

QX-830



Compact Industrial Laser Scanner

The QX-830 laser scanner combines flexible connectivity with high performance decoding capabilities to reliably read 1D barcodes in almost any automation environment. In addition to the Quick Connect System and X-Mode Technology, the QX-830 features IP54 industrial sealing and optional embedded Ethernet protocols.

High performance, simple connectivity, and the highest quality enclosure make the QX-830 an ideal laser scanner for any industrial application.

QX-830: At a Glance

- Scans/second: 300 to 1400
- Read Range: 1 to 30" (25 to 762 mm)
- Optional Embedded Ethernet TCP/IP & EtherNet/IP
- IP54 Enclosure

ESP ESP® Easy Setup Program: Single-point software solution provides quick and easy setup and configuration of all Omron Microscan readers.

EZ EZ Button: This performs reader setup and configuration with no computer required.

GOOD READ Visible Indicators: Performance indicators include "good read" green flash and LEDs.

QX QX Platform: Quick Connect system and X-Mode technology combine to provide simple connectivity, networking, and high performance decoding.

For more information on this product, visit www.microscan.com.

QX-830: Available Codes



Quick Connect System

- M12 connectors and cordsets
- Plug and play setup
- Single or multi-scanner solutions

X-Mode Technology

- Decodes damaged, poorly printed, or misaligned codes
- Ensures high read rates and throughput

High Performance

Aggressive decoding capabilities allow reliable reading of barcodes out to 30" (762 mm), at up to a 10" (254 mm) beam width.

Ethernet Protocols

The QX-830 includes optional embedded Ethernet TCP/IP and EtherNet/IP for high speed communication.

Real-time Feedback

Visible LED indicators on the side of the scanner and a "good read" green flash projecting from the front window provide confirmation of the scanner's performance. The green flash is visible within a complete 360 degree radius from the scanner.

Flexibility

The compact size of the QX-830 allows flexible positioning for a variety of applications.

Application Examples

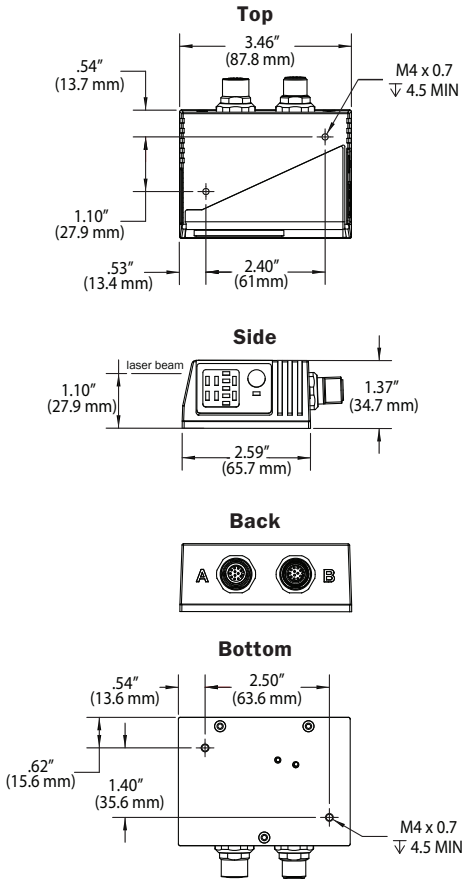
- Any industrial environment from light to heavy duty
- Conveyor lines
- Packaging and sortation
- Electronics production
- Embedded within machinery

QX-830 COMPACT INDUSTRIAL LASER SCANNER

SPECIFICATIONS AND OPTIONS

MECHANICAL

Depth: 2.59" (66 mm)
Width: 3.47" (88 mm)
Height: 1.38" (35 mm)
Weight: 7.5 oz. (212 g)



READ RANGES¹

LOW DENSITY RANGE DATA

| Narrow-bar-width | Read Range |
|-------------------|---------------------------|
| .0075" (0.191 mm) | 10 to 12" (254 to 305 mm) |
| .010" (0.254 mm) | 7 to 16" (178 to 406 mm) |
| .015" (0.381 mm) | 6 to 19" (152 to 483 mm) |
| .020" (0.508 mm) | 5 to 22" (127 to 558 mm) |
| .040" (1.02 mm) | 4 to 30" (102 to 762 mm) |

MEDIUM DENSITY RANGE DATA

| | |
|-------------------|----------------------------|
| .0075" (0.191 mm) | 2.5 to 5.5" (64 to 140 mm) |
| .010" (0.254 mm) | 1.5 to 7.0" (38 to 178 mm) |
| .015" (0.381 mm) | 1.5 to 8.5" (38 to 216 mm) |
| .020" (0.508 mm) | 1.5 to 11" (38 to 280 mm) |
| .030" (0.762 mm) | 1.0 to 12" (25 to 304 mm) |

HIGH DENSITY RANGE DATA

| | |
|-------------------|-----------------------------|
| .0033" (0.084 mm) | Call Omron Microscan |
| .005" (0.127 mm) | 4 to 5.0" (102 to 127 mm) |
| .0075" (0.191 mm) | 3.5 to 6.75" (89 to 171 mm) |
| .010" (0.254 mm) | 3.25 to 8" (82 to 203 mm) |
| .015" (0.381 mm) | 3.25 to 9" (82 to 228 mm) |

¹Ranges based on a Grade A, Code 39 label, at 500 scans per second. Data subject to change.

SCANNING PARAMETERS

Mirror Type: Rotating, 10-faceted
Optional Raster Mirror Image: 10 raster scan lines over a 2° arc (or 0.500" raster height at 8" [203 mm] distance)
Scan Rate: Adjustable from 300 to 1400 scans/sec; default is 500 scans/sec
Scan Width Angle: Typically 60°
Pitch: ±50° max. **Skew:** ±40° max.
Label Contrast: 25% min. absolute dark to light differential at 655 nm wavelength

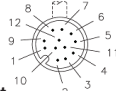
PROTOCOLS

Point-to-Point, Point-to-Point w/RTS/CTS, Point-to-Point w/XON/XOFF, Point-to-Point w/RTS/CTS & XON/XOFF, Multidrop, Daisy Chain, User-Defined Multidrop, Ethernet TCP/IP, EtherNet/IP

PIN ASSIGNMENTS

CONNECTOR A

M12 12-pin plug:



| Pin | Assignment |
|-----|---------------|
| 9 | Host Rx/D |
| 10 | Host Tx/D |
| 2 | Power |
| 7 | Ground |
| 1 | Trigger |
| 8 | Input Common |
| 3 | Default |
| 4 | New Master |
| 5 | Output 1 |
| 11 | Output 2 |
| 6 | Output 3 |
| 12 | Output Common |

CONNECTOR B

M12 12-pin socket:

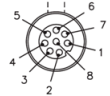


| Pin | Assignment |
|-----|-----------------|
| 9 | TxD/RTS |
| 10 | RxD/CTS |
| 2 | Power |
| 7 | Ground |
| 1 | Trigger |
| 8 | Input Common |
| 3 | Terminated |
| 4 | Input 1 |
| 5 | 422/485 TxD (+) |
| 11 | 422/485 TxD (-) |
| 6 | 422/485 RxD (+) |
| 12 | 422/485 RxD (-) |

ETHERNET CONFIGURATION

CONNECTOR B

M12 8-pin socket



Pin Assignment

| | |
|---|------------|
| 1 | Terminated |
| 2 | Terminated |
| 3 | Terminated |
| 4 | TX (-) |
| 5 | RX (+) |
| 6 | TX (+) |
| 7 | Terminated |
| 8 | RX (-) |

ELECTRICAL

Power Requirement: 10–28 VDC, 200 mV p-p max ripple, 180mA at 24 VDC (typ.)

ENVIRONMENTAL

Enclosure: Die-cast aluminum, IP54 rated
Operating Temperature: 0° to 50° C (32° to 122° F)
Storage Temperature: -50° to 75° C (-58° to 167° F)
Humidity: Up to 90% (non-condensing)

EMISSIONS

Heavy Industrial: EN 61000-6-2:2005
Radiated Emissions: EN 55022:2006 Class B 30-1000 MHz
Conducted Emissions: EN 55022:2006 Class B .15-30 MHz

COMMUNICATION INTERFACE

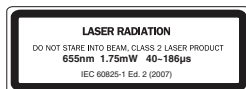
Interface: RS-232/422/485 or Ethernet

SYMBOLOGIES

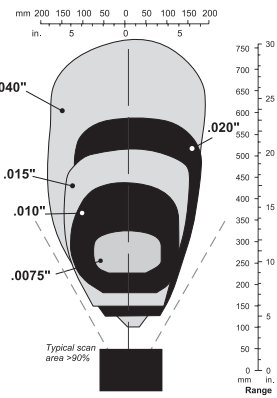
Standard: Code 39, Codabar, Code 93, Interleaved 2 of 5, Code 128, PDF417, Micro PDF417, Pharmacode, UPC, GS1 Databar
Applications Standard: UCC/EAN-128, AIAG

LASER LIGHT

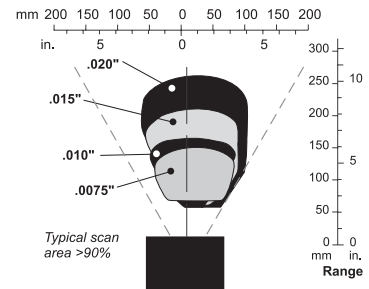
Type: Laser diode
Output Wavelength: 655 nm nominal
Operating Life: 50,000 hours @ 25° C
Safety Class: Visible laser: Class 2



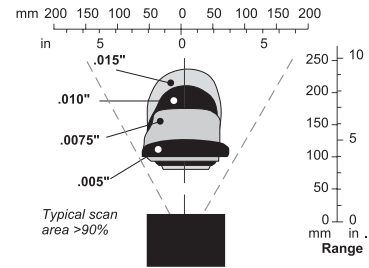
Low Density Scan Width



Medium Density Scan Width



High Density Scan Width



Note: Data subject to change.

DISCRETE I/O

Input 1: (Trigger/New Master): Optoisolated, 4.5–28V rated, (13 mA at 24 VDC) New Master is (-) to signal ground
Outputs (1, 2 & 3): Optoisolated, 1–28V rated, (I_{CE} <100 mA at 24 VDC, current limited by user)

QMS CERTIFICATION

www.microscan.com/quality

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Performance data is determined using high quality Grade A symbols per ISO/IEC 15415 and ISO/IEC 15416 in a 25° C environment. For application-specific results, testing should be performed with symbols used in the actual application. Omron Microscan Applications Engineering is available to assist with evaluations. Results may vary depending on symbol quality. **Warranty**—For current warranty information on this product, please visit www.microscan.com/warranty.

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