Selmo

Model Assembler



Factory IO

Functional Description

Two parts are to be assembled.

The two parts are to be conveyed separately to a stop via two conveyor belts. There they are detected by a sensor and clamped by a cylinder. A 2-axis gantry robot picks up the part and positions it on the other part. Afterwards, the finished assembled part is to be transported away via the conveyor belt. For this purpose, a blockade must move up and a sensor detects the part leaving.

In/Output assignment

The in- and outputs of the model are assigned as follows (the designation input or output refers to the connected controller):

Input Nr.	Name	Factory IO –Variable name		Specification
1	S1	I_Start	:BOOL;	//S1 Start
2	S2	I_Stop	:BOOL;	//S2 Stop
3	S3	I_EStop	:BOOL;	//S3 Emergency stop
4	B1	I _Lid_Conveyor1_Part_present	:BOOL;	//B1 Lid conveyor 1 part present
5	B2	I_Base_Conveyor1_Part_present	:BOOL;	//B2 Base conveyor 1 part present
6	B3	I_Base_Conveyor2_Part_present	:BOOL;	//B3 Base conveyor 2 past present
7	B4	I_Part_present_Gripper	:BOOL;	//B4 part present gripper
8	IX	I_Actual_Pos_X	:REAL;	//X actual position
9	IZ	I_Actual_Pos_Z	:REAL;	//Z actual position
Output Nr.	Name	Factory IO –Variablen name		Specification
Output Nr.	Name M1	Factory IO –Variablen name O_Lid_Conveyor1_ON	:BOOL;	Specification //M1 Lid conveyor 1 ON
		•	:BOOL;	•
1	M1	O_Lid_Conveyor1_ON	•	//M1 Lid conveyor 1 ON
1 2	M1 M2	O_Lid_Conveyor1_ON O_Base_Conveyor1_ON	:BOOL;	//M1 Lid conveyor 1 ON //M3 Base conveyor 1 ON
1 2 3	M1 M2 M3	O_Lid_Conveyor1_ON O_Base_Conveyor1_ON O_Base_Conveyor2_ON	:BOOL; :BOOL;	//M1 Lid conveyor 1 ON //M3 Base conveyor 1 ON //M4 Base Conveyor 2 ON
1 2 3 4	M1 M2 M3 Y4	O_Lid_Conveyor1_ON O_Base_Conveyor1_ON O_Base_Conveyor2_ON O_Stop_Blade_2	:BOOL; :BOOL; :BOOL;	/M1 Lid conveyor 1 ON //M3 Base conveyor 1 ON //M4 Base Conveyor 2 ON //Y2 Stop blade up
1 2 3 4 5	M1 M2 M3 Y4 Y5	O_Lid_Conveyor1_ON O_Base_Conveyor1_ON O_Base_Conveyor2_ON O_Stop_Blade_2 O_Close_Gipper	:BOOL; :BOOL; :BOOL; :BOOL;	/M1 Lid conveyor 1 ON //M3 Base conveyor 1 ON //M4 Base Conveyor 2 ON //Y2 Stop blade up //Y3 Close Gipper
1 2 3 4 5 6	M1 M2 M3 Y4 Y5 OX	O_Lid_Conveyor1_ON O_Base_Conveyor1_ON O_Base_Conveyor2_ON O_Stop_Blade_2 O_Close_Gipper O_Set_X	:BOOL; :BOOL; :BOOL; :BOOL; :REAL;	//M1 Lid conveyor 1 ON //M3 Base conveyor 1 ON //M4 Base Conveyor 2 ON //Y2 Stop blade up //Y3 Close Gipper //Set position X
1 2 3 4 5 6 7	M1 M2 M3 Y4 Y5 OX	O_Lid_Conveyor1_ON O_Base_Conveyor1_ON O_Base_Conveyor2_ON O_Stop_Blade_2 O_Close_Gipper O_Set_X O_Set_Z	:BOOL; :BOOL; :BOOL; :BOOL; :REAL;	/M1 Lid conveyor 1 ON //M3 Base conveyor 1 ON //M4 Base Conveyor 2 ON //Y2 Stop blade up //Y3 Close Gipper //Set position X //Set position Z