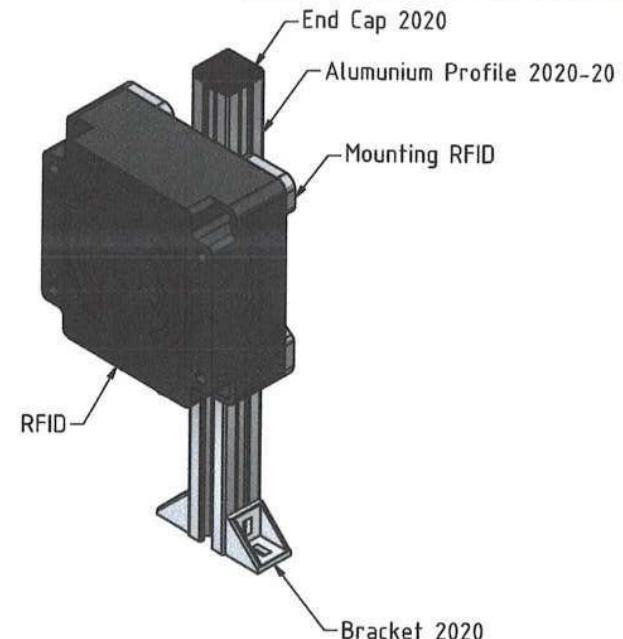
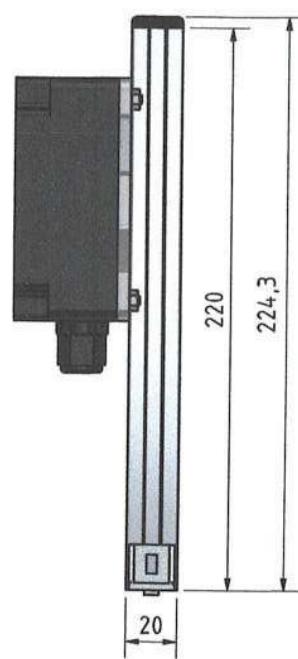
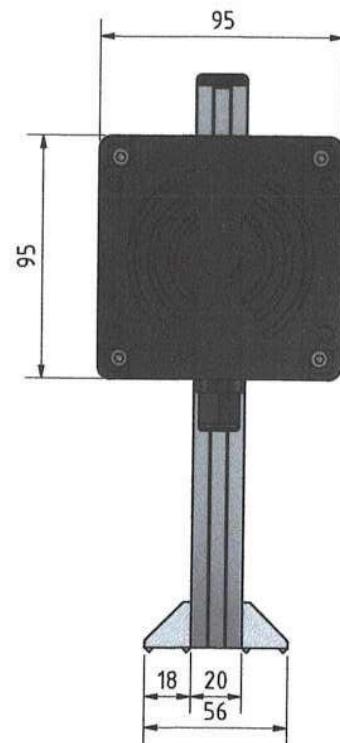
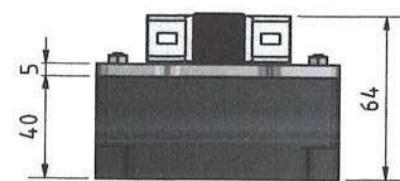
ITEM	QTY	PART NAME	DESCRIPTION
7	5	B-M4x10-B	[B-M4x10-B] Bolt L M4x10 Button
6	10	B-M3x8-B	[B-M3x8-B] Bolt L M3x8 Button
5	5	20-TN-4	[20-TN-4] T-Nut M4 2020
4	1	Pintu B	
3	1	Pintu A	
2	1	Rail B	Part Std
1	1	Rail A	Part Std

PART NUMBER :		PART NAME :		MATERIAL :		QTY : 4		MASS : N/A	
SIGN	CUSTOMER	NOTE	DESIGNED BY	YASIN	SCALE	DATE : 02/10/2023	PROJECT NAME :		LOCATION :
APPROVED			CHECKED BY	NUGROHO	1 : 10	CUSTOMER :	SMART SYSTEM LAB		Sunter, DKI Jakarta
			APPROVED BY	ANDI			TITLE :		PAGES
			DRAWING NO.	AY-UKP01-5.1.1-R0		PROJECT NO :	Sliding Door St 1-4		4
						- / -			SHEET
									A3

A B C D E



PART NUMBER :		PART NAME : -		MATERIAL :		QTY :		MASS : N/A	
SIGN	CUSTOMER	NOTE	DESIGNED BY	YASIN	SCALE	DATE : 02/10/2023	PROJECT NAME : SMART SYSTEM LAB	LOCATION :	PAGES
APPROVED			CHECKED BY	NUGROHO	1 : 5	CUSTOMER :	SMART SYSTEM LAB	Sunter, DKI Jakarta	5
DRAWING NO.			APPROVED BY	ANDI	PROJECT NO :		TITLE :	Station 3 b	
					1	- / -			
A	B	C	D	E					



PART NUMBER :	PART NAME : -			MATERIAL :	QTY :	MASS : N/A
SIGN CUSTOMER	NOTE	DESIGNED BY	YASIN	DATE : 02/10/2023	PROJECT NAME : SMART SYSTEM LAB	LOCATION : Sunter, DKI Jakarta
APPROVED		CHECKED BY	NUGROHO	CUSTOMER :	SMART SYSTEM LAB	PAGES 6
DRAWING NO.		APPROVED BY	ANDI	TITLE :	Station 3 b	
A	B	C	D	E		
					 SSD INDUSTRIAL AUTOMATION AND ROBOTIC SOLUTION	
						SHEET A3

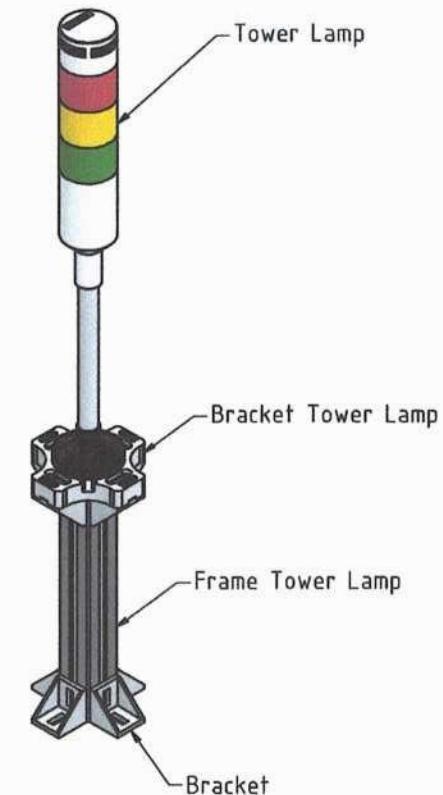
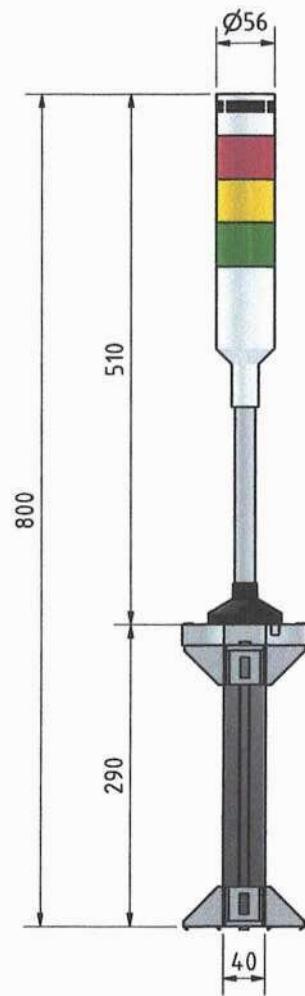
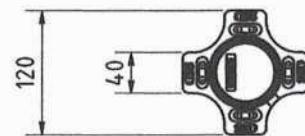
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PART NUMBER :		PART NAME :-		MATERIAL :		QTY :		MASS : N/A	
SIGN	CUSTOMER	NOTE	DESIGNED BY	YASIN	SCALE	DATE	PROJECT NAME	LOCATION	PAGES
APPROVED			CHECKED BY	NUGROHO	1 : 5	02/10/2023	SMART SYSTEM LAB	Sunter, DKI Jakarta	7
			APPROVED BY	ANDI		CUSTOMER :	SMART SYSTEM LAB		
			DRAWING NO.		PROJECT NO :		TITLE :	Station 3 b	
			1		-/-				

A

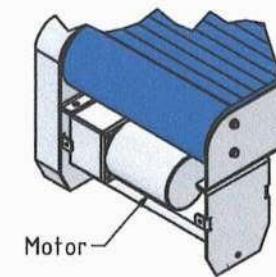
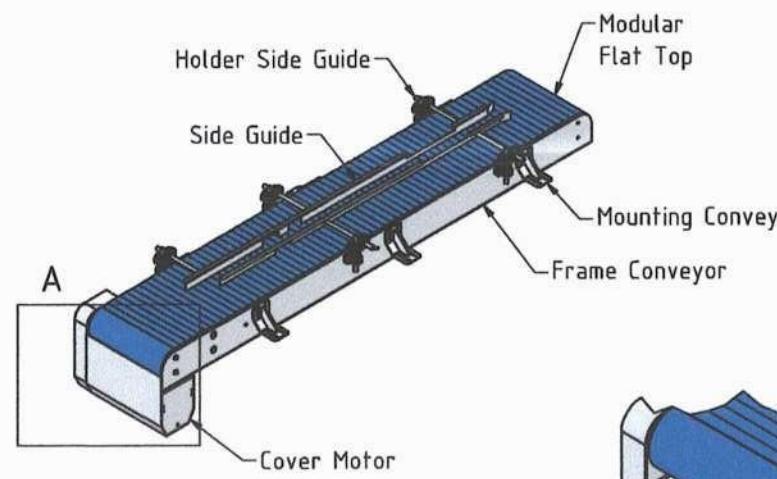
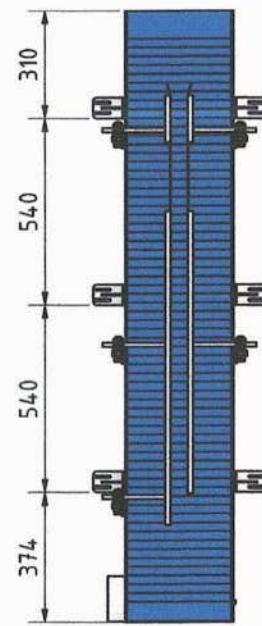
B

C

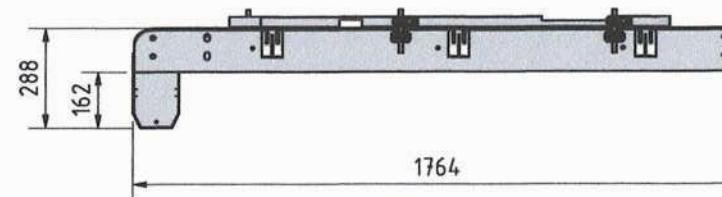
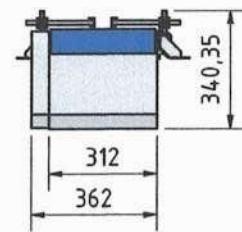
D

E

A B C D E



Detail A



PART NUMBER :		PART NAME : -			MATERIAL :	QTY :	MASS : N/A
SIGN	CUSTOMER	NOTE	DESIGNED BY	YASIN	DATE : 02/10/2023	PROJECT NAME : SMART SYSTEM LAB	LOCATION : Sunter, DKI Jakarta
APPROVED			CHECKED BY	NUGROHO	CUSTOMER :	SMART SYSTEM LAB	PAGES : 8
DRAWING NO.	1	PROJECT NO :	ANDI			TITLE : Station 3 b	
							SSD INTEGRATED AUTOMATION AND ROBOTIC SOLUTIONS

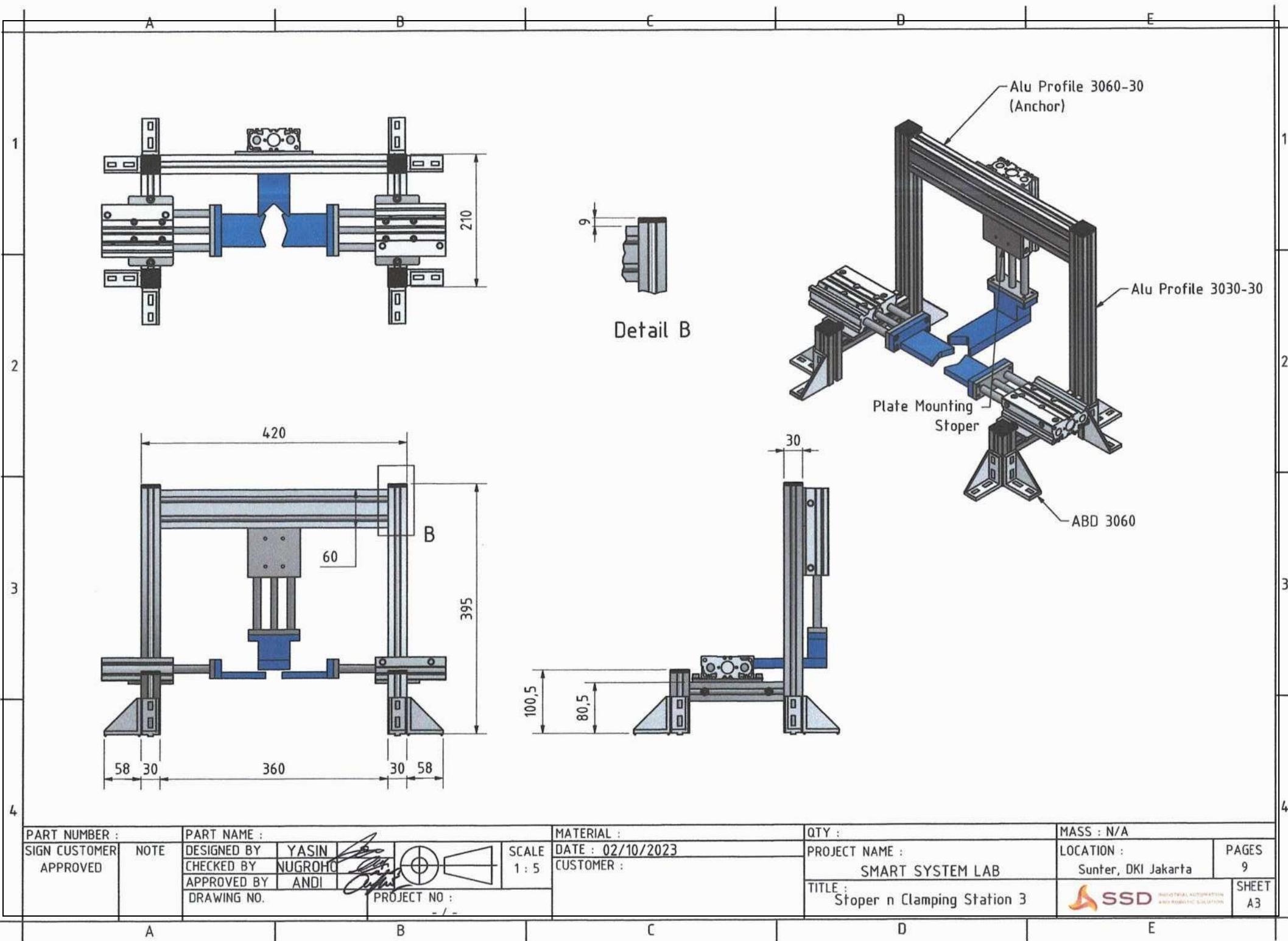
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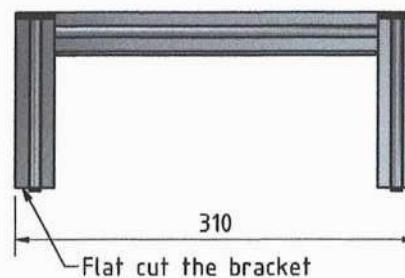
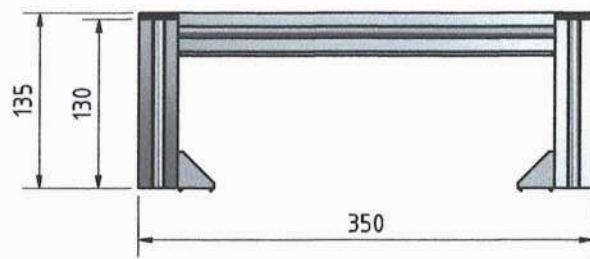
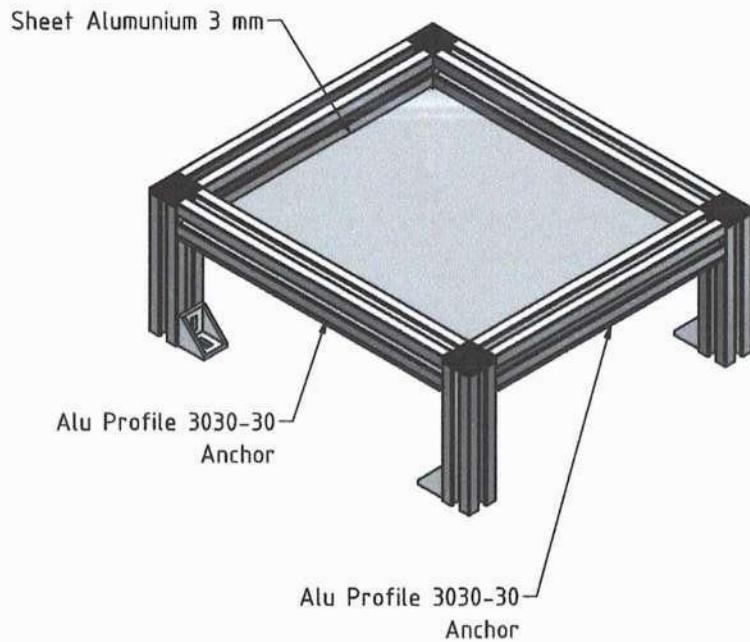
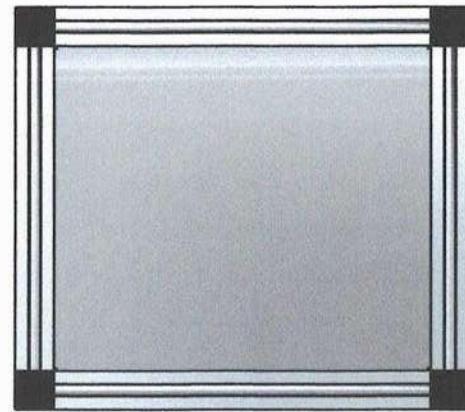
B

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D

E





PART NUMBER :	PART NAME :			MATERIAL :	QTY : 1 Pcs	MASS : N/A
SIGN CUSTOMER APPROVED	NOTE	DESIGNED BY YASIN	YASIN	SCALE 1 : 4	DATE : 02/10/2023	PROJECT NAME : SMART SYSTEM LAB
		CHECKED BY NUGROHO	NUGROHO		CUSTOMER :	LOCATION : Sunter, DKI Jakarta
		APPROVED BY ANDI	ANDI			PAGES 10
		DRAWING NO.	PROJECT NO :		TITLE : Box Caping	SSD INDUSTRIAL AUTOMATION AND ROBOTIC SOLUTION

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SHEET
A3

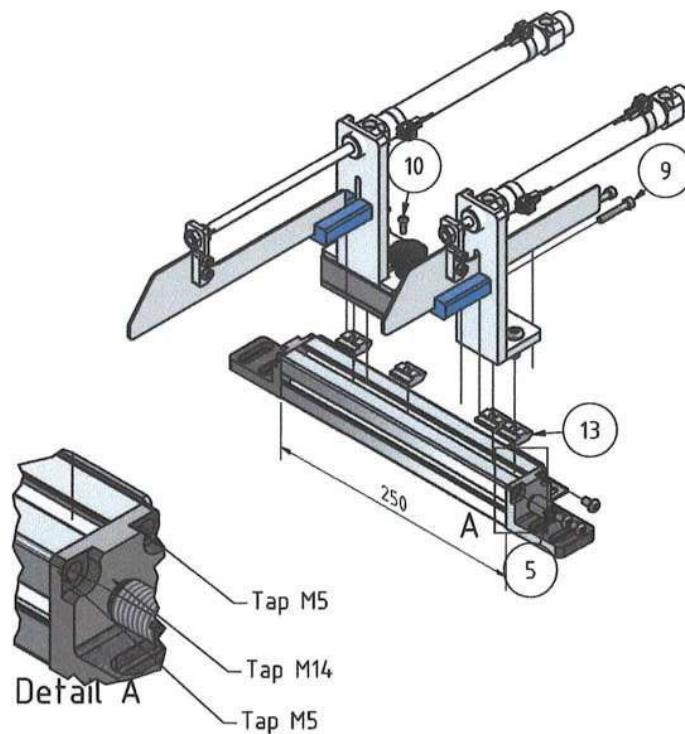
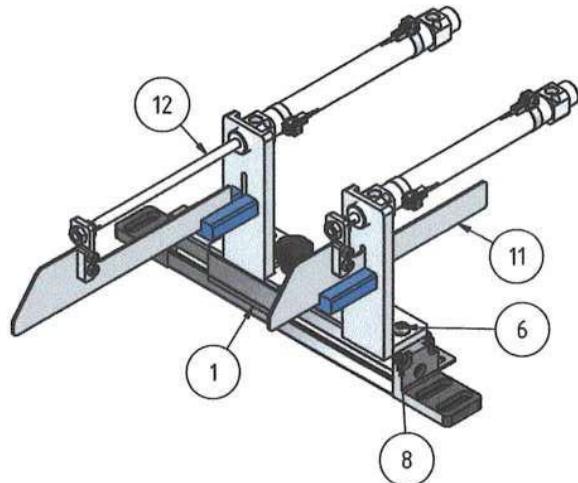
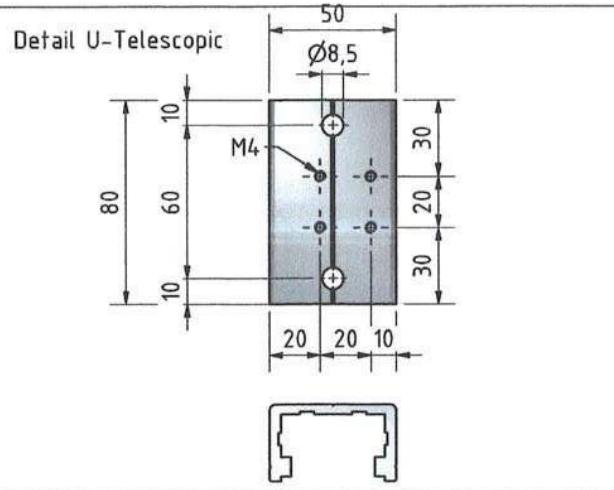
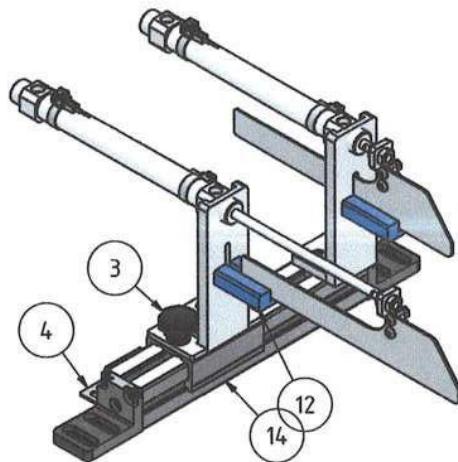
A

B

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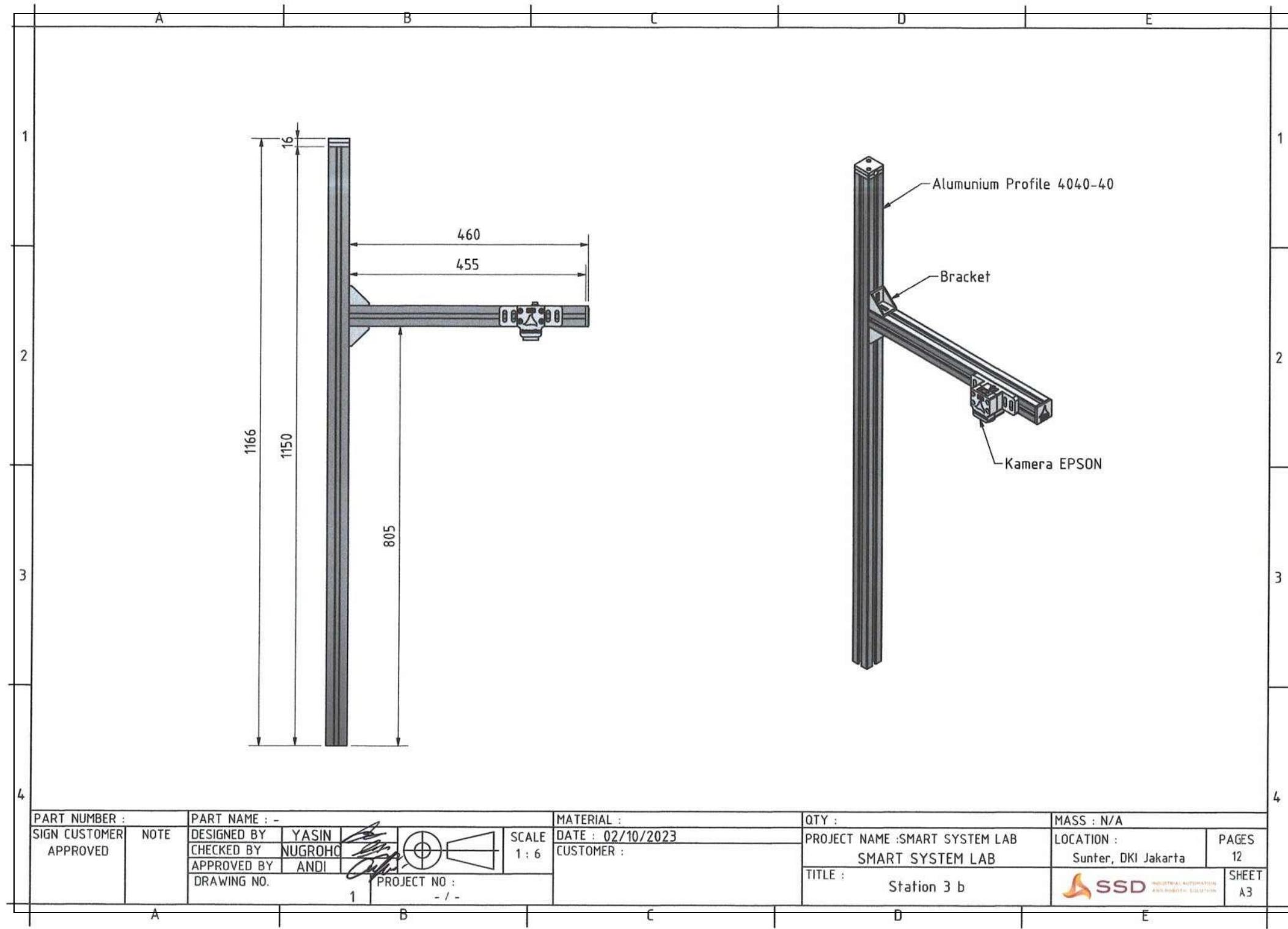
D

E

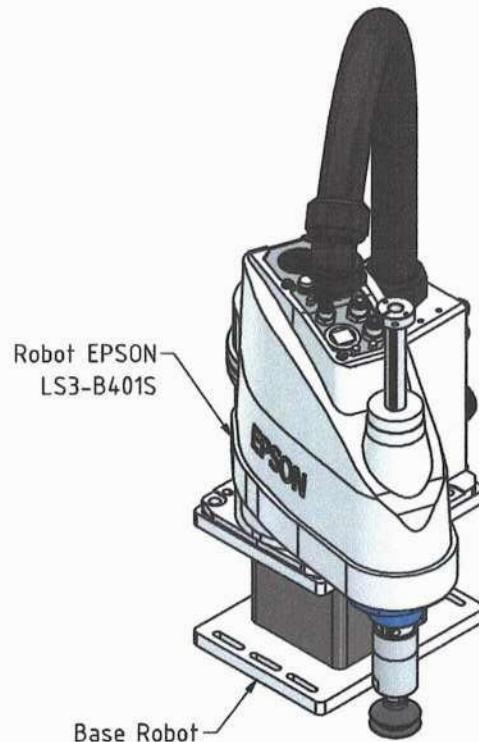
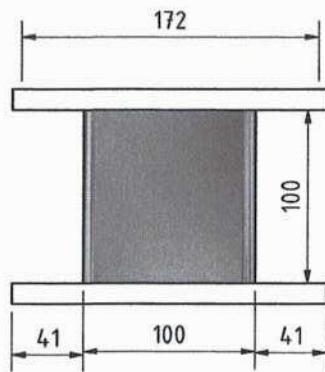
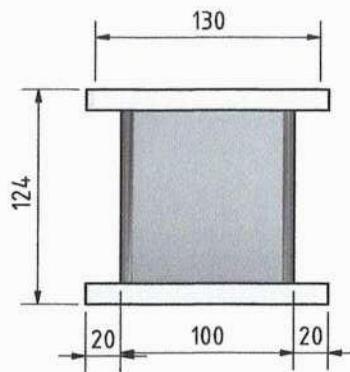
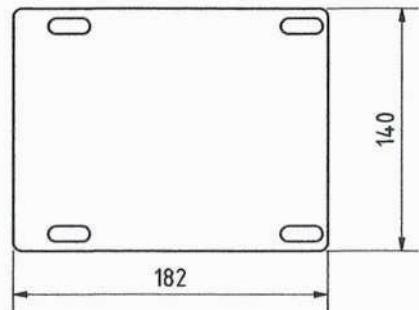
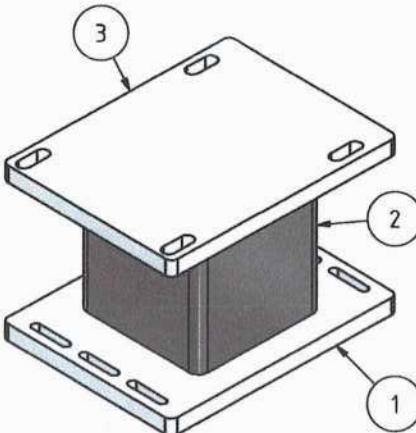


ITEM	QTY	PART NAME	DESCRIPTION
14	1	40-4040 : 250 mm	-
13	4	40-SN-8	-
12	1	Assy Stopper 1	-
11	1	Assy Stopper 2	-
10	4	B-M4x12-B	-
9	2	B-M5x30	-
8	6	B-M6x10-B	-
7	2	B-M8x12-B	-
6	2	B-M8x20-B	-
5	2	Hole Reducer-M6-M14	-
4	2	Mounting A	-
3	2	Star Knob-M8x20	-
2	2	Steel Sheet 6mm (2400mm x 1200mm) : 40 mm x 40 mm	-
1	1	U-TEL : 80mm	-

PART NUMBER :		PART NAME :		MATERIAL :	QTY : 2		MASS : N/A	
SIGN CUSTOMER	NOTE	DESIGNED BY	YASIN		DATE : 02/10/2023	PROJECT NAME :		LOCATION :
APPROVED		CHECKED BY	NUGROHO		CUSTOMER :	SMART SYSTEM LAB		PAGES
		APPROVED BY	ANDI			TITLE : Adjuster Stopper		11
		DRAWING NO.		PROJECT NO :	- / -	SSD		SHEET A3

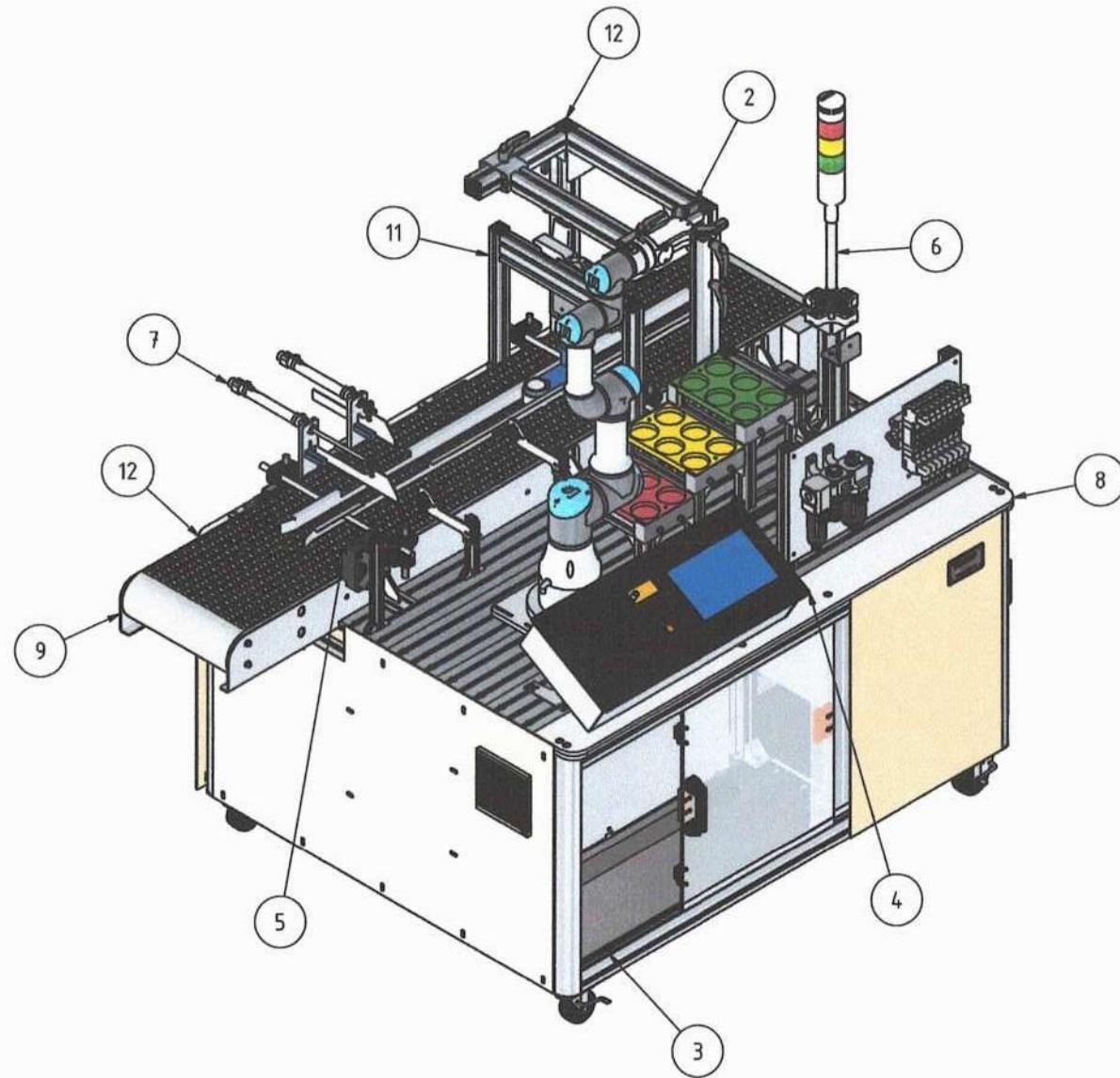


ITEM	QTY	PART NAME	DESCRIPTION
1	1	Bottom Plate	-
2	1	Hollow 100 x 100 : 100 mm	-
3	1	Top Plate	-



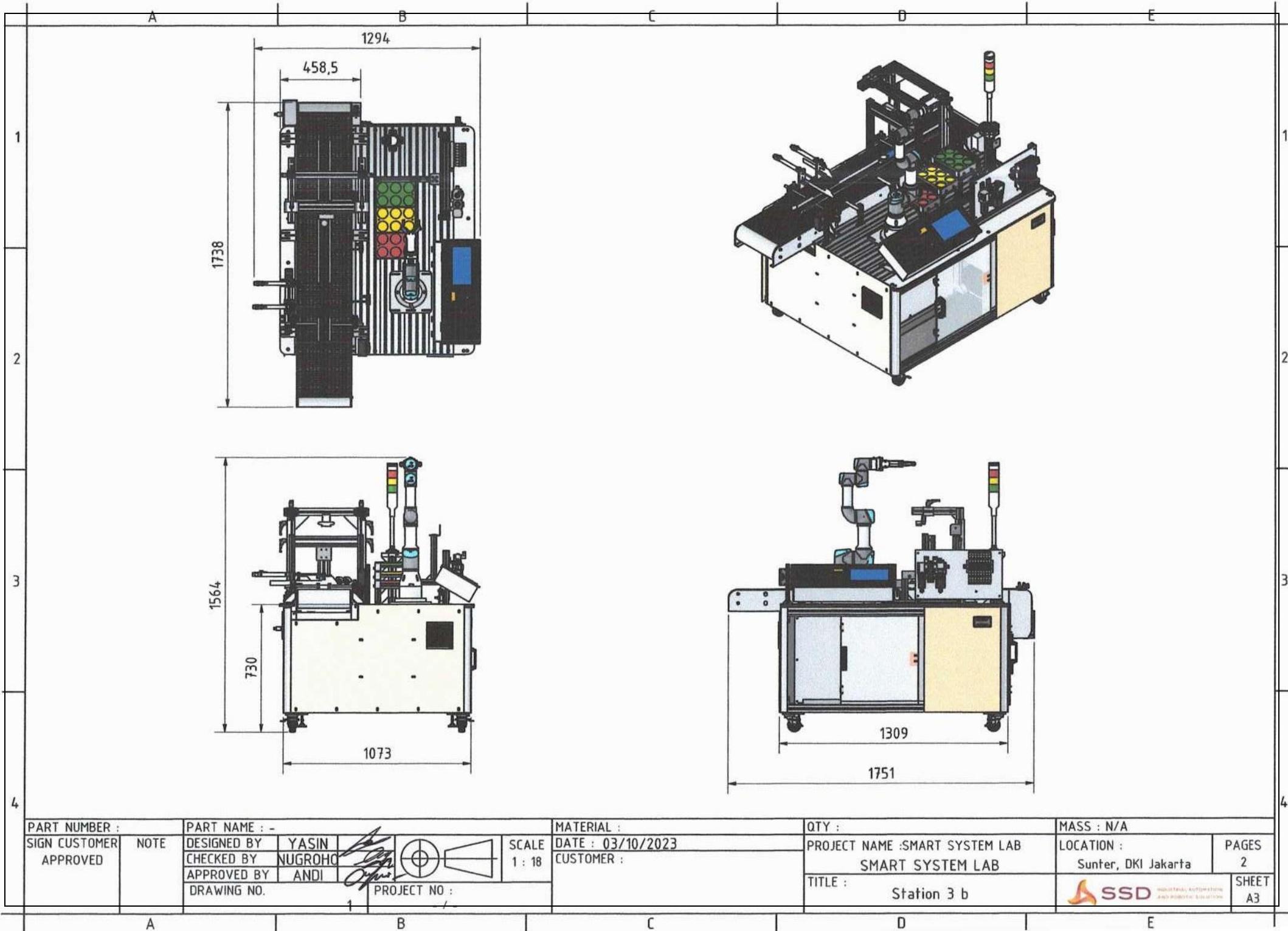
PART NUMBER :		PART NAME :		MATERIAL :		QTY : 1		MASS : N/A	
SIGN CUSTOMER APPROVED	NOTE	DESIGNED BY CHECKED BY APPROVED BY DRAWING NO.	YASIN NUGROHO ANDI /	SCALE 1 : 3	DATE : 02/10/2023 CUSTOMER :	PROJECT NAME : SMART SYSTEM LAB TITLE : Base Robot St. 3		LOCATION : Sunter, DKI Jakarta	PAGES 13
								SSD INDUSTRIAL AUTOMATION AND ROBOTIC SOLUTIONS	
A		B		C		D		E	

6.4 Drawing Mechanical Modul Edukasi Inspection and Storing Station



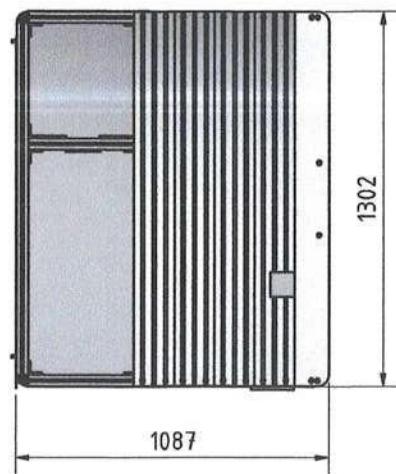
ITEM	QTY	PART NAME	DESCRIPTION
12	1	Frame Camera Station 4	See Dwg 4.5
11	1	Stoper Station 4	See Dwg 4.4
10	1	Terminal Container	See Dwg 4.3
9	1	Modular Conveyor	See Dwg 4.2
8	1	Table Station 4	See Dwg 4.1
7	1	Adjuster Stopper	See Dwg 3.4
6	1	Tower Lamp n Frame	See Dwg 1.8
5	1	RFID and Frame	See Dwg 1.7
4	1	Operation Panel	See Dwg 1.6
3	1	Sliding Door St 1-4	See Dwg 2.2
2	1	Robot UR 3	Robot UR 3
1	1	Kontrol Box UR	(9B8 HL) eSeries_Contr ol_Box CB5.1

PART NUMBER :		PART NAME : 			MATERIAL :	QTY :	MASS : N/A	
SIGN CUSTOMER APPROVED	NOTE	DESIGNED BY	YASIN	DATE : 03/10/2023	PROJECT NAME : SMART SYSTEM LAB			LOCATION : Sunter, DKI Jakarta PAGES 1
		CHECKED BY	NUGROHO	CUSTOMER :				
		APPROVED BY	ANDI	SCALE 1 : 10	TITLE : Station 4_Inspection and Storing			SHEET A3
		DRAWING NO.	PROJECT NO : / -		 <small>Smart System Development & Design Solutions</small>			

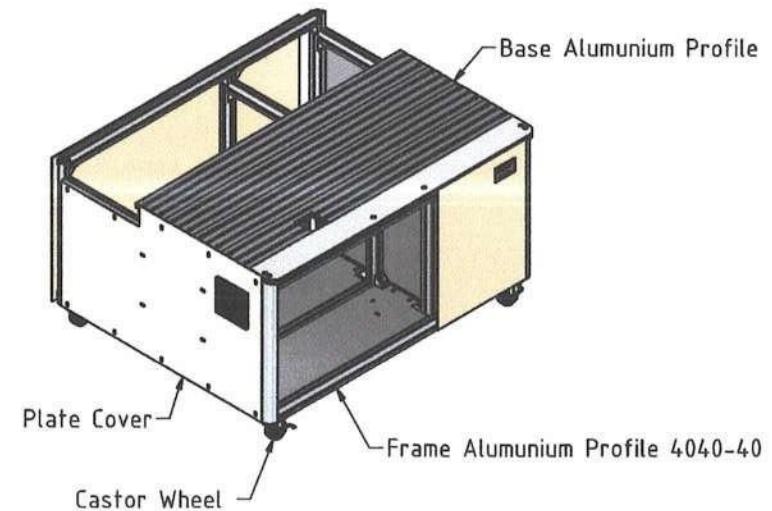


A B C D E

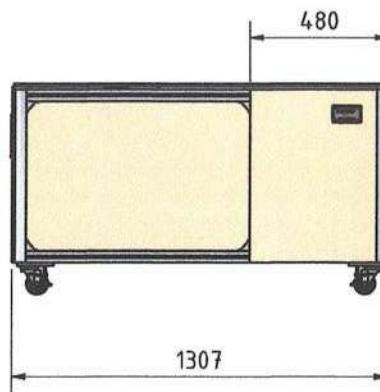
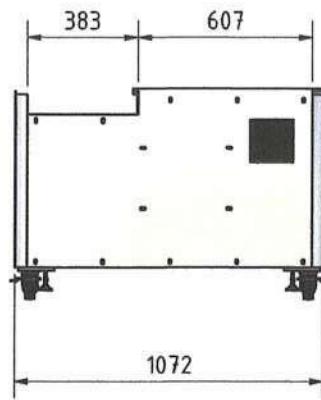
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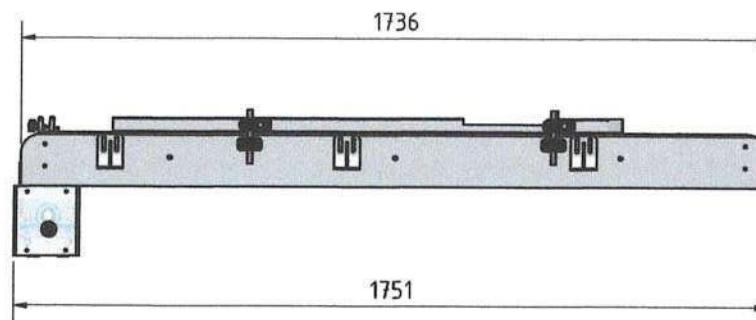
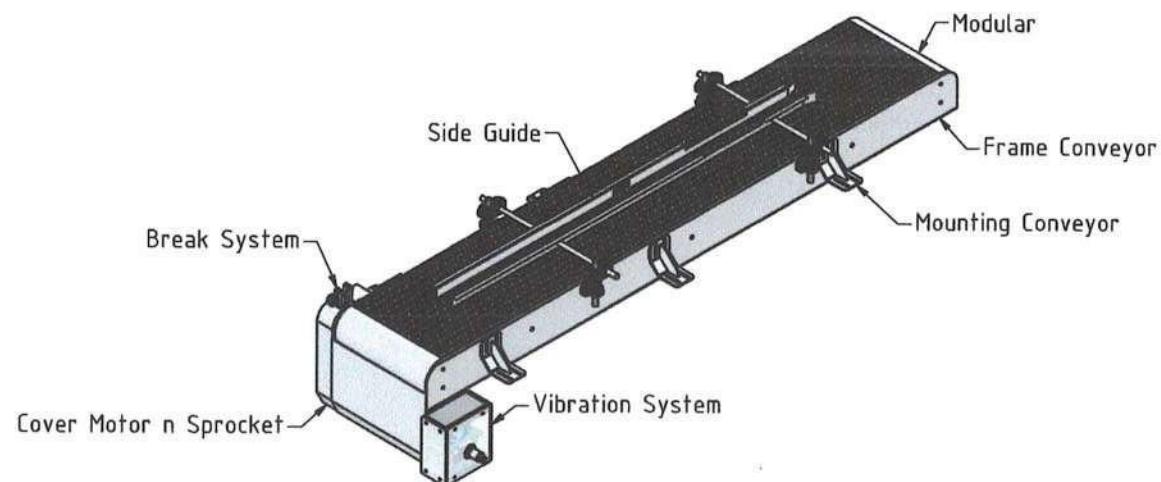
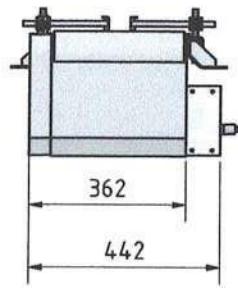
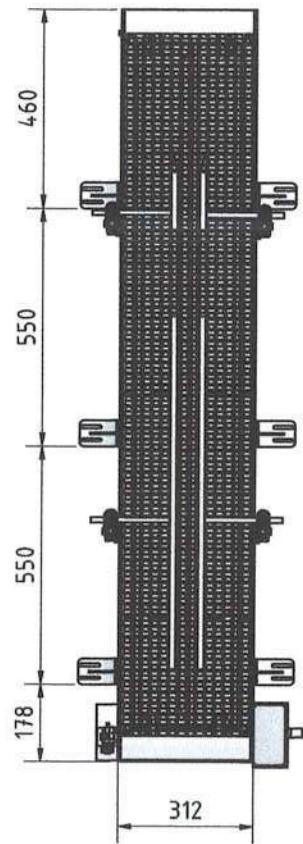


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PART NUMBER :		PART NAME :		MATERIAL :		QTY :		MASS : N/A	
SIGN	CUSTOMER	NOTE	DESIGNED BY	YASIN	SCALE	DATE	PROJECT NAME :	LOCATION :	PAGES
APPROVED			CHECKED BY	NUGROHO	1 : 18	03/10/2023	CUSTOMER :	Smart System Lab	3
			APPROVED BY	ANDI			TITLE :	Table Station 4	
			DRAWING NO.	PROJECT NO :				SSD INDUSTRIAL AUTOMATION AND ROBOTIC SOLUTIONS	Sheet A3

A B C D E

A B C D E



PART NUMBER :	PART NAME : D160000 UKP23A Modular Pick And Place-R1.STEP			MATERIAL :	QTY :	MASS : N/A
SIGN CUSTOMER APPROVED	NOTE	DESIGNED BY YASIN	CHECKED BY NUGROHO	SCALE 1 : 12	DATE : 03/10/2023 CUSTOMER :	PROJECT NAME : SMART SYSTEM LAB
						TITLE : Modular Conveyor
DRAWING NO.	PROJECT NO :	ANY				
						SSD INDUSTRIAL AUTOMATION Sumber Raya Industrial Estate

A B C D E

1

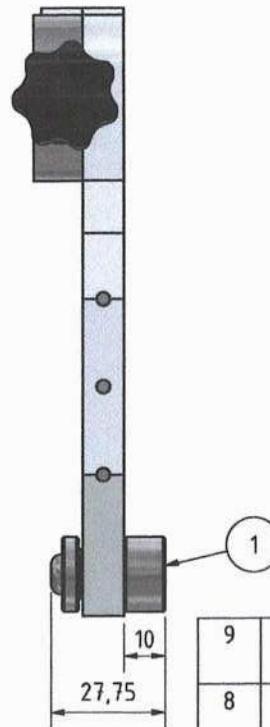
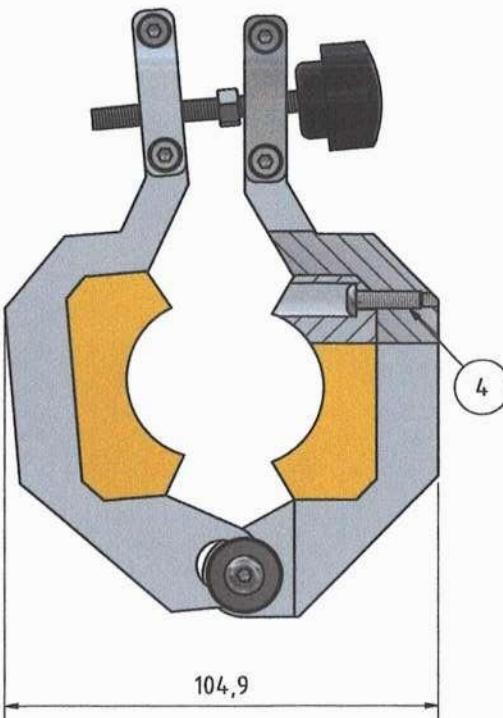
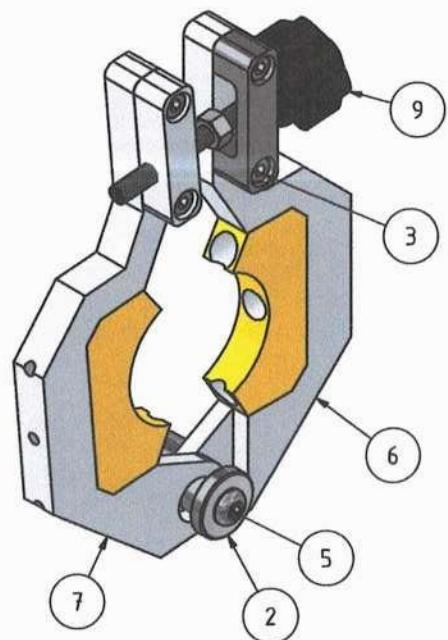
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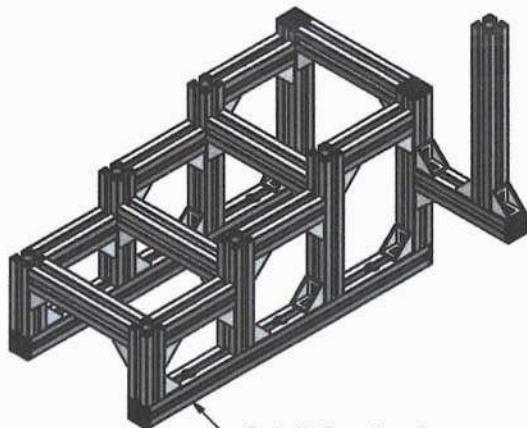
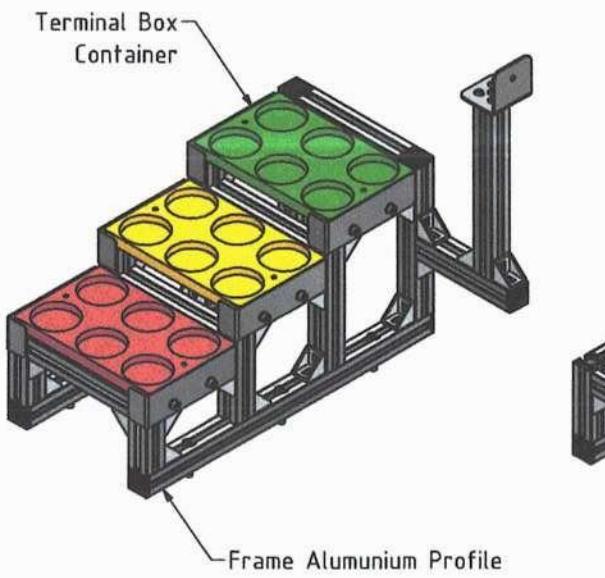
A3

	A	B	C	D	E
1					
2					
3					
4					
	PART NUMBER : AY-UKP01-7.1-R0	PART NAME : DESIGNED BY : YASIN CHECKED BY : NUGROHO APPROVED BY : ANDI DRAWING NO. : - / -	MATERIAL : DATE : 03/10/2023 CUSTOMER :	QTY : 1 PROJECT NAME : SMART SYSTEM LAB TITLE : Assy motor (With Vibration)	MASS : N/A LOCATION : Sunter, DKI Jakarta PAGES : 5 SSD INDUSTRIAL AUTOMATION AND ROBOTIC IDENTIFICATION SHEET : A3

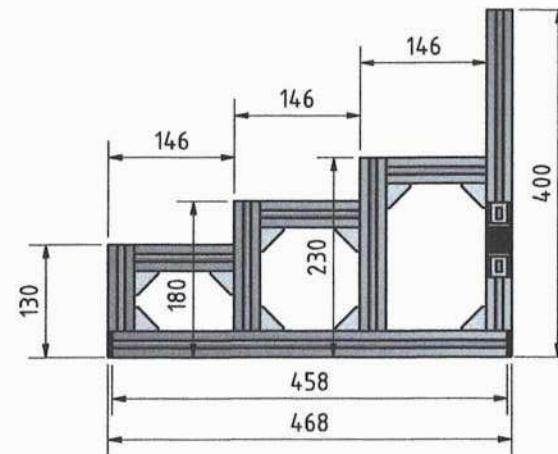
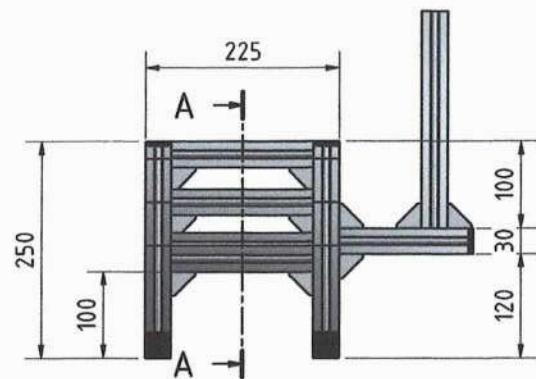
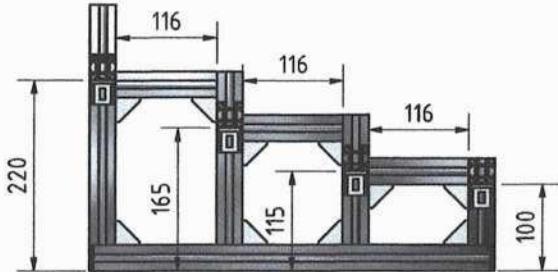


ITEM	QTY	PART NAME	DESCRIPTION
9	1	Star Knob M5x50	Star Knob M5x50
8	1	HN-5	[HN-5] Hexa Nut M5
7	1	Brake BB	
6	1	Brake AA	
5	1	B-M5x10-B	[B-M5x10-B] Bolt L M5x10 Button
4	6	B-M4x15-B	[B-M4x15-B] Bolt L M4x15 Button
3	2	B-M4x12	[B-M4x12] Bolt L M4x12
2	1	As Brake B	
1	1	As Brake A	

PART NUMBER :	PART NAME :			MATERIAL :	QTY : 1	MASS : N/A
SIGN CUSTOMER	NOTE	DESIGNED BY	YASIN	DATE : 03/10/2023	PROJECT NAME :	LOCATION :
APPROVED		CHECKED BY	NUGROHO	SCALE 1 : 1.25	CUSTOMER :	PAGES 6
		APPROVED BY	ANDI		TITLE : Brake System	
DRAWING NO.	PROJECT NO :					SSD INDUSTRIAL AUTOMATION AND ROBOTIC SOLUTIONS
AY-UKP01-6.1-R0				- / -		SHEET A3

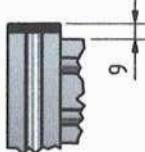


—Detail Counter Bar
(See Detail)

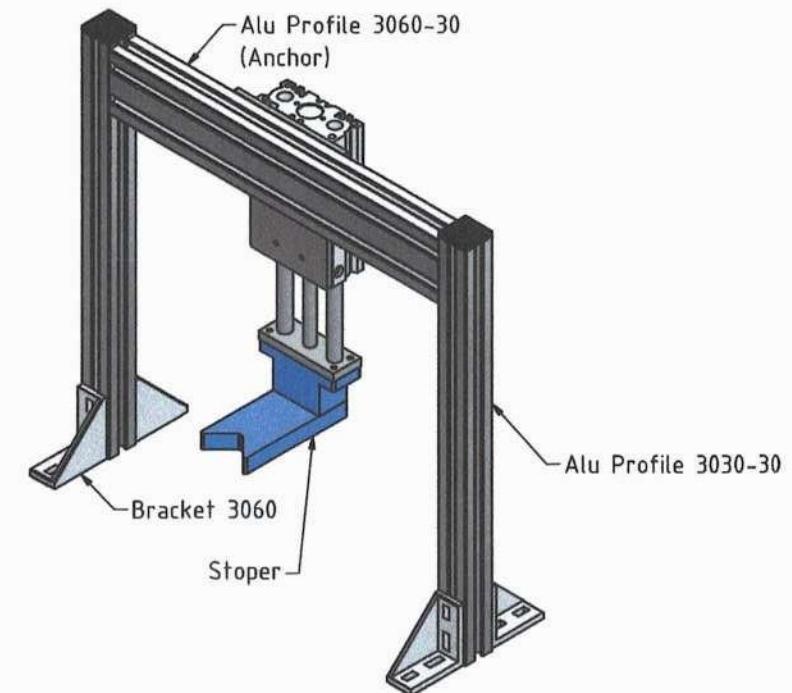
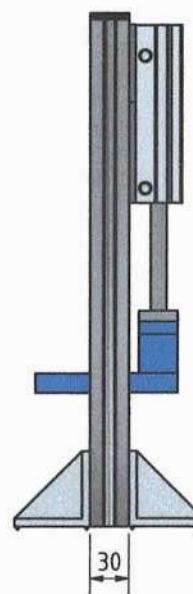
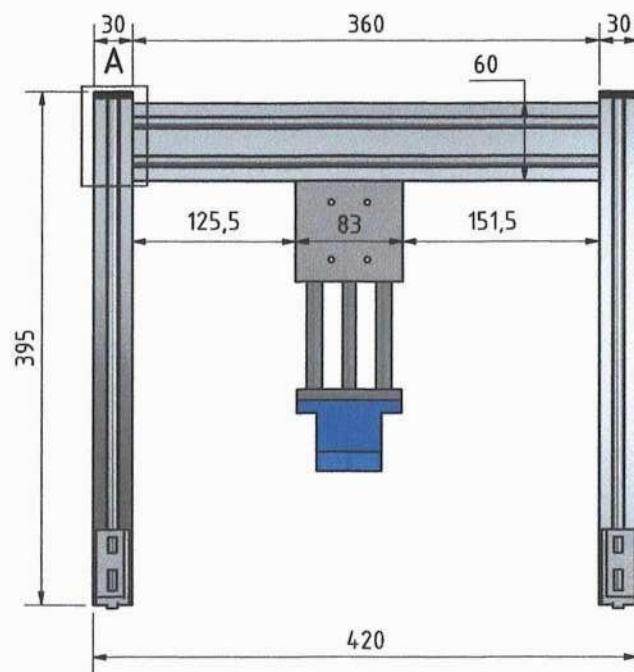


Section A-A

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		CHECKED BY	NUGROHO			CUSTOMER :	SMART SYSTEM LAB		Sunter, DKI Jakarta	7
		APPROVED BY	ANDI				TITLE :	Terminal Container St. 4		SHEET
		DRAWING NO.	PROJECT NO :	- / -						A3



Detail A



PART NUMBER :		PART NAME :		DESIGNED BY		YASIN	DATE :	03/10/2023	MATERIAL :	QTY : 1	MASS : N/A
SIGN	CUSTOMER	NOTE	APPROVED	CHECKED BY	NUGROHO	ANDI	SCALE	1 : 4	CUSTOMER :	PROJECT NAME :	LOCATION :
										SMART SYSTEM LAB	Sunter, DKI Jakarta
										TITLE :	Stopper Station 4
				DRAWING NO.	PROJECT NO.:						SSD

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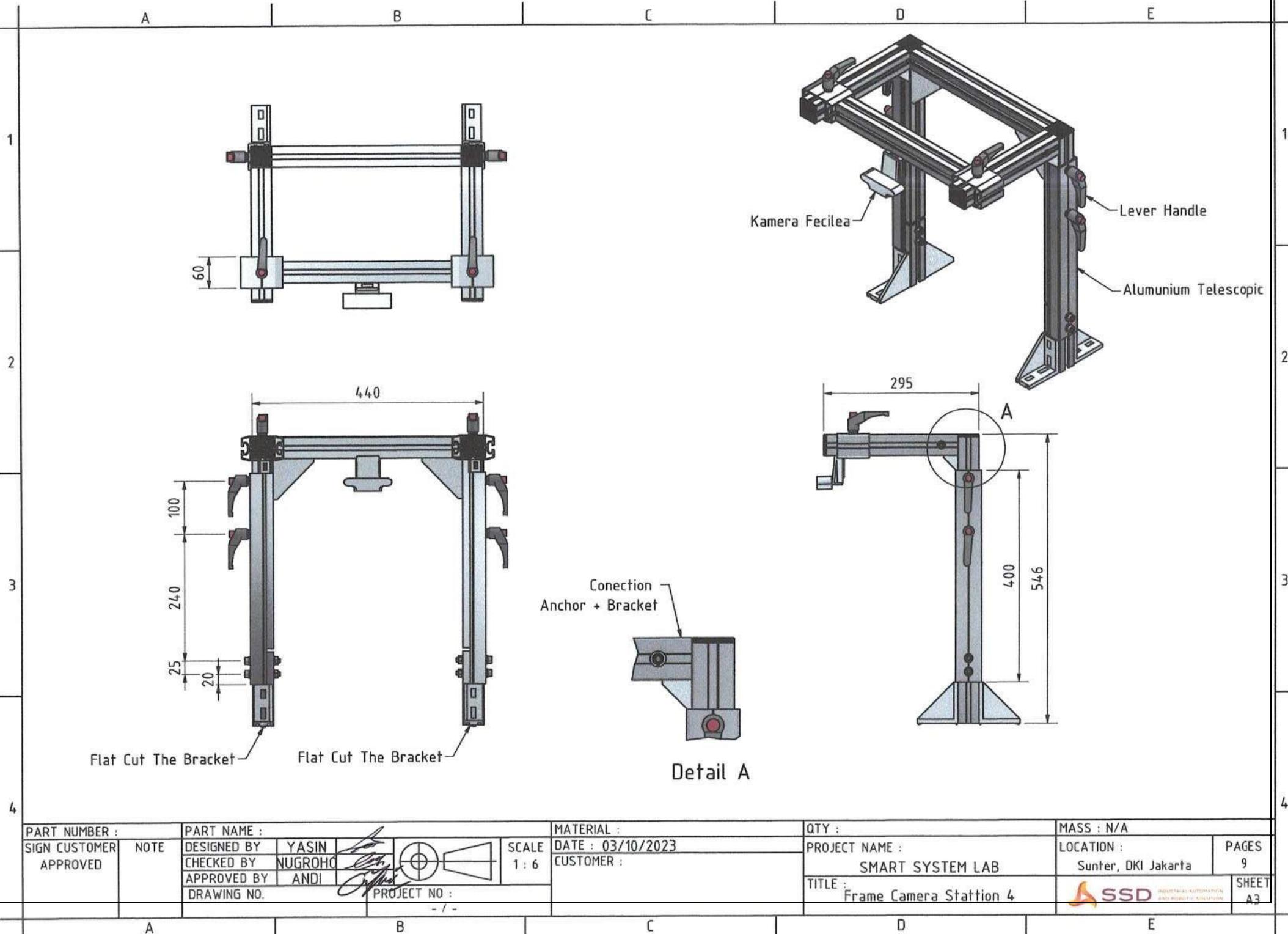
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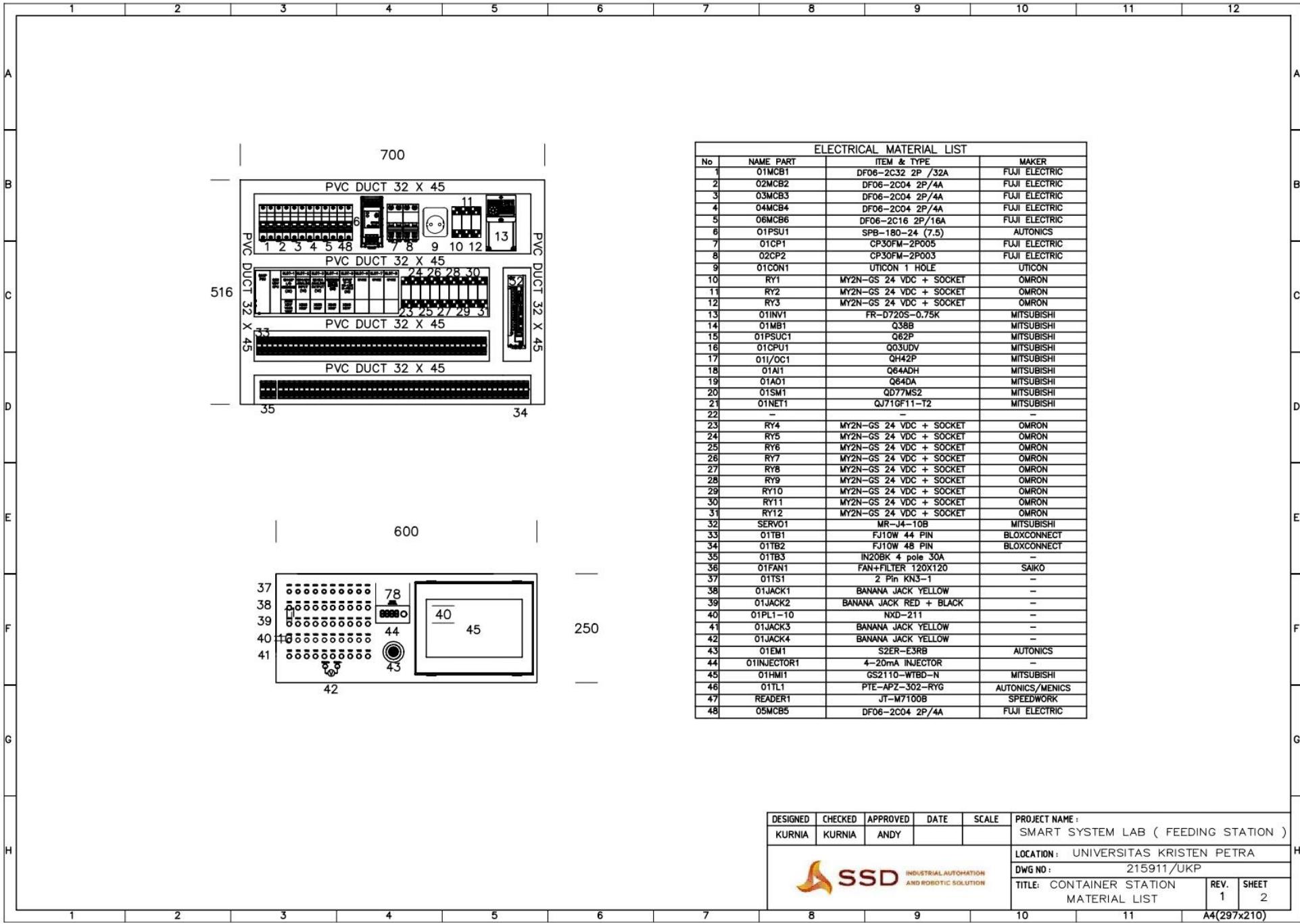


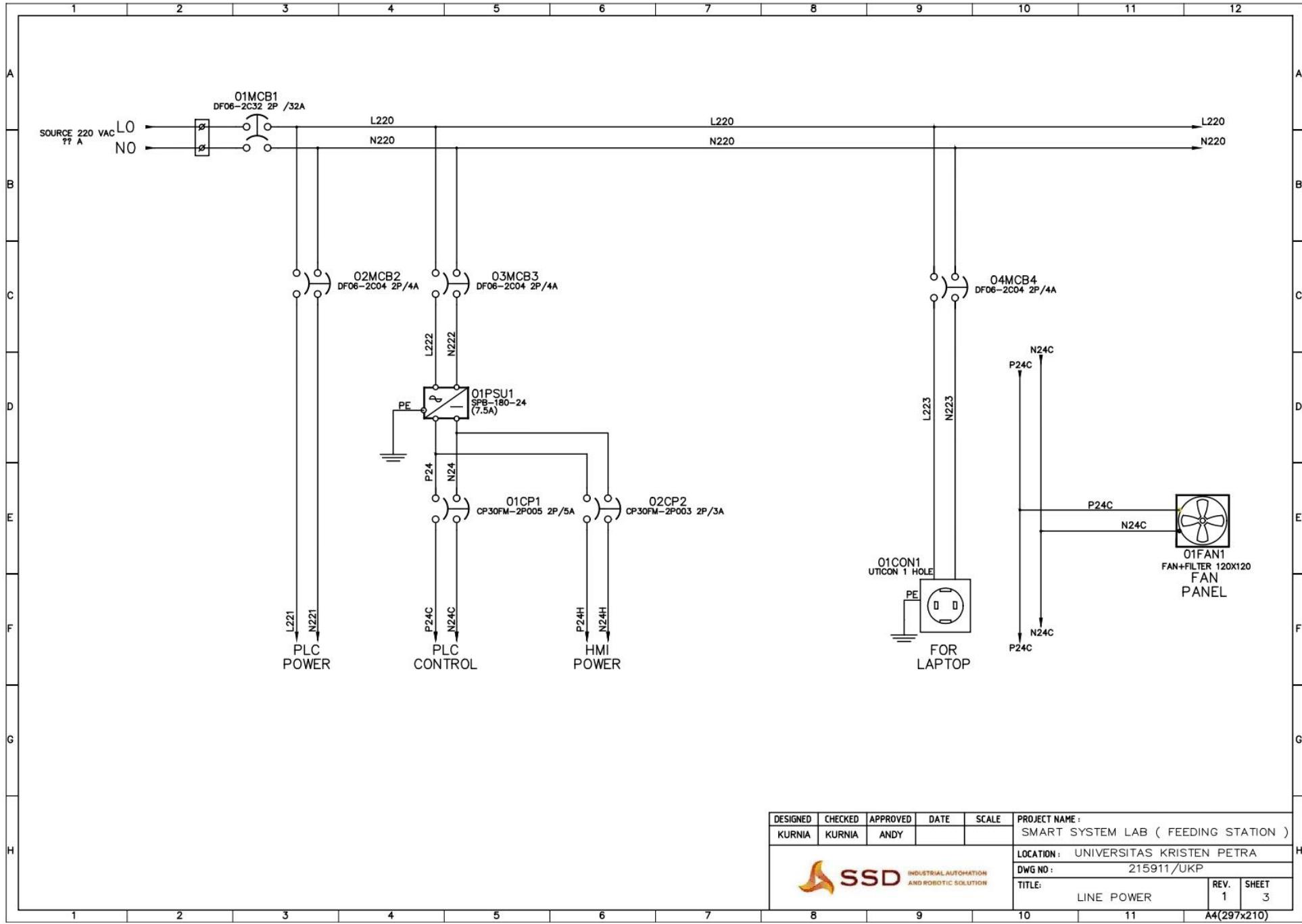
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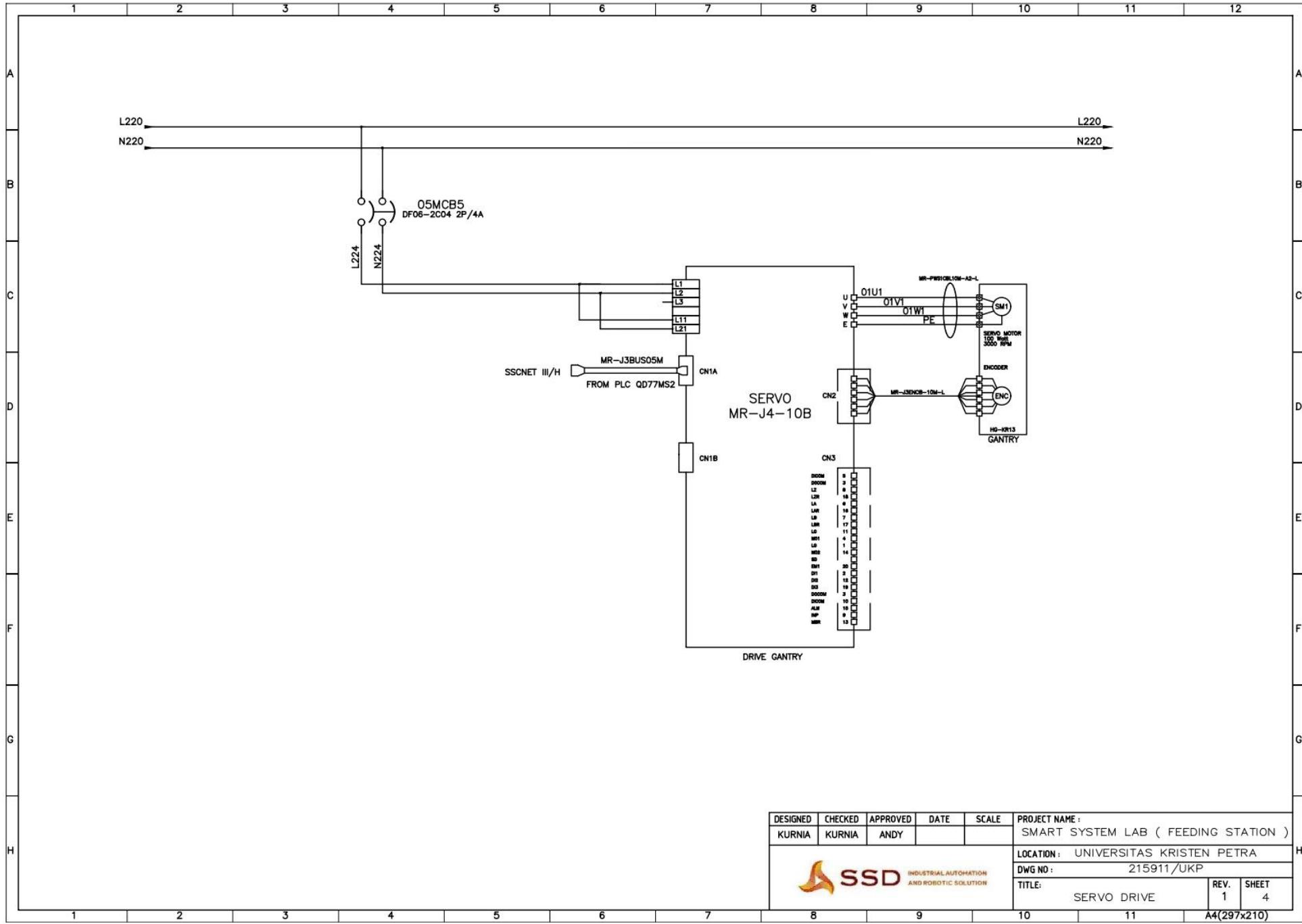
DRAWING ELECTRICAL

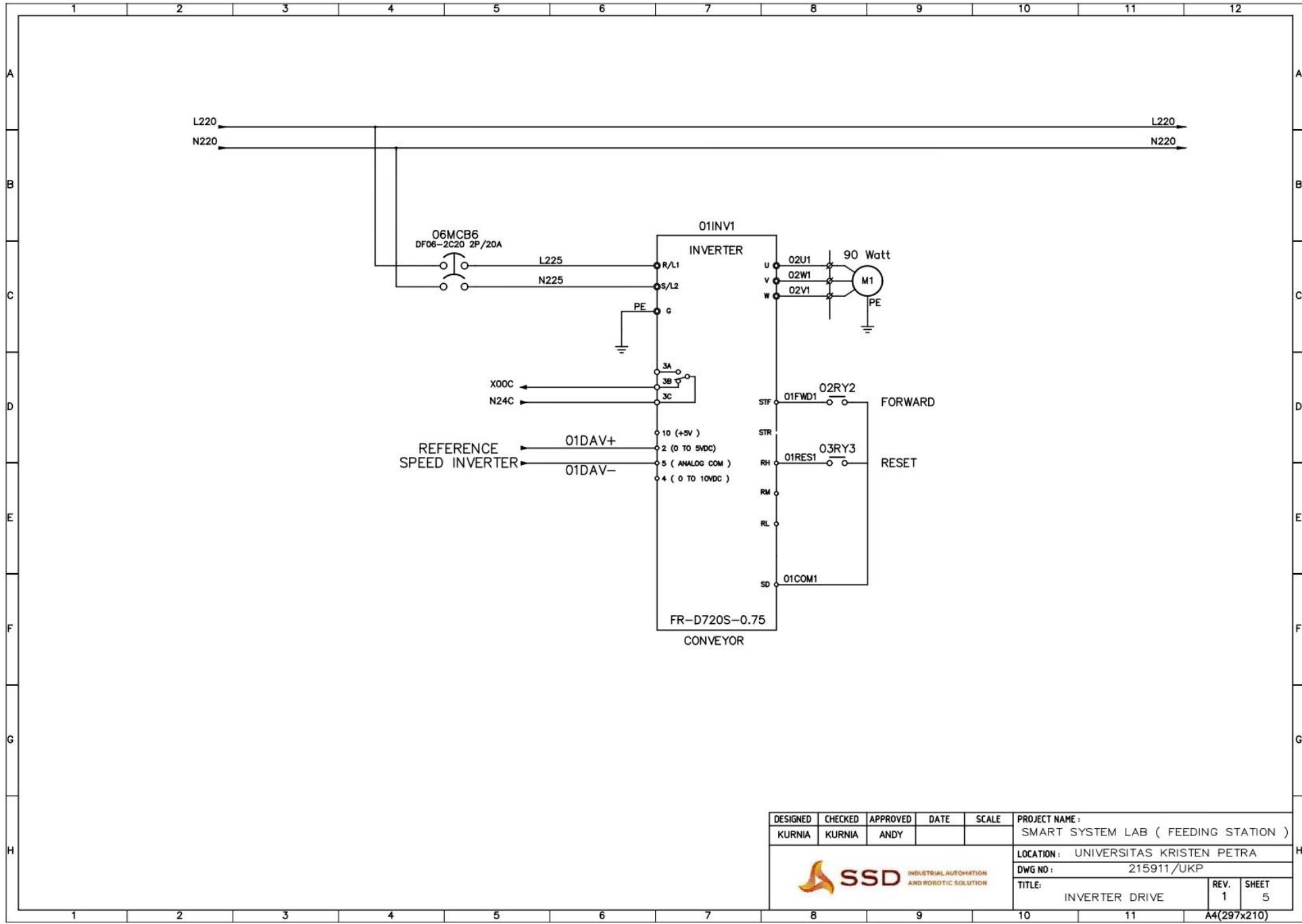
7.1 Drawing Electrical Modul Edukasi Feeding Station

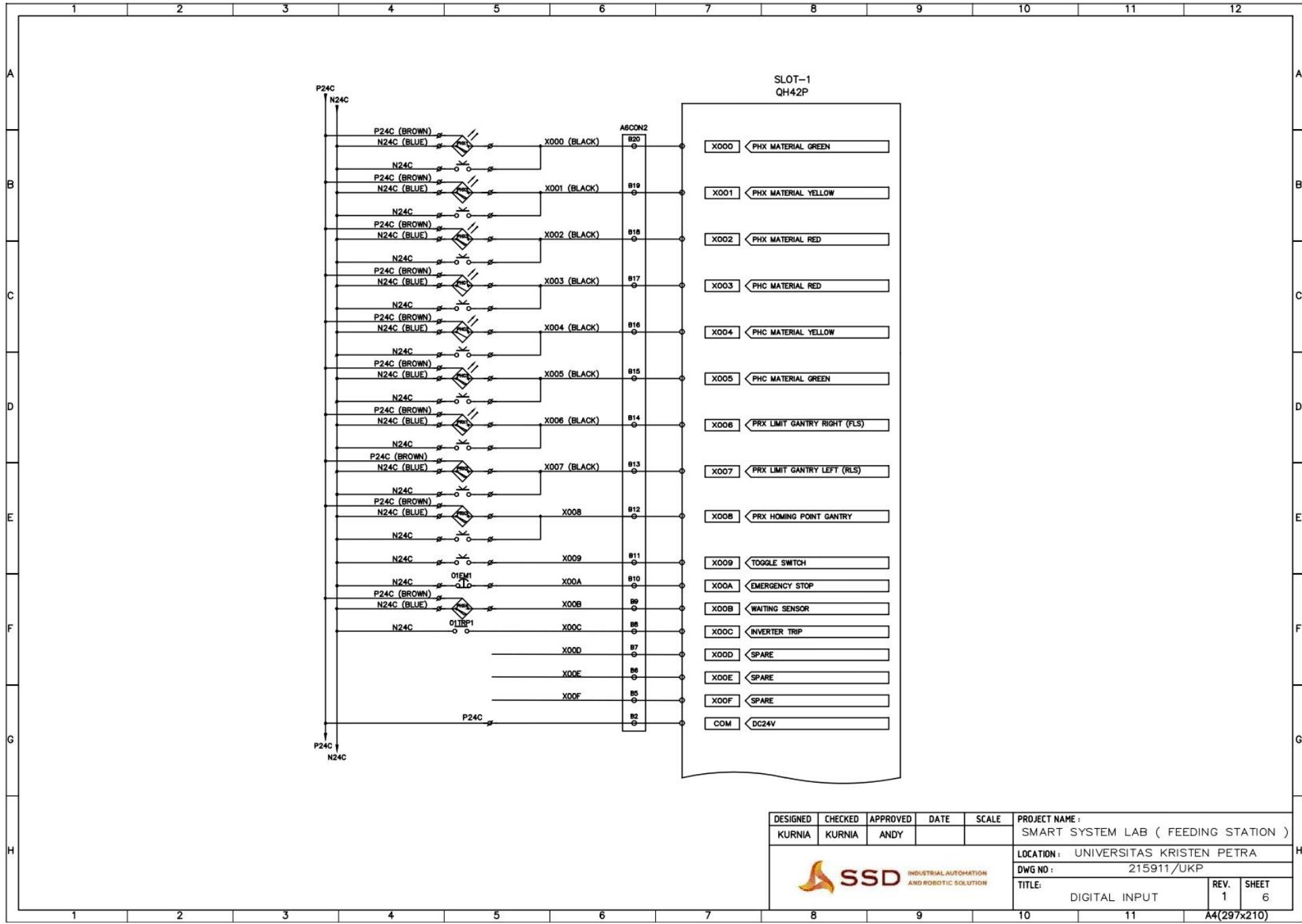
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F	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">SIGN. APPROVAL</td> </tr> <tr> <td colspan="2">UNIVERSITAS KRISTEN PETRA</td> </tr> <tr> <td colspan="2">PT. Surya Sarana Dinamika</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td colspan="2">Date : Date :</td> </tr> </table>												SIGN. APPROVAL		UNIVERSITAS KRISTEN PETRA		PT. Surya Sarana Dinamika				Date : Date :		F																				
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H	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DESIGNED</td><td>CHECKED</td><td>APPROVED</td><td>DATE</td><td>SCALE</td><td>PROJECT NAME :</td> </tr> <tr> <td>KURNIA</td><td>KURNIA</td><td>ANDY</td><td></td><td></td><td>SMART SYSTEM LAB (FEEDING STATION)</td> </tr> <tr> <td colspan="5" style="text-align: center;">  SSD <small>INDUSTRIAL AUTOMATION AND ROBOTIC SOLUTION</small> </td><td>LOCATION : UNIVERSITAS KRISTEN PETRA</td> </tr> <tr> <td colspan="5"></td><td>DWG NO : 215911/UKP</td> </tr> <tr> <td colspan="5"></td><td>TITLE: COVER REV. 1 SHEET 1</td> </tr> </table>												DESIGNED	CHECKED	APPROVED	DATE	SCALE	PROJECT NAME :	KURNIA	KURNIA	ANDY			SMART SYSTEM LAB (FEEDING STATION)	 SSD <small>INDUSTRIAL AUTOMATION AND ROBOTIC SOLUTION</small>					LOCATION : UNIVERSITAS KRISTEN PETRA						DWG NO : 215911/UKP						TITLE: COVER REV. 1 SHEET 1	H
DESIGNED	CHECKED	APPROVED	DATE	SCALE	PROJECT NAME :																																						
KURNIA	KURNIA	ANDY			SMART SYSTEM LAB (FEEDING STATION)																																						
 SSD <small>INDUSTRIAL AUTOMATION AND ROBOTIC SOLUTION</small>					LOCATION : UNIVERSITAS KRISTEN PETRA																																						
					DWG NO : 215911/UKP																																						
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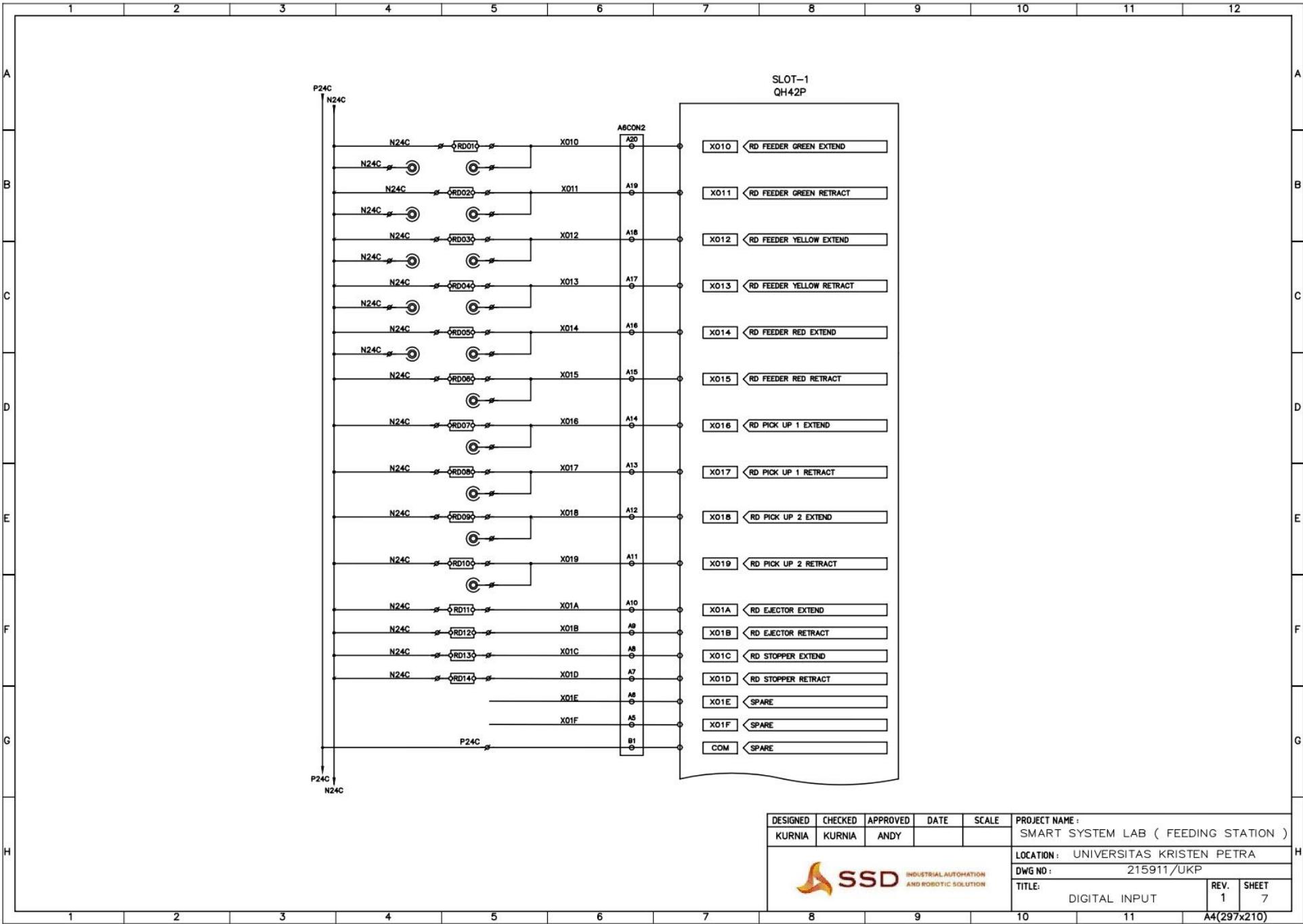


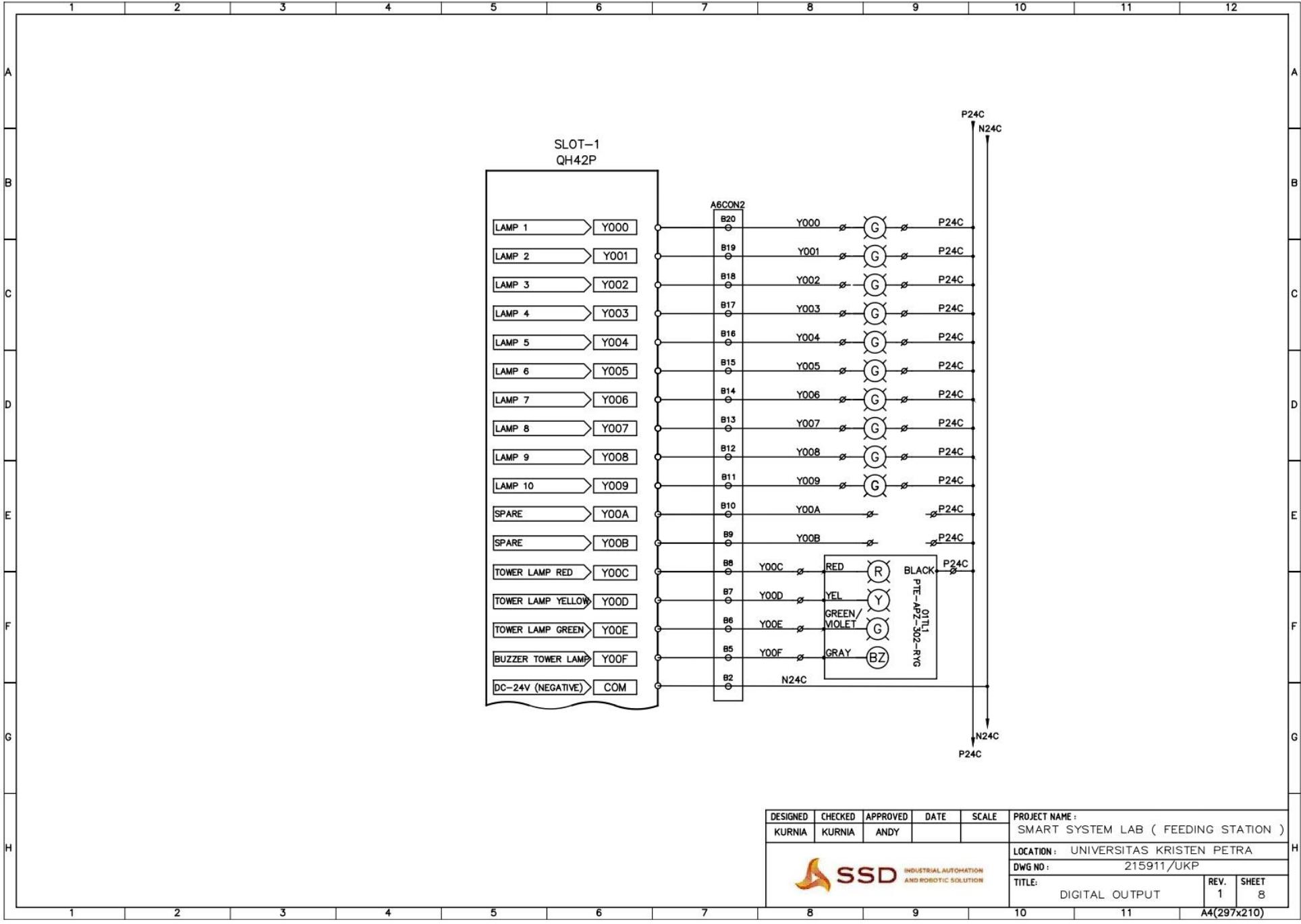


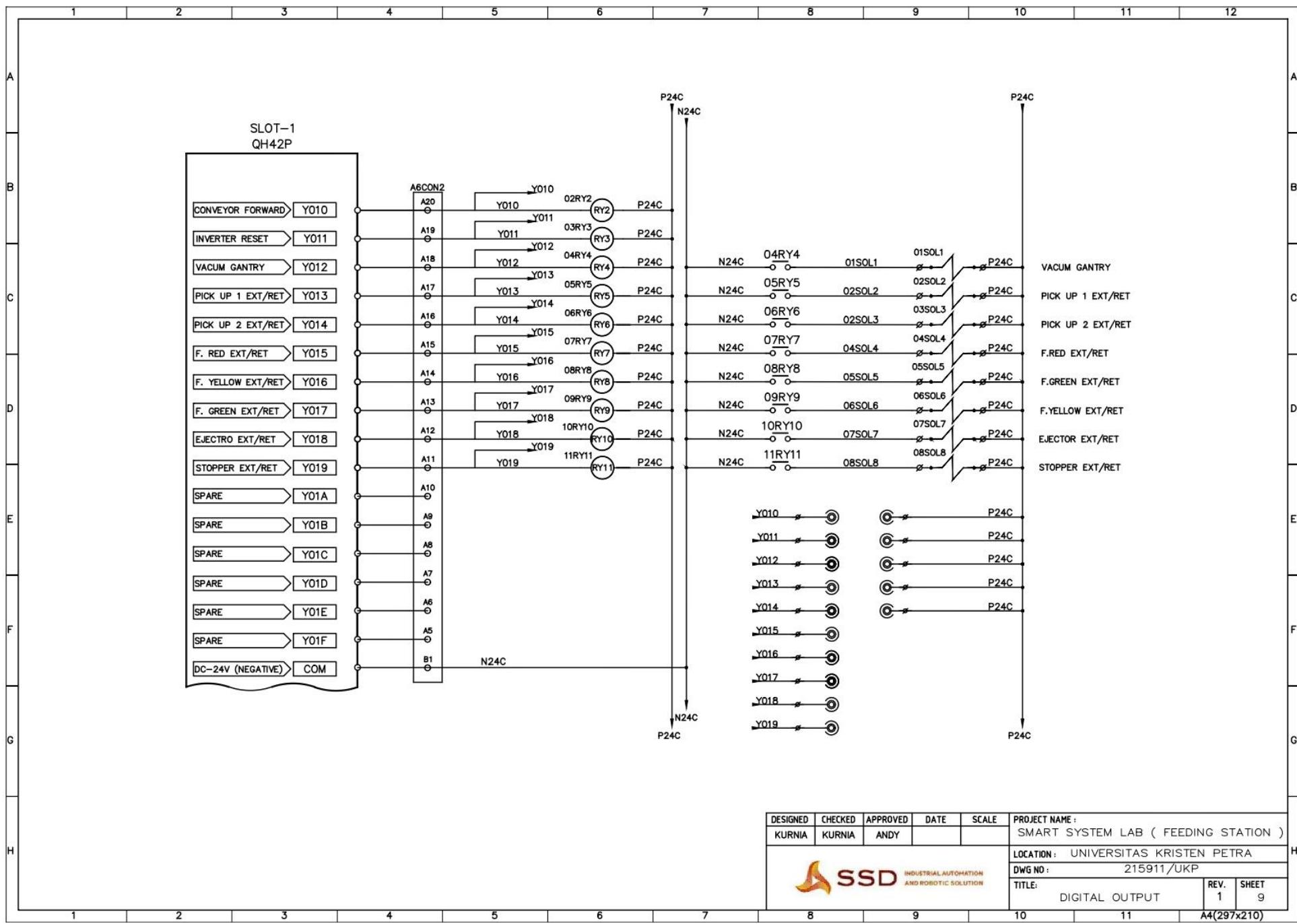


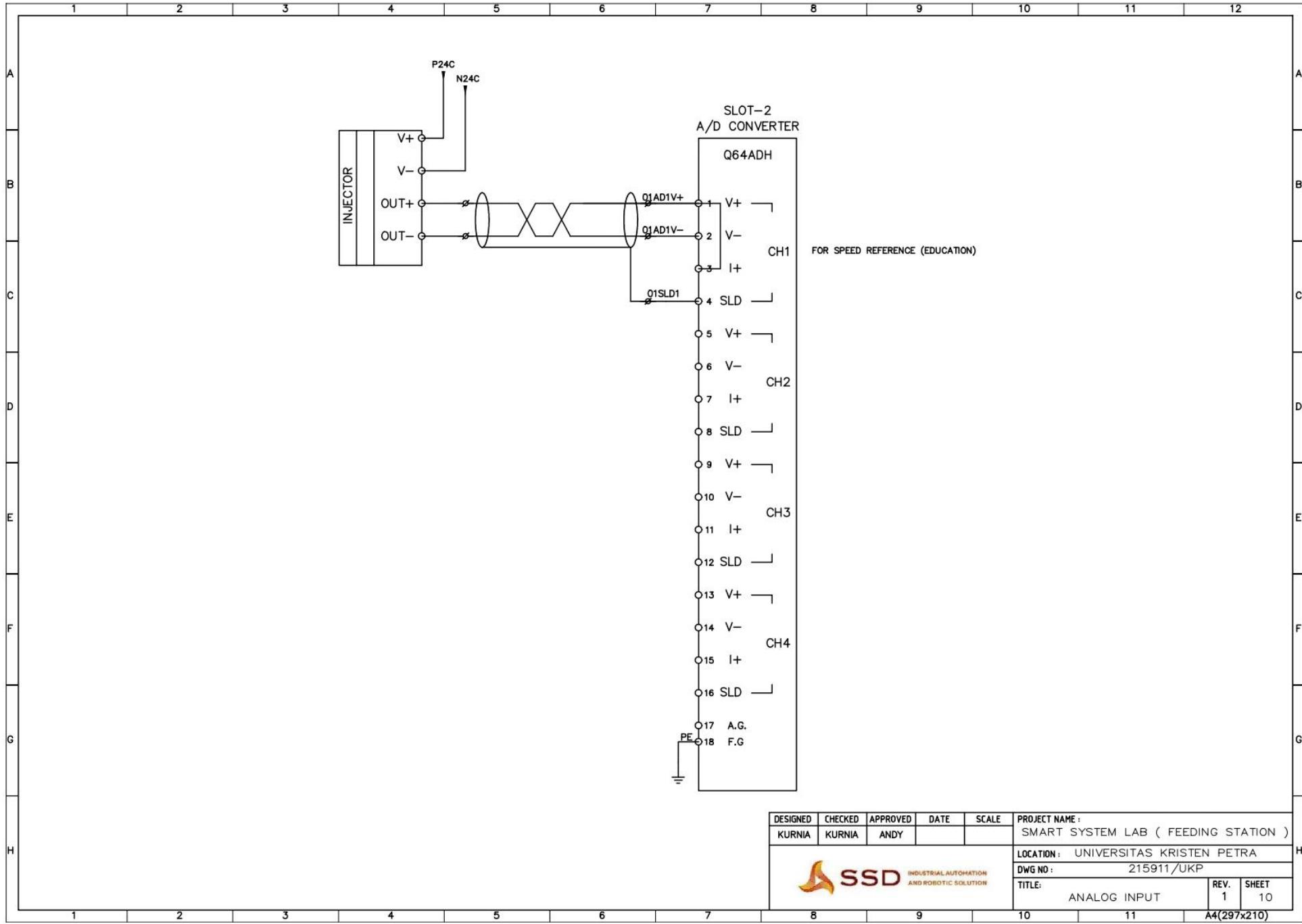


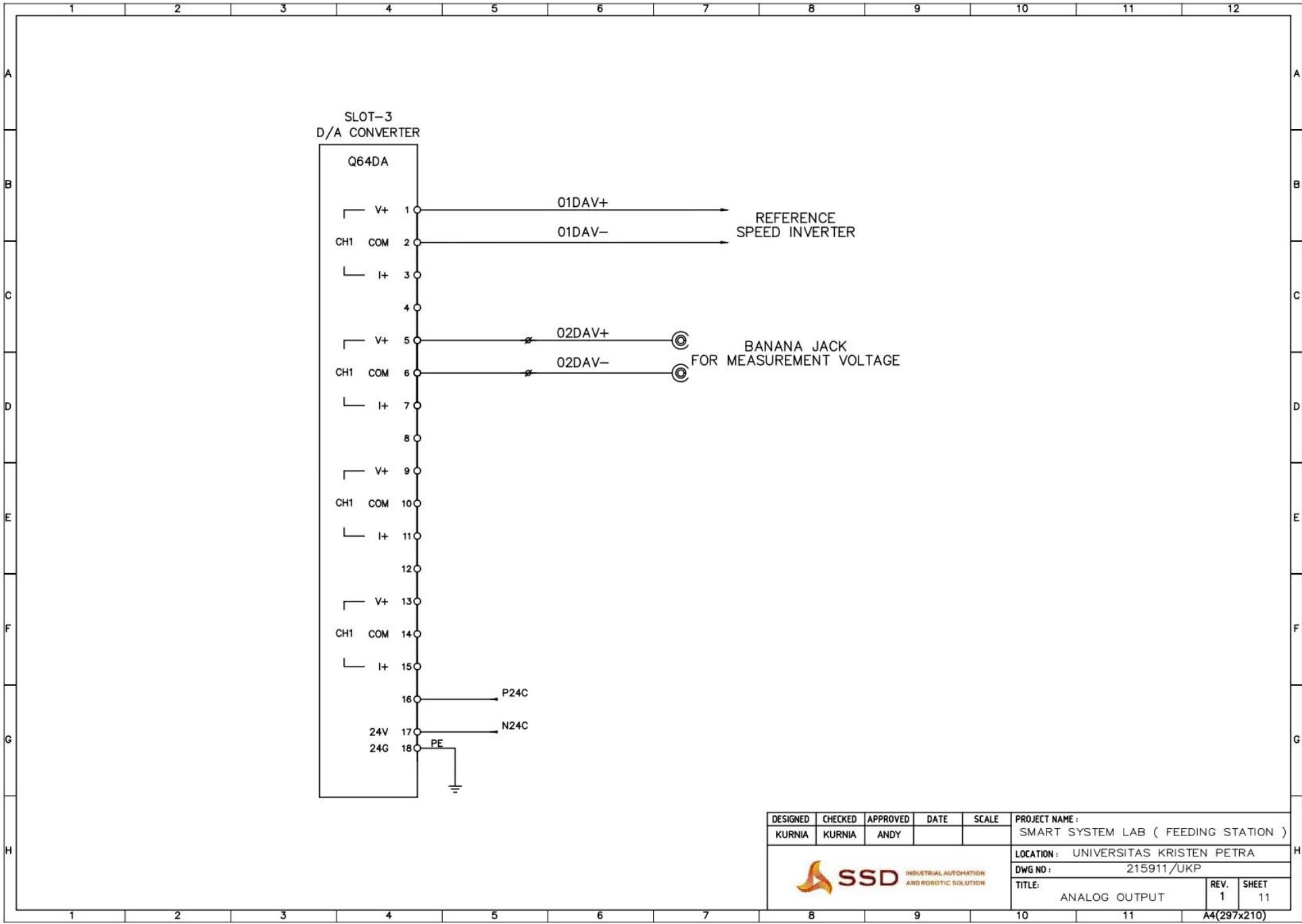


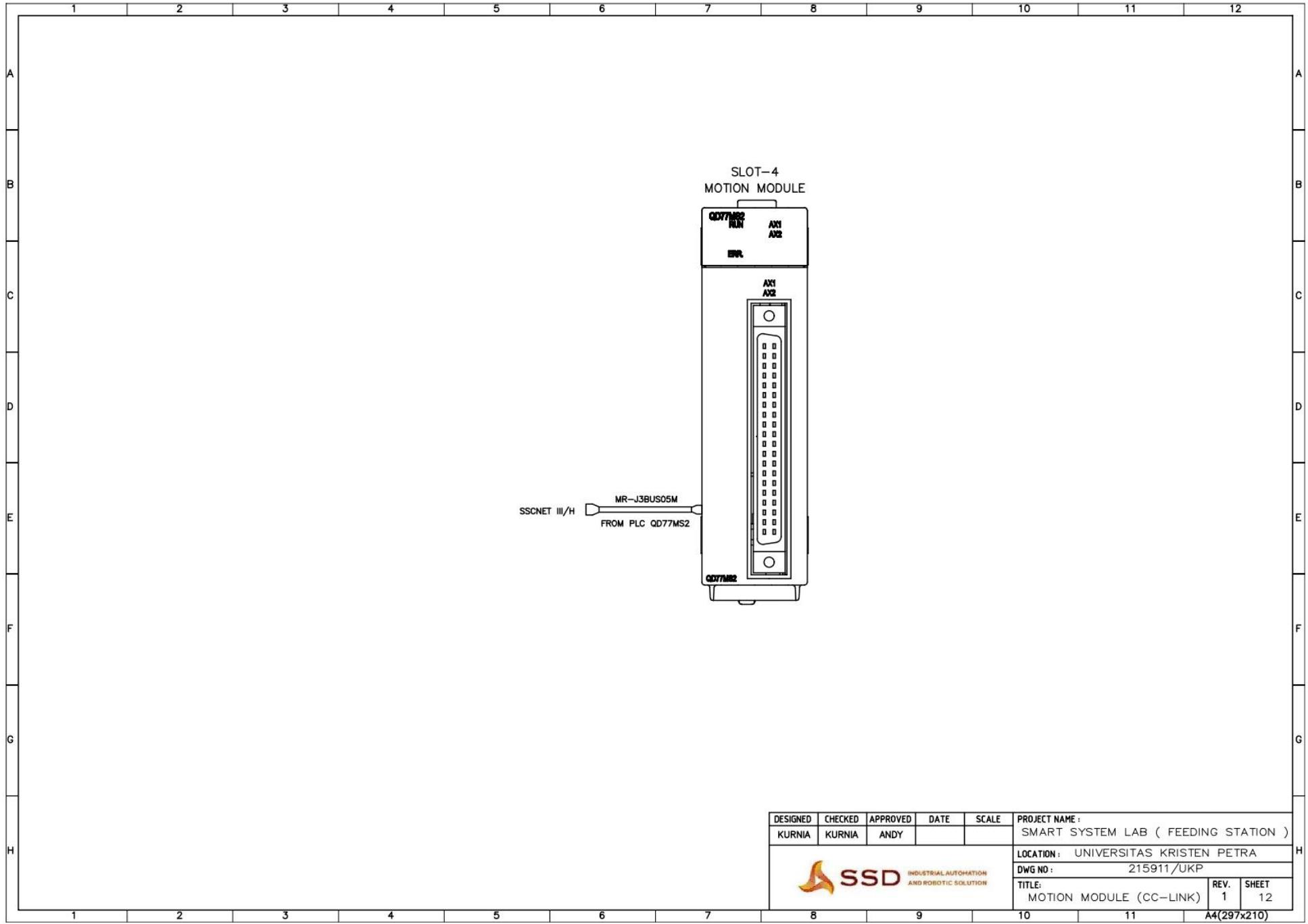


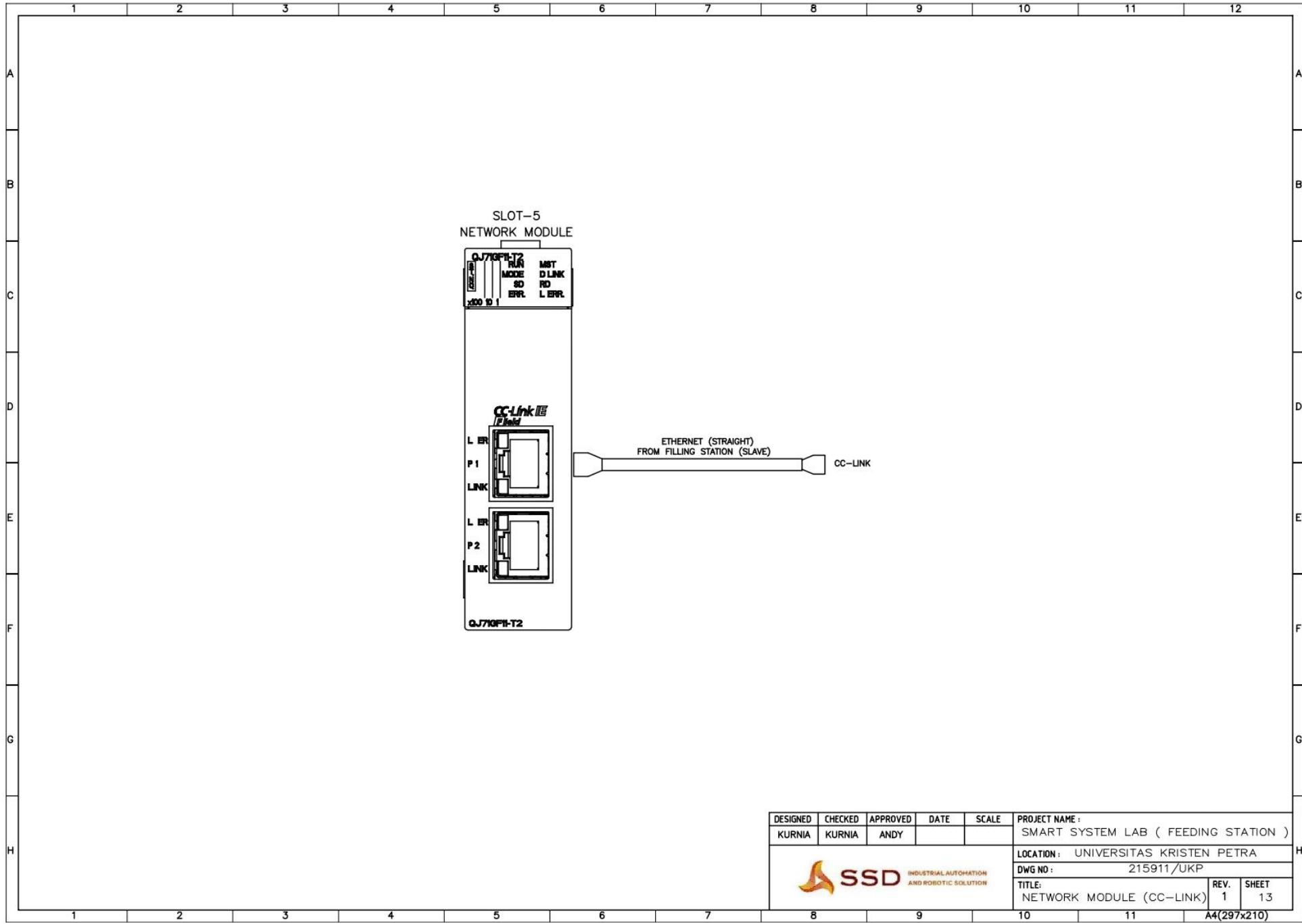


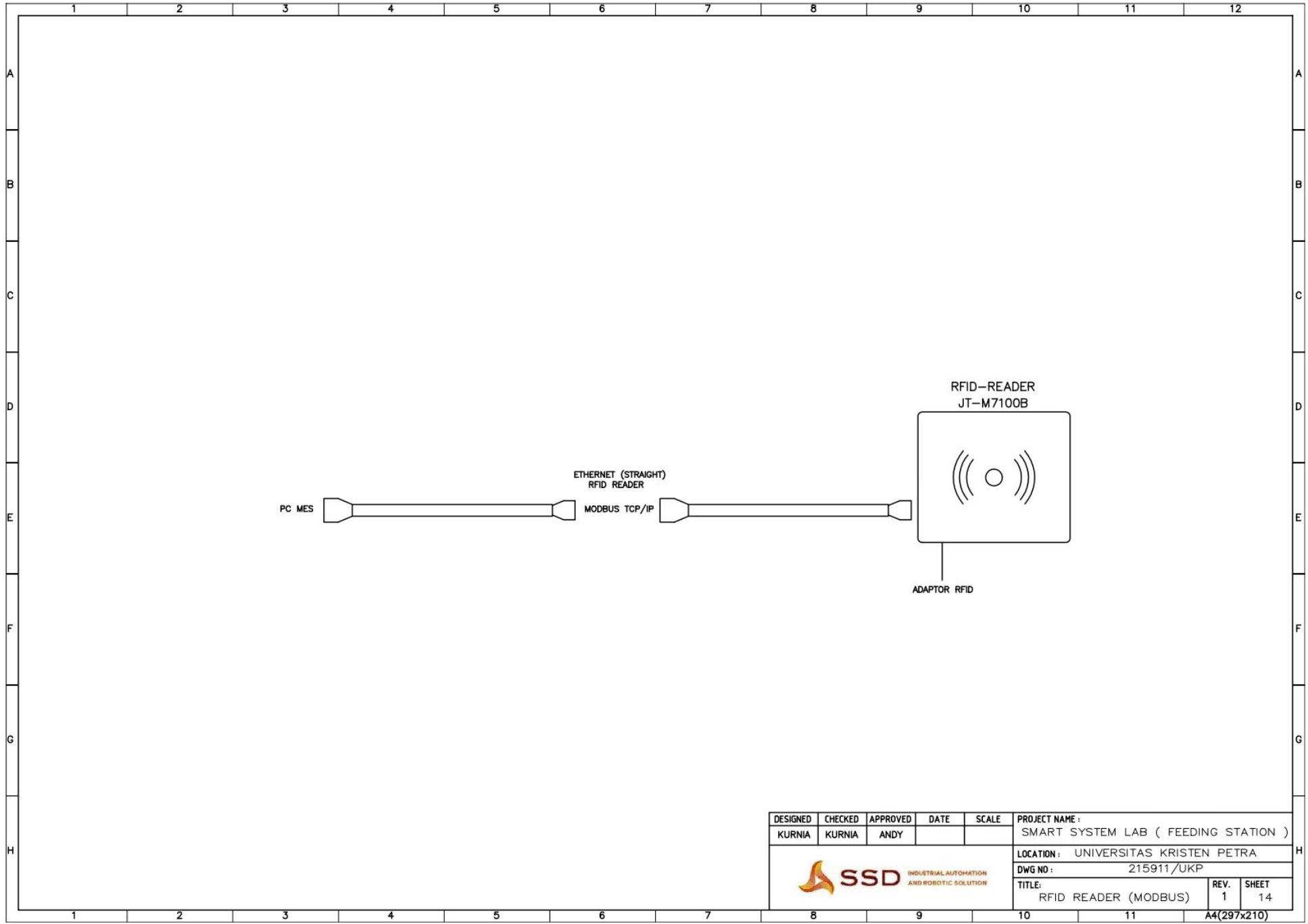


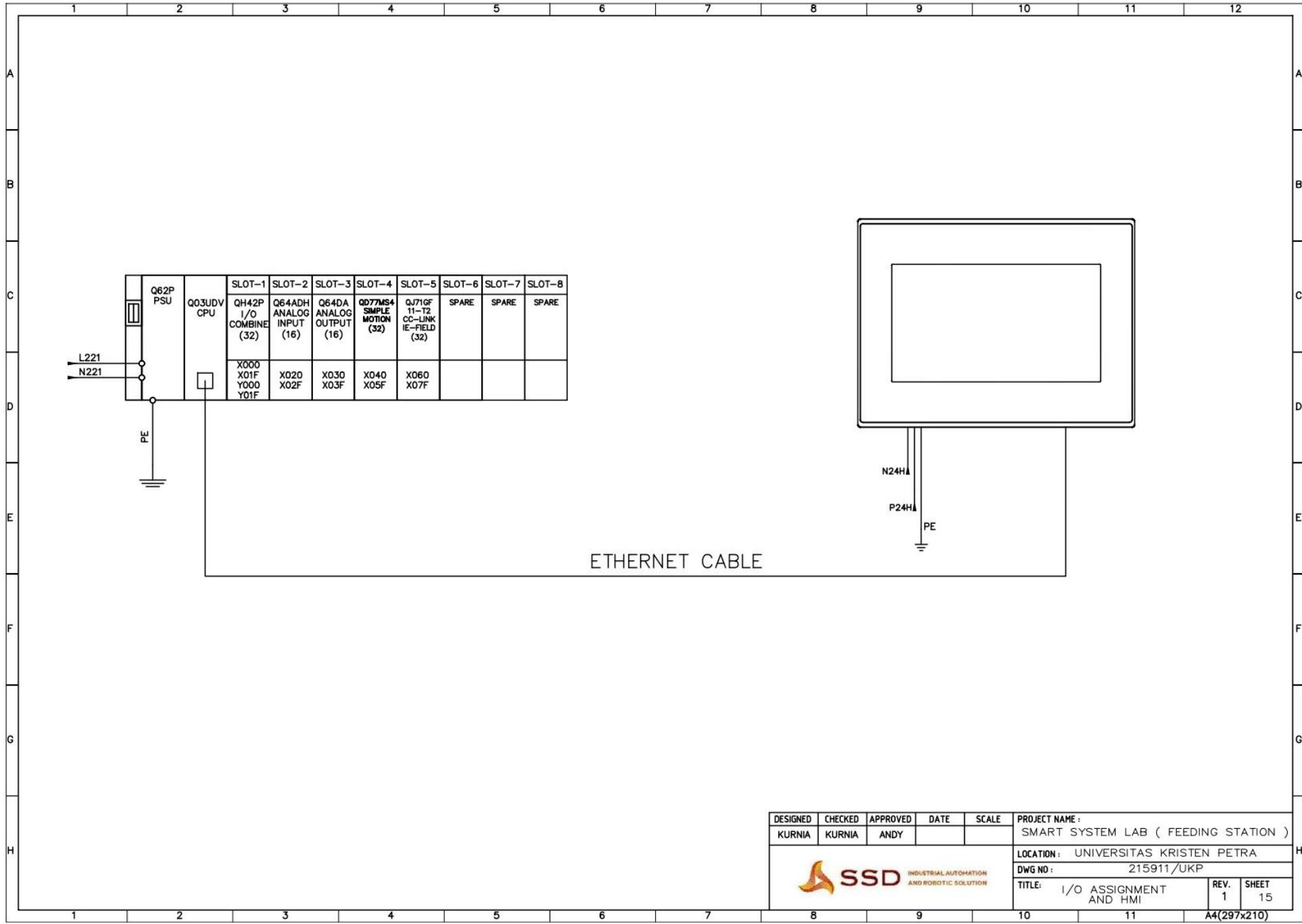






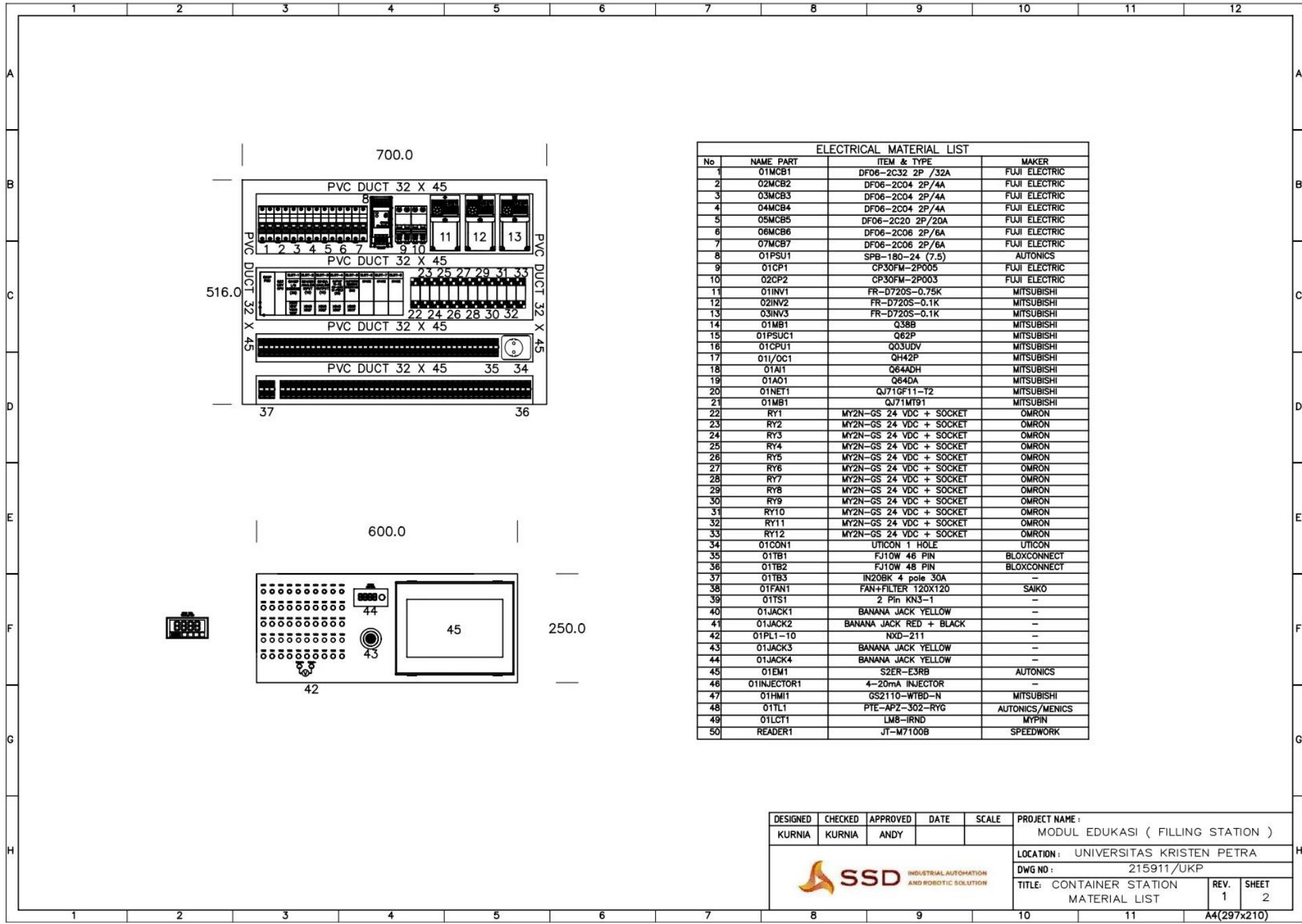


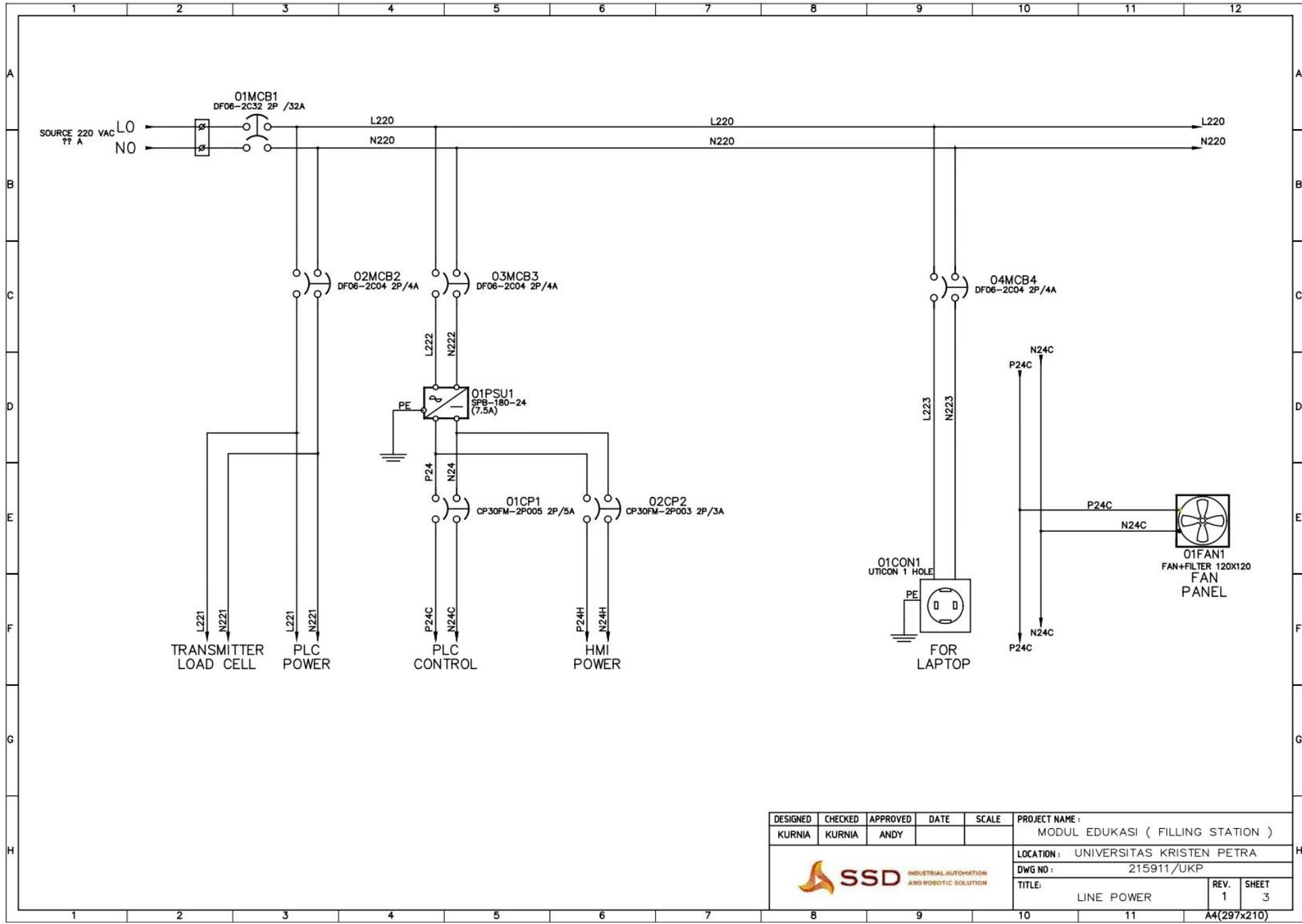


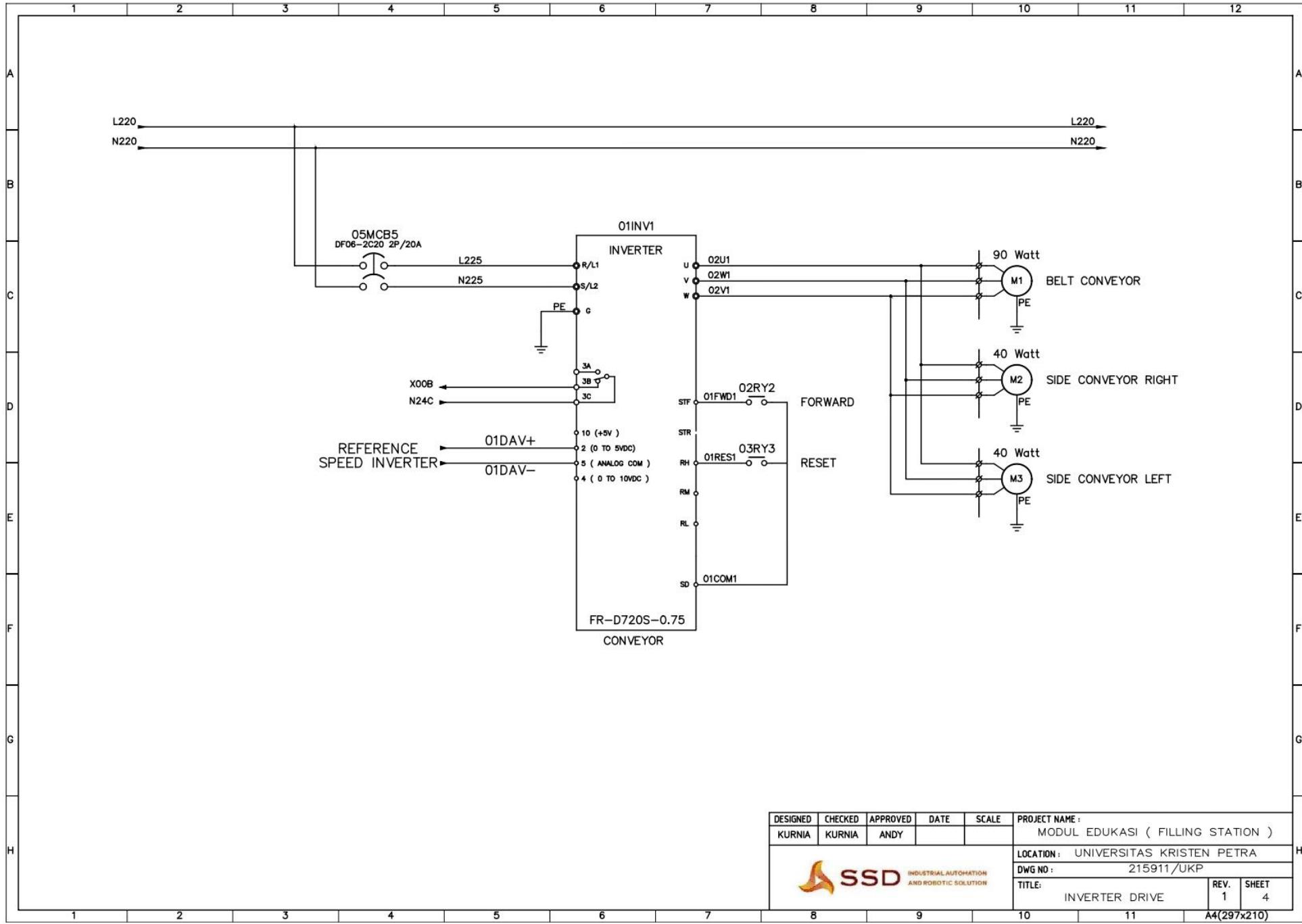


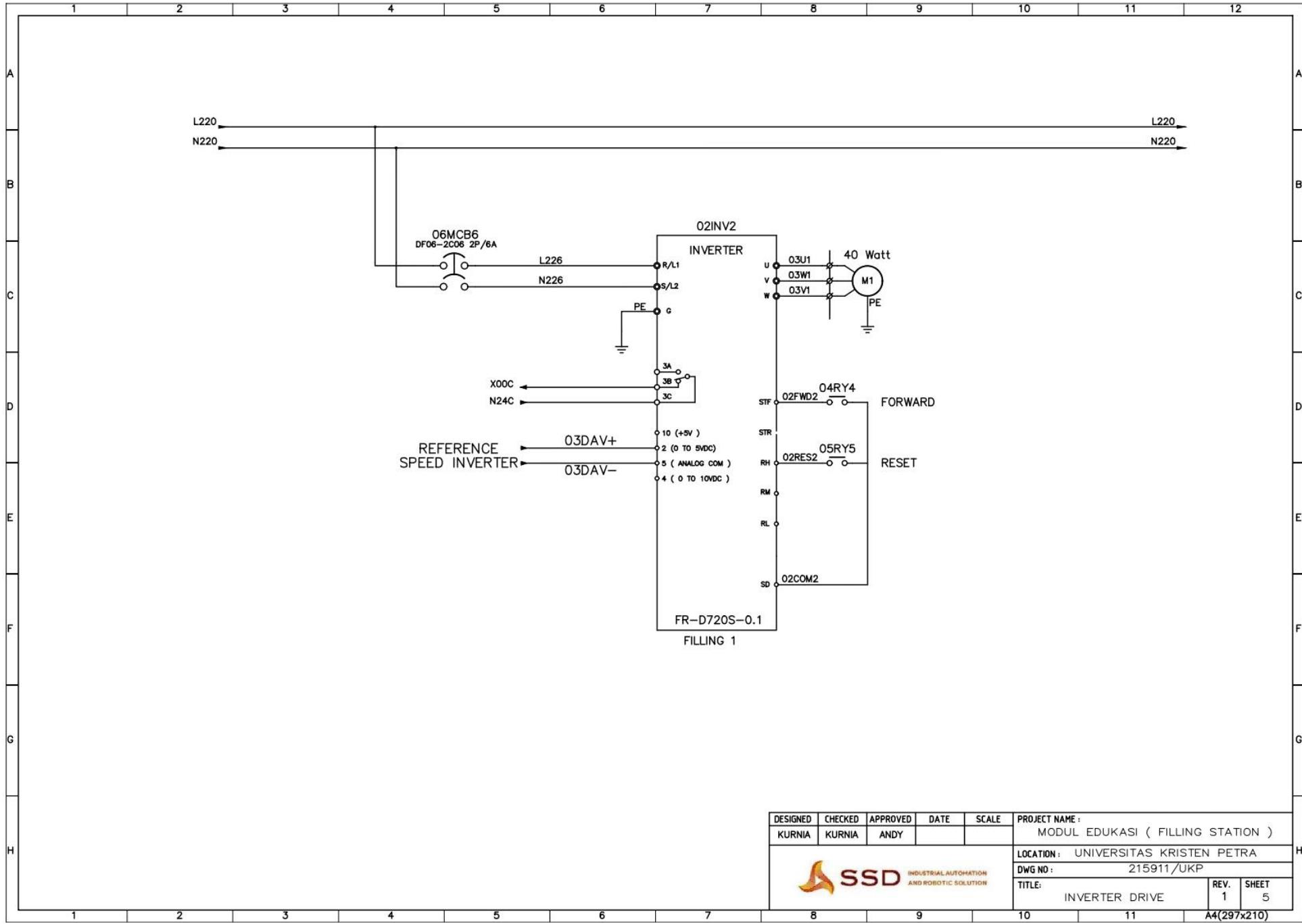
7.2 Drawing Electrical Modul Edukasi *Filling Station*

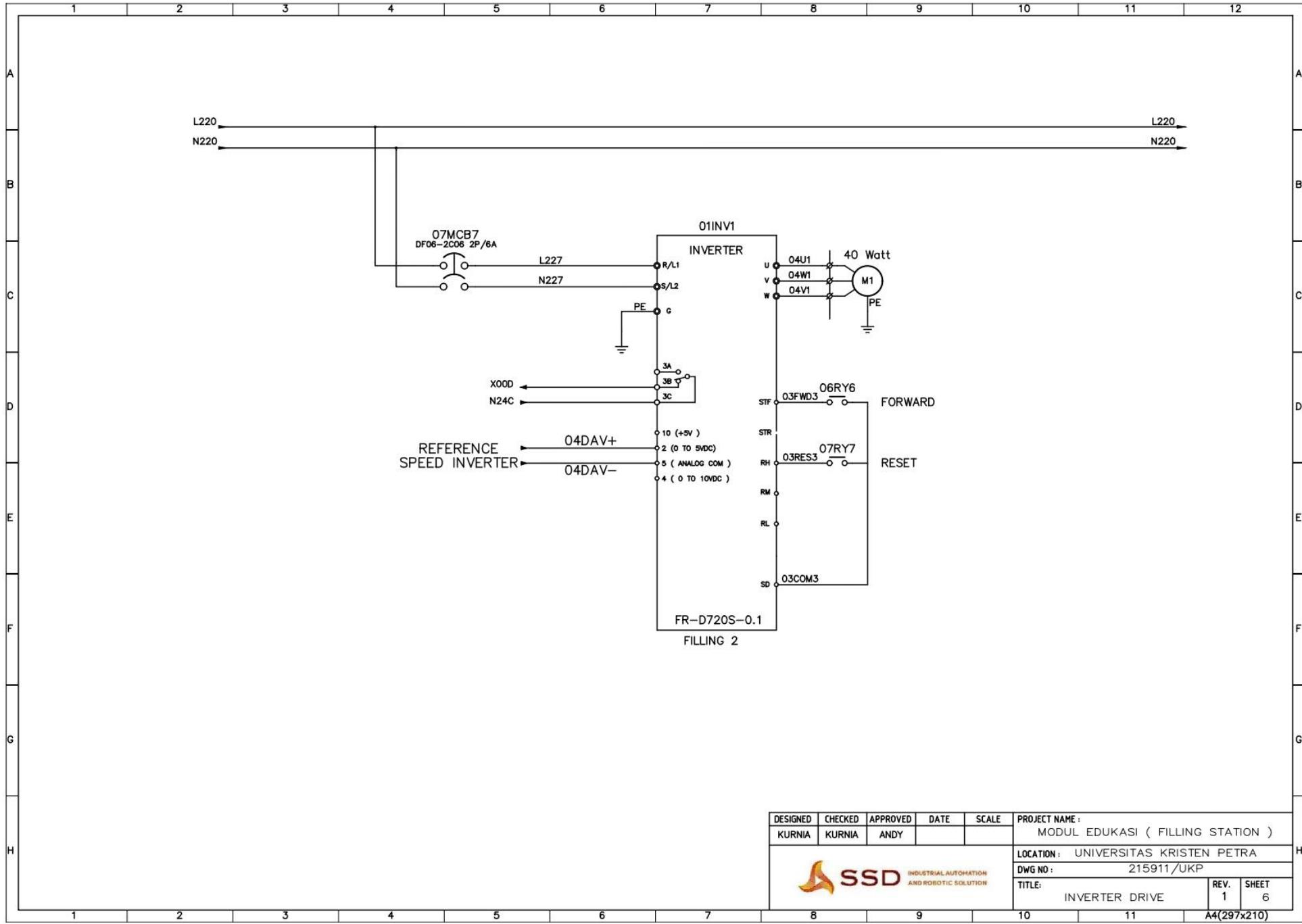
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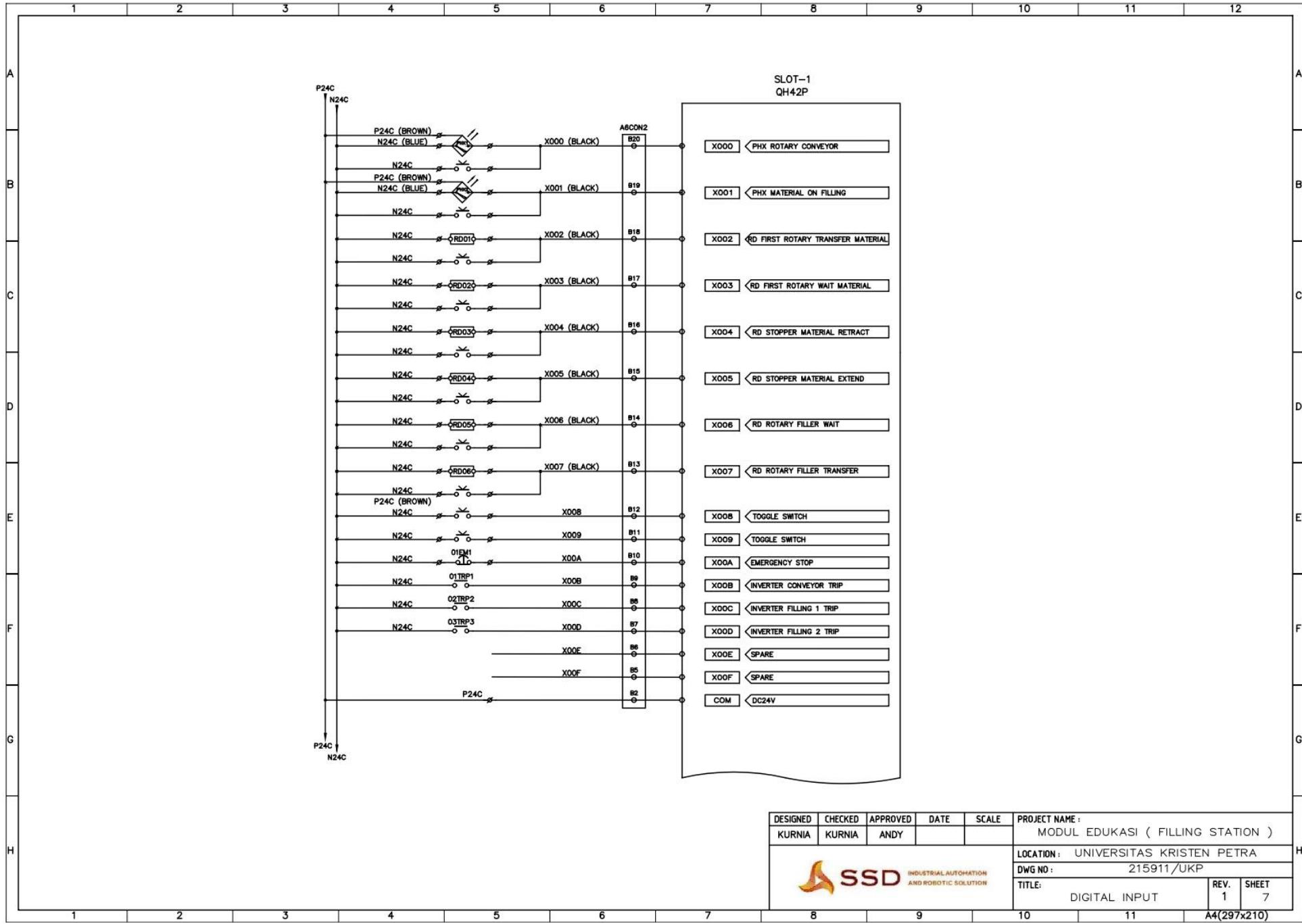


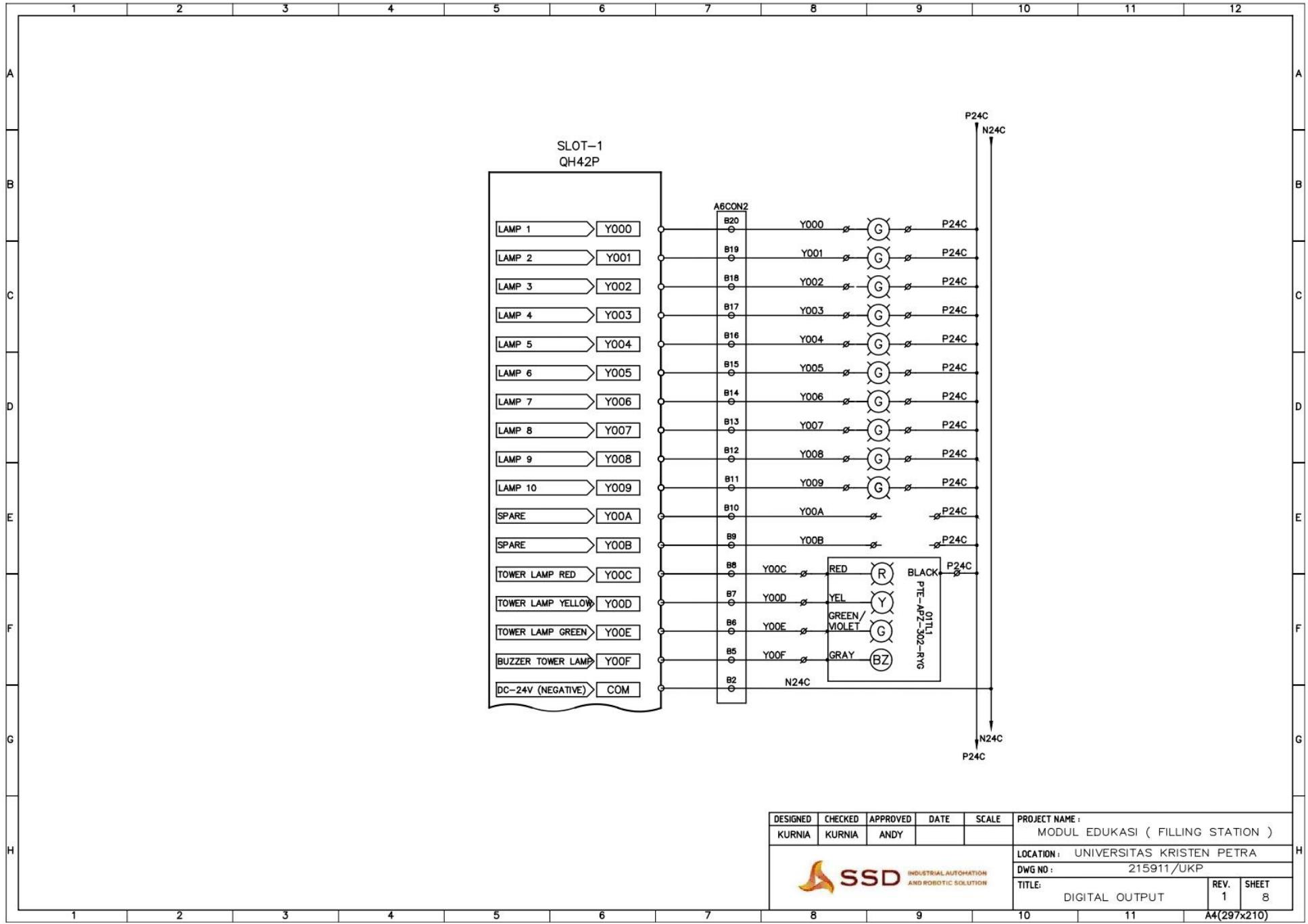


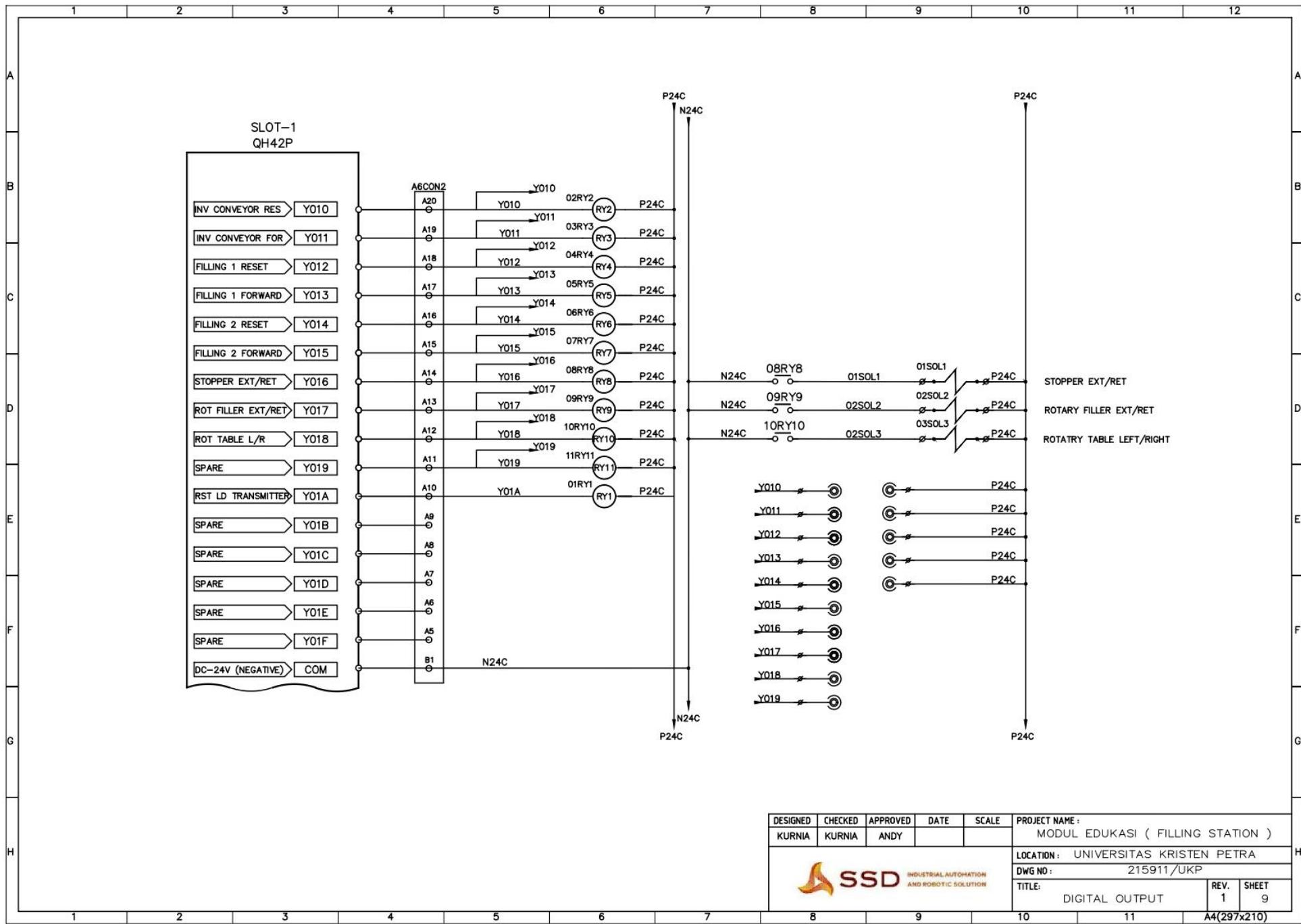


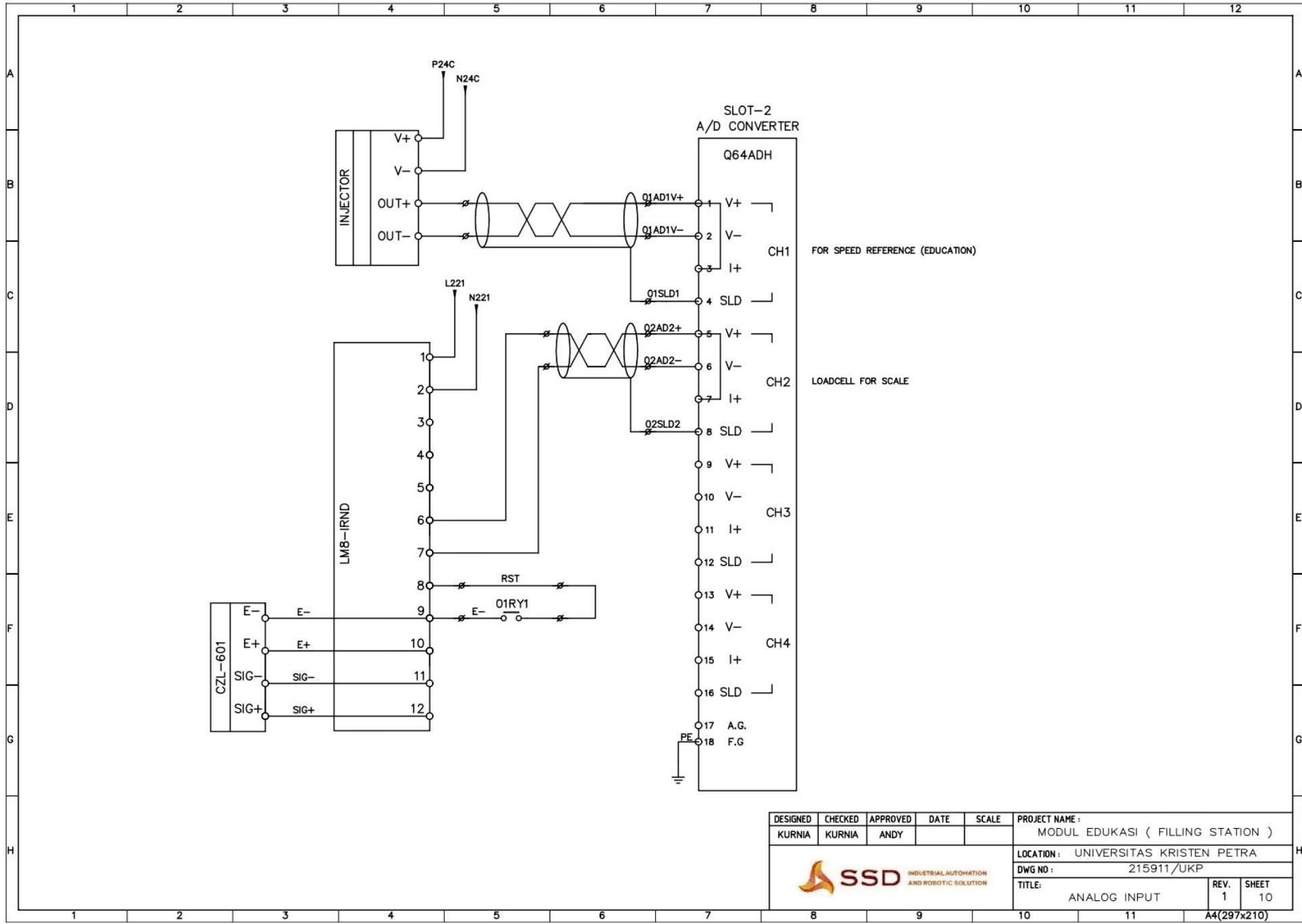




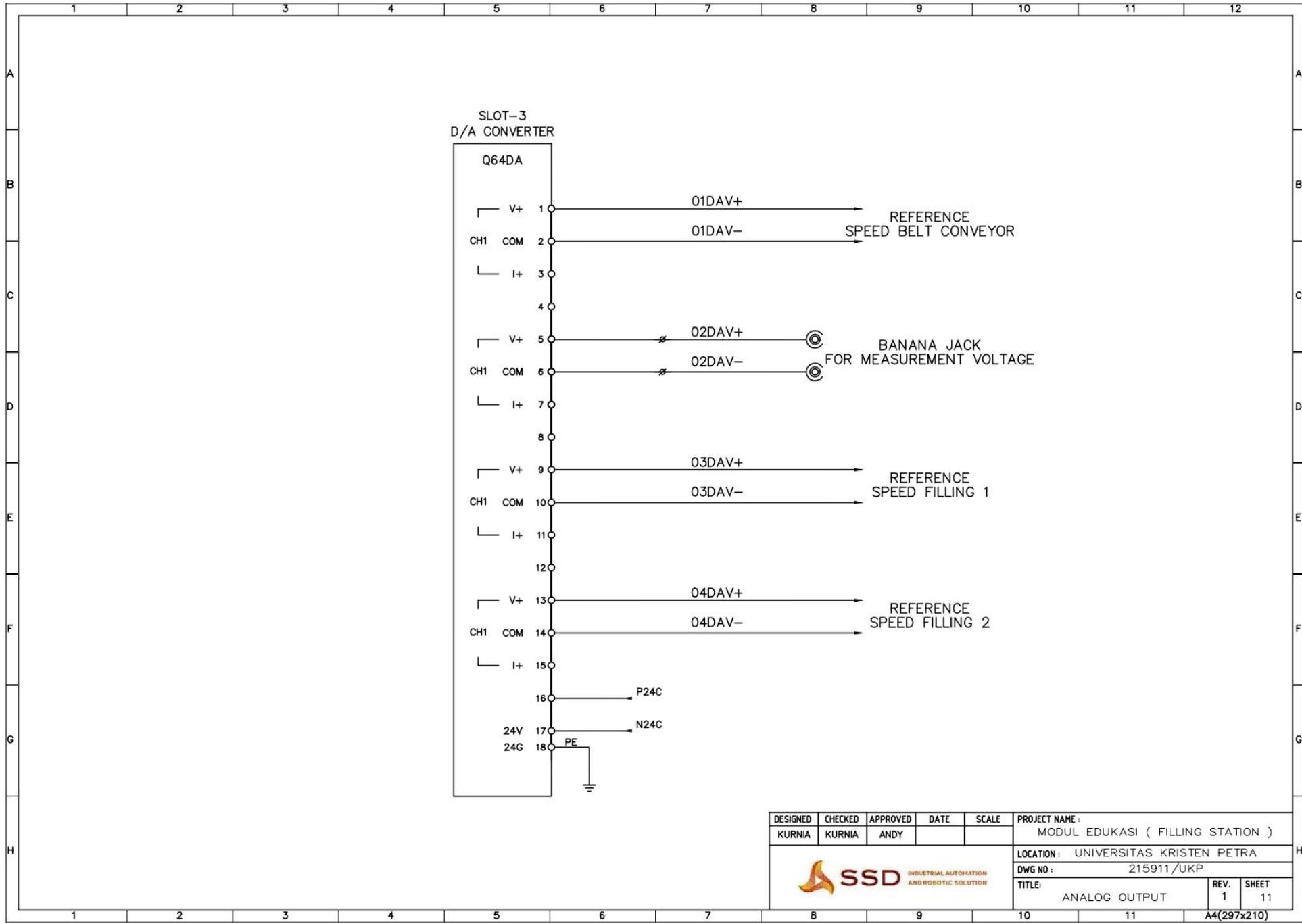


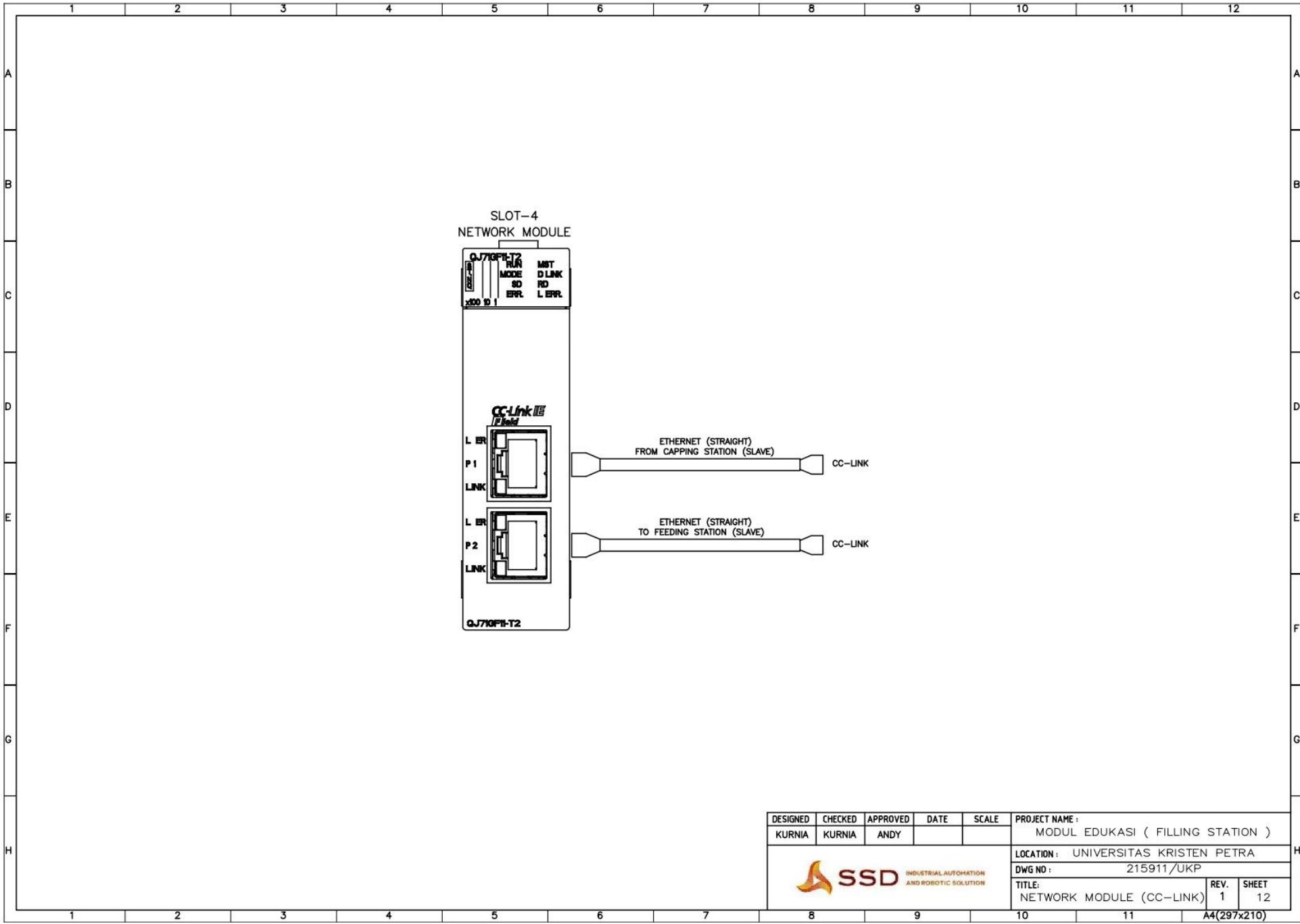


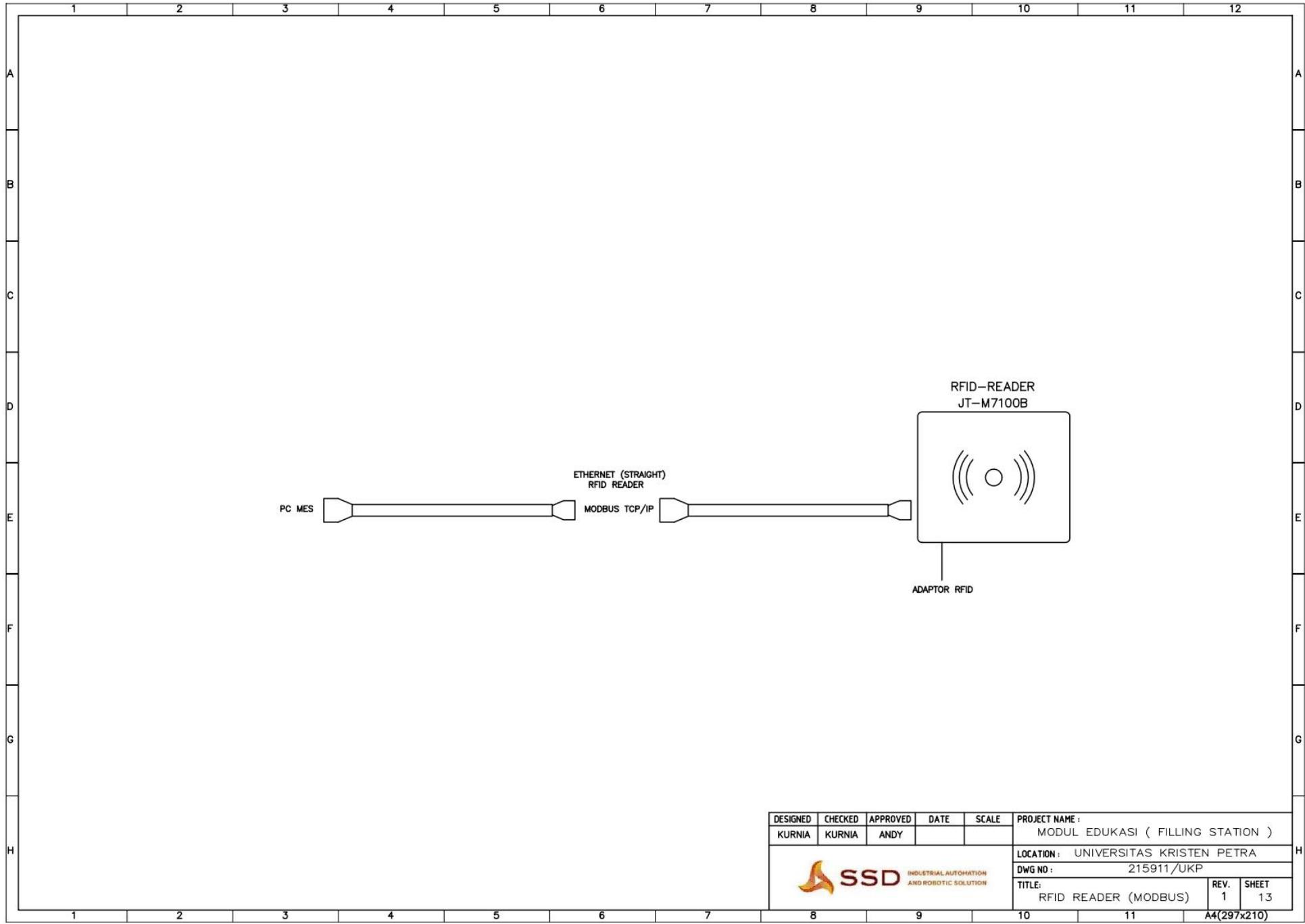


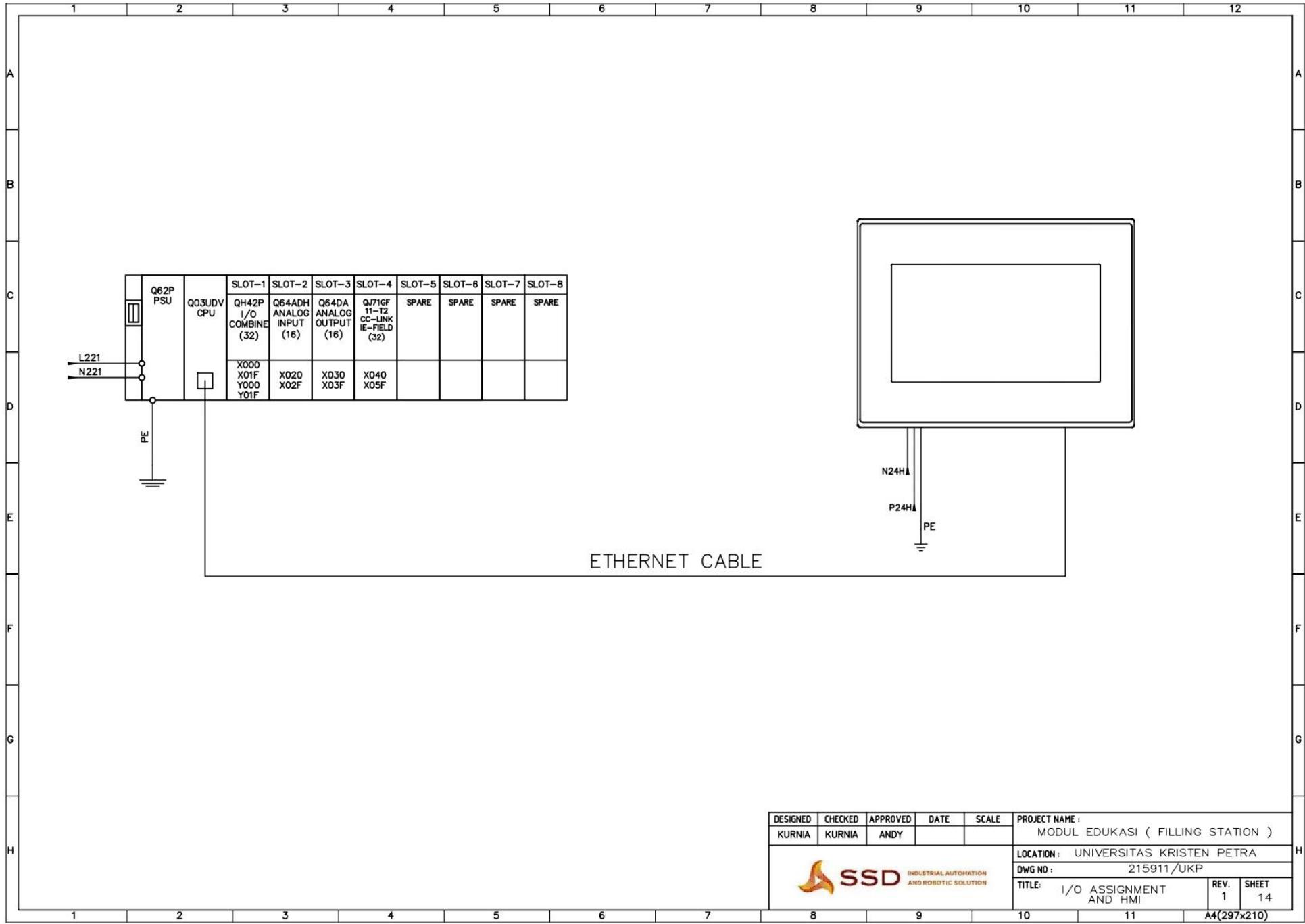


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LOCATION : UNIVERSITAS KRISTEN PETRA					
DWG NO : 215911/UKP					
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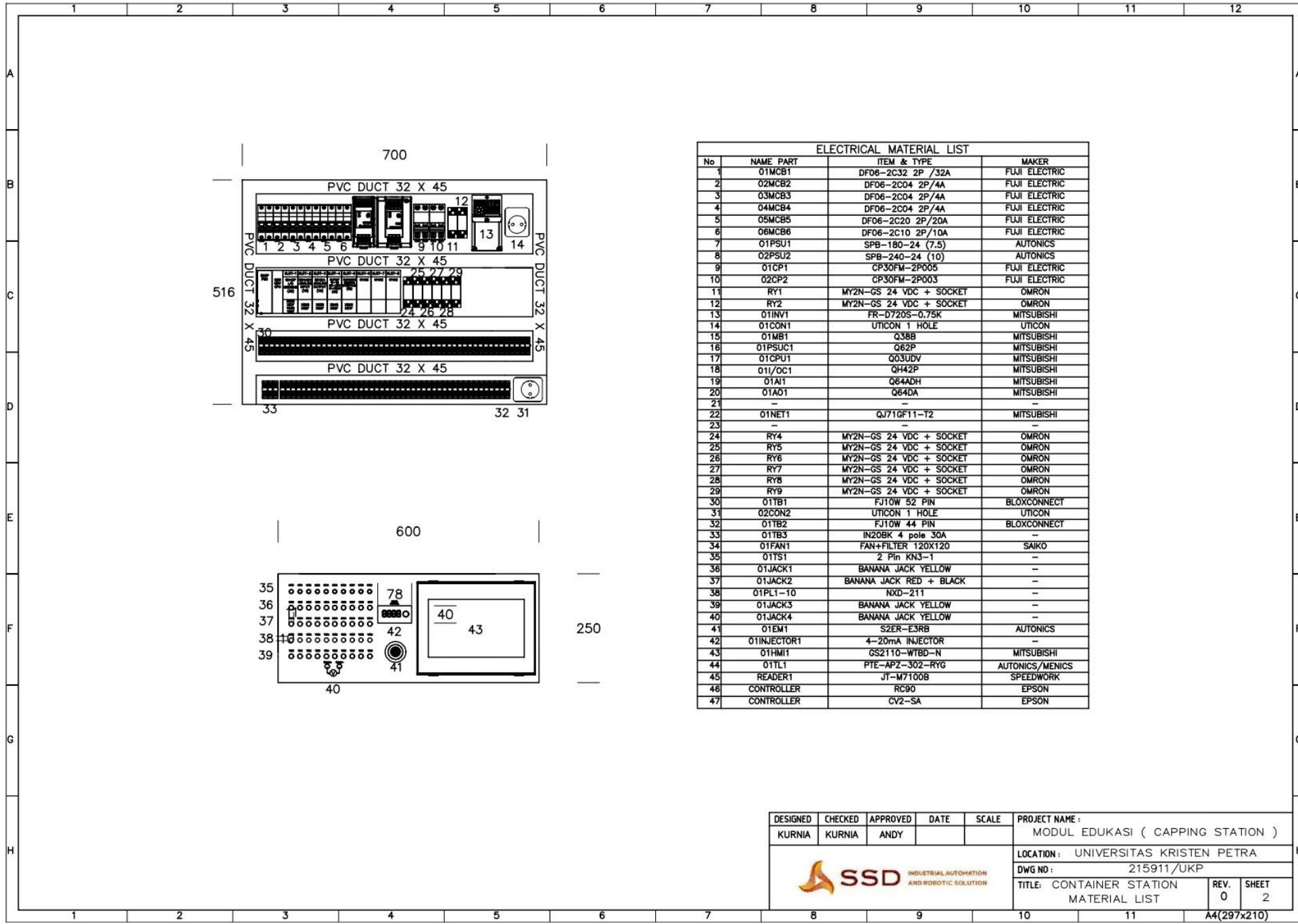


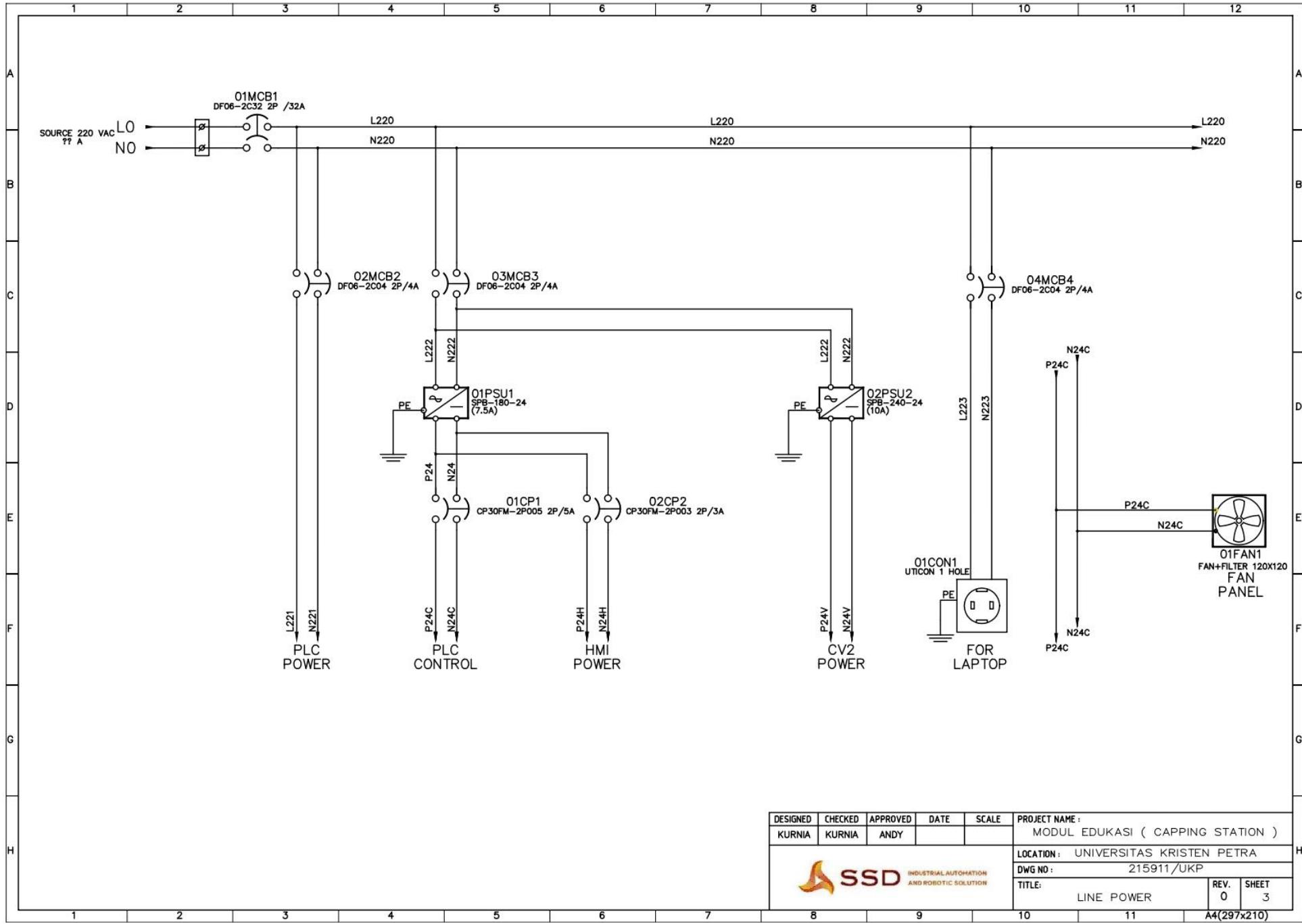


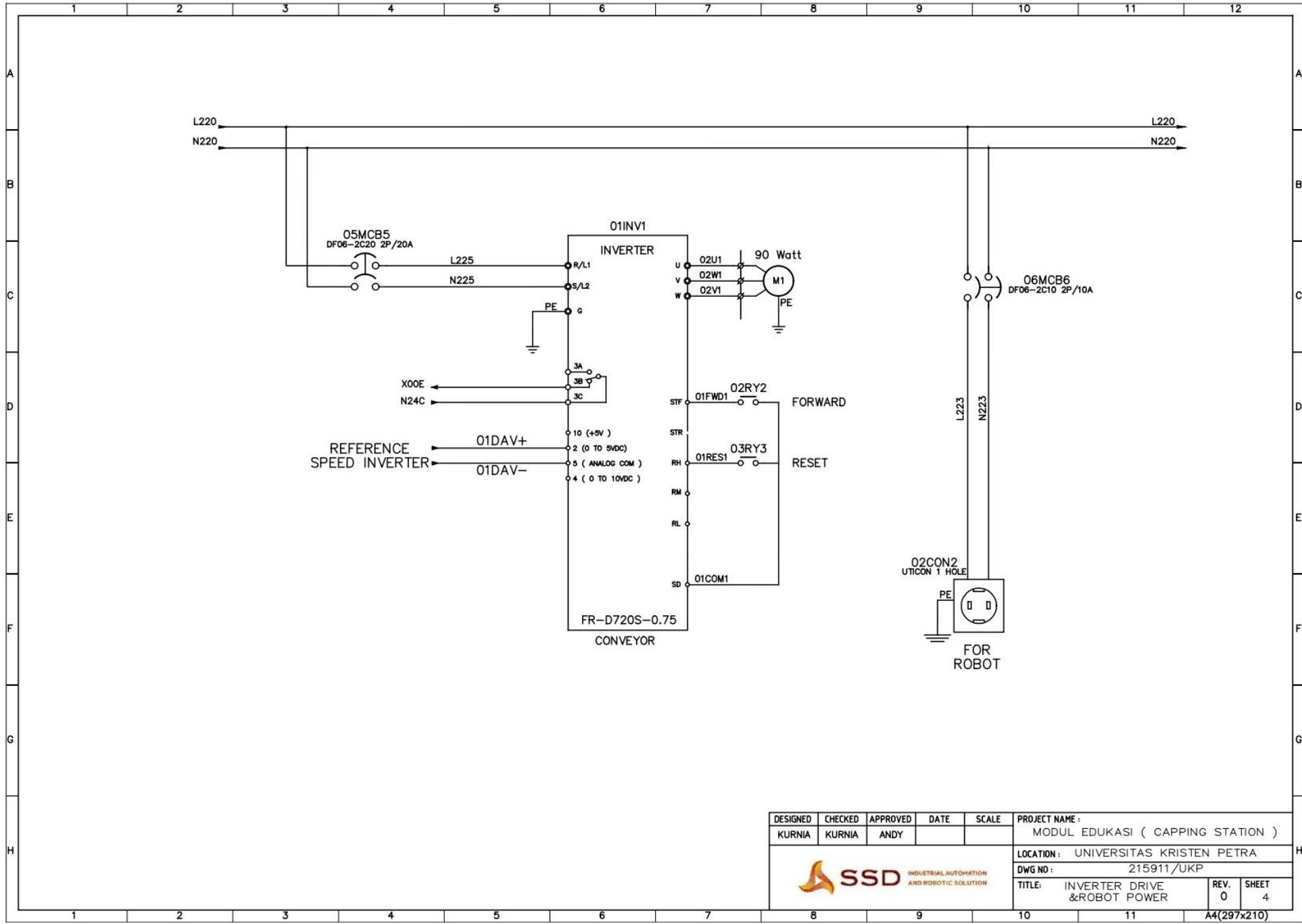


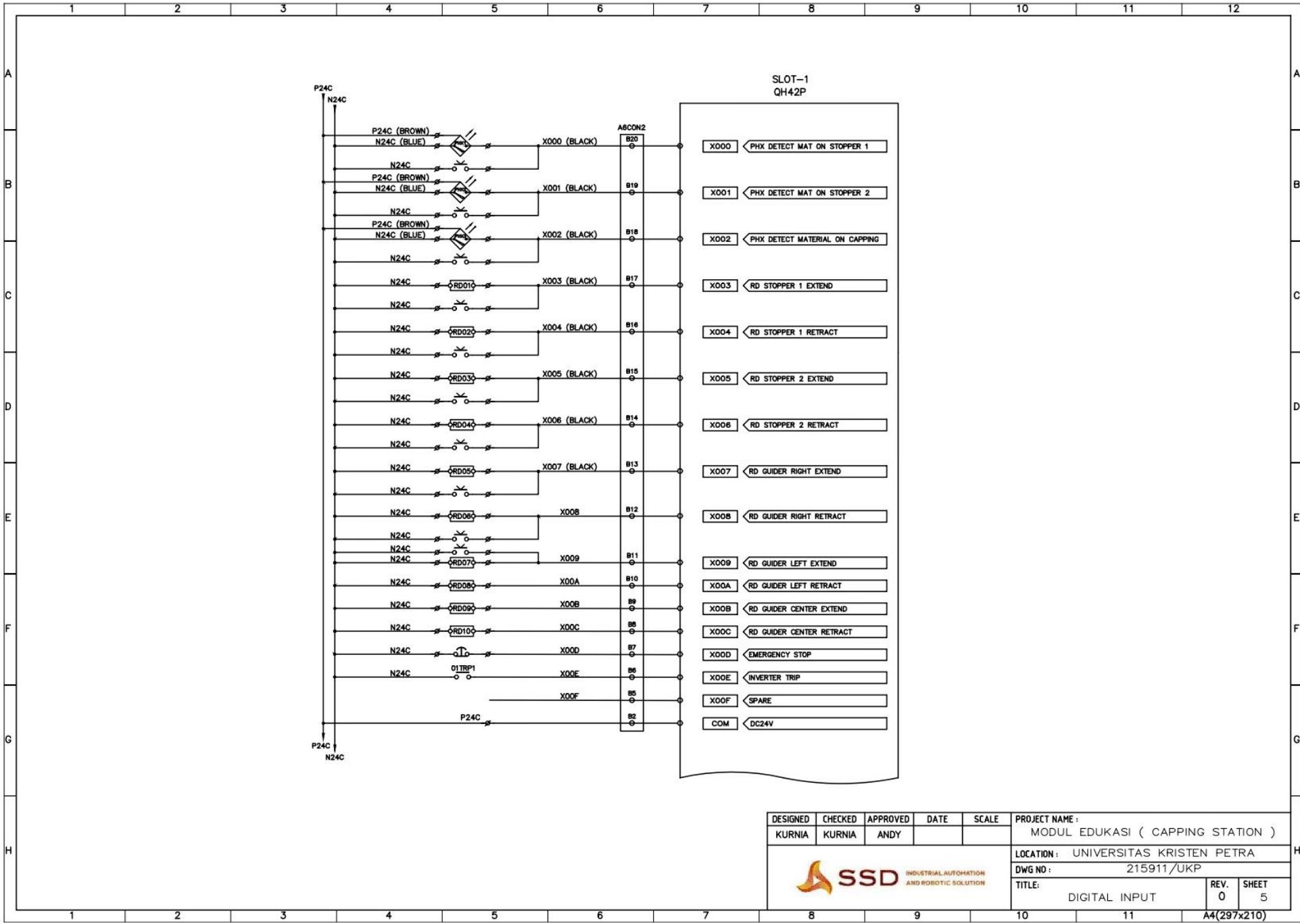
7.3 Drawing Electrical Modul Edukasi Capping Station

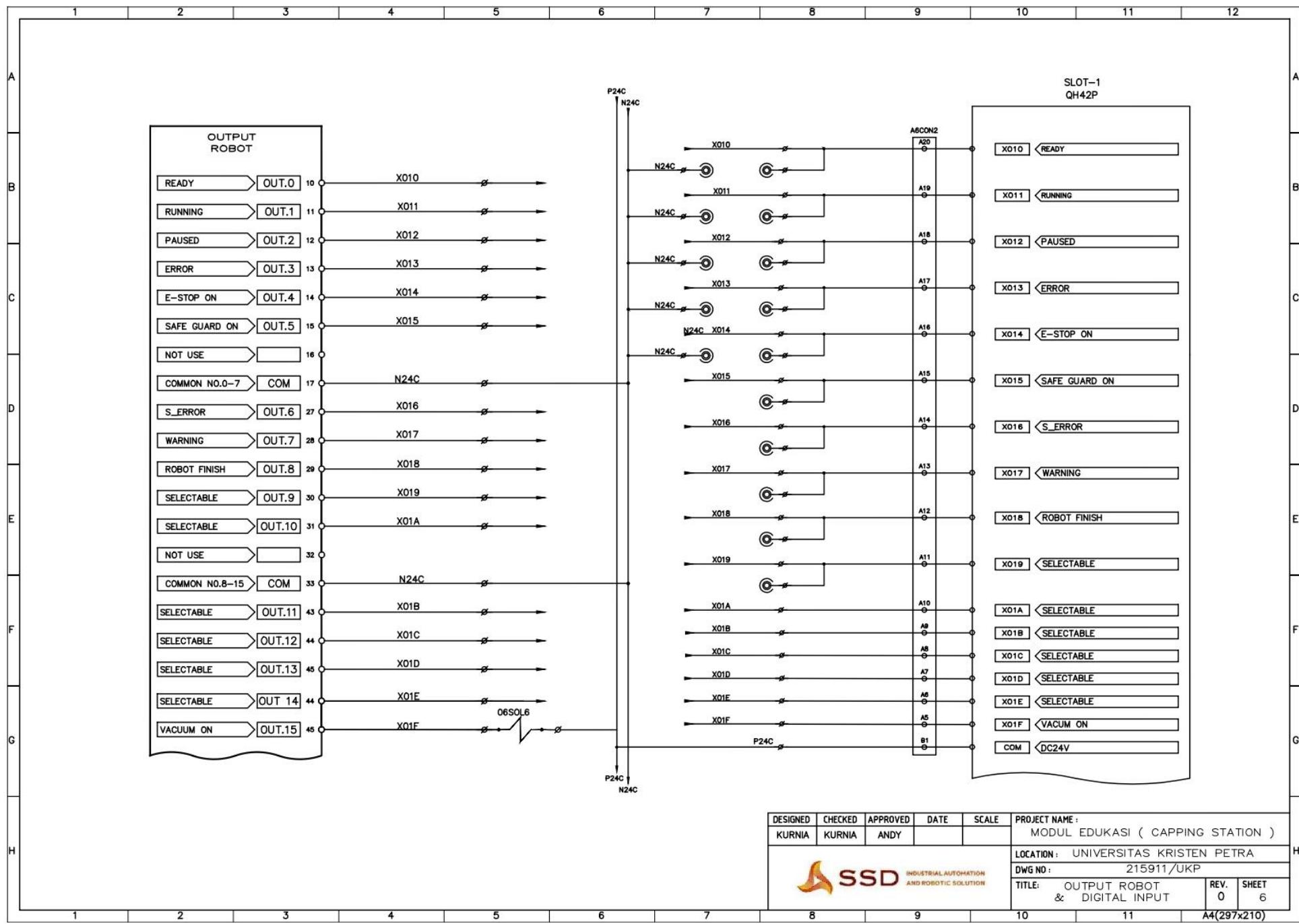
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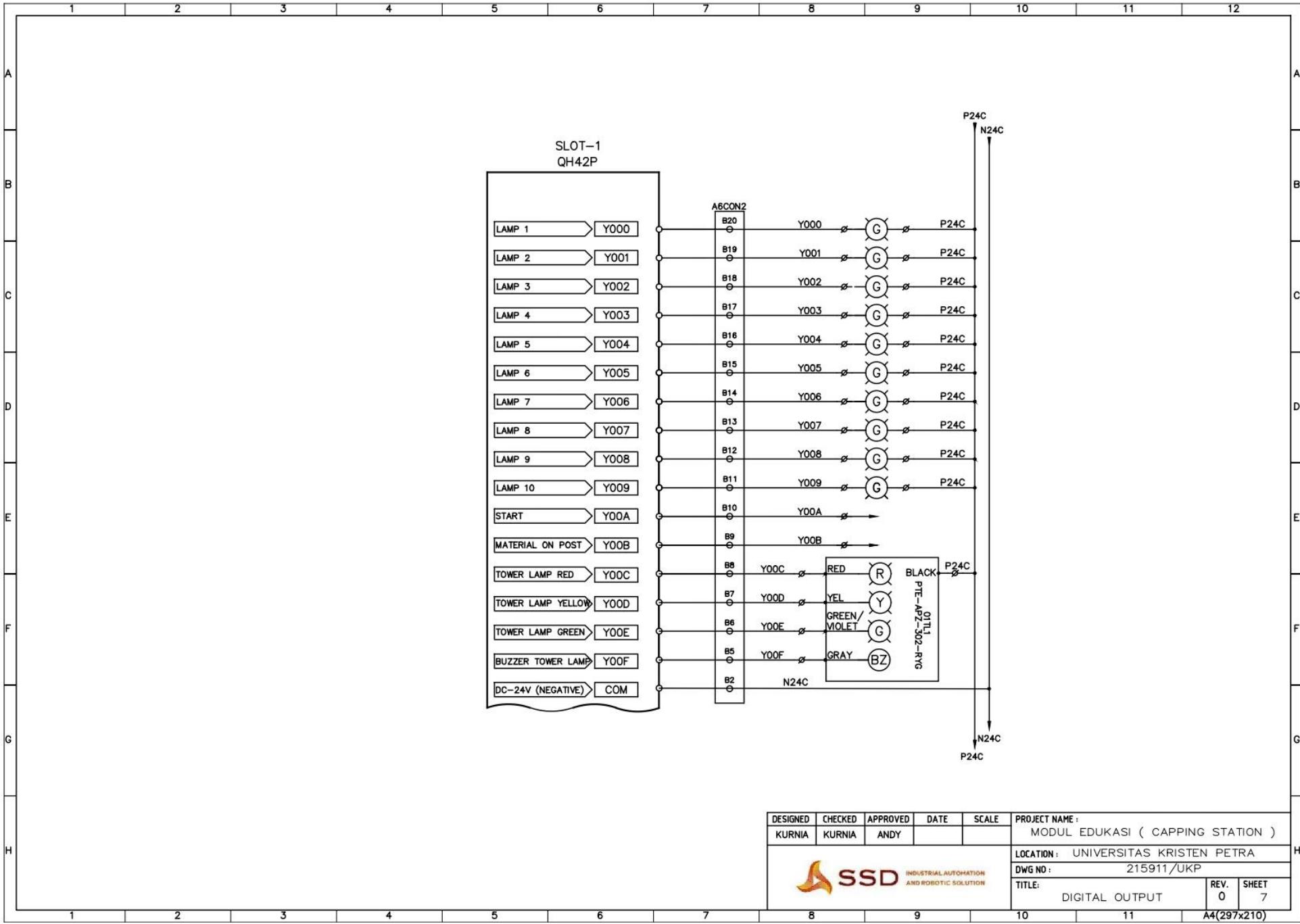








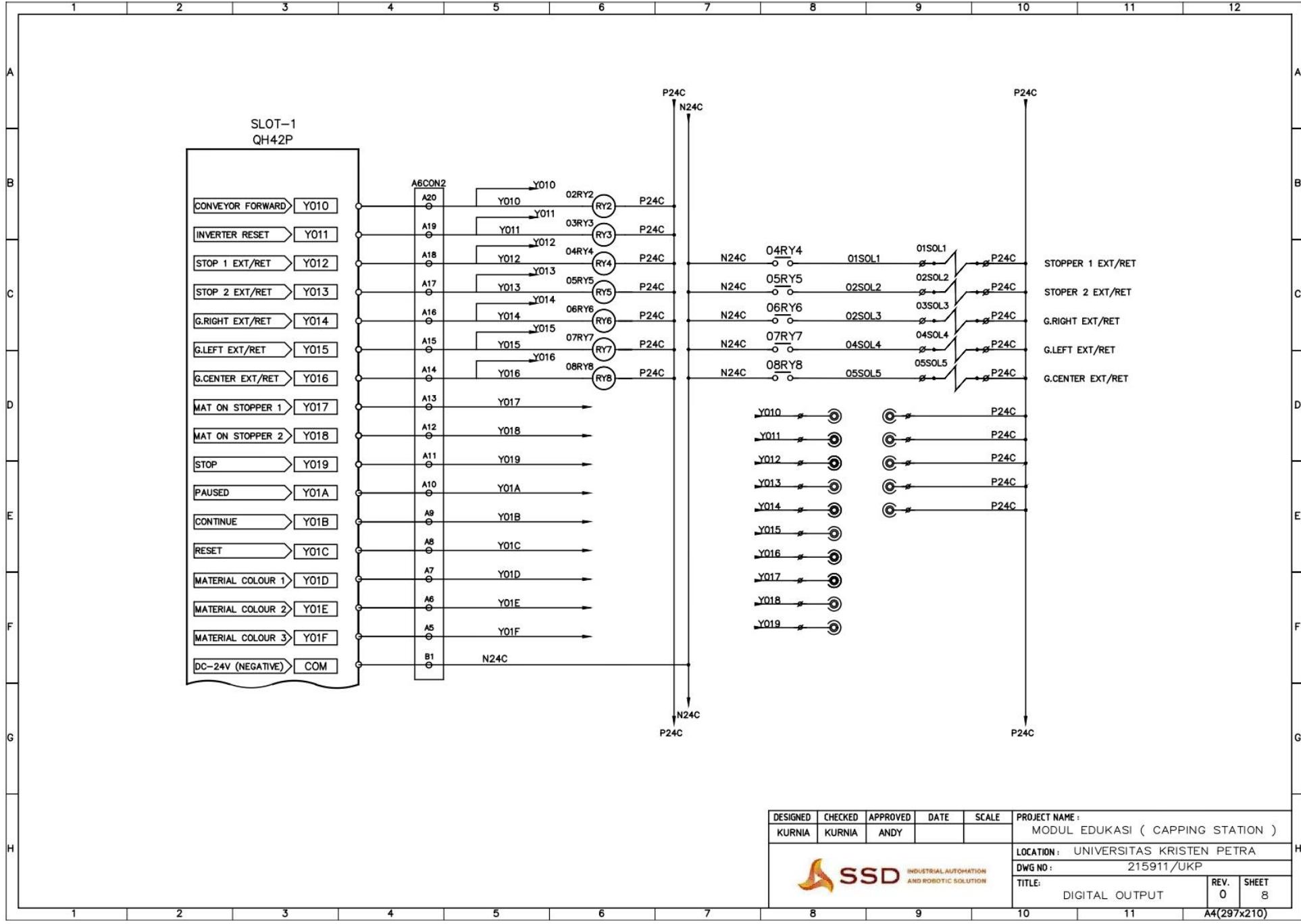




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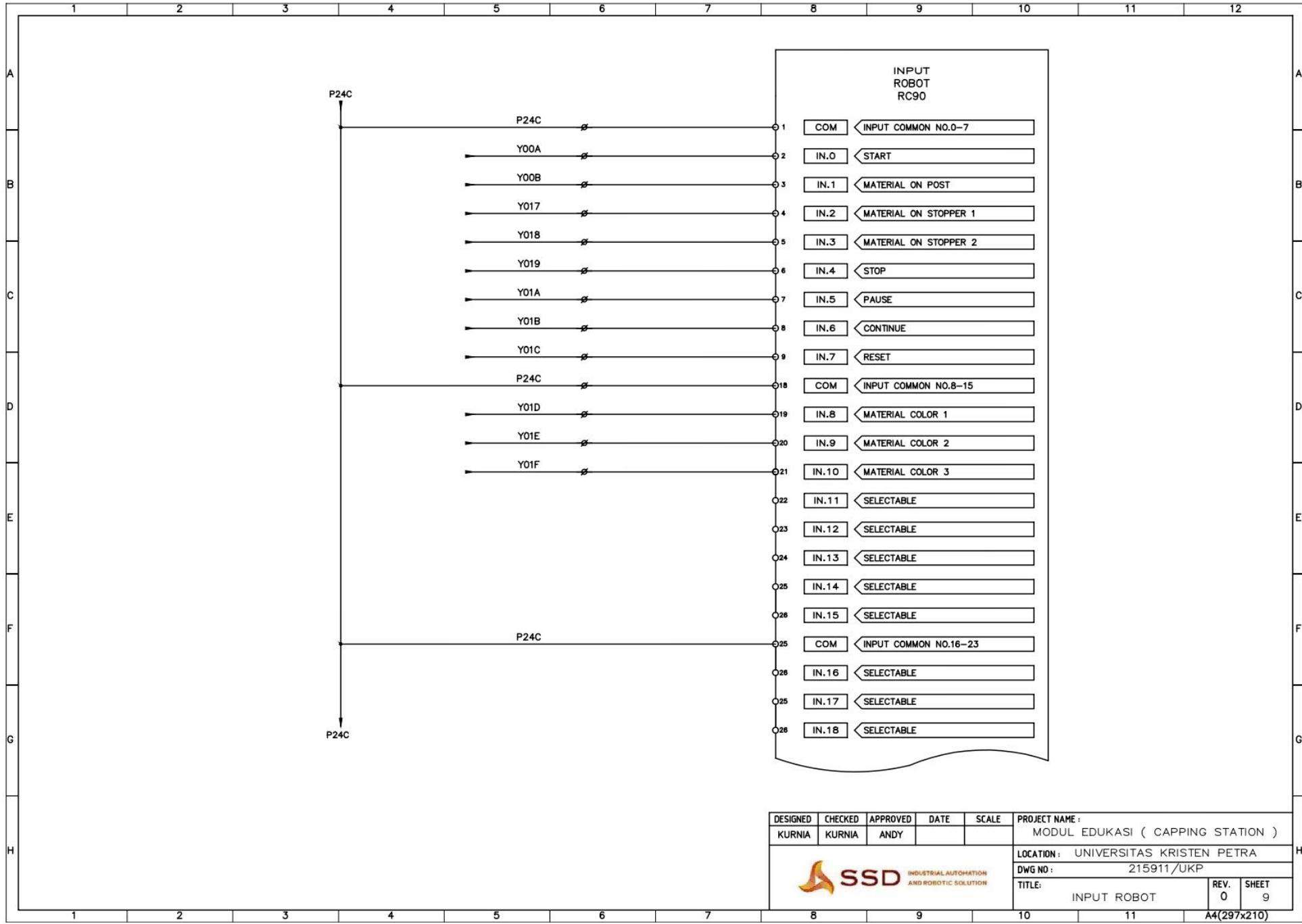


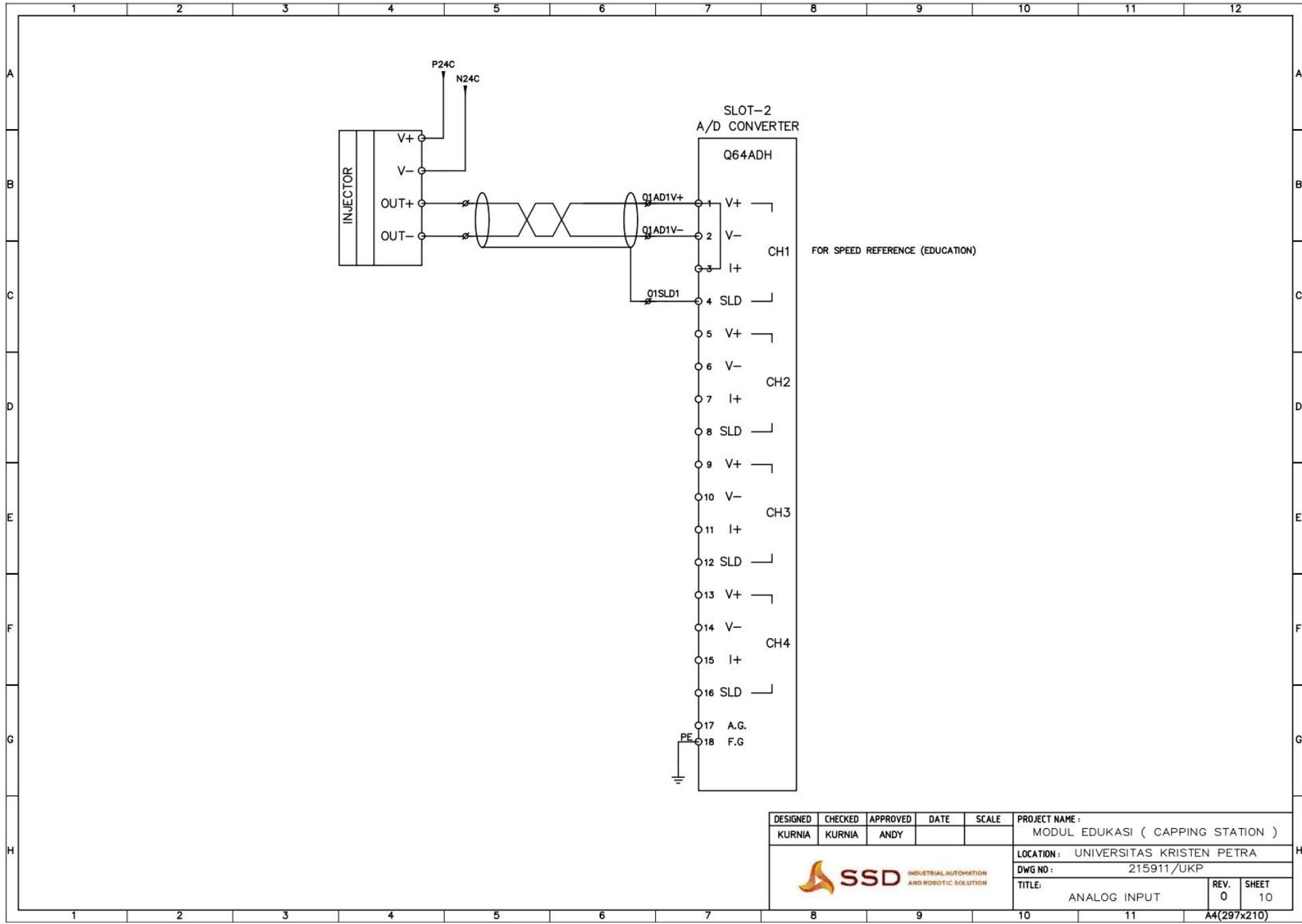
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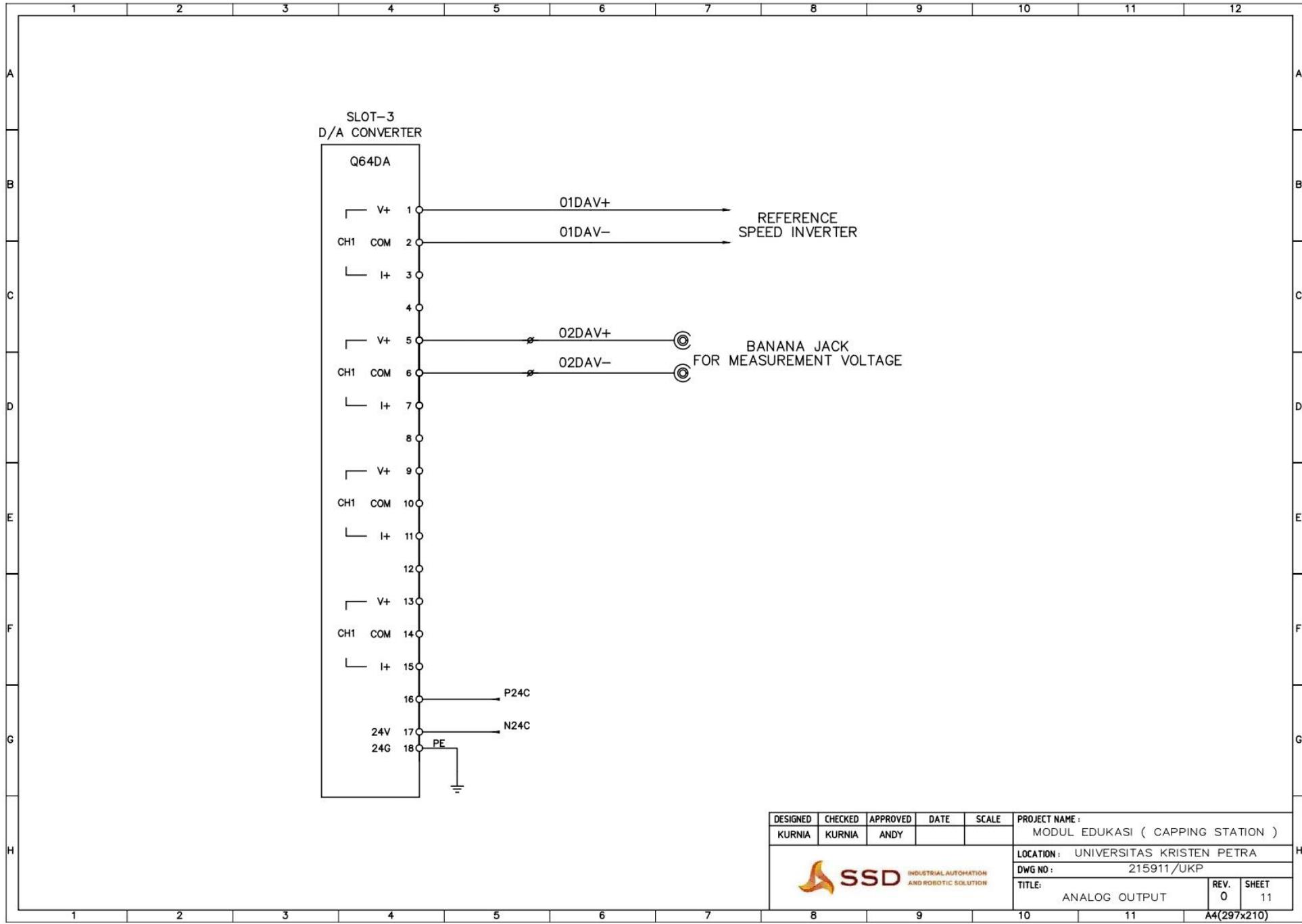


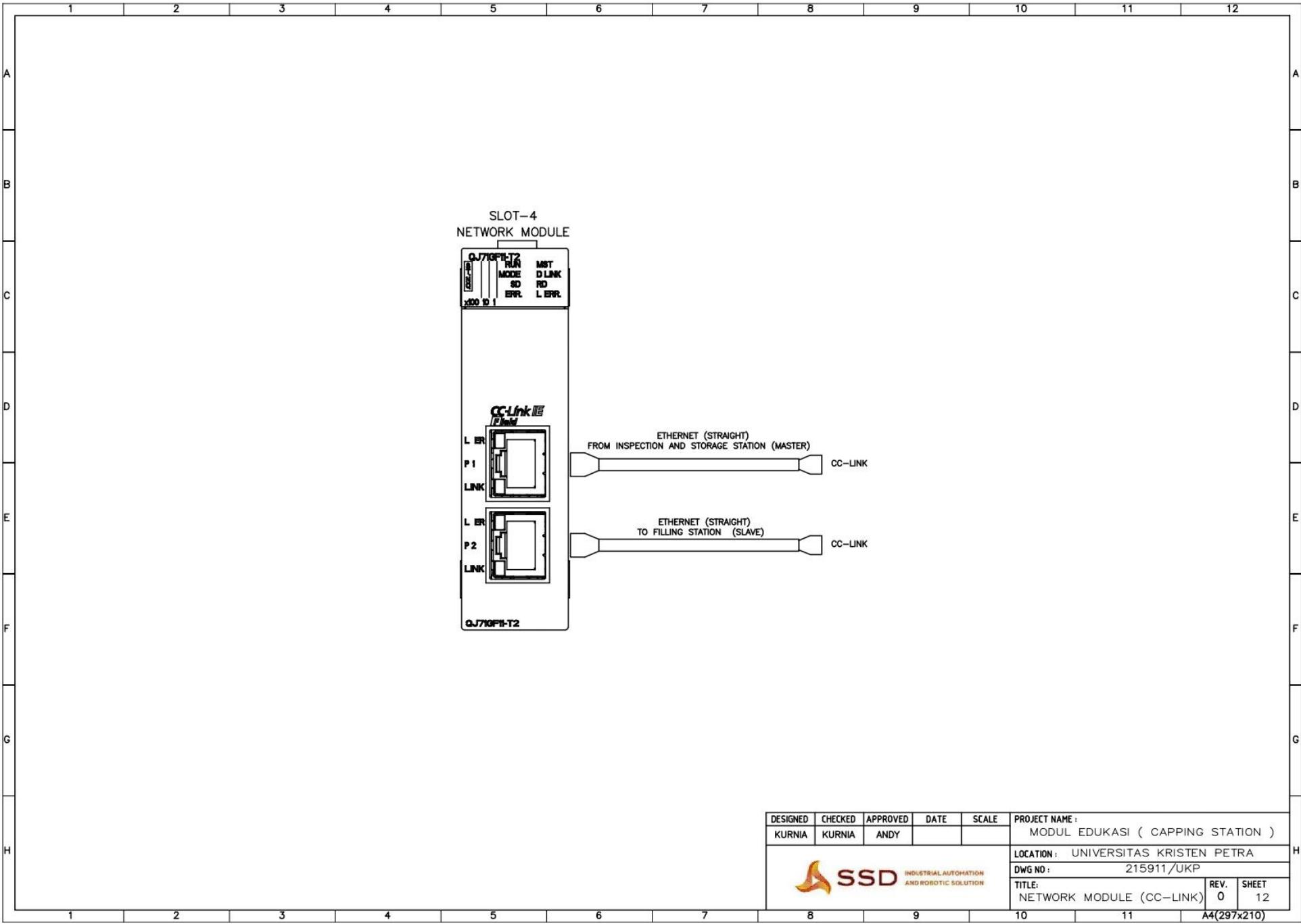
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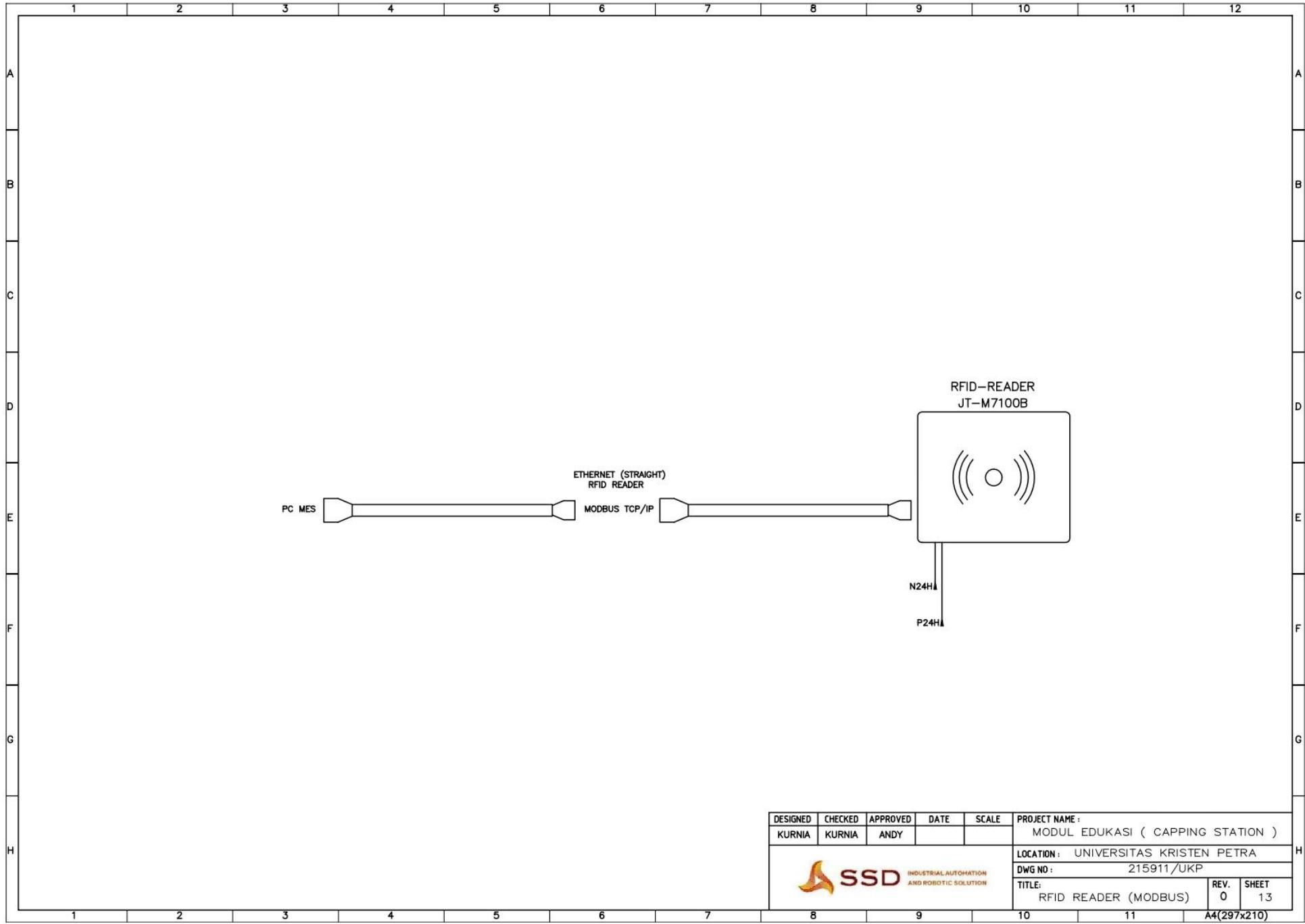


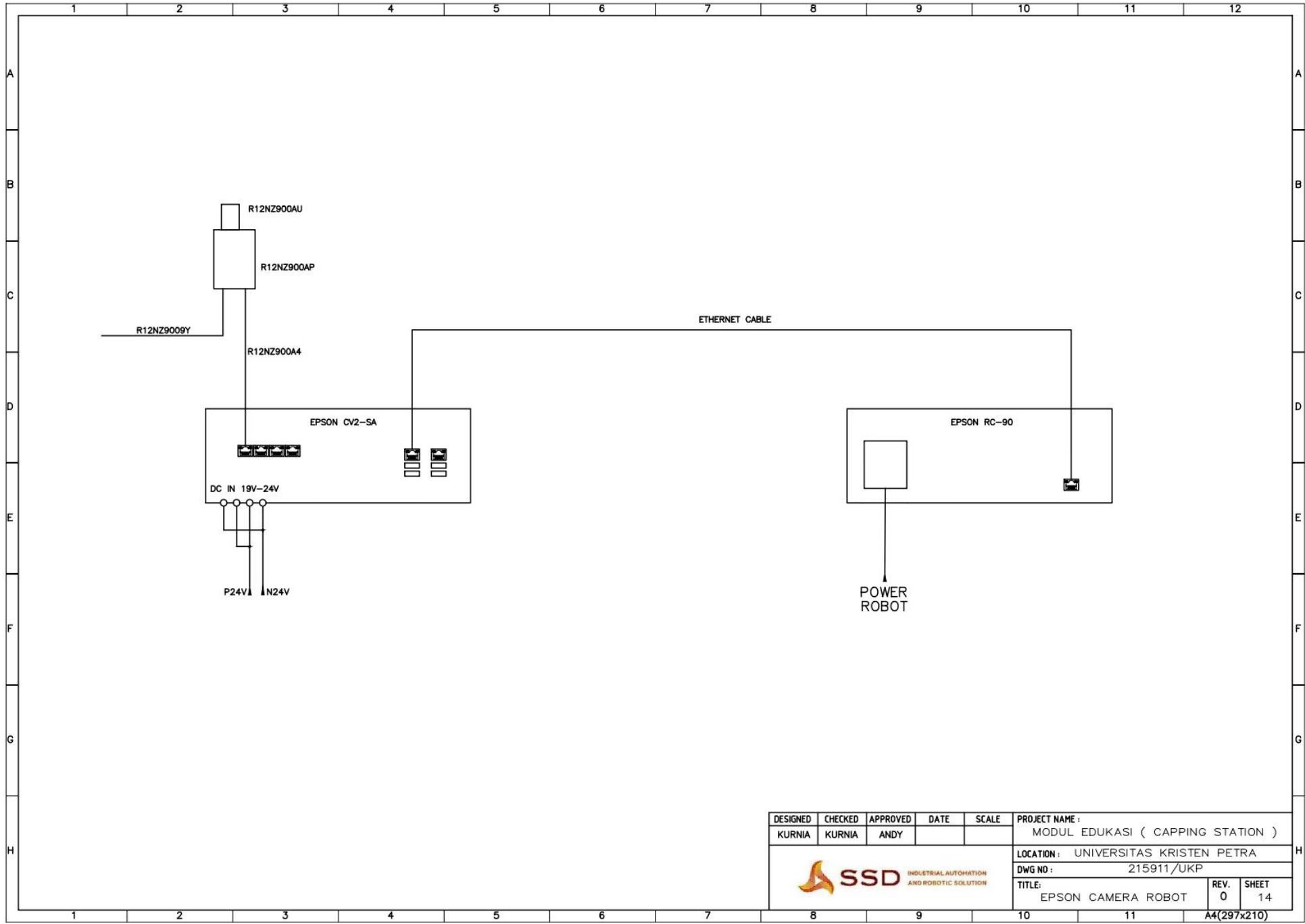


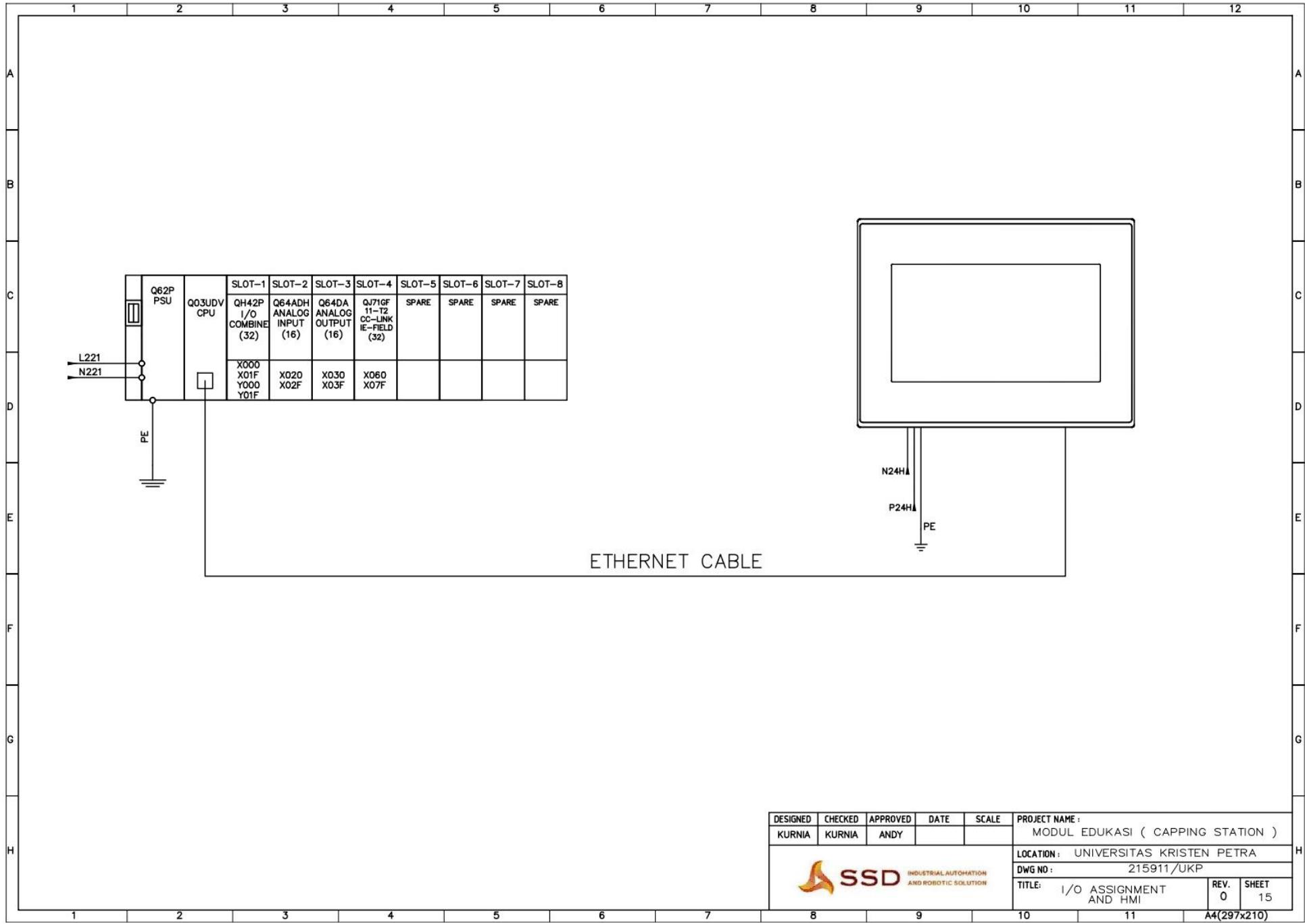












7.4 Drawing Electrical Modul Edukasi Inspection And Storage Station

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700

516

39 38

600

250

ELECTRICAL MATERIAL LIST

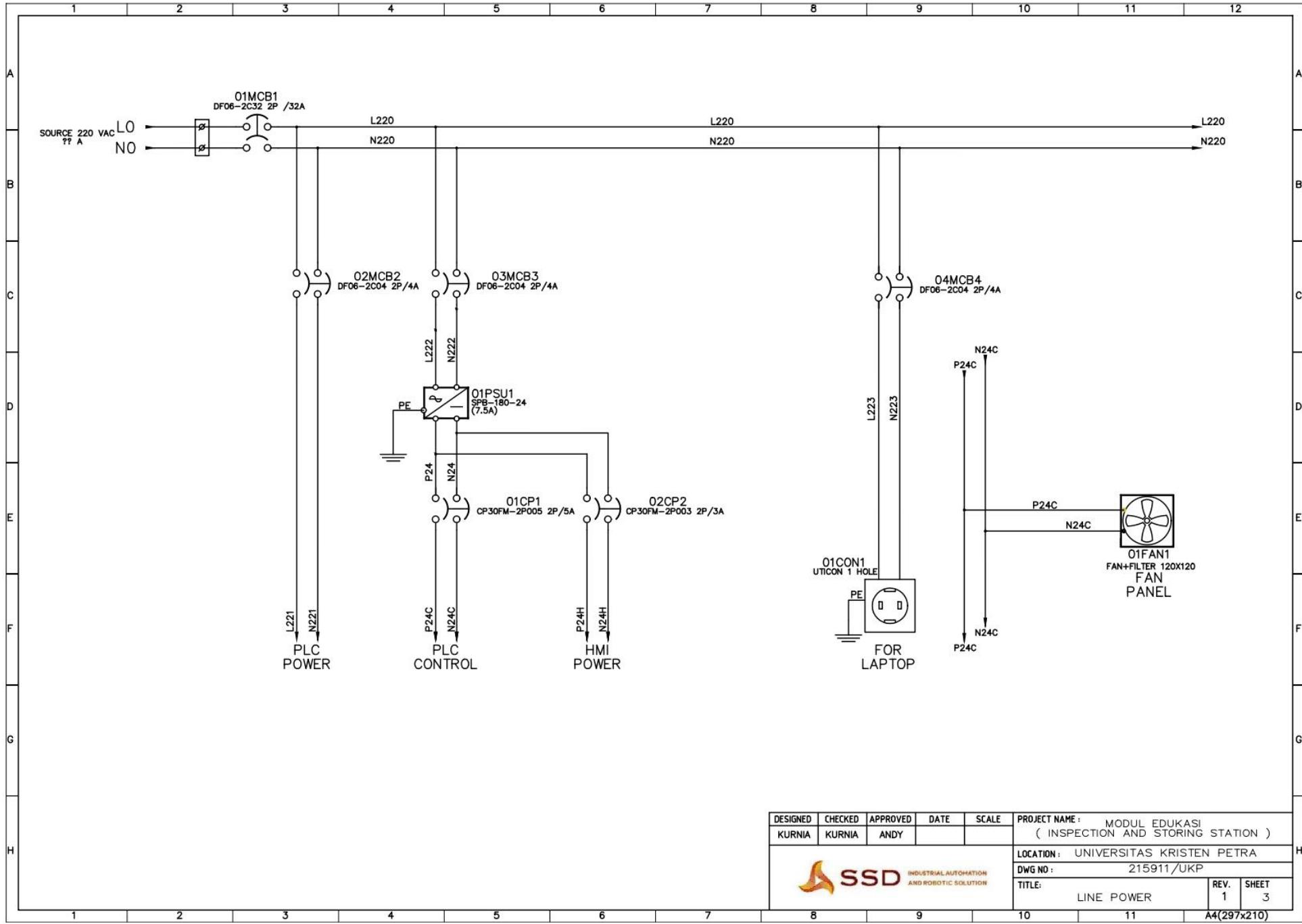
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3	03MCB3	DF06-2C04 2P/4A	FUJI ELECTRIC
4	04MCB4	DF06-2C04 2P/4A	FUJI ELECTRIC
5	05MCB5	DF06-2C20 2P/20A	FUJI ELECTRIC
6	06MCB6	DF06-2C10 2P/10A	FUJI ELECTRIC
7	01PSU1	SPB-180-24 (7.5)	AUTONICS
8	01CP1	CP30FM-2P005	FUJI ELECTRIC
9	02CP2	CP30FM-2P003	FUJI ELECTRIC
10	RY17	MY2N-GS 24 VDC + SOCKET	OMRON
11	RY18	MY2N-GS 24 VDC + SOCKET	OMRON
12	01HUB1	EDS-205	MOXA
13	01INV1	FR-D720S-0.75K	MITSUBISHI
14	01ICON1	UTICON 1 HOLE	UTICON
15	01MB1	R38B	MITSUBISHI
16	01PSUC1	R61P	MITSUBISHI
17	01CPU1	R02CPU	MITSUBISHI
18	01/OC1	RH42C4NT2P	MITSUBISHI
19	01A1	R60AD4	MITSUBISHI
20	01A01	R60DA4	MITSUBISHI
21	01NET1	RJ71GF11-T2	MITSUBISHI
22	01MB1	RJ71EN71(E+E)	MITSUBISHI
23	RY3	MY2N-GS 24 VDC + SOCKET	OMRON
24	RY4	MY2N-GS 24 VDC + SOCKET	OMRON
25	RY5	MY2N-GS 24 VDC + SOCKET	OMRON
26	RY6	MY2N-GS 24 VDC + SOCKET	OMRON
27	RY7	MY2N-GS 24 VDC + SOCKET	OMRON
28	RY8	MY2N-GS 24 VDC + SOCKET	OMRON
29	RY9	MY2N-GS 24 VDC + SOCKET	OMRON
30	RY10	MY2N-GS 24 VDC + SOCKET	OMRON
31	RY11	MY2N-GS 24 VDC + SOCKET	OMRON
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33	RY13	MY2N-GS 24 VDC + SOCKET	OMRON
34	RY14	MY2N-GS 24 VDC + SOCKET	OMRON
35	RY15	MY2N-GS 24 VDC + SOCKET	OMRON
36	RY16	MY2N-GS 24 VDC + SOCKET	OMRON
37	01TB1	FJ10W 52 PIN	BLOXCONNECT
38	02CON2	UTICON 1 HOLE	UTICON
39	01TB2	FJ10W 44 PIN	BLOXCONNECT
40	01TB3	IN206K 4 pole 30A	-
41	01FAN1	FAN+FILTER 120X120	SAIKO
42	01TS1	2 Pin KN3-1	-
43	01JACK1	BANANA JACK YELLOW	-
44	01JACK2	BANANA JACK RED + BLACK	-
45	01PL1-10	NXD-211	-
46	01JACK3	BANANA JACK YELLOW	-
47	01JACK4	BANANA JACK YELLOW	-
48	01EM1	S2ER-E3RB	AUTONICS
49	01INJECTOR1	4-20mA INJECTOR	-
50	01HM11	GS2110-WTBD-N	MITSUBISHI
51	01TL1	PTE-APZ-302-RYG	AUTONICS/MENICS
52	READER1	JT-M7100B	SPEEDWORK
53	CONTROLLER	UR3-CB SERIES	UNIVERSAL ROBOT
54	CAMERA	LOGITECH C100	LOGITECH
55	PERSONAL COMPUTER	DELL	DELL

DESIGNED BY: KURNIA
CHECKED BY: KURNIA
APPROVED BY: ANDY
DATE: _____
SCALE: _____

PROJECT NAME: MODUL EDUKASI
(INSPECTION AND STORING STATION)

LOCATION: UNIVERSITAS KRISTEN PETRA
DWG NO: 215911/UKP
TITLE: CONTAINER STATION MATERIAL LIST
REV. 1 SHEET 2
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SSD INDUSTRIAL AUTOMATION AND ROBOTIC SOLUTION



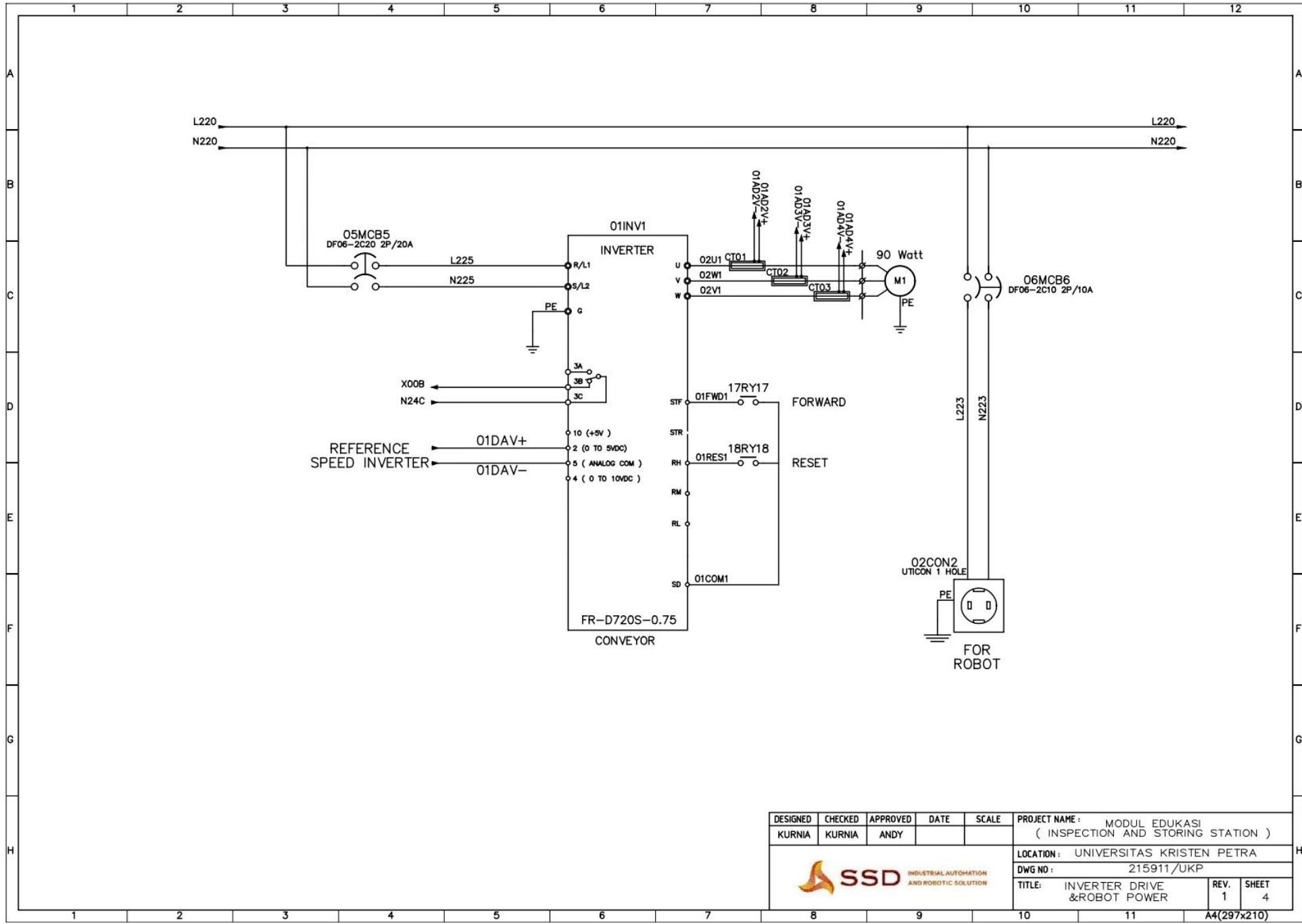
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SSD INDUSTRIAL AUTOMATION AND ROBOTIC SOLUTION						DWG NO : 215911/UKP
TITLE: LINE POWER		REV. 1		SHEET 3		

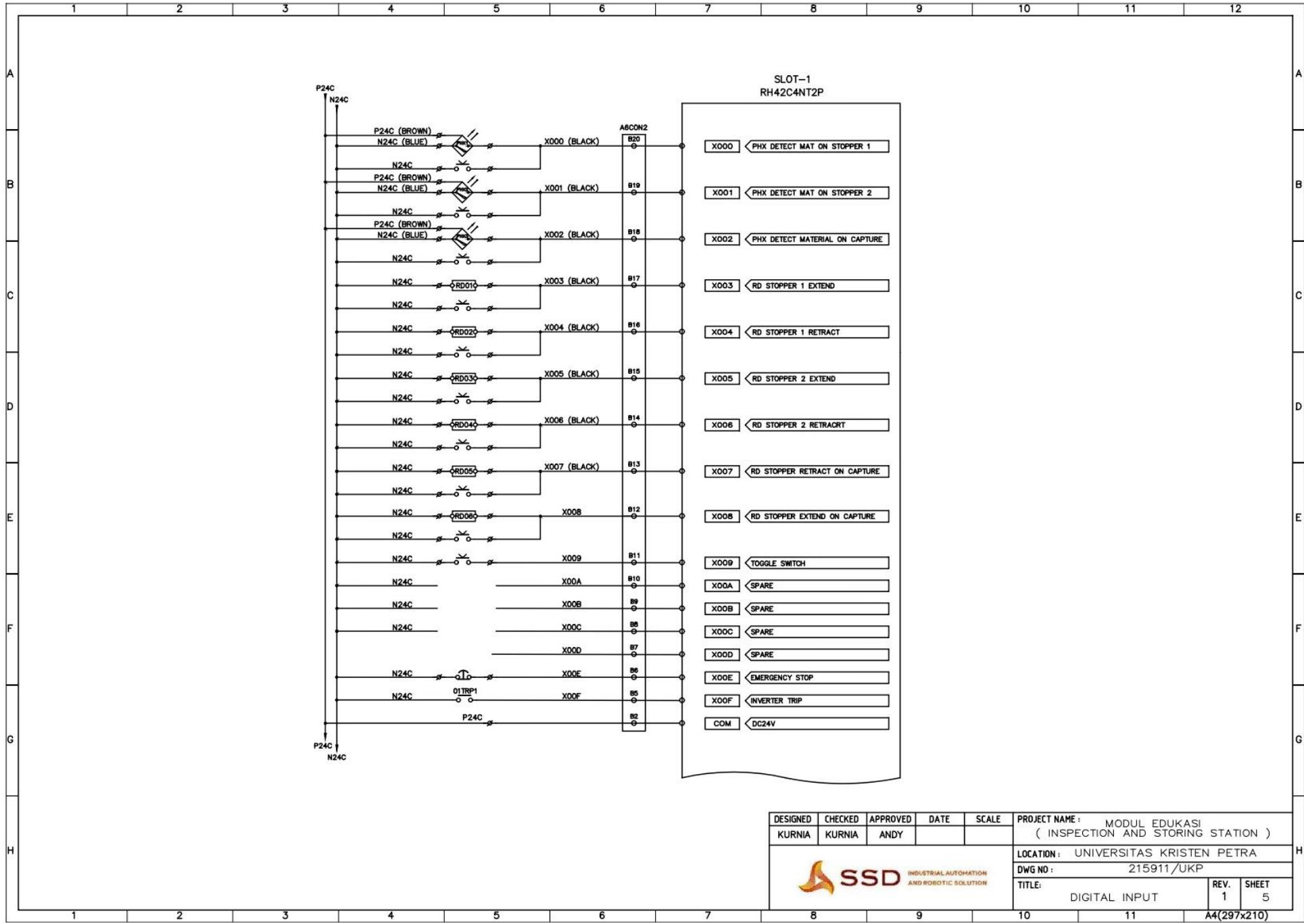


INDUSTRIAL AUTOMATION
AND ROBOTIC SOLUTION

215911/UKP

A4(297x210)



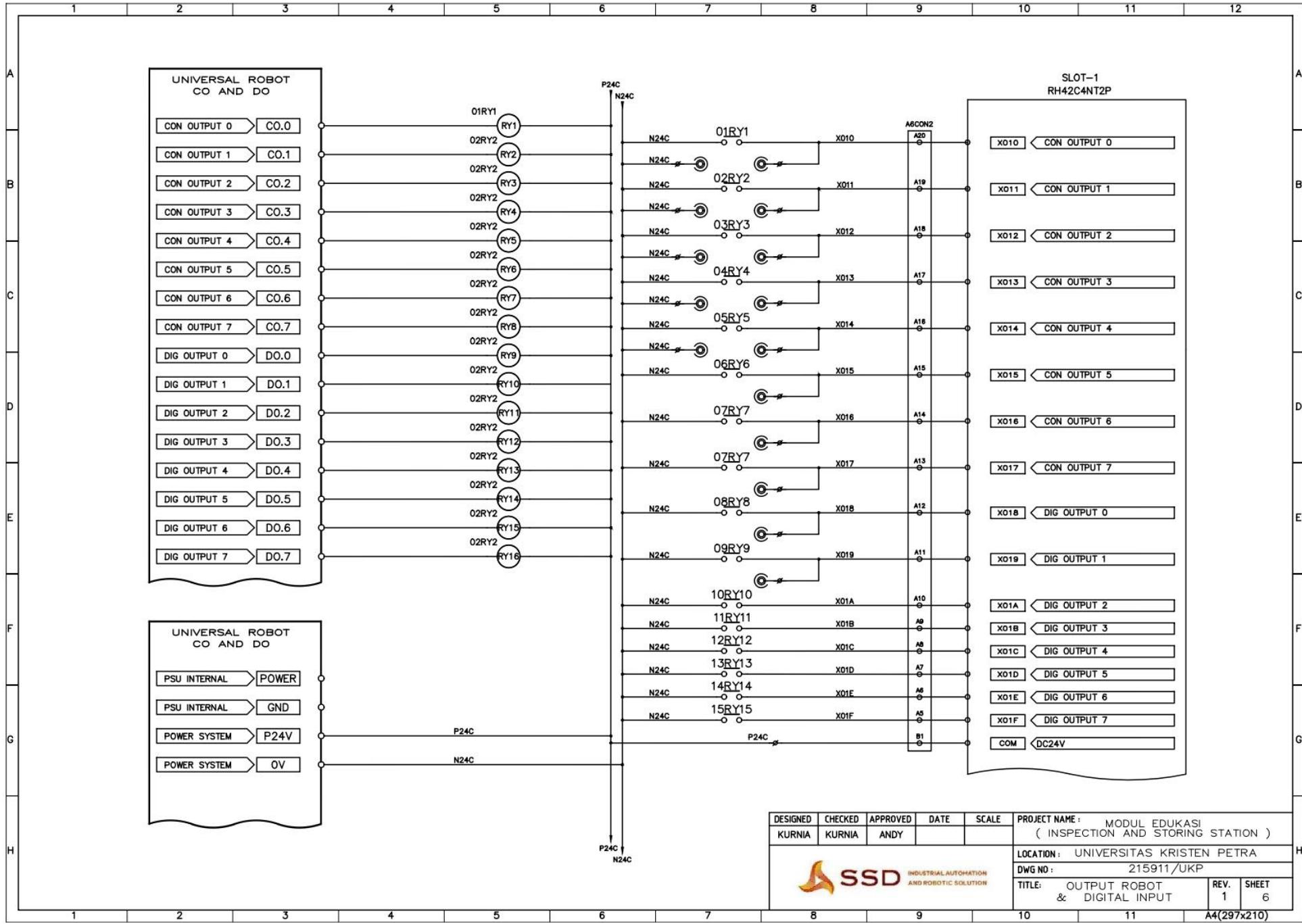


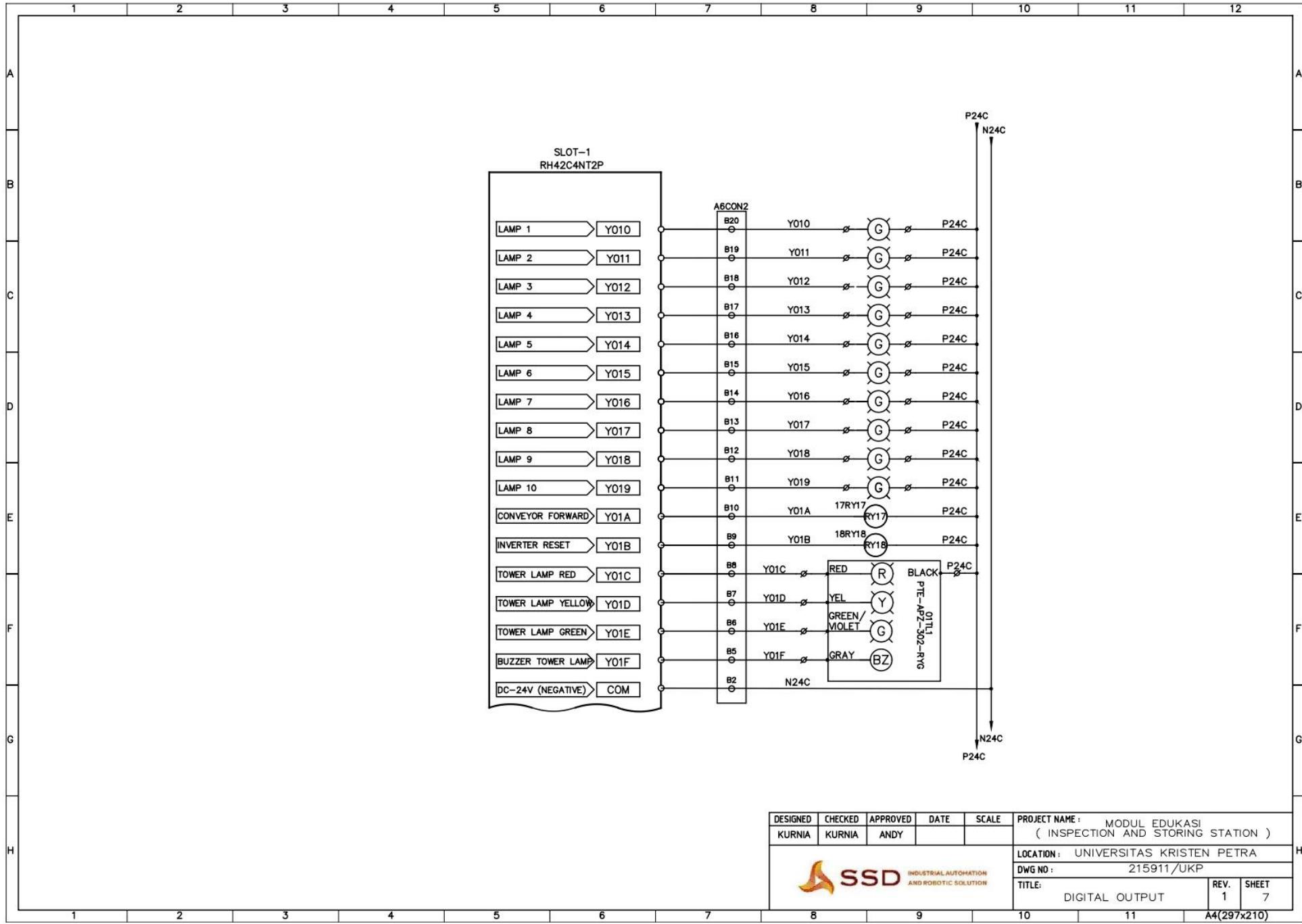
PROJECT NAME : MODUL EDUKASI
(INSPECTION AND STORING STATION)

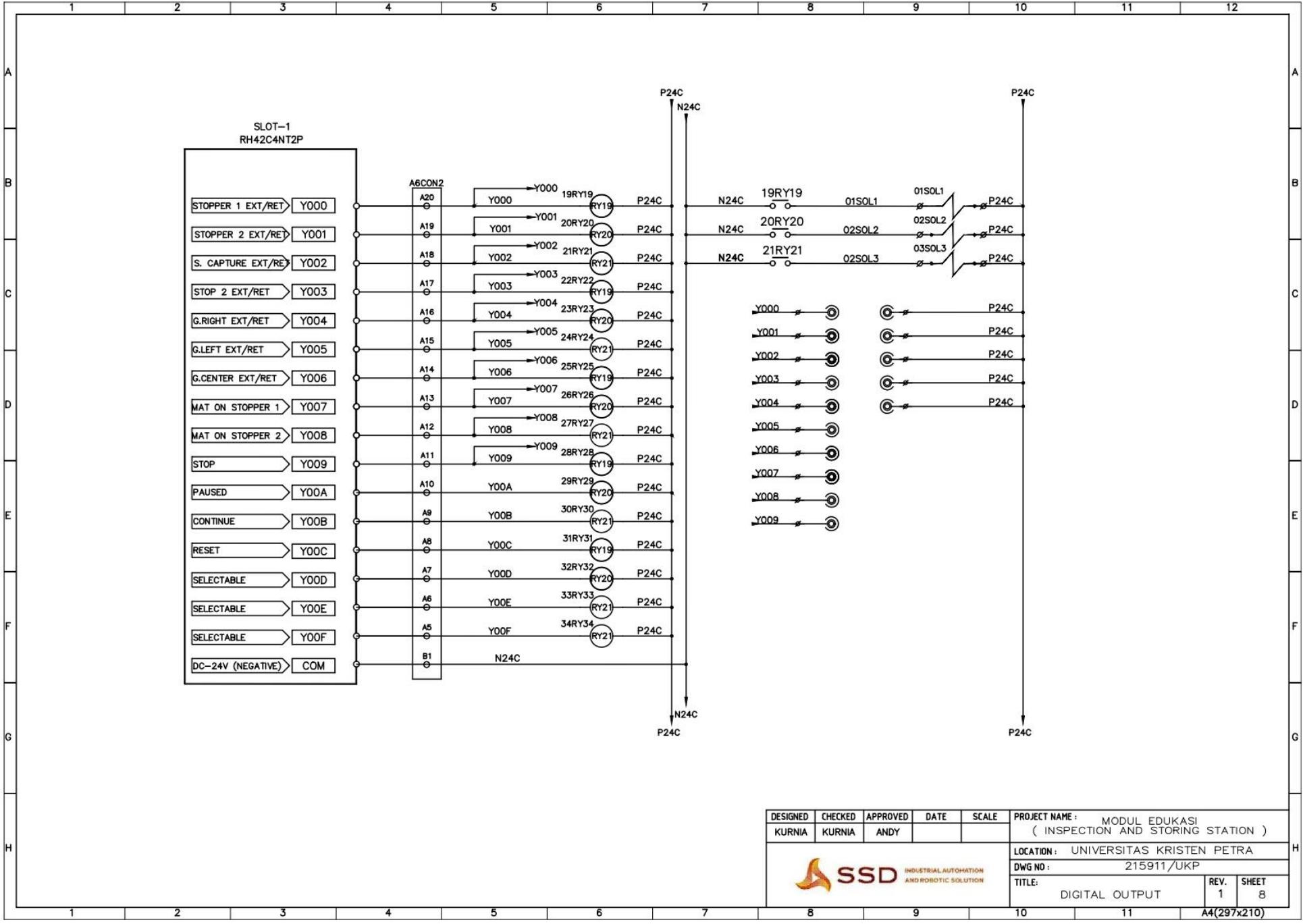
LOCATION : UNIVERSITAS KRISTEN PETRA

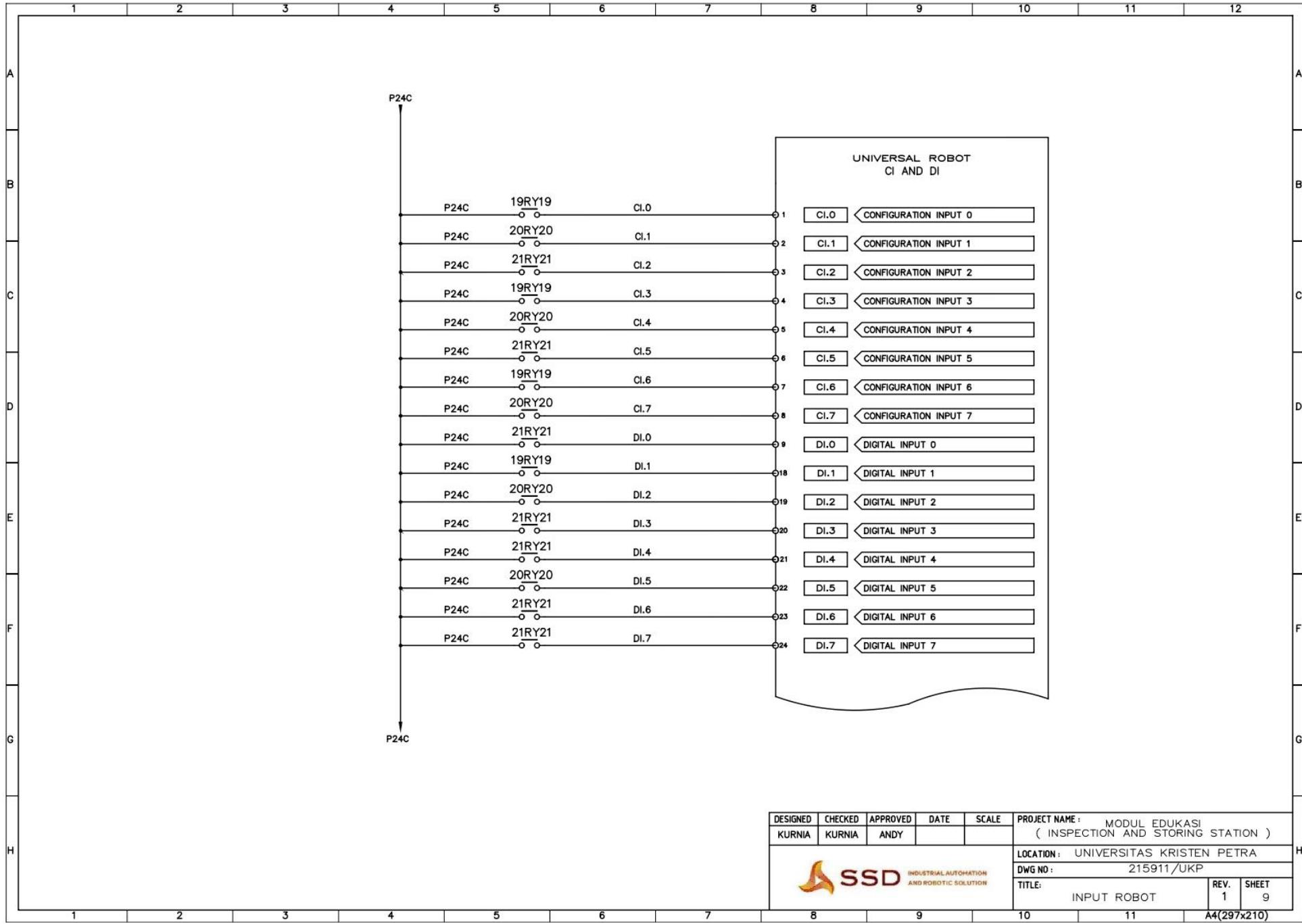
DWG NO : 215911 / UKP

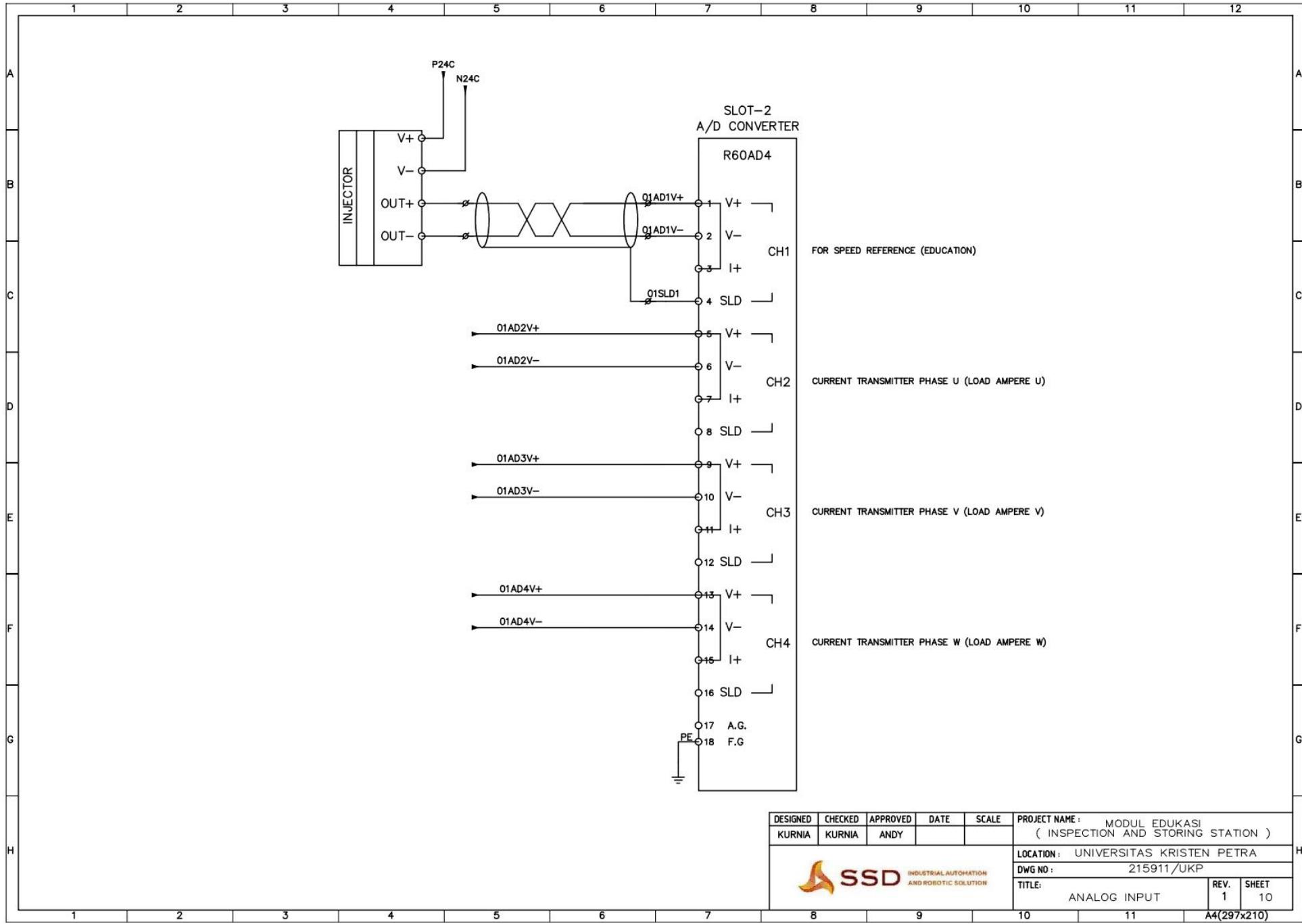
TITLE: DIGITAL INPUT REV. 1 SHEET 5

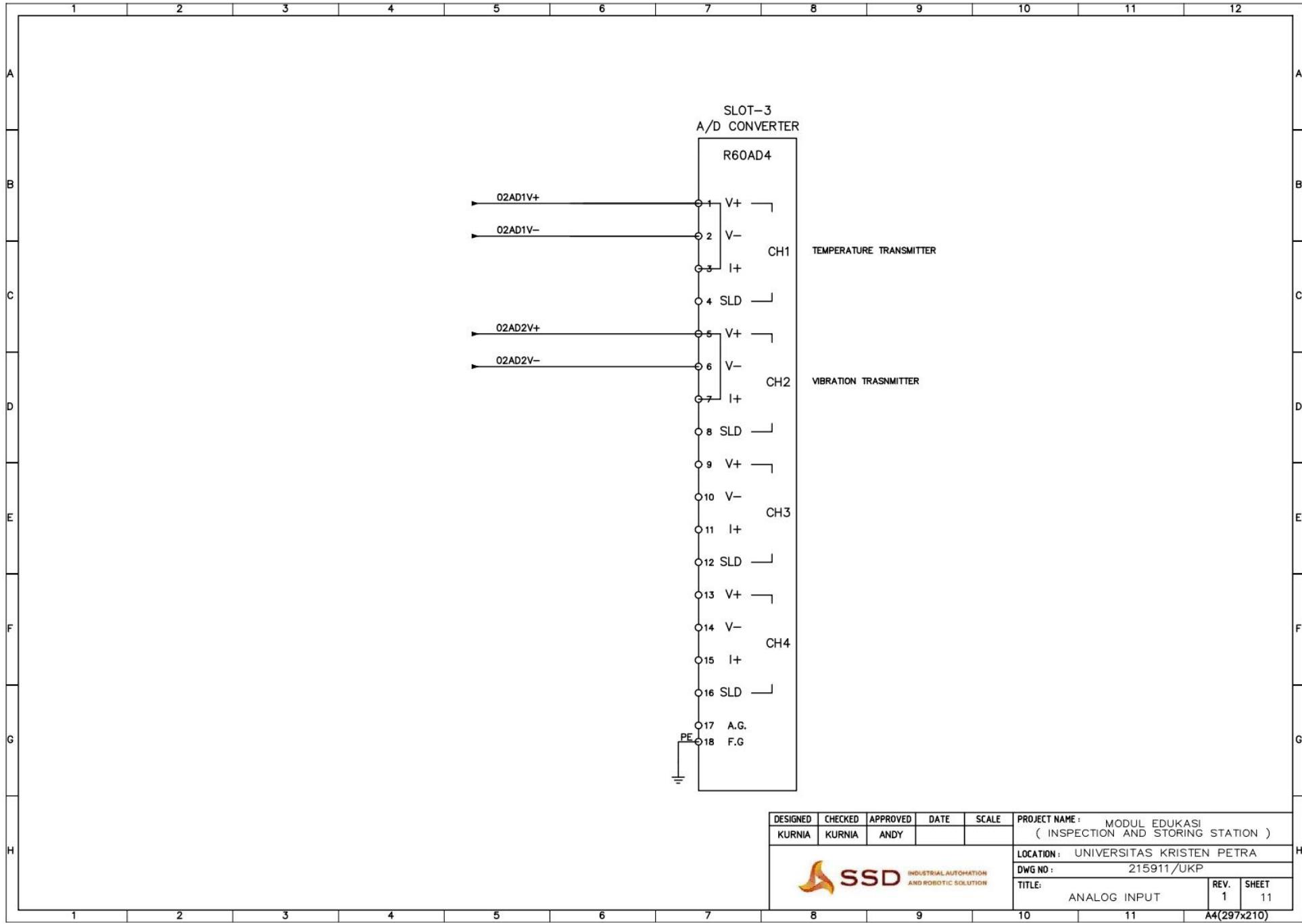


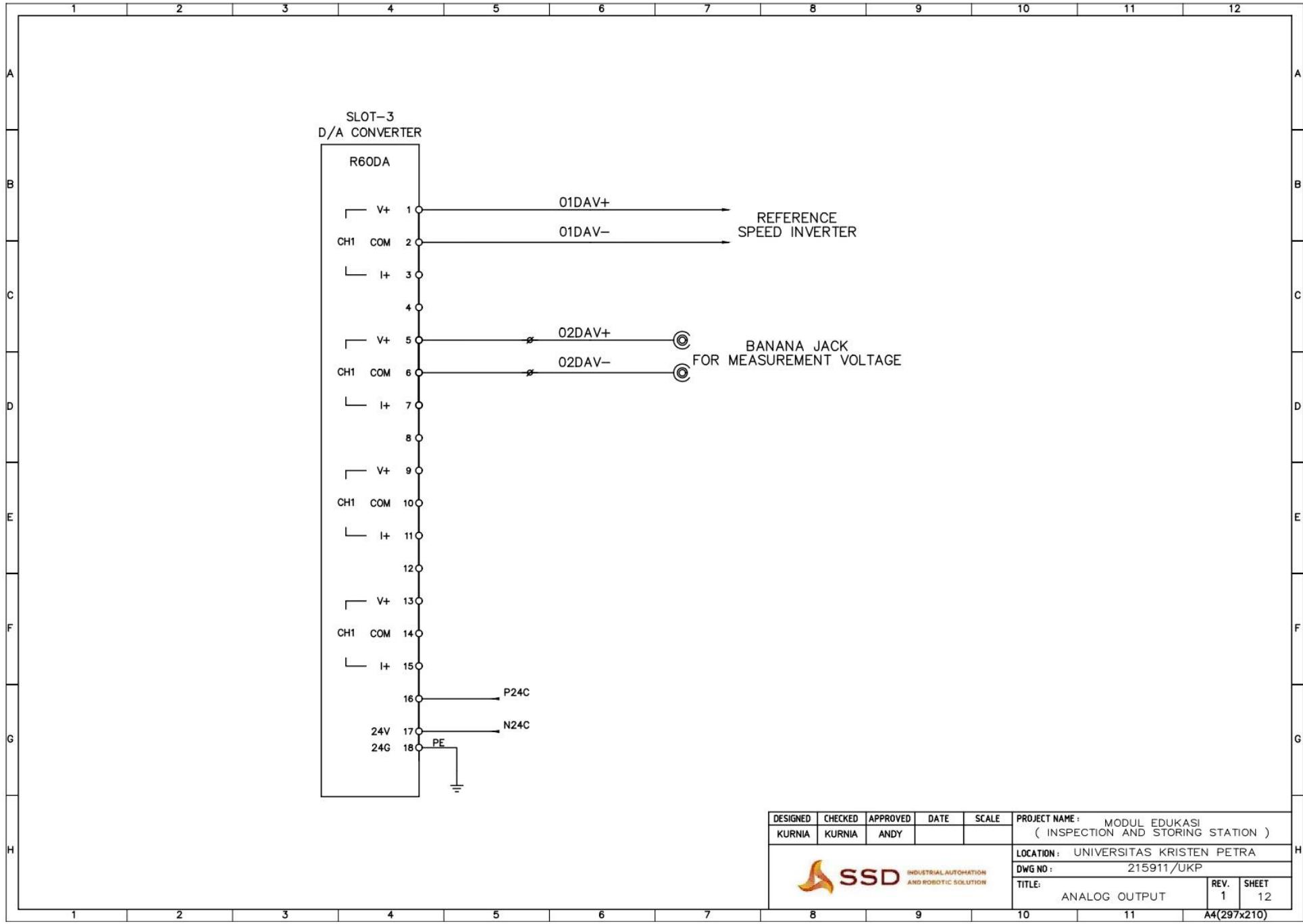


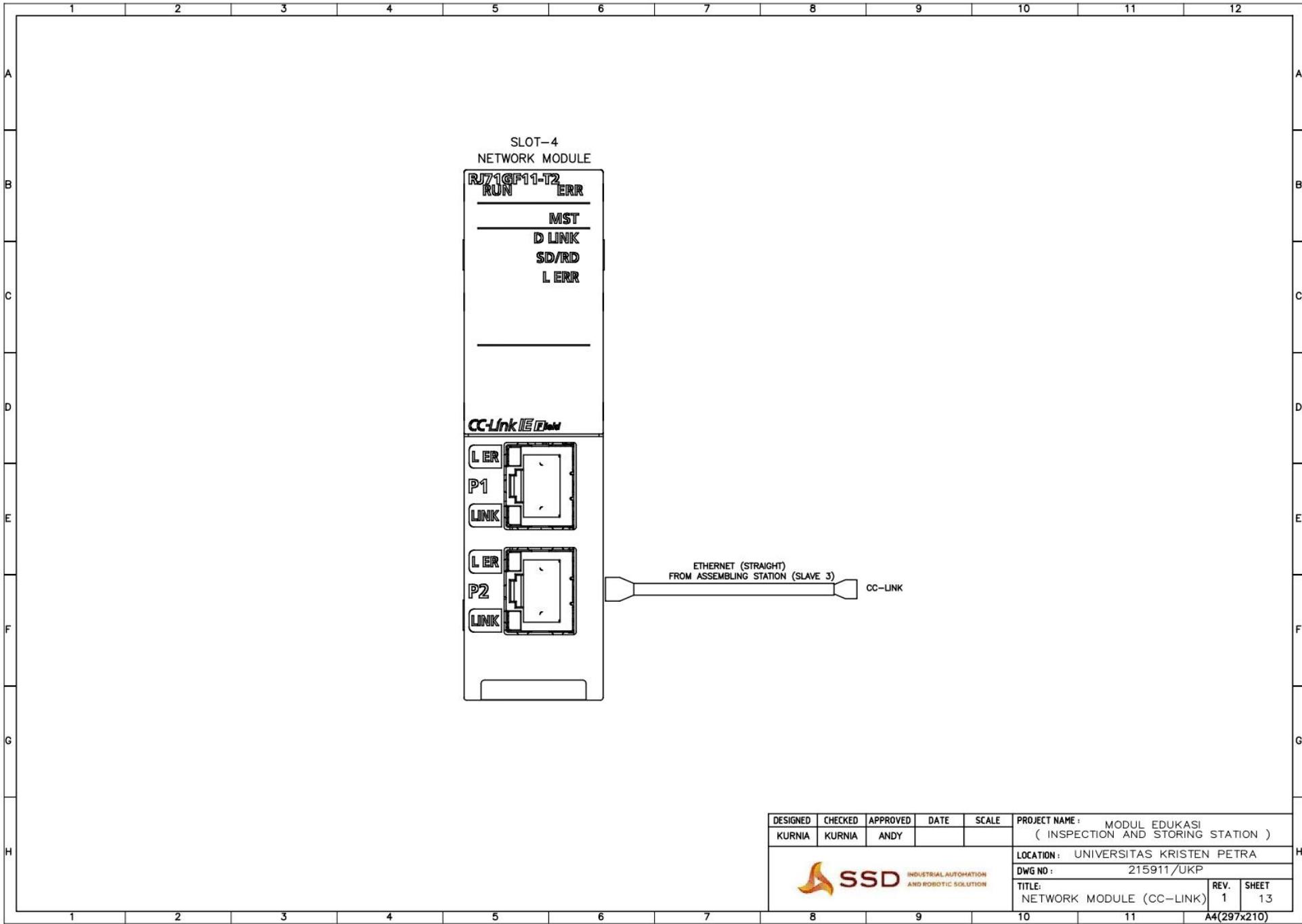


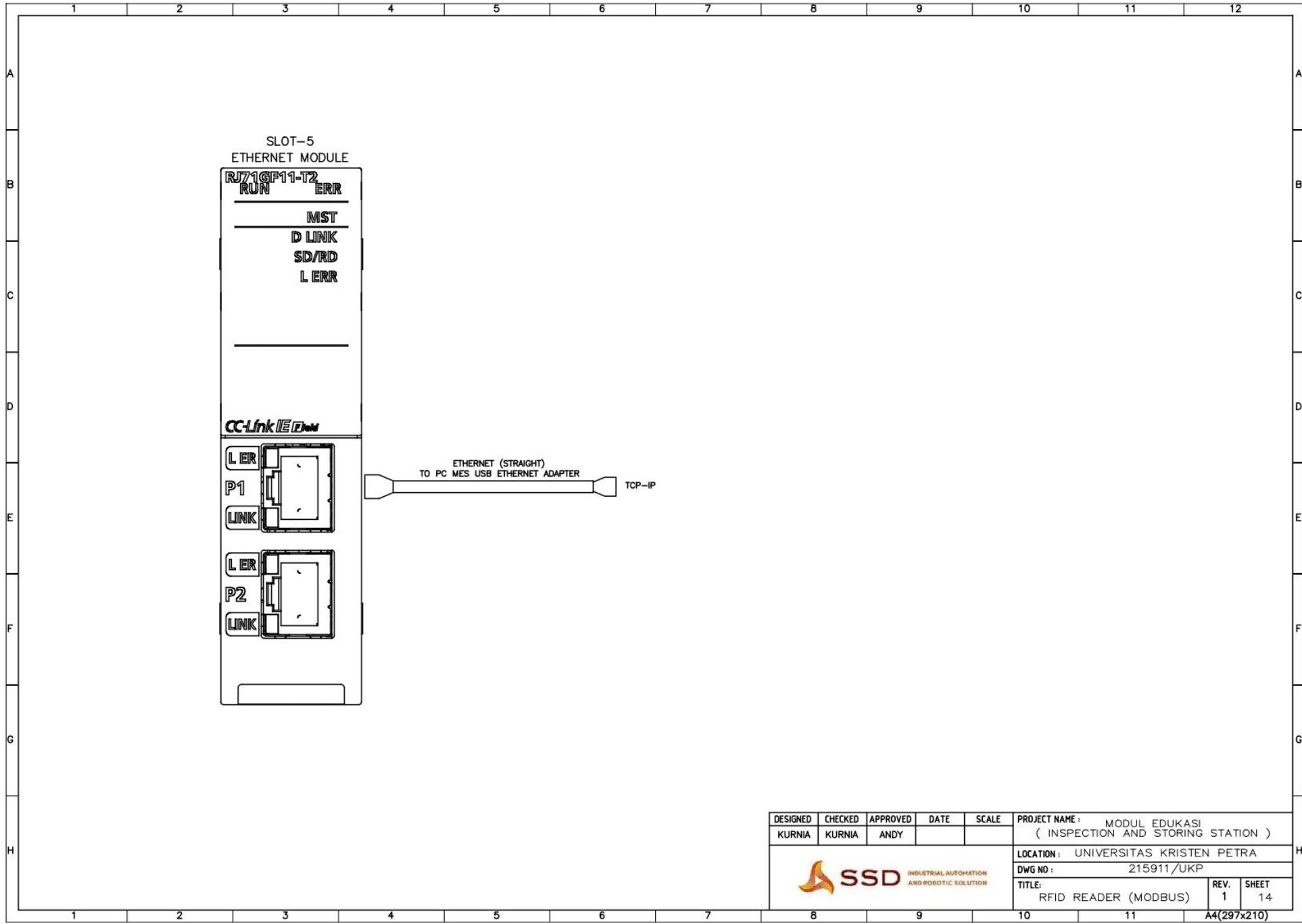


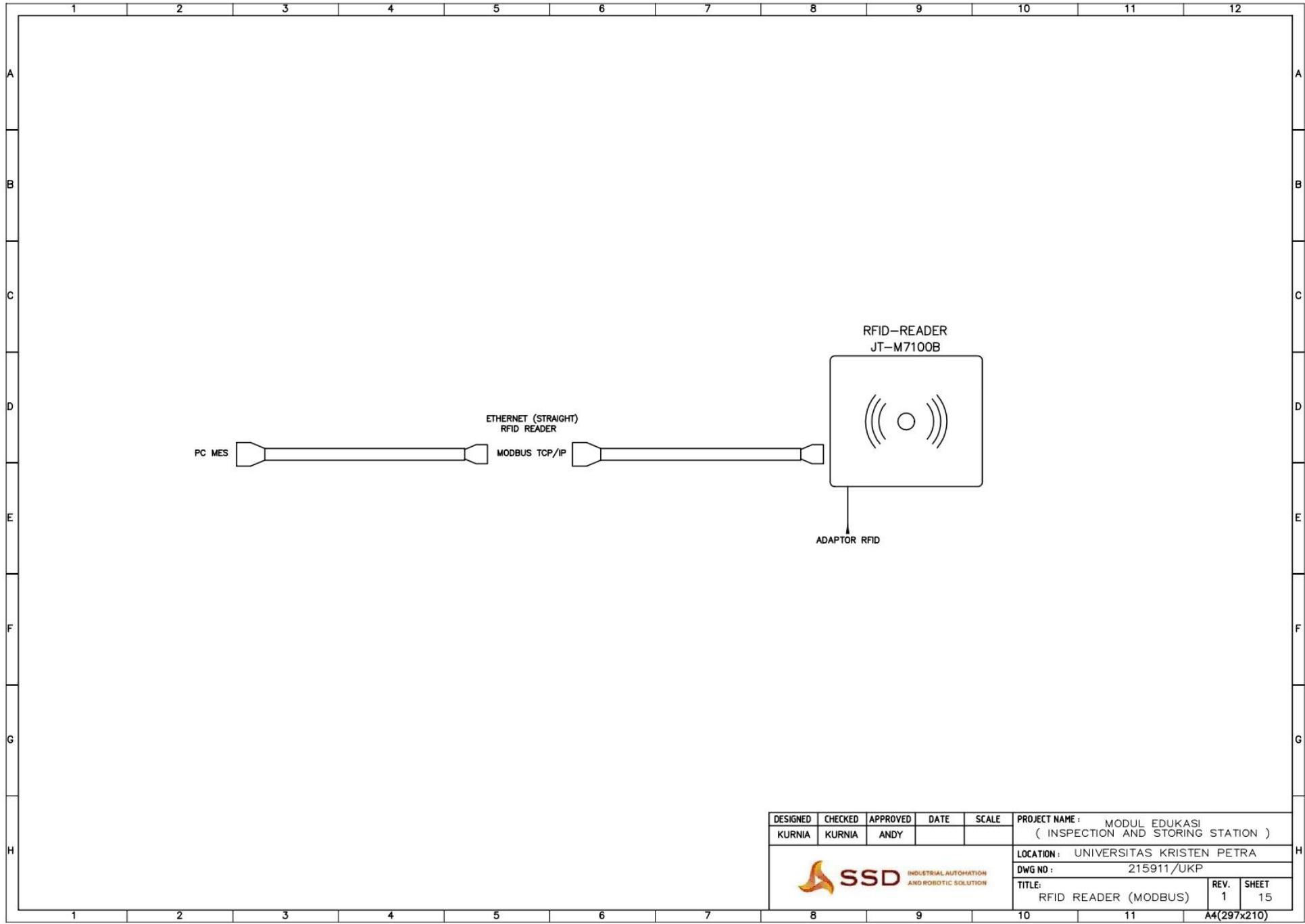


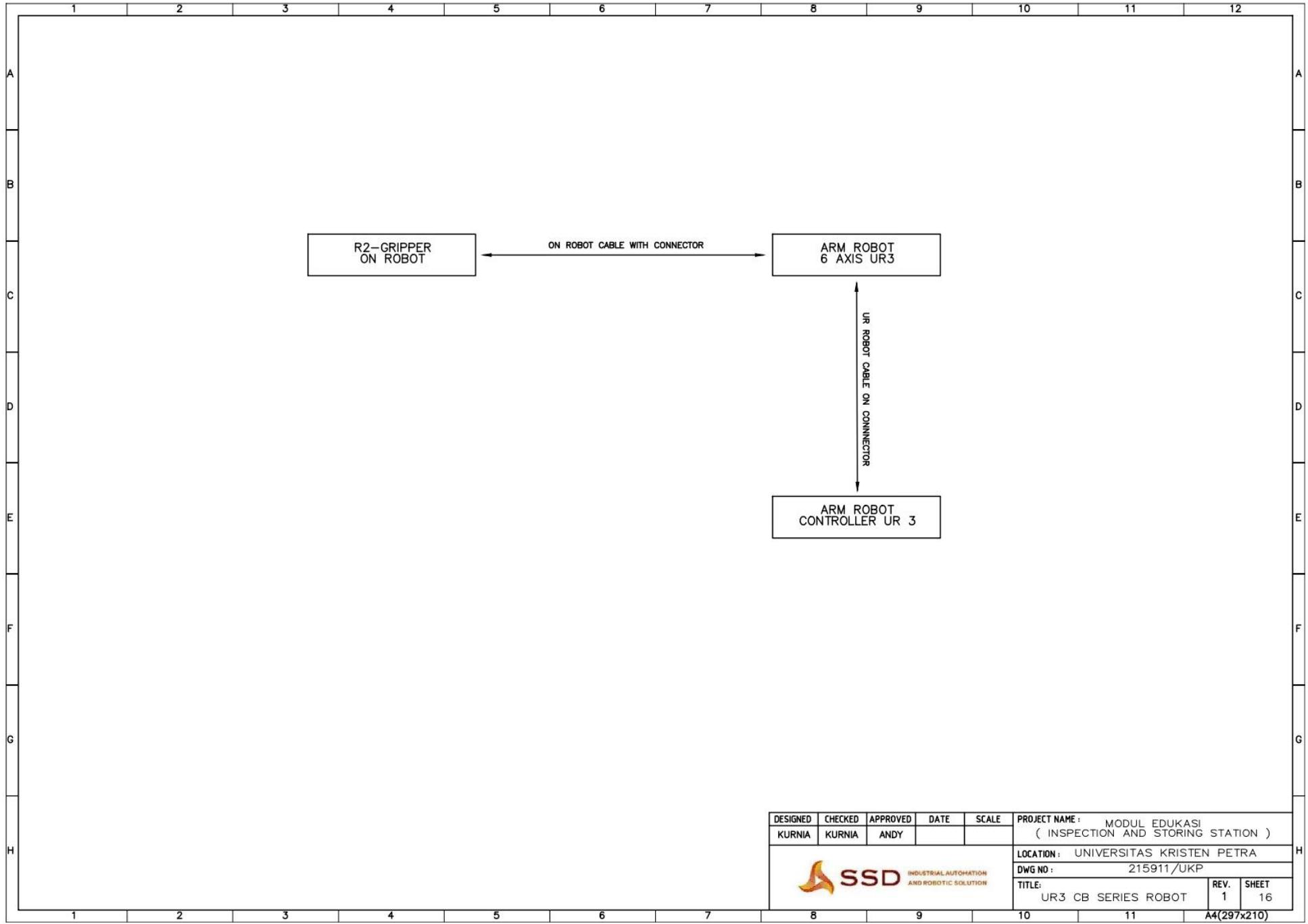


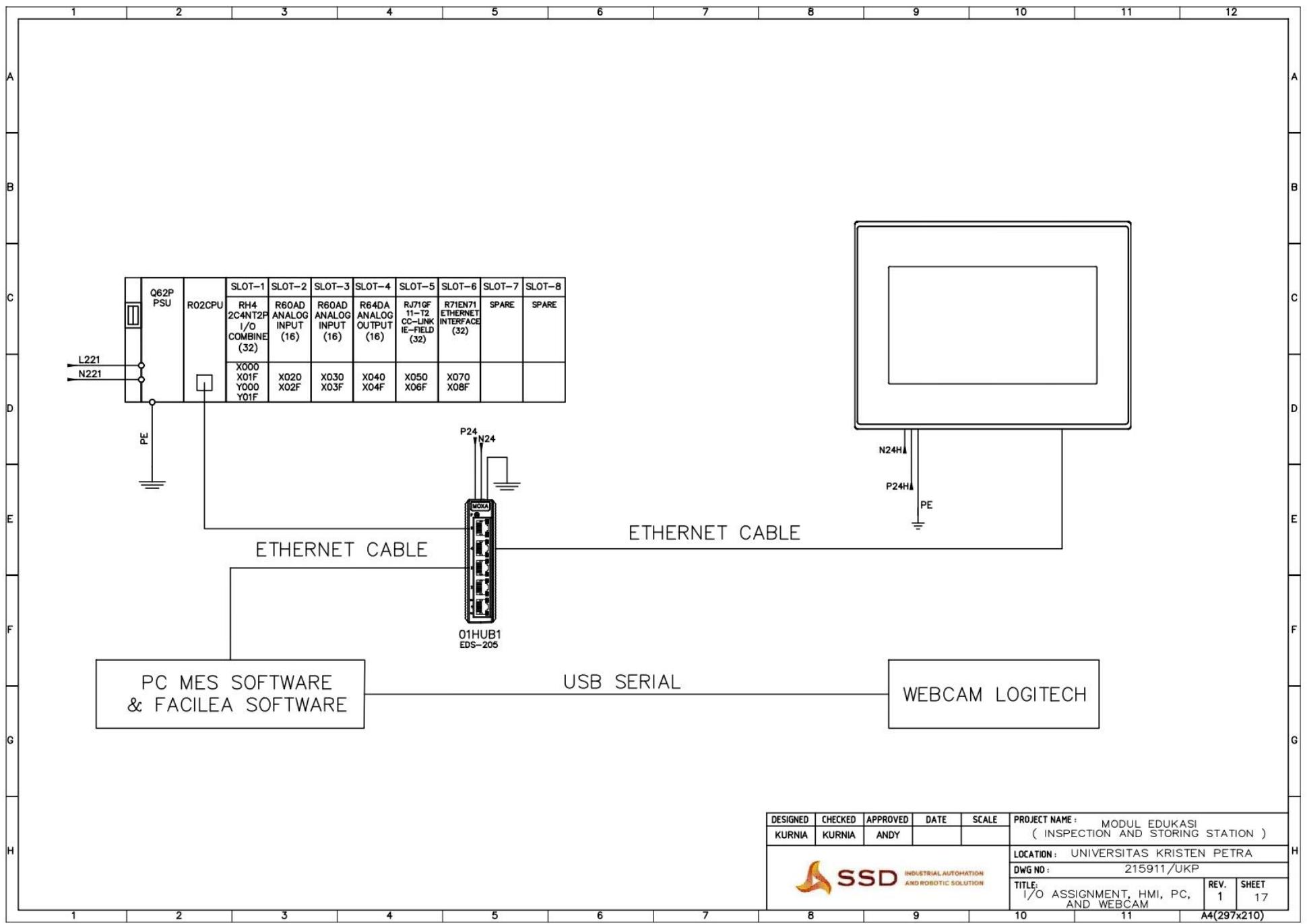








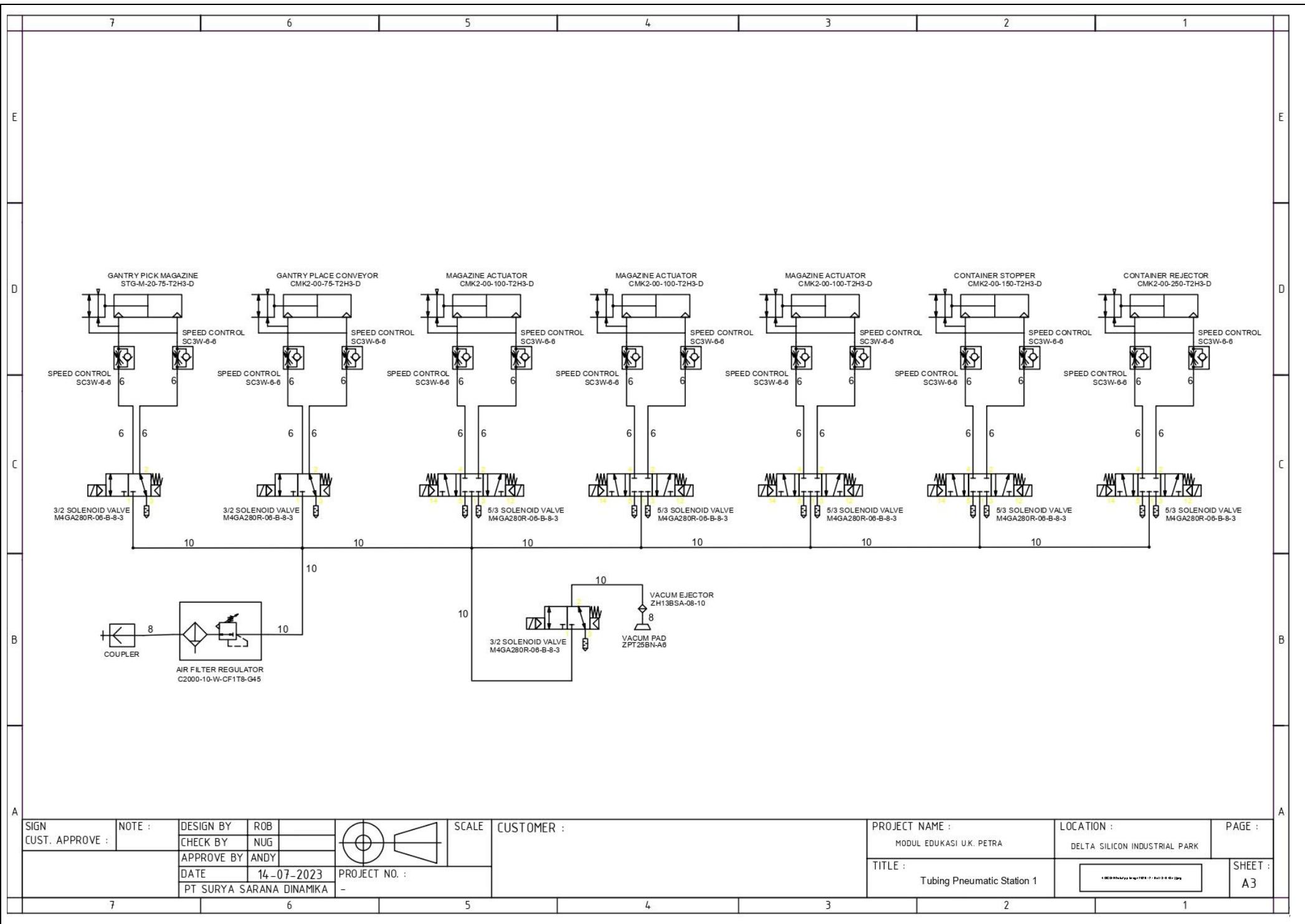




8.

DRAWING PNEUMATIC

8.1 Drawing Pneumatic Modul Edukasi Feeding Station



8.2 Drawing Pneumatic Modul Edukasi *Filling Station*

E

E

D

D

C

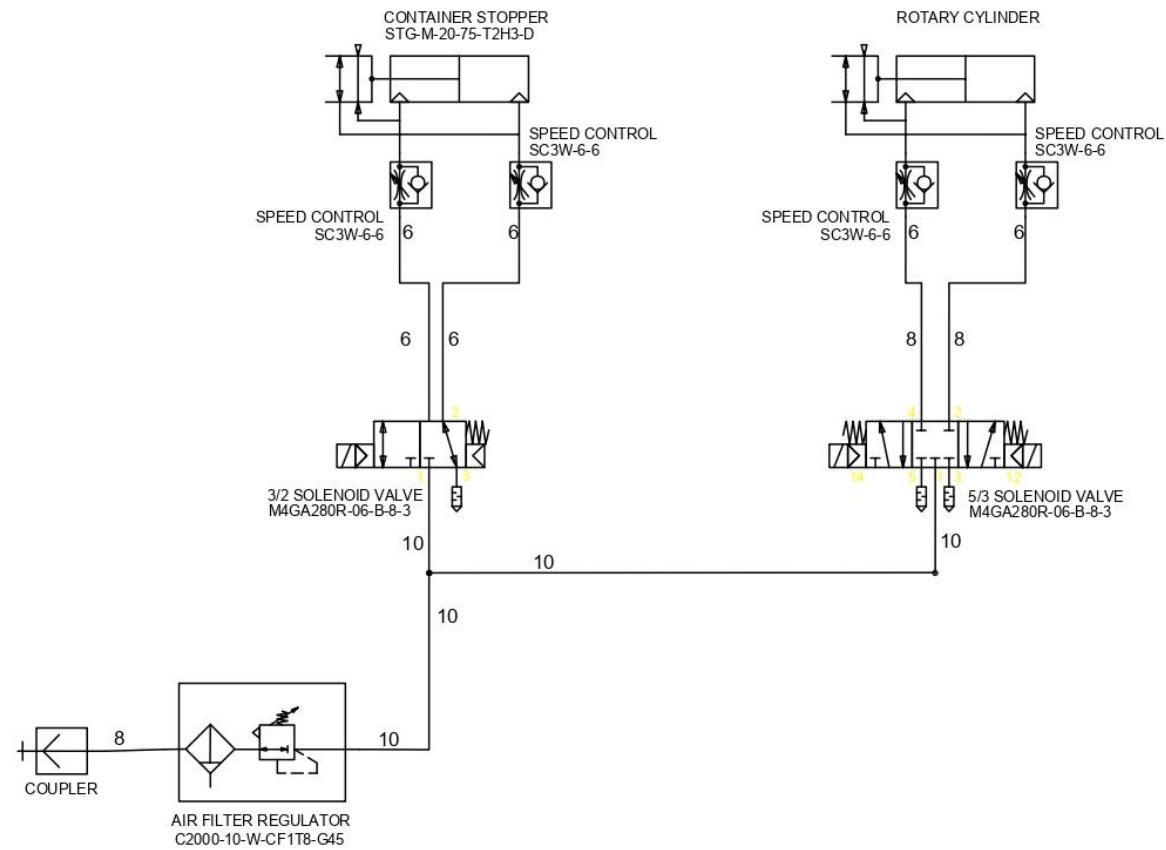
C

B

B

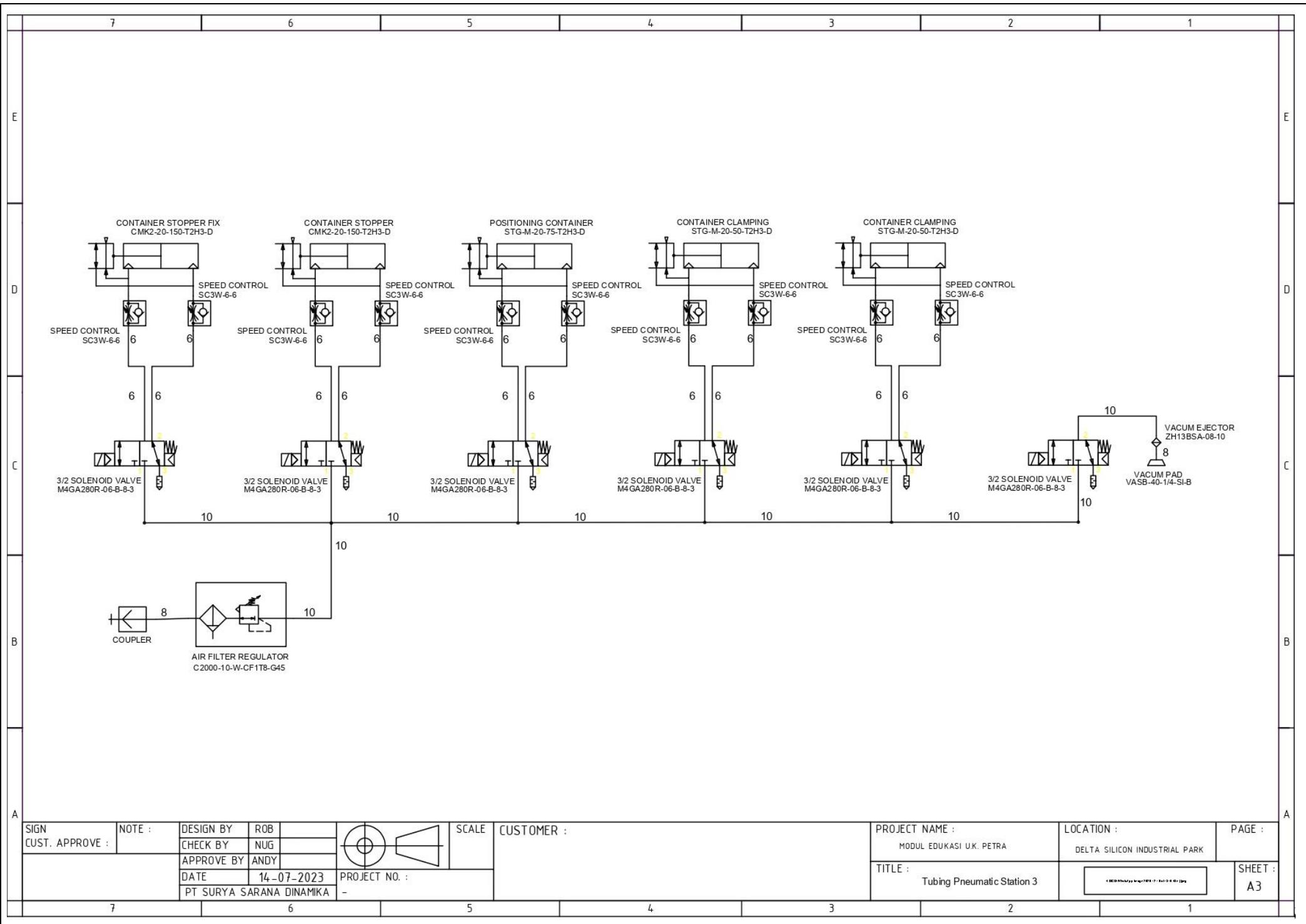
A

A

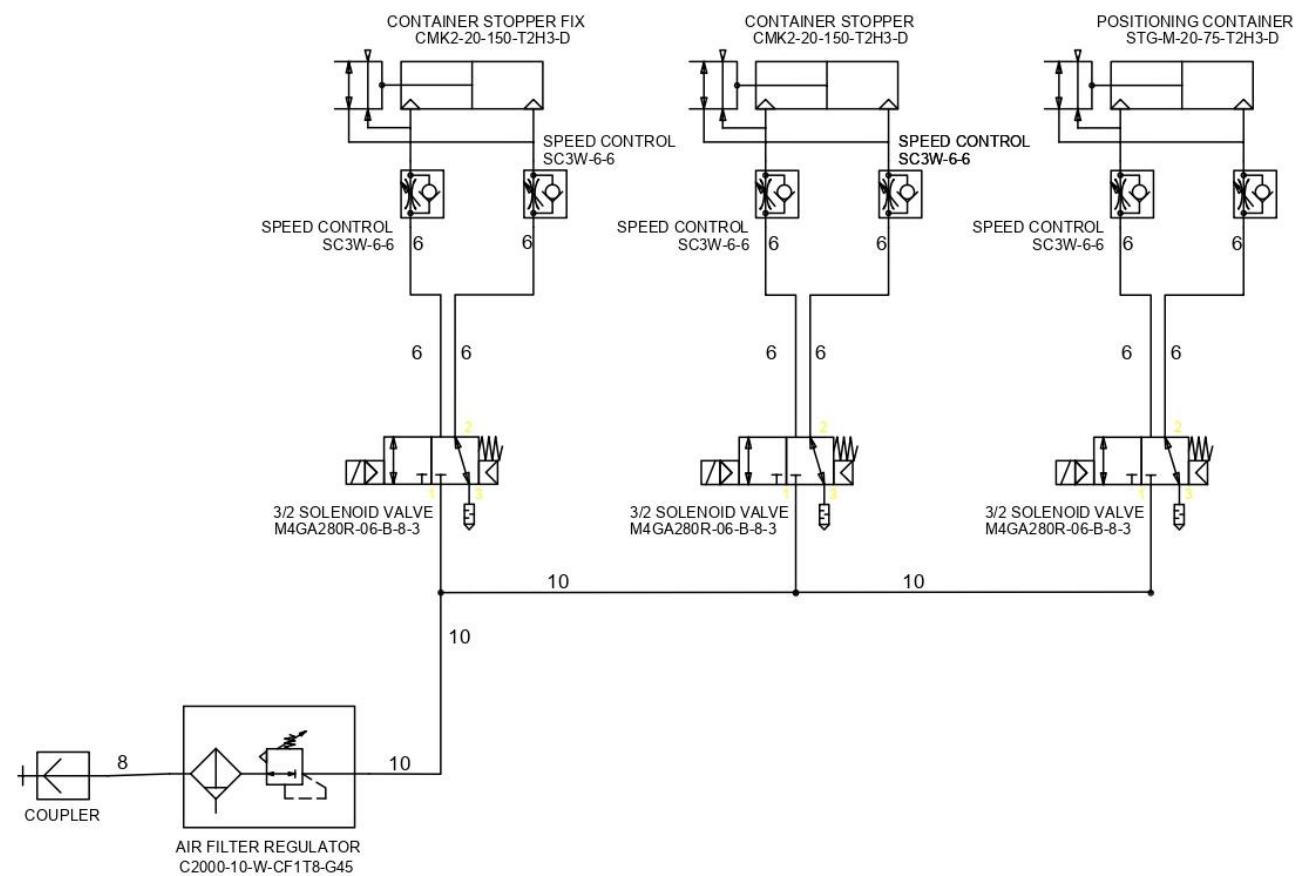


SIGN CUST. APPROVE :	NOTE :	DESIGN BY ROB	CHECK BY NUG	SCALE	CUSTOMER :	PROJECT NAME : MODUL EDUKASI U.K. PETRA	LOCATION : DELTA SILICON INDUSTRIAL PARK	PAGE :
APPROVE BY ANDY								
DATE PT SURYA SARANA DINAMIKA	14-07-2023	PROJECT NO. : -	TITLE : Tubing Pneumatic Station 2					SHEET : A3

8.3 Drawing Pneumatic Modul Edukasi Capping Station



8.4 Drawing Pneumatic Modul Edukasi Inspection And Storage Station



SIGN CUST. APPROVE :	NOTE :	DESIGN BY ROB	CHECK BY NUG	SCALE	CUSTOMER :	PROJECT NAME : MODUL EDUKASI U.K. PETRA	LOCATION : DELTA SILICON INDUSTRIAL PARK	PAGE :
APPROVE BY ANDY								
DATE 14-07-2023	PT SURYA SARANA DINAMIKA	PROJECT NO. : -	TITLE : Tubing Pneumatic Station 4					SHEET : A3

LAMPIRAN

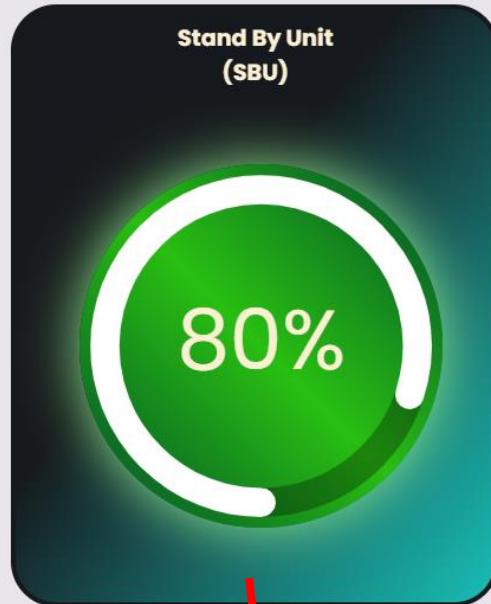
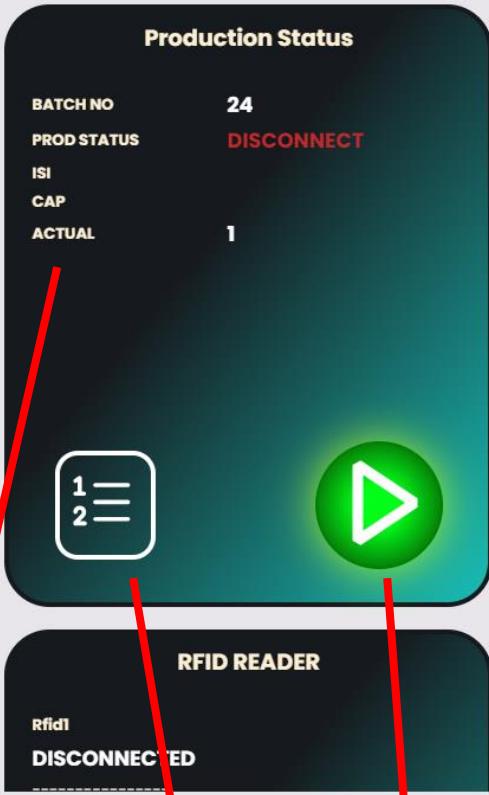
- 1. Fuction MES**
- 2. User Manual Odoo & MES**
- 3. Start Up Odoo Komputer Server**
- 4. Start Up Facilea Komputer Server**
- 5. Troubleshooting**
- 6. Network Topolofi & Topologi Master Slave, and Topologi to MES**

LAMPIRAN

1. *FUNCTION MES*



MAINTENANCE PROGRAMS DASHBOARD



Change Order

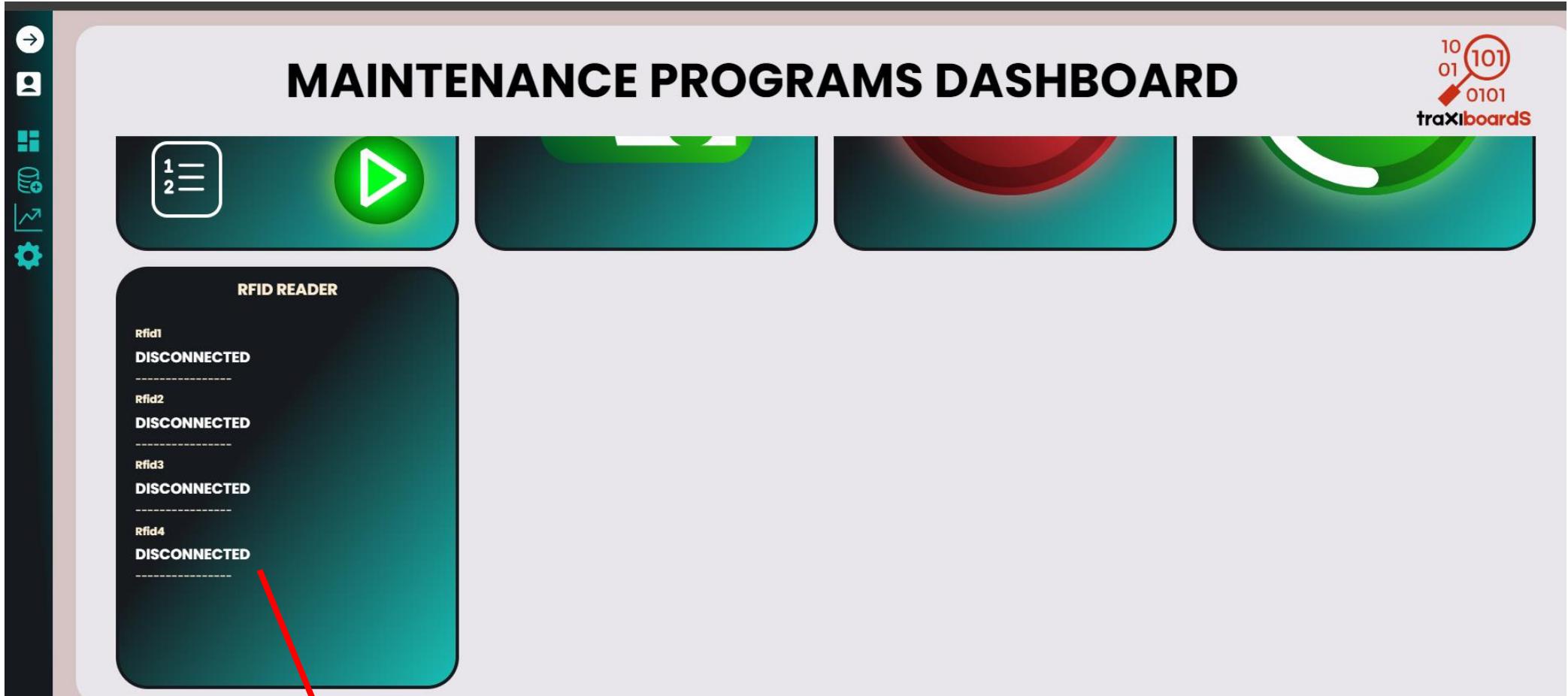
Robot Order From MES

Start / Stop Robot

Vibration / Temp / Current Status

Overall OEE

Standby Unit Percentage
Stock vs Safe Limit

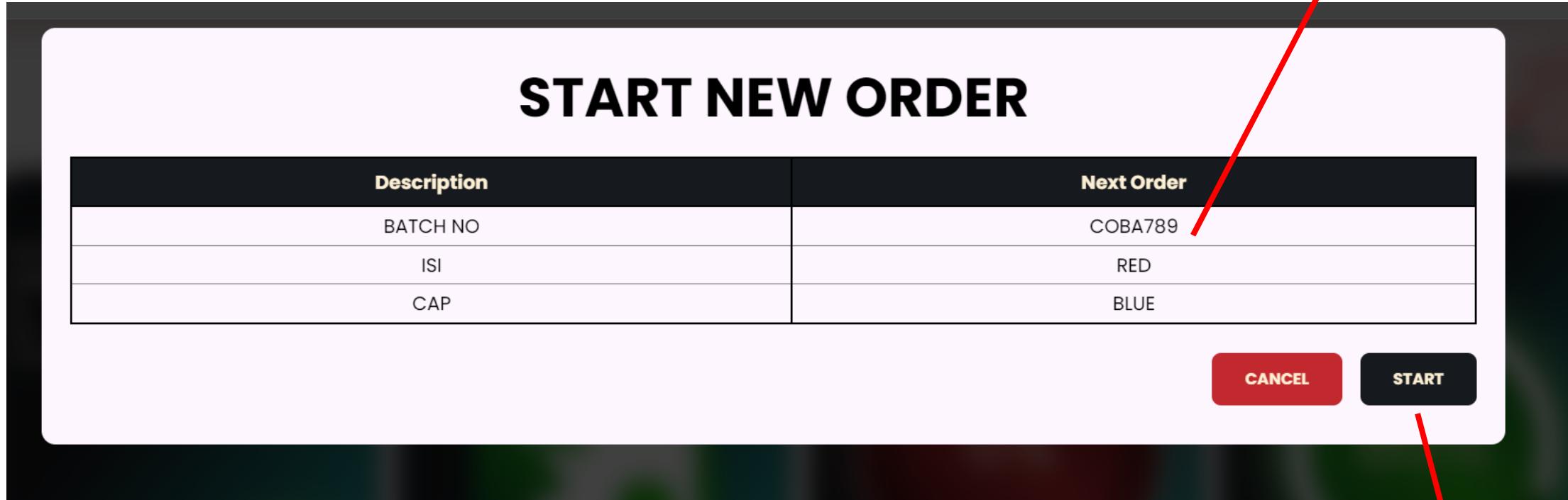


RFID Reader Data

Robot Order From MES

- Batch Order : Active Batch Running in Robot
- Target : Target Quantity from ERP
- Actual : Actual Quantity captured from Robot
- Isi : Color of the Container
- Cap : Color of the cap of the bottle

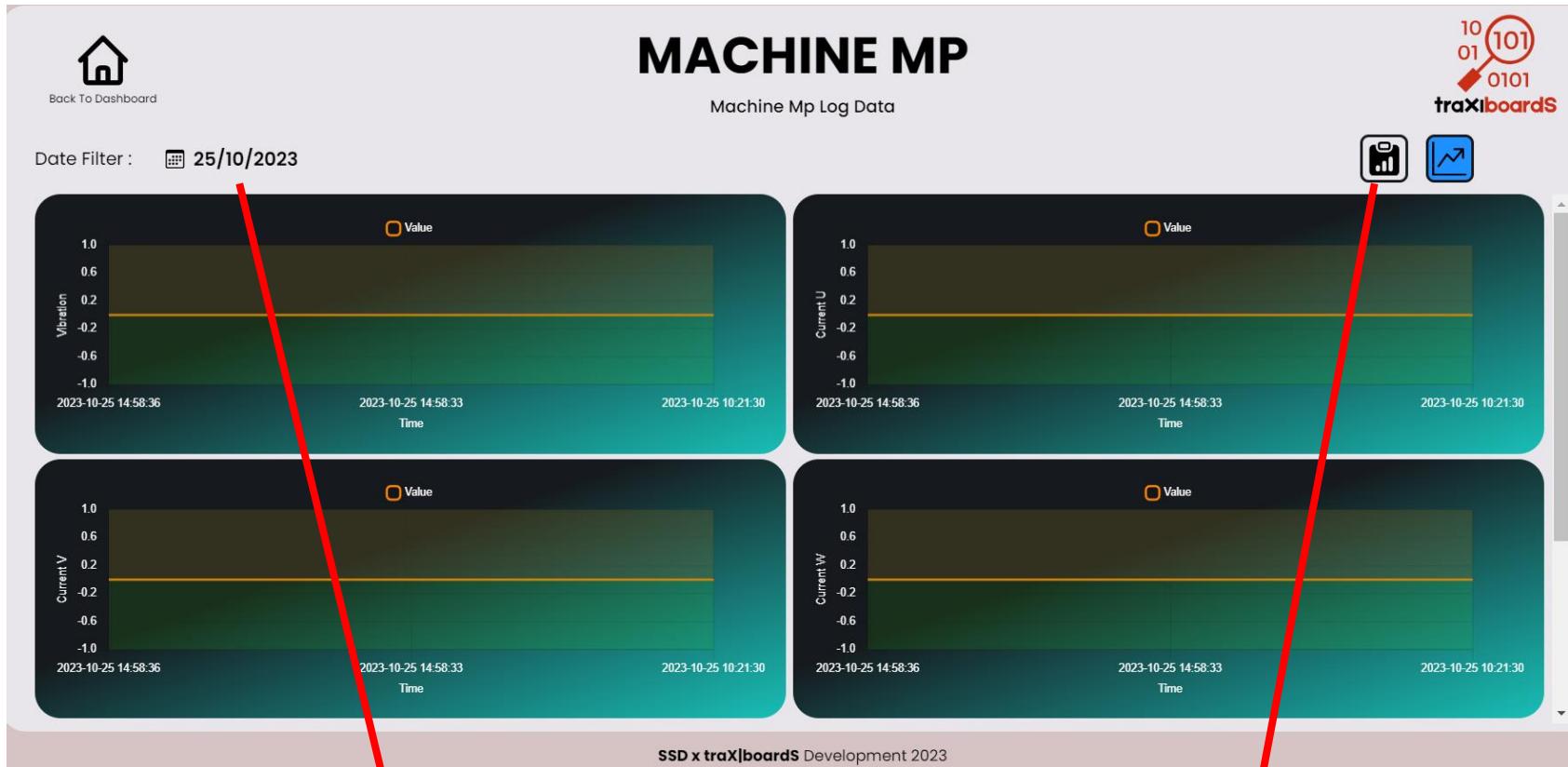
Robot Order From MES



Next Order from MES

Press to change Order

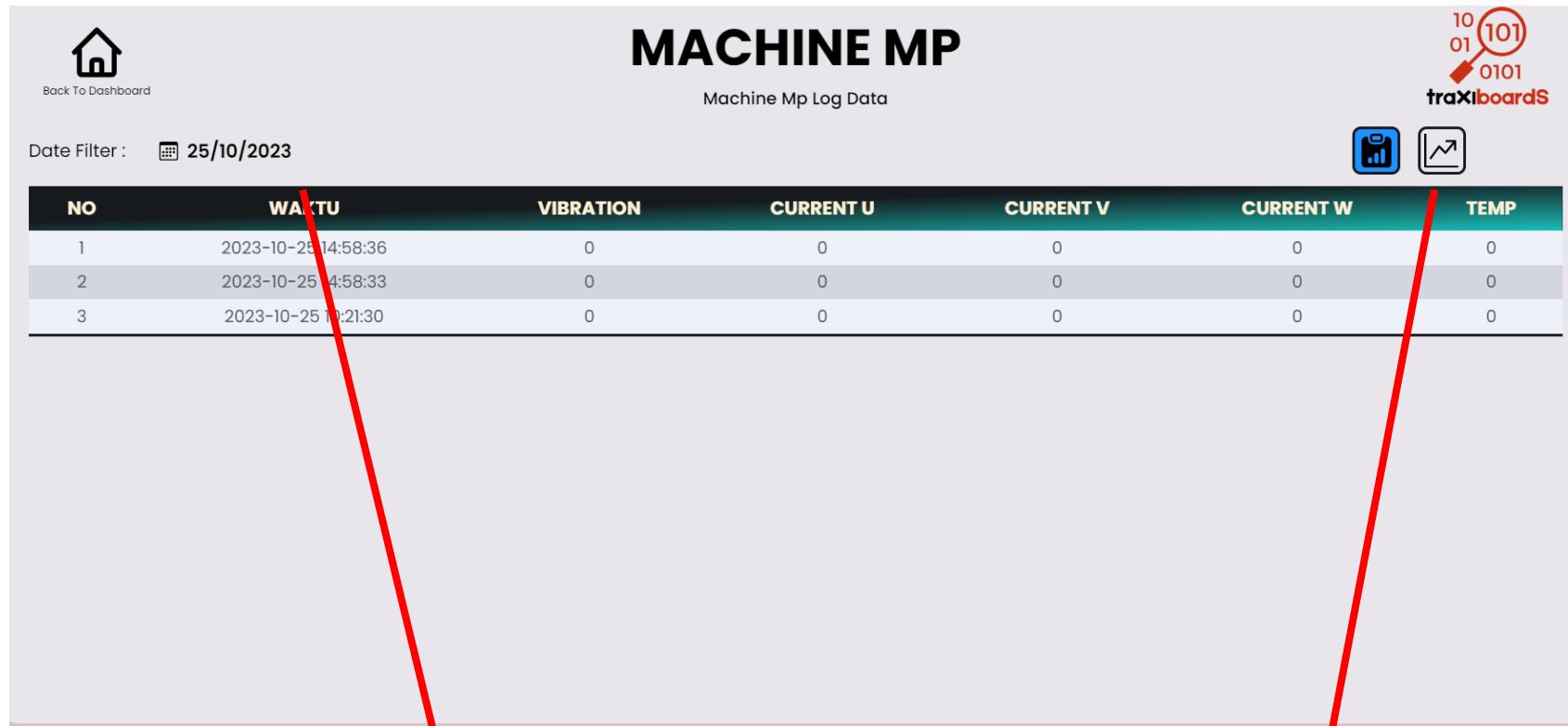
Vibration / Temp / Current Status



Change to show target date

Show Data as Table

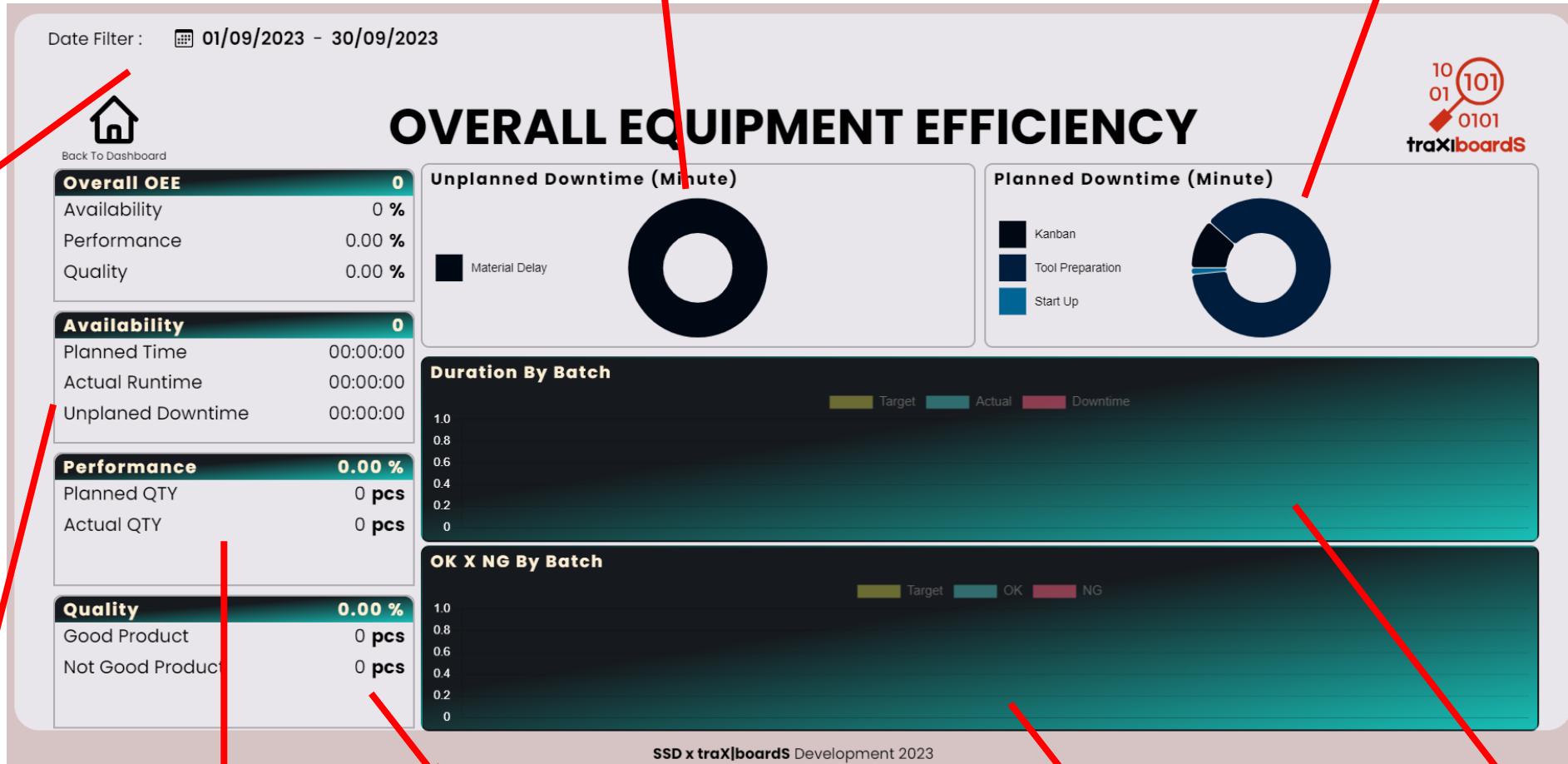
Vibration / Temp / Current Status



Change to show target date

Show Data as Graph

Overall OEE



Calendar
To Filter
Date

Target Time vs Actual Time

Good vs Total Qty

UnPlanned Downtime
Group by Tipe per Minute

Good vs NG

Planned Downtime
Group by Tipe per Minute

Good vs NG Per Batch

Duration Per Batch

Standby Unit Percentage


[Back To Dashboard](#)

STAND BY UNIT PAGE

Spare Part Availability Table

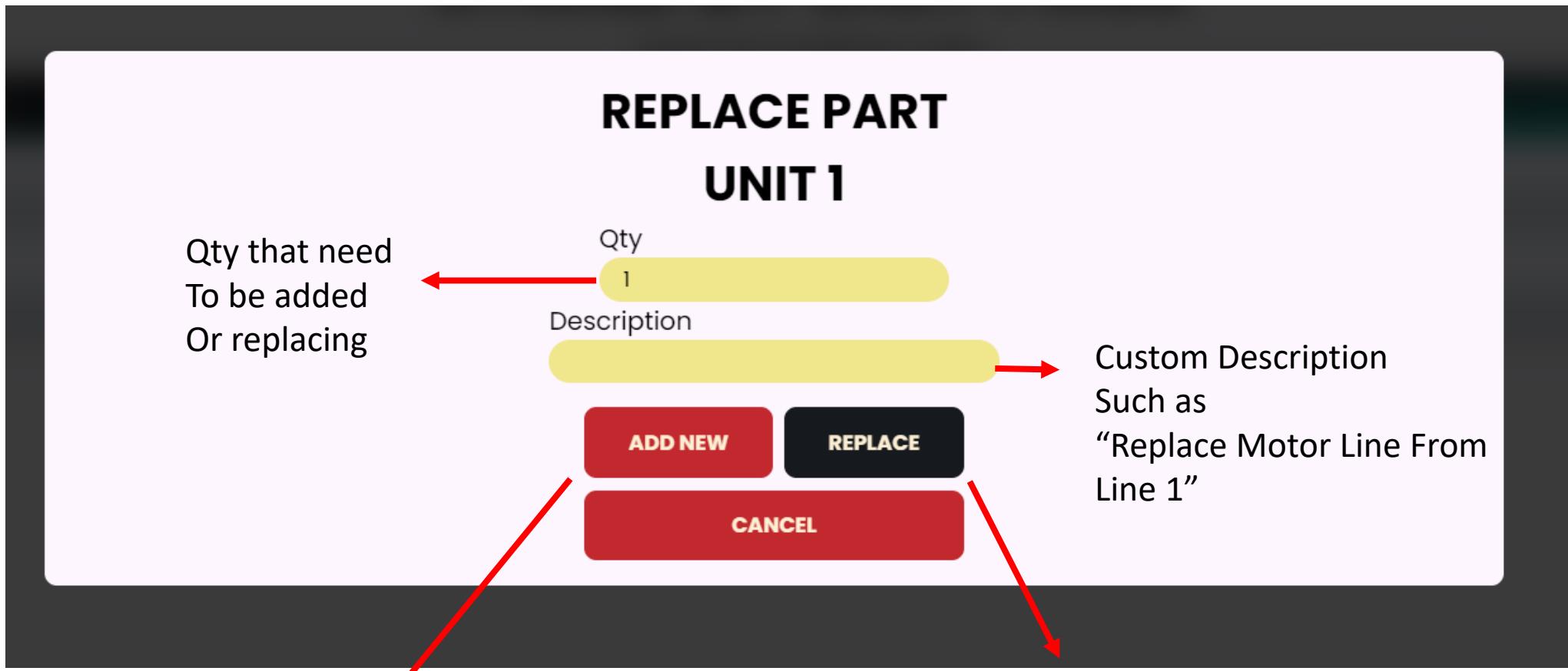
UNIT NAME	RECOMMENDED QTY	NOT READY	IN SERVICE	READY
Unit 1	10	5	0	8
Unit 2	6	1	0	7
Unit 3	2	0	0	5
Unit 4	2	1	0	4





Red : Ready < Recommended
Yellow : Ready = Recommended
Green : Ready > Recommended

Click on Ready Part



Add New Ready Part as Stok

Simulate Replace Broken Part in machine
With new part from SBU Room
Automatically reduce qty in "Ready"
Stok in "not ready" added by one

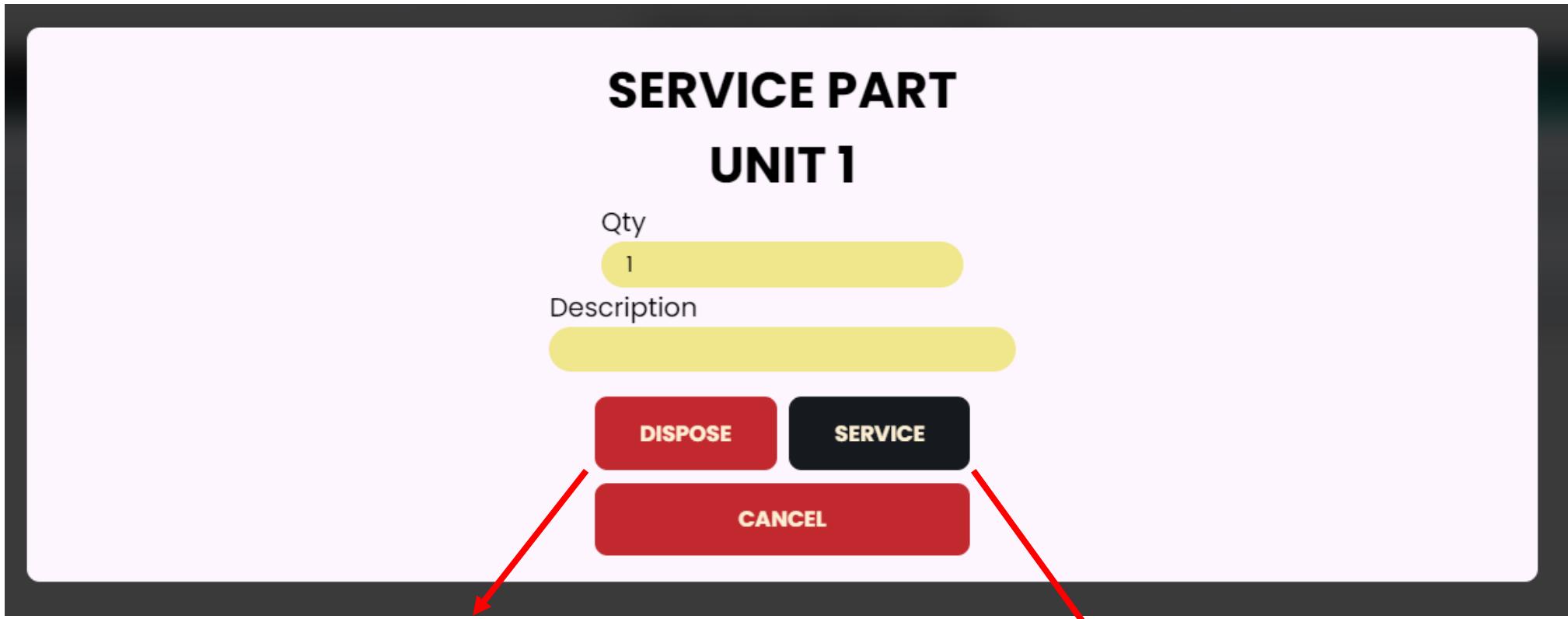
Click on Service Part



This mean, Service Failed
Stok in service reduced by one
But stok in ready still the same

This mean service finish
Stok in service reduce by one
Stok in ready added by one

Click on Not Ready Part



Stok in “Not Ready” Reduced by One
But Stok in “Service” still the same
This mean the part is disposed without
Service process

Stok in “Not Ready” Reduced by One
Stok in “Service” added by one
This mean the part is in service process

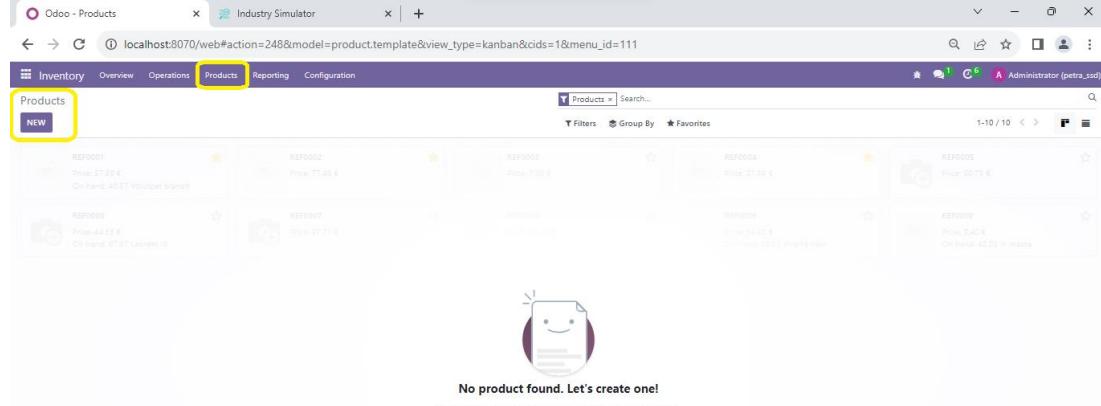
LAMPIRAN

2. User Manual Odoo & MES

User Manual Odoo dan MES

1. Melihat, membuat, dan mengedit Product / Barang

a. Dapat dibuka di menu product yang ada di setiap module

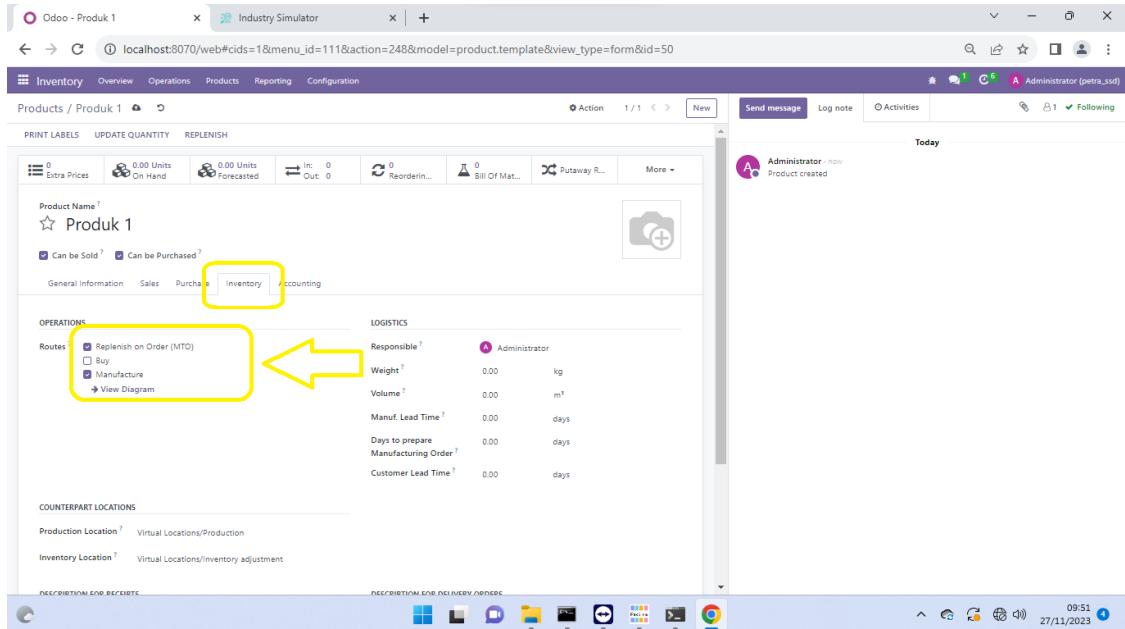


Klik tombol new

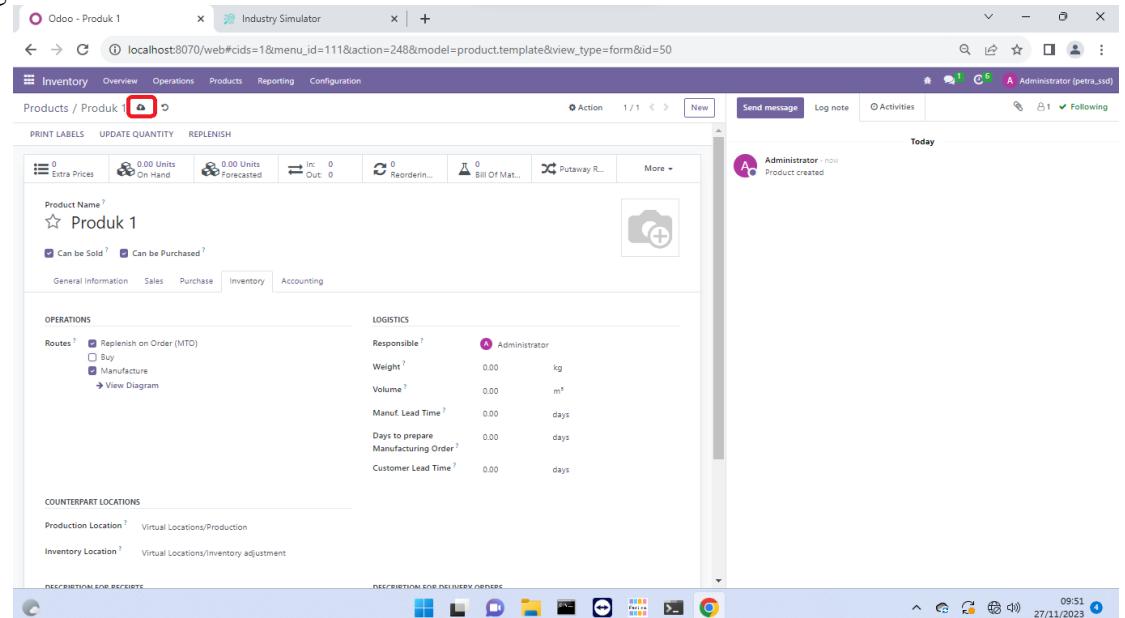
kemudian Isi form yang perlu diisi seperti **product name, warna, warna cap**

Product Name?	Produk 1
Barcode?	Warna MERAH Warna Cap? MERAH

Product name adalah nama product yang akan dibuat, **warna** merupakan warna isi dari produk tersebut, dan **warna cap** adalah warna dari botol, dan cap (warna kemasan produk tersebut).



Kemudian pindah pada menu inventory dan pastikan **replenish on order (MTO)** dan **manufacture** di centang



Dan save produk dengan klik kotak merah seperti gambar di atas

Untuk mengedit sebuah product dapat dibuka saja product nya dan ubah sesuai keinginan dan jangan lupa untuk klik tombol save untuk menyimpan perubahan pada product.

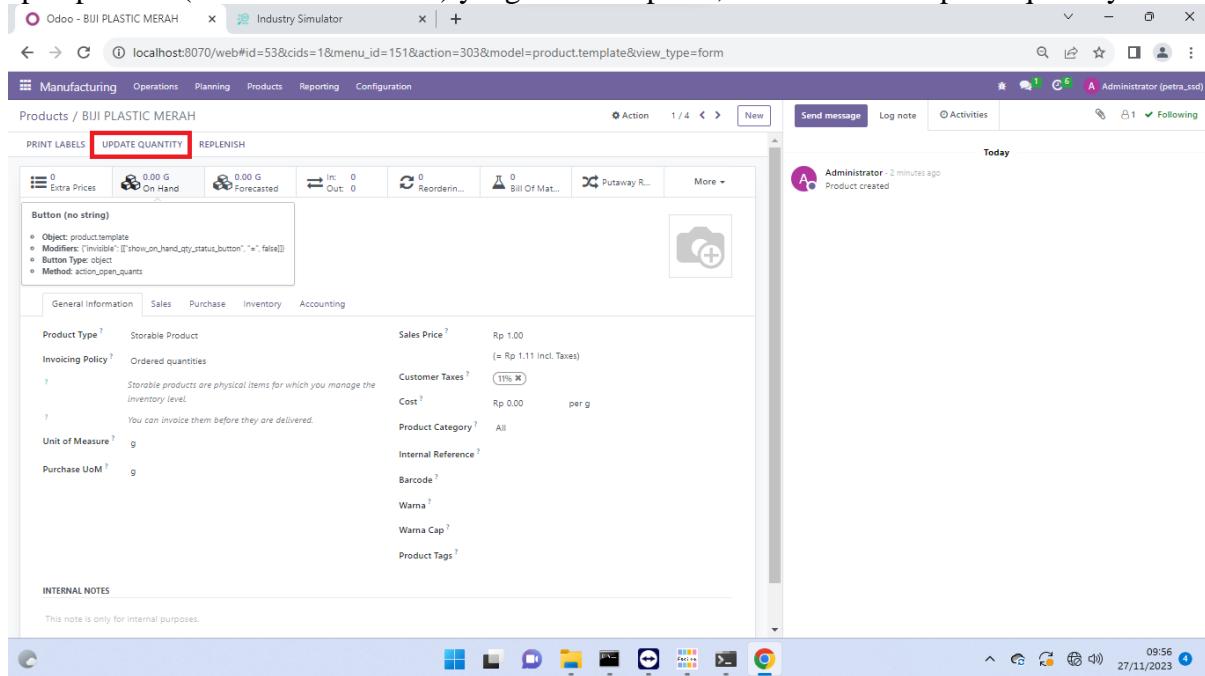
2. Menambah jenis **RAW MATERIAL** untuk nanti menjadi komponen dari suatu produk, disini contoh yang digunakan adalah **BIJI PLASTIC MERAH**.

Klik product pada module apa saja seperti contoh diatas.

Kemudian isi **Product Name**, kemudian pilih unit yang digunakan, jika misalnya RAW MATERIAL yang akan ditambahkan adalah BOTOL atau CAP, maka unit nya adalah **units**, kemudian save.

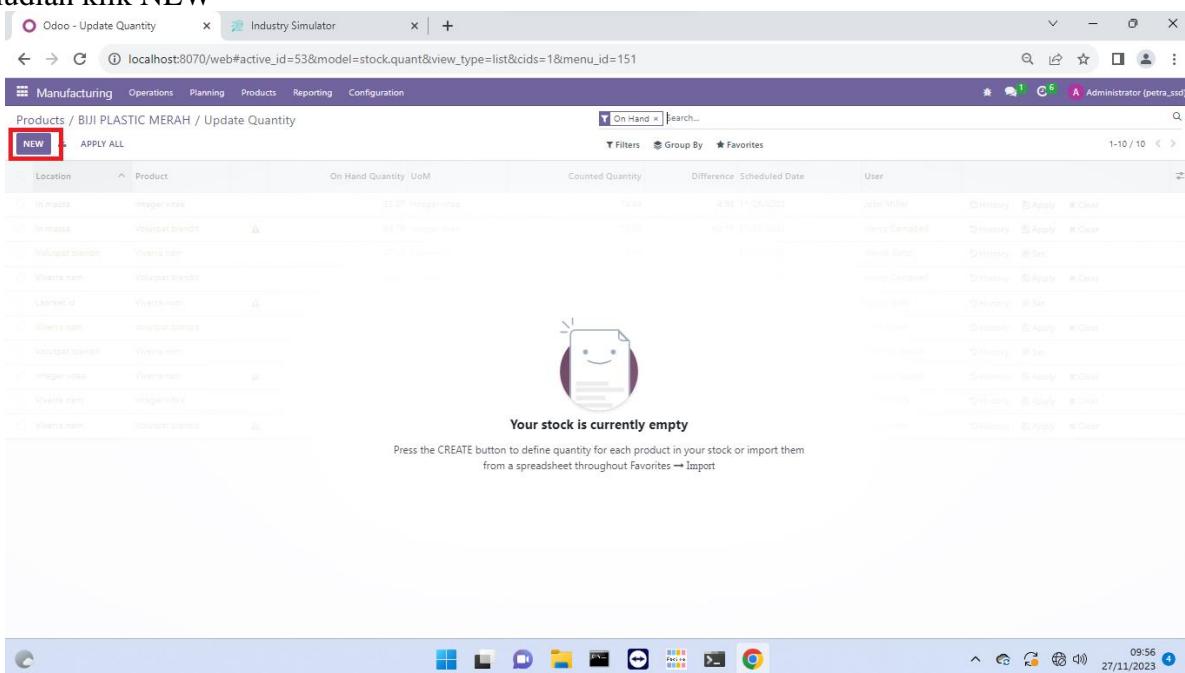
3. Update quantity RAW MATERIAL sehingga ada pada stock

Open product (RAW MATERIAL) yang akan di update, kemudian klik update quantity



The screenshot shows the Odoo product management interface for a product named "BIJI PLASTIC MERAH". The "UPDATE QUANTITY" button is highlighted with a red box. The page displays various product details such as Sales Price (Rp 1.00), Customer Taxes (11%), Cost (Rp 0.00 per g), and Product Category (All). A note at the bottom states: "Storable products are physical items for which you manage the inventory level." and "You can invoice them before they are delivered." The status bar at the bottom right shows the date as 27/11/2023 and the time as 09:56.

Kemudian klik NEW



The screenshot shows the "Update Quantity" screen for the same product. The "NEW" button is highlighted with a red box. The table lists various locations and their current stock levels. A message at the bottom states: "Your stock is currently empty" and "Press the CREATE button to define quantity for each product in your stock or import them from a spreadsheet throughout Favorites → Import". The status bar at the bottom right shows the date as 27/11/2023 and the time as 09:56.

Setelah itu isi quantity yang diinginkan pada counted quantity dan klik apply

The screenshot shows the Odoo 'Update Quantity' interface. A single record is selected for 'BU1 PLASTIC MERAH' located at 'WH/Stock'. The 'On Hand Quantity' is 1.000.00 g and the 'Counted Quantity' is 2.000.00. The 'Difference' is 1.000.00 and the 'Scheduled Date' is 12/31/2023. At the bottom right of the table, there are three buttons: 'Apply' (highlighted with a yellow circle), 'Cancel', and 'Clear'.

4. Membuat dan edit BOM suatu produk

The screenshot shows the Odoo 'Bills of Materials' interface. A new record is being created, indicated by the 'NEW' button highlighted with a yellow circle. The 'Bills of Materials' tab is selected. The interface includes fields for Product, Reference, BoM Type, Quantity, and Unit of Measure. A message at the bottom states 'No bill of materials found. Let's create one!' with a link to 'Create BOM'.

Pilih module manufacture kemudian pilih product dan Bill of materials, dan pilih new seperti gambar diatas

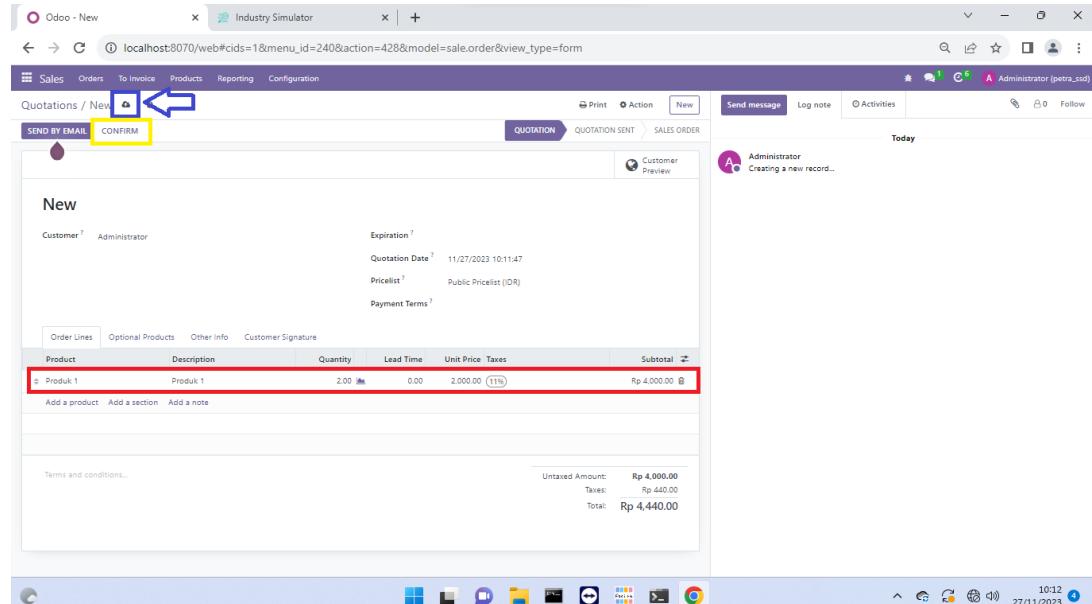
Setelah itu pilih produk yang akan di buat BOM nya disini contoh produk 1, yang sudah ditambahkan, kemudian isi komponen dari produk tsb, sesuai pada kotak kuning, dan klik save sesuai kotak biru.

5. Order Customer

Masuk ke menu sales untuk membuat order customer dan klik new untuk membuat order baru.

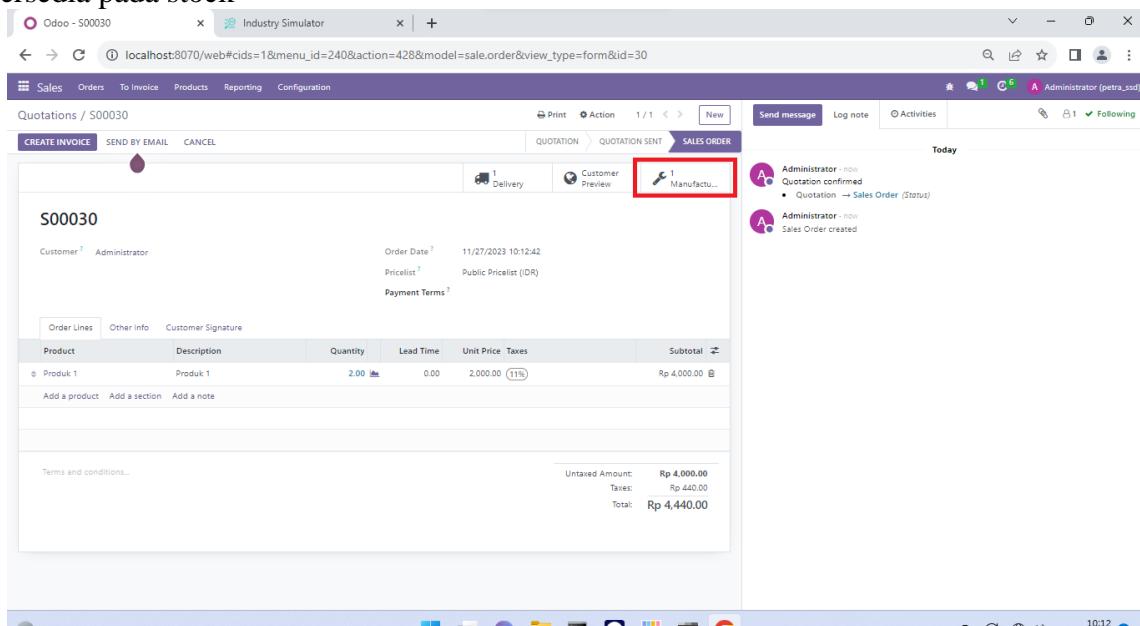
Number	Creation Date	Customer	Salesperson	Activities	Total	Status
REF0001	10/10/2023	Customer Person	Customer Sales		47.012,00	Open
REF0002	10/10/2023	Customer Person	Customer Sales		11.244,00	Open
REF0003	11/10/2023	Customer Person	Customer Sales		42.111,00	Open
REF0004	11/10/2023	Customer Person	Customer Sales		37.200,00	Open
REF0005	11/10/2023	Customer Person	Customer Sales		10.045,00	Open
REF0006	10/10/2023	Customer Person	Customer Sales		10.631,00	Open
REF0007	10/10/2023	Customer Person	Customer Sales		10.775,00	Open
REF0008	11/10/2023	Customer Person	Customer Sales		32.902,00	Open
REF0009	11/10/2023	Customer Person	Customer Sales		10.432,00	Open
REF0010	09/10/2023	Customer Person	Customer Sales		590.132,00	Open

Create a new quotation, the first step of a new sale!
Once the quotation is confirmed by the customer, it becomes a sales order.
You will be able to create an invoice and collect the payment.



Kemudian isi barang pada lines yang akan di order, setelah itu klik save dan confirm untuk confirm order.

Setelah SO maka akan langsung ada manufacturing order (order produksi) jika stok product tersebut tidak tersedia pada stock



Jika quantity SO kecil atau sama dengan stok yang tersedia maka produk akan langsung masuk pada on going dan free to use akan berkurang sesuai quantity SO.

Product	Unit Cost	Total Value	On Hand	Free to Use	Incoming	Outgoing	Unit
BUI PLASTIC MERAH	Rp 0.00	Rp 0.00	1.880.00	1.880.00	0.00	0.00	g
BOTOL	Rp 0.00	Rp 0.00	94.00	94.00	0.00	0.00	Units
CAP	Rp 0.00	Rp 0.00	94.00	94.00	0.00	0.00	Units
Produk 1	Rp 0.00	Rp 0.00	6.00	0.00	0.00	0.00	Units
	Rp 0.00	Rp 0.00	2.074.00	2.068.00	0.00	6.00	

6. Order Produksi

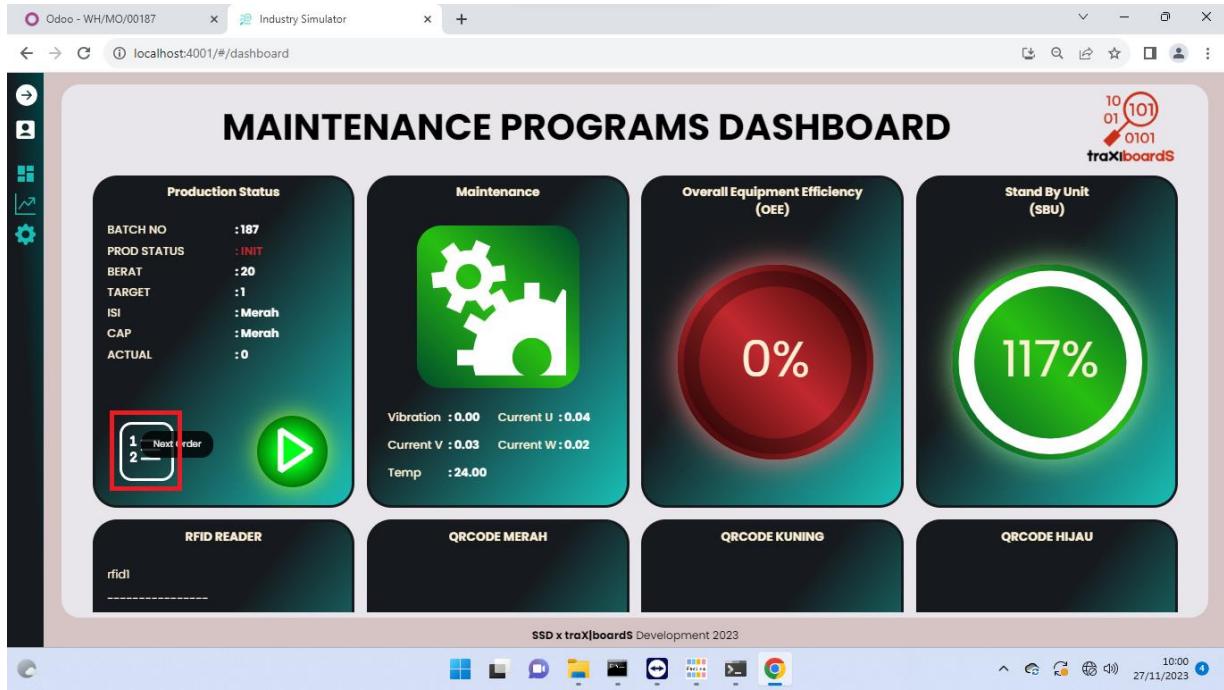
Barang yang di order dari menu sales akan masuk ke menu manufacturing untuk di produksi dengan product yang otomatis terisi sesuai dengan pesanan customer, dan components yang otomatis terisi juga sesuai dengan BOM dari product yang dibuat di tahap awal, tetapi untuk MO tidak harus ada SO, bisa langsung di order menggunakan MO.

- Contoh order dari SO, setelah SO dibuat dan stok tidak tersedia maka akan langsung ada MO.

Product	From	To Consume UoM	Reserved	Consumed
BOTOL	WH/Stock	0.00 / 2.00 Units	2.00	0.00
CAP	WH/Stock	0.00 / 2.00 Units	2.00	0.00
BUI PLASTIC MERAH	WH/Stock	0.00 / 40.00 g	40.00	0.00

Isi berat sesuai dengan BOM dari produk tersebut, kemudian klik **SEND TO MES**.

Kemudian cek order apakah sudah masuk pada MES, dengan cara klik next order



Kemudian tampilan MES akan memperlihatkan order yang masuk

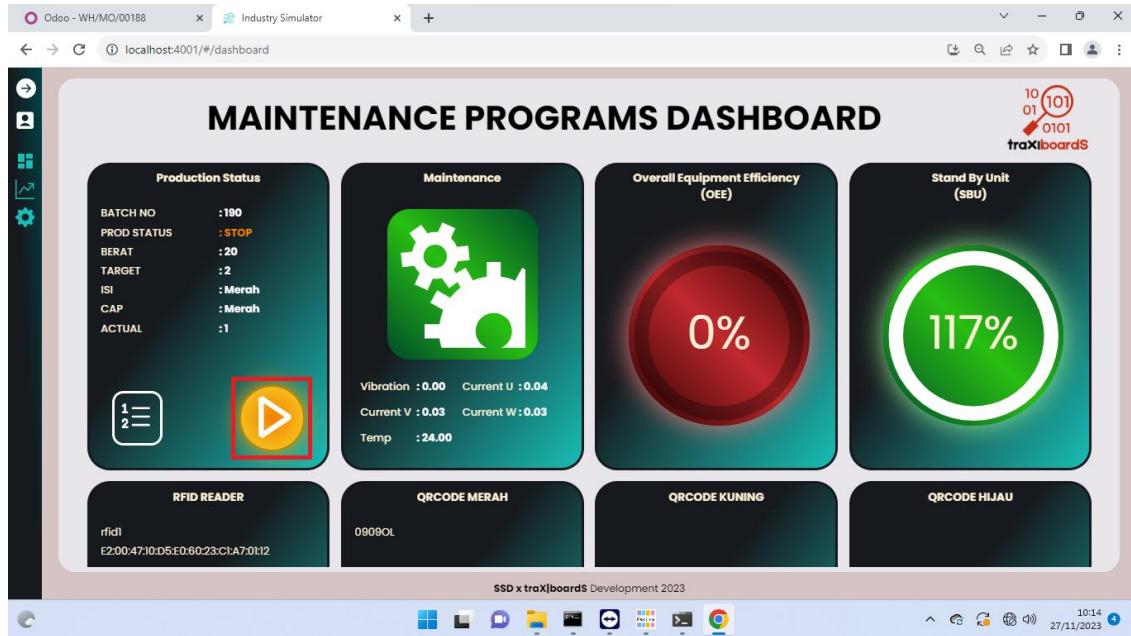
The screenshot shows a "START NEW ORDER" dialog box with the following table:

Description	Next Order
BATCH NO	190
BERAT	20
TARGET	2
ISI	MERAH
CAP	MERAH
PLCPARAM	
STEP	

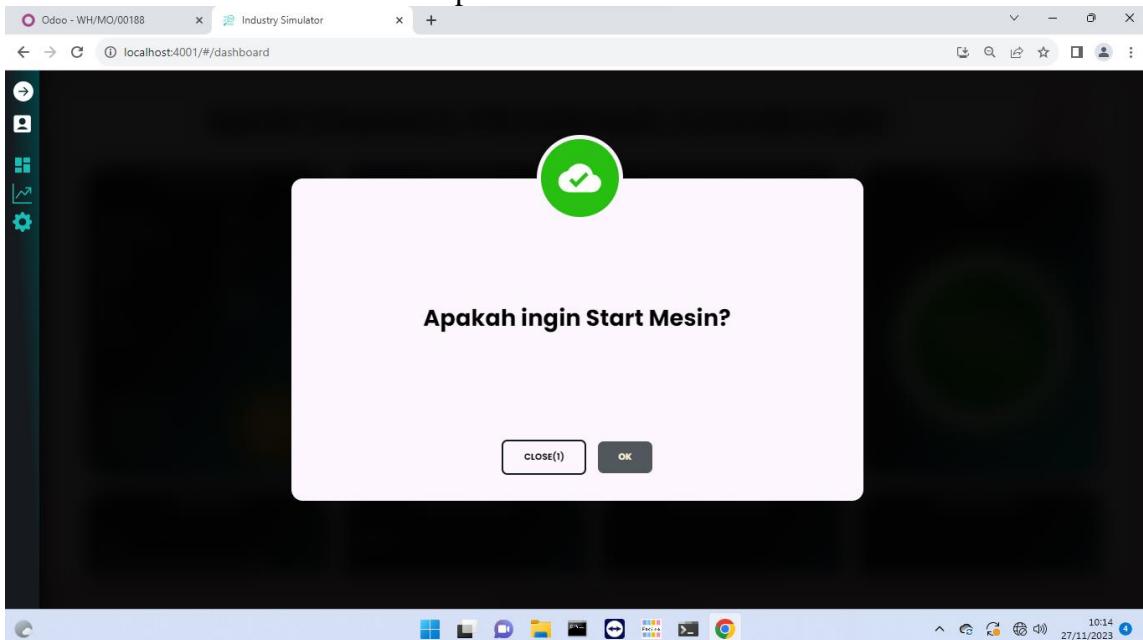
Buttons: CANCEL (red box), START (blue box).

SSD x traxboards Development 2023

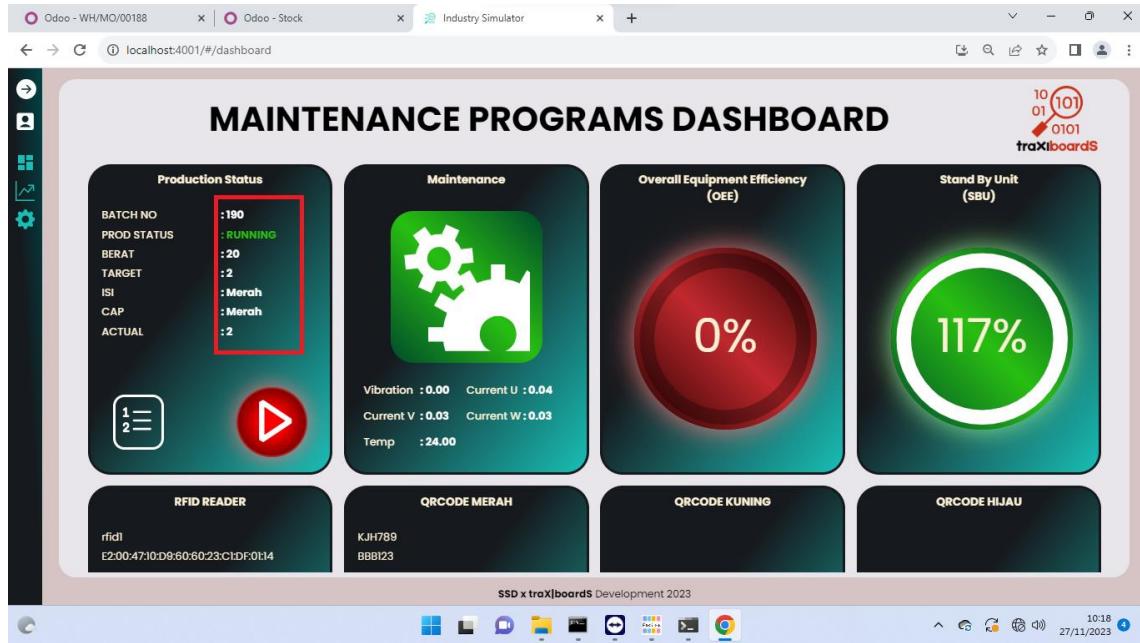
Pastikan BATCH NO dan yang lain sesuai dengan MO yang ada, kemudian klik start



Setelah klik start, maka tampilan akan kembali pada dashboard, kemudian seperti symbol play, pada kotak merah dan akan muncul POP UP seperti dibawah ini



Kemudain Klik Ok, dan mesin akan memproduksi orderan sesuai target yang ada
Jika target yang sudah terpenuhi sesuai actual maka mesin akan otomatis stop



Kembali pada odoo, klik mark as done pada MO yang ada seperti gambar di bawah ini

The screenshot shows the Odoo Manufacturing Order (MO) screen for order WH/MO/00191. The top navigation bar includes Sales, Orders, To Invoice, Products, Reporting, Configuration, and a user menu for Administrator (petra_ssd). The main content area displays the order details and a components table. A red box highlights the "MARK AS DONE" button in the toolbar above the form.

Order Details:

- Product: Produk 1 (Warna:MERAH) (Warna Cap:MERAH)
- Scheduled Date: 11/27/2023 09:45:57
- Batch ID: 193
- Component Status: Available
- Responsible:
- Validate MES:
- Berat: 20.00
- Quantity: 0.00 / 2.00 Units
- To Produce:

Components Table:

Product	From	To Consume	UoM	Reserved	Consumed
BOTOL	WH/Stock	0.00 / 2.00	Units	2.00	0.00
CAP	WH/Stock	0.00 / 2.00	Units	2.00	0.00
BUI PLASTIC MERAH	WH/Stock	0.00 / 40.00	g	40.00	0.00

Activity Log:

- Odoobot - 2 minutes ago: Draft --> Confirmed (Store)
- Odoobot - 2 minutes ago: None --> Ready (MO Readiness)
- Odoobot - 2 minutes ago: Production Order created

7. Cek Finish Good

Dapat dilihat di module inventory, Reporting, kemudian stock

The screenshot shows the Odoo Inventory Overview interface. The top navigation bar has tabs for Inventory, Overview, Operations, Products, Reporting, and Configuration. The Reporting tab is selected and highlighted with a red box. A dropdown menu for 'Stock' is open, listing 'Locations', 'Moves History', 'Stock Moves', and 'Valuation'. Below the menu, there are four sections: 'Receipts' (0 TO PROCESS), 'Delivery Orders' (0 TO PROCESS), 'Returns' (0 TO PROCESS), and 'Manufacturing' (0 TO PROCESS). Each section has a search bar and filter options. The bottom status bar shows the URL as 'localhost:8070/web#menu_id=141&action=247' and the time as 10:08 on 27/11/2023.

Pada menu ini dapat dilihat quantity on hand, free to use (not reserved), incoming (dari MO atau PO), dan outgoing (reserved).

The screenshot shows the Odoo Stock module. The top navigation bar has tabs for Inventory, Overview, Operations, Products, Reporting, and Configuration. The Inventory tab is selected and highlighted with a red box. A dropdown menu for 'Stock' is open, showing 'NEW' and a 'Category' filter. The main area displays a list of products with columns: Product, Unit Cost, Total Value, On Hand, Free to Use, Incoming, and Outgoing Unit. The 'On Hand' column is highlighted with a red box. The bottom status bar shows the URL as 'localhost:8070/web#menu_id=141&action=247' and the time as 10:09 on 27/11/2023.

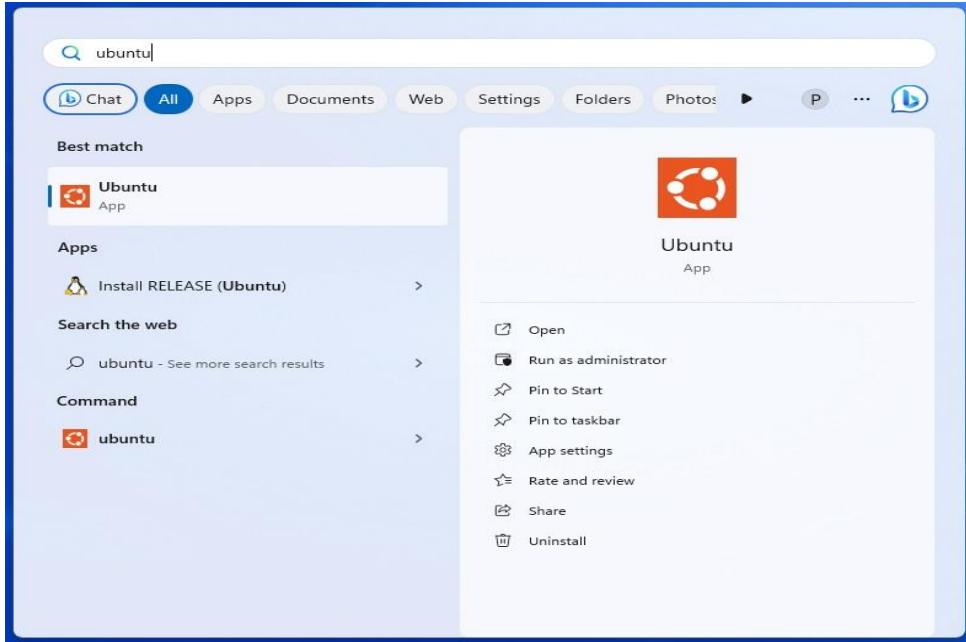
Product	Unit Cost	Total Value	On Hand	Free to Use	Incoming	Outgoing Unit
BJI PLASTIC MERAH	Rp 0.00	Rp 0.00	1,980.00	1,980.00	0.00	0.00 g
BOTOL	Rp 0.00	Rp 0.00	99.00	99.00	0.00	0.00 Units
CAP	Rp 0.00	Rp 0.00	99.00	99.00	0.00	0.00 Units
Produk 1	Rp 0.00	Rp 0.00	1.00	1.00	0.00	0.00 Units
		Rp 0.00	2,179.00	2,179.00	0.00	0.00

LAMPIRAN

3. Start Up Odoo Komputer Server

START UP ODOO PADA KOMPUTER SERVER

1. BUKA UBUNTU PADA MENU START

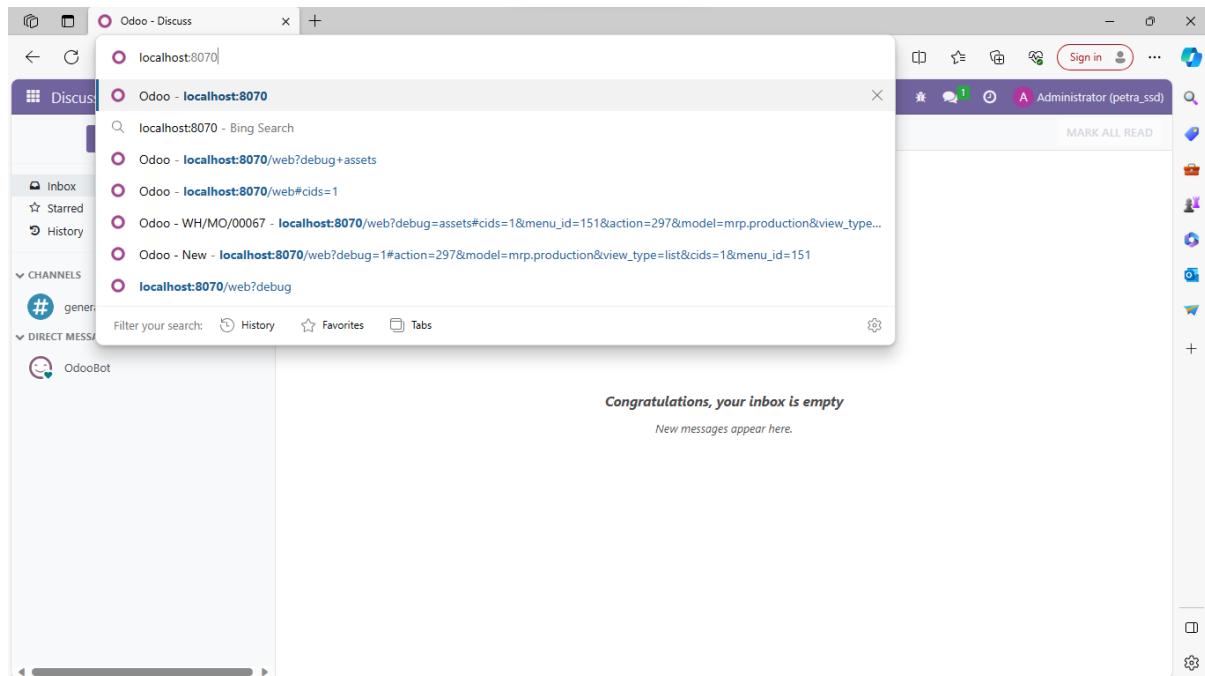


2. SETELAH TERMINAL TERBUKA IKUTI LANGKAH SEPERTI BERIKUT

```
petrassd@DESKTOP-T9U1LCV:~$ cd odoo/1
petrassd@DESKTOP-T9U1LCV:~/odoo$ source petra-venv/bin/activate 2
(petra-venv) petrassd@DESKTOP-T9U1LCV:~/odoo$ ./runserver 3
2023-10-24 04:05:42,409 666 INFO ? odoo: Odoo version 16.0
2023-10-24 04:05:42,409 666 INFO ? odoo: addons paths: ['/home/petrassd/odoo/odoo/addons', '/home/petrassd/.local/share/odoo/addons/16.0', '/home/petrassd/odoo/addons', '/home/petrassd/odoo/petra']
2023-10-24 04:05:42,409 666 INFO ? odoo: database: petra_ssd@default:5432
2023-10-24 04:05:42,554 666 INFO ? odoo.addons.base.models.ir_actions_report: You need Wkhtmltopdf to print a pdf version of the reports.
2023-10-24 04:05:42,767 666 INFO ? odoo.service.server: HTTP service (werkzeug) running on DESKTOP-T9U1LCV.:8070
2023-10-24 04:05:42,831 666 INFO petra_ssd odoo.modules.loading: loading 1 modules...
2023-10-24 04:05:42,835 666 INFO petra_ssd odoo.modules.loading: 1 modules loaded in 0.00s, 0 queries (+0 extra)
2023-10-24 04:05:42,966 666 WARNING petra_ssd odoo.modules.module: Missing 'license' key in manifest for 'petra_mes', defaulting to GPL-3
2023-10-24 04:05:43,002 666 INFO petra_ssd odoo.modules.loading: loading 75 modules...
2023-10-24 04:05:43,494 666 WARNING petra_ssd odoo.api.create: The model odoo.addons.petra_mes.models.mes_order is not overriding the create method in batch
2023-10-24 04:05:43,496 666 WARNING petra_ssd odoo.models: The model mes.order has no _description
2023-10-24 04:05:43,497 666 WARNING petra_ssd odoo.models: The model mes.order.line has no _description
2023-10-24 04:05:43,497 666 WARNING petra_ssd odoo.models: The model petra.warna has no _description
2023-10-24 04:05:43,559 666 INFO petra_ssd odoo.modules.loading: 75 modules loaded in 0.56s, 0 queries (+0 extra)
2023-10-24 04:05:43,646 666 INFO petra_ssd odoo.modules.loading: Modules loaded.
2023-10-24 04:05:43,651 666 INFO petra_ssd odoo.modules.registry: Registry loaded in 0.885s
2023-10-24 04:06:43,775 666 INFO petra_ssd odoo.addons.base.models.ir_cron: Starting job 'Base: Auto-vacuum internal data'.
2023-10-24 04:06:43,813 666 INFO petra_ssd odoo.addons.base.models.ir_attachment: filestore gc 0 checked, 0 removed
2023-10-24 04:06:43,845 666 INFO petra_ssd odoo.addons.base.models.res_users: GC'd 1 user log entries
2023-10-24 04:06:43,860 666 INFO petra_ssd odoo.addons.auth_totp.models.auth_totp: GC'd 0 totp devices entries
2023-10-24 04:06:43,899 666 INFO petra_ssd odoo.models.unlink: User #1 deleted bus.bus records with IDs: [2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566]
```

- A. cd odoo
- B. source petra-venv/bin/activate
- C. ./runserver

3. Buka browser dan ketik localhost:8070

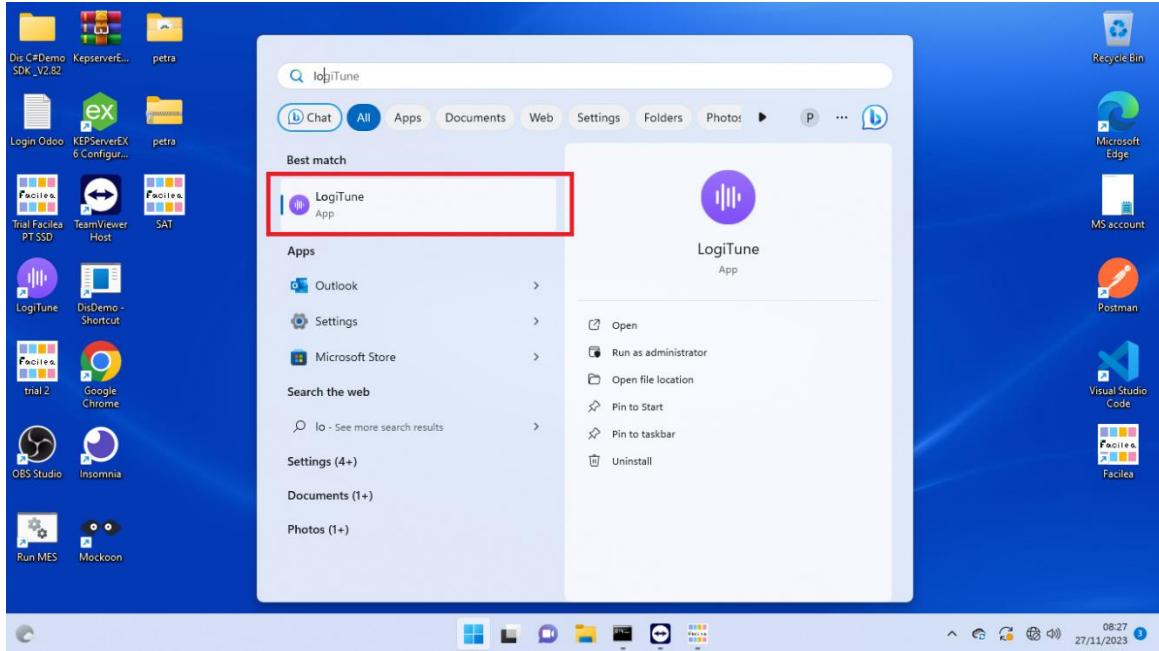


LAMPIRAN

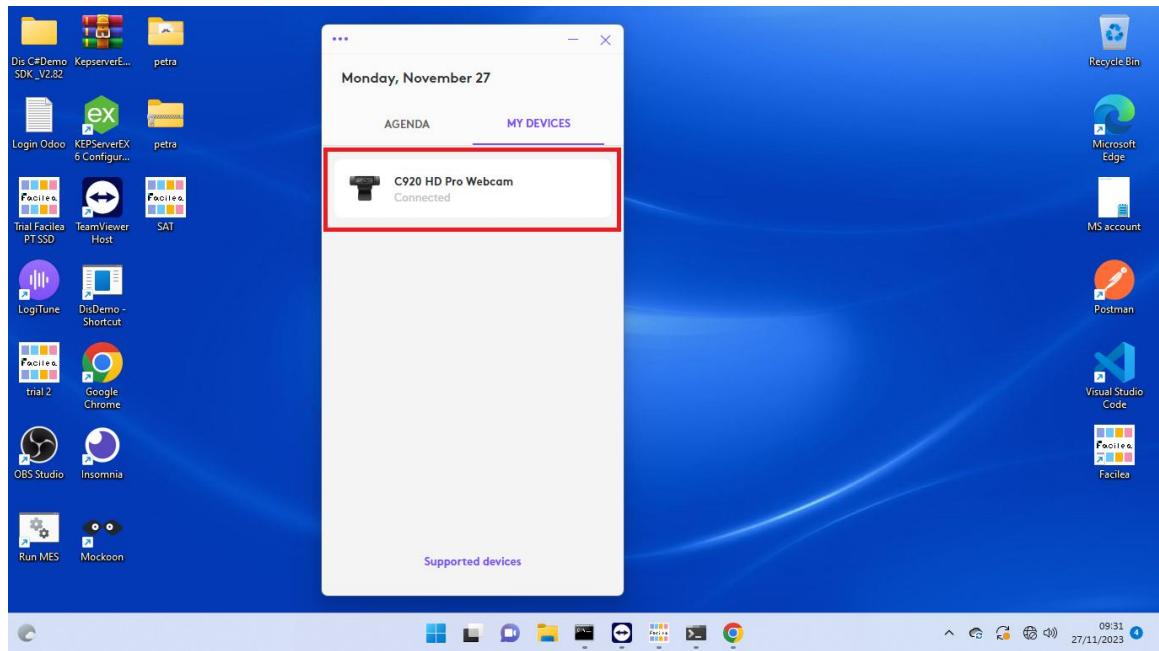
4. Start Up Facilea Komuper Server

START UP FACILE PADA KOMPUTER SERVER

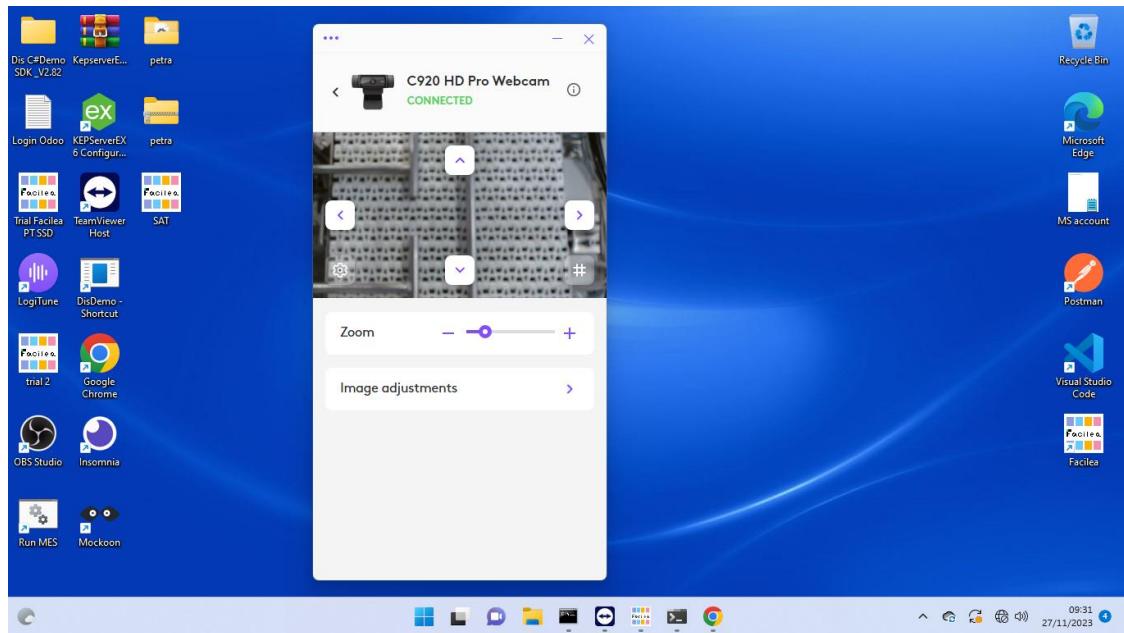
1. BUKA SOFTWARE LOGITUNE PADA START



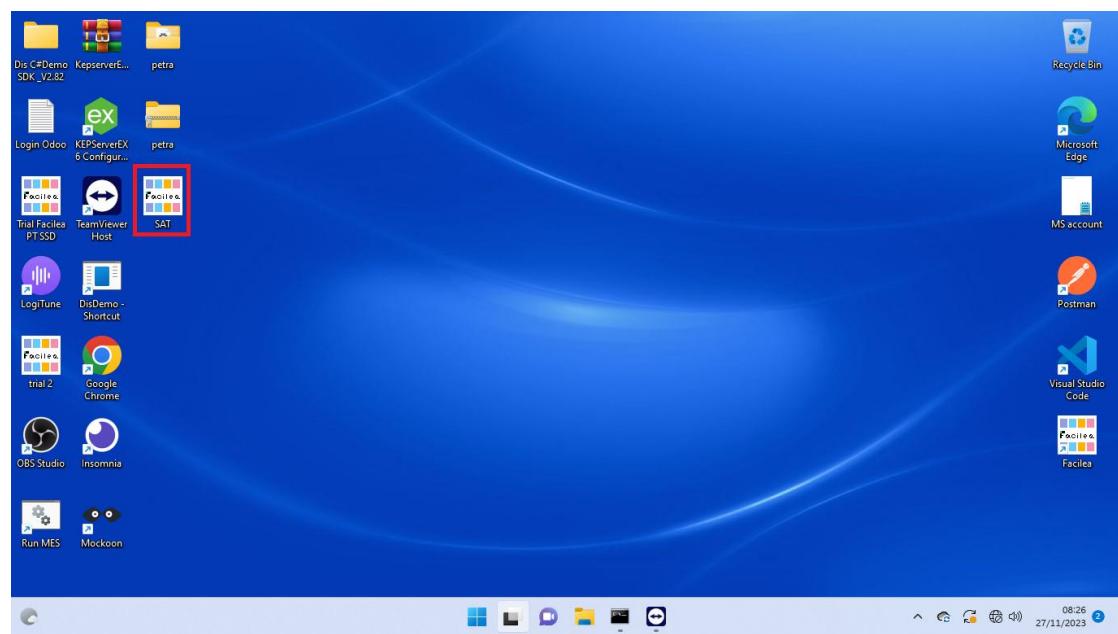
2. SETELAH TERSOFTWARE TERBUKA MAKA AKAN MUNCUL CAMERA YANG TERKONEKSI DENGAN KOMPUTER



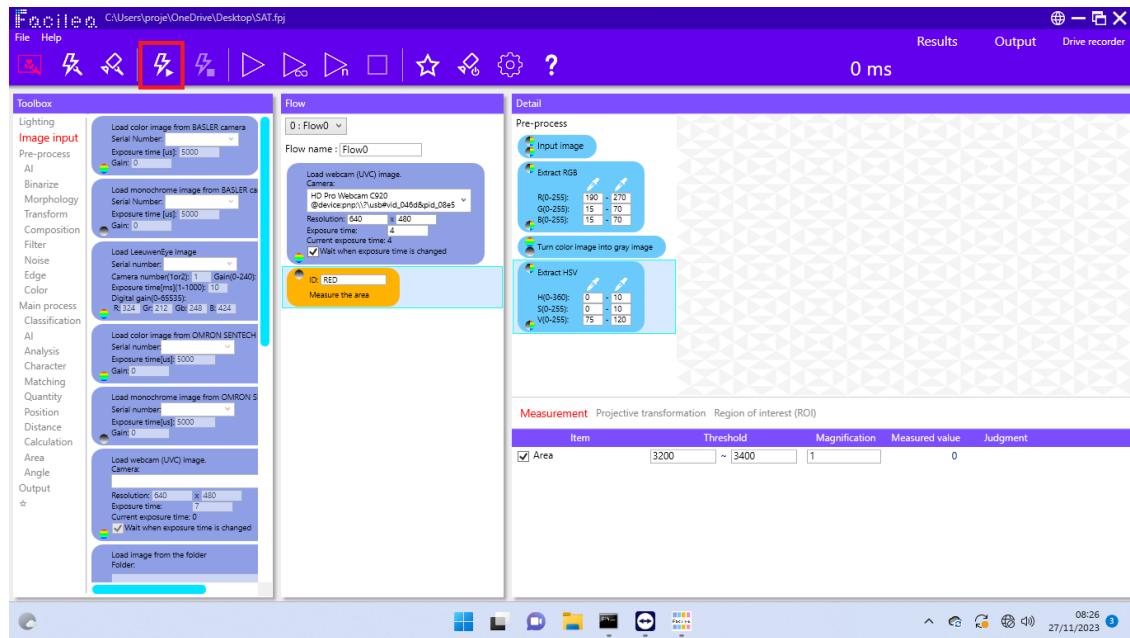
3. KEMUDIAN KLIK CAMERA UNTUK CEK KONDISI PEMBACAAN CAMERA



4. SETELAH ITU OPEN FACILE PADA DESKTOP DENGAN NAMA FILE SAT



5. SETLAH SOFWARE TERBUKA, KLIK SIMBOL SEPERTI LAMBANG PETIR PADA FACILEA



LAMPIRAN

5. Troubleshooting

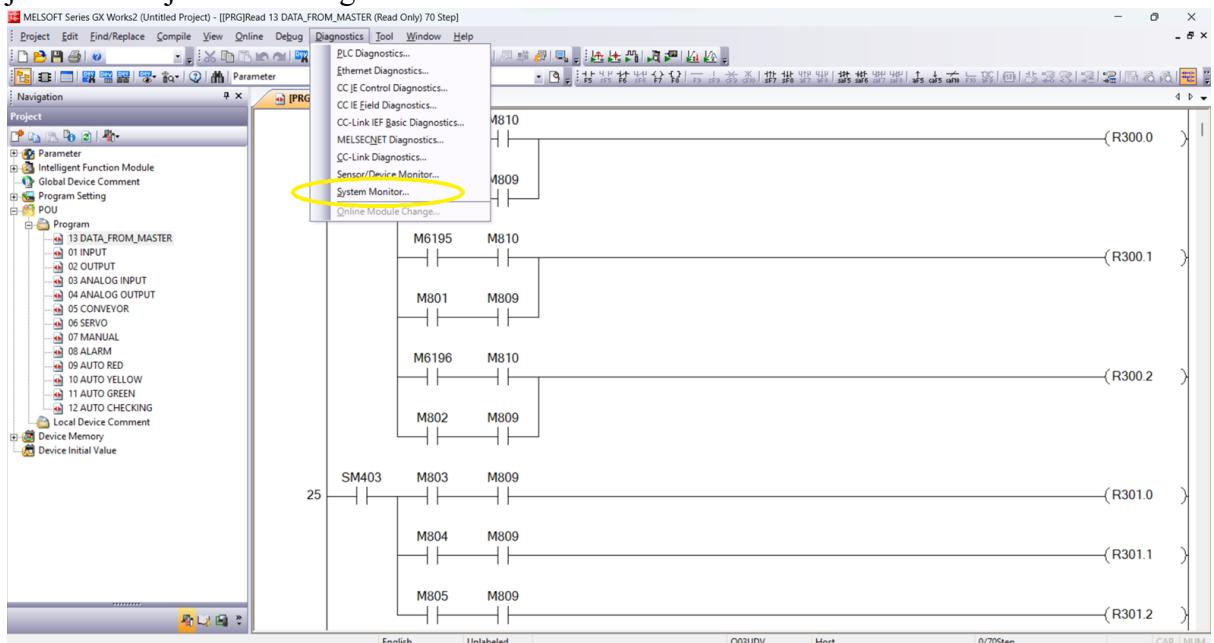
TROUBLESHOOT PLC

1. Cek kondisi CPU dari PLC apakah ada error atau tidak, jika ada error indicator RUN pada CPU akan mati, dan indicator ERROR akan blinking merah.



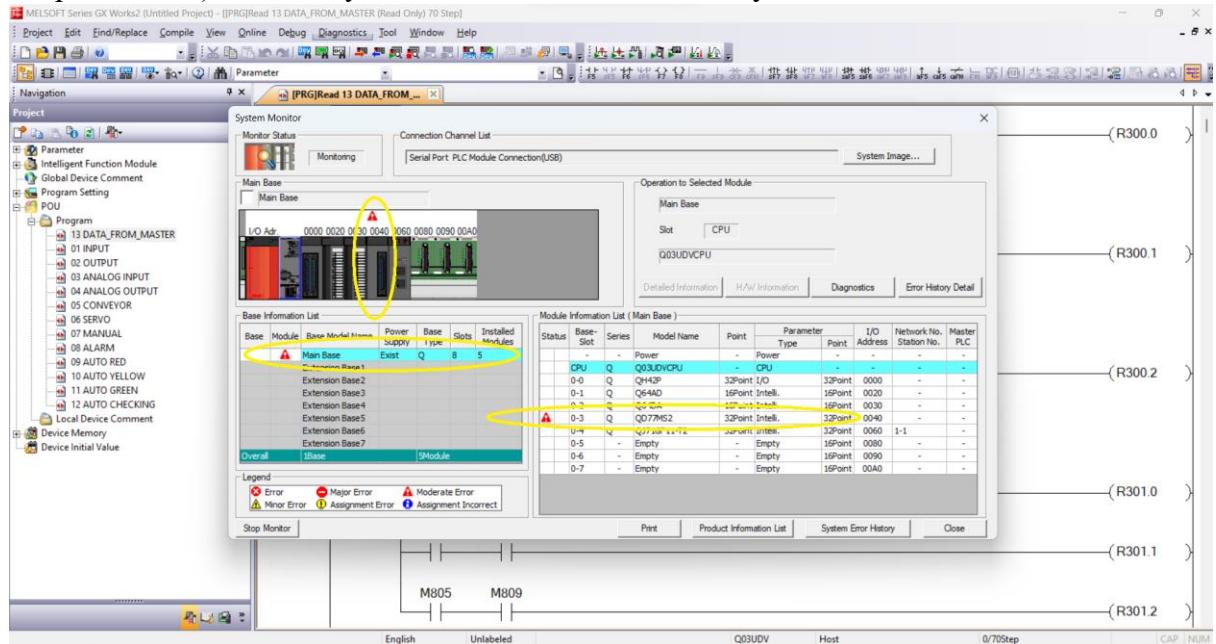
Gambar 1. Kondisi Normal CPU

2. jika error terjadi ikuti Langkah ini untuk cek kondisi dari error CPU tsb



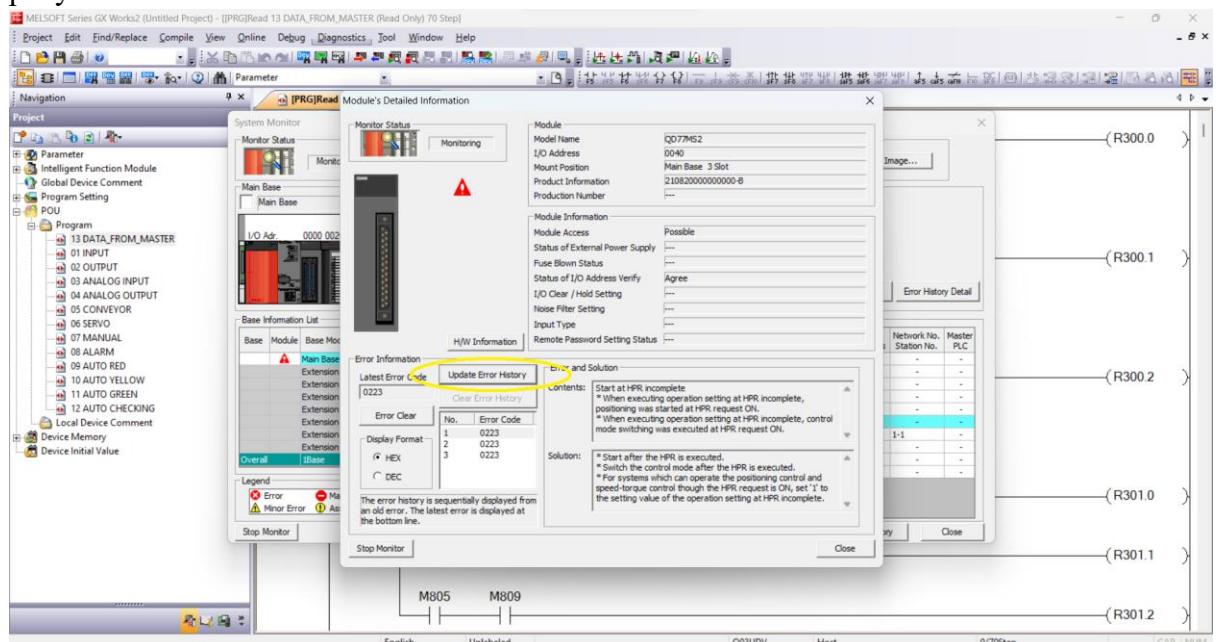
Gambar 2. Diagnostics PLC

3. lihat module mana yang mengalami error, disini contohnya adalah module ke 4 (simple motion), indikasinya adalah module tersebut ada symbol merah



Gambar 3. Module error

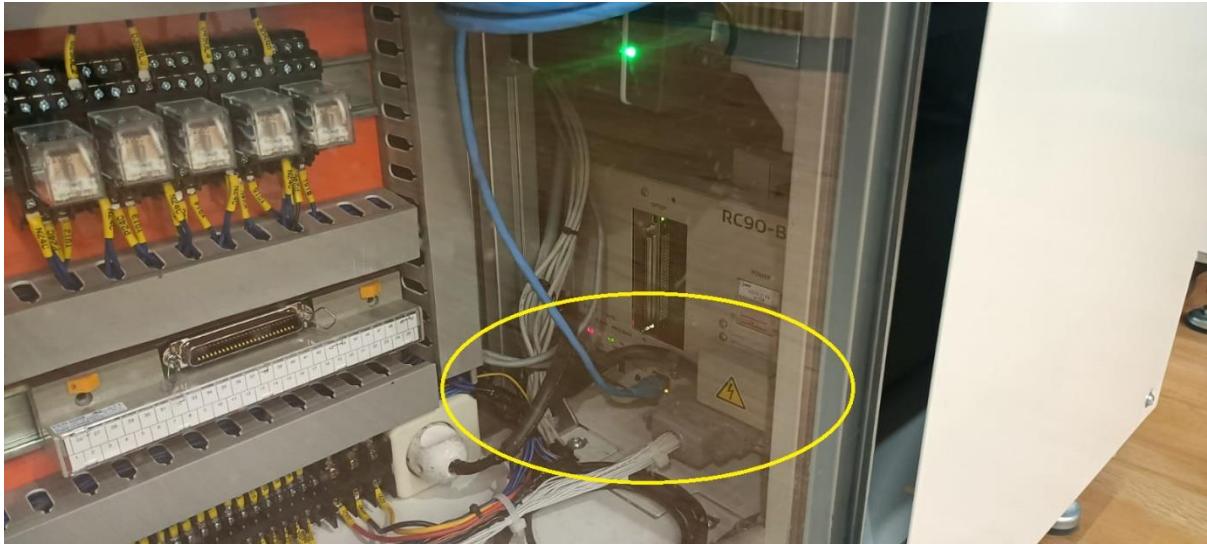
4. kemudian pilih module yang error tersebut dan pilih update error, maka akan terlihat penyebab error tersebut



Gambar 4. Diagnostics module error

TROUBLESHOOT ROBOT EPSON

1. Untuk robot Epson kondisi error akan di record oleh HMI sehingga akan ada pemberitahuan langsung, sehingga tinggal di reset pada HMI. Jika setelah reset error masih terjadi maka penyebab utama adalah cable connector yang goyang.



Gambar 1. Kondisi Robot Epson error terlihat indikasi merah pada controller

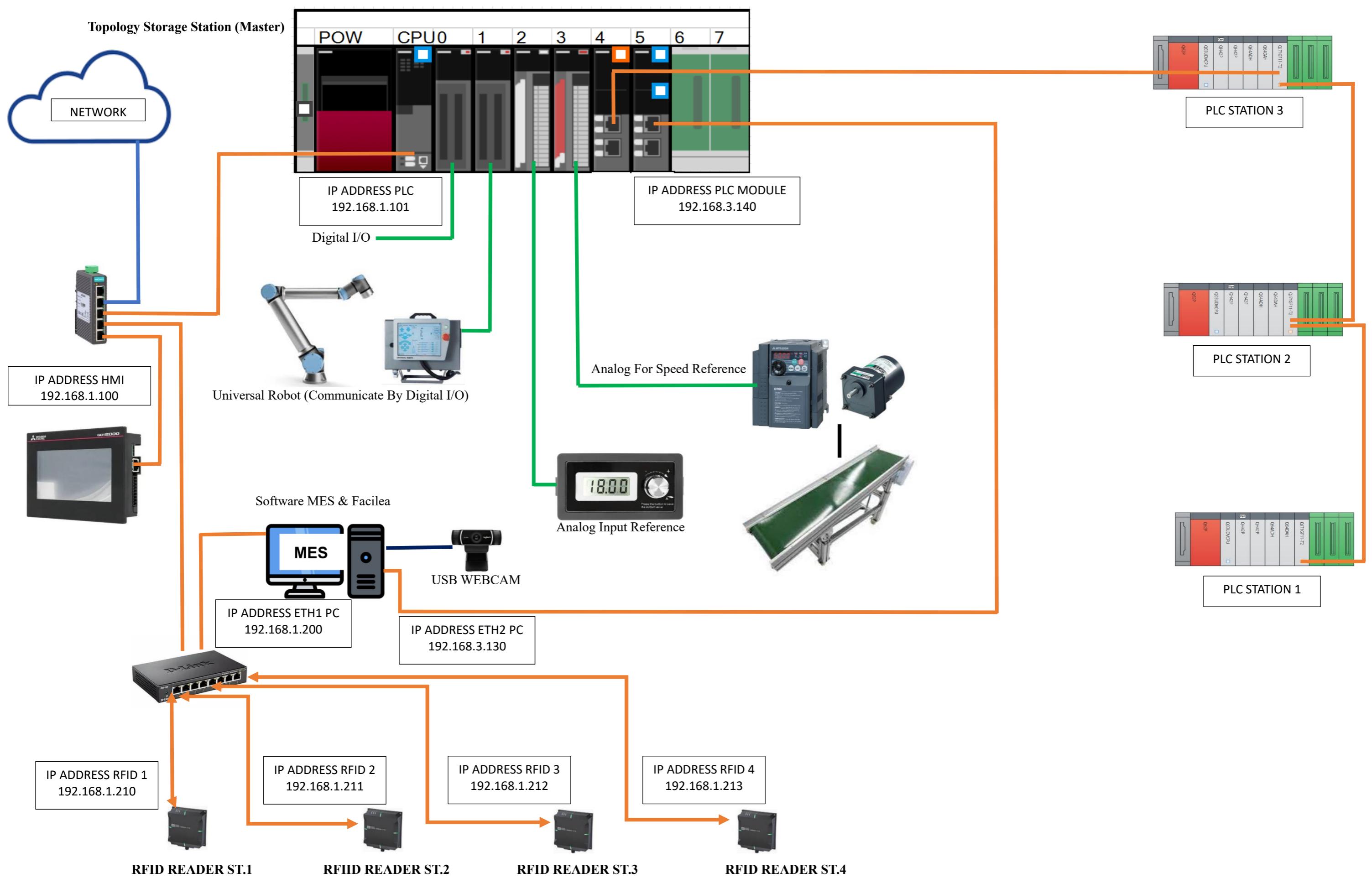
2. Jika error masih terjadi silahkan cek kondisi konektor sesuai gambar di atas, kemudian restart robot

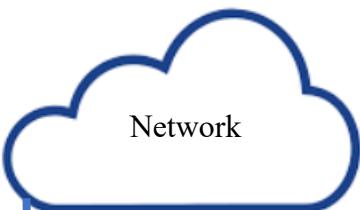
TROUBLESHOOT UNIVERSAL ROBOT

Kondisi error pada Universal Robot biasanya terjadi karena robot protective stop, silahkan cek apakah robot menabrak sesuatu, jika menabrak maka perbaiki teachingan robot

LAMPIRAN

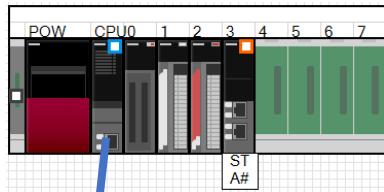
**6. *Network Topologi & Topologi Master
Slave, and Topologi to MES***



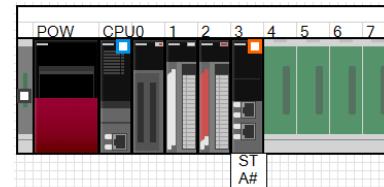


Topologi Master Slave, and Topologi to MES

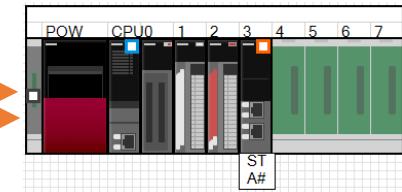
Inspection And Storage Station (Master)



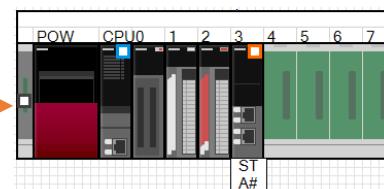
Feeding Station (Local / Slave 1)



Filling Station (Local/Slave 2)



Capping Station (Local/Slave 3)



PC +Software MES



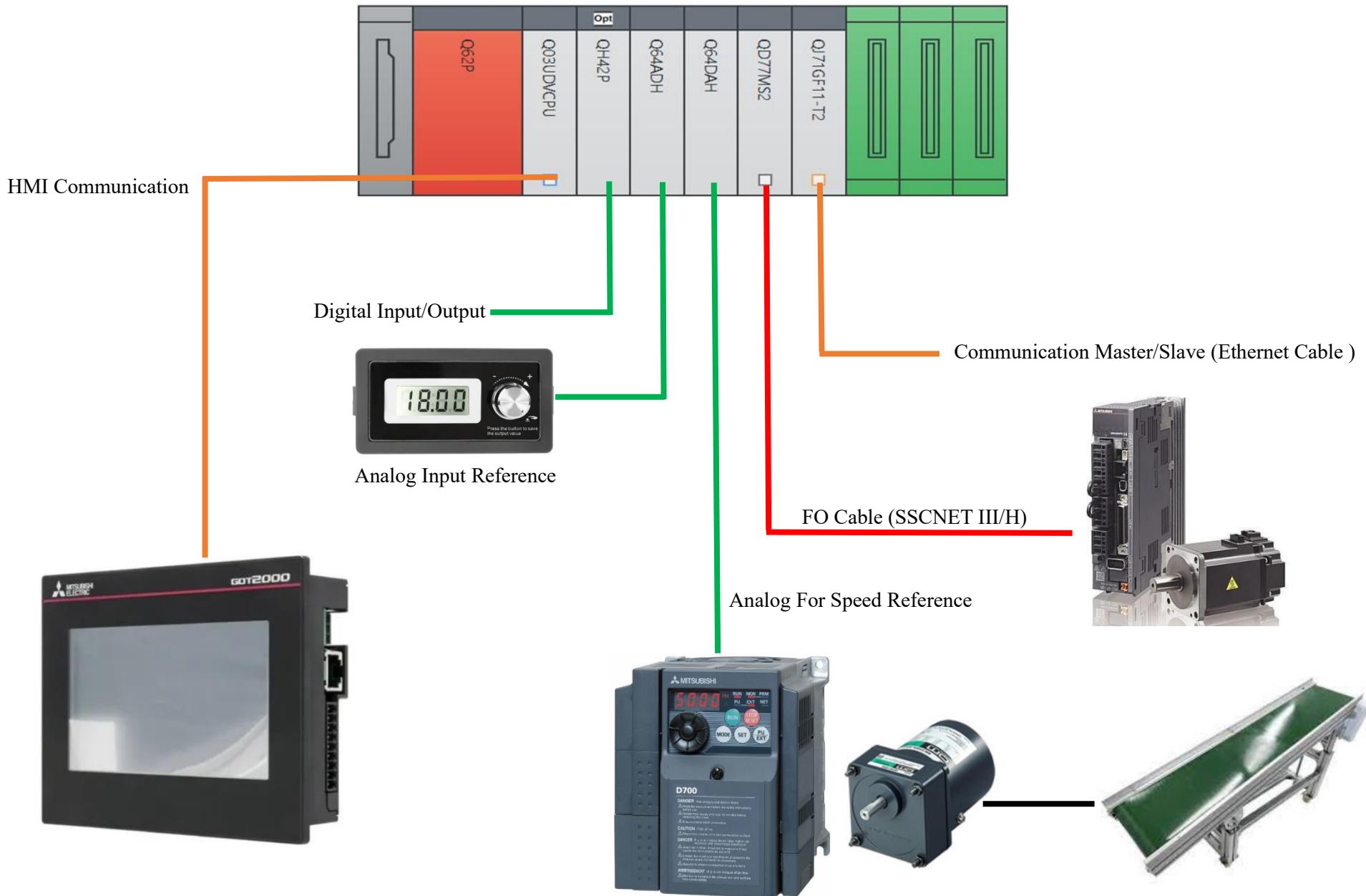
Information : ————— Ethernet Cable With MC Protocol

————— Ethernet Cable With CC-LINK IE FIELD Protocol

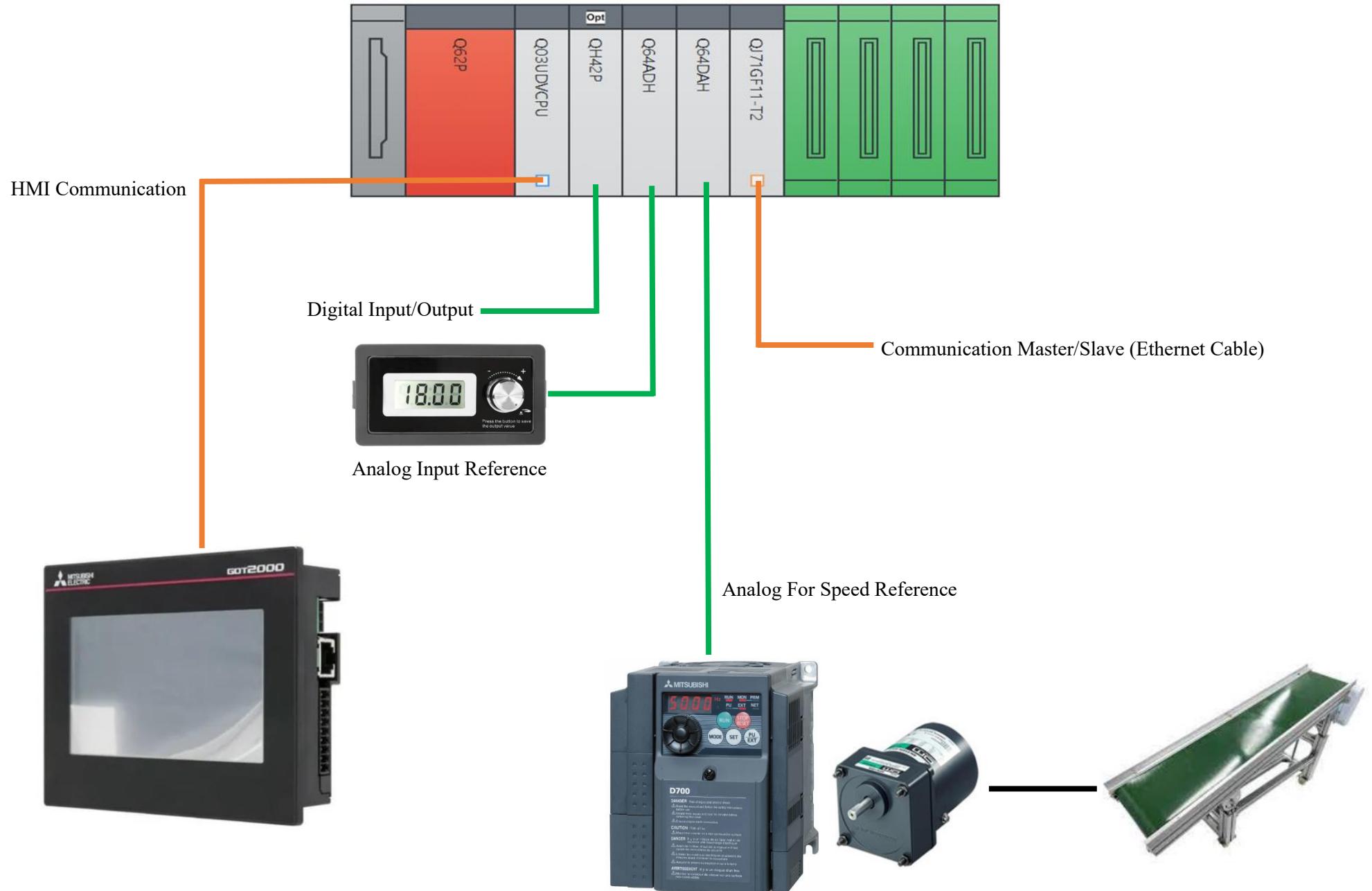
Function : ————— Communication With MES software and IOT Gateway

————— Communication Between PLC (Master/Slave)

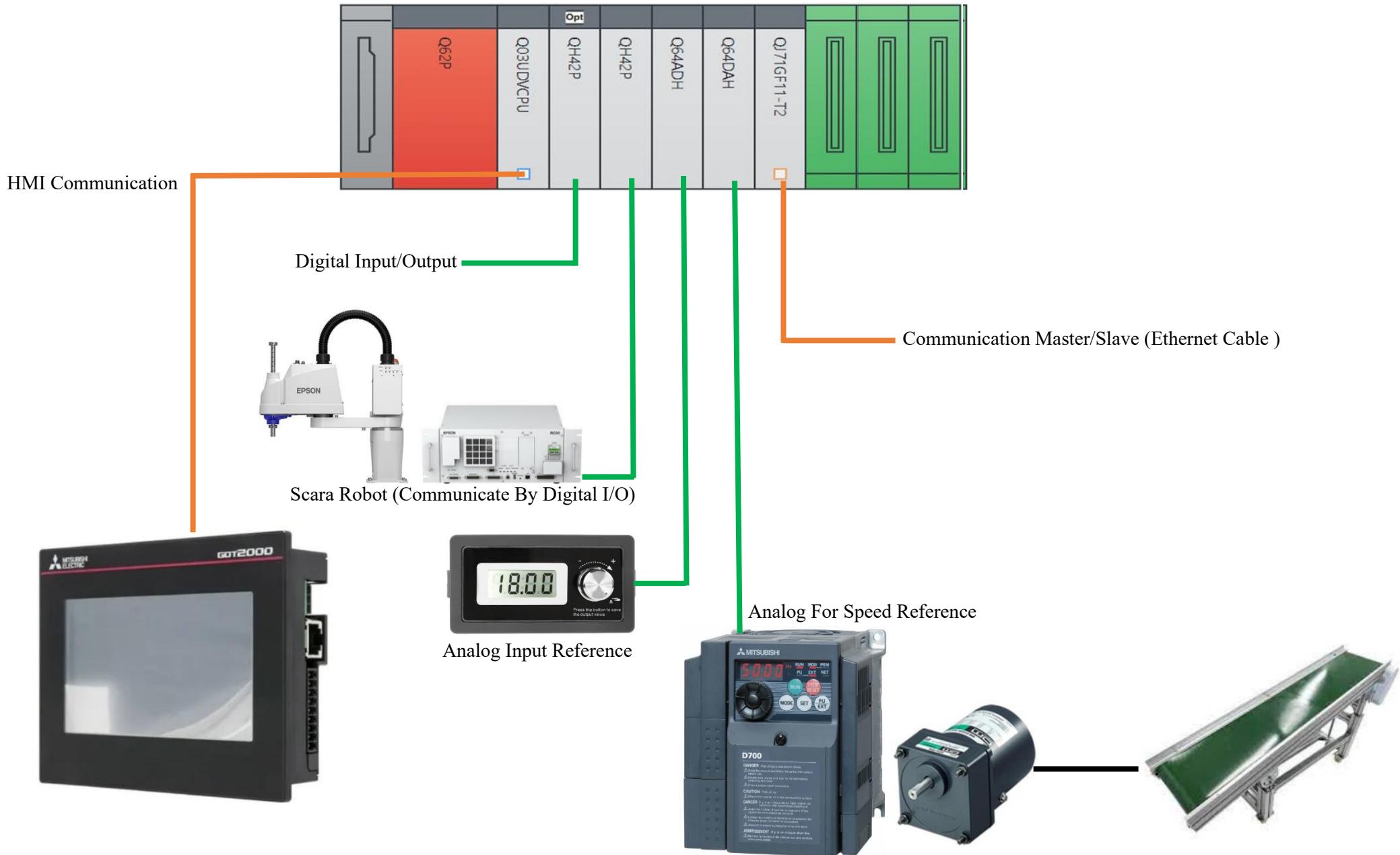
Topology Container Station (Local / Slave 1)



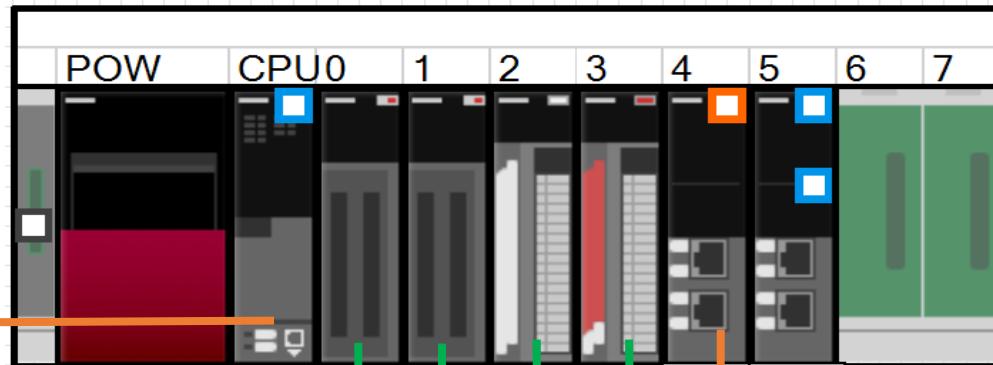
Topology Filling Station (Local / Slave 2)



Topology Assembling Station (Local / Slave 3)



Topology Storage Station (Master)



Digital I/O

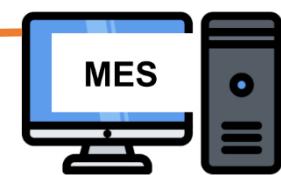
Communication Master/Slave (Ethernet Cable)

Analog For Speed Reference



Analog Input Reference

MES



USB WEBCAM



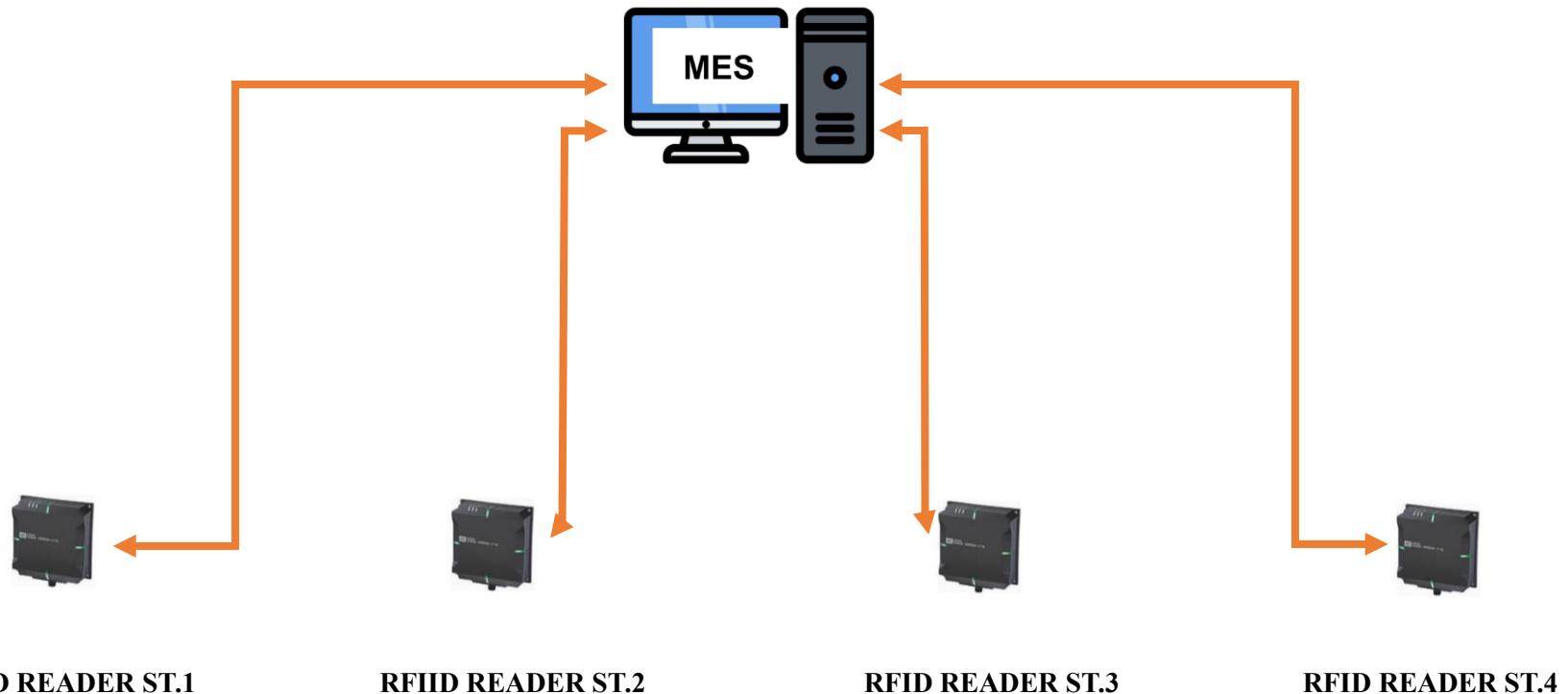
Universal Robot (Communicate By Digital I/O)



Software MES & Facilea



Topology RFID System



PROTOCOL YANG ANTARA KOMUNIKASI RFID DAN MES ADALAH MODBUS TCP/IP



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