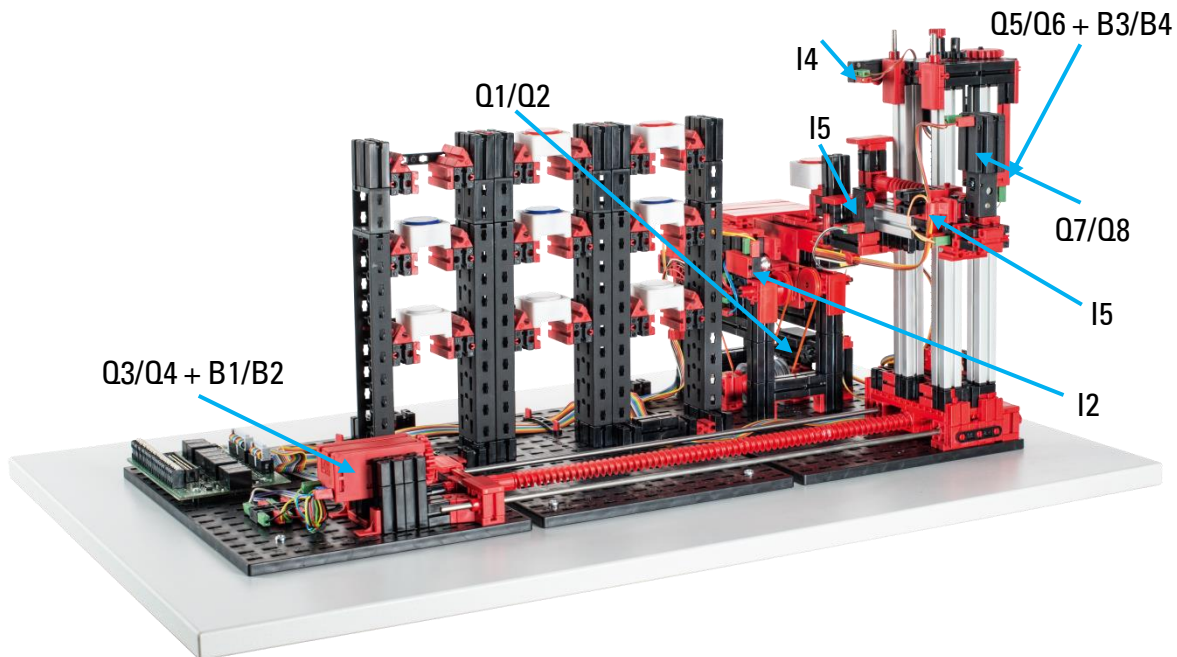


Assignment plan for automated high-bay warehouse (HBW)

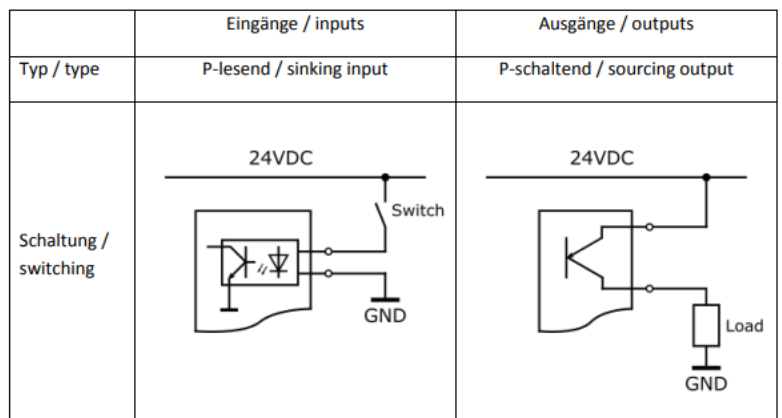


Terminal no. (ST1)	Function	Designation
1	Power supply (+) actuators	24V DC
2	Power supply (+) sensors	24V DC
3	Power supply (-)	0V
4	Power supply (-)	0V
5	Reference pushbutton horizontal	I1
6	Light barrier inside	I2
7	Light barrier outside	I3
8	Reference pushbutton vertical	I4
11	Encoder horizontal pulse 1	B1
12	Encoder horizontal pulse 2	B2
13	Encoder vertical pulse 1	B3
14	Encoder vertical pulse 2	B4
15	Reference pushbutton probe arm front	I5
16	Reference pushbutton probe arm rear	I6
17	Conveyor belt motor forwards	Q1 (M1)
18	Conveyor belt motor backwards	Q2 (M1)
19	Motor horizontal towards rack	Q3 (M2)
20	Motor horizontal towards conveyor belt	Q4 (M2)
21	Vertical motor down	Q5 (M3)
22	Vertical motor up	Q6 (M3)
23	Cantilever motor forwards	Q7 (M4)
24	Cantilever motor backwards	Q8 (M4)
25	PWM conveyor belt	PWM (M1)
26	PWM horizontal	PWM (M2)
27	PWM vertical	PWM (M3)
28	PWM cantilever	PWM (M4)















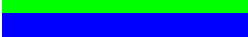


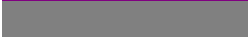
17x2 Stiftleiste / 17x2 pin header














Pin	Function	Pin	Function
1	+24V (Aktoren / actuators)	2	+24V (Sensoren / sensors)
3	0V (GND)	4	0V (GND)
5	I1	6	I2
7	I3	8	I4
9		10	
11	B1	12	B2
13	B3	14	B4
15	I5	16	I6
17	Q1	18	Q2
19	Q3	20	Q4
21	Q5	22	Q6
23	Q7	24	Q8
25		26	
27		28	
29		30	
31	GND	32	
33		34	GND

SPS Eingangs- und Ausgangskonfiguration / PLC input and output configuration



Model wiring

Terminal	Header ST1		Ribbon cable	Sensors + actuators model
5	Reference horizontal	1		I1
2	24V (Sensor)	2		
6	Photo-transistor internal	3		I2
2	24V (Sensor)	4		
7	Photo-transistor external	5		I3
2	24V (Sensor)	6		
17	Conveyor belt forwards	7		Q1/Q2 (M1)
18	Conveyor belt backwards	8		
3.4	GND	9		reserved
2	9V (generated from 24V sensor)	10		
9	reserved	11		
10	reserved	12		
3.4	GND	13		Lights for light barrier
2	24V (Sensor)	14		
19	Motor horizontal towards rack	15		Q3/Q4 (M2)
20	Motor horizontal towards conveyor belt	16		
3.4	GND	17		Horizontal power Signal Signal B
2	24V (Sensor)	18		
11	A	19		encoder supply A
12	B	20		

	Header ST2		Ribbon cable	Sensors + actuators model
8	Reference pushbutton vertical	1		I4
2	24V (Sensor)	2		
21	Vertical axis down	3		Q6/Q7 (M3)
22	Vertical axis up	4		
3.4	GND	5		Vertical power Signal Signal B
2	24V (Sensor)	6		
13	A	7		encoder supply A
14	B	8		
15	Reference pushbutton probe arm forward	9		I5
2	24V (Sensor)	10		
23	Probe arm forward	11		Q7/Q8 (M4)
24	Probe arm back	12		
16	Reference pushbutton probe arm rear	13		I6
2	24V (Sensor)	14		

red = power supply
yellow = Motor poles reversible via relay