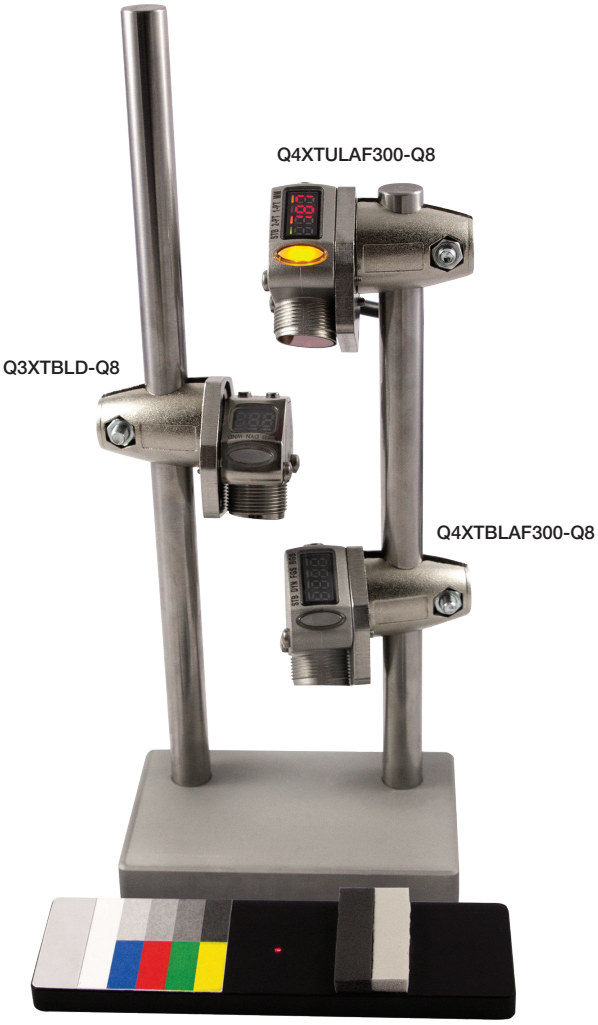
Q4X-Analog Laser Sensor Demo Upgrade Kit (DK-Q4XTU)



Q4X Analog Features

- Solves difficult measurement based applications regardless of target surface reflectivity
- Reliable sensing range of 25 mm (0.98 in) to 300 mm (11.81 in)
- Angled four-digit display with submillimeter resolution is easily viewed from multiple vantage points
- FDA grade stainless steel, chemically-resistant material and laser marked sensor information withstands aggressive cleaning procedures

Demo Kit Components (PN 94972 Model DK-Q4XTU)

Models	Description
Q4XTULAF300-Q8	Q4X Sensor (p/n 94691)
SMBQ4XFAM12	Bracket (p/n 91547)
	Demo Kit Setup Card (p/n 186994)
	Q4X Analog Sell Sheet (p/n 186571)
	Q4X Analog Quick Start Guide (p/n 185623)

Q4X: Prepare the Demo

- Install the Q4X and bracket on the DK-Q4X-Q3X demo stand as pictured and apply power to the sensor.

Restoring factory defaults assures correct sensor performance and provides an opportunity to highlight the display, configuration options and buttons. Be sure to reinforce the flexibility and ease of custom configuration, the straightforward display and the tactile response of the buttons. These all provide a great customer interface experience.

Return the sensor to factory defaults

1. Push and hold the MODE button for two seconds until tch appears on the display.
2. Scroll through the display by pushing + until rSET appears.
3. Push SELECT then push − to see YES on the display, then push SELECT again
4. The display will flash to acknowledge the sensor was returned to factory defaults

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Prove the Q4X is Simple to Program

Two-Point Teach works well when both the near and far conditions will be set independently. One-Point Teach works well when you have a reference position and want to teach the window around that center point. Mention the 25-300 mm sensing range, and the ability to change performance parameters with only a few clicks.

Basic Demo: Two Point TEACH

1. Put the target piece on stable surface, such as a tabletop, and explain how the display is showing the distance measured from the sensor face to the target.
2. Push and hold the center (TEACH) for two seconds. SEt 0 V will appear. Note: The order you teach the targets defines the analog slope.
3. Align the beam on the table top and push (TEACH). The 0 V distance will flash, and then SEt 10 V will appear.
4. Present the demo target piece and align the beam on the black foam and push (SELECT) again.
5. The 10 V distance flashes, and the Q4X returns to run mode. Move the target piece back and forth in front of the sensor. The table, black plastic demo target, and foam on demo target will all show different distance.
6. Now push (DISP) for two seconds. diSt will appear. Push (+) until AOut appears, then push (SELECT) again. The sensor will now return to run mode.
7. Move your target piece back and forth in front of the sensor. The analog output values for the tabletop, black target piece and foam will now appear on the display.
8. From run mode, push (+) once to display or manually edit the taught 10 V value. Push (−) or (+) to adjust the location of the 10 V setting. Push (SELECT) to confirm the new setting, or the display will automatically return after several seconds. Clicking (−) will allow the same manual adjustment of the 0 V setting. These manual adjust options are useful for setting the analog output without having to present multiple targets.

Basic Demo: One Point TEACH

9. Push and hold (MODE) for two seconds to enter the sensor menu. The display will show tch.
10. Push (SELECT), then push either (+) or (−) until 1-Pt appears.
11. Push and hold (SELECT) for two seconds to choose 1-pt teach mode and return the sensor to run mode.
12. Put the black target piece on stable surface, such as a tabletop.
13. Push and hold (TEACH) for two seconds. SEt 5 V will appear.
14. Align the beam on the black target piece and push (TEACH). The 5 V distance will flash, and the sensor will return to run mode.
15. Move your target piece back and forth in front of the sensor. The analog output values for the tabletop, black target piece, and foam will now appear on the display.
16. From run mode, click (−), The display will show SPAN and then a distance. Clicking (+) or (−) will manually adjust the analog output window size. The window size can be set prior to, or any time after initiating a 1-pt teach. Hold (+) until window size is increased to 100 mm. Click (SELECT) to confirm the new setting, or the display will automatically return after several seconds. Note that clicking (+) from the run mode will allow for manually adjusting the 5 V location.
17. Move your target piece back and forth in front of the sensor. Notice that the analog output has changed to reflect the new scaling defined by the analog output window size.

Now, shift the sensor's zero point to the taught distance. This setting is useful when you want the sensor to display the height of the object it is measuring relative to the background. This can be very intuitive for users, and provides measurement feedback for operators.

Advanced Demo: Two-Point TEACH

1. Restore the sensor to factory defaults. Hold (MODE) for two seconds, push (−) until rSEt appears, push (SELECT) once, click (−) until YES appears and push (SELECT). The sensor returns to run mode.
2. Push (MODE) and hold for two seconds to enter the sensor menu.
3. Push (+) four times until ZEro appears. Push (SELECT) and then (−). FAr will appear. Push (SELECT) to set the zero reference at 300 mm from the face of the sensor. The displayed distance value will now increase as a target gets closer to the sensor.
4. ZEro will be shown on the display. Push (+) to ShFt. Push (SELECT) and then (+). on will appear. Push (SELECT). During the next teach, the displayed measurement will change as the zero reference will be set at the taught distance.
5. Push (+) four more times. End will appear. Push (SELECT) to save these changes and return to run mode. Note that the display now shows 300 minus the previously measured distance.
6. Perform a Two-Point teach, teaching the table top first and the foam second, similar to *Basic Demo Two Point TEACH*.
7. Move the demo target to show the display distance is now relative to the tabletop. When measuring the plastic or foam target, the displayed distance will be equal to the height of the target.

Advanced Demo: One-Point TEACH

8. Push and hold (MODE) for two seconds to enter the menu. The display will show tch. Push (SELECT), then push either (+) or (−) until 1-Pt appears. Push and hold (SELECT) for two seconds to choose 1-pt teach mode and return the sensor to run mode.
9. Push and hold the center (TEACH) for two seconds. SEt 5 V will appear. Align the beam on the black target piece and push (TEACH). The 5 V distance will flash, the sensor will return to run mode.
10. Move the demo target to show the display distance is now relative to the taught surface. When measuring the plastic or foam target, the displayed distance will be equal to the height of the target. This setting is useful when you want the sensor to display the height of the object it is measuring relative to the background.