



Balai Pengembangan Talenta Indonesia  
Pusat Prestasi Nasional  
Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi

**MERDEKA  
BELAJAR**

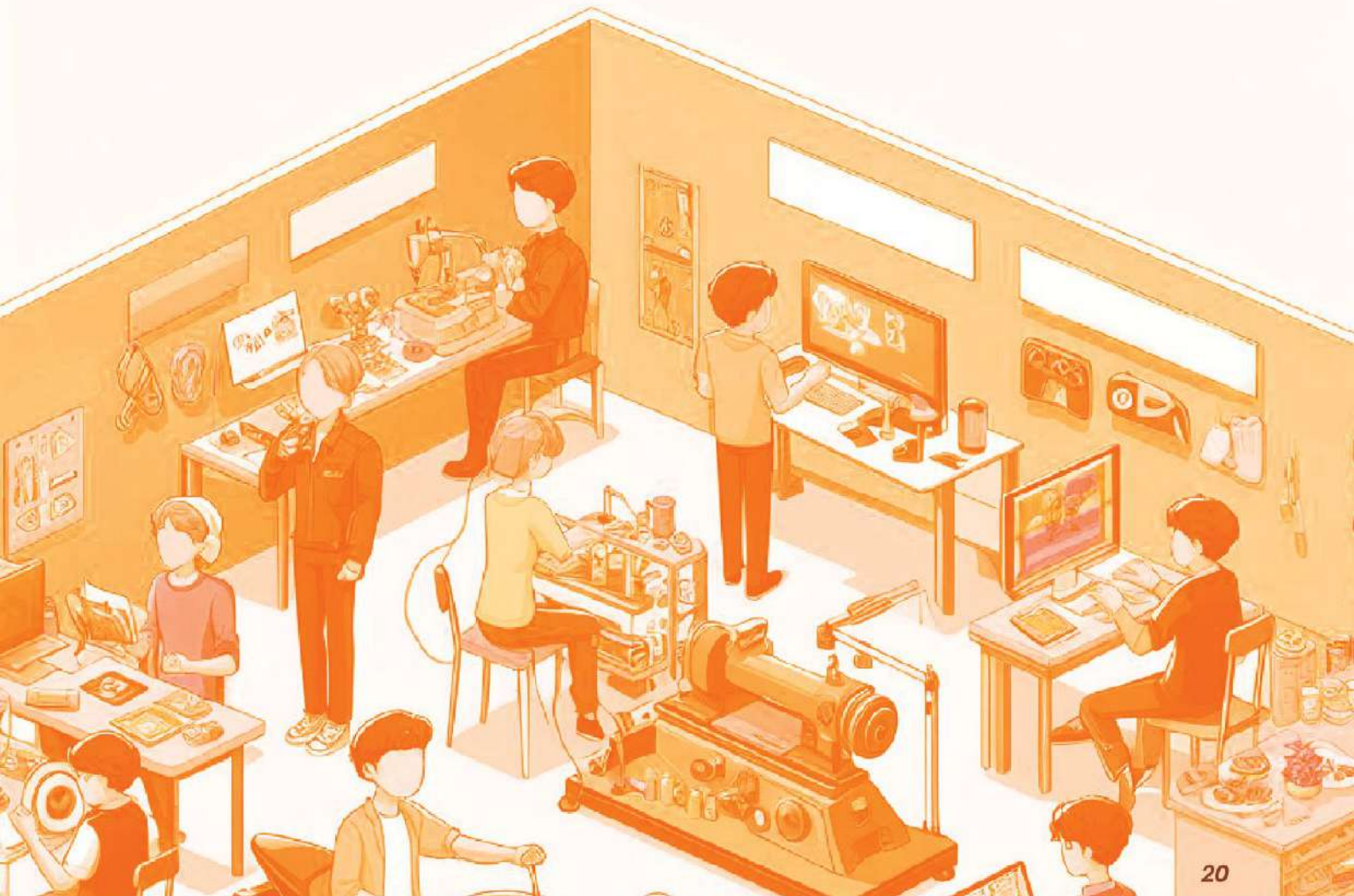


**SMK**

# Kisi-Kisi

## Lomba Kompetensi Siswa Nasional 2024

**Sistim Kendali Industri**  
(Industrial Control)



20

**MERDEKA BERPRESTASI**  
Talenta **Vokasi** Menginspirasi

# Test Project

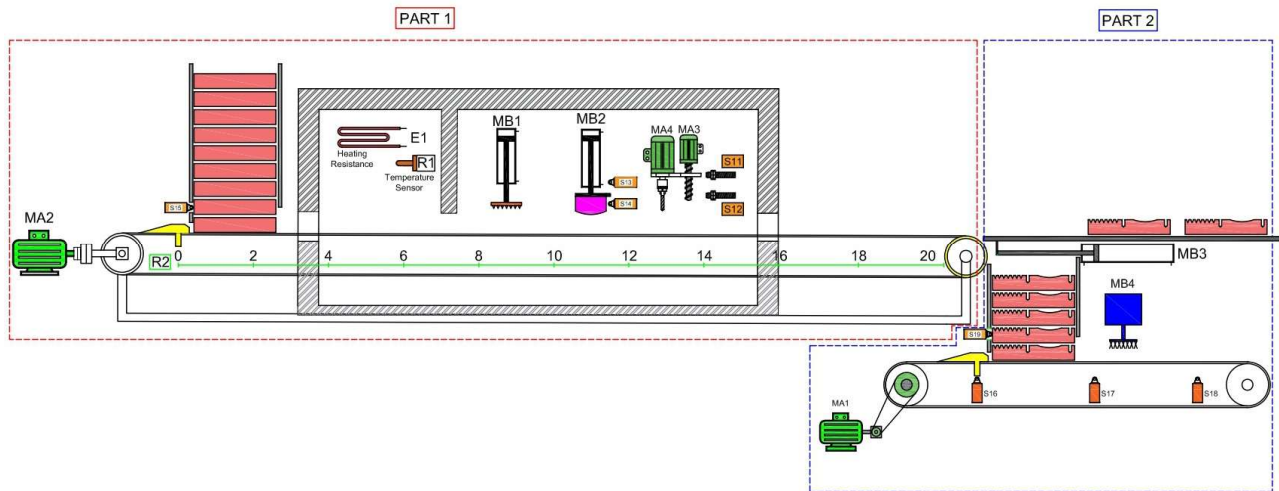
## *Industrial Control*

Module A - Main Project

Submitted by: Lodi Joyo Siswanto

## Module A – Main Project

With the attached mounting layout and its electrical diagrams it is intended to simulate the operation of the following production machine.



### Legend:

**MA1:** Belt 2 motor

**MA2:** Belt 1 motor

**MA3:** Vertical movement motor

**MA4:** Drilling motor

**MB1:** Valve/Cylinder

**MB2:** Valve/Cylinder

**MB3:** Valve/Cylinder

**MB4:** Kleaning Product Valve

**E1:** Heating Resistance

**R1:** Temperature sensor

**R2:** Belt 1 Position

**S11:** MA3 Platform UP

**S12:** MA3 Platform DOWN

**S13:** MB2 Cylinder is UP

**S14:** MB2 Cylinder is DOWN

**S15:** Sensor Pieces available

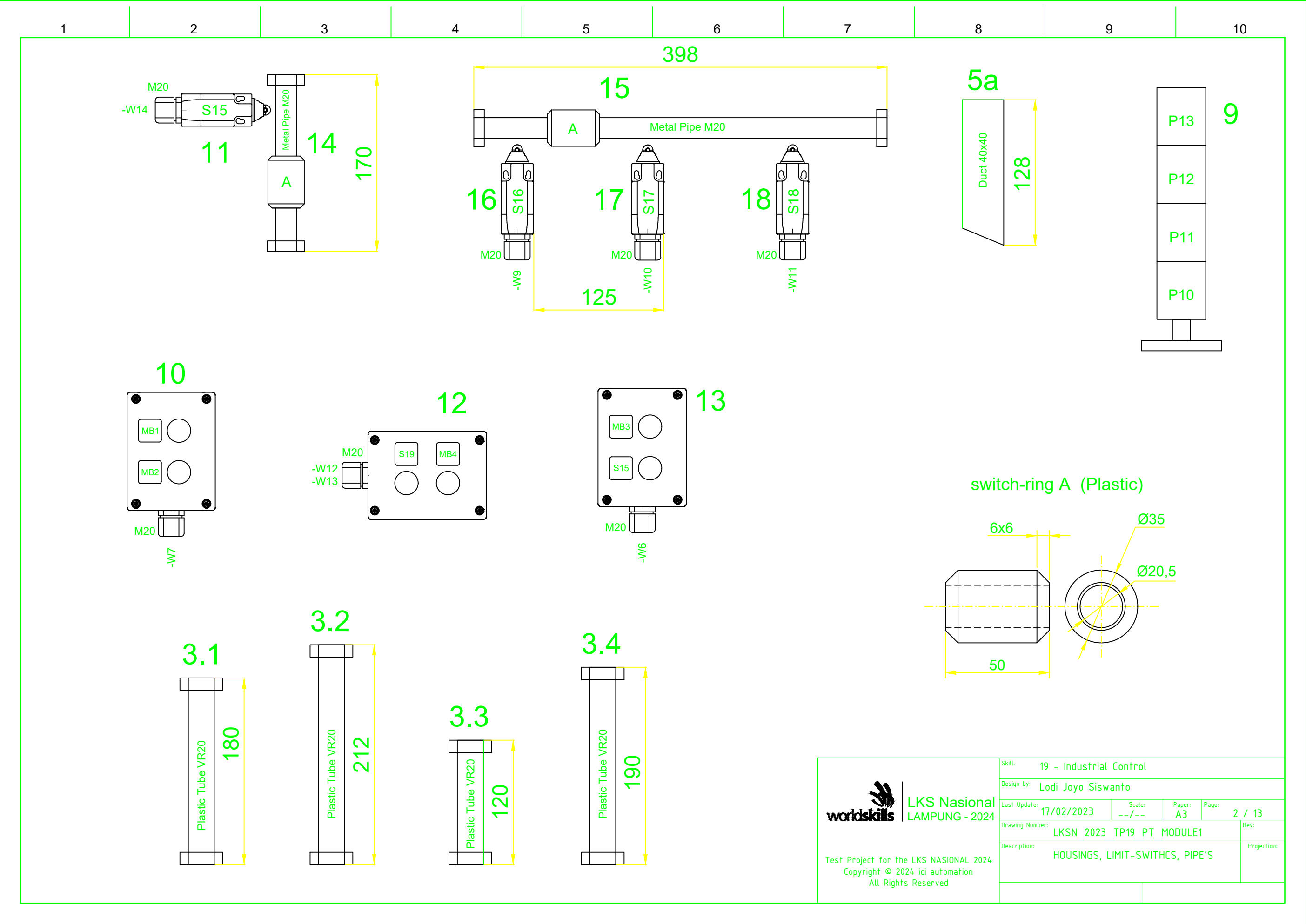
**S16:** Belt 2 – Left position switch

**S17:** Belt 2 – Middle position switch

**S18:** Belt 2 – Right position switch

**S19:** Sensor Pieces available





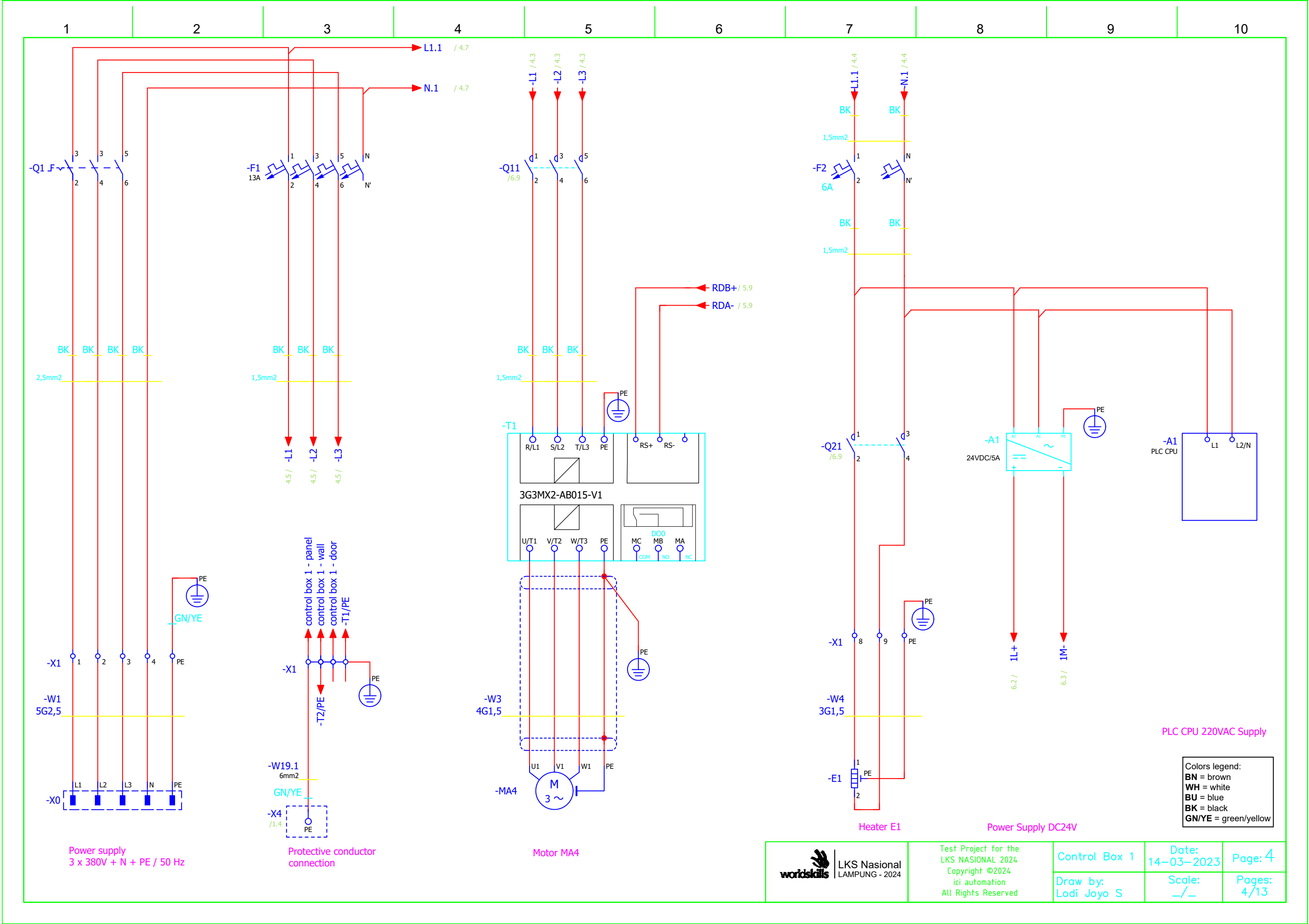
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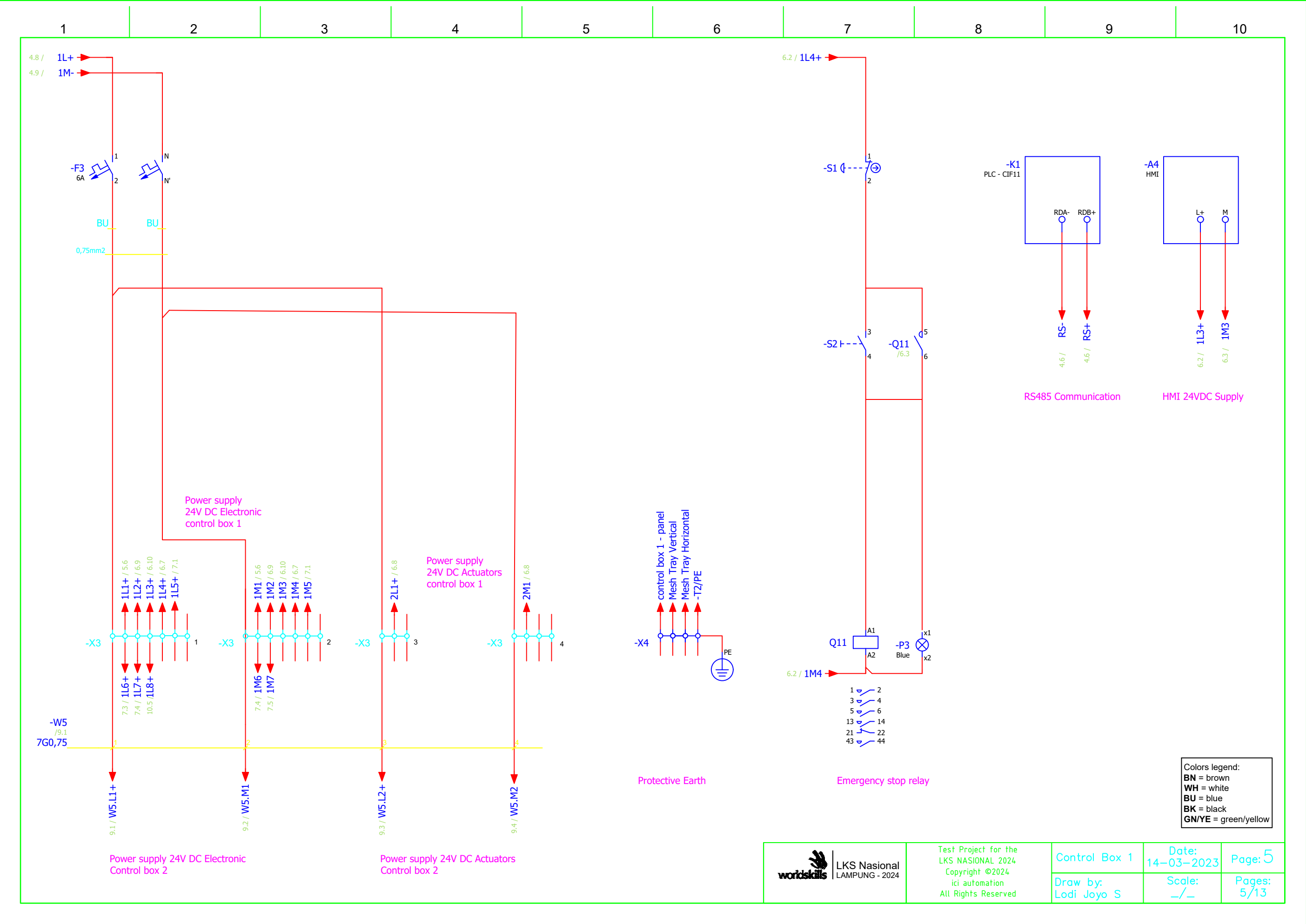
Test Project for the LKS NASIONAL 2024  
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Skill: 19 - Industrial Control			
Design by: Lodi Joyo Siswanto			
Last Update: 17/02/2023	Scale: --/--	Paper: A3	Page: 2 / 13
Drawing Number: LKSN_2023_TP19_PT_MODULE1			Rev:
Description: HOUSINGS, LIMIT-SWITCHES, PIPE'S			Projection:

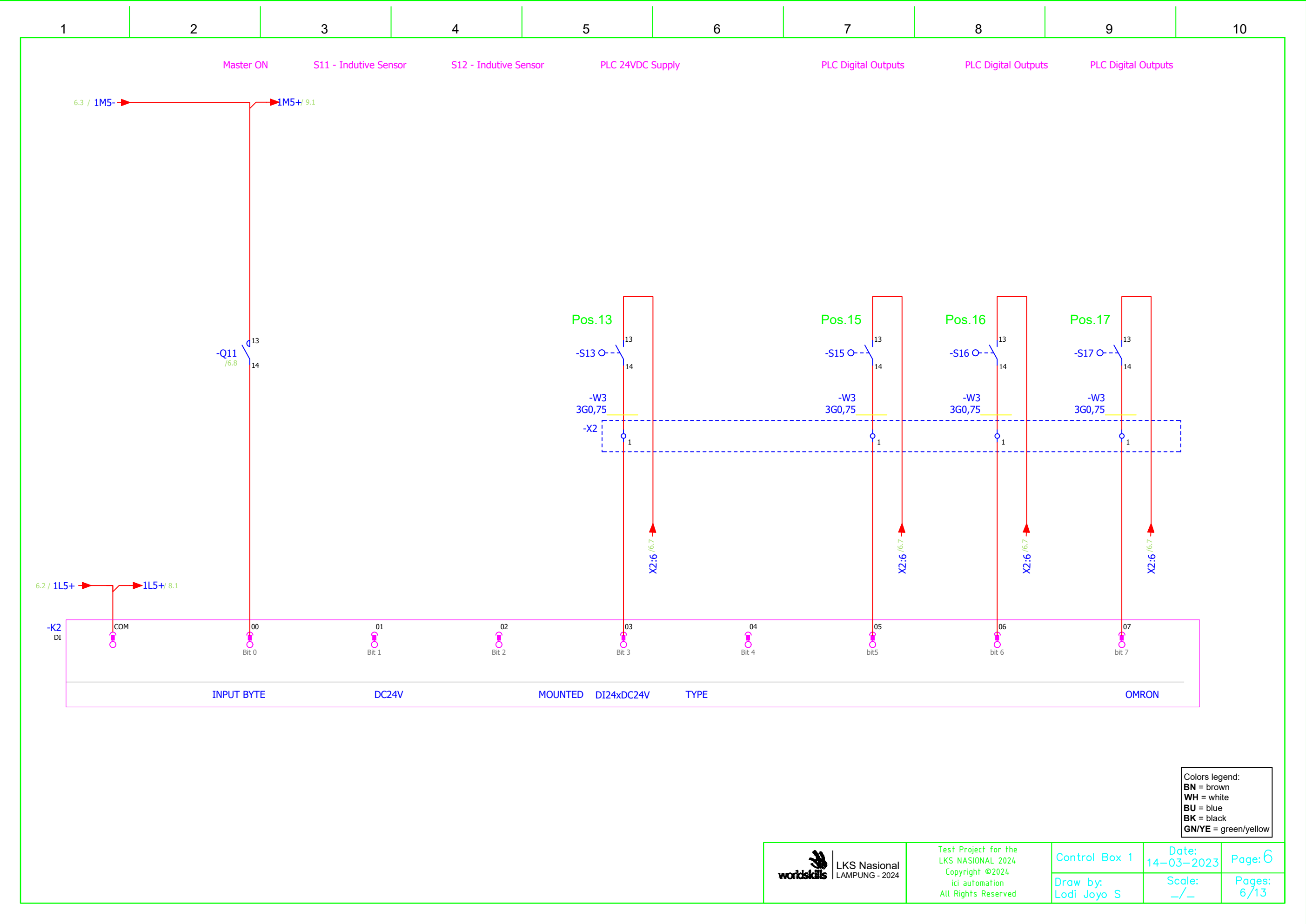


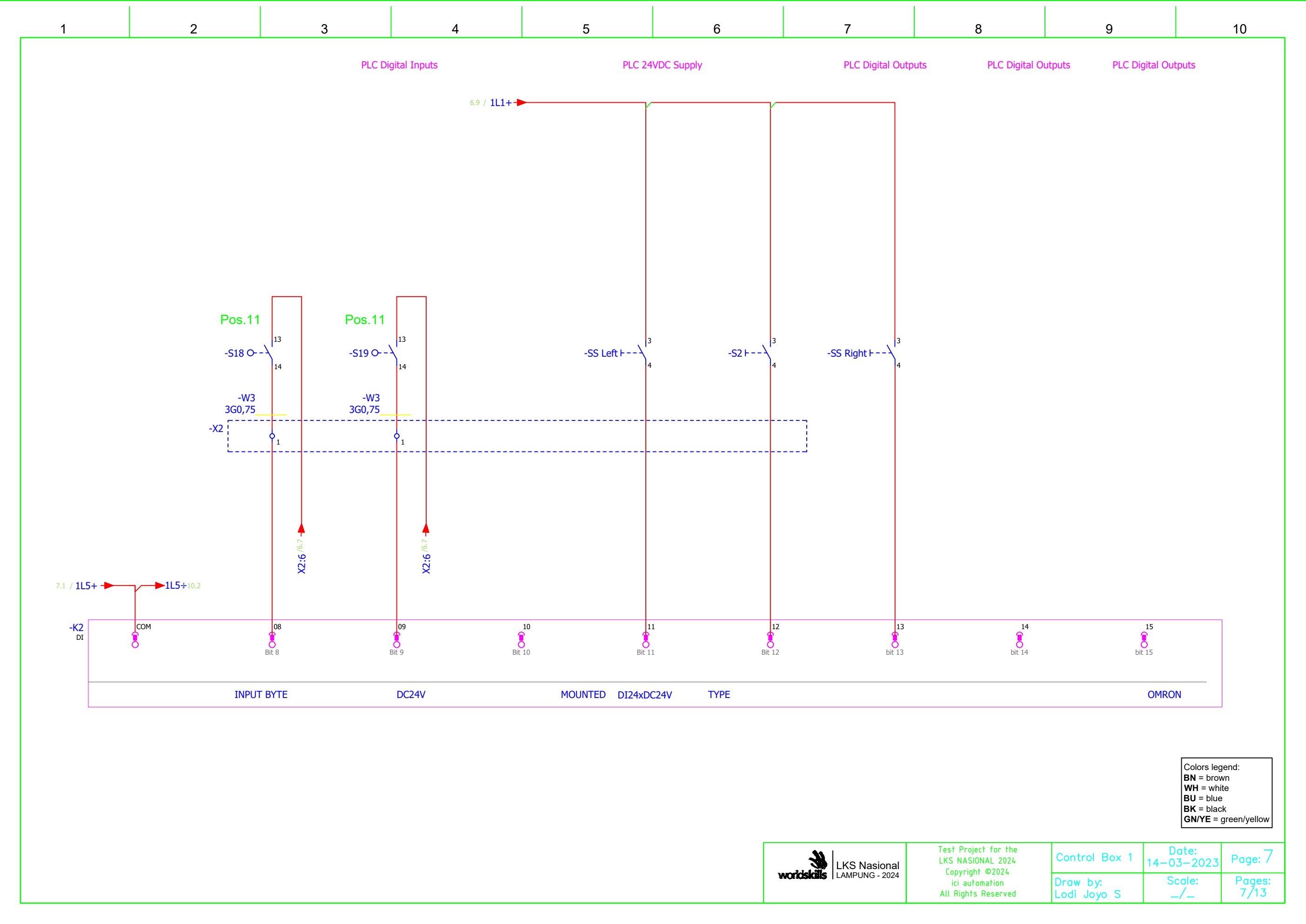




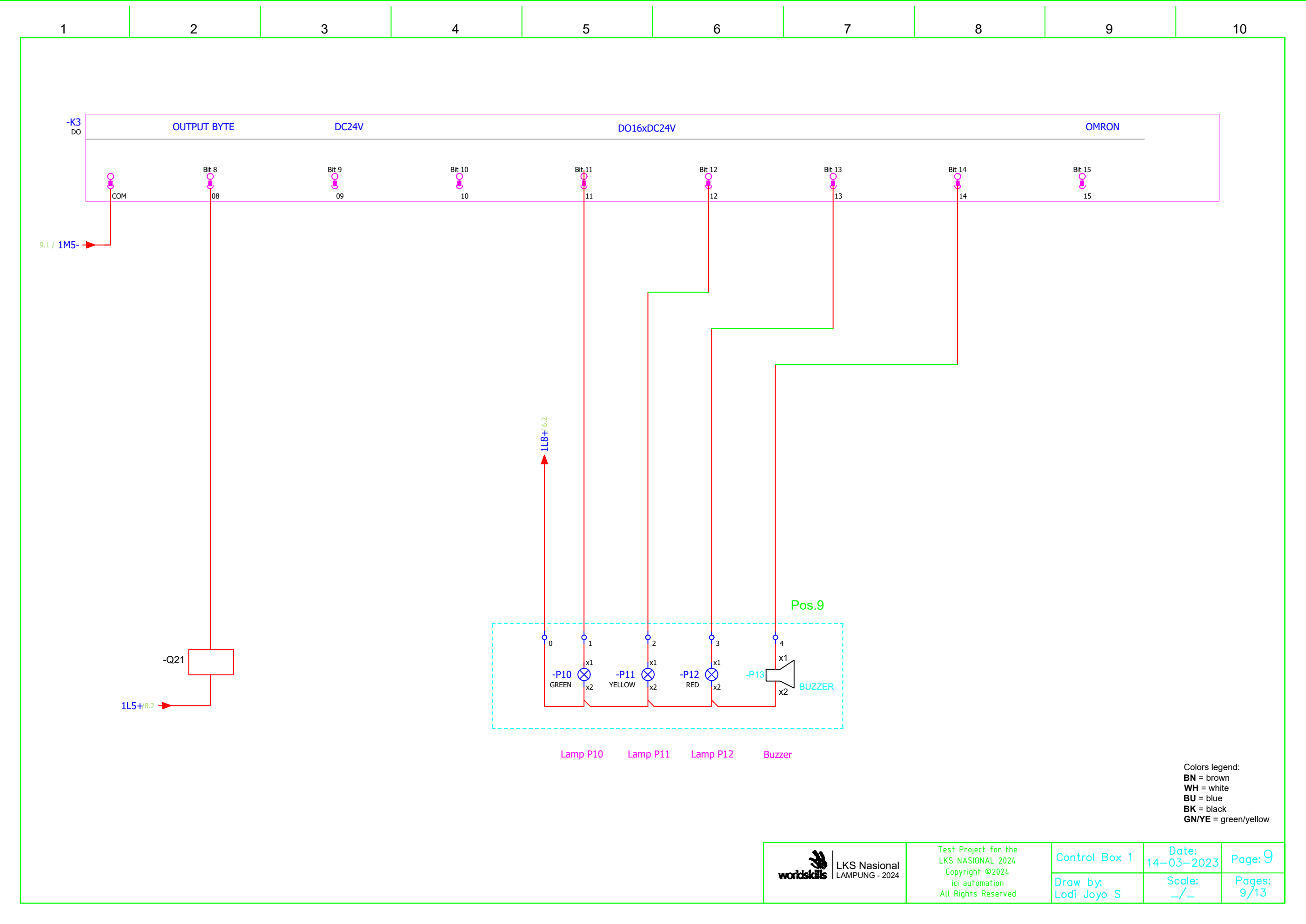


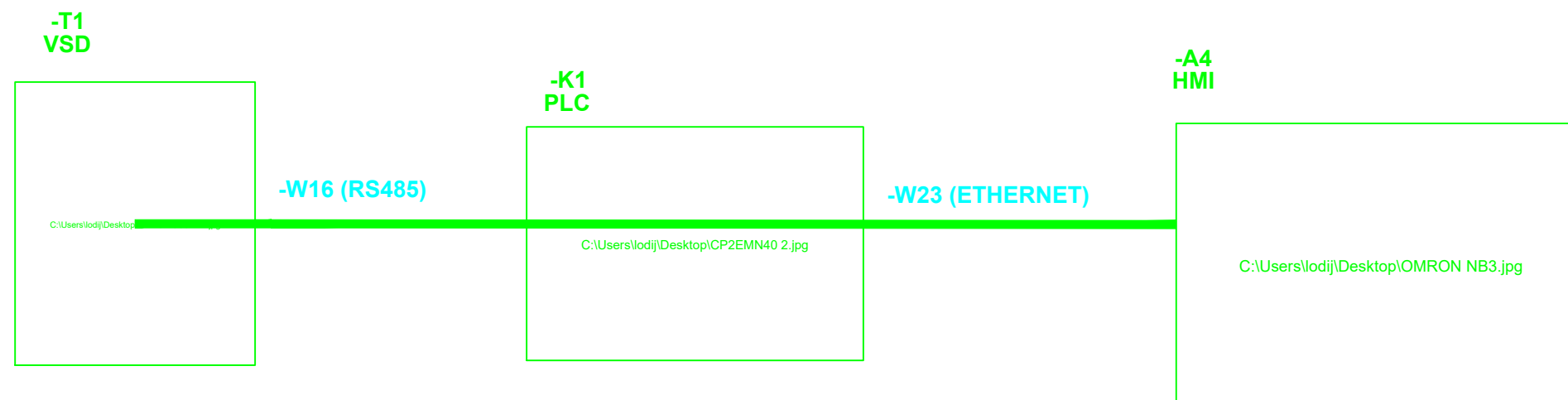












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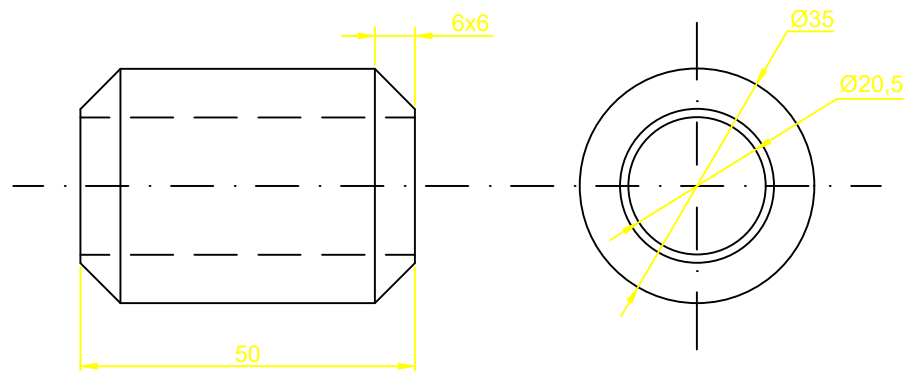
2

3

4

5

switch-ring short (B )  
Made in plastic, nylon or teflon



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Switch Ring

Draw by:  
Lodi Joyo S

Date:  
14-03-2024

Scale:  
-/-

Page: 11

Pages:  
1/13

# PLC - INPUTS

<u>INPUT</u>	<u>ADDRESS</u>	<u>SYMBOL</u>	<u>FUNCTION</u>
I 0	.....	Q11	MASTER ON
I 1	.....		
I 2	.....		
I 3	.....	S13	MB2 Cylinder is UP
I 4	.....		
I 5	.....	S15	Sensor Pieces available
I 6	.....	S16	Belt 2 – Left position switch
I 7	.....	S17	Belt 2 – Middle position switch
I 8	.....	S18	Belt 2 – Right position switch
I 9	.....	S19	Sensor Pieces available
I 10	.....		
I 11	.....	SS LEFT	Manual Mode
I 12	.....	S2	PB Master ON
I 13	.....	SS RIGHT	Auto Mode
I 14	.....		
I 15	.....		



# PLC - OUTPUTS

<u>OUTPUT</u>	<u>ADDRESS</u>	<u>COLOR</u>	<u>SYMBOL</u>	<u>FUNCTION</u>
Q 0	.....			
Q 1	.....	GREEN	MB1	Valve/Cylinder
Q 2	.....	GREEN	MB2	Valve/Cylinder
Q 3	.....			
Q 4	.....	GREEN	MB4	Valve/Cylinder
Q 5	.....	YELLOW	MA2	Belt 1 motor
Q 6	.....			
Q 7	.....			
Q 8	.....		Q21	
Q 9	.....			
Q 10	.....			
Q 11	.....	GREEN	P10	
Q 12	.....	YELLOW	P11	
Q 13	.....	RED	P12	
Q 14	.....	BUZZER	P13	
Q 15	.....			



**BALAI PENGEMBANGAN TALENTA INDONESIA**  
PUSAT PRESTASI NASIONAL  
KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET, DAN TEKNOLOGI

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