

Installation

Install the Safety Label

The safety label must be installed on Q4X sensors that are used in the United States.



Note: Position the label on the cable in a location that has minimal chemical exposure.

1. Remove the protective cover from the adhesive on the label.
2. Wrap the label around the Q4X cable, as shown.
3. Press the two halves of the label together.

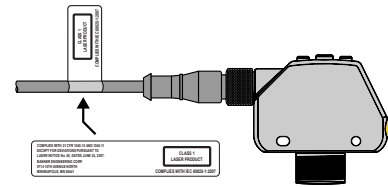


Figure 4. Safety Label Installation

Sensor Orientation

Optimize detection reliability and minimum object separation performance with correct sensor-to-target orientation. To ensure reliable detection, orient the sensor as shown in relation to the target to be detected.

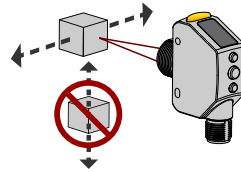


Figure 5. Optimal Orientation of Target to Sensor

See the following figures for examples of correct and incorrect sensor-to-target orientation as certain placements may pose problems for sensing some targets. The Q4X can be used in the less preferred orientation and provide reliable detection performance; refer to the *Performance Curves* for the minimum object separation distance required for each case.

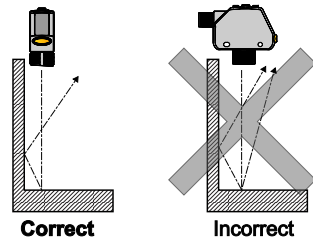


Figure 6. Orientation by a wall

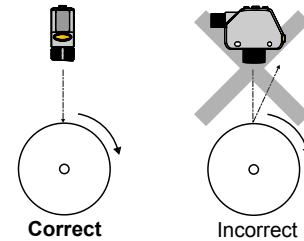


Figure 7. Orientation for a turning object

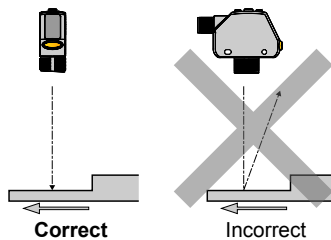


Figure 8. Orientation for a height difference

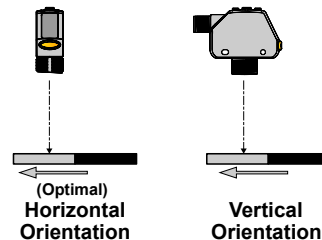


Figure 9. Orientation for a color or luster difference

Mount the Sensor

1. If a bracket is needed, mount the sensor onto the bracket.
2. Mount the sensor (or the sensor and the bracket) to the machine or equipment at the desired location. Do not tighten the mounting screws at this time.
3. Check the sensor alignment.
4. Tighten the mounting screws to secure the sensor (or the sensor and the bracket) in the aligned position.

Wiring Diagram

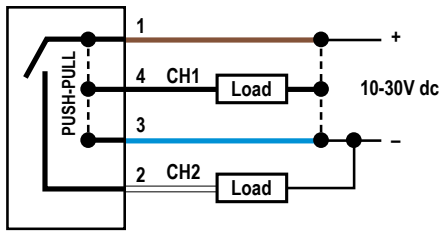


Figure 10. Channel 2 as PNP discrete or PFM output

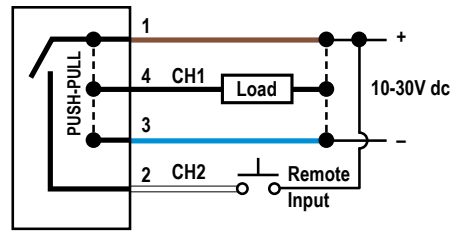
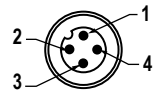


Figure 11. Channel 2 as remote input



- Key
- 1 = Brown
 - 2 = White
 - 3 = Blue
 - 4 = Black



Note: Open lead wires must be connected to a terminal block.



Note: The Channel 2 wire function is user-selectable. The default for the wire is PNP output. See the Instruction Manual for details regarding use as remote input or PFM output.

Cleaning and Maintenance

Handle the sensor with care during installation and operation. Sensor windows soiled by fingerprints, dust, water, oil, etc. may create stray light that may degrade the peak performance of the sensor. Blow the window clear using filtered, compressed air, then clean as necessary using water and a lint-free cloth.

Sensor Programming

Program the sensor using the buttons on the sensor or the remote input (limited programming options).

In addition to programming the sensor, use the remote input to disable the buttons for security, preventing unauthorized or accidental programming changes. See the Instruction Manual, p/n 190074 for more information.

Setup Mode

Access Setup mode and the sensor menu from Run mode by pressing and holding MODE for longer than 2 seconds. Use

⊕ and ⊖ to navigate through the menu. Press SELECT to select a menu option and access the submenus. Use ⊕ and ⊖ to navigate through the submenus. Press SELECT to select a submenu option and return to the top menu, or press and hold SELECT for longer than 2 seconds to select a submenu option and return immediately to Run mode.

To exit Setup mode and return to Run mode, navigate to **End** and press SELECT.



Note: The number that follows a menu option, for example **ech1**, indicates the channel that is selected. For menu items without a number (excluding submenu items), these menu options are only available from Channel 1 and the settings apply to both channels.