

# V E R S A **B U I L T** R O B O T I C S



## VersaDoor Door Sensor Manual

Custom electrical connections

# VersaDoor Sensor Overview

## **VersaDoor Design**

VersaDoor is designed to be a simple, low-cost and easy to install door opener that can be adapted to a wide range of CNC machines. The VersaDoor uses common, low-cost pneumatic cylinders to actuate the door.

## **Optional Sensor Kit**

The open or closed position of the door can be detected using the optional door sensor kit. VersaDoor air cylinders have magnetic pistons, thereby enabling the addition of sensors to detect piston position. Two proximity sensors indicate the fully open or closed door position.

# VersaDoor Sensor Kit Components

Each VersaDoor Sensor Kit includes the following:

1. 2x sensors
  - PNP sourcing solid state switches
  - 5-30 VDC
  - Green Indicator Light
2. 2x cylinder sensor mount clamping bands
  - Strap wraps around air cylinder body
  - Strap connects like belt, with sensor secured with screw and nut
3. Cable to connect to Digital Inputs
  - M8 3-pin to 4-pin Y-Cable plus M8 4-pin cable (5-meters)
  - M8 4-wire cable end with 4 flying leads (5007644)
  - M8 4-wire cable end with M8 connector (5007633)



# VersaDoor Sensor Kit - Connecting signals

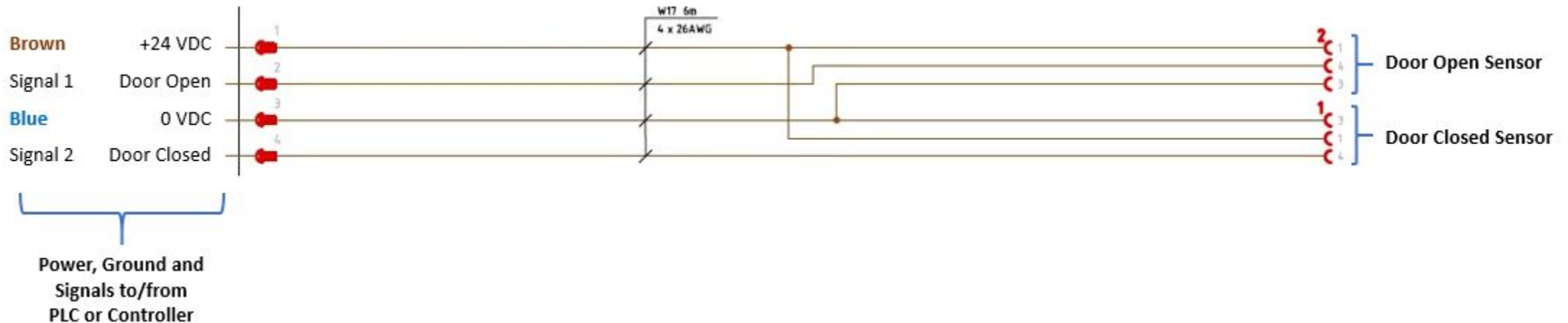
Electrical connections:

CNC Door Sensor Kit includes labeled signals:

- 24 VDC
- 0 VDC
- Signal 1 - Door Open
- Signal 2 - Door Closed

**\*Note:** Double Door setup:

- 2 sets of sensor kits, 2x 4-wire cables is recommended for separate door open and door closed signals
- Best practice: setup sensor signals with “AND” logic to PLC, controller or software such to ensure both doors are either open or closed



# Required Tools and Supplies

## Tools

- 7mm Wrench
- 2mm Hex Key

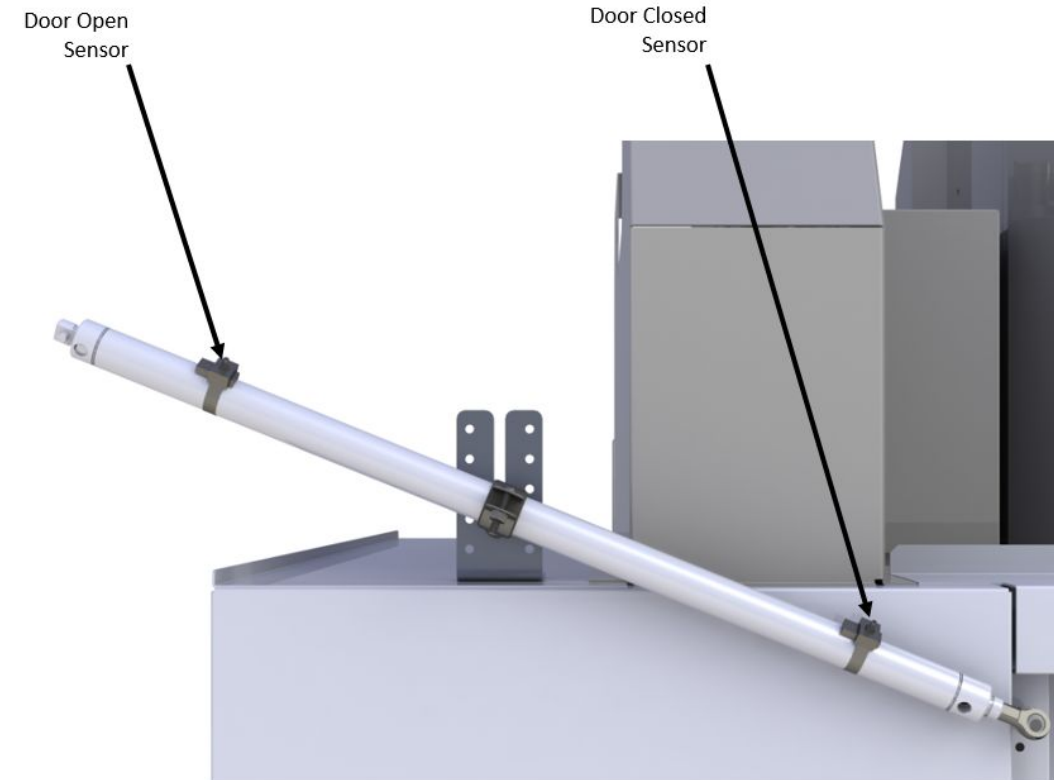
## Supplies

- Zip-ties

# VersaDoor Sensor Kit - Installation & Testing

After mounting VersaDoor to CNC and connecting sensors to 24v digital inputs:

1. Lightly secure sensors to air cylinder with clamping bands
2. Position 2 sensors at the ends of the cylinder, for detecting door open and door closed positions
3. Fully open the CNC door
4. Adjust the Door Open Sensor until the Green LED is illuminated and then secure the sensor in place
5. Close the CNC door then adjust the Door Closed Sensor until the Green LED is illuminated and then secure the sensor in place
6. Test multiple open/close cycles to make certain the sensors are secure and illuminating at open and close



# VersaDoor Sensor Kit

For further information or questions, please visit [www.versabuilt.com](http://www.versabuilt.com) or contact us at [helpdesk@versabuilt.com](mailto:helpdesk@versabuilt.com)