

Test Project – Industrial Control

TP19_40CA_AT_EN

Submitted by:

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Member Country: Austria

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Safety and Health

1. Each competitor is responsible for his own safety and health
2. Each competitor must keep his working area clear of obstacles and the floor space clean of material and equipment
3. Use safety glasses, when ever you use any hand or power tools which create chips, dirt, dust or fragments that may injure the eyes
4. Ear protection must always be used in work whose noise is over 85dba
5. Carry always working clothes and safety-shoes
6. Use only tools, which are conform with the international standards
7. Before the first starting, you have to ask an expert for the safety-check
8. You have to use safety glasses by live testing the installation
9. No live electrical work is allowed
10. All modifications must be made on a "dead" installation
11. Before any installation or repair work, the circuit must be confirmed "dead"
12. Smoking is prohibited at the competition venue
13. Competitors must ensure the cleanliness of their tools and hands

Competitor:

Date:

General Instructions

A: Task:

The project is to carry out in a wooden booth and consist the following skills

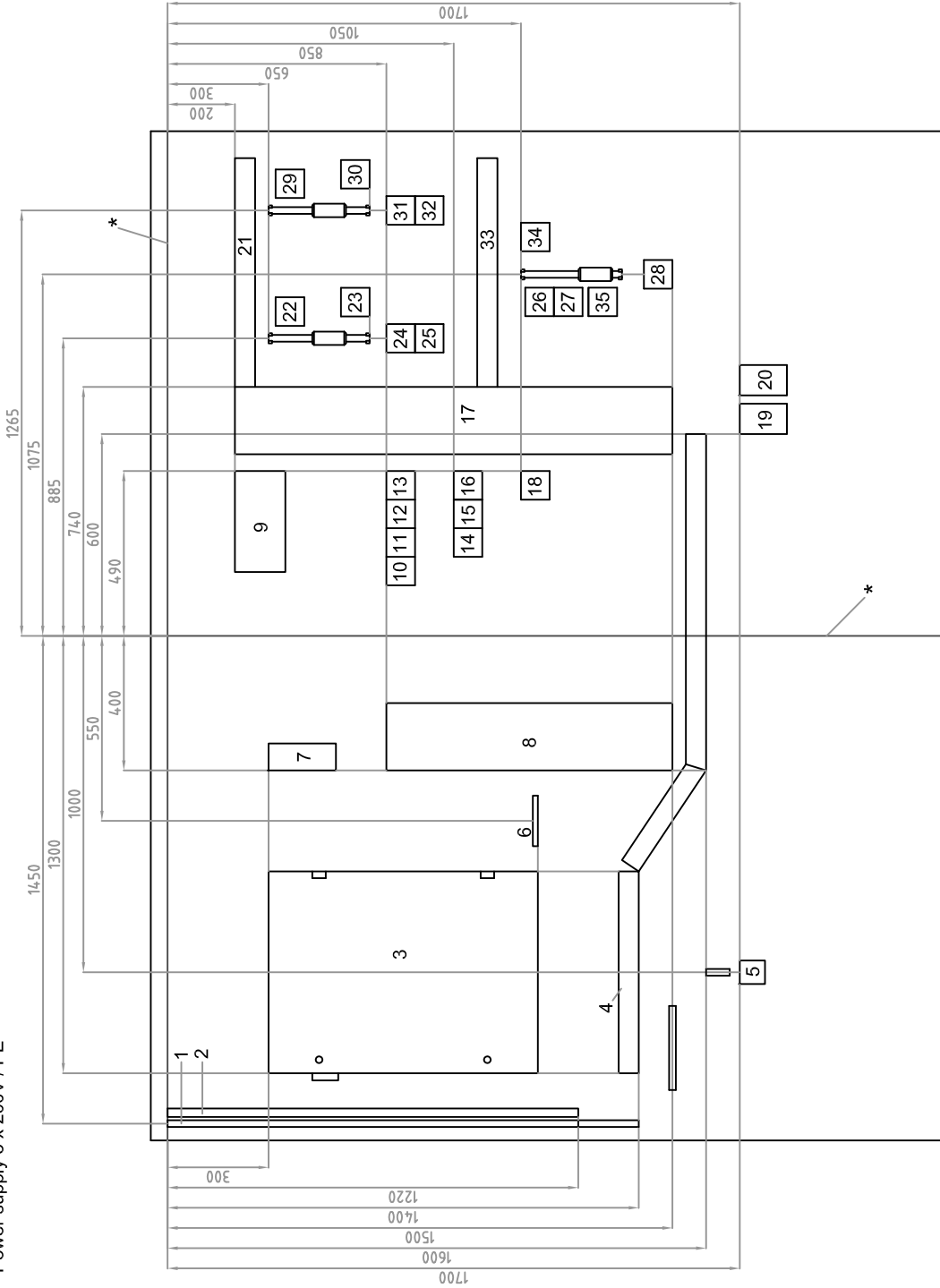
1. Measuring and marking of installation materials and equipment
2. Working with assembling materials made from metal and plastic like
sawing, drilling, bending, cutting
3. Wiring
4. Wiring and connecting switches, control devices, ...
5. Measurement and testing
6. Operator Panel programming
7. PLC programming
8. Circuit construction and design
9. Hardware wiring fault finding

B: Working Time:

		Time in h	day
*	Main project (Pos.1-5)	14	1, 2, 3, 4
	Operator Panel Programming	2	3, 4
	PLC-Programming	4	4
*	Circuit construction and design	1	1
*	Fault finding	1	2

Power supply 3 x 200V / PE

- 1. plastic tube VR20
- 2. plastic tube VR20
- 3. control box
- 4. metal cable tray (100x60)
- 5. earthing-contact-socket 200V (X6)
- 6. protective conductor terminal
- 7. Frequency Converter
- 8. metal vertical ladder
- 9. terminal box (X3)
- 10. signal lamp H5 blue
- 11. signal-lamp H6 blue
- 12. push-button S7 black
- 13. signal-lamp H7 red
- 14. emergency stop S8
- 15. signal-lamp H8 green
- 16. push-button S9 green
- 17. metal vertical ladder
- 18. Potentiometer
- 19. CEE socket (X4)
- 20. CEE socket (X5)
- 21. wall duct 60x40
- 22. limit switch 1S1
- 23. signal lamp H10 white (1Y1)
- 24. signal lamp H11 white (1Y2)
- 25. push-button 1B1
- 26. limit switch 3S1
- 27. limit switch 3S2
- 28. signal lamp H14 white (3Y1)
- 29. limit switch 2S1
- 30. signal lamp H12 white (2Y1)
- 31. signal lamp H13 white (2Y2)
- 32. push-button 2B1
- 33. wall duct 60x40
- 34. signal lamp H15 white (4Y1)
- 35. limit switch 3S3



* All measurements from a horizontal and vertical line
ap 10 - 30mm from the end of the booth.
All devices, which are not in the measurements,
the mounting is up to the competitor

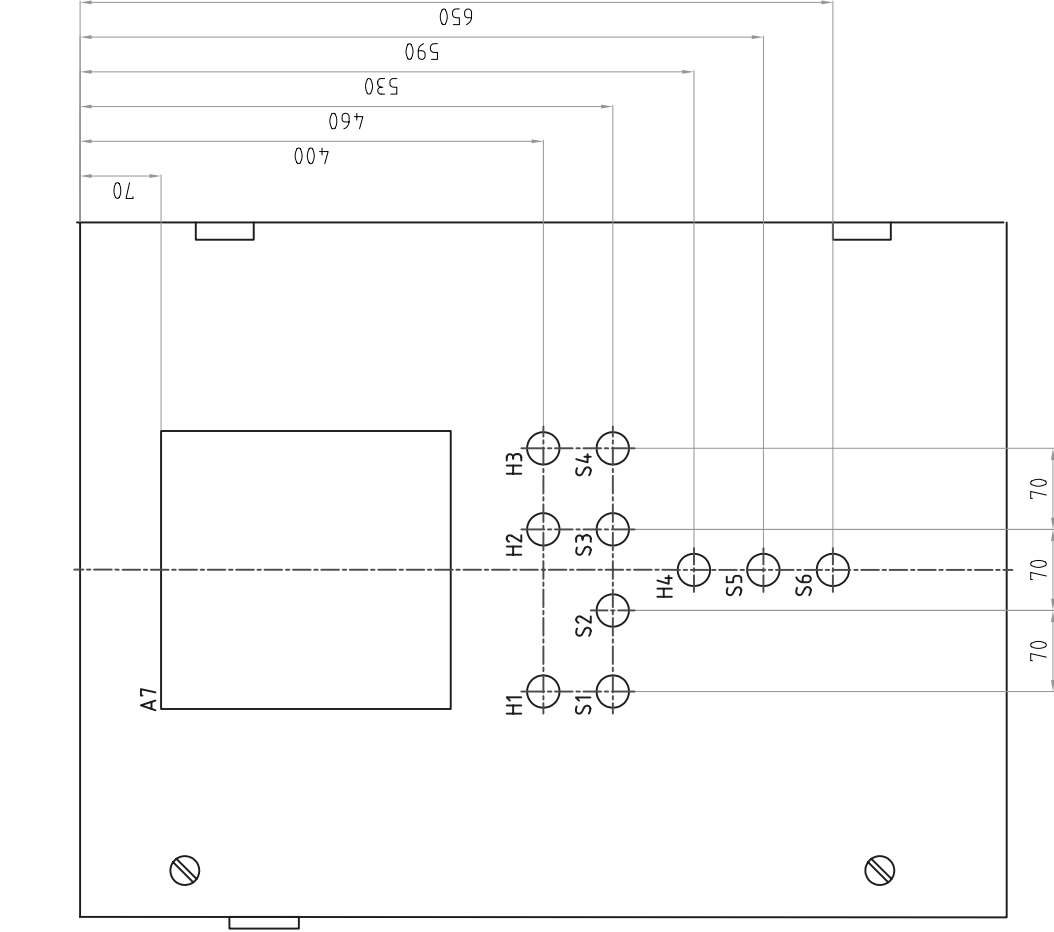
WALL INSTALLATION NOT IN SCALE

40th Worldskills Competition Calgary 2009	
Industrial Control	
Trade 19	
Page 3	

Date	Name
Initialled:	
Tested:	
Accepted:	
Scale:	

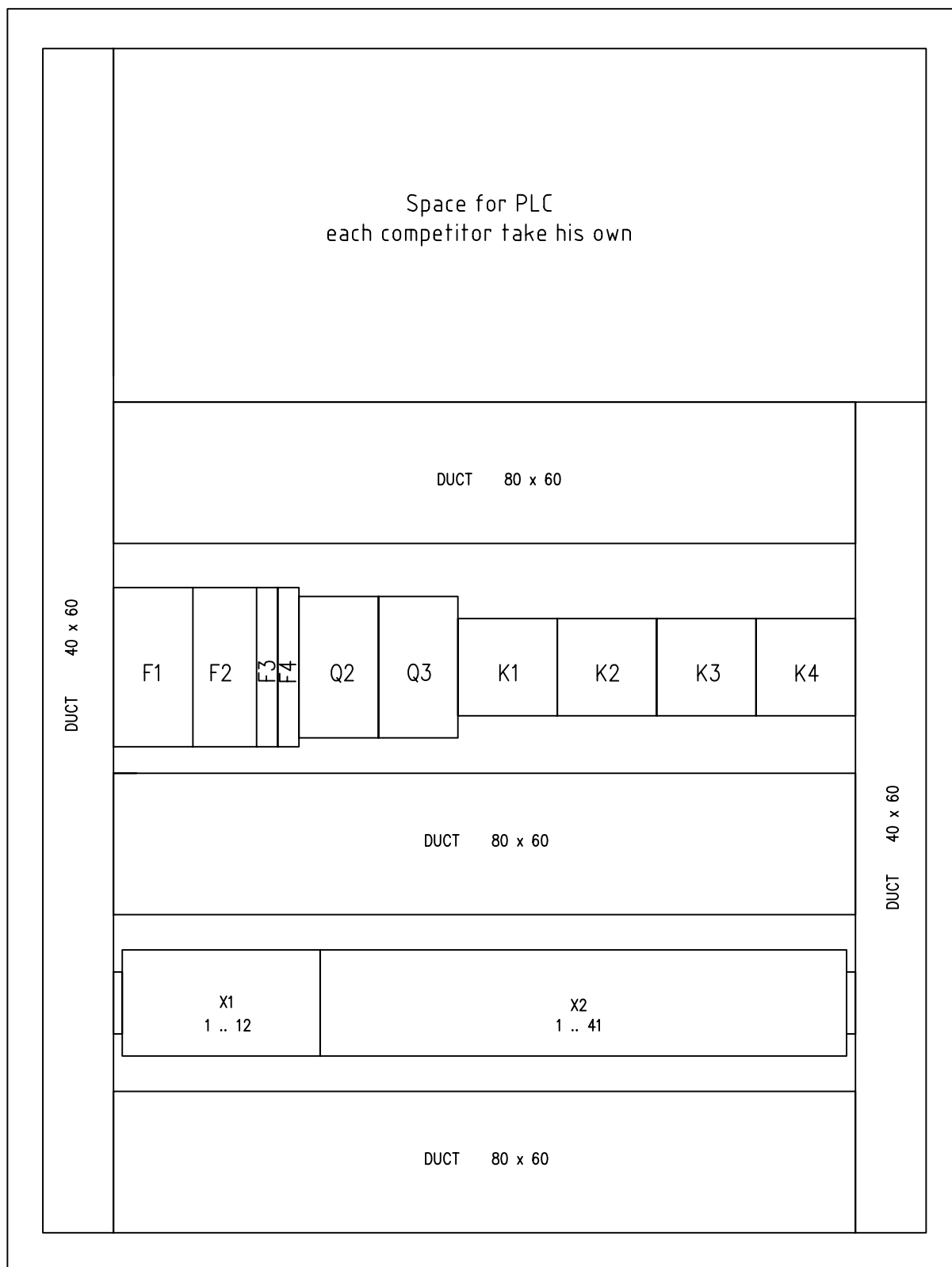
Disignation:	PLANT
Industrial Control	
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Page 3	

cable gland M16, M20, M25

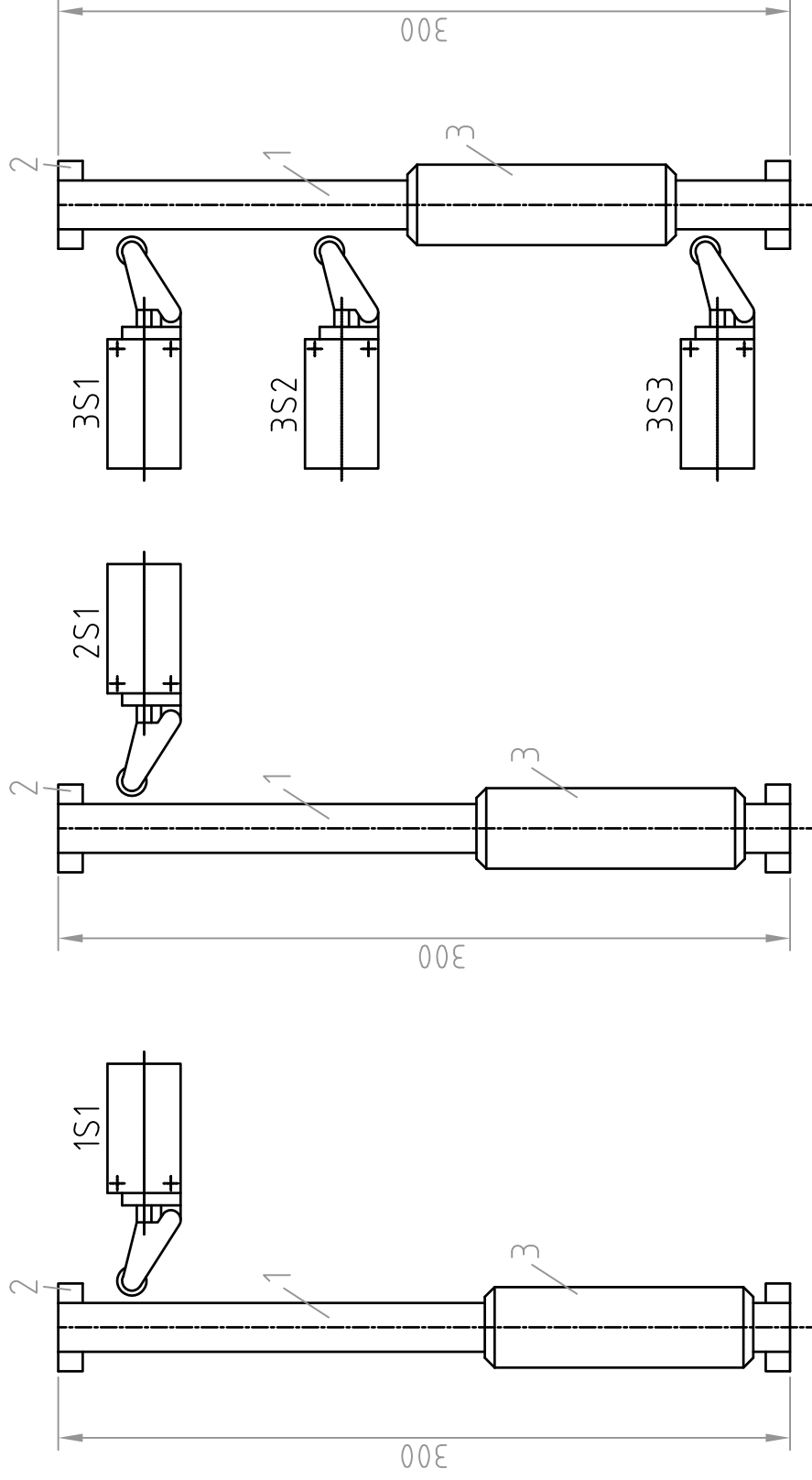


- Q1 Main switch
A7 Operator Panel
each competitor take his own
- H1. Signal lamp blue
H2. Signal lamp blue
H3. Signal lamp green
H4. Signal lamp red
- S1. Push-button black
S2. Push-button red
S3. Push-button black
S4. Push-button green
S5. Push-button black
S6. Emergency stop

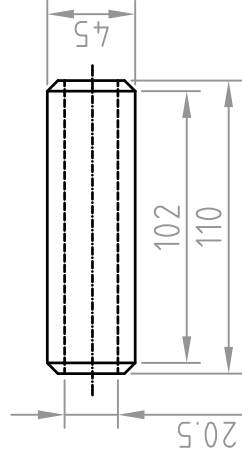
Initialled:	Date	Name
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Control-Box		
Industrial Control		
TRADE 19		
Page 4		



	Date	Name	40th WorldSkills Competition Calgary 2009
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	control - panel		TRADE 19
			Page 5



- 1 - Plastic tube VR20
 2 - clips VR20
 3 - switch-ring (supply by the host country)



Initialled:	Date	Name
Tested:		
Accepted:		

Scale:

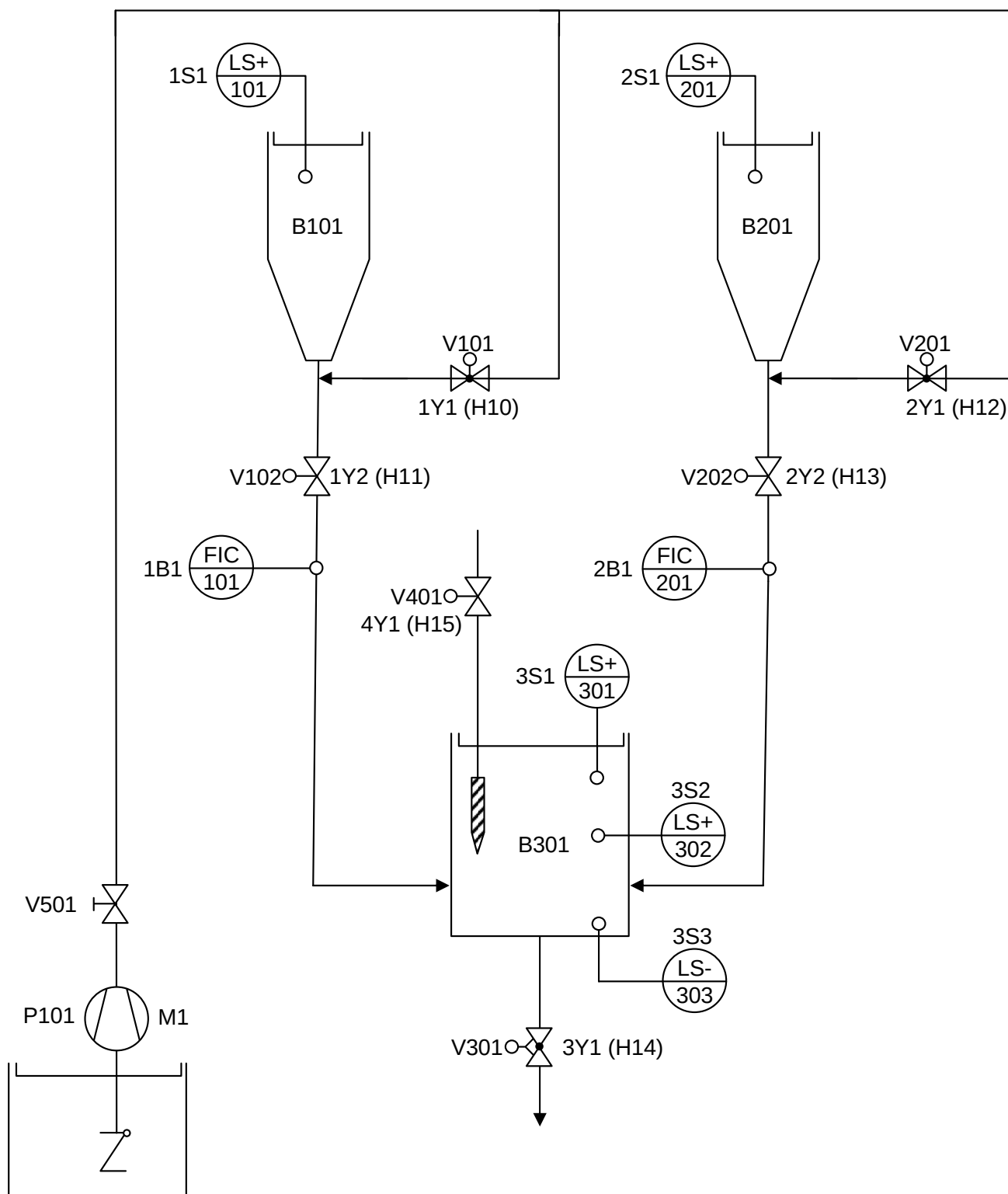
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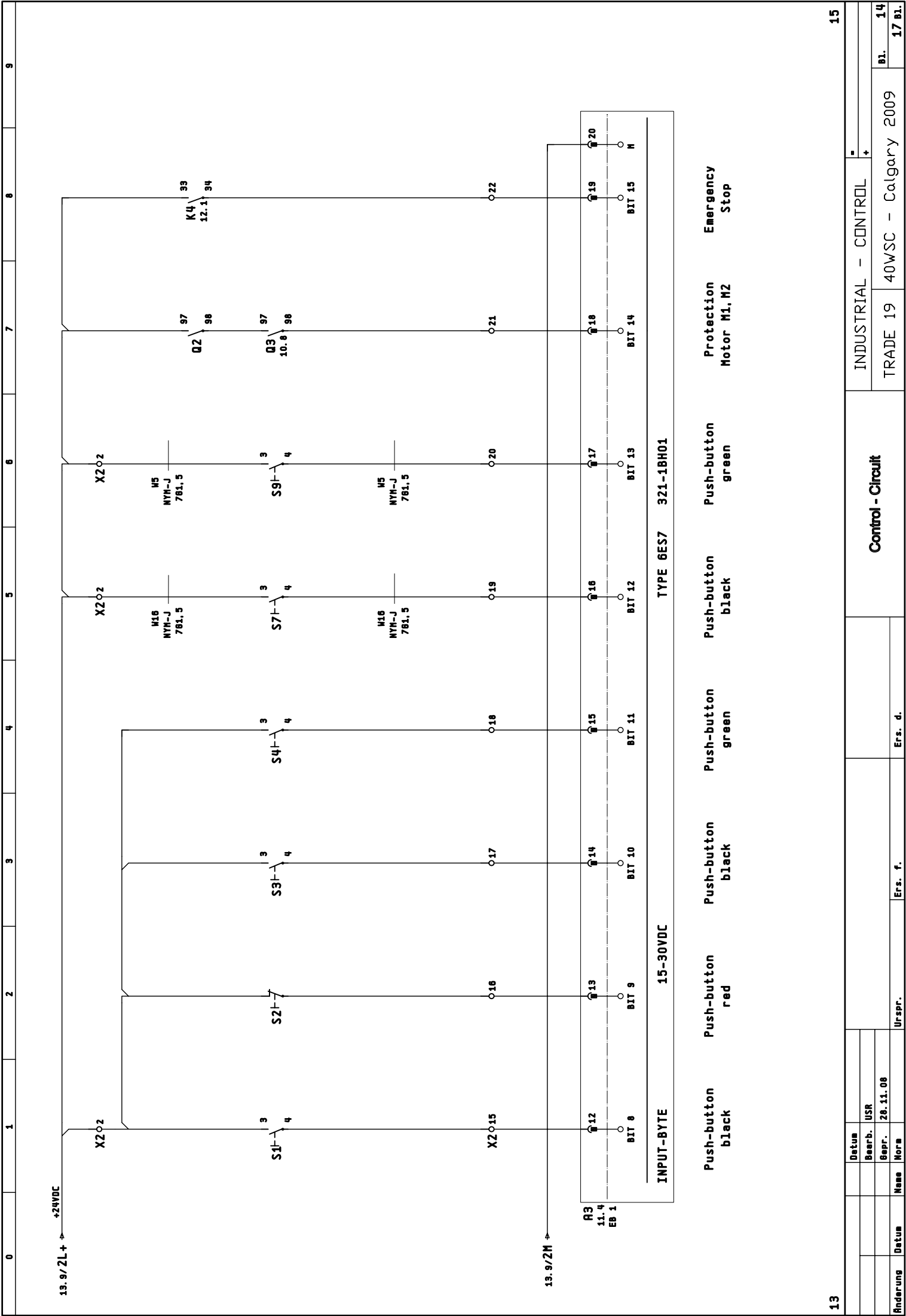
Detail Plant

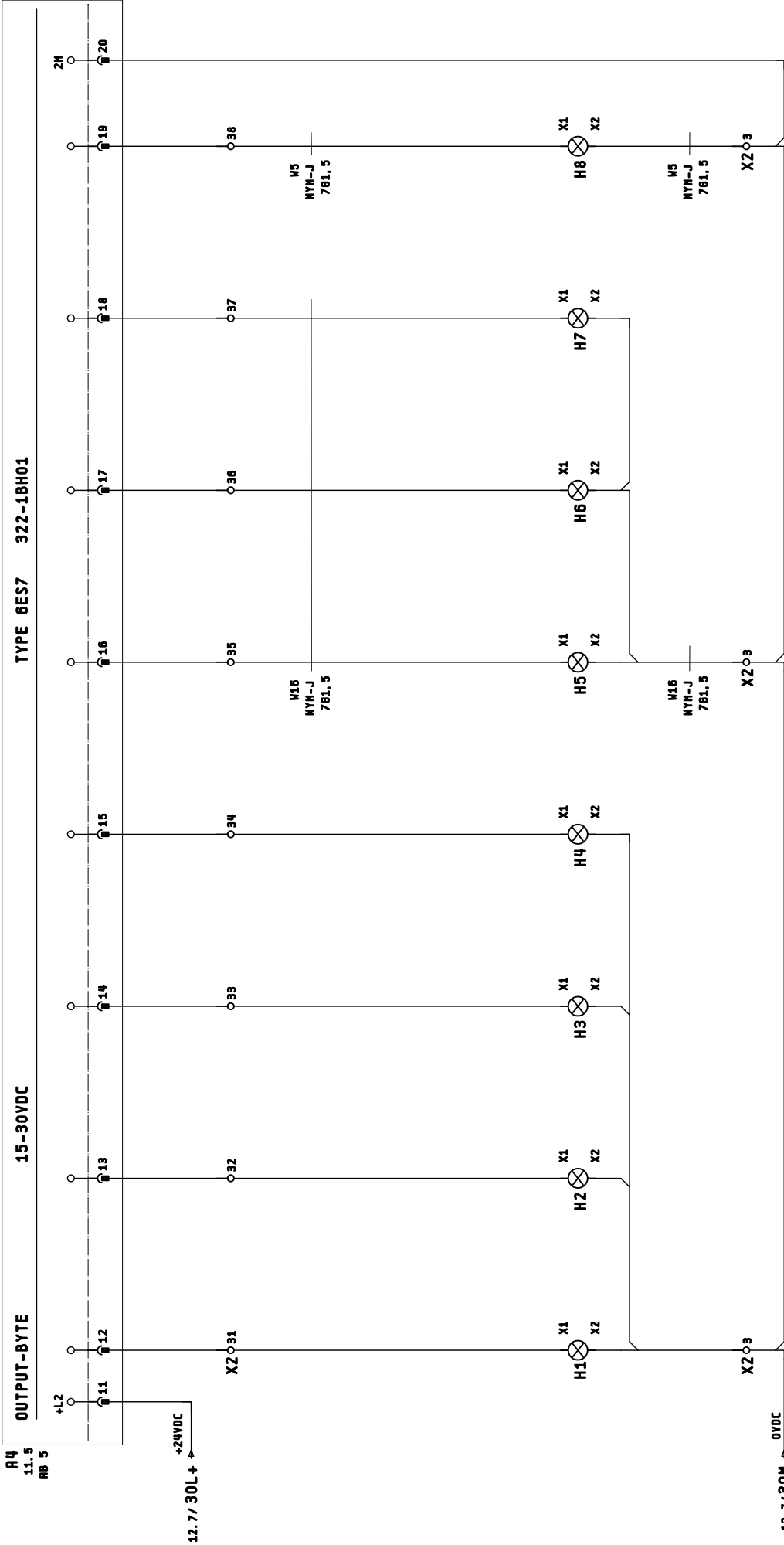
40. WorldSkills Competition
 Calgary 2009

Industrial Control

Trade 19







Terminal diagram		ESSK029E	
Terminal strip designation		X2	
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PLC - INPUTS

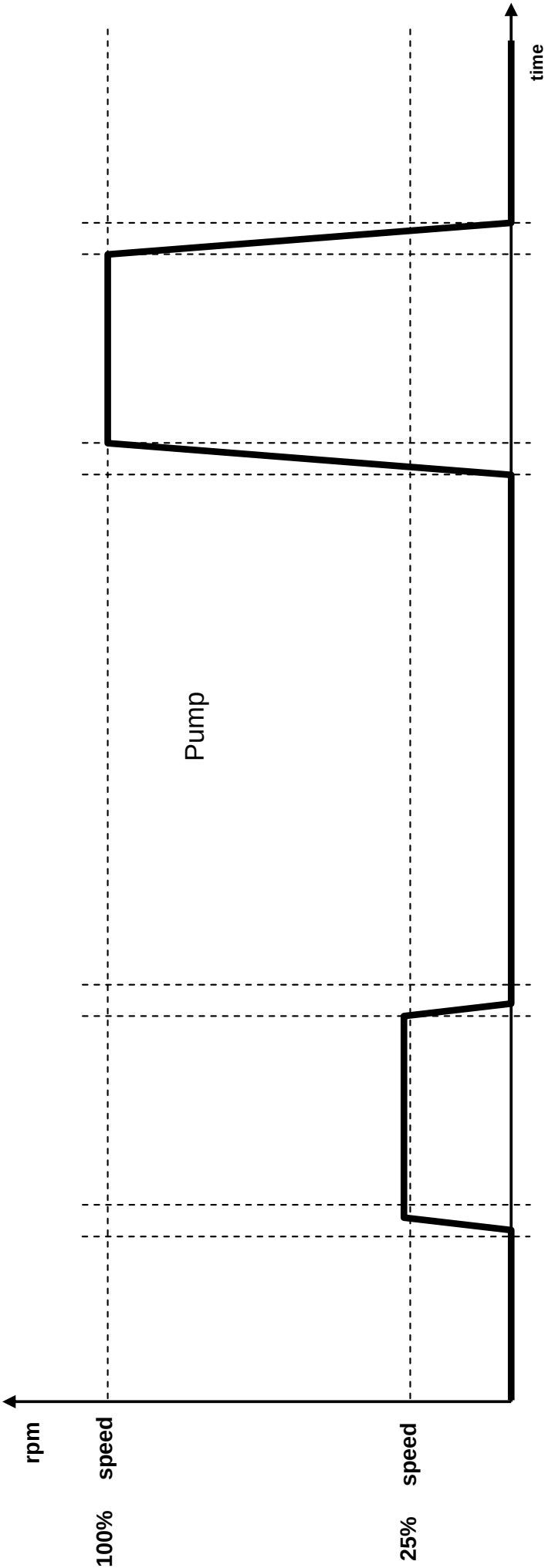
<u>INPUT</u>	<u>ADRESS</u>	<u>SYMBOL</u>	<u>FUNCTION</u>
I 0		1 S 1	max. limit tank 1
I 1		1 B 1	flow sensor outlet tank 1 (push button)
I 2		2 S 1	max. limit tank 2
I 3		2 B 1	flow sensor outlet tank 2 (push button)
I 4		3 S 1	limit 1 tank 3
I 5		3 S 2	limit 2 tank 3
I 6		3 S 3	limit emty tank 3
I 7			not in use
I 8		S 1	push-button black
I 9		S 2	push-button red
I 10		S 3	push-button black
I 11		S 4	push-button green
I 12		S 7	push-button black
I 13		S 9	push-button green
I 14		Q2_Q3	protection Motor M1 and M2
I 15		K4	emergency stop
Analog IN		R 1	potentiometer

PLC - OUTPUTS

<u>OUTPUT</u>	<u>ADRESS</u>	<u>SYMBOL</u>	<u>FUNCTION</u>
Q 0		1 Y 1 (H10)	inlet tank 1
Q 1		1 Y 2 (H11)	outlet tank 1
Q 2		2 Y 1 (H12)	inlet tank 2
Q 3		2 Y 2 (H13)	outlet tank 2
Q 4		3 Y 1 (H14)	outlet tank 3
Q 5		4 Y 1 (H15)	injector valve
Q 6		K 2	belt conveyor
Q 7		DIN 1	enable frequency converter
Q 8		H 1	signal lamp blue
Q 9		H 2	signal lamp blue
Q 10		H 3	signal lamp green
Q 11		H 4	signal lamp red
Q 12		H 5	signal lamp blue
Q 13		H 6	signal lamp blue
Q 14		H 7	signal lamp red
Q 15		H 8	signal lamp green
Analog OUT1		10V	power supply potentiometer
Analog OUT2		A 6_speed	setpoint frequency converter

Motor 1 :

The changes in speed and the 0-speed will be reached in 3 seconds. The ramps must be programmed in the frequency converter.



Electrical Power supply must be on each booth

Nr.	pc/m	name of item	manufacturer	factory-number	Position
1	1	Terminal box 300x 300x 120mm	Rittal	KL 1507.510	
2	1	ground fault circuit interruptor 3 pol. I _{dn} =30mA	Siemens	5SM3342-4	
3	1	line safety switch 3 16A Typ C	Siemens	5SY6616-6	
4	1	line safety switch 1 13A Typ B	Siemens	5SY6513-6	
5	0,3m	Top-hat rail TS35x7,5 1mm	Wago	210-112	
6	4	2-Conductor trough terminal block 2,5/4 grey	Wago	780-601	
7	2	2-Conductor trough terminal block 2,5/4 blue	Wago	780-604	
8	2	2-Conductor earth terminal block 2,5/4 gn/ye	Wago	780-607	
9	1	End and intermediate plate 2,5/4 orange	Wago	780-317	
10	2	Screwless end stop 10mm, TS35	Wago	249-117	
11	1	Adjacent jumper 2,5/4	Wago	280-402	
12	2	Multi marking system 1-50	Wago	793-55xx	
13	1	group marker carrier 10mm	Wago	209-112	
14	1	Cable gland M20x1,5	Obo Bettermann	2022 86 6	
15	2	Cable gland M25x1,5	Obo Bettermann	2022 86 8	
16	1	Locknut M20x1,5	Obo Bettermann	2049 53 8	
17	2	Locknut M25x1,5	Obo Bettermann	2049 54 6	
18	5	Wire H07V-K 2,5 black			
19	2	Wire H07V-K 2,5 blue			
20	24	Conductor sleeve 2,5mm ² isolated			

Control box

Nr.	pc/m	name of item	manufacturer	factory-number	Position
21	1	Compact enclosure B 600xH 800xT 250 mm	Rittal	AE 1058.500	komplete
22	1	cable gland M16x1,5	Obo Bettermann	2022 86 4	control box
23	7	cable gland M20x1,5	Obo Bettermann	2022 86 6	control box
24	2	cable gland M25x1,5	Obo Bettermann	2022 86 8	control box
25	1	Locknut M16x1,5	Obo Bettermann	2049 51 1	control box
26	7	Locknut M20x1,5	Obo Bettermann	2049 53 8	control box
27	2	Locknut M25x1,5	Obo Bettermann	2049 54 6	control box
28	2m	Wiring duct Base B80xH60	Obo Bettermann	LK4 60080	control box
29	2m	Wiring duct Cover B80xH60	Obo Bettermann	LK4/D80	control box
30	2m	Wiring duct Base B40xH60	Obo Bettermann	LK4 60040	control box
31	2m	Wiring duct Cover B40xH60	Obo Bettermann	LK4/D40	control box
32	2m	Top-hat rail TS35x7,5 1mm	Wago	210-112	X1,X2,X3,control box
33	60	2-Conductor trough terminal block 2,5/4 grey	Wago	780-601	X1, X2
34	8	2-Conductor earth terminal block 2,5/4 gn/ye	Wago	780-607	X1, X2
35	8	End and intermediate plate 2,5/4 orange	Wago	780-317	X1, X2
36	1	2-Conductor earth terminal block 4/6 gn/ye	Wago	781-607	X1
37	3	Screwless end stop 10mm, TS35	Wago	249-117	X1, X2
38	10	Adjacent jumper 2,5/4	Wago	280-402	X2
39	4	Multi marking system 1-50	Wago	793-55xx	X1, X2
40	2	group marker carrier 10mm	Wago	209-112	X1, X2
41	1	Main switch with emergency function	Kraus & Naimer	KG20B T203/01 E	Q1
42	1	line safety switch 3P (13AC)	Siemens	5SY6313-7	F1
43	1	line safety switch 2P (2AC)	Siemens	5SY6506-6	F2
44	1	line safety switch 1P (2AC)	Siemens	5SY6102-6	F3
45	1	line safety switch 1P (6AC)	Siemens	5SJ6106-6	F4
46	1	motor-circuit switch	Siemens	3RV1011-1FA14	Q2
47	2	motor-circuit switch	Siemens	3RV1011-1FA15	Q3
48	4	contactor 24VDC	Siemens	3RT1015-1BB42	K1, K2, K3, K4
49	4	auxiliary contact block 2NC/2NO for contactor	Siemens	3RH1911-1FA22	K1, K2, K3, K4
50	1	push-button green complete with 1NO/1NC	Siemens	3SB3201-0AA41	S4
51	3	push-button black complete with 1NO/1NC	Siemens	3SB3201-0AA11	S1, S3, S5
52	1	push-button red complete with 1NO/1NC	Siemens	3SB3201-0AA21	S2
53	1	Emergency stop button complete	Siemens	3SB3201-1HR20	S6
54	1	indicator lamp 24 VDC red complete	Siemens	3SB3244-6AA20	H4
55	1	indicator lamp 24 VDC green complete	Siemens	3SB3244-6AA40	H3
56	2	indicator lamp 24 VDC blue complete	Siemens	3SB3244-6AA50	H1, H2
57	9	nameplate carrier	Siemens	3SB3922-0AV	H1-H4, S1-S5
58	9	nameplate	Siemens	3SB1901-2AA	H1-H4, S1-S5
59	1m	Wire H07V-K 6 gn/ye			
60	25m	Wire H07V-K 2,5 black			
61	10m	Wire H07V-K 1, 5 black			
62	5m	Wire H07V-K 1, 5 gn/ye			
63	100m	Wire H05V-K 0,75 blue			
64	10	conductor sleeve 6 mm ² isolated			
65	10	conductor sleeve 2,5 mm ² isolated			
66	10	conductor sleeve 1,5 mm ² isolated			
67	200	conductor sleeve 0,75 mm ² isolated			
68	3	cable lug ring form 6mm ² ;M6			
69	3	cable lug ring form 6mm ² ;M8			
70	30	cable tie 100x2,5			
71	10	block for cable tie; self adhesive			

Wall mounting

Nr.	pc/m	name of item	manufacturer	factory-number	Position
72	1	earthing-contact socket 230V			X6
73	2	CEE-Socket 400V/16A; 4pole			X4, X5
74	2	CEE-Plug 400V/16A; 4 pole			X4, X5
75	1	Terminal box 300x 150x 120mm	Rittal	KL 1501.510	terminal box X3
76	0,3m	Top-hat rail TS35x7,5 1mm	Wago	210-112	X3
77	2	Terminalblock ground plate	Siemens	8WA2 011-3KE50	X3
78	13	Actor/Sensor Terminal block	Siemens	8WA2 011-3KE12	X3
79	3	Power Supply -Terminal block	Siemens	8WA2 011-3KE01	X3
80	1	2-Conductor earth terminal block 2,5/4 gn/ye	Wago	780-607	
81	2	End and intermediate plate 2,5/4 orange	Wago	780-317	
82	2	2-Conductor earth terminal block 4/6 gn/ye	Wago	781-607	
83	2	Screwless end stop 10mm, TS35	Wago	249-117	
84	1	Multi marking system 1-20	Siemens		
85	1	group marker carrier 10mm	Wago	209-112	
86	2	2-Conductor trough terminal block 2,5/4 grey	Wago	780-601	X3
87	1	End and intermediate plate 2,5/4 orange	Wago	780-317	X3
88	7	Junction box	Siemens	3SB3801-0AA3	H5,H6,H7,H8,S7,S8,S9
89	7	Nameplate 20x 20mm; silver	Siemens	3SB1901-3AA	H5,H6,H7,H8,S7,S8,S9
90	1	Push-button black complete with 1NO	Siemens	3SB3201-0AA11	S7
91	1	Push-button green complete with 1NO	Siemens	3SB3201-0AA41	S9
92	1	Emergency stop button complete	Siemens	3SB3201-1HR20	S8
93	1	Indicator lamp 24 V red complete	Siemens	3SB3244-6AA20	H7
94	1	Indicator lamp 24 V green complete	Siemens	3SB3244-6AA40	H8
95	2	Indicator lamp 24 V blue complete	Siemens	3SB3244-	H5, H6
96	1	Protective conductor terminal;16mm ²	Obo Bettermann	2054 01 9	
97	2m	cable tray 100x 60mm metal	Obo Bettermann	6055 10 9	
98	1m	Edge protection for panel	Obo Bettermann	6072 90 9	
99	6	Wall brackets	Obo Bettermann	6424 71 6	
100	33	Truss-head bolts M6x12mm	Obo Bettermann	6406 13 0	
101	2,5m	Vertical ladder 200x 50mm metal	Obo Bettermann	6010 46 6	
102	20	U-clamps 2056/U 8-12mm	Obo Bettermann	1175 12 2	
103	4	U-clamps 2056/U 40-46mm	Obo Bettermann	1175 46 7	
104	8	End cap for vertical ladder	Obo Bettermann	6338 46 1	
105	8	Mounting angle 70x 50mm with M10x25	Obo Bettermann	6019 70 6	
106	1	Junction box 80 x 80			
107	1	Potentiometer 10KOhm			
108	6m	Plastic tube VR20;			
109	3m	Plastic tube VR25;			
110	2	bow 90° for VR20;			
111	30	clips VR20;	Obo Bettermann	2149 01 0	
112	4	clips VR25;	Obo Bettermann	2149 01 6	
113	8	Cable gland M16x1,5	Obo Bettermann	2022 86 4	
114	13	Cable gland M20x1,5	Obo Bettermann	2022 86 6	
115	1	Cable gland M25x1,5	Obo Bettermann	2022 86 8	
116	8	Locknut M16x1,5	Obo Bettermann	2049 51 1	
117	13	Locknut M20x1,5	Obo Bettermann	2049 53 8	
118	1	Locknut M25x1,5	Obo Bettermann	2049 54 6	
119	6m	Wire H07V-K 6 gn/ye			
120	5m	H07VV-K 4G 2,5mm ²			
121	10	H07VV-U 7G 1,5mm ²			
122	15	H07VV-U 4G 1,5mm ²			
123	5m	H07VV-U 3G 1,5mm ²			
124	8m	H07VV-K 25G 0,75mm ²			
125	15	H07VV-K 3G 0,75mm ²			
126		Conductor sleeve 6mm ² isolated			
127		Conductor sleeve 2,5mm ² isolated			
128		Conductor sleeve 1,5mm ² isolated			
129		Conductor sleeve 0,75mm ² isolated			
130		cable lug ring form M6; 6mm ²			

Process

Nr.	pc/m	name of item	manufacturer	factory-number	Position
131	8	Junction box	Siemens	3SB3801-0AA3	H10-H15
132	6	Indicator lamp 24 V white complete	Siemens	3SB3244-6AA60	H10-H15
133	2	Push-button black complete with 1NO	Siemens	3SB3201-0AA11	1B1, 2B1
134	8	Nameplate 20x 20mm; silver	Siemens	3SB1901-3AA	H10-H15, 1B1, 2B1
135	5	Limit switch with 1NC/1NO	Siemens	3SE3 2200-1G	1S1, 2S1, 3S1, 3S2, 3S3
136	2m	Wall duct Base+Cover 90x 60 mm			
137		screws for mounting			
138	13	Cable gland M20x1,5	Obo Bettermann	2022 86 6	
139	25m	H07VV-K 3G 0,75mm ²			H10, H12,H14, all S
140	10m	H07VV-K 5G 0,75mm ²			H11,1B1,H13,2B1
141	2m	Plastic tube VR20;			
142	6	clips VR20;	Obo Bettermann	2149 01 0	

Test Project – OP Function Description

TP19_40CA_AT_EN

Submitted by:

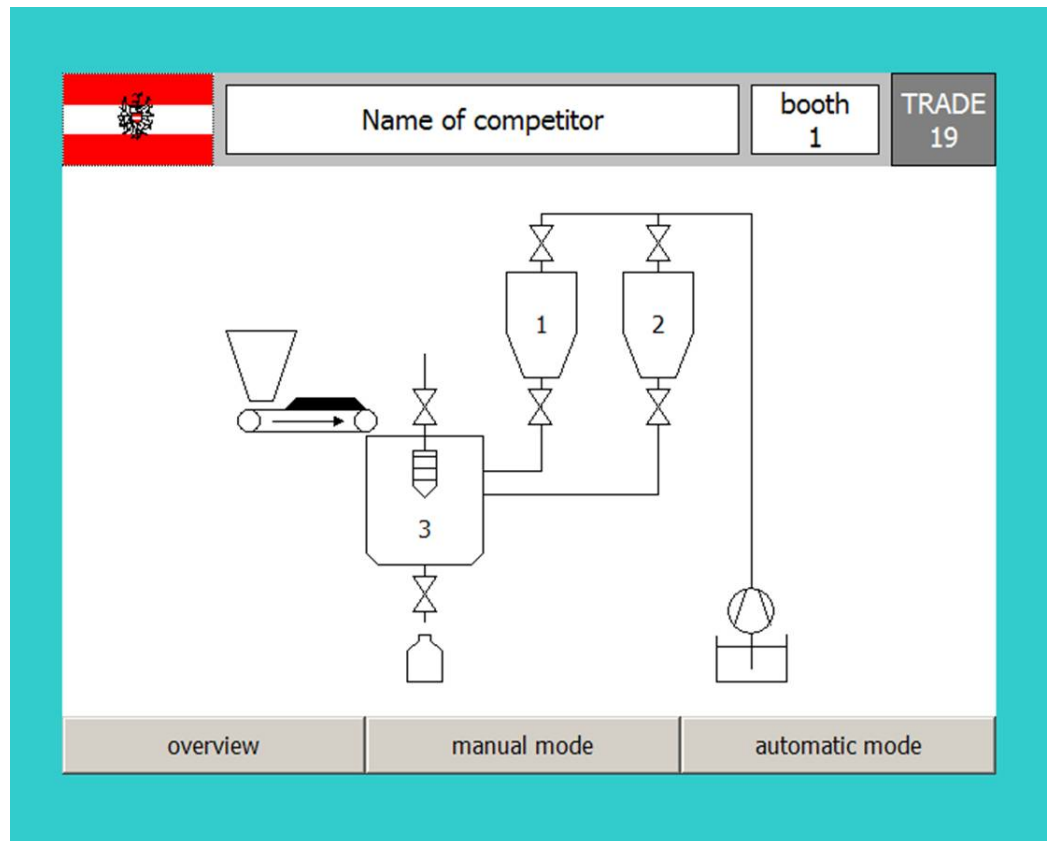
Name: Peter Grininger

Member Country: Austria

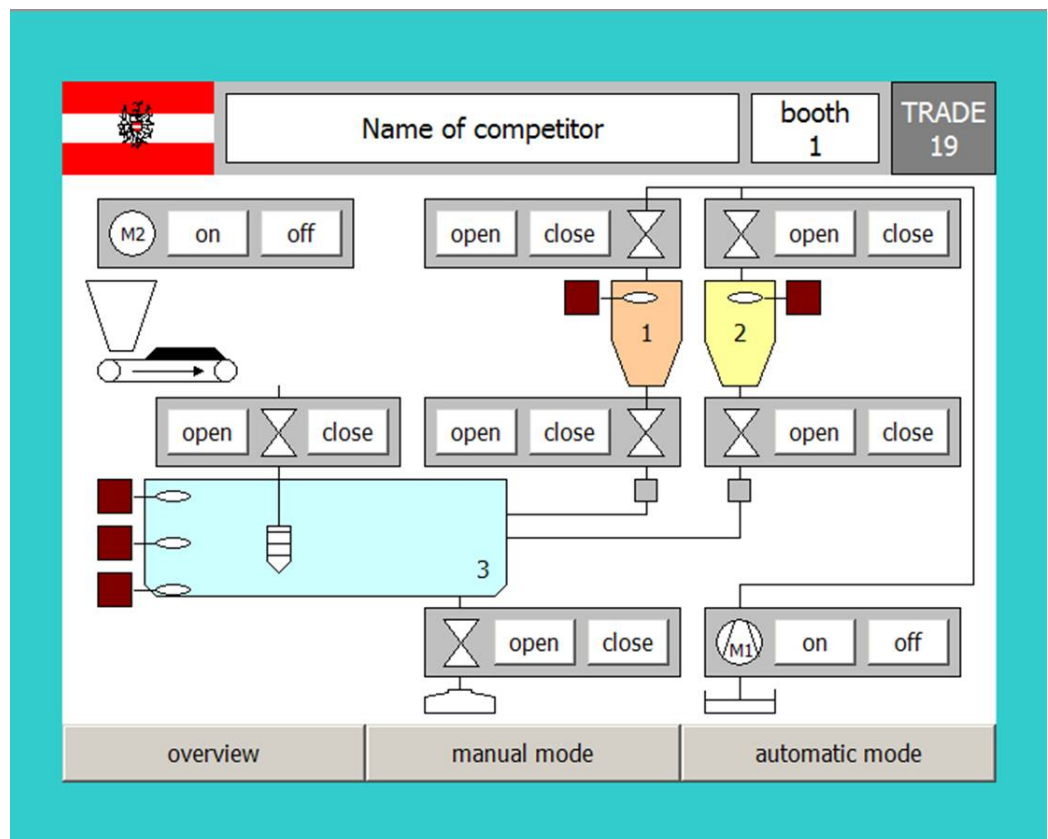
Function Description Operator Panel

Screen - Overview

SCREEN:
OVERVIEW



SCREEN:
MANUAL_MODE



Function Description Operator Panel

Screen - Overview

SCREEN:
AUTOMATIC_MODE

The screenshot shows the AUTOMATIC_MODE operator panel interface. At the top left is the Austrian flag. To its right is a text field for 'Name of competitor'. Further right are two small boxes: 'booth 1' and 'TRADE 19'. Below the flag is a vertical 'control' panel with three buttons: 'cycle START' (green), 'cycle STOP' (red), and 'cycle HALT' (orange). To the right of the control panel is a 'status information' section with three status boxes: 'cycle active', 'cycle halt active', and 'emergency stop active'. Below the status section is a 'setup information' section with two rows: 'numbers of cycles' set to 3, and 'speed motor M1 in %' set to 25.00. At the bottom are three mode buttons: 'overview', 'manual mode' (which is highlighted with a dotted border), and 'automatic mode'.

	Name of competitor	booth 1	TRADE 19
control	status information		
cycle START	cycle active	emergency stop active	
cycle STOP	cycle halt active		
cycle HALT	setup information		
	numbers of cycles	3	
	speed motor M1 in %	25.00	
overview	manual mode	automatic mode	

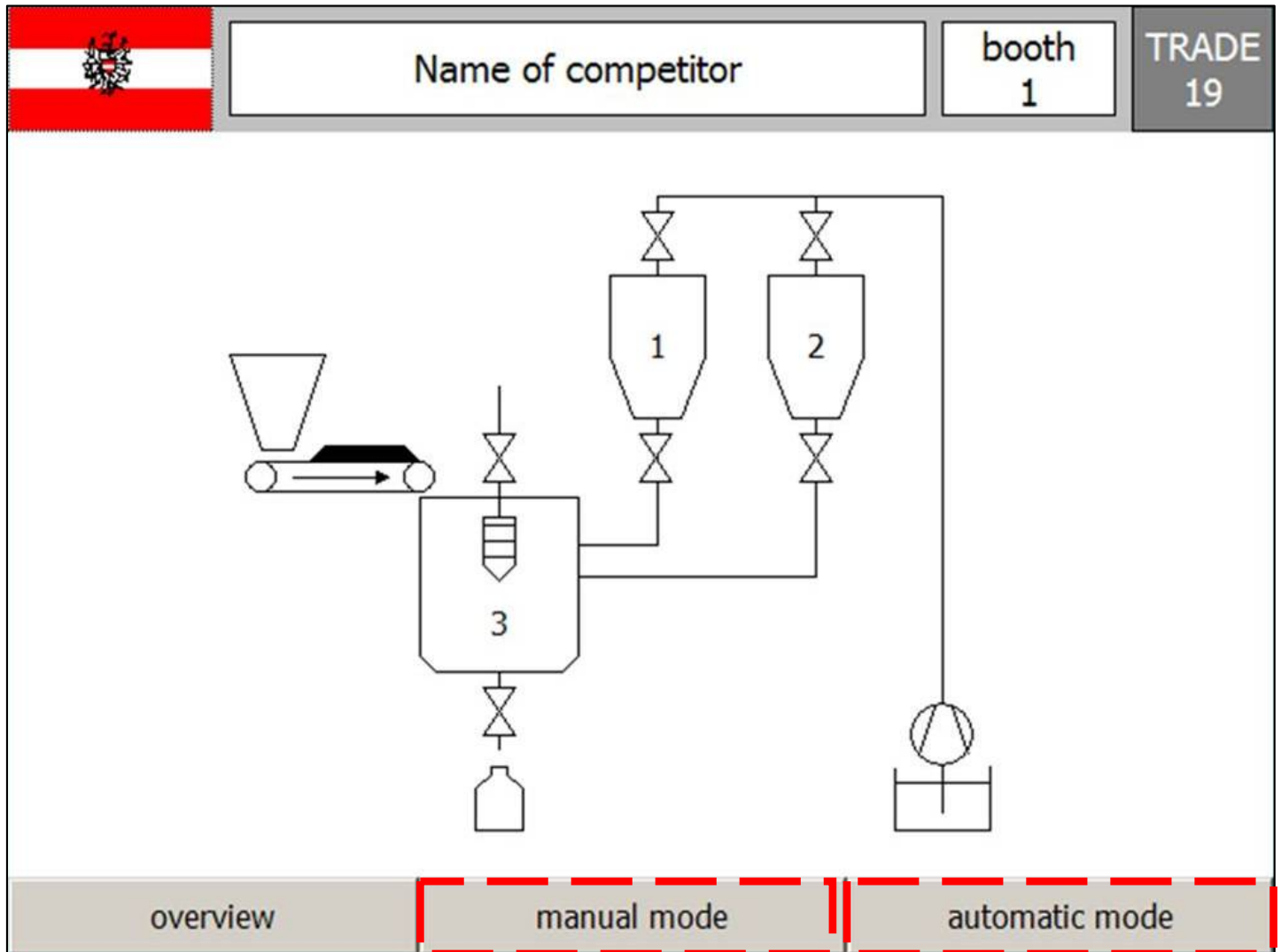
Function Description Operator Panel

Variable-List

Symbol	Typ	Comment	in use
select_no_operation mode	BOOL	Operator Panel - Pushbutton "NO"	write
select_manual_mode	BOOL	Operator Panel - Pushbutton "NO"	write
select_automatic_mode	BOOL	Operator Panel - Pushbutton "NO"	write
1Y1_open	BOOL	Operator Panel - Pushbutton "NO"	write
1Y1_close	BOOL	Operator Panel - Pushbutton "NO"	write
1Y2_open	BOOL	Operator Panel - Pushbutton "NO"	write
1Y2_close	BOOL	Operator Panel - Pushbutton "NO"	write
2Y1_open	BOOL	Operator Panel - Pushbutton "NO"	write
2Y1_close	BOOL	Operator Panel - Pushbutton "NO"	write
2Y2_open	BOOL	Operator Panel - Pushbutton "NO"	write
2Y2_close	BOOL	Operator Panel - Pushbutton "NO"	write
3Y1_open	BOOL	Operator Panel - Pushbutton "NO"	write
3Y1_close	BOOL	Operator Panel - Pushbutton "NO"	write
4Y1_open	BOOL	Operator Panel - Pushbutton "NO"	write
4Y1_close	BOOL	Operator Panel - Pushbutton "NO"	write
M1_on	BOOL	Operator Panel - Pushbutton "NO"	write
M1_off	BOOL	Operator Panel - Pushbutton "NO"	write
M2_on	BOOL	Operator Panel - Pushbutton "NO"	write
M2_off	BOOL	Operator Panel - Pushbutton "NO"	write
cycle_start	BOOL	Operator Panel - Pushbutton "NO"	write
cycle_stop	BOOL	Operator Panel - Pushbutton "NO"	write
cycle_halt	BOOL	Operator Panel - Pushbutton "NO"	write
1S1	BOOL	PLC - Input 0	read only
1B1	BOOL	PLC - Input 1	read only
2S1	BOOL	PLC - Input 2	read only
2B1	BOOL	PLC - Input 3	read only
3S1	BOOL	PLC - Input 4	read only
3S2	BOOL	PLC - Input 5	read only
3S3	BOOL	PLC - Input 6	read only
K4	BOOL	PLC - Input 15	read only
1Y1	BOOL	PLC - Output 0	read only
1Y2	BOOL	PLC - Output 1	read only
2Y1	BOOL	PLC - Output 2	read only
2Y2	BOOL	PLC - Output 3	read only
3Y1	BOOL	PLC - Output 4	read only
4Y1	BOOL	PLC - Output 5	read only
M1	BOOL	PLC - Output 6	read only
M2	BOOL	PLC - Output 7	read only
cycle_active	BOOL	PLC - Variable	read only
cycle_halt_active	BOOL	PLC - Variable	read only
number_of_cycle	INT	PLC - Variable	read/write
Speed_M1	REAL	PLC - Variable	read/write

Function Description Operator Panel

Screen Details “OVERVIEW”



Button “manual mode“:

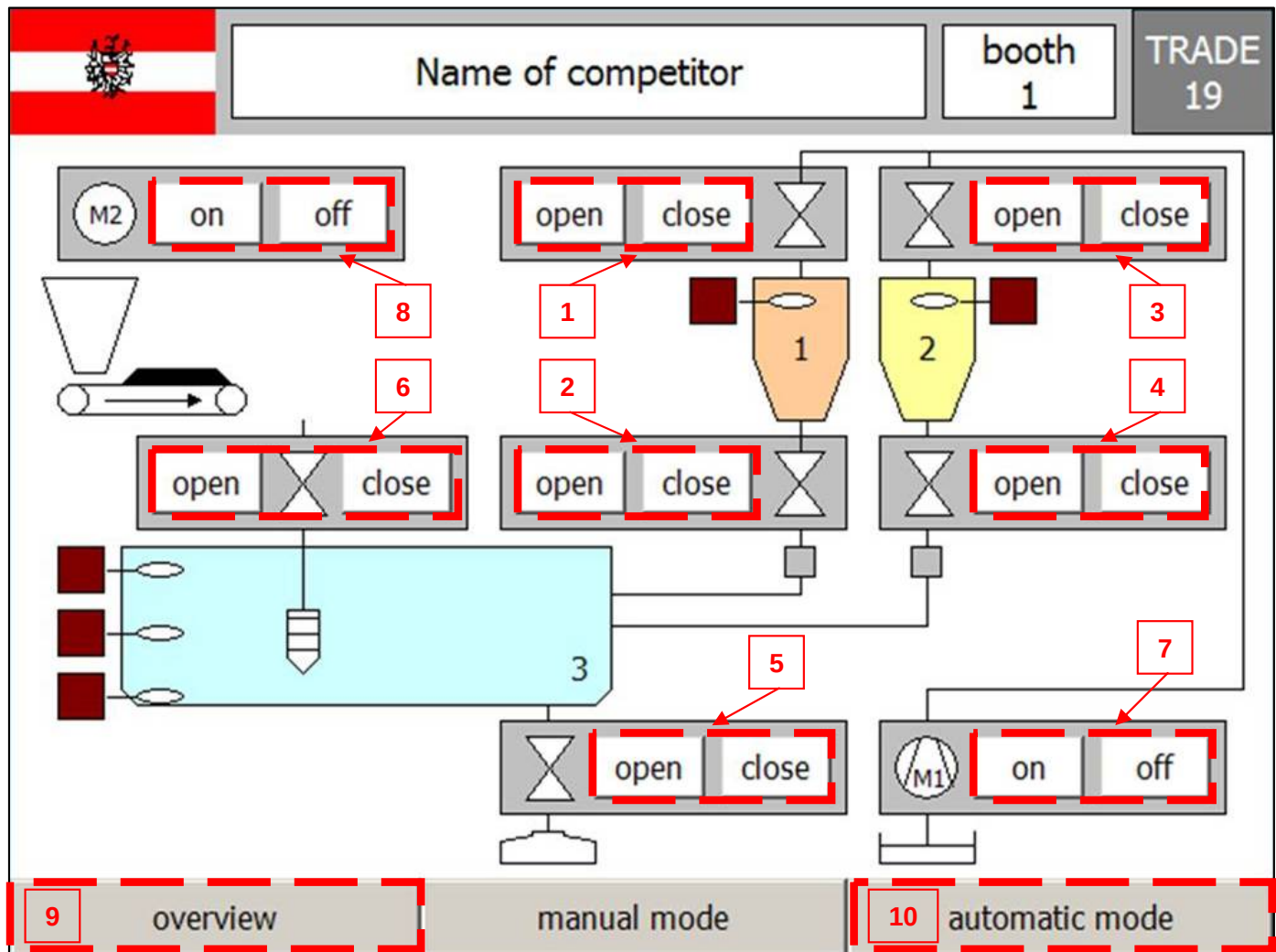
- a. Variable “select_manual_mode”
- b. change to screen “MANUAL_MODE”

Button “automatic mode“:

- a. Variable “select_automatic_mode”
- b. change to screen “AUTOMATIC_MODE”

Function Description Operator Panel

Screen Details "MANUAL_MODE"



1. Button open: Variable "1Y1_open"
Button close: Variable "1Y1_close"

2. Button open: Variable "1Y2_open"
Button close: Variable "1Y2_close"

3. Button open: Variable "2Y1_open"
Button close: Variable "2Y1_close"

4. Button open: Variable "2Y2_open"
Button close: Variable "2Y2_close"

5. Button open: Variable "3Y1_open"
Button close: Variable "3Y1_close"

6. Button open: Variable "4Y1_open"
Button close: Variable "4Y1_close"

7. Button on: Variable "M1_on"
Button off: Variable "M1_off"

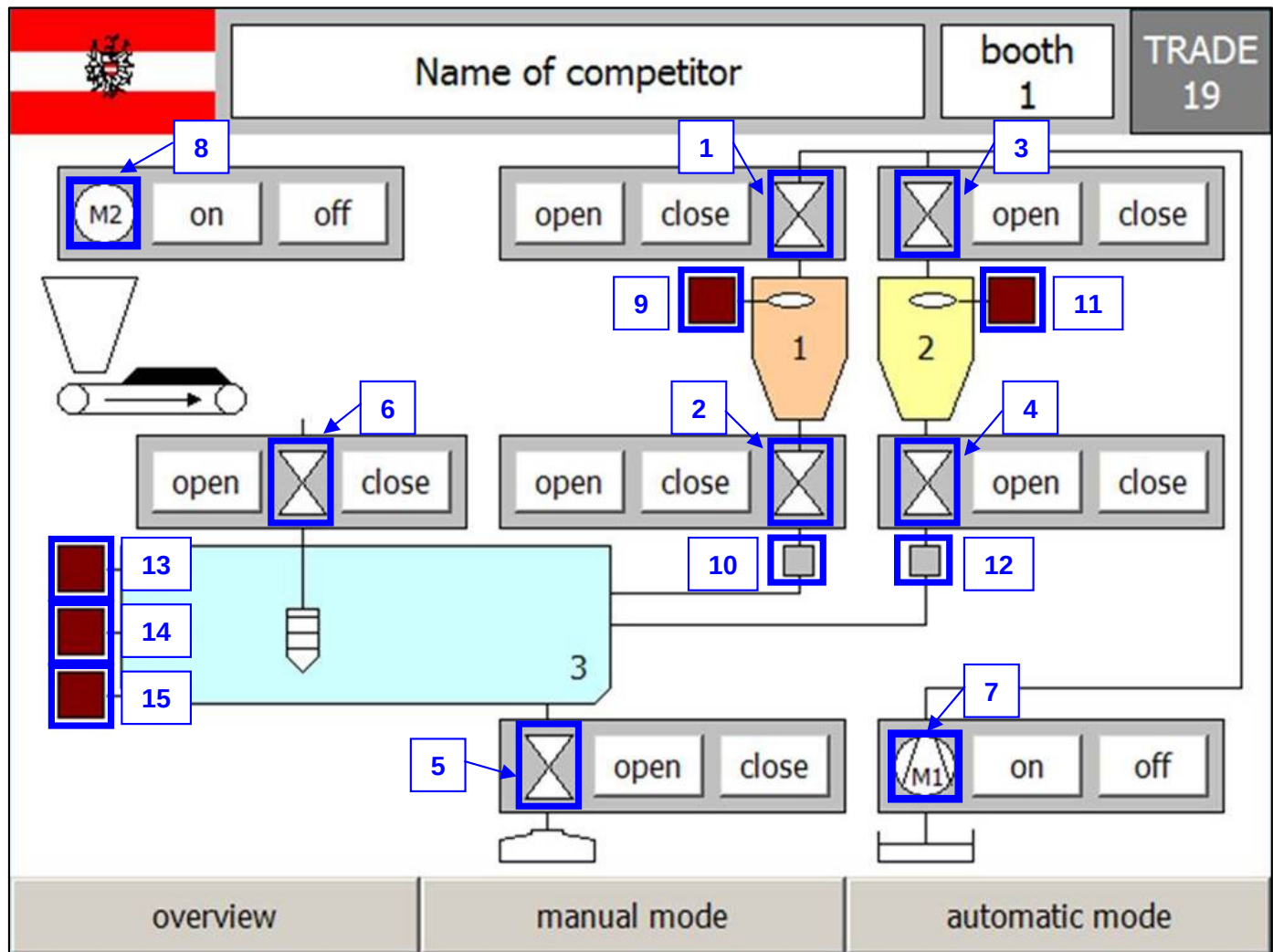
8. Button on: Variable "M2_on"
Button off: Variable "M2_off"

9. Button "overview": a. Variable "select_no_operating_mode"
b. change to screen "OVERVIEW"

10. Button "automatic mode": a. Variable "select_automatic_mode"
b. change to screen "AUTOMATIC_MODE"

Function Description Operator Panel

Screen Details "MANUAL_MODE"



- 1: Variable "1Y1"
- 2: Variable "1Y2"
- 3: Variable "2Y1"
- 4: Variable "2Y2"
- 5: Variable "3Y1"
- 6: Variable "4Y1"
- 7: Variable "M1"
- 8: Variable "M2"

background control

Variable state 0 → colour = WHITE
Variable state 1 → colour = GREEN

- 9: Variable "1S1"
- 10: Variable "1B1"
- 11: Variable "2S1"
- 12: Variable "2B1"
- 13: Variable "3S1"
- 14: Variable "3S2"
- 15: Variable "3S3"

background control

Variable state 0 → colour = BROWN
Variable state 1 → colour = RED

Function Description Operator Panel

Screen Details "AUTOMATIC_MODE"

	Name of competitor	booth 1	TRADE 19
control	status information		
	cycle active	emergency stop active	
	cycle halt active		
cycle START			
cycle STOP			
cycle HALT			
setup information			
numbers of cycles		1	
speed motor M1 in %		2	
overview	manual mode	automatic mode	

Button "cycle START": Variable "cycle_start"

Button "cycle STOP": Variable "cycle_stop"

Button "cycle HALT": Variable "cycle_halt"

INPUT/OUTPUT FIELD 1: Variable "number_of_cycle"

INPUT/OUTPUT FIELD 2: Variable "speed_M1"

Button "overview": a. Variable "select_no_operation_mode"
b. change to the screen "OVERVIEW"

Button "manual mode": a. Variable "select_manual_mode"
b. change to the screen "MANUAL MODE"

Function Description Operator Panel

Screen Details "AUTOMATIC_MODE"

	Name of competitor		booth 1	TRADE 19
control	status information			
cycle START	cycle active		emergency stop active	
	cycle halt active			
cycle STOP	setup information			
cycle HALT	numbers of cycles		3	
	speed motor M1 in %		25.00	
overview		manual mode		automatic mode

background control

cycle active:	Variable "cycle_active"	by state 0 → colour = GRAY by state 1 → colour = GREEN
cycle halt active:	Variable "cycle_halt_active"	by state 0 → colour = GRAY by state 1 → colour = ORANGE
Emergency stop active:	Variable "K4"	by state 0 → colour = RED by state 1 → colour = GRAY

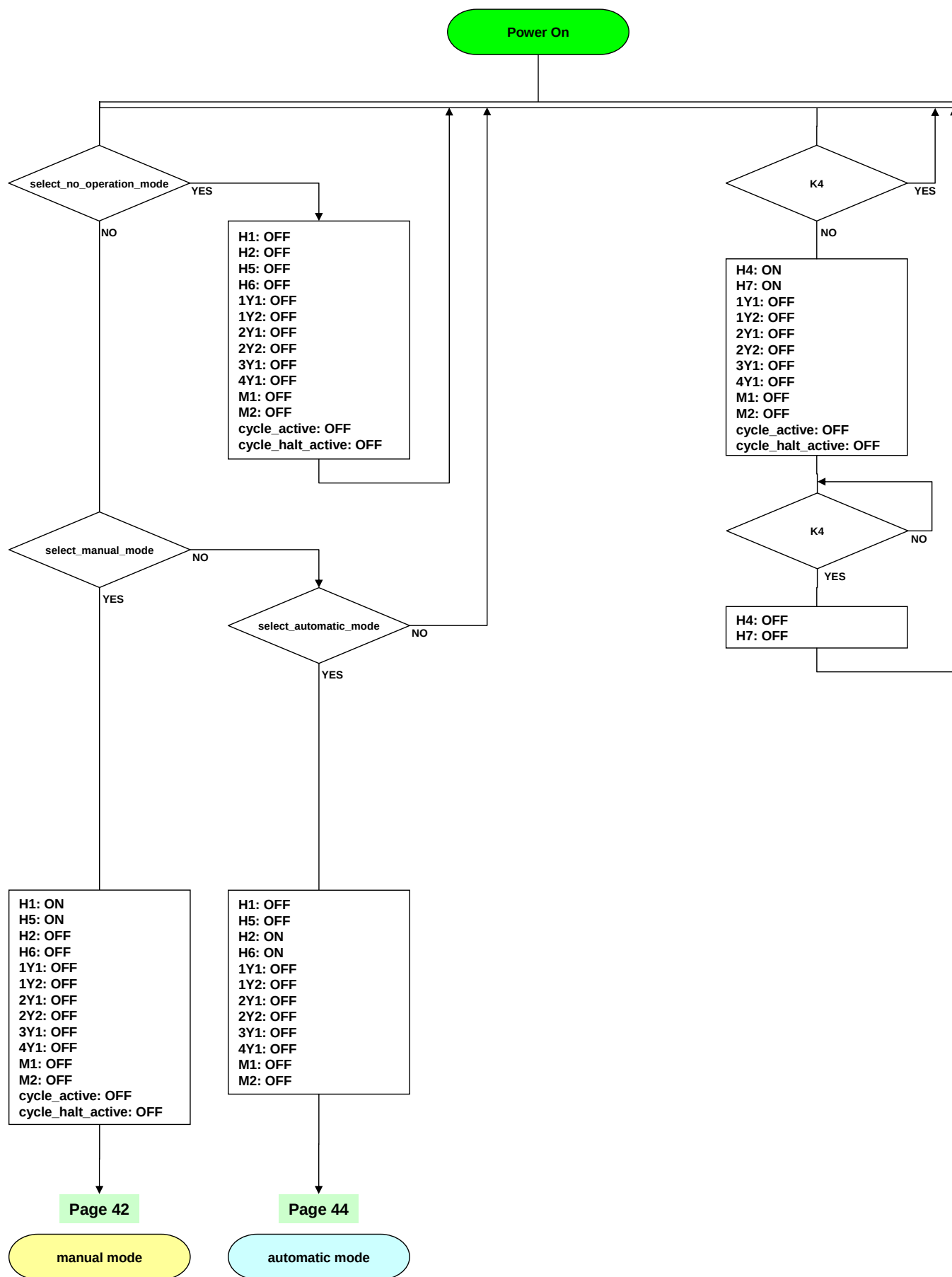
Test Project – PLC Function Description

TP19_40CA_AT_EN

Submitted by:

Name: Peter Grininger

Member Country: Austria



manual mode

