

Code Reader Group Catalog



1D / 2D
Code Verification

1D / 2D
Code Reader

Total solution from recognition to print quality verification

1D / 2D Symbols and Direct Part Marks

Linear (1D) barcodes have been in commercial use since the 1970s and are the most common symbologies used for automatic identification. Increasing numbers of manufacturers are using two-dimensional (2D) symbols, such as Data Matrix, that offer greater placement flexibility and increased data capacity.

Machine-readable symbols generally fall into the categories of linear barcodes, stacked symbols, 2D symbols and Optical Character Recognition (OCR) fonts. A few examples of each are shown below (symbologies are not to scale).

OMRON Microscan provides fast, reliable reading solutions for 1D and 2D Symbology Standards in the right and OCR. Our products read any linear barcodes or 2D symbols printed or marked by any means, and verify them to industry standards.

LINEAR BARCODES



Code 128



Code 39



Pharmacode



Code 93



Interleaved 2 of 5



UPC

STACKED SYMBOLOGIES



PDF417



GS1 DataBar (Stacked)



GS1 DataBar (Composite)



Micro PDF417

2D SYMBOLOGIES



Data Matrix



QR Code



Aztec Code



DotCode

DIRECT PART MARKS

Direct part marks (DPM) are typically 2D Data Matrix symbols permanently marked by such methods as dot peen or laser / chemical etch onto substrates including metal, plastic, rubber or glass. OMRON Microscan offers a comprehensive family of readers and verifiers with illumination and decode algorithms specifically designed for difficult direct part marks.



Thermal print on foil



Dot peen on metal



Laser etch on metal



Inkjet on ABS plastic

1D and 2D Symbology Standards

- **ISO / IEC 15416**
1D Print Quality Standard
- **ISO / IEC 15415**
2D Print Quality Standard
- **Automotive Industry Action Group: AIAG B-4**
Parts Identification and Tracking
- **U.S. Department of Defense: IUID MIL-STD-130**
Permanent and Unique Item Identification
- **Electronics Industry Association: EIA 706**
Component Marking
- **Clinical / Laboratory Standards Institute: AUTO2-A2**
Bar Codes for Specimen Container Identification
- **ISO / IEC 16022**
International Symbology Specification
- **ISO / IEC 15434**
Symbol Data Format Syntax
- **Society of Aerospace Engineers: AS9132**
Data Matrix Quality Requirements For Part Marking
- **AIM DPM / ISO 29158**
Direct Part Mark Quality Guideline

NOTE: Symbologies on this page are not shown to scale and are not intended for testing purposes.

OCR FONTS

| | | | |
|-------------------------------------|-------------------------------------|-------------------------------|-------------------------------------|
| OCR-A | OCR-B | MICR E-13B | SEMI M12 |
| 1234ABCD | 1 2 3 4 A B C D | 1 2 3 4 5 6 7 8 9 0 | 1234ABCD |
| Alphanumeric (+4 currency char.) | Alphanumeric (+4 currency char.) | Numeric (+4 special char.) | Alphanumeric (+4 currency char.) |

Barcode Verification and Label Inspection

Legible, accurate barcodes and text have never been more important than they are today. Inconsistencies in print quality can lead to process inefficiencies and downtime; unreadable barcodes may require re-labeling, re-scanning, or even manual entry of critical information by a human operator. Inconsistent quality may also result in expensive vendor non-compliance fines and other penalties, plus damage the labeled product's perceived quality.

Readability of barcodes is determined by how well a barcode reader can decode the data stored in the symbol. Understanding the primary reasons for decoding failures can save operators valuable time and effort when diagnosing reading issues. Once the cause of barcode unreadability is defined, it can be addressed by taking simple, preventative measures.

OMRON Microscan's barcode verifiers are embedded solutions that include camera, software, and precision illumination specifically designed for the verification of 1D / 2D codes and direct part marks to ISO / IEC standards.

Benefits of Barcode Verification Systems

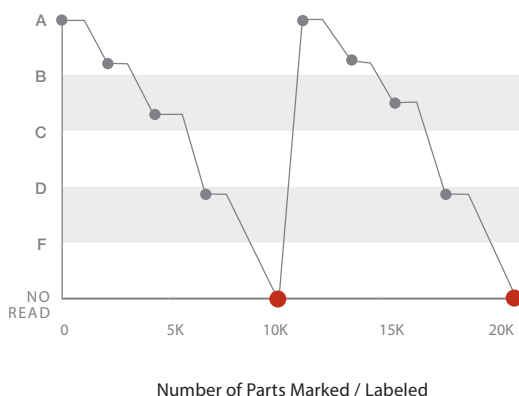
- Comply with symbol quality industry standards and directives
- Maximize efficiency of your manufacturing process
- Control quality in real time as you verify the output from your printer or code marking equipment
- Minimize returned goods due to bad labels
- Increase customer satisfaction
- Produce informative verification reports

THE IMPORTANCE OF VERIFICATION

Automated data capture is critical to a company's success, and the results of scanning failure can have a serious impact. Without verification, bad barcodes are not identified until they are unreadable. By the time a bad barcode is identified, thousands of poor-quality barcodes may have already escaped down the line. With verification, bad barcodes are prevented from being applied to the product, eliminating the chance for future failures.

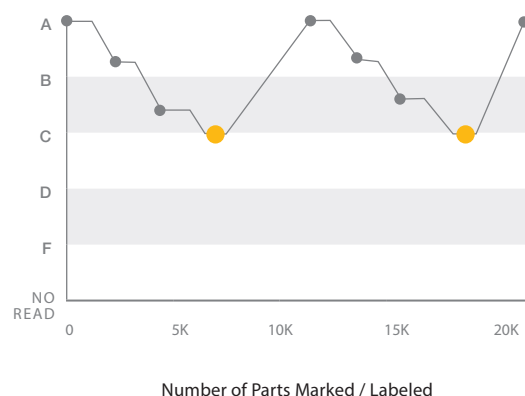
WITHOUT VERIFICATION

Barcode Quality Over Time:
Using a Reader to Check Quality



WITH VERIFICATION

Barcode Quality Over Time:
Using a Verification Solution to Check Quality



A wide range of products to suit your application



1D / 2D Code Recognition



Laser Barcode Readers

From small products for embedded OEM applications to rugged readers for industrial manufacturing environments, OMRON Microscan offers a wide range of quality products to read linear barcodes and stacked symbols, with features such as high-speed decoding, wide field of view, symbol reconstruction and aggressive decode algorithms.



MS-3 series

Compact raster laser barcode reader offers high-performance decoding and wide scan angle at close range.



QX-830 series

Compact laser barcode reader features QX platform, symbol reconstruction and Ethernet protocols.



QX-870 series

Programmable sweeping raster laser barcode reader with QX platform, symbol reconstruction and Ethernet protocols.

| | | | |
|----------------|--|--|--|
| Read Range | 51 to 254mm | 25 to 762mm | 25 to 762mm |
| Scans / Second | Up to 1000 | 300 to 1400 | 300 to 1400 |
| Power | 5 VDC | 10 to 28 VDC | 10 to 28 VDC |
| Sensor | Laser diode | Laser diode | Laser diode |
| IP Rating | IP54 | IP54 | IP65 |
| Connectivity | RS-232, RS-422 / 485 (up to 115.2k), Keyboard Wedge, USB | RS-232, RS-422 / 485 Ethernet TCP / IP or EtherNet / IP™ | RS-232, RS-422 / 485 Ethernet TCP / IP or EtherNet / IP™ |

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Handheld Code Readers

OMRON Microscan's handheld code readers feature the latest technology for decoding 1D and 2D symbols. From simple data tracking for inventory control to aggressive reading of the toughest direct part marks, we have a handheld solution for various track, trace, and control applications. These compact designs feature durable, shock-resistant enclosures that are disinfectant-ready.

Multi Code Readers



HS-360X series



V430-F series

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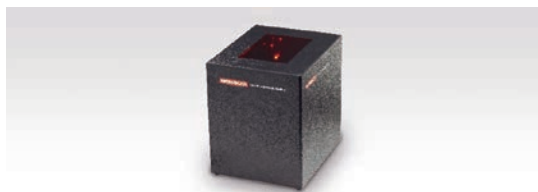


Print Quality Verification



Barcode Verification Systems

OMRON Microscan's LVS® Barcode Verifiers are fully-integrated off-line solutions designed for the verification of 1D and 2D symbols and direct part marks to application standards such as GS1, HIBC, USPS and ISO / IEC 15415 / 15416. Barcode Verification Kits offer flexible integration options for off-line to symbology standards or user-defined parameters.



LVS-9510 series

All-in-one desktop verifier for off-line ISO / IEC barcode verification.



LVS-958 series

All-in-one handheld verifier for flexible verification of multiple printed 1D / 2D symbols and direct part marks (DPM). Can be used with a tablet for portability.

| | | |
|----------------------|-----------------|---|
| 1D / 2D | ✓ | ✓ |
| DPM | | ✓ |
| GS1 Data | ✓ | ✓ |
| GS1 Certified Manage | ✓ | ✓ |
| Permissions | ✓ | ✓ |
| Field of View | Varies by model | Standard: Horizontal 76 mm, Vertical 57 mm DPM: 44 x 44 mm DPM-HD: 33 x 33 mm |

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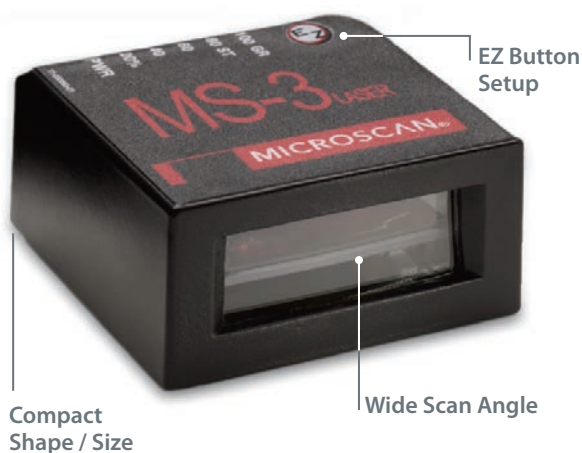
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OTHER FEATURES

- GS1 US® and 21 CFR Part 11 compliant-ready
- Verifies to over 20 global application standards and over 30 symbology types
- Enables U.S. FDA UDI (Unique Device Identification) compliance for Medical Device Manufacturers and Labelers
- Provides comprehensive and user-friendly barcode defect analysis to help guide corrections
- Includes a local report archive, as well as an external database interface to provide flexible quality reporting



Laser Barcode Reader

MS-3 series**Ultra-Compact
Laser Barcode Reader**

The MS-3 laser barcode reader offers the fastest read performance* in embedded compact bar code readers. The wide scan angle of 70 degrees is coupled with ultra-compact size and flexible mounting.

High performance and flexibility make the MS-3 the optimal choice for reliable reading in embedded instruments.

*Based on Omron investigation in march 2018.

MS-3: At a Glance

- Decodes / second: up to 1000
- Read Range: 51 to 254 mm
- Wide Scan Angle
- IP54 Enclosure



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



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

MS-3: Available Codes**Linear**

Please see the Ratings and Specifications for a complete list of supported symbologies.

Compact & Lightweight

44.5 mm square by 21.6 mm tall code reader weighs only 57 g for easy mounting onto robotic equipment or into tight spaces.

High Scan Speed

Adjustable scan speed from 300 up to 1000 decodes per second and OMRON Microscan's world-class decode algorithms ensure accurate reading every time.

Wide Scan Angle

The wide scan angle of over 70 degrees and a factory customizable focal point add up to space savings within your system, allowing greater flexibility with positioning.

Visible Indicators

Illuminated LEDs on top of the code reader provide visual confirmation of the code reader performance.

Real-time Controls

The inputs include a trigger signal, a "new master" input, and a programmable input for resetting counters or releasing outputs. The outputs can be configured to activate upon a variety of conditions including matchcode and diagnostic operations.

Application Examples

- Clinical instruments
- Bank ATMs
- Parking kiosks
- Point-of-sale terminals
- Robotics

Laser Barcode Reader MS-3 series

Ordering Information

Laser Barcode Readers

| Scan mode | Read range | Installation type | Model |
|-------------|--------------|-------------------|----------------|
| Single Line | Low Density | Standard | FIS-0003-0001G |
| | High Density | | FIS-0003-0002G |
| Raster Line | Low Density | Standard | FIS-0003-0003G |
| | High Density | | FIS-0003-0004G |
| Single Line | Low Density | Right Angle | FIS-0003-0005G |
| Raster Line | Low Density | Right Angle | FIS-0003-0007G |

Accessories

| Type | Model |
|---|----------------|
| MS-Connect 210, Connectivity Box with Display | FIS-0210-0001G |
| Relay Module, 120 VAC, 3 Amp Output, Series 70, Type SM, for MS-Connect 210 | 98-000013-04 |
| Relay Module, 240 VAC, 3 Amp Output, Series 70, Type SM, for MS-Connect 210 | 98-000013-05 |
| Relay Module, 24 VDC, 3 Amp Output, Series 70, Type SM, for MS-Connect 210 | 98-000013-06 |
| Cable, MS-3 to MS-Connect 210, 1.8 m (6 feet) | 61-000127-02 |
| IB-3PC Keyboard Wedge / Interface Box | FIS-0001-0030G |
| IC-3USB Interface Kit, USB to Serial 15-pin | 98-000051-01 |
| Converter, IC-332, 24 V / 5 V, Opto I / O for use with IB-131 | FIS-0001-0035G |
| IB-131 Interface Box | 99-000018-01 |
| Communication Cable, DB-25 Plug to DB-9 Socket, 1.8 m (6 feet) | 61-300026-03 |
| Communication Cable, DB-9 Socket to DB-9 Socket, 1.8 m (6 feet) | 61-000010-02 |
| IB-131 Daisy Chain Cable | 61-100029-03 |
| Photoelectric Sensor, M12, 4-pin Plug, NPN output, Cable length 2m | 99-9000016-01 |

Power Supplies

| Type | Model |
|---|--------------|
| Power Supply, 100-240 VAC, +5 VDC, 5-pin Plug, U.S. / Euro Plug | 97-000011-01 |
| Power Supply, 100-240 VAC, +5 VDC, 2-pin Plug, U.S. / Euro Plug | 97-000011-02 |
| Power Supply, 100-240 VAC, +24 VDC, TRK 3-pin, U.S. / Euro Plug | 97-000012-02 |

Note: Do not use the power supplies or power supply cords indicated in this catalog with any other electric or electronic equipment.
When using the MS-3 Series, please use the power supply and power supply cord indicated in this catalog.

Mounting and Connectors

| Type | Model |
|---|--------------|
| Mounting Arm / Adapter Kit for MS-3, 101 mm (4 inches) | 98-000048-01 |
| Mounting Stand Base Plate Kit | 98-000054-01 |
| Mounting Arm Extension Kit for MS-3, 101 mm (4 inches) | 98-000053-01 |
| Mounting Arm Extension Kit for MS-3, 76 mm (3 inches) | 98-000053-02 |
| Side Mount Bracket for MS-3 | 98-000060-01 |
| Angle Mount Bracket for MS-3 | 98-000059-01 |
| Through-Hole Mount Bracket for MS-3 | 98-000057-02 |
| Extended Right Angle Mirror for MS-3 | 98-000058-02 |
| Trigger Connector, 4-pin Plug (screw terminal and field wireable for custom wiring into IB-131) | 20-610024-01 |

Laser Barcode Reader MS-3 series

Ratings and Specifications

| | | |
|------------------------------|---------------------------|--|
| Applicable codes | | Code 39, Code 128, Interleaved 2 of 5, Codabar, Code 93, UPC / EAN, Pharmacode |
| Reading performance | Scan mode | Single line, fixed raster |
| | Scan rate | Adjustable from 300 to 1,000 scans / s, default=500 |
| | Scan width angle | >70° |
| | Pitch | ±50° |
| | Skew | ±40° |
| | Label contrast | 25% min. at 650 nm |
| Communications | Interface | RS-232, RS-422 / 485, USB |
| | Protocols | Point-to-Point, Point-to-Point w / RTS / CTS, Point-to-Point w / XON / XOFF, Point-to-Point w / RTS / CTS & XON / XOFF, Polling Mode D, Multidrop, User Defined, User Defined Multidrop, Daisy Chain |
| I / O specifications | Trigger input | 3 to 24 V rated (1 mA at 5 VDC) |
| | New Master | 3 to 24 V rated (1 mA at 5 VDC) |
| | Outputs (1, 2, 3) | 5 V TTL compatible, can sink 10 mA and source 2 mA |
| | Beeper | Good read, Match/Mismatch, Noread |
| | On / Off LEDs | 1 status, 1 power, 5 read performance (representing percentage of good decodes) |
| Power requirement | | 5 VDC±5%, 200 mV p-p max. ripple, 260 mA at 5 VDC (typ.) |
| Laser light | Type | Semiconductor visible laser diode (650 nm nominal) |
| | Safety class | IEC 60825-1 Class II, 1.0 mW max. |
| Environmental specifications | Ambient temperature range | Operating: 0 to 50°C, Storage: -40 to 75°C |
| | Ambient humidity range | Up to 90% (with no icing or condensation) |
| | Operating life | 40,000 hours at 25°C |
| | Degree of protection | IP54 (category 2) |
| Weight | Standard | Approx. 106 g |
| | Right Angle | Approx. 136 g |
| Safety standards | | FCC, UL/c UL, CE, KC, RCM, EAC, BIS |

HOST CONNECTOR / PIN ASSIGNMENTS

High Density 15 Pin D-sub Socket Connector

| Pin No. | Host RS-232 | Host / Aux RS-232 | Host RS-422 / 485 | In / Out |
|---------|------------------------------------|-------------------|-------------------|----------|
| 1 | Power +5 VDC | | | In |
| 2 | TxD | TxD | TxD(-) | Out |
| 3 | RxD | RxD | RxD(-) | In |
| 4 | Power / Signal Ground | | | |
| 5 | NC | | | |
| 6 | RTS | Aux TxD | TxD(+) | Out |
| 7 | Output 1 TTL ^a | | | Out |
| 8 | Default configuration ^b | | | In |
| 9 | Trigger | | | In |
| 10 | CTS | Aux RxD | RxD(+) | In |
| 11 | Output 3 TTL ^a | | | Out |
| 12 | New Master (NPN) | | | In |
| 13 | Chassis ground ^c | | | |
| 14 | Output 2 TTL ^a | | | Out |
| 15 | NC | | | |

a. Can sink 10 mA and source 2 mA.

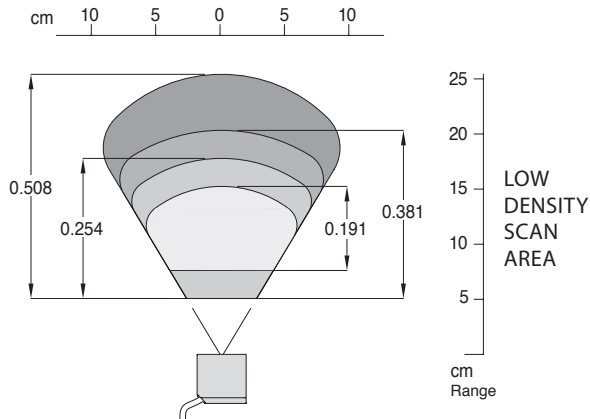
b. The default is activated by connecting pin 8 to ground pin 4.

c. Chassis ground: Used to connect chassis body to earth ground only. Not to be used as power or signal return.

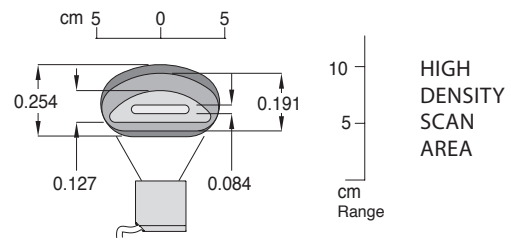
Laser Barcode Reader MS-3 series

Read Ranges

(Unit: mm)



| Narrow-bar-width | Read range |
|------------------|--------------|
| 0.191 mm | 76 to 152 mm |
| 0.254 mm | 51 to 178 mm |
| 0.381 mm | 51 to 203 mm |
| 0.508 mm | 51 to 254 mm |

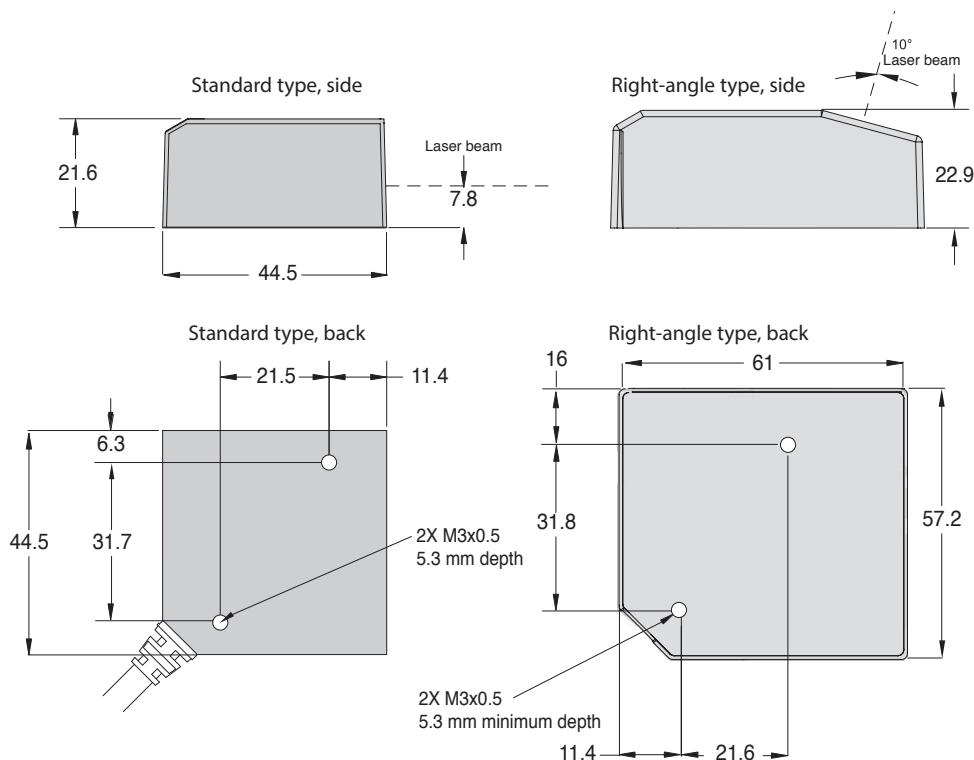


| Narrow-bar-width | Read range |
|------------------|----------------|
| 0.084 mm | Contact OMRON. |
| 0.127 mm | 51 to 79 mm |
| 0.191 mm | 43 to 94 mm |
| 0.254 mm | 38 to 102 mm |

Note: For Right Angle option, subtract 15 mm from read range. Read ranges are based upon optimal scan speed for specific symbol density.

Dimensions

(Unit: mm)



Laser Label Indications

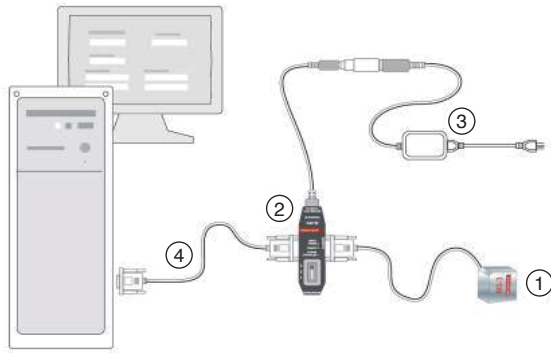
This warning label is attached to the laser barcode reader. Never remove this label or place objects in front of it.

Laser Barcode Reader MS-3 series

System Configurations

Stand Alone (5V)

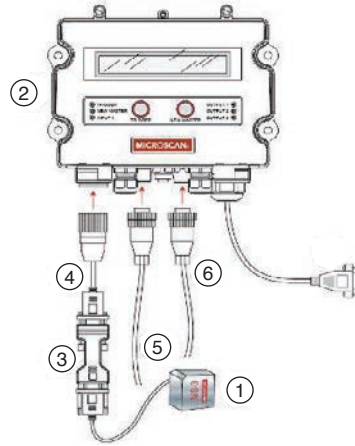
This is the basic setup for a single MS-3.



| No. | Type | Model |
|-----|---|----------------|
| 1 | MS-3 Laser Barcode Reader | FIS-0003-□□□□G |
| 2 | IB-3PC Keyboard Wedge / Interface Box | FIS-0001-0030G |
| 3 | Power Supply,100-240VAC,+5VDC, 5PIN, USA / EUR Plug | 97-000011-01 |
| 4 | Cable, Communication, DB-9 Socket-to-DB-9 Socket, 6 ft. | 61-000010-02 |
| - | Kit, Mounting Arm / Adapter, 4 in., for MS-3 | 98-000048-01 |
| - | Kit, Mounting Stand Base Plate | 98-000054-01 |

Stand Alone (10-28V)

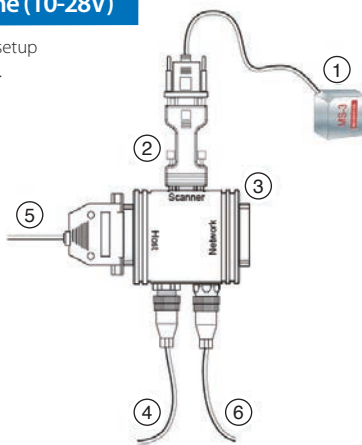
With MS-Connect 210
This is the basic setup for a single MS-3 and MS-Connect 210.



| No. | Type | Model |
|-----|--|----------------|
| 1 | MS-3 Laser Barcode Reader | FIS-0003-□□□□G |
| 2 | Connectivity Box A | FIS-0210-0001G |
| 3 | Converter, IC-332, 24V / 5V, Opto I / O, for Use with IB-131 | FIS-0001-0035G |
| 4 | Cable, MS-3-to-MS-Connect 210, 6 ft. | 61-000127-02 |
| 5 | Power Supply (100-240 VAC, +24VDC, TRK 3Pin, USA/Euro Plug) | 97-000012-02 |
| 6 | Photoelectric Sensor, M12, 4-pin Plug, NPN output, Cable length 2m | 99-9000016-01 |

Stand Alone (10-28V)

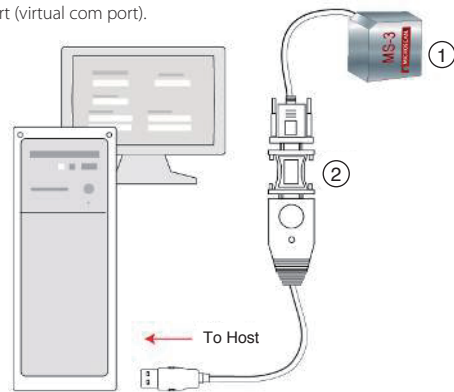
This is the basic setup for a single MS-3.



| No. | Type | Model |
|-----|--|----------------|
| 1 | MS-3 Laser Barcode Reader | FIS-0003-□□□□G |
| 2 | Converter, IC-332, 24V / 5V, Opto I / O, for Use with IB-131 | FIS-0001-0035G |
| 3 | IB-131 Interface Box | 99-000018-01 |
| 4 | Power Supply (100-240 VAC, +24VDC, TRK 3Pin, USA / Euro Plug) | 97-000012-02 |
| 5 | Cable, Communication, DB-25 Plug-to-DB-9 Socket, 6 ft. | 61-300026-03 |
| 6 | Photoelectric Sensor, M12, 4-pin Plug, NPN output, Cable length 2m | 99-9000016-01 |
| - | Kit, Mounting Arm / Adapter, 4 in., for MS-3 | 98-000048-01 |
| - | Kit, Mounting Stand Base Plate | 98-000054-01 |

USB

Allows the code reader to be powered and communicate via a USB port (virtual com port).



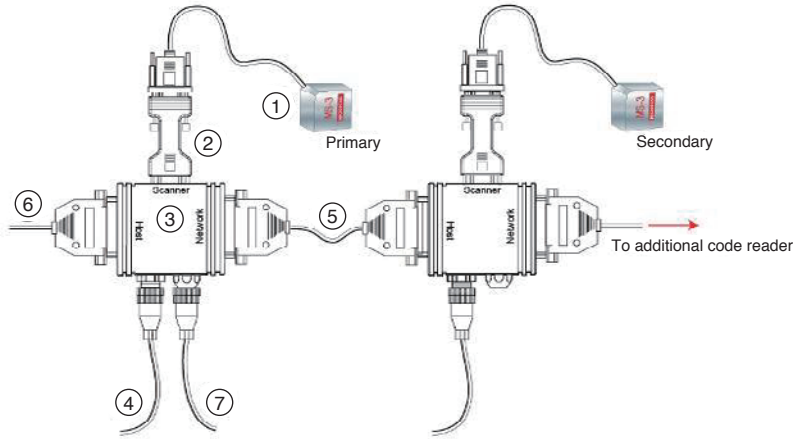
| No. | Type | Model |
|-----|--|----------------|
| 1 | MS-3 Laser Barcode Reader | FIS-0003-□□□□G |
| 2 | IC-3USB Interface Kit, USB-to-Serial, 15-Pin | 98-000051-01 |
| - | Kit, Mounting Arm / Adapter, 4 in., for MS-3 | 98-000048-01 |
| - | Kit, Mounting Stand Base Plate | 98-000054-01 |

Laser Barcode Reader MS-3 series

System Configurations

Daisy Chain

A primary code reader is linked directly to the host. Secondary code readers (up to 9) are linked in tandem. Data is sent from the primary code reader directly to the host.



| No. | Type | Model |
|-----|---|----------------|
| 1 | MS-3 Laser Barcode Reader | FIS-0003-□□□□G |
| 2 | Converter, IC-332, 24V / 5V, Opto I / O, for Use with IB-131 | FIS-0001-0035G |
| 3 | IB-131 Interface Box | 99-000018-01 |
| 4 | Power Supply (100-240 VAC, +24VDC, TRK 3Pin, USA / Euro Plug) | 97-000012-02 |
| 5 | Cable, Daisy Chain, IB-131 | 61-100029-03 |
| 6 | Cable, Communication, DB-25 Plug-to-DB-9 Socket, 6 ft. | 61-300026-03 |
| 7 | Photoelectric Sensor, M12, 4-pin Plug, NPN output, Cable length 2m. | 99-9000016-01 |
| - | Kit, Mounting Arm / Adapter, 4 in., for MS-3 | 98-000048-01 |
| - | Kit, Mounting Stand Base Plate | 98-000054-01 |

Laser Barcode Reader

Handheld Code Reader

Multi Code Reader

Code Verification System

Laser Barcode Reader

QX-830 series

Compact Industrial Laser Barcode Reader



The QX-830 laser barcode reader 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 barcode reader for any industrial application.

QX-830: At a Glance

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



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



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



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



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



Quick Connect System

- Plug and play setup
- Single or multi-code reader 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 762 mm, at up to a 254 mm beam width.

Flexibility

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

Real-time Feedback

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

Application Examples

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

QX-830: Available Codes

Linear



MicroPDF



PDF417



GS1 Databar



Stacked

Please see the Ratings and Specifications for a complete list of supported symbologies.

Ethernet Protocols

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

Laser Barcode Reader QX-830 series

Ordering Information

Laser Barcode Readers

| Scan mode | Read range | Interface | Model |
|-------------|------------------------------|------------------------|----------------|
| Single Line | Low Density | Serial *1 | FIS-0830-0001G |
| | Middle Density | | FIS-0830-0002G |
| | High Density | | FIS-0830-0003G |
| Raster Line | Low Density | Serial *1 | FIS-0830-0004G |
| | Middle Density | | FIS-0830-0005G |
| | High Density | | FIS-0830-0006G |
| | Low Density / Plastic Window | | FIS-0830-0010G |
| Single Line | Low Density | Serial *2 and Ethernet | FIS-0830-1001G |
| | Middle Density | | FIS-0830-1002G |
| | High Density | | FIS-0830-1003G |
| Raster Line | Low Density | Serial *2 and Ethernet | FIS-0830-1004G |
| | Middle Density | | FIS-0830-1005G |
| | High Density | | FIS-0830-1006G |
| | Low Density / Plastic Window | | FIS-0830-1010G |

*1. Supports RS-232, RS-422, or RS-485.

*2. Supports RS-232.

Accessories

| Type | Model |
|---|---------------|
| QX-1 Interface Device | 98-000103-02 |
| QX Cordset, Common, M12 12-pin Socket (Screw-On) to M12 12-pin Plug (Screw-On), 3 m | 61-000148-02 |
| QX Cordset, Common, M12 12-pin Socket (Screw-On) to M12 12-pin Plug (Screw-On), 1 m | 61-000162-02 |
| QX Cordset, Host, Serial, M12 12-pin Socket (Screw-On) to DB-9 Socket, 1 m | 61-000153-02 |
| QX Cordset, Host, Serial, M12 12-pin Socket (Screw-On) to DB-9 Socket, 3 m | 61-000164-02 |
| QX Cordset, Host, Serial, M12 12-pin Plug (Screw-On) to DB-9 Socket, 1 m | 61-000152-02 |
| QX Cordset, Host, Serial, M12 12-pin Plug (Screw-On) to DB-9 Socket, 3 m | 61-000165-02 |
| QX Cordset, Host, Ethernet, M12 8-pin Plug (Screw-On) to RJ45, 1 m | 61-000160-03 |
| QX Cordset, M12 12-pin Plug to M12 12-pin Socket to DB-25 Plug Turck Connectors | 61-000172-02 |
| QX Cordset, M12 12-pin Plug & M12 12-pin Socket to MS-Connect 210, RS-232, 2 m | 61-000158-03 |
| QX Cordset, M12 12-pin Plug (Screw-On) to Flying Leads, 3 m | 61-000166-02 |
| QX Cordset, M12 12-pin Plug & Socket to IB-131, RS-232, 2 m | 61-000159-03 |
| QX Cordset, M12 12-pin Socket to IB-131, RS-232/RS-485, 2 m | 61-000159-04 |
| Photoelectric Sensor, M12, 4-pin Plug, NPN output, Cable length 2m | 99-9000016-01 |

Power Supplies

| Type | Model |
|---|--------------|
| Power Supply, 100-240 VAC, +24 VDC, M12 12-pin Socket | 97-000012-01 |
| Power Supply, 100-240 VAC, +24 VDC, M12 12-Pin Plug | 97-000012-04 |

Note: Do not use the power supplies or power supply cords indicated in this catalog with any other electric or electronic equipment. When using the QX-830 Series, please use the power supply and power supply cord indicated in this catalog.

Mounting and Connectors

| Type | Model |
|---|--------------|
| Mounting Plate Kit for QX-830 / QX-870 | 98-500006-01 |
| Right Angle Mirror Kit for QX-830 | 98-200026-02 |
| Mounting Arm/Adapter Kit for QX-830 / QX-870, 152 mm (6 inches) | 98-000016-01 |
| Mounting Arm Extension Kit for all code readers, 152 mm (6 inches) | 98-000037-01 |
| L-Bracket Kit for QX Series | 98-000148-01 |
| Mounting Stand Base Plate Kit | 98-000054-01 |
| Trigger Connector, 4-pin Plug (screw terminal and field wireable for custom wiring into IB-131) | 20-610024-01 |

Laser Barcode Reader QX-830 series

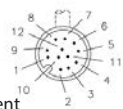
Ratings and Specifications

| | | |
|------------------------------|--------------------------------|--|
| Applicable codes | Standard | Code 39, Codabar, Code 93, Interleaved 2 of 5, Code 128, PDF417, Micro PDF417, Pharmacode, UPC, GS1 Databar |
| | Application standards | UCC / EAN-128, AIAG |
| Reading performance | Mirror type | Rotating, 10-faceted |
| | Optional raster mirror image | 10 raster scan lines over a 2° arc (or 0.500-inch raster height at 8-inch [203-mm] distance) |
| | Scan rate | Adjustable from 300 to 1,400 scans / s, default=500 |
| | Scan width angle | 60° (typ.) |
| | Pitch | ±50° max. |
| | Skew | ±40° max. |
| | Label contrast | 25% min. absolute dark to light differential at 655 nm wavelength |
| Communications | Interface | RS-232 / 422 / 485 or Ethernet* |
| | 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 |
| I / O specifications | Input 1 / Trigger / New Master | Optoisolated, 4.5 to 28 V rated, (13 mA at 24 VDC) New Master is (-) to signal ground |
| | Outputs (1, 2 & 3) | Optoisolated, 1 to 28 V rated, (I _{CE} < 100 mA at 24 VDC, current limited by user) |
| Power requirement | | 10 to 28 VDC, 200 mW p-p max. ripple, 180 mA at 24 VDC (typ.) |
| Laser light | Type | Laser diode |
| | Output wavelength | 655 nm nominal |
| | Beam divergence | 0.4 mrad (typ.) |
| | Pulse time | 40 to 186 μs |
| | Maximum output | 1.75mW |
| | Safety class | Visible laser: IEC 60825-1 Class 2 |
| Environmental specifications | Ambient temperature range | Operating: 0 to 50°C, Storage: -40 to 75°C |
| | Ambient humidity range | Up to 90% (with no icing or condensation) |
| | Degree of protection | IP54 |
| | Operating life | 50,000 hours at 25°C |
| Weight | | Approx. 212 g |
| Dimensions | | 35 x 65.7 x 87.8 mm (H x D x W) |
| Safety standards | | FCC, UL/c UL, CE, CB, KC, RCM, EAC, BIS |
| Material (Case) | | Aluminum diecast |

* Depends on model. See Ordering Information for details.

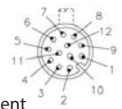
PIN ASSIGNMENTS

CONNECTOR A
M12 12-PIN PLUG



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

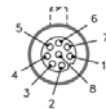
CONNECTOR B
M12 12-PIN SOCKET



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

ETHERNET CONFIGURATION

CONNECTOR B
M12 8-PIN SOCKET



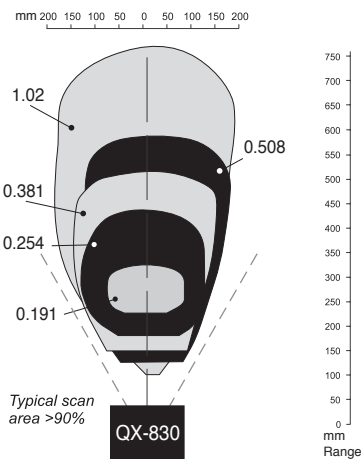
| Pin Assignment |
|----------------|
| 1 Terminated |
| 2 Terminated |
| 3 Terminated |
| 4 TX (-) |
| 5 RX (+) |
| 6 TX (+) |
| 7 Terminated |
| 8 RX (-) |

Laser Barcode Reader QX-830 series

Read Ranges*

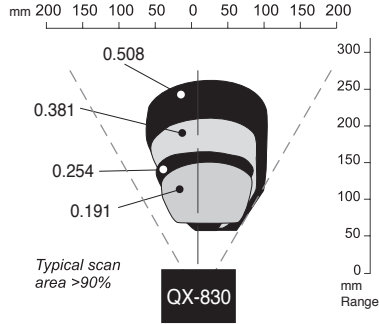
(Unit: mm)

Low Density Scan Area



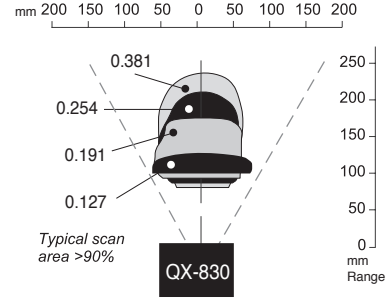
| Narrow-bar-width | Read range |
|------------------|---------------|
| 0.191 mm | 254 to 305 mm |
| 0.254 mm | 178 to 406 mm |
| 0.381 mm | 152 to 483 mm |
| 0.508 mm | 127 to 559 mm |
| 1.02 mm | 102 to 762 mm |

Medium Density Scan Area



| Narrow-bar-width | Read range |
|------------------|--------------|
| 0.191 mm | 64 to 140 mm |
| 0.254 mm | 38 to 178 mm |
| 0.381 mm | 38 to 216 mm |
| 0.508 mm | 38 to 279 mm |
| 0.762 mm | 25 to 305 mm |

High Density Scan Area

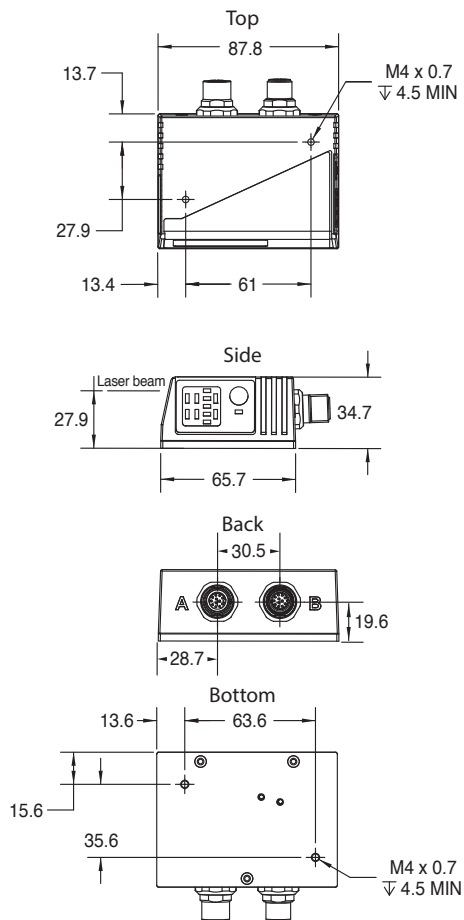


| Narrow-bar-width | Read range |
|------------------|----------------|
| 0.084 mm | Contact OMRON. |
| 0.127 mm | 102 to 127 mm |
| 0.191 mm | 89 to 171 mm |
| 0.254 mm | 82 to 203 mm |
| 0.381 mm | 82 to 229 mm |

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

Dimensions

(Unit: mm)



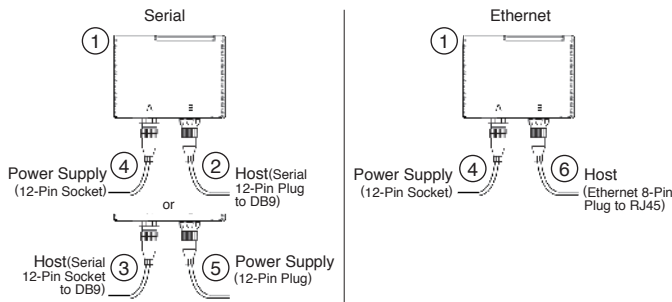
Laser Label Indications

This warning label is attached to the laser barcode reader. Never remove this label or place objects in front of it.

Laser Barcode Reader QX-830 series

System Configurations

Stand Alone Configurations

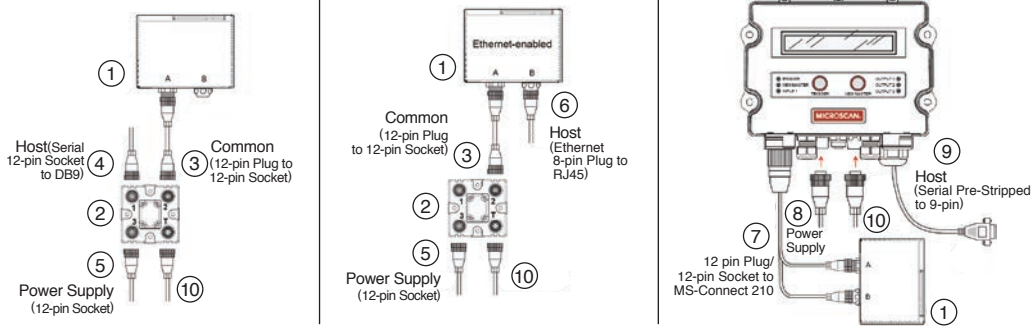


| No. | Type | Model |
|-----|---|----------------|
| 1 | QX-830 Laser Barcode Reader | FIS-0830-□□□□G |
| 2 | QX Cordset, Host, Serial, M12 12-Pin Plug (Screw-On)-to-DB-9 Socket, 1 m. | 61-000152-02* |
| 3 | QX Cordset, Host, Serial, M12 12-Pin Socket (Screw-On)-to-DB-9 Socket, 1 m. | 61-000153-02* |
| 4 | Power Supply, 100-240VAC, +24VDC, M12 12-Pin Socket | 97-000012-01 |
| 5 | Power Supply, 100-240VAC, +24VDC, M12 12-Pin Plug | 97-000012-04 |
| 6 | QX Cordset, Host, Ethernet, M8 8-Pin Plug (Screw-On)-to-RJ45, 1 m. | 61-000160-03 |
| - | Kit, 6 in. Mounting Arm / Adapter, QX-830, QX-870 | 98-000016-01 |
| - | Kit, Mounting Stand Base Plate | 98-000054-01 |

* Cordsets available in multiple lengths.

Stand Alone Configurations

With QX-1 or MS-Connect 210



| No. | Type | Model |
|-----|--|------------------|
| 1 | QX-830 Laser Barcode Reader | FIS-0830-□□□□G |
| 2 | QX-1 Interface Device | 98-000103-02 |
| 3 | QX Cordset, Common, M12 12-Pin Socket (Screw-On)-to-M12 12-Pin Plug (Screw-On), 1 m. | 61-000162-02*1 |
| 4 | QX Cordset, Host, Serial, M12 12-Pin Socket (Screw-On)-to-DB-9 Socket, 1 m. | 61-000153-02*1 |
| 5 | Power Supply, 100-240VAC, +24VDC, M12 12-Pin Socket | 97-000012-01 |
| 6 | QX Cordset, Host, Ethernet, M12 8-Pin Plug (Screw-On)-to-RJ45, 1 m. | 61-000160-03*1 |
| 7 | QX Cordset, M12 12-Pin Plug & M12 12-Pin Socket-to-MS-Connect 210 (RS-232), 2 m. | 61-000158-03 |
| 8 | Power Supply, 100-240VAC, +24VDC, TRK 3-Pin, U.S. / Euro Plug) | 97-000012-02 |
| 9 | Connectivity Box | FIS-0210-0001G*2 |
| 10 | Photoelectric Sensor, M12, 4-pin Plug, NPN output, Cable length 2m | 99-9000016-01 |
| - | Kit, 6 in. Mounting Arm / Adapter, QX-830, QX-870 | 98-000016-01 |
| - | Kit, Mounting Stand Base Plate | 98-000054-01 |

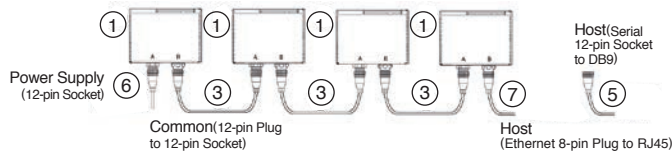
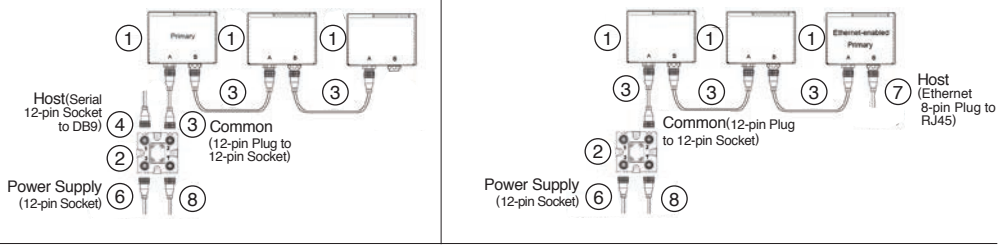
*1. Cordsets available in multiple lengths

*2. Refer to MS-Connection page for complete listing of MS-Connection 210 options

Laser Barcode Reader QX-830 series

System Configurations

Daisy Chain Configurations



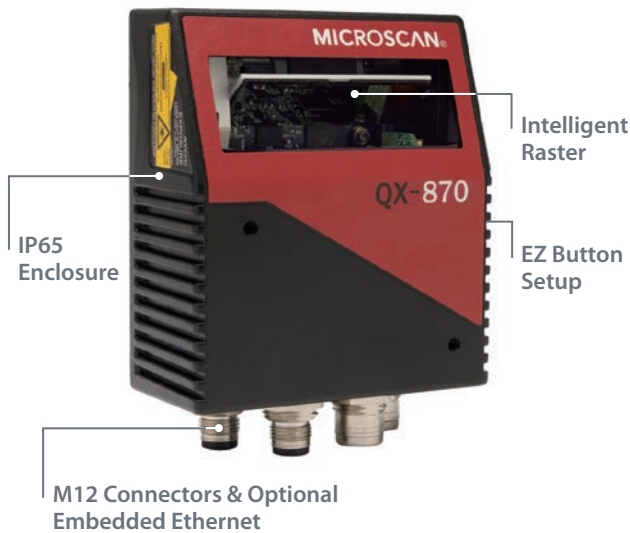
| No. | Type | Model |
|-----|--|----------------|
| 1 | QX-830 Laser Barcode Reader | FIS-0830-□□□□G |
| 2 | QX-1 Interface Device | 98-000103-02 |
| 3 | QX Cordset, Common, M12 12-Pin Socket(Screw-On)-to-M12 12-Pin Plug(Screw-On), 1 m. | 61-000162-02* |
| 4 | QX Cordset, Host, Serial, M12 12-Pin Socket (Screw-On)-to-DB-9 Socket, 1 m. | 61-000153-02* |
| 5 | QX Cordset, Host, Serial, M12 12-Pin Plug (Screw-On)-to-DB-9 Socket, 1 m. | 61-000152-02* |
| 6 | Power Supply, 100-240VAC, +24VDC, M12 12-Pin Socket | 97-000012-01 |
| 7 | QX Cordset, Host, Ethernet, M8 8-Pin Plug (Screw-On)-to-RJ45, 1 m. | 61-000160-03 |
| 8 | Photoelectric Sensor, M12, 4-pin Plug, NPN output, Cable length 2m | 99-9000016-01 |
| - | Kit, 6 in. Mounting Arm / Adapter, QX-830, QX-870 | 98-000016-01 |
| - | Kit, Mounting Stand Base Plate | 98-000054-01 |

* Cordsets available in multiple lengths.

Laser Barcode Reader

QX-870 series

Industrial Raster Laser Barcode Reader



The QX-870 laser barcode reader partners the latest technologies in barcode reading and connectivity into an easy to use solution for barcode track, trace and control applications. Simple to set up and deploy, it features a programmable sweeping raster to read multiple codes, in varying locations, even if they are damaged or mis-aligned.

With plug and play setup and the most aggressive decode algorithms available, the QX-870 an ideal laser barcode reader for any industrial application.

QX-870: At a Glance

- Scans / second: 300 to 1400
- Read Range: 25 to 762 mm
- Optional Embedded Ethernet TCP / IP & EtherNet / IP
- IP65 Enclosure



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



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



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



Sweeping Raster: This programmable feature enables the reader for multiple symbols at varying distances and locations.



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



Quick Connect System

- Plug and play setup
- Single or multi-reader 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 762 mm, at up to a 254 mm beam width.

Ethernet Protocols

The QX-870 includes optional embedded Ethernet TCP / IP and EtherNet / IP for high speed communication.

Intelligent Raster

In addition to sweep angle and speed controls, the QX-870 features a programmable raster with intelligent auto framing technology. Advanced software will automatically frame the raster height and width of the laser to match the barcode, allowing selective targeting of codes within a single read cycle.

Application Examples

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

QX-870: Available Codes

Linear



Stacked

MicroPDF



PDF417



GS1 Databar



Please see the Ratings and Specifications for a complete list of supported symbologies.

Laser Barcode Reader QX-870 series

Ordering Information

Laser Barcode Readers

| Scan mode | Read range | Interface | Model |
|-----------------|------------------------------|-----------------------|----------------|
| Sweeping Raster | Low Density | Serial * | FIS-0870-0004G |
| | Medium Density | | FIS-0870-0005G |
| | High Density | | FIS-0870-0006G |
| | Low Density / Plastic Window | | FIS-0870-0007G |
| Sweeping Raster | Low Density | Serial * and Ethernet | FIS-0870-1004G |
| | Medium Density | | FIS-0870-1005G |
| | High Density | | FIS-0870-1006G |

* Supports RS-232, RS-422, or RS-485.

Accessories

| Type | Model |
|---|---------------|
| QX-1 Interface Device | 98-000103-02 |
| QX Cordset, Common, M12 12-pin Socket (Screw-On) to M12 12-pin Plug (Screw-On), 3 m | 61-000148-02 |
| QX Cordset, Common, M12 12-pin Socket (Screw-On) to M12 12-pin Plug (Screw-On), 1 m | 61-000162-02 |
| QX Cordset, Host, Serial, M12 12-pin Socket (Screw-On) to DB-9 Socket, 1 m | 61-000153-02 |
| QX Cordset, Host, Serial, M12 12-pin Socket (Screw-On) to DB-9 Socket, 3 m | 61-000164-02 |
| QX Cordset, Host, Serial, M12 12-pin Plug (Screw-On) to DB-9 Socket, 1 m | 61-000152-02 |
| QX Cordset, Host, Serial, M12 12-pin Plug (Screw-On) to DB-9 Socket, 3 m | 61-000165-02 |
| QX Cordset, Host, Ethernet, M12 8-pin Plug (Screw-On) to RJ45, 1 m | 61-000160-03 |
| QX Cordset, M12 12-pin Plug to M12 12-pin Socket to DB-25 Plug Turck Connectors | 61-000172-02 |
| QX Cordset, M12 12-pin Plug & M12 12-pin Socket to MS-Connect 210, RS-232, 2 m | 61-000158-03 |
| QX Cordset, M12 12-pin Plug (Screw-On) to Flying Leads, 3 m | 61-000166-02 |
| QX Cordset, M12 12-pin Plug & Socket to IB-131, RS-232, 2 m | 61-000159-03 |
| QX Cordset, M12 12-pin Socket to IB-131, RS-232 / RS-485, 2 m | 61-000159-04 |
| Photoelectric Sensor, M12, 4-pin Plug, NPN output, Cable length 2m | 99-9000016-01 |

Power Supplies

| Type | Model |
|---|--------------|
| Power Supply, 100-240 VAC, +24 VDC, M12 12-pin Socket | 97-000012-01 |
| Power Supply, 100-240 VAC, +24 VDC, M12 12-Pin Plug | 97-000012-04 |

Note: Do not use the power supplies or power supply cords indicated in this catalog with any other electric or electronic equipment.
When using the QX-870 Series, please use the power supply and power supply cord indicated in this catalog.

Mounting and Connectors

| Type | Model |
|---|--------------|
| Mounting Plate Kit for QX-830 / QX-870 | 98-500006-01 |
| Right Angle Mirror Kit for QX-830 | 98-200026-02 |
| Mounting Arm / Adapter Kit for QX-830 / QX-870, 152 mm (6 inches) | 98-000016-01 |
| Mounting Arm Extension Kit for all code readers, 152 mm (6 inches) | 98-000037-01 |
| L-Bracket Kit for QX Series | 98-000148-01 |
| Mounting Stand Base Plate Kit | 98-000054-01 |
| Trigger Connector, 4-pin Plug (screw terminal and field wireable for custom wiring into IB-131) | 20-610024-01 |

Laser Barcode Reader QX-870 series

Ratings and Specifications

| | | |
|------------------------------|--------------------------------|--|
| Applicable codes | Standard | Code 39, Codabar, Code 93, Interleaved 2 of 5, Code 128, PDF417, Micro PDF417, Pharmacode, UPC, GS1 Databar |
| | Application standards | UCC / EAN-128, AIAG |
| Reading performance | Mirror type | Rotating, 10-faceted |
| | Scan rate | Adjustable from 300 to 1,400 scans/s, default=500 |
| | Scan width angle | 60° (typ.) |
| | Pitch | ±50° max. |
| | Skew | ±40° max. |
| | Label contrast | 25% min. absolute dark to light differential at 655 nm wavelength |
| Communications | Interface | RS-232 / 422 / 485 and / or Ethernet* |
| | 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 |
| I / O specifications | Input 1 / Trigger / New Master | Bi-directional optoisolated 4.5 to 28 V rated (13 mA at 24 VDC) |
| | Outputs (1, 2 & 3) | Optoisolated, 1 to 28 V rated, (I _{CE} <100 mA at 24 VDC, current limited by user) |
| Power requirement | | 10 to 28 VDC, 200 mV p-p max. ripple, 270 mA at 24 VDC (typ.) |
| Laser light | Type | Laser diode |
| | Output wavelength | 655 nm nominal |
| | Beam divergence | 0.4 mrad (typ.) |
| | Pulse time | 40 to 186 µs |
| | Maximum output | 1.75 mW |
| | Operating life | 50,000 hours at 25°C |
| Environmental specifications | Safety class | Visible laser: IEC 60825-1 Class 2 |
| | Ambient temperature range | Operating: 0 to 50°C, Storage: -40 to 75°C |
| | Ambient humidity range | Up to 90% (with no icing or condensation) |
| Degree of protection | | IP65 |
| Weight | | Approx. 453 g |
| Dimensions | | 109 x 45 x 95 mm (H x D x W) |
| Safety standards | | FCC, UL/c UL, CE, CB, KC, RCM, EAC, BIS |
| Material | | Aluminum diecast |

* Depends on model. See Ordering Information for details.

Raster Mirror Performance

| Raster sweep angle | Maximum sweeps per second |
|--------------------|---------------------------|
| 1 to 10° | 80 |
| 11 to 20° | 60 |
| 21 to 34° (max.) | 40 |
| 35 to 36° (max.) | 20 |

PIN ASSIGNMENTS*

Connector A (Serial)
M12 12-pin plug

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

Connector B (Serial)
M12 12-pin socket

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

Connector P / M (Serial)
M12 12-pin plug

| Pin Assignment |
|----------------------|
| 1 N / C |
| 2 Power |
| 3 N / C |
| 4 N / C |
| 5 422 / 485 TxD (+) |
| 6 422 / 485 RxD (+) |
| 7 Ground |
| 8 N / C |
| 9 N / C |
| 10 N / C |
| 11 422 / 485 TxD (-) |
| 12 422 / 485 RxD (-) |

Connector B (Ethernet)
M12 8-pin socket

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

Connector T (Trigger)
M12 4-pin socket

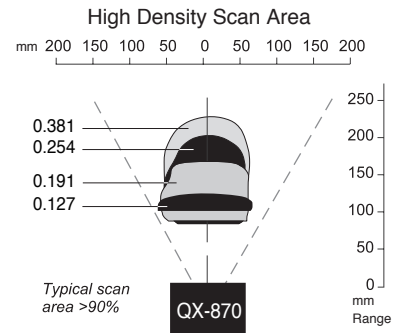
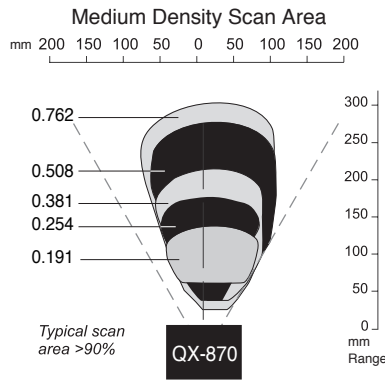
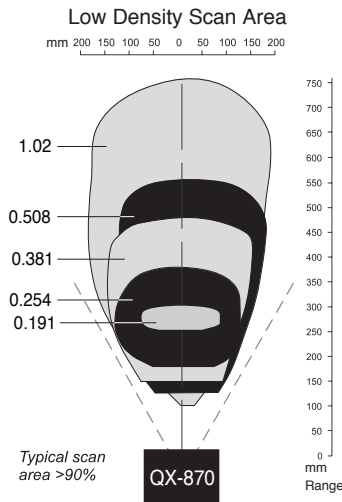
| Pin Assignment |
|----------------|
| 1 Power |
| 2 Trigger |
| 3 Ground |
| 4 Input |

*Note: Detailed connector pinout information is available in the User's Manual.

Laser Barcode Reader QX-870 series

Read Ranges*

(Unit: mm)



| Narrow-bar-width | Read range |
|------------------|---------------|
| 0.191 mm | 254 to 305 mm |
| 0.254 mm | 178 to 381 mm |
| 0.381 mm | 152 to 483 mm |
| 0.508 mm | 127 to 558 mm |
| 1.02 mm | 102 to 762 mm |

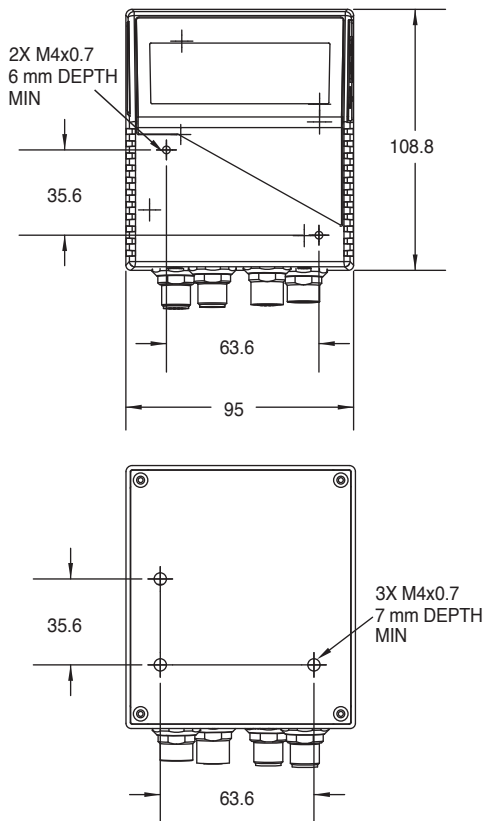
| Narrow-bar-width | Read range |
|------------------|--------------|
| 0.191 mm | 64 to 140 mm |
| 0.254 mm | 38 to 178 mm |
| 0.381 mm | 38 to 216 mm |
| 0.508 mm | 38 to 280 mm |
| 0.762 mm | 25 to 304 mm |

| Narrow-bar-width | Read range |
|------------------|----------------|
| 0.084 mm | Contact OMRON. |
| 0.127 mm | 102 to 127 mm |
| 0.191 mm | 89 to 171 mm |
| 0.254 mm | 82 to 203 mm |
| 0.381 mm | 82 to 228 mm |

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

Dimensions

(Unit: mm)



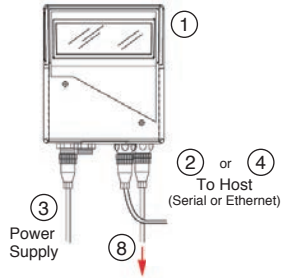
Laser Label Indications

This warning label is attached to the laser barcode reader. Never remove this label or place objects in front of it.

Laser Barcode Reader QX-870 series

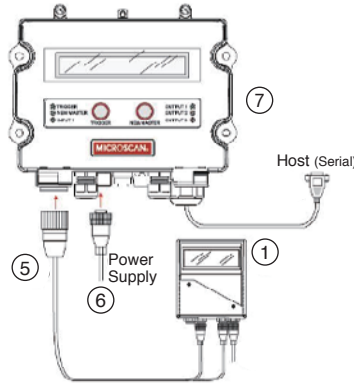
System Configurations

Stand Alone Configurations



Important: Ethernet or Serial connectivity is reader dependent See FISes for the appropriate reader model.

MS-Connect 210

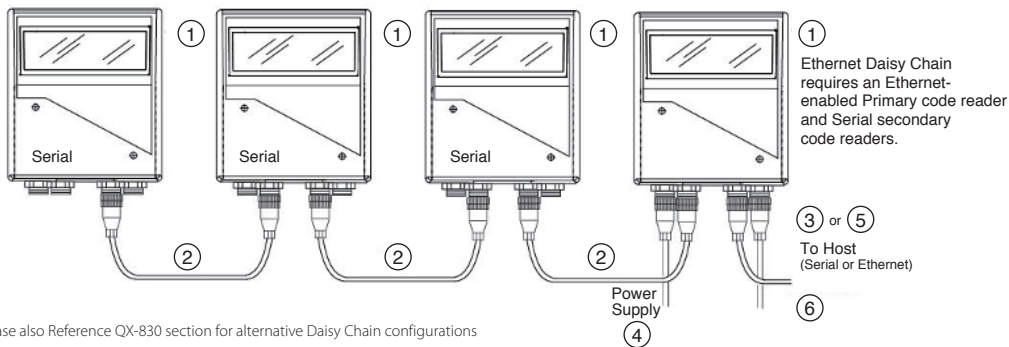


| No. | Type | Model |
|-----|--|------------------------------|
| 1 | QX-870 Laser Barcode Reader | FIS-0870-□□□□G |
| 2 | QX Cordset, Host, Serial, M12 12-Pin Plug (Screw-On)-to-DB-9 Socket, 1 m. | 61-000152-02 ^{*1} |
| 3 | Power Supply, 100-240VAC, +24VDC, M12 12-Pin Socket | 97-000012-01 |
| 4 | QX Cordset, Host, Ethernet, M8 8-Pin Plug (Screw-On)-to-RJ45, 1 m. | 61-000160-03 ^{*1} |
| 5 | QX Cordset, M12 12-Pin Plug & M12 12-Pin Socket-to-MS-Connect 210 (RS-232), 2 m. | 61-000158-03 |
| 6 | Power Supply, 100-240VAC, +24VDC, TRK 3-Pin, U.S. / Euro Plug) | 97-000012-02 |
| 7 | Connectivity Box | FIS-0210-0001G ^{*2} |
| 8 | Photoelectric Sensor, M12, 4-pin Plug, NPN output, Cable length 2m | 99-9000016-01 |
| - | Kit, 6 in. Mounting Arm / Adapter, QX-830, QX-870 | 98-000016-01 |
| - | Kit, Mounting Stand Base Plate | 98-000054-01 |

*1. Cordsets available in multiple lengths

*2. Refer to MS-Connection page for complete listing of MS-Connection 210 options

Daisy Chain Configurations



Please also Reference QX-830 section for alternative Daisy Chain configurations

| No. | Type | Model |
|-----|---|---------------------------|
| 1 | QX-870 Laser Barcode Reader | FIS-0870-□□□□G |
| 2 | QX Cordset, Common, M12 12-Pin Socket (Screw-On)-to-M12 12-Pin Plug (Screw-On),1 m. | 61-000162-02 [*] |
| 3 | QX Cordset, Host, Serial, M12 12-Pin Plug (Screw-On)-to-DB-9 Socket, 1 m. | 61-000152-02 [*] |
| 4 | Power Supply, 100-240VAC, +24VDC, M12 12-Pin Socket | 97-000012-01 |
| 5 | QX Cordset, Host, Ethernet, M8 8-Pin Plug (Screw-On)-to-RJ45, 1 m. | 61-000160-03 [*] |
| 6 | Photoelectric Sensor, M12, 4-pin Plug, NPN output, Cable length 2m | 99-9000016-01 |
| - | Kit, 6 in. Mounting Arm / Adapter, QX-830, QX-870 | 98-000016-01 |
| - | Kit, Mounting Stand Base Plate | 98-000054-01 |

* Cordsets available in multiple lengths

MEMO

Laser Barcode Reader

Handheld Code Reader

Multi Code Reader

Code Verification System

Handheld DPM Code Reader

HS-360X series

“Ultra-Rugged” Hand Held Code Reader

Laser Barcode Reader

Handheld Code Reader



The HS-360X Ultra-Rugged Handheld Code Reader is Omron Microscan’s newest generation of industrial Direct Part Mark (DPM) handheld code reader, purpose built from the ground up to set new standards for durability and performance. With best in class out of box performance most applications require NO setup. An all NEW user interface WebLink_{PC} makes setup for more difficult applications intuitive and easy.

HS-360X:At a Glance

- Wired or Wireless
- Ultra-Rugged DPM Handheld Code Reader
- Industry-Leading DPM Decoding Performance with X-Mode
- Intuitive WebLink_{PC} Interface

HS-360X:Available Codes

| | | | |
|---------|-------------|----|----------|
| Liner | | | |
| Stacked | PDF417 | | |
| | GS1 Databar | | |
| 2D | Data Matrix | QR | Micro QR |
| | | | |

Please see the Ratings and Specifications for a complete list of supported symbologies.

Multi Code Reader

Code Verification System

Ultra-Rugged

The HS-360X withstands multiple drops from 8' and 5,000 tumbles.

X-Mode Decode Algorithms

The HS-360X includes industry-leading X-Mode decoding algorithms to consistently read damaged, distorted or otherwise challenging directly marked codes at high decode rates.

Performance Indicators

In addition to a beeper, visual and vibrating indicators provide silent confirmation of successful reads for noisy or sensitive environments.

Industrial Fluid and Chemical Tolerable

Many industrial fluids and chemicals deemed tolerable.

Charging Station

The charging station is IP65 and transmits and receives data over a Bluetooth class 1 or 2 out to 300 feet. It includes a Wi-Fi friendly mode and a paging button to locate a misplaced code reader.

Ease of Use - WebLink_{PC}

Code reader configuration and deployment with browser based user interface and device discovery.

Handheld DPM Code Reader HS-360X series

Ordering Information

| Type | Applicable countries | Model |
|--|--------------------------------------|----------------|
| Handheld DPM Code Reader, Wired, HDS-3608 | Common (except for India / Korea) | HDS-3608-0001 |
| Handheld DPM Code Reader, Wireless, HDS-3678 | | HDS-3678-0001 |
| Battery Spare for HS-360X Wireless Type | | 98-9000224-01 |
| Handheld DPM Code Reader, Wired, HDS-3608 INDIA / KOREA | India / Korea | HDS-3608-0002* |
| Handheld DPM Code Reader, Wireless, HDS-3678 INDIA / KOREA | | HDS-3678-0002* |
| Battery Spare for HS-360X Wireless Type, INDIA / KOREA | | 98-9000224-02* |
| Cradle / Charger, HS-360X Wireless Type | Common | 12-9000937-01 |
| Cable, USB, Shielded, 2m (Power Supply Required) | | 12-9000942-01 |
| Cable, USB, Shielded, 4.6m (Power Supply Required) | | 12-9000943-01 |
| Cable, USB, Shielded, 2m | | 12-9000946-01 |
| Cable, USB, Shielded, 4.6m | | 12-9000947-01 |
| Cable, RS-232, DB9 Socket, 2M, Straight, HS-360X (Power Supply Required) | | 12-9000953-01 |
| AC power Cord, 1.8m, JAPAN, C13 connector | | Japan |
| AC power Cord, 1.9m, INDIA, C13 connector | India | 12-9000963-01* |
| AC power Cord, 2.5m, US, C13 connector | United States | 12-9000959-01 |
| AC power Cord, 2.5m, EU / Korea, C13 connector | Europe / Korea | 12-9000960-01 |
| AC power Cord, 2.5m, UK, C13 connector | UK | 12-9000961-01 |
| AC power Cord, 2.5m, CHINA, C13 connector | China | 12-9000962-01 |
| KIT, Power Supply for Cradle / Charger, HS-360X Wireless Type (A / C Power Cord Required) | Common | 98-9000181-01 |
| KIT, Power Supply for Battery Charger, 4 Slot, HS-360X Wireless Type (A / C Power Cord Required) | | 98-9000182-01 |
| 4 Slot, Battery Charger, HS-360X Wireless Type (Power Supply Required) | | 98-9000185-01 |
| Intelligent Stand | | 98-9000186-01 |

* These models are coming soon.
Ask your Omron representative for more information.

Note: Do not use the power supplies or power supply cords indicated in this catalog with any other electric or electronic equipment.
When using the HS-360X Series, please use the power supply and power supply cord indicated in this catalog.

Handheld DPM Code Reader HS-360X series

Ratings and Specifications

| | | |
|------------------------------|---|--|
| Applicable codes | 1D | UPC / EAN, UPC / EAN with supplementals, Bookland, EAN, ISSN, UCC Coupon Extended Code, Code 128, GS1-128, ISBT 128, ISBT Concatenation, Code 39, Code 39 Full ASCII, Trioptic Code 39, Code 32, Code 93, Code 11, Interleaved 2 of 5, Discrete 2 of 5, Codabar, MSI, Chinese 2 of 5, Matrix 2 of 5, Korean 3 of 5, GS1 DataBar variants |
| | 2D | PDF417, MicroPDF417, Composite Codes, TLC-39, Data Matrix, QR Code, MicroQR, Aztec, Han Xin, GS1-QR, GS1-DM |
| | Postal | US Postnet, US Planet, UK Postal, Japan Post, Australia Post, Royal Mail 4 State Customer, UPU 4 State Postal FICS (Post US4), USPS 4 State Postal (Post US3) |
| Reading performance | Field of view (Horizontal x Vertical) nominal | 31° (H) × 23° (V) |
| | Roll | 0 to 360° |
| | Pitch | ±60° |
| | Skew | ±60° |
| | Scans per charge | Up to 100,000 |
| | Minimum resolution | Code 39: 0.0762 mm PDF417: 0.1016 mm DataMatrix: 0.1016 mm |
| Interface | | USB, RS-232 The code reader supports the following protocols over USB: HID Keyboard (default mode), SNAPI, COM Port Emulation, USB CDC |
| Power | | 5 VDC + / - 10% @ 360 mA (RMS typical) |
| Light source | | Aiming pattern: Class 2 Laser 655nm Illumination: Exempt Risk Group, Warm white LED, Red 634nm LED |
| Environmental specifications | Ambient temperature range | Wireless code reader Operating: -20 to +50°C, Storage: -40 to +70°C Wired code reader Operating: -30 to +50°C, Storage: -40 to +70°C |
| | Ambient humidity range | 5%RH to 95%RH (with no icing or condensation), |
| | Drop specifications | Withstands multiple 8 ft. / 2.4 m drops to concrete at room temperature. |
| | Degree of protection | IP65 and IP67 |
| | ESD | 20 kV air discharge: 10 kV contact discharge |
| Ambient light immunity | | 0 to 10,037 foot-candles / 0 to 108,000 Lux (direct sunlight) |
| Weight | | Wireless code reader: Approx. 402 g (with Battery) Wired code reader: Approx. 304 g (without Cable) |
| Dimensions | | Wireless code reader: 185 mm (H) × 143 mm (D) × 77 mm (W) Wired code reader: 185 mm (H) × 132 mm (D) × 77 mm (W) |

Cradle

| | |
|--|---|
| Power requirements for host-powered | 5.0V ± 10% |
| Power requirements for external power supply | 12.0V ± 5% |
| Typical current draw when not charging | 80mA @ 5V; 30mA @ 12V |
| Typical current draw in safe charging mode | 1200mA @ 5V (BC 1.2), 475mA (non-BC1.2); 700mA @ 12V |
| Typical current draw in safe charging mode | 400mA @ 5V; 200mA @ 12V |
| Interfaces | USB, RS-232 |
| Radio | Bluetooth, Up to 100 meters / 300 ft. in open air range / environment Serial Port & HID Profiles 2.402 to 2.480 GHz Adaptive Frequency Hopping (co-existence with 802.11 wireless networks) 3Mbit / s (2.1Mbit / s) for Classic Bluetooth 1Mbit / s (0.27Mbit / s) for Low Energy |
| Ambient temperature range | Operating : -20 to 50°C, Storage : -40 to 70°C |
| Charging temperature | 0 to 40°C nominal, 5 to 35°C ideal |
| Ambient humidity range | 5%RH to 95%RH (non-condensing) |
| ESD | 25 kV air discharge 10 kV contact discharge |
| Weight | Approx. 390 g |
| Dimensions | 82.6 mm (H) x 229.4 mm (D) x 99.8 mm (W) |
| Safety standards | UL / EN / IEC 60950-1 + AM2 |
| EMC | IEC61000-4-(2,3,4,5,6,11) |
| EMI | FCC Part 15 Class B, ICES-003 Class B Japan VCCI Class B |

Handheld DPM Code Reader HS-360X series

Read Ranges

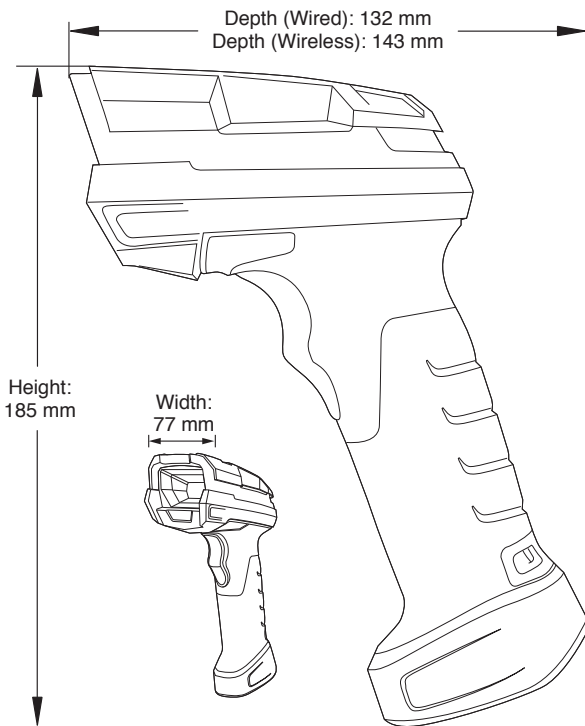
(Unit: mm)

| Barcode Type | Symbol Density | HS-360X Typical Working Ranges | |
|--------------|----------------|--------------------------------|--------|
| | | Near | Far |
| Code 39 | 0.0762 mm | 5 mm | 71 mm |
| PDF417 | 0.127 mm | 5 mm | 71 mm |
| | 0.16764 mm | 5 mm* | 81 mm |
| DataMatrix | 0.127 mm | 10 mm | 63 mm |
| | 0.254 mm | 0 mm | 86 mm |
| QR Code | 0.127 mm | 10 mm | 63 mm |
| | 0.254 mm | 0 mm | 86 mm |
| UPC | 0.3302 mm | 25 mm* | 147 mm |

* Field of view/barcode width limited. Decode ranges measured with Decoder Effort Level 1 (DPM Mode off), photographic paper barcodes, and under 30 fcd ambient light conditions.

Dimensions

(Unit: mm)



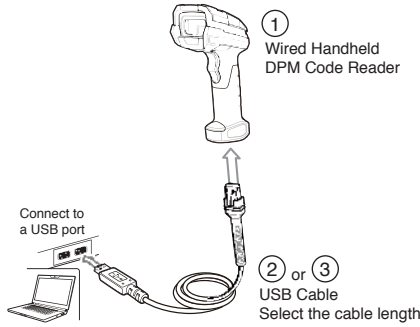
Laser Label Indications

This warning label is attached to the code reader. Never remove this label or place objects in front of it.

Handheld DPM Code Reader HS-360X series

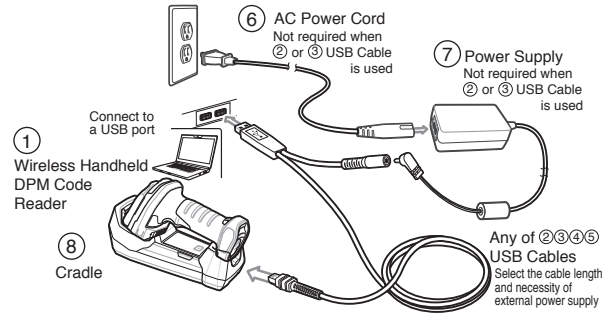
System Configurations

Wired code reader (USB connection)



| No. | Type | Model |
|-----|---|---------------|
| 1 | Handheld DPM Code Reader, Wired, HDS-3608 | HDS-3608-0001 |
| 2 | Cable, USB, Shielded, 2 m | 12-9000946-01 |
| 3 | Cable, USB, Shielded, 4.6 m | 12-9000947-01 |

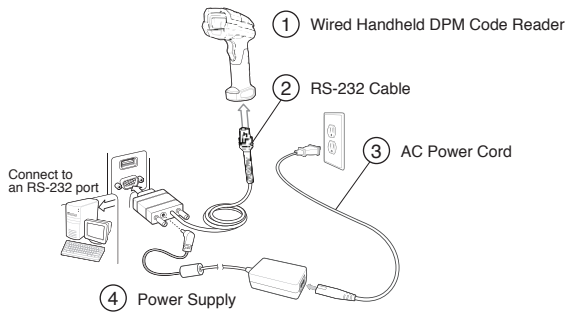
Wireless code reader (USB connection)



| No. | Type | Model |
|-----|--|---------------|
| 1 | Handheld DPM Code Reader, Wireless, HDS-3678 | HDS-3678-0001 |
| 2 | Cable, USB, Shielded, 2 m *1 | 12-9000946-01 |
| 3 | Cable, USB, Shielded, 4.6 m *1 | 12-9000947-01 |
| 4 | Cable, USB, Shielded, 2 m (power supply required) *1 | 12-9000942-01 |
| 5 | Cable, USB, Shielded, 4.6 m (power supply required) *1 | 12-9000943-01 |
| 6 | AC Power Cord, 1.8 m, JAPAN, C13 connector *2 | 12-9001046-01 |
| 7 | KIT, Power Supply for Cradle/Charger, HS-360X Wireless Type (AC power cord required) | 98-9000181-01 |
| 8 | Cradle/Charger, HS-360X Wireless Type | 12-9000937-01 |

*1. Cables that require external power supply provide faster charge. From discharge to full charge: 10 hours max. using USB port only, 3 hours max. using external power supply
 *2. AC power cords that can be used in other countries are also available.

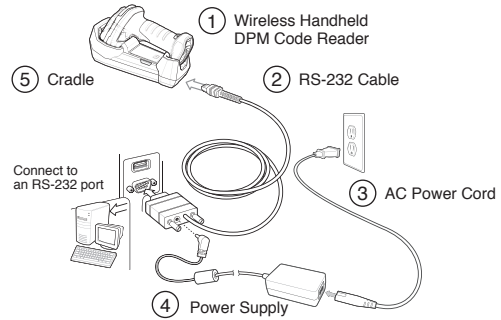
Wired code reader (RS-232 connection)



| No. | Type | Model |
|-----|--|---------------|
| 1 | Handheld DPM Code Reader, Wired, HDS-3608 | HDS-3608-0001 |
| 2 | Cable, RS-232, DB9 Socket, 2 m, Straight, HS-360X (power supply required) | 12-9000953-01 |
| 3 | AC Power Cord, 1.8 m, JAPAN, C13 connector * | 12-9001046-01 |
| 4 | KIT, Power Supply for Cradle/Charger, HS-360X Wireless Type (AC power cord required) | 98-9000181-01 |

* AC power cords that can be used in other countries are also available.

Wireless code reader (RS-232 connection)



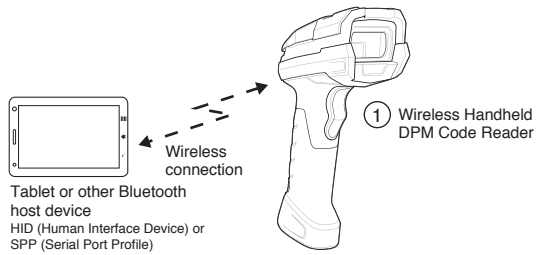
| No. | Type | Model |
|-----|--|---------------|
| 1 | Handheld DPM Code Reader, Wireless, HDS-3678 | HDS-3678-0001 |
| 2 | Cable, RS-232, DB9 Socket, 2 m, Straight, HS-360X (power supply required) | 12-9000953-01 |
| 3 | AC Power Cord, 1.8 m, JAPAN, C13 connector * | 12-9001046-01 |
| 4 | KIT, Power Supply for Cradle/Charger, HS-360X Wireless Type (AC power cord required) | 98-9000181-01 |
| 5 | Cradle/Charger, HS-360X Wireless Type | 12-9000937-01 |

* AC power cords that can be used in other countries are also available.

Handheld DPM Code Reader HS-360X series

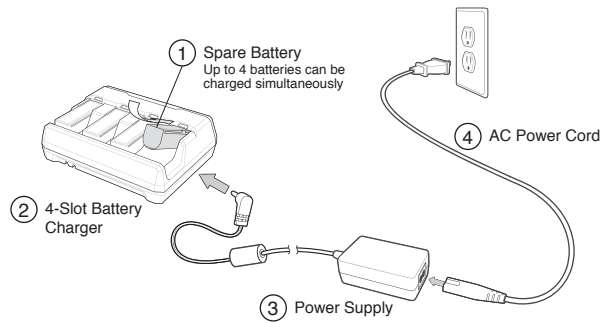
System Configurations

Wireless code reader (Bluetooth connection)



| No. | Type | Model |
|-----|--|---------------|
| 1 | Handheld DPM Code Reader, Wireless, HDS-3678 | HDS-3678-0001 |

Charging spare batteries



| No. | Type | Model |
|-----|--|---------------|
| 1 | Battery, Spare, HS-360X Wireless Type | 98-9000224-01 |
| 2 | 4 Slots, Battery Charger, HS-360X Wireless Type (power supply required) | 98-9000185-01 |
| 3 | KIT, Power Supply for Battery Charger, 4 Slots, HS-360X Wireless Type (AC power cord required) | 98-9000182-01 |
| 4 | AC Power Cord, 1.8 m, JAPAN, C13 connector * | 12-9001046-01 |

* AC power cords that can be used in other countries are also available.

Auto Focus Multi Code Reader V430-F series

Auto Focus Multi Code Reader



Powerful functionality in a compact design. The V430-F reliably reads different codes at different distances using the liquid lens.

V430-F: At a Glance

- Best in class: 5 Mpix *1
- Smallest in class *2
- Reading distance: 50 to 300 mm
- Maximum skew / pitch: 30°

V430-F: Available Codes



Please see the Ratings and Specifications for a complete list of supported symbologies.

Liquid lens for autofocus

The V430-F uses a liquid lens that does not need a drive mechanism or motor, providing unlimited autofocus and long life.

Applicable standards

- ISO / IEC 15415
- ISO / IEC 15416
- ISO / IEC TR29158 (AMD PM-1-2006)
- ISO / IEC 16022

Quick troubleshooting from web browser

The V430-F has pre-installed software for setup. You can easily troubleshoot using a PC or tablet with the browser-based interface.

Print Quality Grading function

This function enables an in-line check of the relative quality change and the parameter where the change occurred.

Refer to the V430 series catalog (Cat. No. Q258) for details.

*1. Fixed mount multi code reader. Based on Omron investigation in March 2018.
*2. Fixed mount multi code readers with 1.2 Mpix or more. Based on Omron investigation in March 2018.

Laser Barcode Reader

Handheld Code Reader

Multi Code Reader

Code Verification System

Auto Focus Multi Code Reader V430-F series

Ordering Information

Code Readers

| Number of pixels | Field of view | Reading distance * | Model |
|---------------------------------|---------------|---------------------------|---------------|
| 5 million pixels (Color) | Wide View | Autofocus 50 to 300 mm | V430-F000W50C |
| | Middle View | | V430-F000M50C |
| 1.2 million pixels (Monochrome) | Wide View | Autofocus 50 to 300 mm | V430-F000W12M |
| | Middle View | | V430-F000M12M |
| | Narrow View | Autofocus 40 to 150 mm | V430-F000N12M |
| 0.3 million pixels (Monochrome) | Middle View | Fixed Focus 50 mm | V430-F050M03M |
| | | Fixed Focus 81 mm | V430-F081M03M |
| | | Fixed Focus 102 mm | V430-F102M03M |

* Refer to Read Ranges on p.31 for detail.

Mounting Brackets

| Type | Model |
|--------------------------------------|---------------|
| Angle adjustable Bracket (L Bracket) | V430-AM0 |
| Mounting Block | V430-AM1 |
| Isolation Mounting Kit | 98-9000064-01 |

Cables (Bending Resistant Cables)

| Type | Connector | Length | Model |
|---|------------------|--------|--------------|
| I/O Cable | Straight | 3 m | V430-W8-3M |
| | Straight | 5 m | V430-W8-5M |
| | Right angle down | 3 m | V430-W8LD-3M |
| | Right angle up | 3 m | V430-W8LU-3M |
| Ethernet Cable | Straight | 3 m | V430-WE-3M |
| | Straight | 5 m | V430-WE-5M |
| | Right angle down | 3 m | V430-WELD-3M |
| | Right angle up | 3 m | V430-WELU-3M |
| Cordset, M12 12-pin Socket to DB9 Socket with M12 12-pin Plug | Straight | 3 m | V430-W2-3M |

Optics Options

| Type | Model |
|--------------------------------|----------|
| Front Window (for replacement) | V430-AF0 |
| Diffuser | V430-AF1 |
| Polarizer | V430-AF2 |
| Right Angle Mirror | V430-AF3 |

Auto Focus Multi Code Reader V430-F series

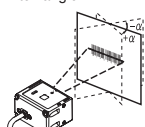
Ratings and Specifications

| Model | | V430-F000□50C | V430-F000□12M | V430-F□□□M03M |
|------------------------------|---|---|--|--|
| Applicable codes *1 | Bar code | Code 39, Code 128, BC412, ITF (Interleaved 2 of 5), EAN / UPC, Codabar, Code 93, PharmacoCode, PLANET, POSTNET, Japanese Post, Australian Post, Royal Mail, Intelligent Mail, KIX, UPU, GS1 Databar (Composite) | | |
| | 2D code | DataMatrix (ECC000-ECC200), GS1 DataMatrix, QR Code, Micro QR Code, Aztec Code, DotCode, PDF417, Micro PDF417, GS1 Databar (Stacked) | | |
| Reading performance *2 | Number of reading digits | No upper limit (depends on bar width and reading distance) | | |
| | Aiming light | Two Blue LEDs | | |
| | Light source | Inner LEDs: Four White and Four Red LEDs (wave length: 625 nm) | | |
| | | Outer LEDs: Eight White LEDs | Outer LEDs: Eight Red LEDs (wave length: 617 nm) | Outer LEDs: Eight Red LEDs (wave length: 617 nm) |
| | Reading distance / Field of view | Refer to Read Ranges on page 31 for detail. | | |
| | Pitch angle (α) | $\pm 30^\circ$ | | |
| | Skew angle (β) | $\pm 30^\circ$ | | |
| Tilt angle (γ) | $\pm 180^\circ$ | | | |
| Image capture device | Effective pixels | 2592 (H) x 1944 (V) | 1280 (H) x 960 (V) | 752 (H) x 480 (V) |
| | Color / Monochrome | Color CMOS | Monochrome CMOS | Monochrome CMOS |
| | Shutter method | Rolling shutter | Global shutter | Global shutter |
| | Frame rate | 5 fps | 42 fps | 60 fps |
| | Shutter speed | 50 us to 100 ms | | |
| Image logging | FTP | | | |
| Reading trigger | External trigger (edge, level), Trigger by command (Ethernet, RS-232C) | | | |
| I / O specifications | Input signals | Trigger, New Master: 4.5 to 28 V rated (10 mA at 28 VDC) | | |
| | Output signals | Output1, Output2, Output3: 1 to 28 V rated (100 mA Max. at 24 VDC) | | |
| | Communication specification *4 | RS-232C, Ethernet TCP / IP, EtherNet / IP™, PROFINET | | |
| | Ethernet specifications | 100BASE-TX / 10BASE-T | | |
| Indicator lamps | PASS (Green), TRIG (Amber), MODE (Amber), LINK (Amber), FAIL (Red), PWR (Green) | | | |
| Power voltage | 5.0 to 30.0 VDC (including ripple) | | | |
| Consumption current | 0.18 A (typ.) (at 24 VDC) | | | |
| Environmental specifications | Ambient temperature range | Operating: 0 to 40°C, Storage: -50 to +75°C (with no icing or condensation) | | |
| | Ambient humidity range | Operating: 5 to 85%RH, Storage: 5 to 85%RH (with no condensation) | | |
| | Ambient atmosphere | No corrosive gases | | |
| | Vibration resistance (destruction) | 10 to 55 Hz, double amplitude: 0.35 mm, X / Y / Z directions, 10 cycles / axis | | |
| | Shock resistance (destruction) | 150 m / s ² , 3 times in each X / Y / Z directions | | |
| | Degree of protection | IEC 60529 IP67 | | |
| Weight | Main body only | Approx. 68 g | | |
| | Packing weight | Approx. 174 g (including packing) | | |
| Dimensions | Main body Dimension | 44.5 (W) x 44.5 (D) x 25.4 (H) mm | | |
| | Packing Dimension | 170 (W) x 117 (D) x 86 (H) mm | | |
| Accessories | Instruction manual ("Read me first"), Compliance Sheet (CE) | | | |
| LED class | Risk Group Exempt (IEC 62471-1) | | | |
| Safety standards | EN61326-1: 2013 FCC Part 15, Subpart B (Class A) KC CISPR 11, IEC 61000-4-2: 2008 UL60950-1 RCM, EAC, BSMI, BIS | | | |
| Material | Case | Aluminum diecast, alumite (black) | | |
| | Reading window | Acrylic | | |

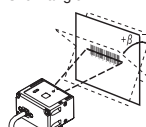
*1. These are the code types supported based on Omron's read capability validation standard. It is recommended that the customer do its own validation in its actual work environment.

*2. Unless otherwise specified, the reading performance is defined with center of field of view, angle $R=\infty$.

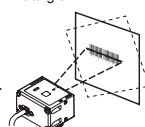
*3. Pitch angle



Skew angle



Tilt angle



*4. EtherNet/IP and PROFINET are supported in firmware version 1.3.1 and later.

Auto Focus Multi Code Reader V430-F series

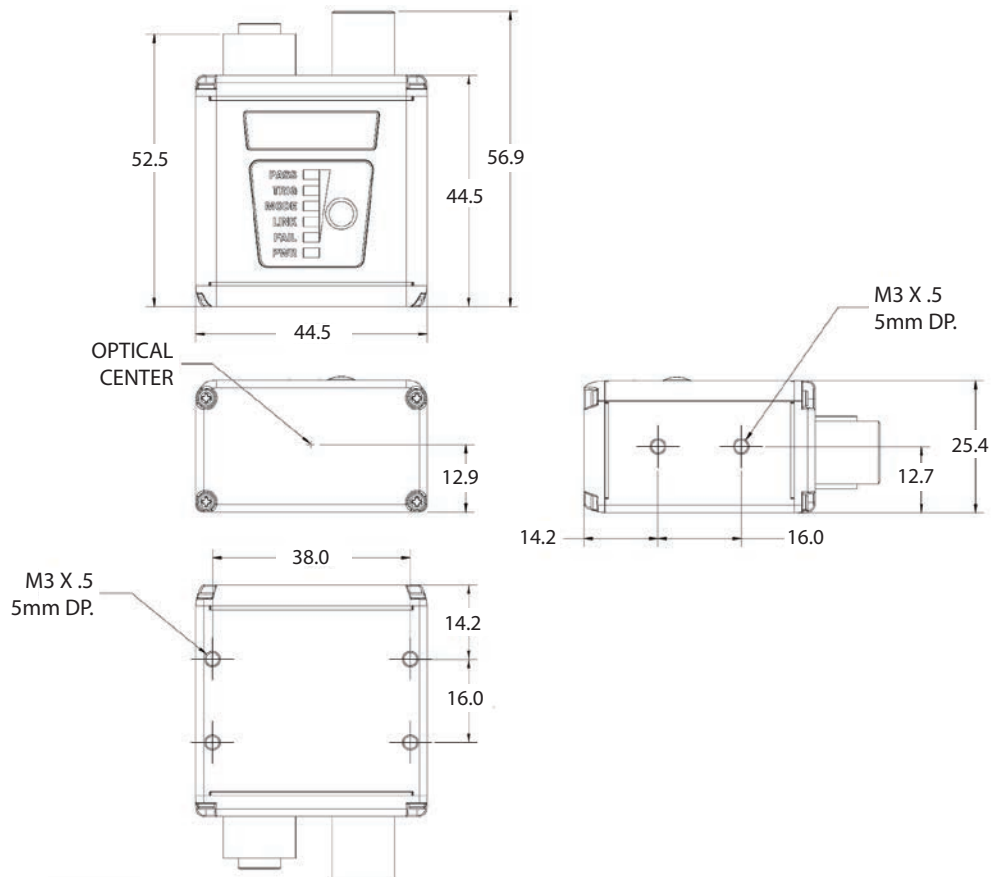
Read Ranges (Reference)

| | Reading distance (mm) | Field of view (mm) | | Reading ranges (mm) | | Minimum 2D cell size (Reference) (mm) | | |
|--------------------|------------------------------|--------------------|----------|---------------------|---------|---------------------------------------|------|------|
| | | Horizontal | Vertical | Inside | Outside | | | |
| 5 million pixels | Wide View V430-F000W50C | 50 | 51 | 37 | 43 | 59 | 0.09 | |
| | | 102 | 96 | 75 | 80 | 124 | - | |
| | | 300 | 265 | 210 | 203 | 397 | - | |
| | Middle View V430-F000M50C | 50 | 35.5 | 25 | 46.5 | 54.5 | 0.09 | |
| | | 102 | 66 | 49 | 94 | 110 | - | |
| | | 300 | 184 | 143 | 227 | 373 | - | |
| 1.2 million pixels | Wide View V430-F000W12M | 50 | 57.2 | 42.9 | 37 | 64 | 0.13 | |
| | | 102 | 109.5 | 82.2 | 74 | 131 | - | |
| | | 300 | 314.3 | 235.7 | 224 | 427 | - | |
| | Middle View V430-F000M12M | 50 | 36.5 | 27.4 | 47.5 | 55 | 0.09 | |
| | | 102 | 71.4 | 53.6 | 88 | 116 | - | |
| | | 300 | 198.4 | 148.8 | 185 | 400 | - | |
| | Narrow View V430-F000N12M | 40 | 10 | 7.5 | 38.5 | 41.5 | 0.05 | |
| | | 81 | 20.6 | 15.4 | 78.5 | 83.5 | - | |
| | | 150 | 39 | 29.5 | 132 | 153 | - | |
| 0.3 million pixels | Middle View | V430-F050M03M | 50 | 35 | 21.5 | 43 | 58 | 0.13 |
| | | V430-F081M03M | 81 | 49 | 33 | 65 | 97 | 0.19 |
| | | V430-F102M03M | 102 | 65 | 41 | 83 | 121 | 0.26 |

Dimensions

(Unit: mm)

Code Reader
V430-F



Related Manuals

| Cat. No. | Model | Manual |
|----------|-------|--|
| Z392 | V430 | Auto Focus Multi Code Reader V430-F-series User's Manual |

Code Verification System

LVS-9510 series

Desktop Barcode Verification System



Comes with handheld top cover (not shown) to keep label in position on viewing window.

LVS-9510: At a Glance

- Validates to ISO / IEC, ANSI, GS1, and UDI print quality standards.
- Software upgrade options include Multi-Sector for verification of multiple barcodes on a label.
- 21 CFR Part 11 compliant-ready.
- Certified by GS1 US.
- Supports 15 languages.
- Quality data reporting for auditing purposes.
- Manage operator permissions using LVS-95XX software or using Microsoft Active Directory.
- Includes NIST-Traceable Calibrated Conformance Standard Test Card for calibrating the system.

The LVS-9510 is a high-performance system for off-line verification of barcodes to ISO / IEC, ANSI, GS1, and UDI standards.

The LVS-9510 is unique in the world of ISO verification due to its ease of use and ability to verify linear (1D) and two-dimensional (2D) codes without any change of equipment. The system automatically determines the symbology and aperture needed to evaluate the code and identifies and highlights trouble spots.

The LVS-9510 offers a “stitching” feature that allows grading of barcodes that are larger than the field of view.

ISO / ANSI for 1D

LVS-95XX series barcode verifiers inspect all nine ISO / ANSI parameters for linear (1D) barcodes, have the ability to identify blemishes, and can perform simple human-readable validation.

ISO / ANSI for 2D

The LVS-95XX series verifies 2D codes and reports all parameters as specified in the applicable symbology specification.

Software Upgrade: EAIV

The Enhanced Application Identifier Verification (EAIV) option verifies that all GS1 Application Identifiers, such as Expiration Date, Global Trade Item Number (GTIN), and Batch Number, embedded in the data structure of a GS1 barcode match the data programmed in the EAIV feature by the user.

User Permission Options

Manage permissions through LVS-95XX software: Passwords are stored in a local database. All passwords are encrypted, include an expiration date, and count failed password attempts.

Analytical Tools

Equipped with numerous analytical tools to identify and evaluate barcode errors. Problems are color-coded to make problem solving easy.

Software

LVS-95XX software includes GS1 System Symbol Specification Tables. GS1 tables set standards for barcode data structure and how to maintain the quality of codes during barcode creation. OMRON Microscan offers an online training course on GS1 tables and how these apply to different organizations.

Manage permissions through Microsoft Active Directory: User privileges are based on Microsoft authentication and LVS-95XX permissions are assigned based on group membership.

LVS-9510: Available Symbologies

| | | | |
|---------|-------------|--------|-------------|
| Linear | | Postal | |
| 2D | Data Matrix | QR | Micro QR |
| | | | Aztec |
| Stacked | MicroPDF | PDF417 | GS1 Databar |

Please see the Ratings and Specifications for a complete list of supported symbologies.

Laser Barcode Reader

Handheld Code Reader

Multi Code Reader

Code Verification System

Code Verification System LVS-9510 series

Ordering Information

Code Verification Systems

| Type | Field of view | Model |
|-------------------|---------------|--------------|
| LVS-9510 Verifier | 76 mm | 9510-5-3.0 |
| | 102 mm | 9510-5-4.0 |
| | 144 mm | 9510-5-4.5 |
| | 159 mm | 9510-5-6.250 |

Note: Be sure to use the power supply and power supply cord included with the product.
 In addition, do not use the power supplies or power supply cords with any other electric or electronic equipment.

Accessories

| Type | Model |
|---|------------|
| EAN / UPC Calibrated Conformance Test Card (Included with 9510-5-3.0 / 4.0 / 4.5 / 6 / 250) | 98-CAL020 |
| GS1-128 Calibrated Conformance Test Card (Included with 9510-5-6.250) | 98-CAL021 |
| Data Matrix Calibrated Conformance Test Card | 98-CAL010 |
| LVS-9510 and LVS-958□ Software Upgrade Option: Multi-Sector Verification | 98-SOF0039 |
| LVS-95□□ Software Upgrade Option: Automatic Login Feature | 98-SOF0056 |
| Software Upgrade Option: EAIV (Enhanced Application Identifier Verification) | 98-SOF0088 |
| LVS-95□□ IQ-OQ Validation Procedure Guidelines, v. 4.3 and later (includes text cards) | 98-LVS0077 |
| Validation Test Cards (25 test cards) | 98-LVS-VTC |

Code Verification System LVS-9510 series

Ratings and Specifications

| | | | | |
|--|--|--|---------------------------------------|-------------------------------|
| Laser Barcode Reader | Supported standards | AIAG / DAMA / JAPIA / Odette | | |
| | | ALDI | | |
| | | ISO / IEC TR 29158 (DPM Cat 0) | | |
| | | DHL | | |
| | | FPMAJ | | |
| | | French CIP | | |
| | | GS1 General Specifications | | |
| | | HDMA Guidelines | | |
| | | Health Industry Barcode (HIBC) | | |
| | | IFAH | | |
| | | ISO / IEC 15415 / 15416 | | |
| | | Italian Pharmacode | | |
| | | Japan Codabar | | |
| | | Laetus Miniature Pharmacode | | |
| | | Laetus Pharmacode | | |
| | | Laetus Standard | | |
| | | MIL-STD-130N Change 1 | | |
| | | Pharmacy Product Number (PPN) | | |
| | | Automatic GS1 or ISO | | |
| | | Chinese Sensible (Han Xin) Code | | |
| | | GS1 General Specifications | | |
| | | GS1 (NTIN) | | |
| | | HDMA Guidelines | | |
| | | Miniature Pharmacode | | |
| | | Postal (EIB, USPS IMB / Code 128, POSTNET, Japan Post) | | |
| | | PPN Code | | |
| | | PZN-big, normal, small (German Pharmacode) | | |
| | | PZN 7 and PZN 8 | | |
| | | Handheld Code Reader | GS1 US certification | Data Matrix for Healthcare |
| | | | | Data Matrix (ECC 200) |
| | | | | EAN / UPC |
| | | | | EAN / UPC and extended codes |
| | | | | EAN / UPC with CC |
| GS1 DataBar Omnidirectional | | | | |
| ITF-14 | | | | |
| GS1 DataBar-14 with CC (formerly RSS-14 with CC) | | | | |
| UCC / EAN with Supplementals | | | | |
| UCC / EAN-128 | | | | |
| UCC / EAN-128 with CC | | | | |
| Multi Code Reader | ISO conformance standards | | | ISO / IEC 15415, 15416, 15418 |
| | | ISO / IEC 15426-1, 15426-2 | | |
| | | ISO / IEC TR29158 (DPM Cat 0) / AIM DPM-1-2006 | | |
| | | All supported ISO / IEC symbology specifications | | |
| Code Verification System | Supported symbologies | Codabar | | |
| | | Code 128, Code 39, Code 93 | | |
| | | GS1 DataBar Expanded and Limited | | |
| | | DataBar | | |
| | | DataBar Expanded and Limited | | |
| | | DataBar Omnidirectional | | |
| | | DataBar Stacked and Truncated | | |
| | | EAN / JAN-13 | | |
| | | EAN / JAN-8 | | |
| | | Enterprise Intelligent Barcode (EIB) 4-State (4SB) | | |
| | | GS1-128 | | |
| | | Hanxin Code | | |
| | | HIBC | | |
| | | Interleaved 2 of 5 (ITF) | | |
| | | ITF-14 | | |
| | | Japan Post | | |
| | | MSI Plessey | | |
| | | Pharmacode-Italian and Laetus | | |
| | PZN 7, PZN 8 | | | |
| | UPC-A, UPC-E | | | |
| | USPS-128 | | | |
| | USPS Intelligent Mail Barcode (4-State Customer Barcode) | | | |
| | Supported symbologies | Two-dimensional (2D) symbologies | Aztec | |
| | | | DataBar with CC-A, CC-B, or CC-C | |
| | | | EAN / JAN-13 with CC-A, CC-B, or CC-C | |
| | | | EAN / JAN-8 with CC-A, CC-B, or CC-C | |
| | | | ECC-200 (Data Matrix) | |
| | | | • EIB CMDM | |
| | | | • French CIP | |
| | | | • GS1 Data Matrix | |
| | | | • NTIN and PPN | |
| | | | GS1-128 with CC-A, CC-B, or CC-C | |
| | | | MaxiCode | |
| Micro QR Code | | | | |
| MicroPDF417 | | | | |
| PDF417 | | | | |
| QR Code | | | | |
| UPC-A with CC-A, CC-B, or CC-C | | | | |
| UPC-E with CC-A, CC-B, or CC-C | | | | |

* Contact OMRON for a complete list of supported ECC-200 (Data Matrix) codes.

CC=Composite Components

Code Verification System LVS-9510 series

| | | |
|---|---------------------------|--|
| Minimum PC requirements (PC supplied by customer) | | <ul style="list-style-type: none"> • Windows® 7 Professional, Windows® 8.1 Pro, or Windows® 10 Pro • Intel® Core™ 2 Duo Processor or higher • 2 GB RAM • 800 x 600 screen resolution • One USB 2.0 port available per unit |
| Camera | | Monochrome 5 million pixels |
| Illumination | | White LED, red filter (660 nm) |
| Environmental specifications | Ambient temperature range | Operating: 10 to 30°C, Storage: 0 to 40°C |
| | Ambient humidity range | Operating: 20% to 80% (with no icing or condensation), Storage: 20% to 95% (with no icing or condensation) |
| Communications | | USB 2.0 A plug to B plug cable, 1.8 m |
| Power voltage | | 12 VDC at 2.5 A max. |
| Weight | Unpackaged standalone | Approx. 2.72 kg |
| | Shipping weight | Approx. 5.89 kg (Includes all items packaged in shipping box, such as power supply and cables) |
| Dimensions | | 279.4 x 228.6 x 279.4 mm (H x D x W) (Includes rubber feet on system base) |
| Top cover | Dimensions | 139.7 x 190.5 mm |
| | Weight | Approx. 155.92 g |
| Safety standards | | FCC, CE, UL |
| Calibrated Conformance Test Card (Included with system) | | <ul style="list-style-type: none"> • Included with 9510-5-3.0: EAN / UPC Calibrated Conformance Standard Test Card • Included with 9510-5-4.0: EAN / UPC Calibrated Conformance Standard Test Card • Included with 9510-5-4.5: EAN / UPC Calibrated Conformance Standard Test Card • Included with 9510-5-6.250: GS1-128 Calibrated Conformance Standard Test Card |
| Calibrated Conformance Test Card (Option) | | <ul style="list-style-type: none"> • EAN / UPC Calibrated Conformance Standard Test Card (Model: 98-CAL020) • GS1-128 Calibrated Conformance Standard Test Card (Model: 98-CAL021) |

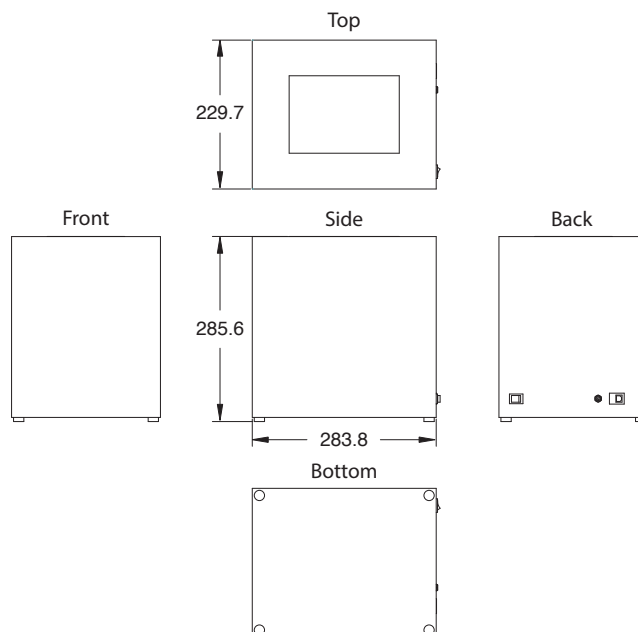
Options

Field of View Options

| Model | Minimum X dimension (nominal) | | Field of view (approximate) |
|--------------|-------------------------------|---------|-----------------------------|
| | 1D | 2D | |
| 9510-5-3.0 | 0.10 mm | 0.15 mm | 76 mm |
| 9510-5-4.0 | 0.15 mm | 0.23 mm | 102 mm |
| 9510-5-4.5 | 0.18 mm | 0.25 mm | 144 mm |
| 9510-5-6.250 | 0.24 mm | 0.33 mm | 159 mm |

Dimensions

(Unit: mm)



Code Verification System

LVS-9585 series

Laser Barcode Reader

Handheld Code Reader

Multi Code Reader

Code Verification System

Portable Barcode Verification System



The LVS-9585 is a high-performance handheld solution for off-line barcode verification to ISO / IEC, ANSI, and GS1 standards. Featuring a high-resolution 5.0 megapixel camera, the LVS-9585 reads and analyzes linear (1D) and two-dimensional (2D) codes up to 76.19 mm wide and up to 57.15 mm tall. 1D and 2D direct part marks (DPM) of up to 44 mm x 44 mm can be verified to MIL-STD-130, ISO, and GS1 standards.

The LVS-9585 verifies multiple symbologies, including any combination of linear, 2D (Data Matrix, QR Code, and Aztec Code), and stacked linear (PDF417, MicroPDF, and Composite codes).

Powered by a 2.0 m USB 2.0 cable, the LVS-9585 verifies barcodes on a wide range of surfaces including plastics, PCBs, metal, cardboard, and shipping containers.

LVS-9585: At a Glance

- Verify a broad variety of direct part marks as well as 1D and 2D printed barcodes with a single model.
- Software automatically selects best lighting performance from integrated red or white dome and 30° angle lighting.
- Validates printed barcodes to ISO / IEC, ANSI, GS1, and UDI print quality standards.
- Validates direct part marks (DPM) to ISO, MIL-STD-130, and GS1 standards.
- Software options include Multi-Sector for verification of multiple barcodes and GS1 AI content check.
- 21 CFR Part 11 compliant-ready.
- Supports 15 languages.
- Export verification reports to Excel or SQL database.
- Includes NIST-Traceable Calibrated Conformance Standard Test Card for calibrating the system.

LVS-9585: Available Symbologies



Please see Ratings and Specifications for a complete list of supported symbologies.

ISO/ANSI for 1D

LVS-95XX series barcode verifiers inspect all nine ISO and ANSI parameters for linear (1D) barcodes, have the ability to identify blemishes, and can perform simple human-readable validation.

ISO/ANSI for 2D

The LVS-95XX series verifies 2D codes and reports all parameters as specified in the applicable symbology specification.

Analytical Tools

Equipped with numerous analytical tools to identify and evaluate barcode errors. Problems are color-coded to make problem solving easy.

Software

LVS-95XX software includes GS1 System Symbol Specification Tables. GS1 tables set standards for barcode data structure and how to maintain the quality of codes during barcode creation. OMRON Microscan offers an onlinetraining course on GS1 tables and how these apply to different organizations.

Software Upgrade: EAIV

The Enhanced Application Identifier Verification (EAIV) option verifies that all GS1 Application Identifiers, such as Expiration Date, Global Trade Item Number (GTIN), and Batch Number, embedded in the datastructure of a GS1 barcode match the data programmed in the EAIV feature by the user.

User Permission Options

Manage permissions through LVS-95XX software: Passwords are stored in a local database. All passwords are encrypted, include an expiration date, and count failed password attempts.

Manage permission through Microsoft Active Directory: User privileges are based on Microsoft authentication and LVS-95XX permissions are assigned based on group membership.

Portability

Connects to the latest Windows OS tablets.

Code Verification System LVS-9585 series

Ordering Information

Code Verification Systems

| Type | Model |
|--|-------------|
| LVS-9585 Handheld 1D, 2D & DPM Barcode Verification, High Resolution | 9585-DPM-HD |
| LVS-9585 Handheld 1D, 2D & DPM Barcode Verification, Red and White Light | 9585-DPM |

Accessories

| Type | Model |
|--|------------|
| EAN / UPC Calibrated Conformance Test Card | 98-CAL020 |
| GS1-128 Calibrated Conformance Test Card | 98-CAL021 |
| Data Matrix Calibrated Conformance Standard Test Card (for 9585-DPM) | 98-CAL010 |
| Data Matrix Calibrated Conformance Standard Test Card (for 9585-DPM-HD) | 98-CAL022 |
| LVS-9510 and LVS-958□ Software Upgrade Option: Multi-Sector Verification | 98-SOF0039 |
| LVS-95□□ Software Upgrade Option: Automatic Login Feature | 98-SOF0056 |
| Software Upgrade Option: EAIV (Enhanced Application Identifier Verification) | 98-SOF0088 |
| LVS-9580 Upgrade (1D / 2D to DPM) | 98-SOF0095 |
| LVS-95□□ IQ-OQ Validation Procedure Guidelines, v. 4.3 and later (includes text cards) | 98-LVS0077 |
| Validation Test Cards (25 test cards) | 98-LVS-VTC |

Laser Barcode Reader

Handheld Code Reader

Multi Code Reader

Code Verification System

Code Verification System LVS-9585 series

Ratings and Specifications

| | | |
|---|--|---|
| Laser Barcode Reader | Supported standards | AIAG / DAMA / JAPIA / Odette |
| | | ALDI |
| | | ISO / IEC TR 29158 |
| | | DHL |
| | | FPMAJ |
| | | French CIP |
| | | GS1 General Specifications |
| | | HDMA Guidelines |
| | | Health Industry Barcode (HIBC) |
| | | IFAH |
| | | ISO / IEC 15415 / 15416 |
| | | Italian Pharmacode |
| | | Japan Codabar |
| | | Laetus Miniature Pharmacode |
| | | Laetus Pharmacode |
| | | Laetus Standard |
| | | MIL-STD-130N Change 1 |
| | | Pharmacy Product Number (PPN) |
| | | Automatic GS1 or ISO |
| | | GS1 (NTIN) |
| | Miniature Pharmacode | |
| | Postal (EIB, USPS IMB / Code 128, POSTNET, Japan Post) | |
| | PZN-big, normal, small (German Pharmacode) | |
| | GS1 US certification | Data Matrix for Healthcare |
| | | Data Matrix (ECC 200) |
| | | EAN / UPC |
| | | EAN / UPC and Extended Codes |
| | | EAN / UPC with CC |
| | | GS1 DataBar Omnidirectional |
| | | ITF-14 |
| | | GS1 DataBar-14 with CC (formerly RSS-14 with CC) |
| | | UCC / EAN with Supplementals |
| | | UCC / EAN-128 |
| | | UCC / EAN-128 with CC |
| | | ISO conformance standards |
| | ISO / IEC 15426-1, 15426-2 | |
| ISO / IEC TR29158(DPM Cat 0, 1, 2) / AIM DPM-1-2006 | | |
| All supported ISO / IEC symbology specifications | | |
| Supported symbologies | Linear (1D) symbologies | Codabar |
| | | Code 128, Code 39, Code 93 |
| | | GS1 DataBar Expanded and Limited |
| | | DataBar |
| | | DataBar Expanded and Limited |
| | | DataBar Omnidirectional |
| | | DataBar Stacked and Truncated |
| | | EAN / JAN-13 |
| | | EAN / JAN-8 |
| | | Enterprise Intelligent Barcode (EIB) 4-State (4SB) |
| | | French CIP |
| | | GS1-128 |
| | | Hanxin Code |
| | | HIBC |
| | | Interleaved 2 of 5 (ITF) |
| | | ITF-14 |
| | | Japan Post |
| | | MaxiCode |
| | | MSI Plessey |
| | | Pharmacode-Italian and Laetus |
| | PZN 7 and PZN 8 | |
| | UPC-A and UPC-E | |
| | USPS-128 | |
| | USPS Intelligent Mail Barcode (4-State Barcode) | |
| | Two-dimensional (2D) symbologies | Aztec Code |
| | | DataBar with CC-A, CC-B, or CC-C |
| | | EAN / JAN-13 with CC-A, CC-B, or CC-C |
| | | EAN / JAN-8 with CC-A, CC-B, or CC-C |
| | | ECC-200 (Data Matrix) |
| | | Enterprise Intelligent Barcode (EIB) Complex Mail Data Marks (CMDM) |
| | | GS1-128 with CC-A, CC-B, or CC-C |
| | | Micro QR Code |
| | | MicroPDF417 |
| | | PDF417 |
| | | QR Code |
| | | UPC-A with CC-A, CC-B, or CC-C |
| UPC-E with CC-A, CC-B, or CC-C | | |

* Contact OMRON for a complete list of supported ECC-200 (Data Matrix) codes.

CC=Composite Components

Laser Barcode Reader

Handheld Code Reader

Multi Code Reader

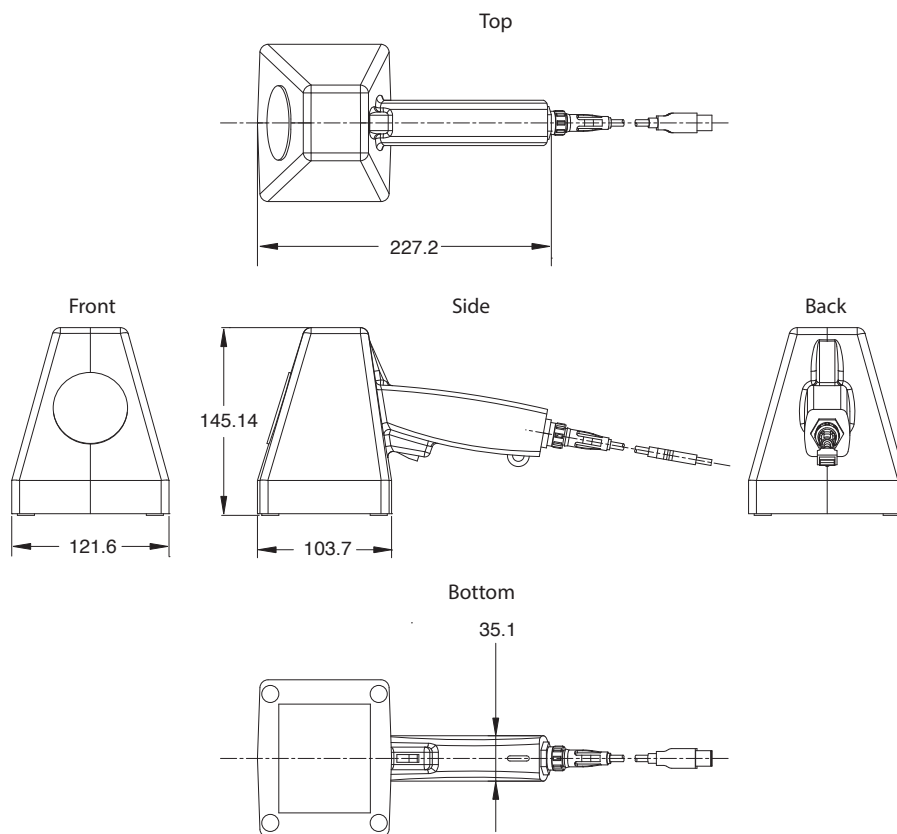
Code Verification System

Code Verification System LVS-9585 series

| | | |
|---|---------------------------|---|
| Minimum PC requirements (PC supplied by customer) | | <ul style="list-style-type: none"> • Windows®7 Pro SP1 or Windows®10 Pro • Intel® Core™ i3 or higher • 4 GB RAM • 800 x 600 screen resolution; • One USB 2.0 port available per unit |
| Field of view | DPM (9585-DPM) | 44 x 44 mm |
| | HD (9585-DPM-HD) | 33 x 30 mm |
| Minimum cell size | DPM (9585-DPM) | 1D = 4.0 mils (0.10 mm) 2D = 5.9 mils (0.15 mm) |
| | HD (9585-DPM-HD) | 2D = 2.0 mils (0.05 mm) |
| Camera | | 5 million pixels |
| Illumination | | Object distance: Contact Red dome (660 nm), white dome, 30° angle |
| Environmental specifications | Ambient temperature range | Operating: 4 to 46°C, Storage: -20 to 60°C |
| | Ambient humidity range | Operating: 20% to 80% (with no icing or condensation), Storage: 20% to 95% (with no icing or condensation) |
| Communications | | USB 2.0 A plug to Mini-B plug cable, 2 m |
| Power supply | | USB powered 5 VDC at 400 mA |
| Weight | Unpackaged standalone | Approx. 0.68 kg |
| | Shipping weight | Approx. 1.51 kg (Includes all cables and other items packaged in shipping box) |
| Dimensions | | 215.9 x 139.7 x 120.6 mm (H x D x W) |
| Calibrated Conformance Test Card (Included with system) | | <ul style="list-style-type: none"> • Included with 9585-DPM: EAN / UPC Calibrated Conformance Standard Test Card • Included with 9585-DPM-HD: Data Matrix Calibrated Conformance Standard Test Card |
| Safety standards | | FCC, CE, UL |

Dimensions

(Unit: mm)



Code Verification System

LVS-9580 series

Laser Barcode Reader

Handheld Code Reader

Multi Code Reader

Code Verification System

Portable Barcode Verification System

Durable, portable handheld verifier



Weights only 0.64kg

LVS-9580: At a Glance

- Stitching feature to grade barcodes larger than the field of view.
- Ideal for multiple line production and warehouse environments.
- Validates printed barcodes to ISO / IEC, ANSI, GS1, and UDI print quality standards.
- Validates direct part marks (DPM) to ISO, MIL-STD-130, and GS1 standards.
- Software upgrade options include Multi-Sector for verification of multiple barcodes on a label.
- 21 CFR Part 11 compliant-ready.
- Supports 15 languages.
- Quality data reporting for auditing purposes.
- Includes NIST-Traceable Calibrated Conformance Standard Test Card for calibrating the system.

LVS-9580: Available Symbolologies



Please see the Ratings and Specifications for a complete list of supported symbolologies.

The LVS-9580 is a high-performance handheld solution for off-line barcode verification to ISO / IEC, ANSI, GS1, and UDI standards. Featuring a high-resolution 5.0 megapixel camera, the LVS-9580 reads and analyzes linear (1D) and two-dimensional (2D) codes up to 76.19 mm wide and up to 57.15 mm tall. 1D and 2D direct part marks (DPM) of up to 44 mm x 44 mm can be verified to MIL-STD-130, ISO, and GS1 standards.

The LVS-9580 verifies multiple symbologies, including any combination of linear, 2D (Data Matrix, QR Code, and Aztec Code), and stacked linear (PDF417, MicroPDF, and Composite codes).

Powered by a 2.0 m USB 2.0 cable, the LVS-9580 verifies barcodes on a wide range of surfaces including plastics, PCBs, metal, cardboard, and shipping containers.

ISO/ANSI for 1D

LVS-95XX series barcode verifiers inspect all nine ISO and ANSI parameters for linear (1D) barcodes, have the ability to identify blemishes, and can perform simple human-readable validation.

ISO/ANSI for 2D

The LVS-95XX series verifies 2D codes and reports all parameters as specified in the applicable symbology specification.

Analytical Tools

Equipped with numerous analytical tools to identify and evaluate barcode errors. Problems are color-coded to make problem solving easy.

Software

LVS-95XX software includes GS1 System Symbol Specification Tables. GS1 tables set standards for barcode data structure and how to maintain the quality of codes during barcode creation. OMRON Microscan offers an online training course on GS1 tables and how these apply to different organizations.

Software Upgrade: EAIV

The Enhanced Application Identifier Verification (EAIV) option verifies that all GS1 Application Identifiers, such as Expiration Date, Global Trade Item Number (GTIN), and Batch Number, embedded in the data structure of a GS1 barcode match the data programmed in the EAIV feature by the user.

User Permission Options

Manage permissions through LVS-95XX software: Passwords are stored in a local database. All passwords are encrypted, include an expiration date, and count failed password attempts.

Manage permissions through Microsoft Active Directory: User privileges are based on Microsoft authentication and LVS-95XX permissions are assigned based on group membership.

Portability

Connects to the latest Windows OS tablets.

Code Verification System LVS-9580 series

Ordering Information

Code Verification Systems

| Type | Model |
|--|-------------|
| LVS-9580 Handheld 1D & 2D Barcode Verification | 9580-C-3 |
| LVS-9580 Handheld 1D, 2D & DPM Barcode Verification | 9580-DPM |
| LVS-9580 Handheld 1D, 2D & DPM Barcode Verification, High Resolution | 9580-DPM-HD |

Accessories

| Type | Model |
|--|------------|
| EAN / UPC Calibrated Conformance Test Card | 98-CAL020 |
| GS1-128 Calibrated Conformance Test Card | 98-CAL021 |
| Data Matrix Calibrated Conformance Standard Test Card (for 9580-C-3 / 9580-DPM) | 98-CAL010 |
| Data Matrix Calibrated Conformance Standard Test Card (for 9580-DPM-HD) | 98-CAL022 |
| LVS-9510 and LVS-9580 Software Upgrade Option: Multi-Sector Verification | 98-SOF0039 |
| LVS-9500 Software Upgrade Option: Automatic Login Feature | 98-SOF0056 |
| Software Upgrade Option: EAIV (Enhanced Application Identifier Verification) | 98-SOF0088 |
| LVS-9580 Upgrade (1D / 2D to DPM) | 98-SOF0095 |
| LVS-9500 IQ-OQ Validation Procedure Guidelines, v. 4.3 and later (includes text cards) | 98-LVS0077 |
| Validation Test Cards (25 test cards) | 98-LVS-VTC |

Ratings and Specifications

| | | |
|---------------------|---------------------------|--|
| Supported standards | Application standards | AIAG / DAMA / JAPIA / Odette ALDI ISO / IEC TR 29158 DHL FPMAJ French CIP GS1 General Specifications HDMA Guidelines Health Industry Barcode (HIBC) IFAH ISO / IEC 15415 / 15416 Italian Pharmacode Japan Codabar Laetus Miniature Pharmacode Laetus Pharmacode Laetus Standard MIL-STD-130N Change 1 Pharmacy Product Number (PPN) Automatic GS1 or ISO GS1 (NTIN) Miniature Pharmacode Postal (EIB, USPS IMB / Code 128, POSTNET, Japan Post) PZN-big normal small (German Pharmacode) |
| | GS1 (NTIN) | Data Matrix for Healthcare Data Matrix (ECC 200) EAN / UPC EAN / UPC and Extended Codes EAN / UPC with CC GS1 DataBar Omnidirectional ITF-14 GS1 DataBar-14 with CC (formerly RSS-14 with CC) UCC / EAN with Supplementals UCC / EAN-128 UCC / EAN-128 with CC |
| | ISO conformance standards | ISO / IEC 15415, 15416, 15418 ISO / IEC 15426-1, 15426-2 ISO / IEC TR29158 (DPM Cat 0) / AIM DPM-1-2006 All supported ISO/IEC symbology specifications |

Code Verification System LVS-9580 series

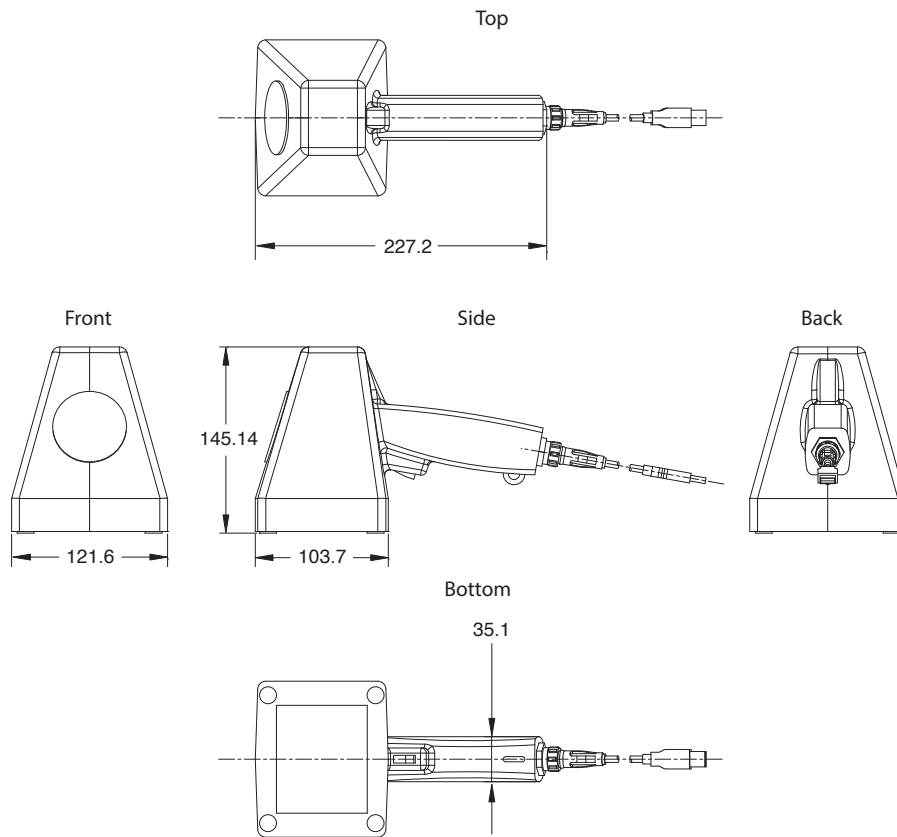
| | | | |
|---|--|---|---|
| Laser Barcode Reader | Supported symbologies | Linear (1D) symbologies | Codabar |
| | | | Code 128 Code 39 Code 93 |
| | | | GS1 DataBar Expanded and Limited |
| | | | DataBar |
| | | | DataBar Expanded and Limited |
| | | | DataBar Omnidirectional |
| | | | DataBar Stacked and Truncated |
| | | | EAN / JAN-13 |
| | | | EAN / JAN-8 |
| | | | Enterprise Intelligent Barcode (EIB) 4-State (4SB) |
| | | | French CIP |
| | | | GS1-128 |
| | | | Hanxin Code |
| | | | HIBC |
| | | | Interleaved 2 of 5 (ITF) |
| | | | ITF-14 |
| | | | Japan Post |
| | | MaxiCode | |
| | | MSI Plessey | |
| | | Pharmacode-Italian and Laetus | |
| | | PZN 7 and PZN 8 | |
| | | UPC-A and UPC-E | |
| | | USPS-128 | |
| | | USPS Intelligent Mail Barcode (4-State Barcode) | |
| | | Two-dimensional (2D) symbologies | Aztec Code |
| | | | DataBar with CC-A, CC-B, or CC-C |
| | | | EAN / JAN-13 with CC-A, CC-B, or CC-C |
| | | | EAN / JAN-8 with CC-A, CC-B, or CC-C |
| | | | ECC-200 (Data Matrix) |
| | | | Enterprise Intelligent Barcode (EIB) Complex Mail Data Marks (CMDM) |
| | | | GS1-128 with CC-A, CC-B, or CC-C |
| | | | Micro QR Code |
| | | | MicroPDF417 |
| PDF417 | | | |
| QR Code | | | |
| UPC-A with CC-A, CC-B, or CC-C | | | |
| UPC-E with CC-A, CC-B, or CC-C | | | |
| Minimum PC requirements (PC supplied by customer) | <ul style="list-style-type: none"> • Windows®7 Pro SP1 or Windows®10 Pro • Intel® Core™ i3 or higher • 4 GB RAM • 800 x 600 screen resolution • One USB 2.0 port available per unit | | |
| Field of view | Standard (9580-C-3) | | 76.19 mm horizontal 57.15 mm vertical |
| | DPM (9580-DPM) | | 44 x 44 mm |
| | HD (9580-DPM-HD) | 33 x 30 mm | |
| Minimum cell size | Standard (9580-C-3) | 1D = 4.0 mils (0.10 mm) | |
| | DPM (9580-DPM) | 2D = 5.9 mils (0.15 mm) | |
| | HD (9580-DPM-HD) | 2D = 2.0 mils (0.05 mm) | |
| Camera | 5 million pixels | | |
| | Object distance: Contact | | |
| illumination | Red dome (660 nm) | | |
| Environmental specifications | Ambient temperature range | Operating: 4 to 46°C, Storage: -20 to 60°C | |
| | Ambient humidity range | Operating: 20% to 80% (with no icing or condensation), Storage: 20% to 95% (with no icing or condensation) | |
| Communications | USB 2.0 A plug to Mini-B plug cable, 2 m | | |
| Power supply | USB powered 5 VDC at 400 mA | | |
| Weight | Unpackaged standalone | Approx. 0.64 kg | |
| | Shipping weight | Approx. 1.81 kg (includes all cables and other items packaged in shipping box) | |
| Dimensions | 215.9 x 139.7 x 120.6 mm (H x D x W) | | |
| Calibrated Conformance Test Card (Included with system) | <ul style="list-style-type: none"> • Included with 9580-C-3: EAN / UPC Calibrated Conformance Standard Test Card • Included with 9580-DPM: EAN / UPC Calibrated Conformance Standard Test Card • Included with 9580-DPM-HD: Data Matrix Calibrated Conformance Standard Test Card | | |
| Safety standards | FCC, CE, UL | | |

* Contact OMRON for a complete list of supported ECC-200 (Data Matrix) codes.

CC=Composite Components

Dimensions

(Unit: mm)



Laser Barcode Reader

Handheld Code Reader

Multi Code Reader

Code Verification System

MEMO

Laser Barcode Reader

Handheld Code Reader

Multi Code Reader

Code Verification System

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