Eccentric press

Fischertechnik
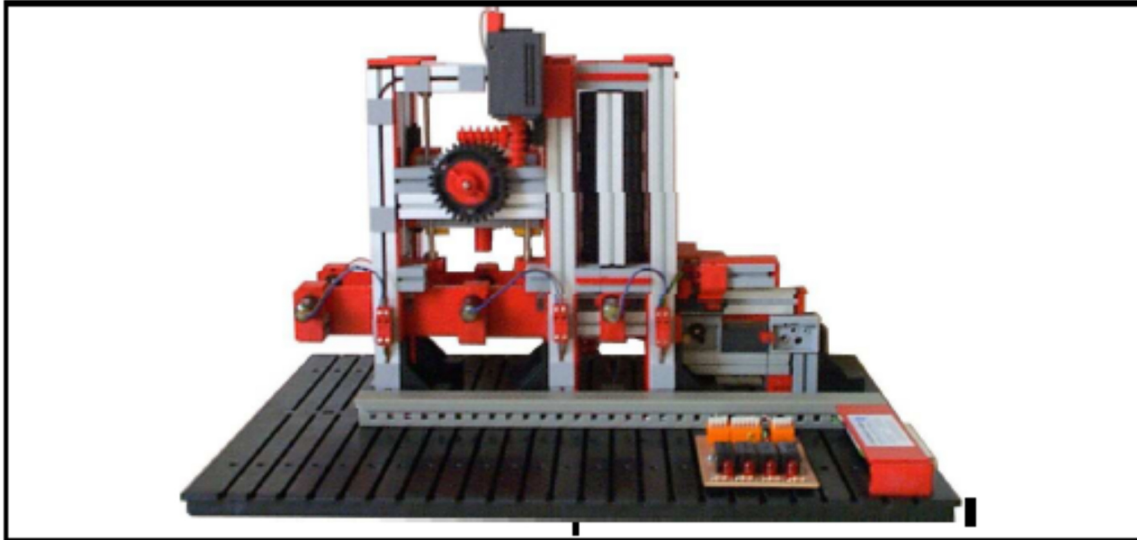
Technical description
translated V2.01

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1. General

1.1 Short description

The eccentric press model simulates a path-bounded press in column design, as used for example in forming technology. The eccentric press consists of the actual forming machine, a workpiece magazine and a slider for automatic insertion and removal of the workpieces.

In the simulation sequence, a workpiece is inserted from the magazine into the press, "processed" there and then pushed out to an unloading station. After the sequence is started by a two-hand control, the slider brings a workpiece from the magazine into the press chamber. When the workpiece is positioned, the press starts its working cycle. Consecutive to the pressing operation, the end of which is detected by a mechanical end switch in the upper dead center of the tappet, the slider transports the workpiece out of the press chamber to the unloading station. The position of the workpiece in the press as well as the detection of its presence in the magazine and at the unloading station is checked by a through-beam sensor.
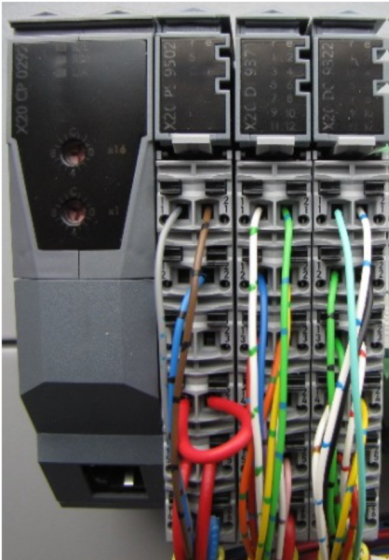
1.2 Prerequisites

Familiarity with Automation Studio from B&R.

1.3 Learning objectives

- Parameterization and assignment of variables on hardware
- Converting a project description into an executable program
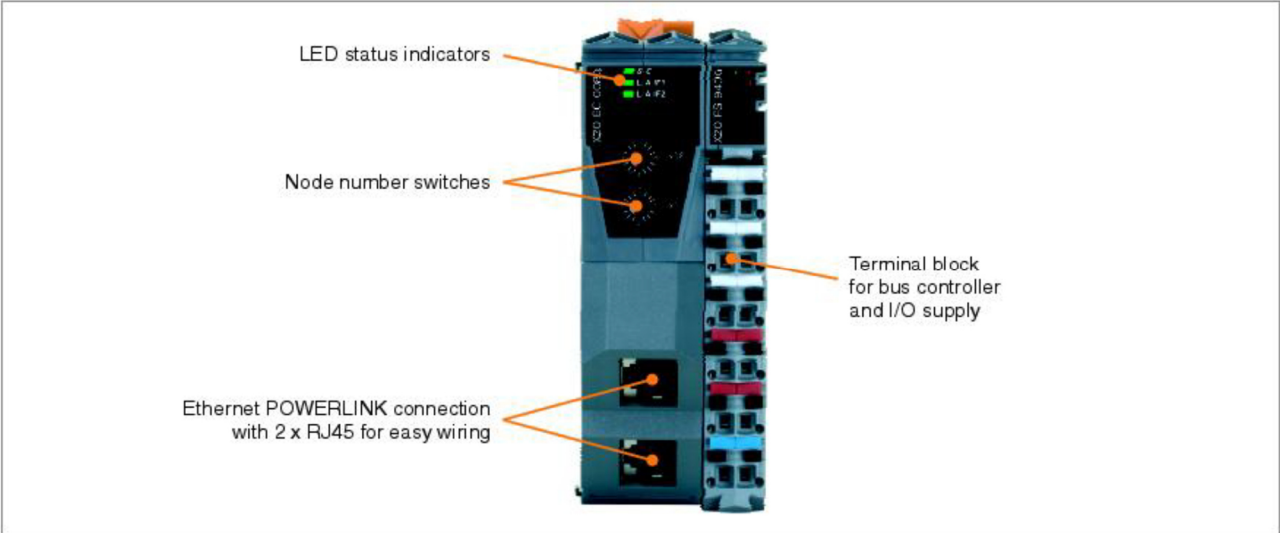- Creating a structured program
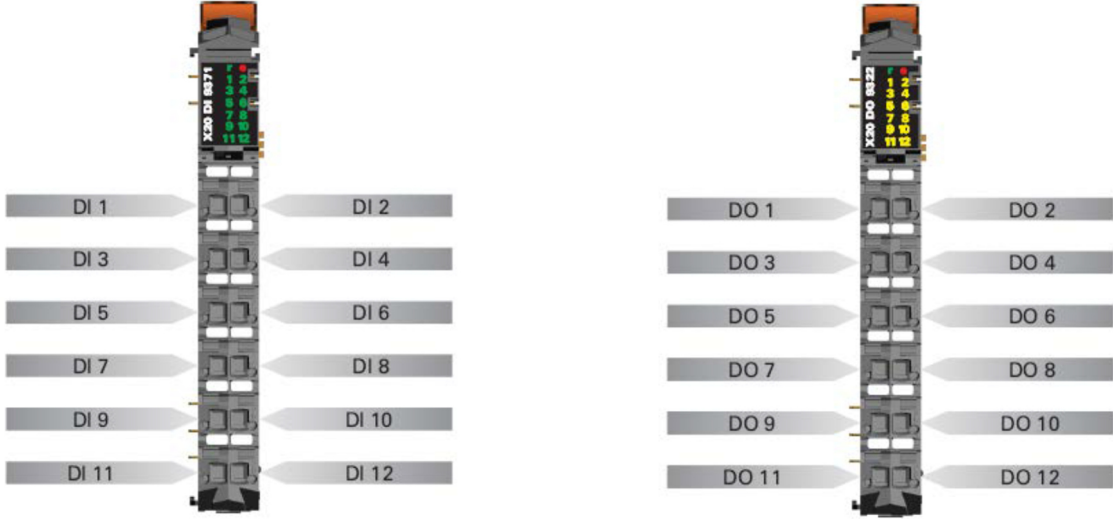
2. Module description

2.1 Structure

Slot	Module	Description
0	X20BC0083	PowerLink V2.0 receiver
1	X20PS9400	Supply module 24V
2	X20DI9371	Digital input module
3	X20DO9322	Digital output module

2.2 PowerLink

LED status indicators

Node number switches

Terminal block for bus controller and I/O supply

Ethernet POWERLINK connection with 2 x RJ45 for easy wiring

Station number	Description
$00	Reserved, setting not allowed
$01 - $EF	Free station numbers
$F0 - $FF	Reserved, setting not allowed

2.3 Input/output description

Module	Input	Output	Assignment	Notes
X20DI9371	E1		Slider at magazine	
	E2		Slider at press	
	E3		Slider at unloading station	
	E4		Start switch	
	E5		Press at lower end position	
	E6		Press at upper end position	
	E7		Workpiece in register	
	E8		Workpiece below press	
	E9		Workpiece at unloading station	
	E10			
	E11			
	E12			
X20DO9322		A1	Slider forwards	
		A2	Slider backwards	
		A3	Press drive	
		A4		
		A5		
		A6		
		A7		
		A8		
		A9		
		A10		
		A11		
		A12		

3. Notes