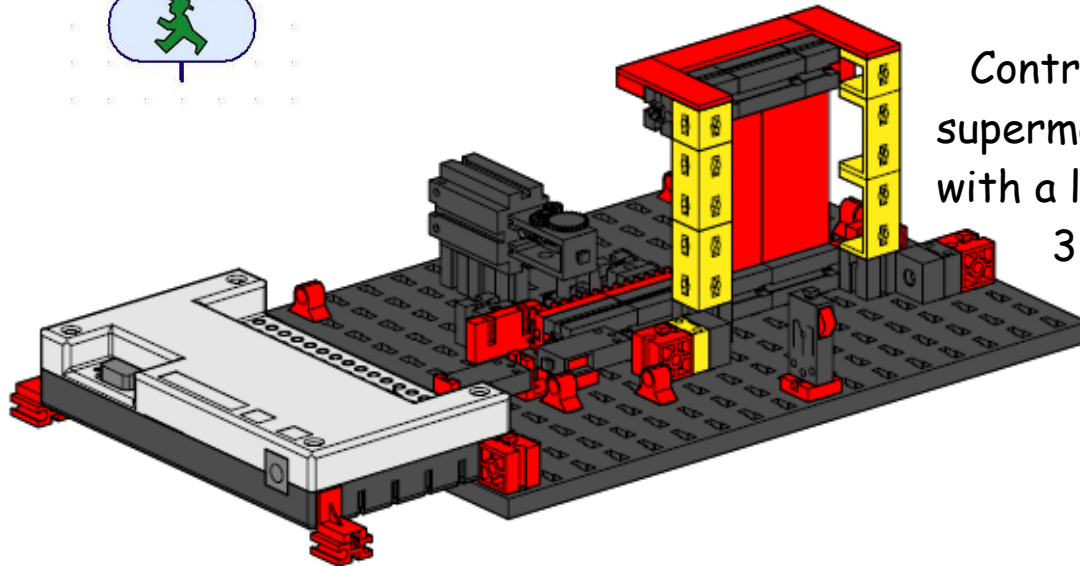


Robotics

Science 8



Model 4: The Sliding Door



Control a sliding supermarket door with a light beam and 3 switches.

Assemble the model:

Step 1: Build the Sliding Door Model as shown in these assembly instructions.

Step 2: Wire three pushbutton switches and one phototransistor to the **digital inputs I1 - I8** on the interface.

Step 3: Wire the 1 light and 1 motor to the **outputs M1 - M4** on the interface.

Programming Tasks:

Task 1: The door should slide open when the switch (I3) is pressed and released and then close 5 seconds later. The door should open each time the switch is pressed (loop the program).

Task 2: Your program needs to be modified; it seems that customers have been getting injured as the door closes on them! Expand the program to include the light barrier so that:

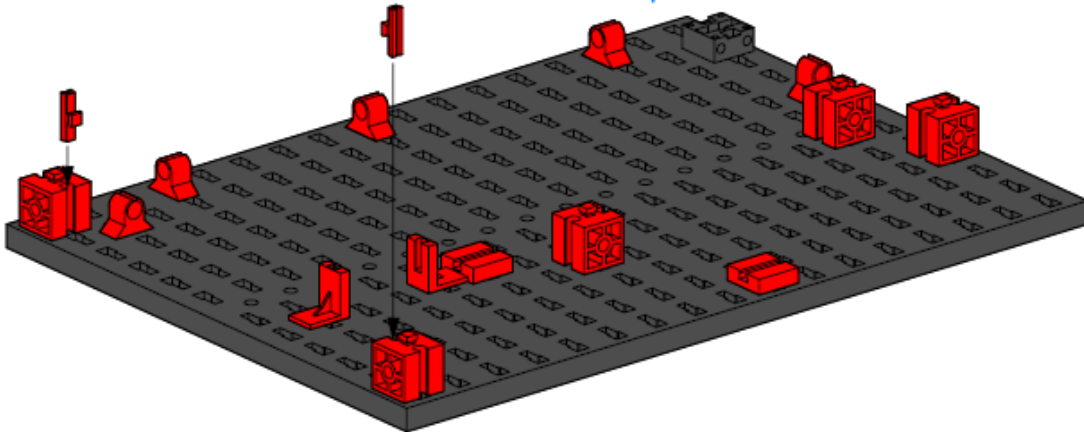
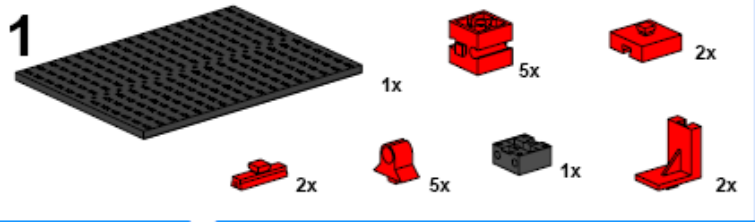
- The door will open as soon as the light barrier is interrupted, the switch (I3) does not need to be pressed. The door will close 5 seconds later if the conditions below are met.
- The door will only be closed when the light barrier is not interrupted.
- If the light barrier is interrupted while the door is closing, it will reopen.

Programming Tip: see Hand Dryer programming tips for programming the light barrier.

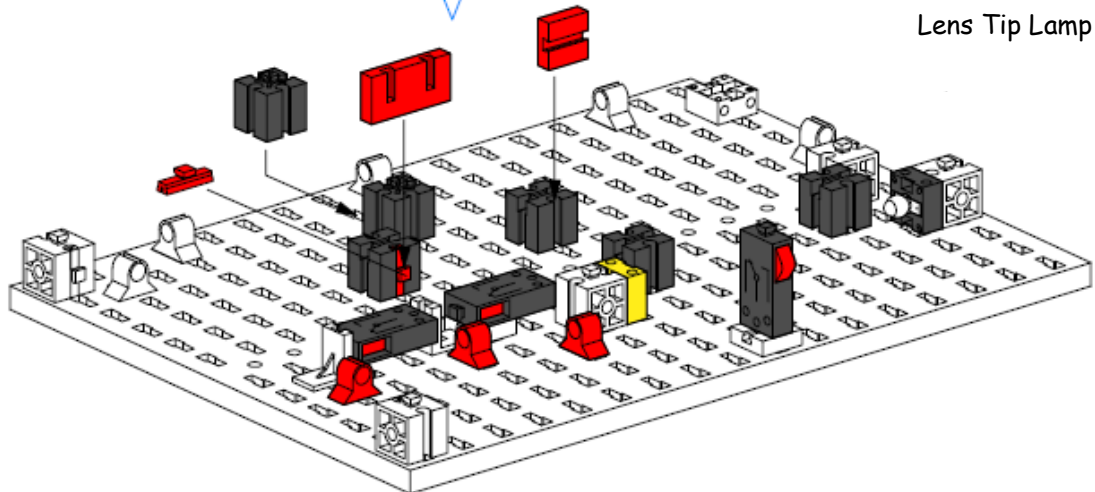
Model 4 - The Sliding Door

Assembly Instructions Page 1

1

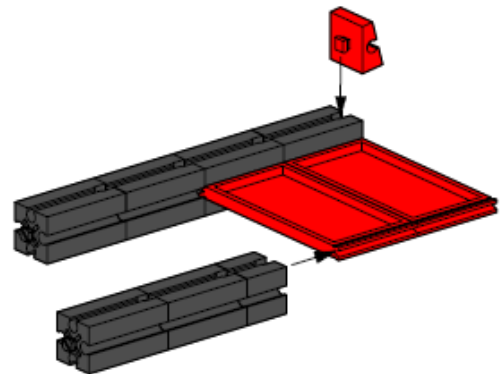
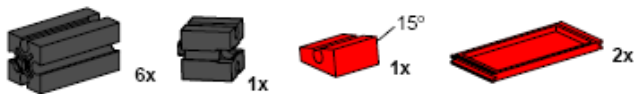


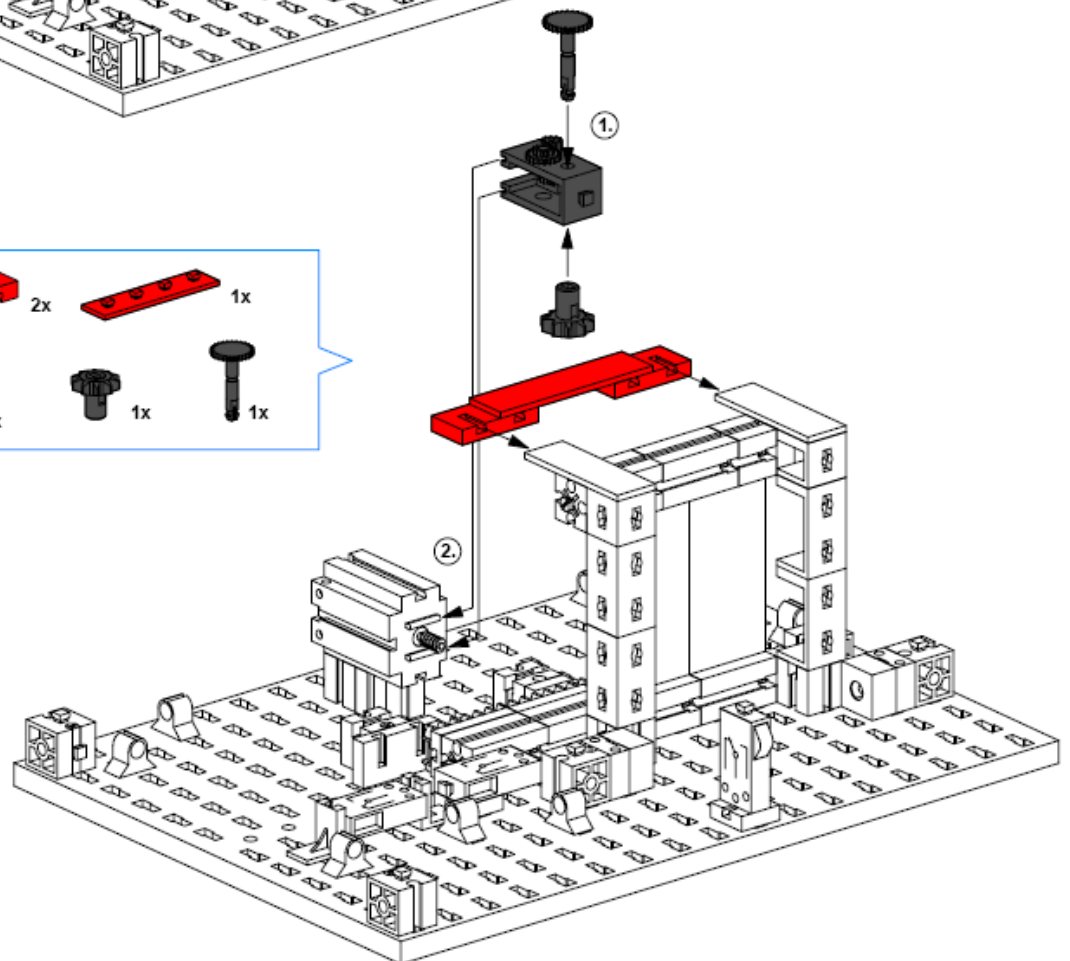
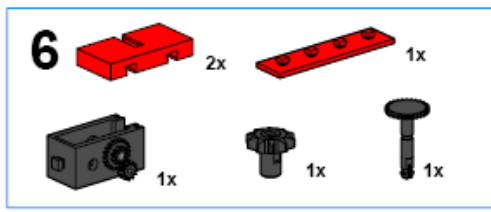
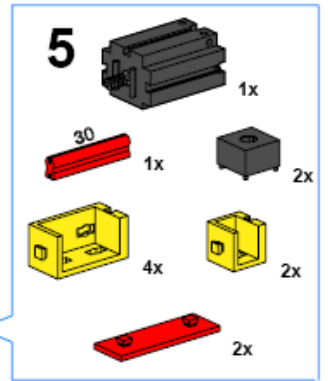
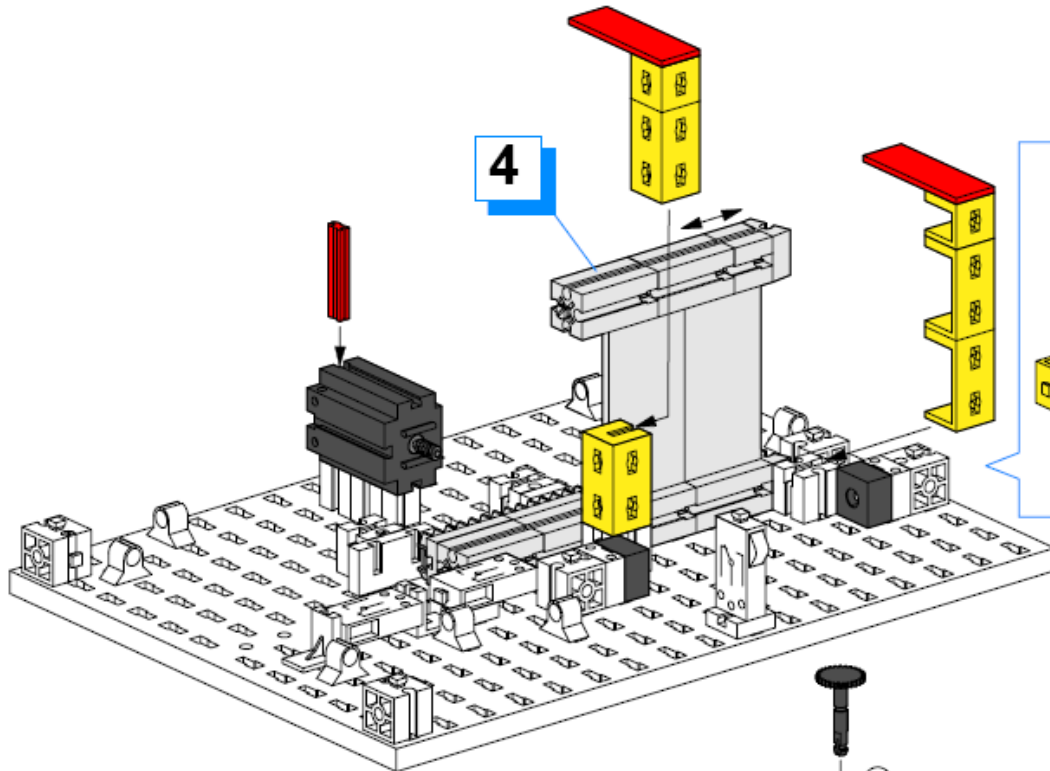
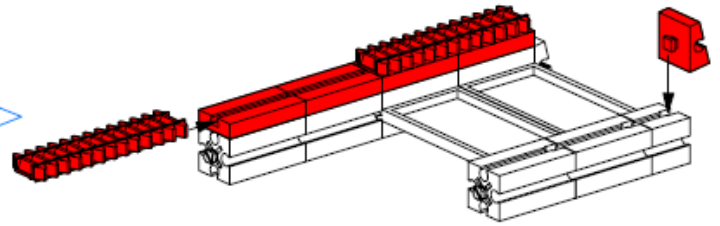
2



Lens Tip Lamp

3

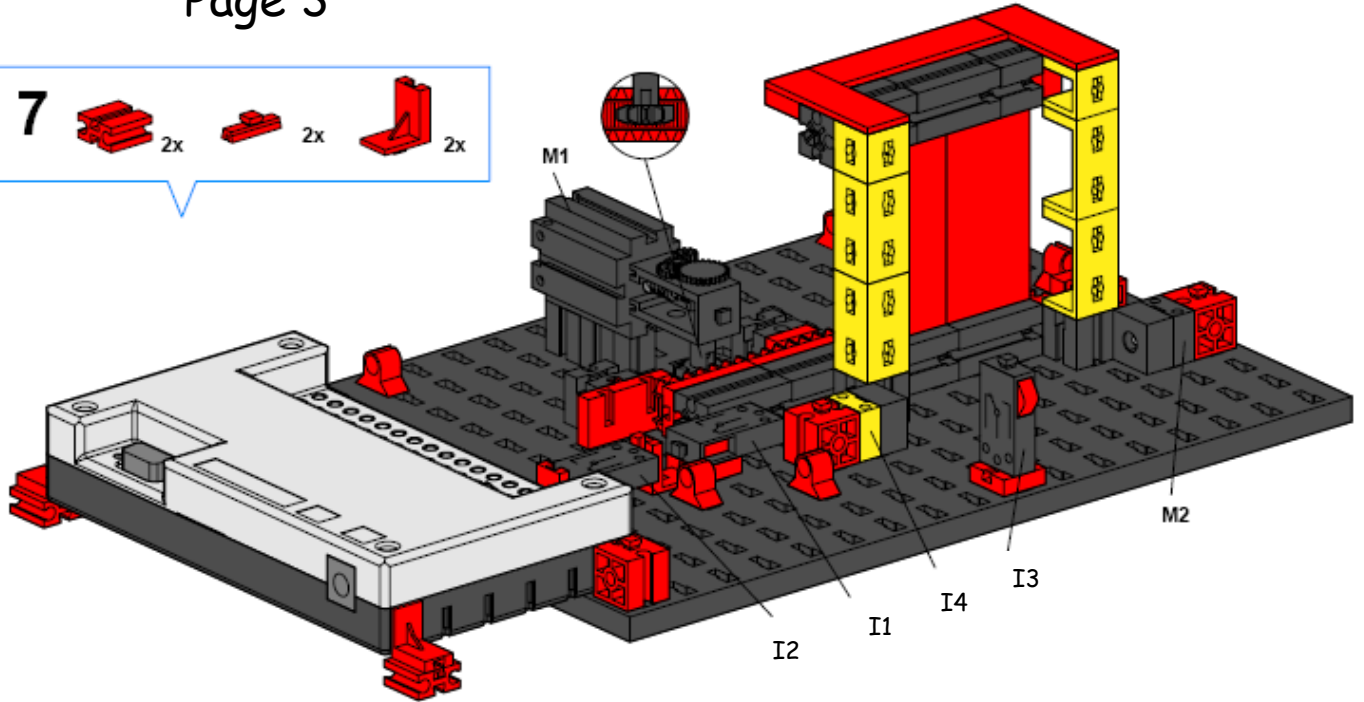
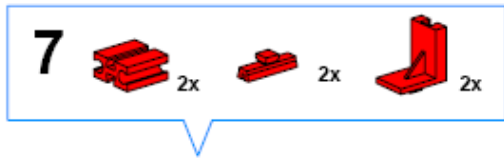




Assembly Instructions

Page 3

Model 4 - The Sliding Door



Wiring Diagram

Note: our interface looks a little different from this picture.

