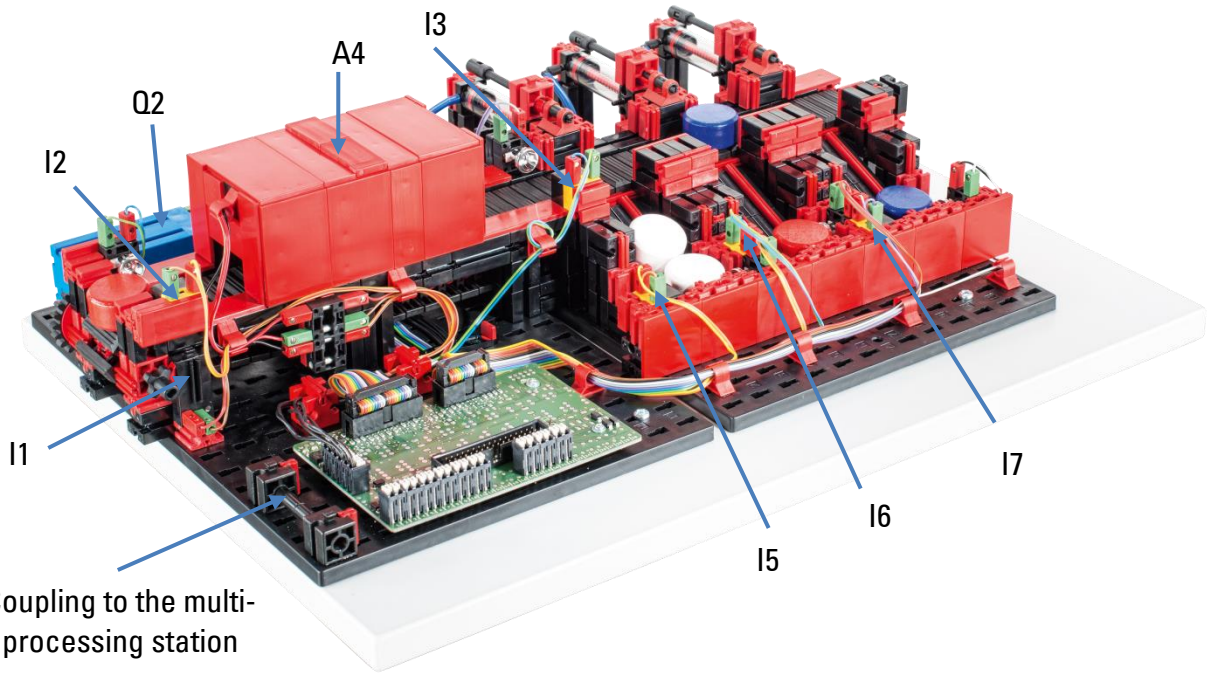
Assignment plan for the sorting line using colour recognition (SLD)



Coupling to the multi-processing station

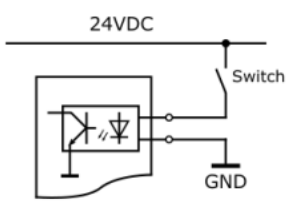
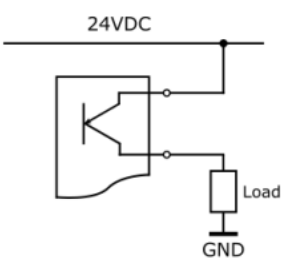
Not shown: Q1, Q3, Q4, Q5

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	Pulse key	I1
6	Light barrier input	I2
7	Light barrier after colour sensor	I3
9	Colour sensor	A4 Analogue 0-10VDC
10	Light barrier white	I5
11	Light barrier red	I6
12	Light barrier blue	I7
17	Motor conveyor belt	Q1
18	Compressor	Q2
20	Valve first ejector (white)	Q3
21	Valve second ejector (red)	Q4
22	Valve third ejector (blue)	Q5

17x2 Stiftleiste / 17x2 pin header

+24V (Aktoren / actuators)	1		2	+24V (Sensoren / sensors)
0V (GND)	3		4	0V (GND)
I1	5		6	I2
I3	7		8	
A4	9		10	I5
I6	11		12	I7
	13		14	
	15		16	
Q1	17		18	Q2
	19		20	Q3
Q4	21		22	Q5
	23		24	
	25		26	
	27		28	
	29		30	
	31		32	
GND	33		34	GND

SPS Eingangs- und Ausgangskonfiguration / PLC input and output configuration

	Eingänge / inputs	Ausgänge / outputs
Typ / type	P-lesend / sinking input	P-schaltend / sourcing output
Schaltung / switching		

Model wiring

Terminal	Header ST1		Ribbon cable	Sensors + actuators model
5	Pulse key	1		I1
2	24V (Sensor)	2		
6	Light barrier input	3		I2
2	24V (Sensor)	4		
7	Light barrier after colour sensor	5		I3
2	24V (Sensor)	6		
3.4	GND	7		Q2 (compressor)
18	Compressor	8		
3.4	GND	9		Q1 (Conveyor belt)
17	Conveyor belt	10		
3.4	GND	11		Colour sensor (A4)
2	9V (generated from 24V)	12		
9	Colour sensor (0-10V)	13		
	not assigned	14		
3.4	GND	15		Light barrier lamp
2	24V (Sensor)	16		
3.4	GND	17		Light barrier lamp
2	24V (Sensor)	18		
	not assigned	19		
	not assigned	20		

	Header ST2			
	not assigned	1		
	not assigned	2		
10	Light barrier white	3		I5
2	24V (Sensor)	4		
12	Light barrier blue	5		I7
2	24V (Sensor)	6		
11	Light barrier red	7		I6
2	24V (Sensor)	8		
3.4	GND	9		Light barrier lamp
2	24V (Sensor)	10		
3.4	GND	11		Light barrier lamp
2	24V (Sensor)	12		
3.4	GND	13		Light barrier lamp
2	24V (Sensor)	14		

3.4 20	Terminal V1	Q3 (Valve first ejector, white)
3.4 21	Terminal V2	Q4 (Valve second ejector, red)
3.4 22	Terminal V3	Q5 (Valve third ejector, blue)

red = power supply

Schlauchanschlussplan / air line layout plan