fischertechnik: Indexed Line with two Machining Stations
Station no. 96790

- Program design

| Slider input | Milling Machine | Drilling Machine | Slider Output |

Button · Button
Machine motor · Sensor
Machine motor · Sensor
Button · Motor · Button

Motor

Conveyer motor · Output sensor
Conveyer motor · Sensor

Input sensor · Motor

Motor

Conveyer Input

Conveyer Output
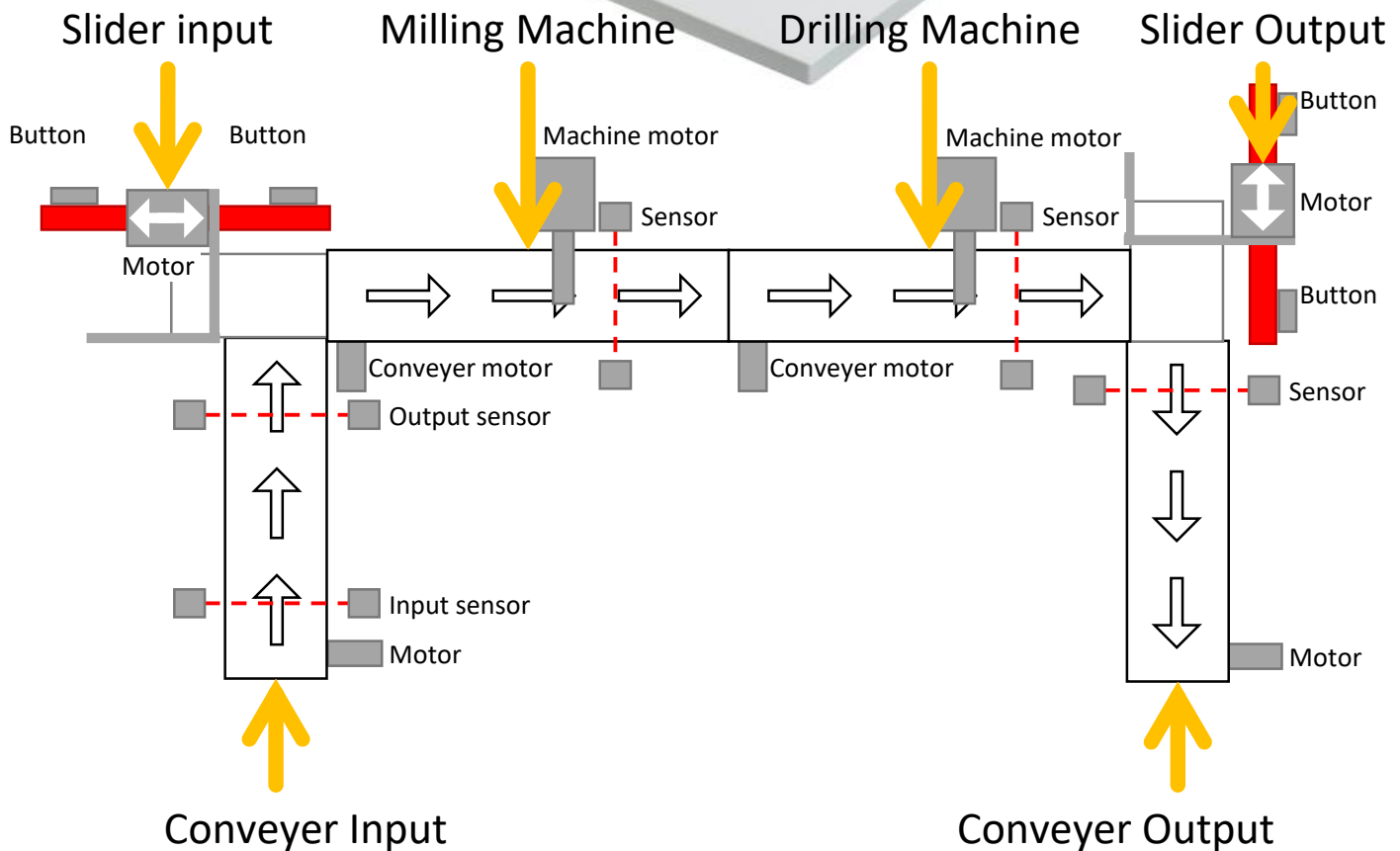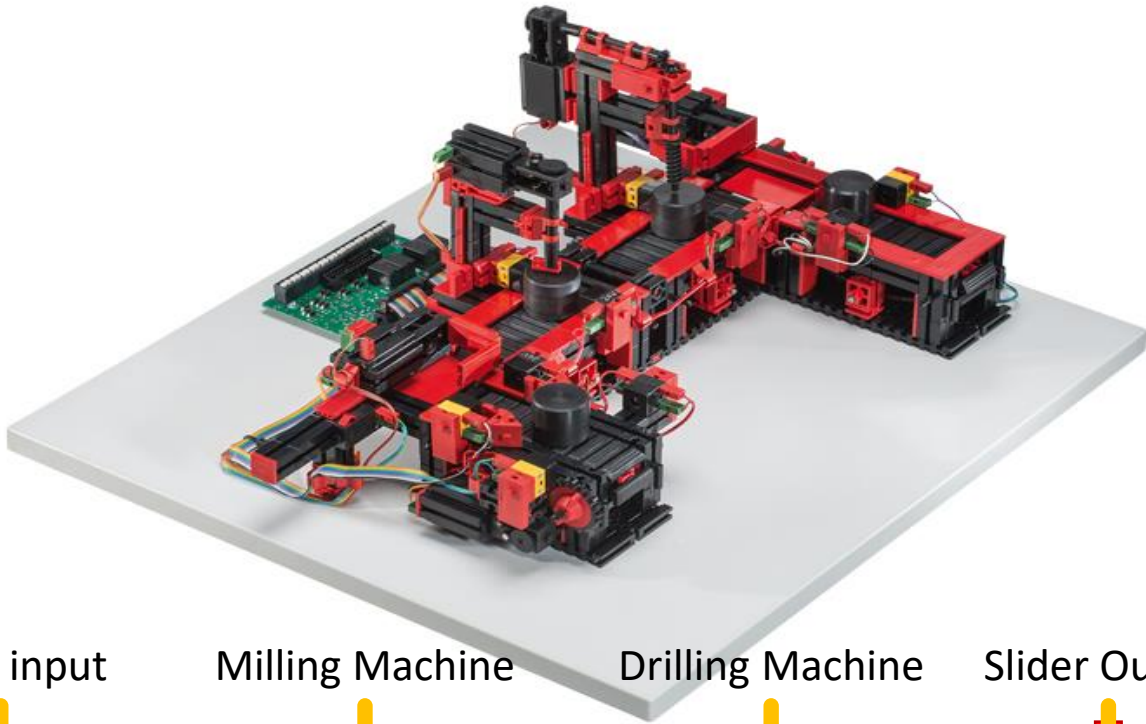
Program design

Each equipment module has similar control I/O

Each EM has similar control I/O, the most important (which are present on each EM) I/O's for controlling the equipment module are:

Wrting bits:
- xStart | Starts the program loop
- xSuspend | Suspends the program loop
- xTerminate | Stops the progam loop immediatly
- xErrorReset | Resets the Error bit

Reading bits:
- xReady | Ready bit, indicating the program loop can be started
- xDobe | Done bit, indicates EM has finished it's loop (only TRUE for one cyce)
- xError | Error bit, indicating an active error

asynchronous

Because of het similar control I/O its possible to have multiple pieces simultaneously in the fischerTechnik station.

The next equipment is activated on the xDone bit of the previous EM. A piece may not be brought to a next EM if the xReady bit of this next station is not TRUE.

Program design | State diagram

Piece placed

InputConveyer

Move piece to Slider_1

Only process if next EM = READY

Slider_1

Shifts piece onto milling machine

Only process if next EM = READY

MillingMachine

Performs proces on a piece, moves piece to drillingmachine

Only process if next EM = READY

DrillingMachine

Performs proces on a piece, moves piece to Slider_2

Only process if next EM = READY

Slider_2

Shifts piece onto output belt

Only process if next EM = READY

OutputConveyer

Moves piece to sensor, waiting to be removed by user.