Industrial Electronics Technician

Exam preparation Documentation

Part 1

2026

Test Taker first and last name:

Test Taker number:

Test Taker company:

German American Chambers of Commerce
Deutsch-Amerikanische Handelskammern

German American Chamber of Commerce of the Midwest, Inc.
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Atlanta | Chicago | Detroit | Houston | New York | San Francisco | Washington DC

General notes

In the Part 1 examination, the test taker must carry out a complex work assignment.

The training company is to provide the testing equipment listed in the "Standard material staging list" and in this YELLOW preparation document for the practical exam assignment and technical discussion. This test equipment and both documents must be given to the test taker within 2-3 months of the test date to ensure that the test taker can check the test equipment for completeness and functionality.

The test taker must bring this documentation and the "Standard material staging list" to the practical examination.

The trainer/company must inform the test taker that work clothing must correspond to the accident prevention regulations.

The training company must ensure that the person approved to take the test has received safety training regarding the valid work regulations.

Test preparation important note:

For the Part 1 exam, this YELLOW preparation documentation contains a control program.

The test taker has to prepare this control program on a memory device that works with the automation system and bring it to the test. Depending on the problem, the test taker must transfer the control program that was brought from the memory device to the automation system and be able to put it into operation.

The documents have been created to be as neutral as possible and must be adapted as necessary for the actual components used.

The following must be provided on the title page of this YELLOW preparation documentation

– The test-taker number assigned (at test)
– First and last name of the test taker

The standard provisioning documents and preparation material can be accessed and downloaded from the ICATT resource pages

https://www.icattapprenticeships.com/resources/apprentices/

This test was resolved by a committee composed of members from different regions in the United States. It has been developed for implementation and acceptance of examinations as part of training examinations. Neither the test nor products based on it are intended for reproduction or free trade.

Final Examination Overview - ICATT Industrial Electronics Technician

Final examination: Part 1

Weighting: 40 %

Areas of examination

Practical task with professional, situation-based discussions

Weighting: 50 %

Total time permitted: 6.5 h

– Planning*
Weighting: 20 %
Time suggested: 30 min

– Execution including tech discussion
Weighting: 40 %
Time suggested: 4 h

–Commissioning
Weighting: 35 %
Time suggested: 2 h

Professional, situation-based discussions

Weighting: 5 %
Time permitted: 10 min

- The duration of the discussions is included in the examination time.
- The discussions can last up to 10 min within the scope of the examination and can be held continuously or in stages.

*The planning phase takes place after the written assignments. If the planning time is exceeded or not used in full, the relevant deviation is compensated for in the execution and review phases to ensure that the total permitted time of 6 h 30 min is not exceeded.

Written examination

Weighting: 50 %

Total time permitted: 1 h 30 min

– Part A (50%):
23 multiple choice questions
3 of which can be deselected

– Part B (50%):
8 short answer questions
No deselection possible

Final examination: Part 2

Weighting: 60 %

Areas of examination

Practical task with professional, situation-based discussions

Weighting: 50 %

Total time: 14 h

– Preparation for the practical task
Time allotted: 8 h In company

– Execution of the practical task
Time allotted: 6 h At exam site

Including **technical discussion**
Time allotted: 20 min

Phases:

- Information
- Planning
- Execution
- Review

The practical task is assessed by means of:

- Task-specific documents
- Professional, situation-based discussions
- Observations by the board of examiners

Written examination

– System Drafting
– Function and System Analysis
– OSHA and Workers Rights

Weighting: 50 %

Total time permitted: 4 h 15 min

– System Drafting

Time permitted: 105 min
Weighting: 40 %

Part A (50%):
28 multiple choice questions – 3 of which can be deselected

Part B (50%):
8 short answer questions
No deselection possible

– Functional and System Analysis

Time permitted: 105 min
Weighting: 40 %

Part A (50%):
28 multiple choice questions
3 of which can be deselected

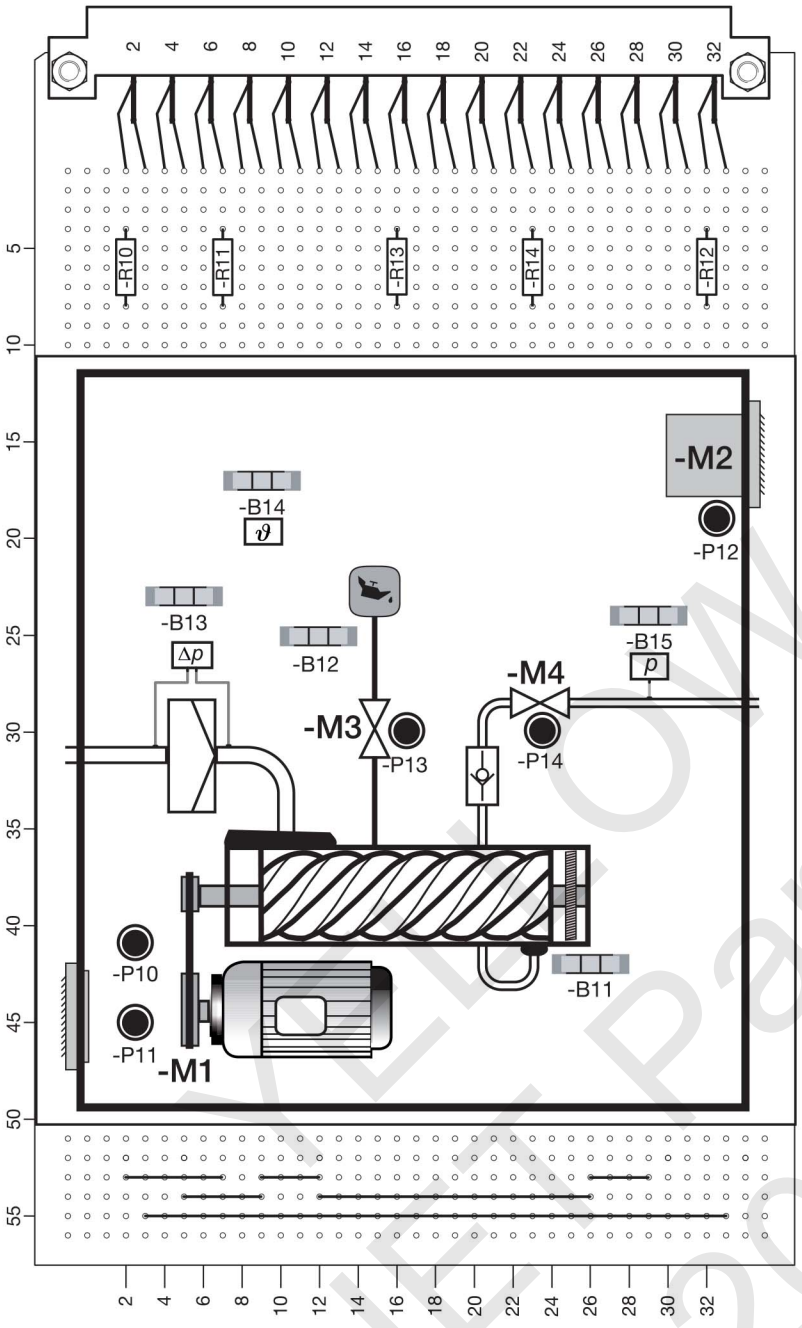
Part B (50%):
8 short answer questions
No deselection possible

– OSHA and Workers Rights

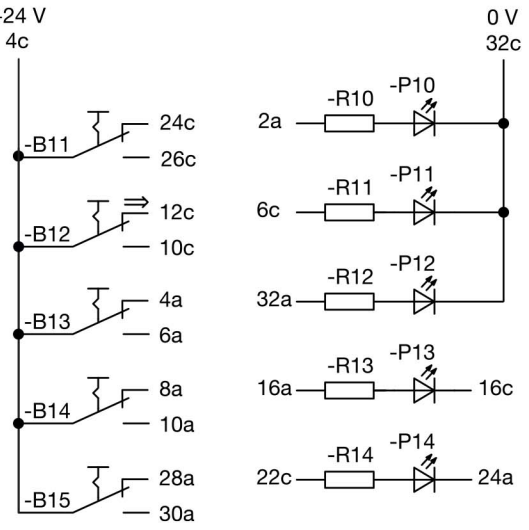
Time permitted: 60 min
Weighting: 20 %

20 multiple choice questions
5 of which can be deselected

4 short answer questions
1 of which can be deselected



1 Connection diagram for contact strip



Note: The home position of slide switches -B11 to -B15 are to be configured in accordance with the specification "Connection diagram for contact strip".

5			Tin-plated copper wire	
4	5	-R10 bis -R14	Resistance suitable for Item no. 3	(U_B = 24 V)
3	5	-P10 bis -P14	LED Ø 3 mm	5 × gn
2	5	-B11 bis -B15	Miniature slide switch	1 change pin
1	1	-A1/-X10	Vero board with pin header	32-pin a-c
Item no.	**Qty.**	**Marking**	**Designation**	**Type/value/standard**

AHK

Final Examination Part 1 - 2026

First and last name:

Test taker number:

Work Task
Preparation for the practical tasks
Process Simulation

Industrial Electronics Technician

Item No.	Qty.	Designation	Type/Value/Standard	Comment	Price
1	1	Assembly plate	600 mm × 600 mm	e.g. perforated plate	
2	2.5 m	DIN mounting rail	DIN EN 60715		
3	4 m	Wiring duct; slotted	e.g. *H* = 40; *B* = 25		
4	47	Feed-through terminal	2.5 mm^2; gy		
5	6	Feed-through terminal	2.5 mm^2; gn-ye		
6	2	Label 1 - 50		For Item Nos. 4 and 5	
7	2	End plate		For Item Nos. 4 and 5	
8	4	Fastener		For Item Nos. 4 and 5	
9	4	Connecting bridge	2-pin	For Item Nos. 4 and 5	
10	2	Connecting bridge	6-pin	For Item Nos. 4 and 5	
11	23	Double layer terminal strip	2.5 mm^2; gy		
12	2	Double layer terminal strip	2.5 mm^2; gn-ye		
13	2	Label 1 - 50		For Item Nos. 11 and 12	
14	2	End plate		For Item Nos. 11 and 12	
15	4	Fastener		For Item Nos. 11 and 12	
16	4	Connecting bridge	2-pin	For Item Nos. 11 and 12	
17	2	Connecting bridge	10-pin ("endless"; divisible)	For Item Nos. 11 and 12	
18	1	Power supply unit	230 V AC/24 V DC/≥ 2.5 A		
19	1	Circuit breaker	C4 A; 1-pin	For Item No. 18 (secondary-side)	
20	4	Circuit breaker	B16 A; 1-pin		
21	2	D01 fuse block with screw cap	3-pin		
22	2	D01 fuse block with screw cap	1-pin		
23	13	D01 fuse cartridge with corresponding screw-in insert	3 × 16 A; 6 × 10 A; 2 × 6 A; 2 × 2 A		
24	1	Residual-current device (RCD)	25 A/30 mA; 4-pin	Also suitable for 2-pin connection (L-N)	
25	3	Motor protection switch with auxiliary contacts	2.2 A–3.2 A; 1 NO + 1 NC		
26	2	Motor protection relay with auxiliary contacts	2.2 A–3.2 A; 1 NO + 1 NC		

Item No.	Qty.	Designation	Type/Value/Standard	Comment	Price
27	5	Contactor with quenching circuit	24 V DC; 3 H + 2 NO + 2 NC		
28	1	Protective contact socket for assembly on a top-hat rail	16 A		
29	2	Empty housing for 4 command and display elements with cable clamp and connecting element		For Item Nos. 30 and 39	
30	2	Built-in selector switch	Toggle switch 0-1	For Item No. 29	
31	2	Built-in selector switch	Toggle switch 1-0-1	For Item No. 29	
32	2	Built-in button	2 × bk	For Item No. 29	
33	5	Built-in illuminated button	5 × wh	For Item No. 29; also to be used as indicator lamp	
34	2	Built-in signal lamp	2 × ye	For Item No. 29	
35	5	Dummy plug		For Item No. 29	
36	8	Contact element	1 NO	For Item Nos. 30 and 33	
37	4	Contact element	1 NC	For Item Nos. 30 and 33	
38	5	LED element	24 V	For Item Nos. 33 and 34	
39	8	Mounting adapter		For Item Nos. 36 and 38	
40	1	PCB holder with female multipoint connector	32-pin; DIN EN 60603-2		
41	1	Connecting cable including CEE plug 16 A	H07RN-F 5 G 1.5	Approx. 3 m	
42	1.5 m	Line	Y-JZ 18 × 0.75 mm^2		
43	2	Cable clamp		For Item Nos. 41 and 42	
44	1 m	PVC single-core non-sheathed cable	H07V-K 1.5 mm^2; gn-ye		
45	1	Protective earth terminal			
46	1	Identification label for test taker number			
47	1	Labeling material (self-adhesive) for components			

Material for Final Examination Part 2

Item No.	Qty.	Designation	Type/Value/Standard	Comment	Price
48a	1	Automation system with programming option; memory device for taking along a program	24 V DC power supply; 14 digital inputs; 10 digital outputs (relays); 2 analog inputs (0-10 V); 2 analog outputs (0-20 mA);	Can also be used in Final Examination Part 1.	

Material for Final Examination Part 1

Item No.	Qty.	Designation	Type/Value/Standard	Comment	Price
48b	1	Automation system with programming option; memory device for taking along a program	24 V DC power supply; 14 digital inputs; 10 digital outputs (relays);		

Standard provision documents for the training company **Test equipment, tools, aids**	**Industrial Electronics Technician**

I Test equipment that every test taker needs:

1. 1 multimeter for current, voltage and resistance measurement and continuity tester with measuring lines/tips

II Tools that every test taker needs at minimum:

1. 1 set of screwdrivers for slotted screws
2. 1 set of screwdrivers for Phillips screws
3. 1 side-cutting pliers
4. 1 set of telephone pliers (bent)
5. 1 stripping tool
6. 1 crimper for wire end sleeves
7. 1 cable knife
8. 1 open-end wrench 7 mm, 8 mm

III Tools and test equipment that are needed for 1 to 5 test takers:

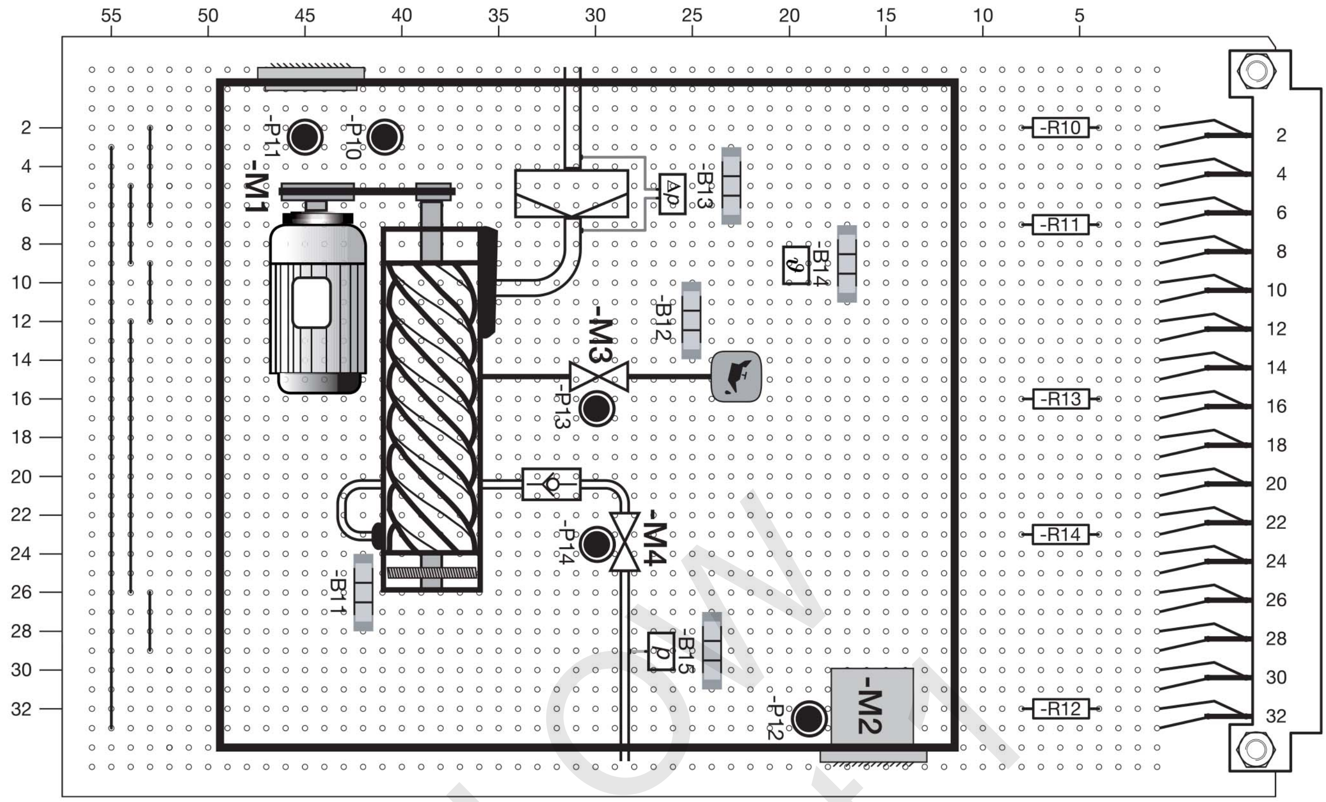
1. 1 VDE testing device — VDE 0413 for testing the safety measures in accordance with VDE 0100-600 (insulation resistance, ground wire resistance, rotating field test, etc.)
2. 1 crimper — for cable lugs 1.5 mm^2 to 4 mm^2 (as needed)

IV Aids that every test taker needs:

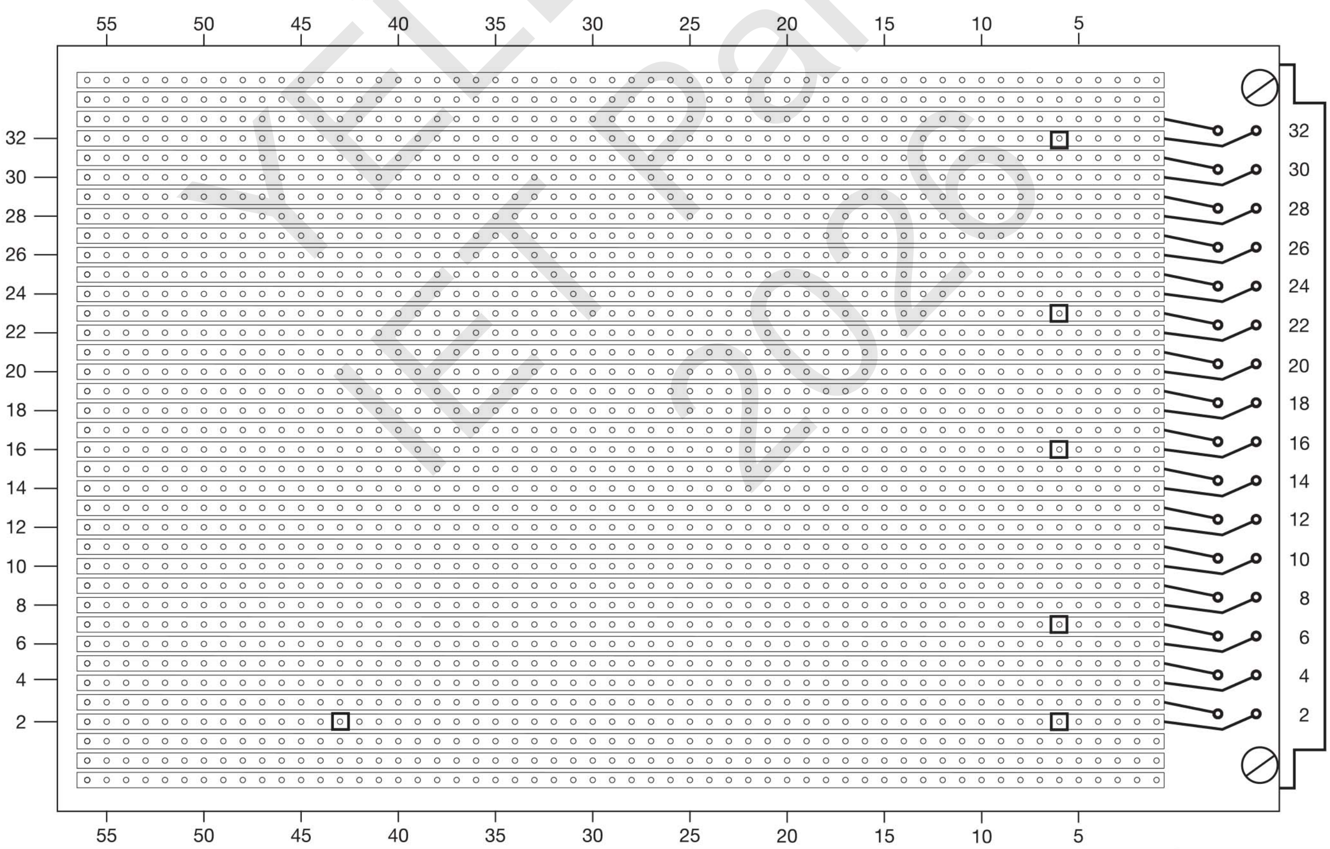
1. Books of tables
2. Drawing tools
3. Non-programmable, offline pocket calculator incapable of external communication
4. Folder

The work clothing and tools of the test taker must comply with the applicable accident prevention regulations. If they do not comply with the accident prevention regulations, participation in the test is not permitted.

2 Equipment page



3 Conductor breaks on the copper side



AHK Final Examination Part 1 - 2026	First and last name: Test taker number:
Work Task **Preparation for the practical tasks** **Process Simulation**	**Industrial Electronics Technician**

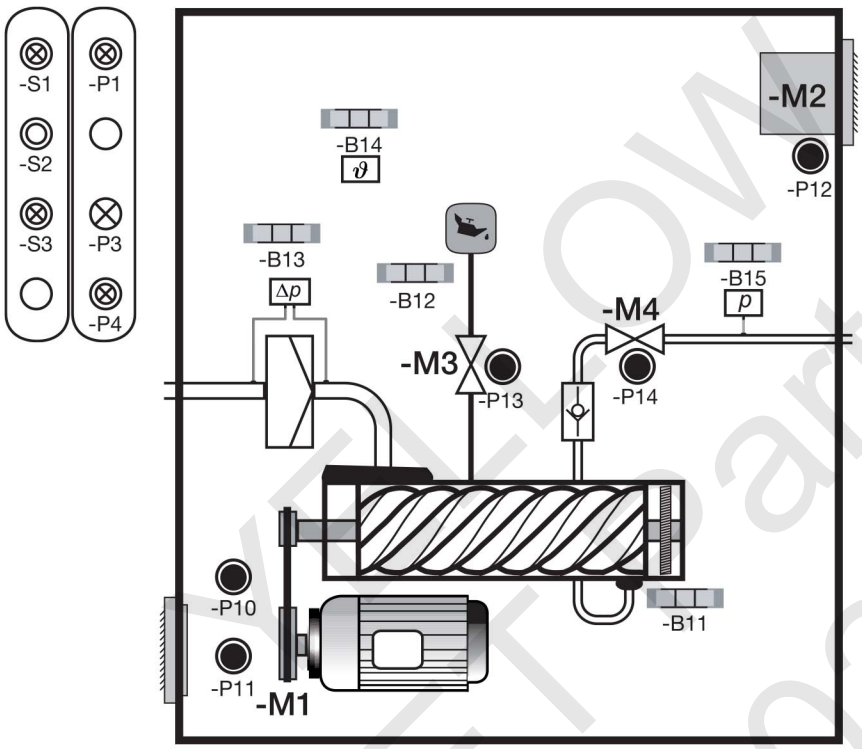
Item no.	Qty.	Designation	Type/value/standard	Comment	Price
101	20 m	PVC single-core non-sheathed cable	H07V-K 1,5 mm^2; bk		
102	45 m	PVC single-core non-sheathed cable	H05V-K 0,75 mm^2; dbu		
103	3,5 m	PVC single-core non-sheathed cable	H07V-K 1,5 mm^2; gn-ye		
104	2,5 m	PVC single-core non-sheathed cable	H07V-K 1,5 mm^2; lbu		
105	approx. 100	Wire end sleeve	1,5 mm^2		
106	approx. 20	Twin wire end sleeve	1,5 mm^2		
107	approx. 100	Wire end sleeve	0,75 mm^2		
108	approx. 20	Twin wire end sleeve	0,75 mm^2		
109	approx. 50	Labeling material (self-adhesive) for components			
110	1	GFCI	B16 A/10 mA; 2-pin		

AHK Final Examination Part 1 - 2026	First and last name: Test taker number:
Work Task **Description of the assignment**	**Industrial Electronics Technician**

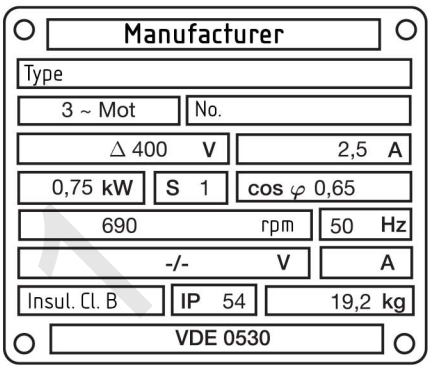
1 Assigment description

You are tasked with constructing a control cabinet with a control panel for a part of the shown system. You are to wire the main and control circuirts according to the customer specifications.

2 Technology diagram: Compressor



Motor Name Plate -M1:



Description: Process simulation

-M1	"Compressor" motor
-B11	"Operation monitoring" sensor, NO
-B12	"Oil present" sensor, NO
-B15	"System pressure too low" sensor, NO
-P10	"-M1" display
-P13	"-M3" simulation
-P14	"-M4" simulation

Description: Control panel

-S1	"System ON" button, NO
-S2	"System OFF" button, NO
-S3	"Reset" button, NO
-P1	"System ON" signal lamp
-P3	"Oil level low" signal lamp
-P4	"Fault" signal lamp

Note: This system/machine serves is exclusively used for the purpose of testing and evaltuating occupation-specific qualifications on an exemplary basis.

AHK-USA Chicago

Final Examination Part 1 - 2026

Work Task Description of the Assignment cont.	Industrial Electronics Technician

3 Functional description in accordance with customer order

In the home position, there is sufficient system pressure and the oil reservoir is full.

Push button -S1 turns the system on. When the system is on signal lamp -P1 lights up. Button -S2 turns the system off.

When sensor -B15 reports that the system pressure of the compressed air network is below the set value, then Motor -M1 switches on until sensor -B15 reports that system pressure has returned to the sufficient set value.

When sensor -B11 (speed switch) is activated, then solenoid valve -M3 and solenoid valve -M4 are activated.

An oil reservoir is provided for lubrication. If sensor -B12 reports that the oil fill level is too low, motor -M1 switches off and indicator light -P3 illuminates. Once the oil reservoir is refilled, the message can be acknowledged by pressing button -S3.

Motor -M1 is monitored by a motor protection relay. If the motor protection relay trips, indicator light -P4 illuminates and the motor is switched off. Once the motor protection relay has cooled down, the fault can be acknowledged pressing button -S3.

The operation status of motor -M1 is indicated by an auxiliary contact of the corresponding power contactor on the process simulation board (-P10). Solenoid valves -M3 and -M4 are controlled directly by an output of the automation device and simulated on the process simulation board. (-P13 and -P14)

Note: The sole purpose of this system/machine is to serve as an example for testing and evaluating vocation-specific qualifications.

4 Planning the task

Before beginning the work, you have to clarify organizational questions. Specifically, these include:

- Organization of the work (workflows, equipment, work time)
- Checking the circuit documentation (diagrams, descriptions, etc.)
- Definition of the home conditions (type of system, type of wiring, etc.)
- Procurement of the required materials
- Coordination of the work with the people involved

5 Task Implementation

The required control cabinet is simulated with a 600 mm × 600 mm assembly plate. A NEMA 21-20 LP is used for the network connection. The control panel is connected to terminal strip -X3. The automation system is connected via terminal strip -X4.

- Build the system properly in accordance with your customary specifications.
- Define the conductor cross sections and wire colors and wire the control cabinet.
- The control program printed in this booklet on a gray background must be brought along on a memory device to be transferred into the automation system during the test time.
- Complete the documentation for this customer order.

Provide the following operating voltages for the system:

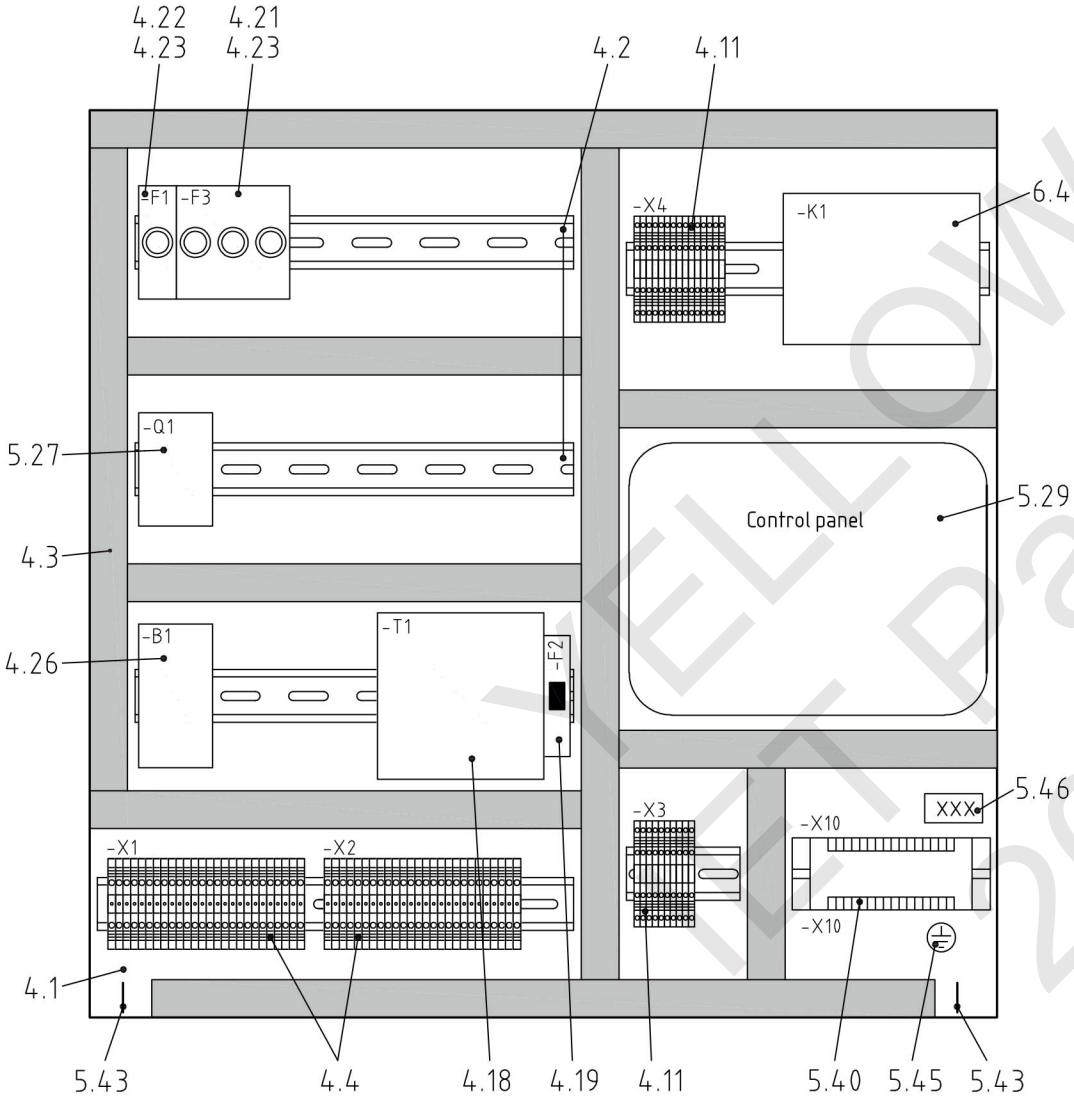
- 230 V/50 Hz supply voltage (3/N/PE)

– 24 V DC control voltage
– 24 V DC process simulation board

6 Inspection (commissioning)

The completed system must be inspected as described in DIN VDE 0100-600 and documented with an inspection report (e.g. the accompanying report).

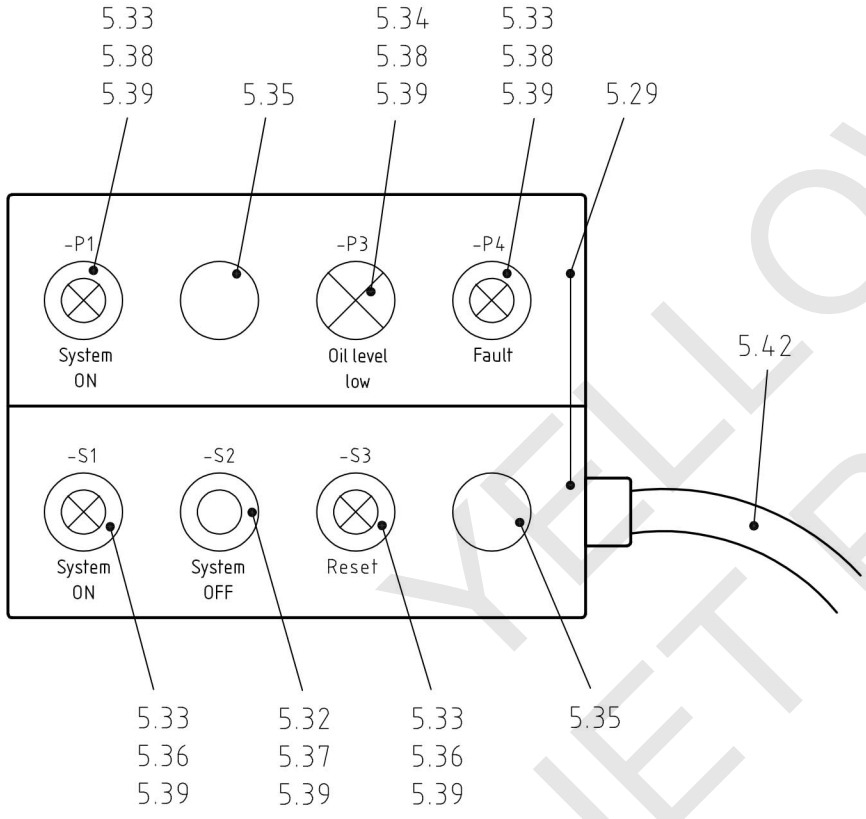
The system produced according to these documents and the documentation must be submitted on the day of the test.



Note:
If a customary installation drawing is used to set up the assembly plate, a white copy of this drawing must also be brought to the 6.5-hour exam portion.

The Item no. relate to the standard provision documents for the training company, pages 4, 5, and 6.

Item no.	Qty.	Designation	Type/value/standard
6.48	1	Automation system	
5.46	1	Identification label for the test-taker no.	
5.45	1	Protective earth terminal	
5.43	2	Cable clamp	
5.40	1	PCB holder	
5.29	1	Control unit with accessories	see sheet 5
5.27	1	Contactor with quenching circuit	24 V DC; 3 H + 2 NO + 2 NC
4.26	1	Motor protection relay with auxiliary contacts	2,2 A–3,2 A; 1 NO + 1 NC
4.23	4	Fuse cartridge with corresponding screw in insert	1 × 6 A; 3 × 10 A
4.22	1	D01-fuse block with screw cap	1-pin
4.21	1	D01-fuse block with screw cap	3-pin
4.19	1	Circuit breaker	C4 A DC; 1-pin
4.18	1	Power supply unit	230 V AC/24 V DC/ ≥ 2,5 A
4.11	2	Terminal strip with accessories	see terminal diagram
4.4	2	Terminal strip with accessories	see terminal diagram
4.3		Wiring duct	slotted H = 40 mm, B = 25 mm
4.2		DIN mounting rail	in accordance with DIN EN 60715
4.1	1	Assembly plate	600 mm × 600 mm



Note:
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The Item no. relate to the standard provision documents for the training company, pages 4, 5, and 6.

Item no.	Qty.	Designation	Type/value/standard
5.42	1	Line	Y-JZ 18 × 0,75 mm²
5.39	6	Mounting adapter	
5.38	3	LED element	24 V
5.37	1	Contact element	1 NC
5.36	2	Contact element	1 NO
5.35	2	Dummy plug for control panel	
5.34	1	Built-in signal lamp	
5.33	4	Built-in illuminated button	
5.32	1	Built-in button	
5.29	2	Empty housing for 4 command and display elements	

Terminal block -X1
230/400 V

Function	Objective	Terminal	Bridge	Objective
L1		1		-F1:1
		2		
L2		3		-F3:3
		4		
L3		5		-F3:5
		6		
N		7		
		8		-T1:2
PE		9/PE		M-plate
		10/PE		-X2:11
	-M1:PE	11/PE		-X3:20
	-M1:U1	12		-B1:2
	-M1:V1	13		-B1:4
	-M1:W1	14		-B1:6
		15		
		16		
		17		
		18/PE		-X4:30
		19		
		20		
		21		
		22/PE		
		23		
		24		
		25		
		26		

Terminal block -X2
24 V DC

Function	Objective	Terminal	Bridge	Objective
L+		1		-F2:2
		2		-X3:1
		3		-X4:1
		4		-X4:2
	-X10:4c	5		
		6		-Q1:13
L-		7		-T1:4
		8		-X3:3
	-X10:16c	9		-X4:3
	-X10:24a	10		-X4:4
	-X10:32c	11		-X1:10
		12		-Q1:A2
	-X10:2a	13		-Q1:14
		14		
		15		
		16		
		17		
	-X10:26c	18		-X4:10
	-X10:12c	19		-X4:11
		20		
		21		
	-X10:30a	22		-X4:14
		23		
	-X10:16a	24		-X4:27
	-X10:22c	25		-X4:28
		26		

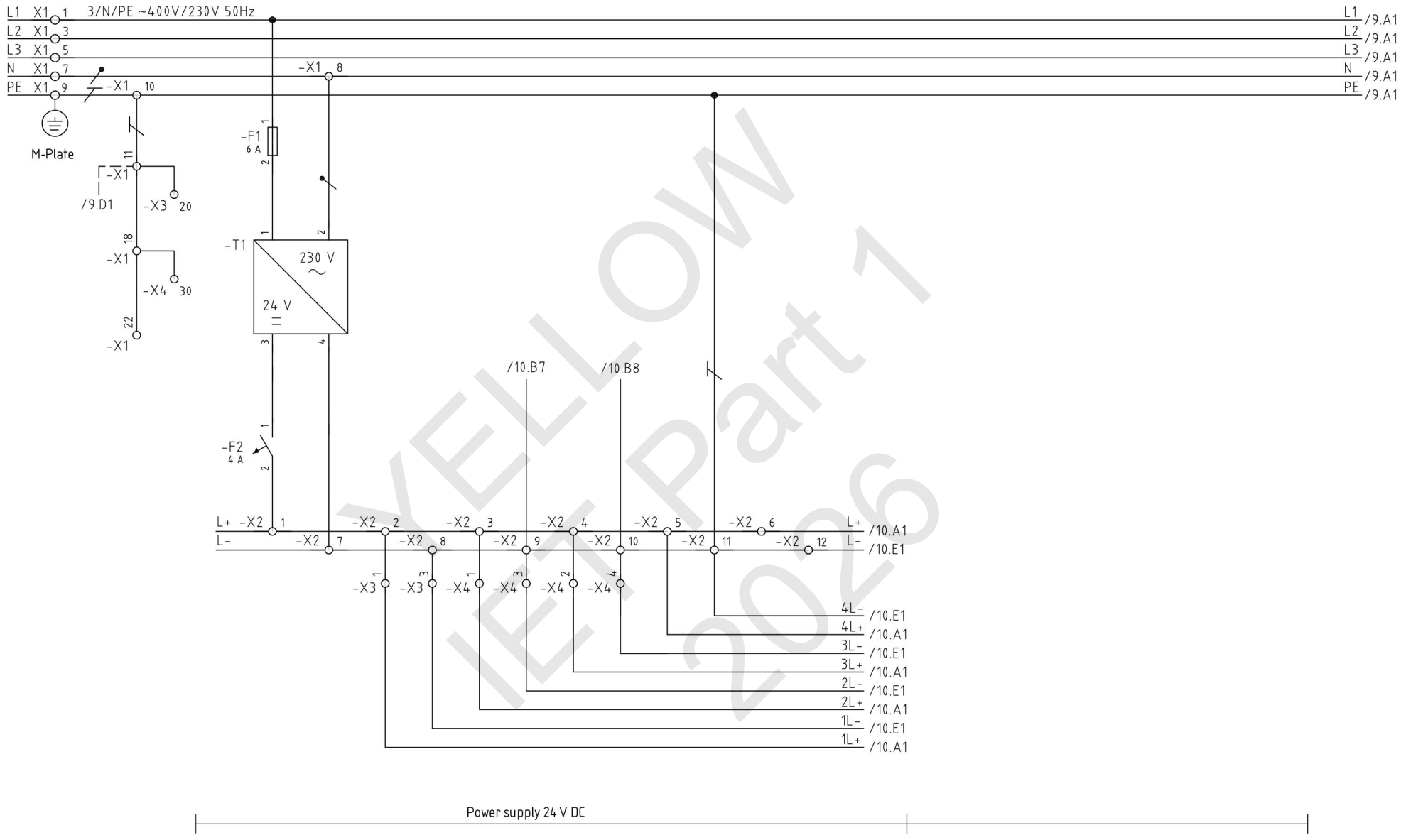
Terminal block -X3
Operating elements

Function	Objective		Terminal	Bridge	Objective
1L+	-S1:3		1		-X2:2
			2		
1L-	-P1:X2		3		-X2:8
			4		
	-S1:4		5		-X4:5
	-S2:2		6		-X4:6
	-S3:4		7		-X4:7
			8		
			9		
			10		
			11		
			12		
			13		
	-P1:X1		14		-X4:19
			15		
	-P3:X1		16		-X4:21
	-P4:X1		17		-X4:22
			18		
			19/PE		
			20/PE		-X1:11

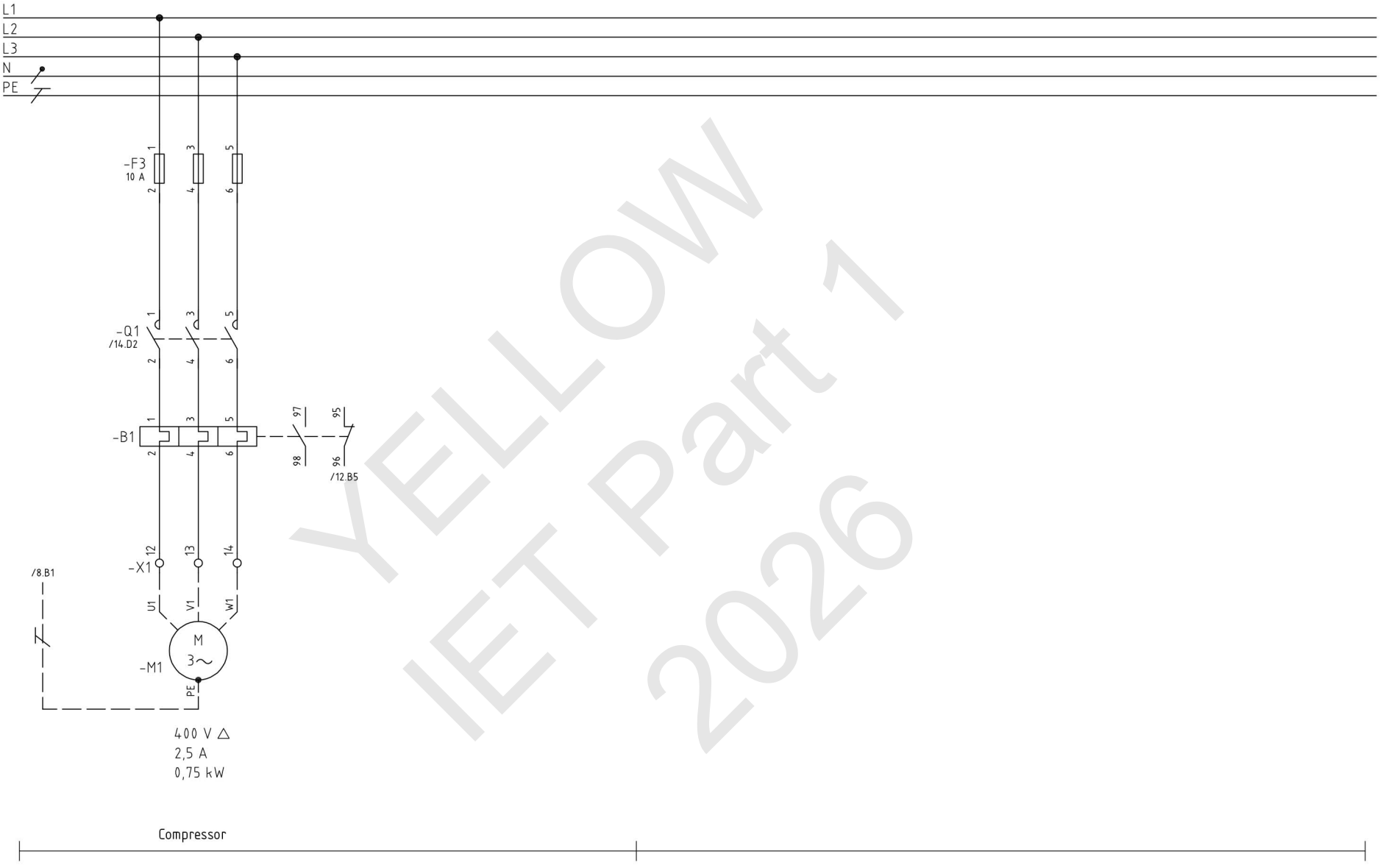
Terminal block -X4
Automation system

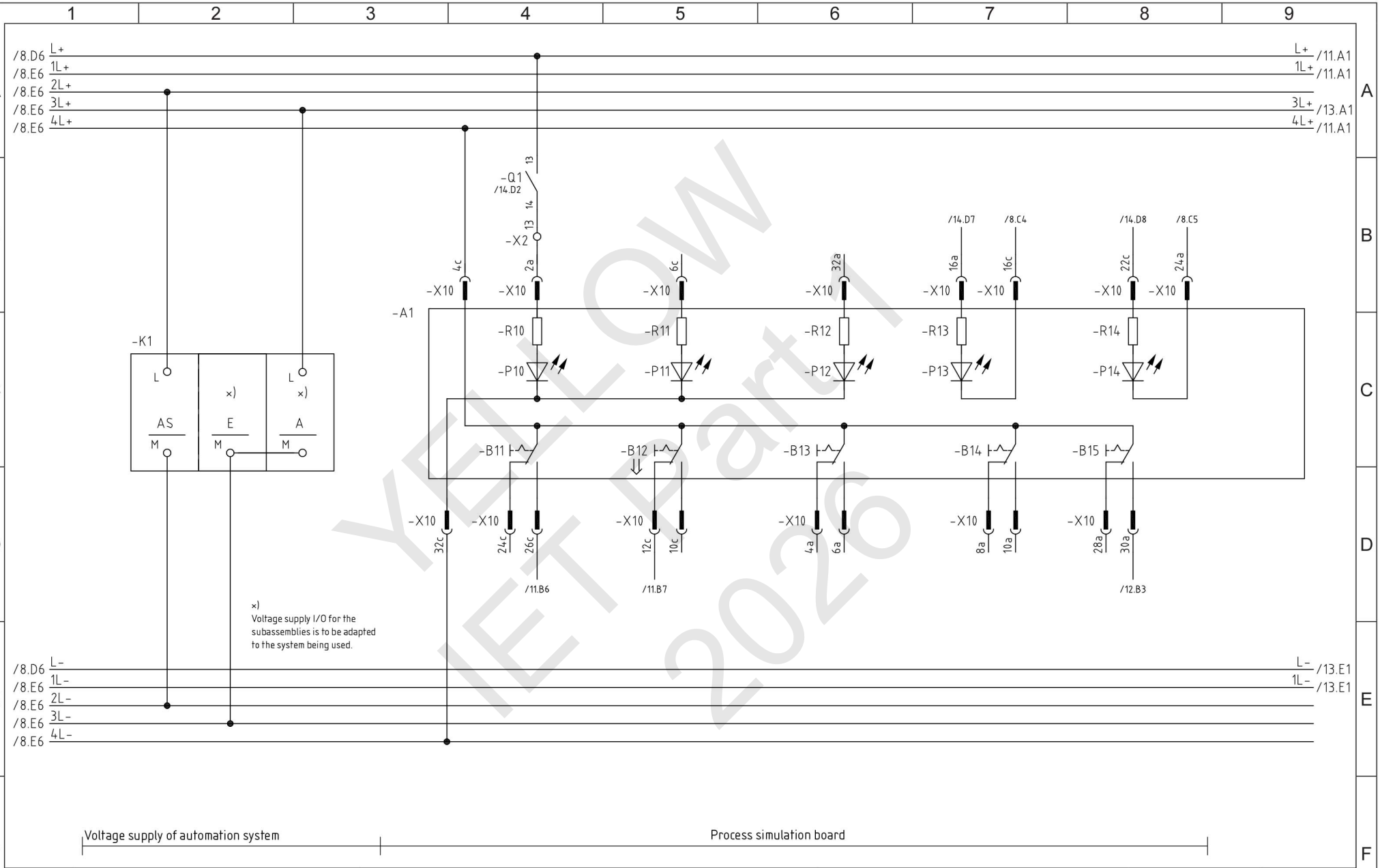
Function	Objective		Terminal	Bridge	Objective
2L+	-X2:3		1		AS
3L+	-X2:4		2		E/A
2L-	-X2:9		3		AS
3L-	-X2:10		4		E/A
E1	-X3:5		5		E1
E2	-X3:6		6		E2
E3	-X3:7		7		E3
E4			8		E4
E5			9		E5
E6	-X2:18		10		E6
E7	-X2:19		11		E7
E8			12		E8
E9			13		E9
E10	-X2:22		14		E10
E11			15		E11
E12	-B1:96		16		E12
E13			17		E13
E14			18		E14
A1	-X3:14		19		A1
A2			20		A2
A3	-X3:16		21		A3
A4	-X3:17		22		A4
A5			23		A5
A6	-Q1:A1		24		A6
A7			25		A7
A8			26		A8
A9	-X2:24		27		A9
A10	-X2:25		28		A10
			29/PE		
	-X1:18		30/PE		

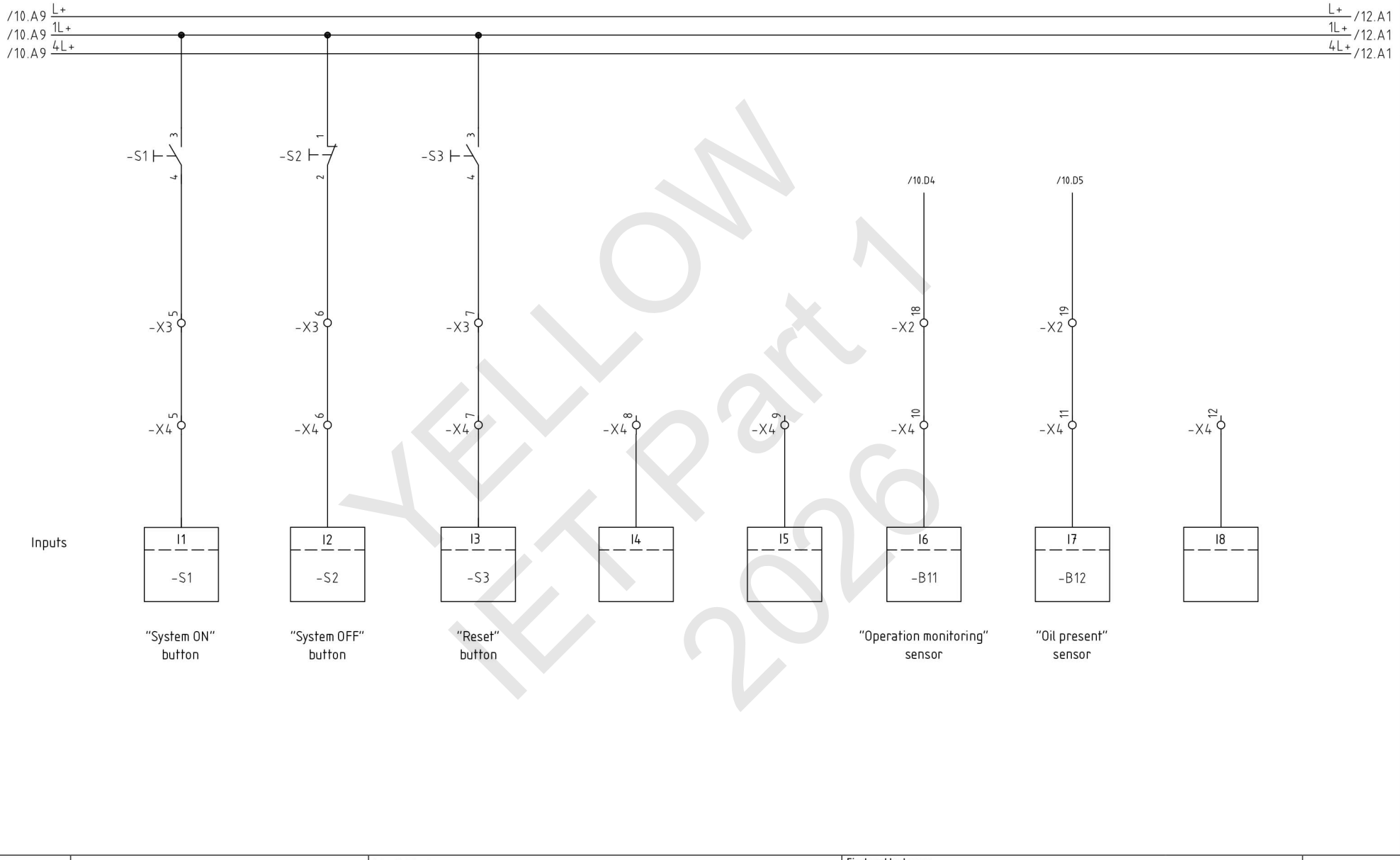
Function	Objective	Terminal		Objective
Plug-in card holder -X10 System simulation				
	-X2:13	2 a		-R10
		2 c		
		4 a		-B13/NC
4L+	-X2:5	4 c		+24 V
		6 a		-B13/NO
		6 c		-R11
		8 a		-B14/NC
		8 c		
		10 a		-B14/NO
		10 c		-B12/NC
		12 a		
	-X2:19	12 c		-B12/NO
		14 a		
		14 c		
	-X2:24	16 a		-R13
	-X2:9	16 c		-P13/Cathode
		18 a		
		18 c		
		20 a		
		20 c		
		22 a		
	-X2:25	22 c		-R14
	-X2:10	24 a		-P14/Cathode
		24 c		-B11/NC
		26 a		
	-X2:18	26 c		-B11/NO
		28 a		-B15/NC
		28 c		
	-X2:22	30 a		-B15/NO
		30 c		
		32 a		-R12
4L-	-X2:11	32 c		0 V

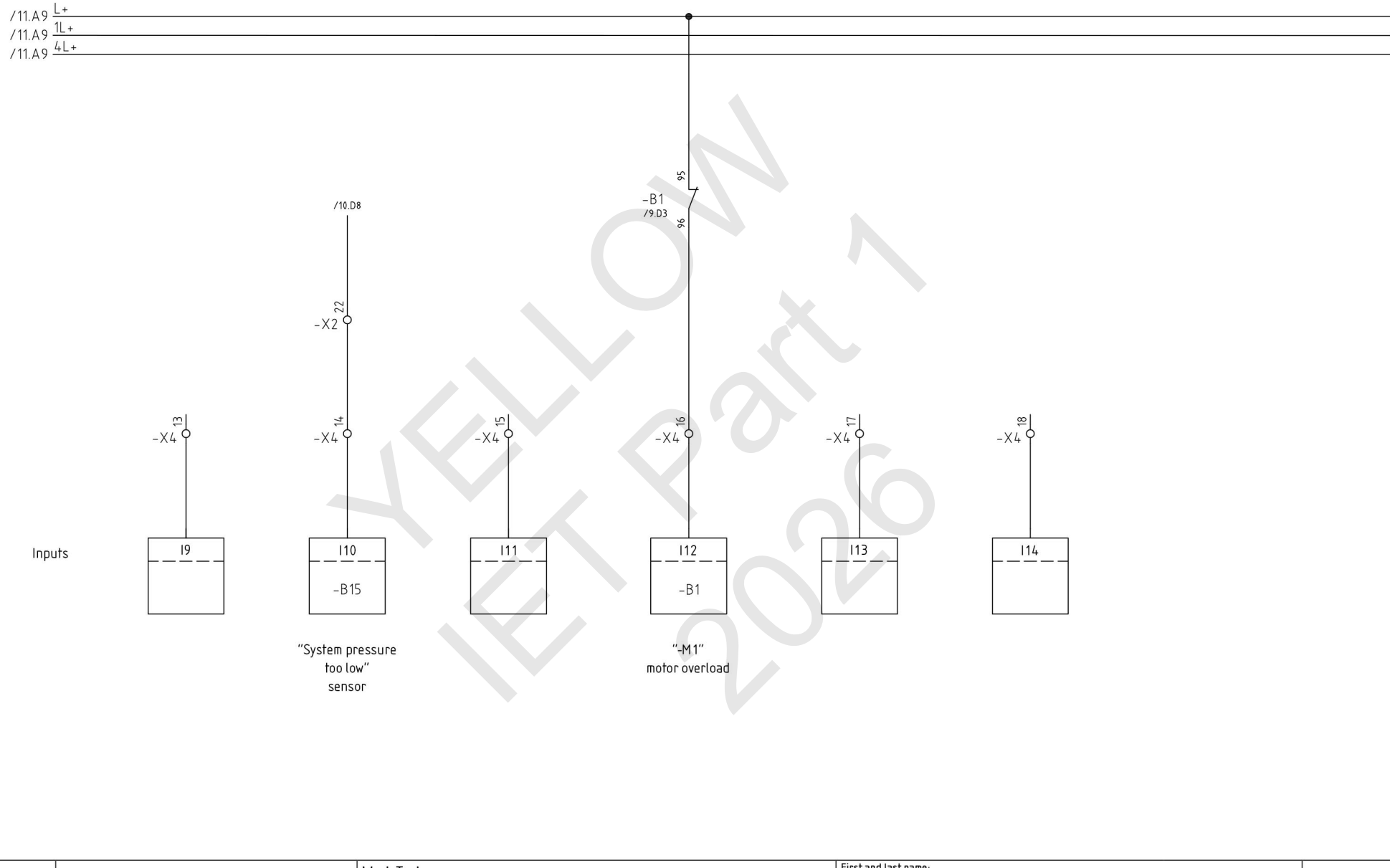


AHK	Final Examination Part 1 - 2026 Industrial Electronics Technician	Work Task Circuit diagram: Main circuit	First and last name: Test taker number:	Sheet 8

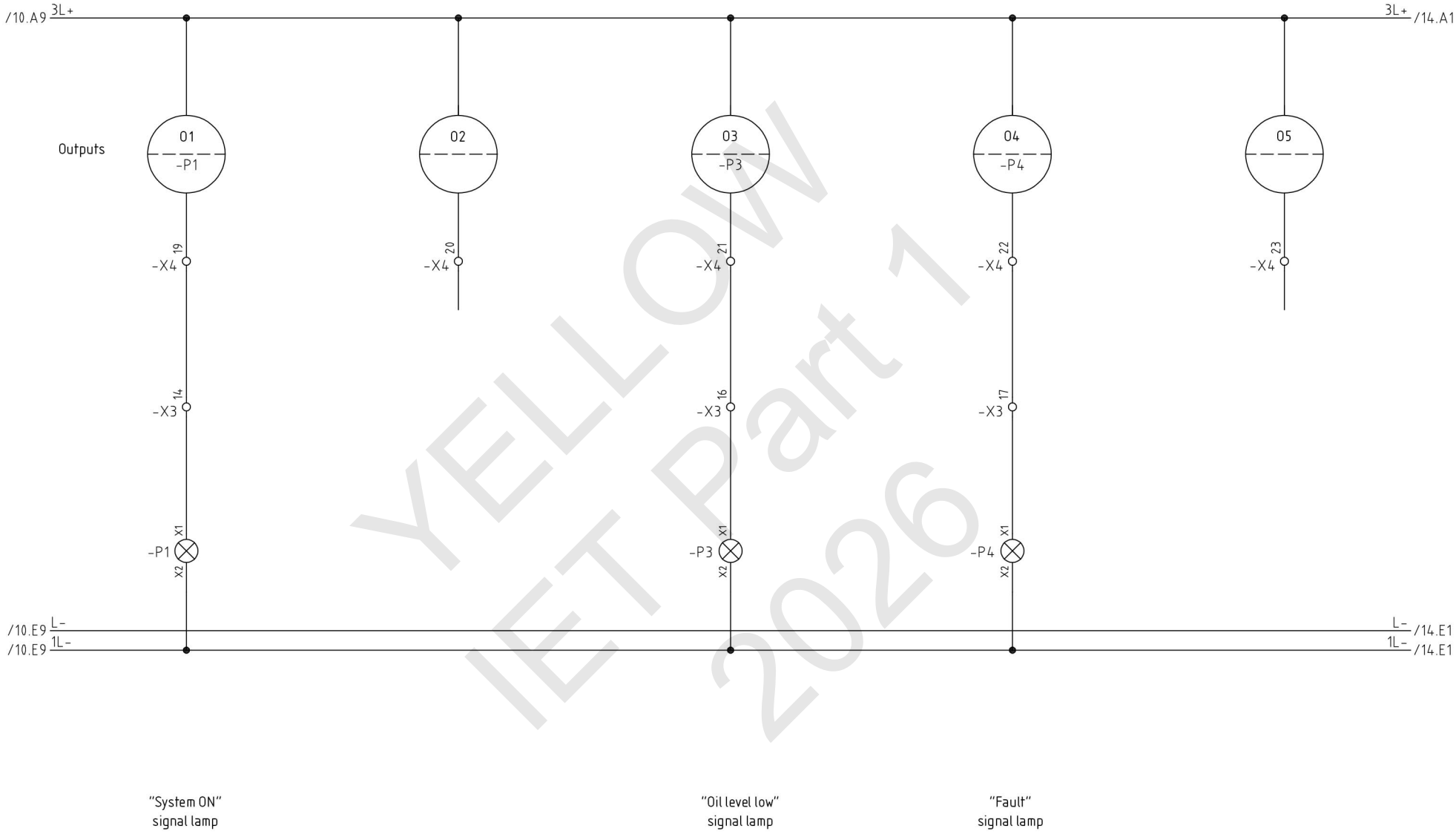




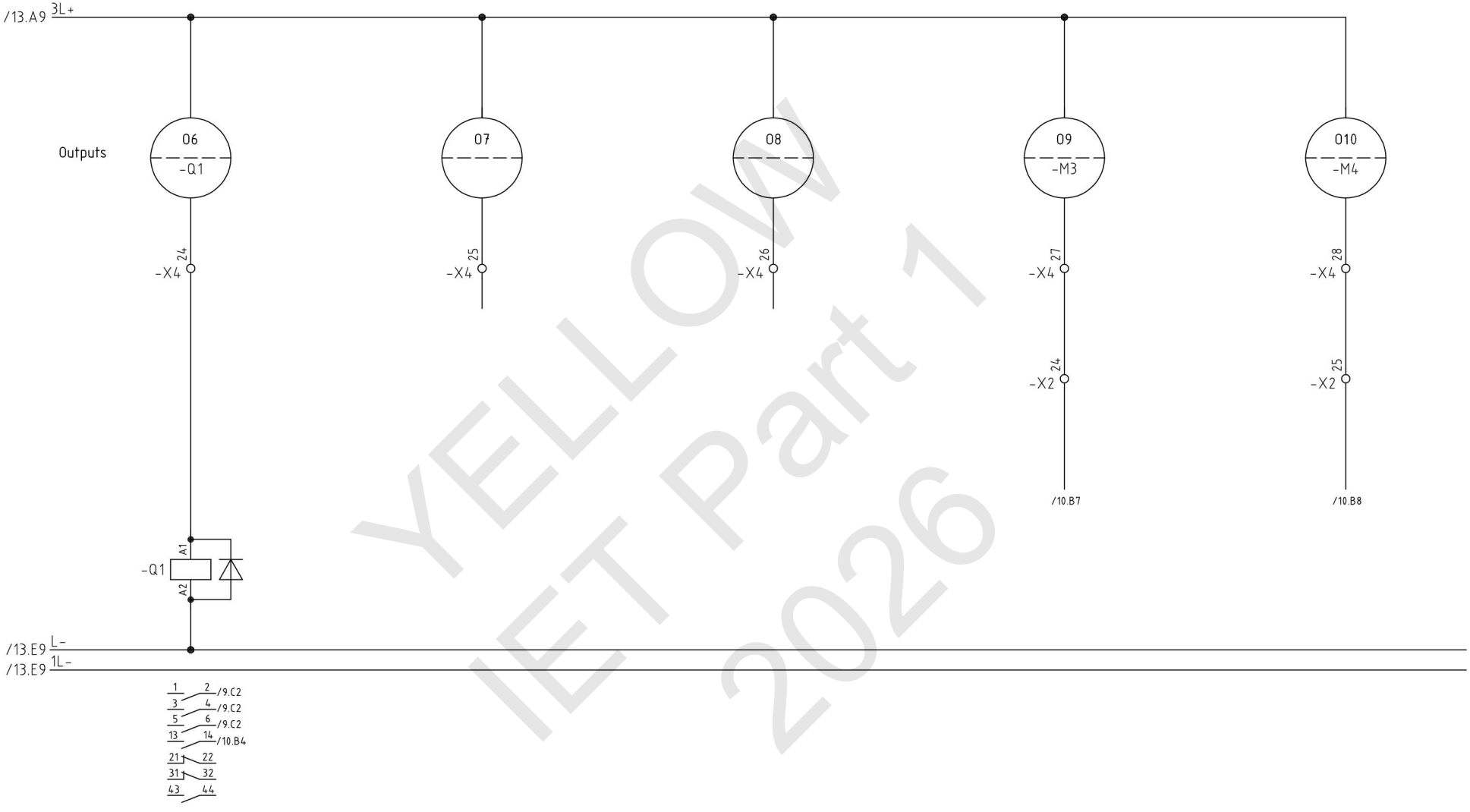




AHK	Final Examination Part 1 - 2026 Industrial Electronics Technician	Work Task Connection diagram: Input module	First and last name: Test taker number:	Sheet 12



AHK	Final Examination Part 1 - 2026 Industrial Electronics Technician	Work Task Connection diagram: Output module	First and last name: Test taker number:	Sheet 13



AHK	Final Examination Part 1 - 2026 Industrial Electronics Technician	Work Task Connection diagram: Output module	First and last name: Test taker number:	Sheet 14

AHK Final Examination Part 1 - 2026	First and last name: Test taker number:	
Work Task PLC Input and Output Assignment List	Industrial Electronics Technician	

1 General Information

The test taker must transfer the control program brought on the memory device to the automation system. The assignment list must be completed.

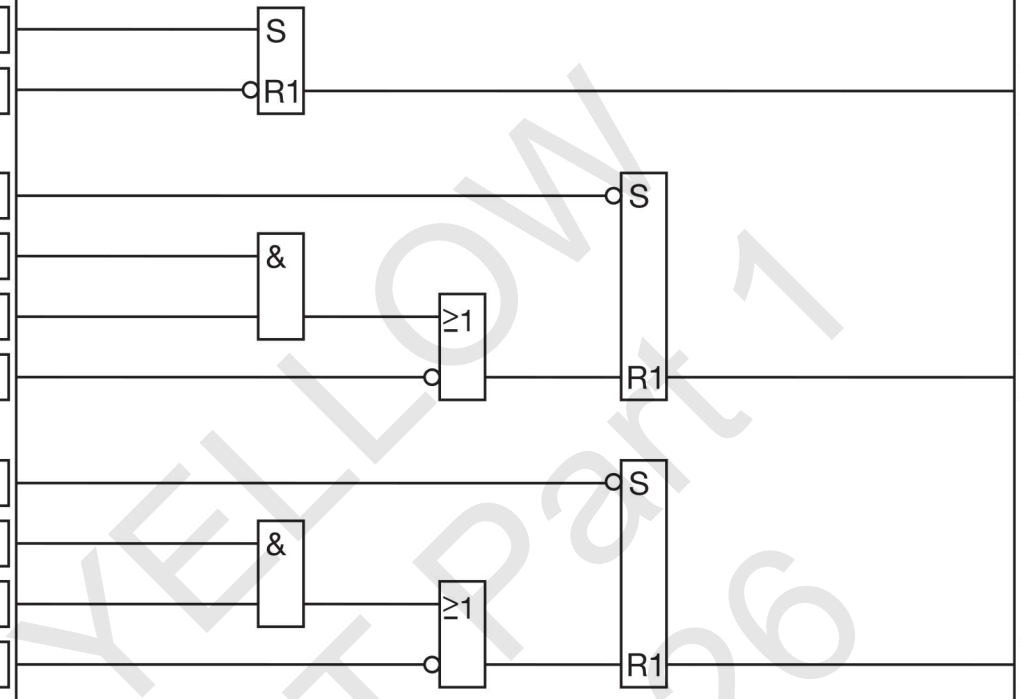
Automation device used: _____

2 Assignment List

Inputs/ Outputs	Tags/ Addresses	Equipment identifier	Description, comments
I1		-S1	"System ON" button
I2		-S2	"System OFF" button
I3		-S3	"Reset" button
I4			
I5			
I6		-B11	"Operation monitoring" sensor
I7		-B12	"Oil present" sensor
I8			
I9			
I10		-B15	"System pressure too low" sensor
I11			
I12		-B1	"-M1" motor overload
I13			
I14			
O1		-P1	"System ON" signal lamp
O2			
O3		-P3	"Oil level low" signal lamp
O4		-P4	"Fault" signal lamp
O5			
O6		-Q1	"-M1" contactor
O7			
O8			
O9		-M3	"-M3" solenoid valve
O10		-M4	"-M4" solenoid valve
M1			Flag 1

Enter system-related tags/adresses here.

Comments	Tag/Address (optional)	Function Block Diagram	Tag/Address (optional)	Comments
-S1 "System ON" button	I1			
-S2 "System OFF" button	I2		01	-P1 "System ON" signal lamp
-B12 "Oil present" sensor	I7			
-B12 "Oil present" sensor	I7			
-S3 "Reset" button	I3			
-P1 "System ON" signal lamp	01		03	-P3 "Oil level low" signal lamp
-B1 "-M1" motor overload	I12			
-B1 "-M1" motor overload	I12			
-S3 "Reset" button	I3			
-P1 "System ON" signal lamp	01		04	-P4 "Fault" signal lamp



Comments	Tag/Address (optional)	Function Block Diagram	Tag/Address (optional)	Comments
-P1 "System ON" signal lamp	01			
-B15 "System pressure too low" sensor	I10			
-P3 "Oil level low" signal lamp	03			
-P4 "Fault" signal lamp	04	&	06	-Q1 "-M1" contactor
-P1 "System ON" signal lamp	01			
-B11 "Operation monitoring" sensor	I6	&	09	-M3 "-M3" solenoid valve
-P1 "System ON" signal lamp	01			
-B11 "Operation monitoring" sensor	I6	&	010	-M4 "-M4" solenoid valve

AHK-USA Chicago

Final Examination Part 1 - 2026

Work Task **Preparation of the practical task** **Commissioning Protocol**	**Industrial Electronics Technician**

General Information:

The completed, functional electrical system must be inspected in accordance with DIN VDE 0100-600 or equivalent IEC or company standard. To document the test, this commissioning protocol or a company-specific commissioning protocol document can be used. The commissioning protocol must be brought on the day of the test.

System:	Tester:
Test after:	☐ New build ☐ Expansion ☐ Modification ☐ Repair

Inspection

• Complete circuit documentation – Completion of all documents	☐ Ok	☐ Not OK
• Operating equipment – Correct selection, no damage, equipment marking	☐ Ok	☐ Not OK
• Line connections – Insulation, removing cable sheaths, fastening	☐ Ok	☐ Not OK
• Selection of lines and routing – Line type, cross section, routing, marking	☐ Ok	☐ Not OK
• Safety measures against direct contact – Protection against touching with fingers, covers	☐ Ok	☐ Not OK
• Overcurrent protective devices – Selection, settings	☐ Ok	☐ Not OK
• No detectable flaws at time of test	☐ True	☐ False

Measuring/Testing

Continuity of protective earth wire measured value: _____ ☐ Ok ☐ Not OK

Insulation measurement points

– All active conductors to all active conductors and to PE

Measuring points terminals		Measured value

Measuring points terminals		Measured value

☐ Ok ☐ Not OK

• RCD/Circuit breaker – Contact voltage	☐ Ok	☐ Not OK
• Activation time in the circuit with	Measured value: _____ ☐ Ok	☐ Not OK
• RCD rotary field test – (field rotating clockwise)	☐ Ok	☐ Not OK

Testing

• Contact voltage – Function in accordance with circuit diagram	☐ Ok	☐ Not OK
• RCD function – Activating test button	☐ Ok	☐ Not OK

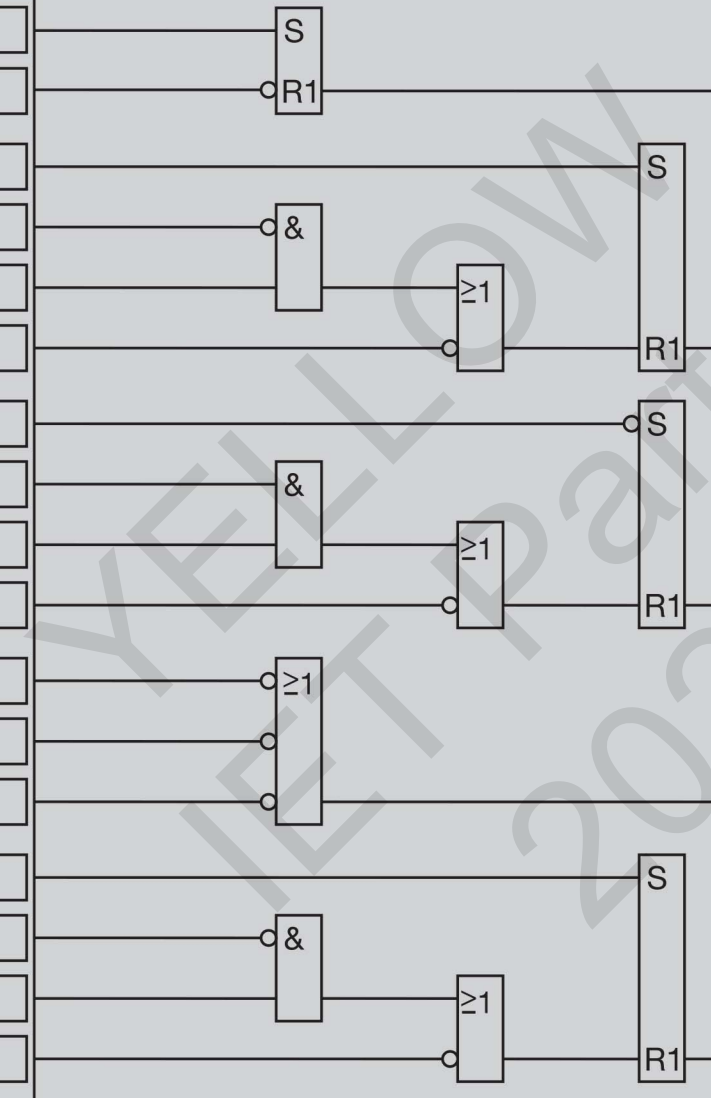
☐ The electrical system corresponds to the recognized regulations of electrical standards and has no faults

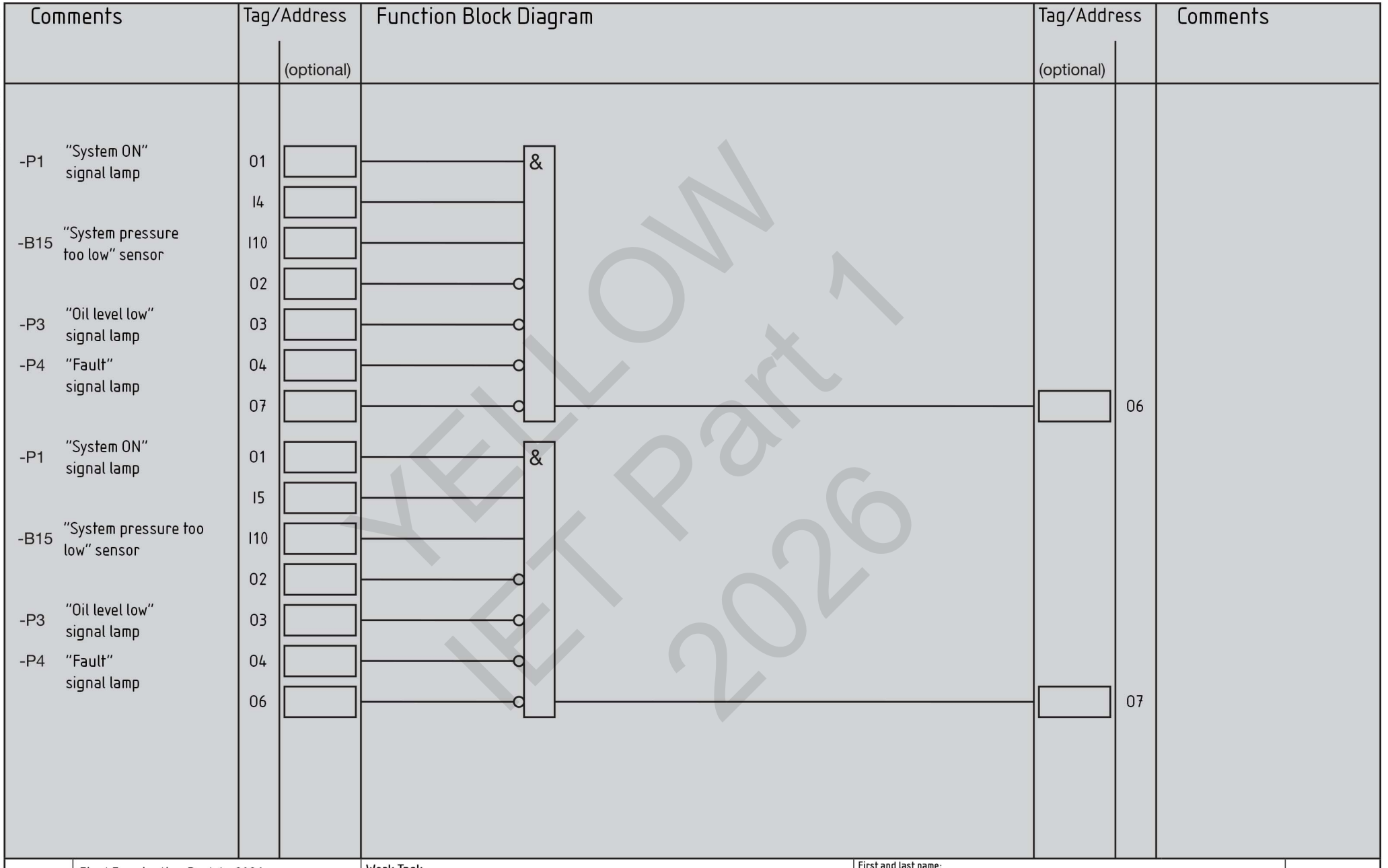
_____ Date

_____ Apprentice Signature

_____ Trainer signature

Comments	Tag/Address (optional)	Function Block Diagram	Tag/Address (optional)	Comments
-S1 "System ON" button	I1			
-S2 "System OFF" button	I2		01	-P1 "System ON" signal lamp
	I8			
	I8			
-S3 "Reset" button	I3			
-P1 "System ON" signal lamp	O1		02	-P2 "Filter dirty" signal lamp
-B12 "Oil present" sensor	I7			
-B12 "Oil present" sensor	I7			
-S3 "Reset" button	I3			
-P1 "System ON" signal lamp	O1		03	-P3 "Oil level low" signal lamp
-B1 "-M1" motor overload	I12			
	I13			
	I14		M1	Flag 1
M1 Flag 1	M1			
M1 Flag 1	M1			
-S3 "Reset" button	I3			
-P1 "System ON" signal lamp	O1		04	-P4 "Fault" signal lamp





AHK	Final Examination Part 1 - 2026 Industrial Electronics Technician	Work Task Control Program for the exam - status at exam start	First and last name: Test taker number:

Comments	Tag/Address	(optional)	Function Block Diagram	Tag/Address	(optional)	Comments
-P1 "System ON" signal lamp	01		&			
	I9					
-P4 "Fault" signal lamp	04				08	
-P1 "System ON" signal lamp	01		&			
-B11 "Operation monitoring" sensor	I6				09	-M3 "-M4" solenoid valve
-P1 "System ON" signal lamp	01		&			
-B11 "Operation monitoring" sensor	I6				010	-M4 "-M4" solenoid valve