

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

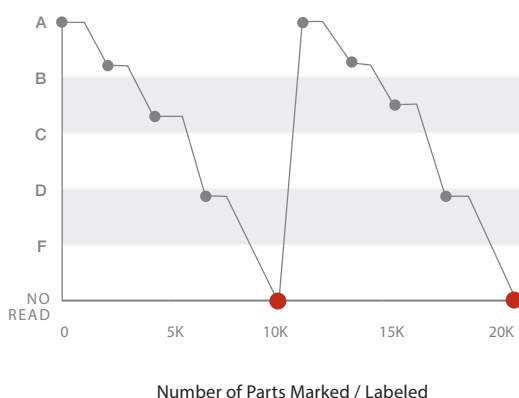
- Comply with symbol quality industry standards and directives
- Maximize efficiency of your manufacturing process
- Control quality in real time as you verify the output from your printer or code marking equipment
- Minimize returned goods due to bad labels
- Increase customer satisfaction
- Produce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

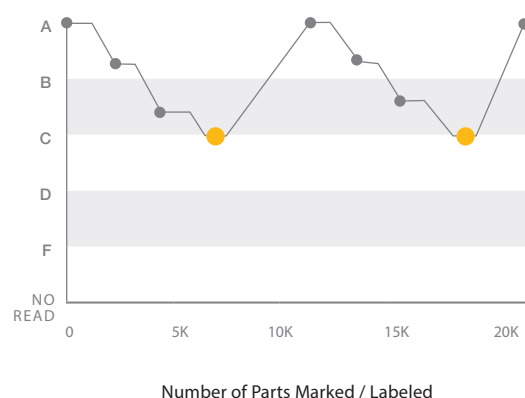
WITHOUT VERIFICATION

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 × 44 mm DPM-HD: 33 × 33 mm

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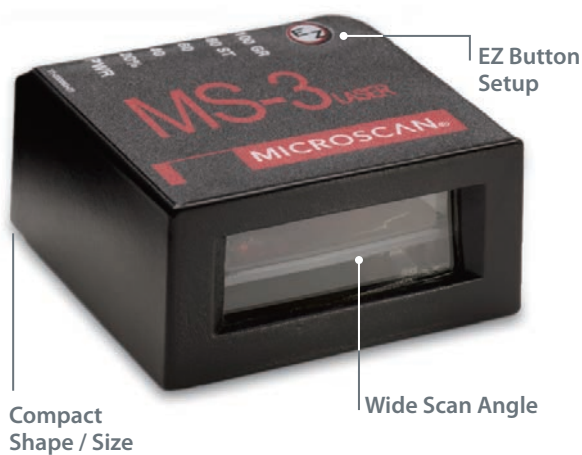
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OTHER FEATURES

- 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.

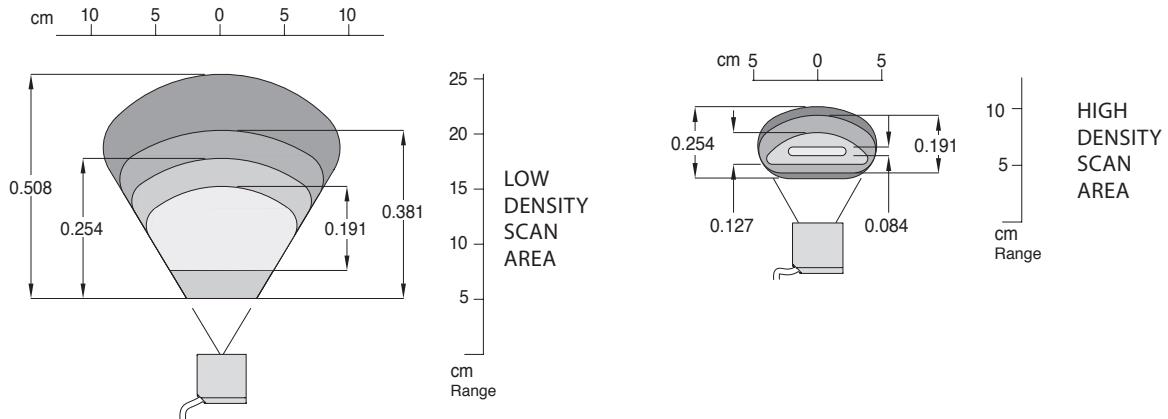
b. The default is activated by connecting pin 8 to ground pin 4.

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)



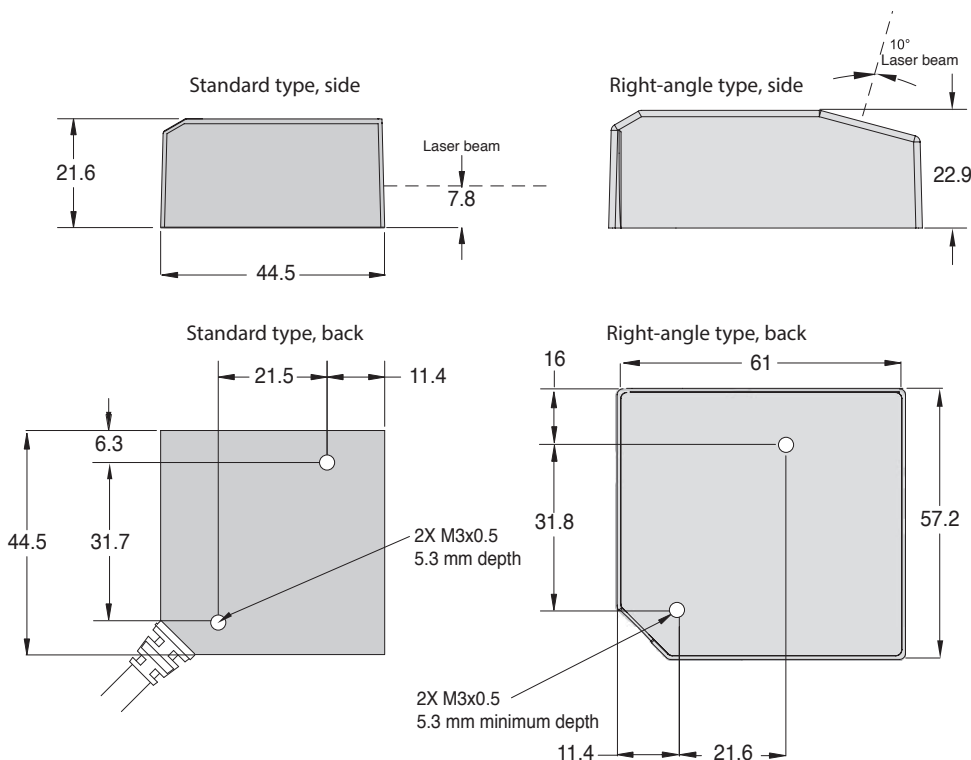
Narrow-bar-width	Read range
0.191 mm	76 to 152 mm
0.254 mm	51 to 178 mm
0.381 mm	51 to 203 mm
0.508 mm	51 to 254 mm

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

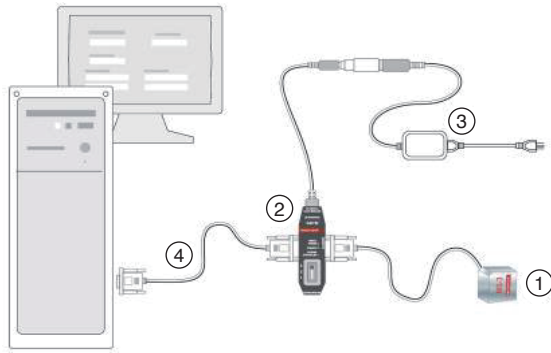
This warning label is attached to the laser barcode reader. Never remove this label or place objects in front of it.

Laser Barcode Reader MS-3 series

System Configurations

Stand Alone (5V)

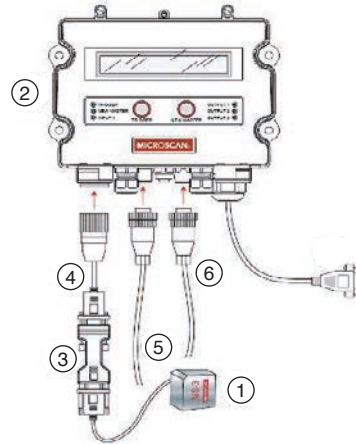
This is the basic setup for a single MS-3.



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)

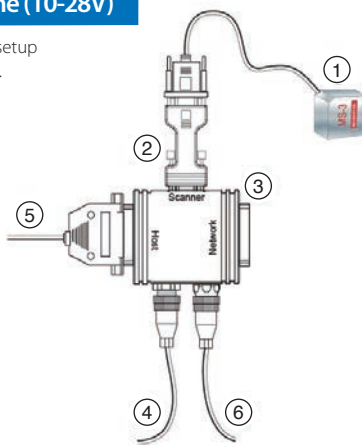
With MS-Connect 210
This is the basic setup for a single MS-3 and MS-Connect 210.



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)

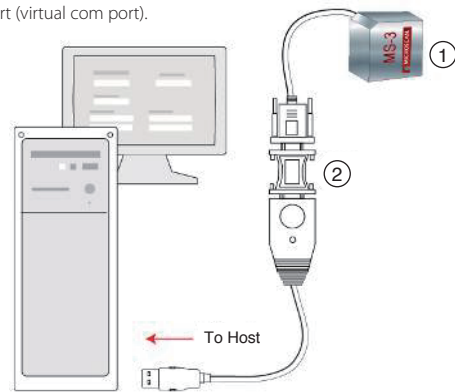
This is the basic setup for a single MS-3.



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).



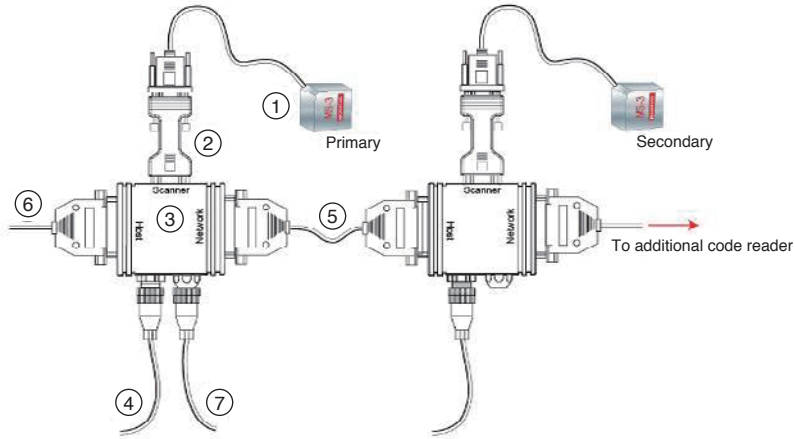
No.	Type	Model
1	MS-3 Laser Barcode Reader	FIS-0003-□□□□G
2	IC-3USB Interface Kit, USB-to-Serial, 15-Pin	98-000051-01
-	Kit, Mounting Arm / Adapter, 4 in., for MS-3	98-000048-01
-	Kit, Mounting Stand Base Plate	98-000054-01

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

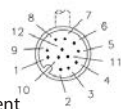
Ratings and Specifications

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.

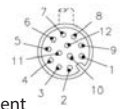
PIN ASSIGNMENTS

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



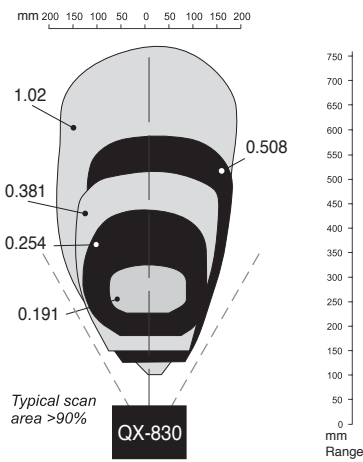
Pin Assignment
1 Terminated
2 Terminated
3 Terminated
4 TX (-)
5 RX (+)
6 TX (+)
7 Terminated
8 RX (-)

Laser Barcode Reader QX-830 series

Read Ranges*

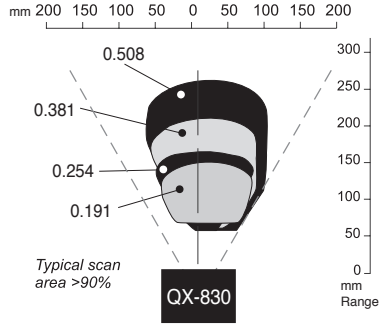
(Unit: mm)

Low Density Scan Area



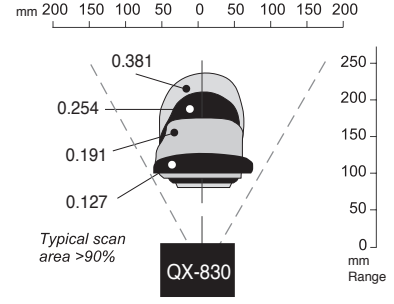
Narrow-bar-width	Read range
0.191 mm	254 to 305 mm
0.254 mm	178 to 406 mm
0.381 mm	152 to 483 mm
0.508 mm	127 to 559 mm
1.02 mm	102 to 762 mm

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

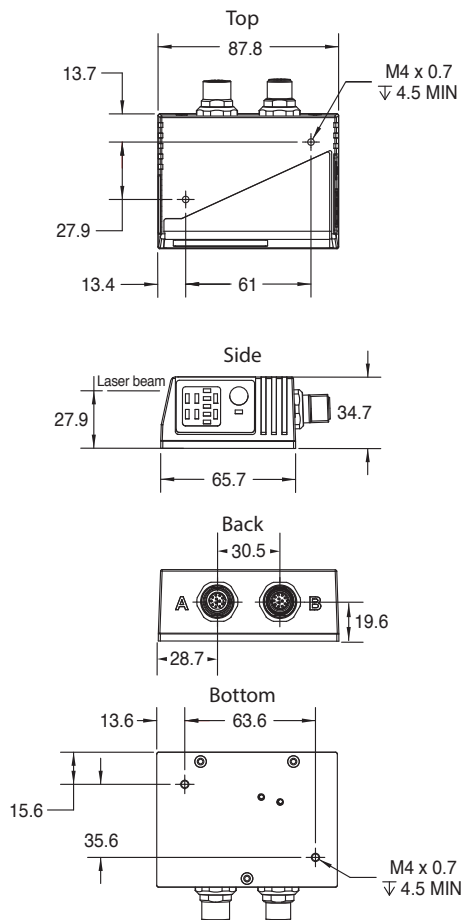


Narrow-bar-width	Read range
0.084 mm	Contact OMRON.
0.127 mm	102 to 127 mm
0.191 mm	89 to 171 mm
0.254 mm	82 to 203 mm
0.381 mm	82 to 229 mm

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

Dimensions

(Unit: mm)



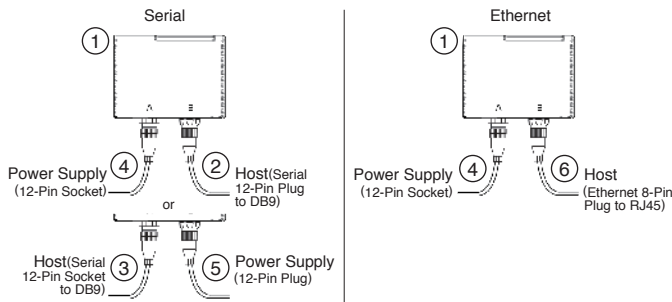
Laser Label Indications

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

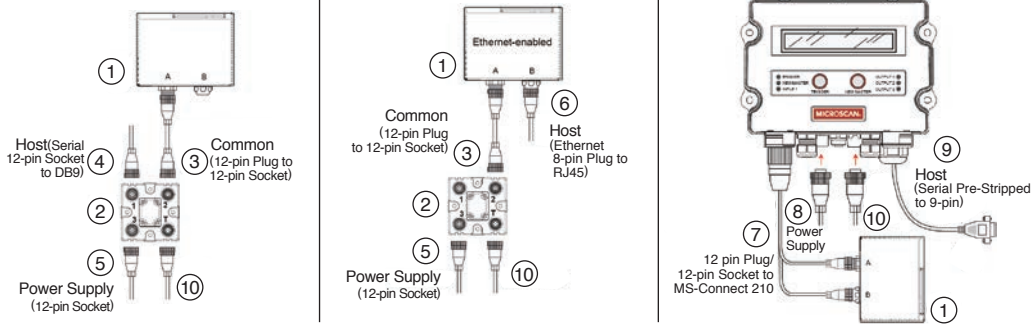


No.	Type	Model
1	QX-830 Laser Barcode Reader	FIS-0830-□□□□G
2	QX Cordset, Host, Serial, M12 12-Pin Plug (Screw-On)-to-DB-9 Socket, 1 m.	61-000152-02*
3	QX Cordset, Host, Serial, M12 12-Pin Socket (Screw-On)-to-DB-9 Socket, 1 m.	61-000153-02*
4	Power Supply, 100-240VAC, +24VDC, M12 12-Pin Socket	97-000012-01
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

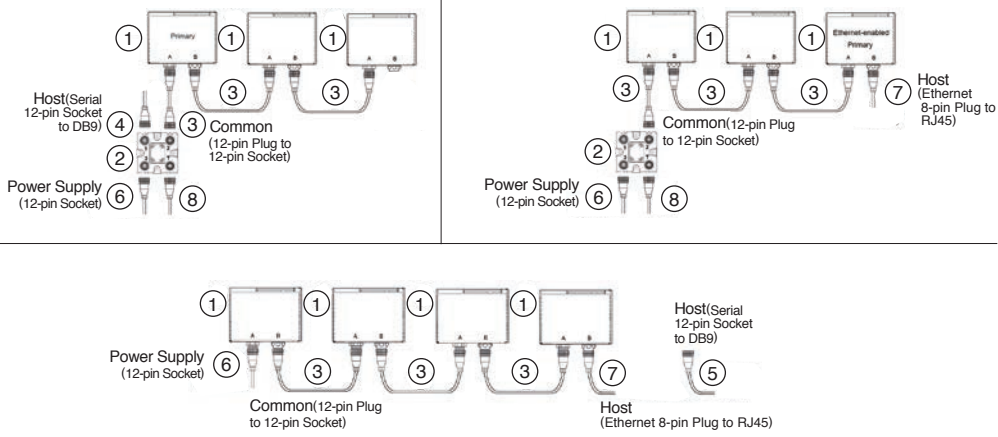
*1. Cordsets available in multiple lengths

*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

Handheld Code Reader

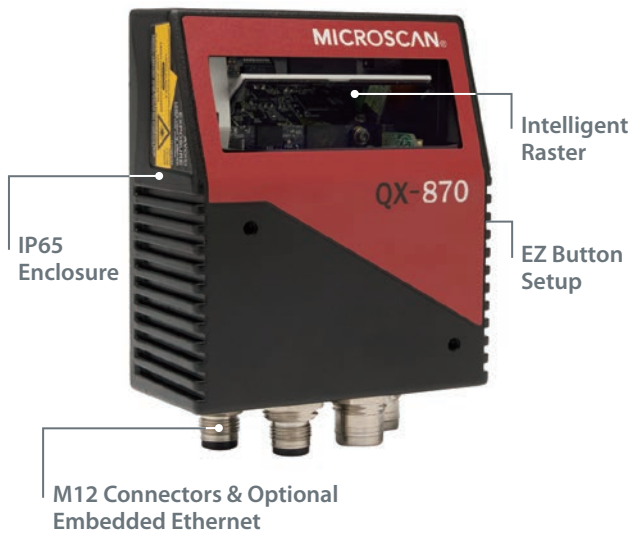
Multi Code Reader

Code Verification System

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

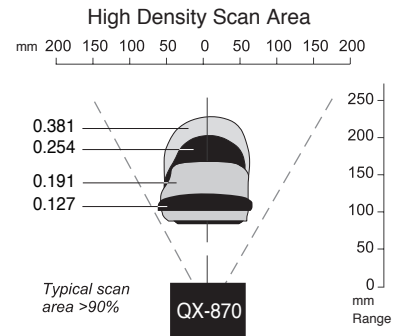
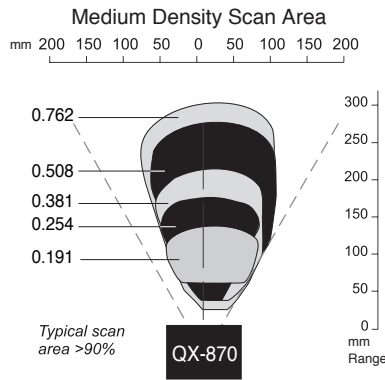
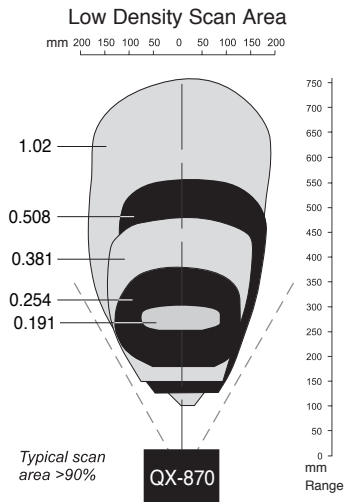
Pin Assignment
1 Power
2 Trigger
3 Ground
4 Input

*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

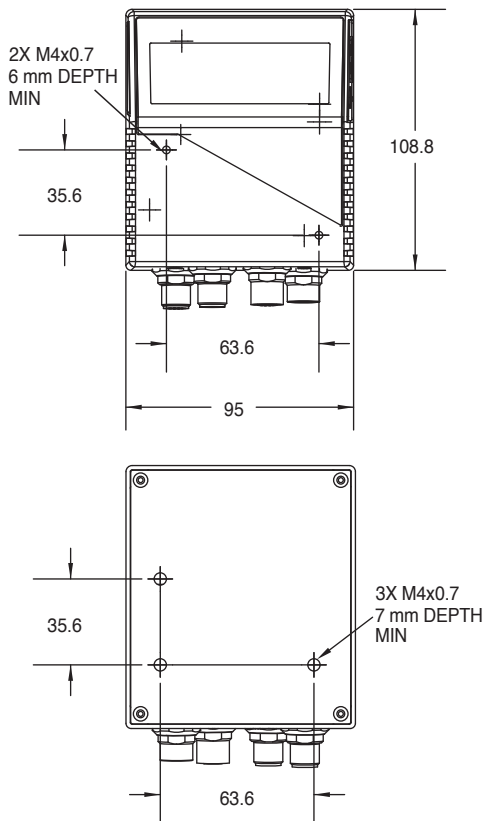
Narrow-bar-width	Read range
0.191 mm	64 to 140 mm
0.254 mm	38 to 178 mm
0.381 mm	38 to 216 mm
0.508 mm	38 to 280 mm
0.762 mm	25 to 304 mm

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)



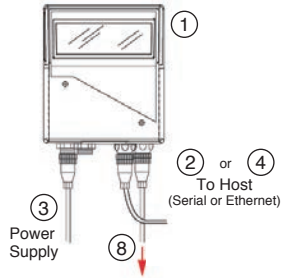
Laser Label Indications

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

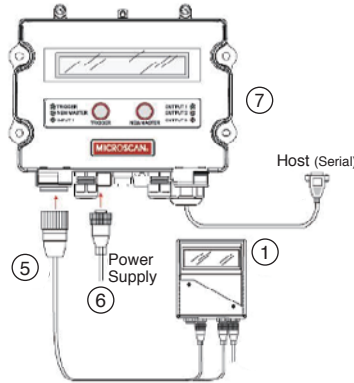
System Configurations

Stand Alone Configurations



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

MS-Connect 210

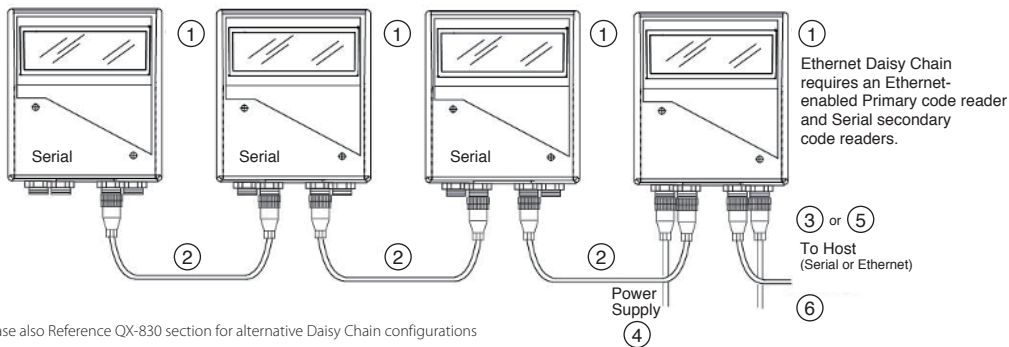


No.	Type	Model
1	QX-870 Laser Barcode Reader	FIS-0870-□□□□G
2	QX Cordset, Host, Serial, M12 12-Pin Plug (Screw-On)-to-DB-9 Socket, 1 m.	61-000152-02 ^{*1}
3	Power Supply, 100-240VAC, +24VDC, M12 12-Pin Socket	97-000012-01
4	QX Cordset, Host, Ethernet, M8 8-Pin Plug (Screw-On)-to-RJ45, 1 m.	61-000160-03 ^{*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

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

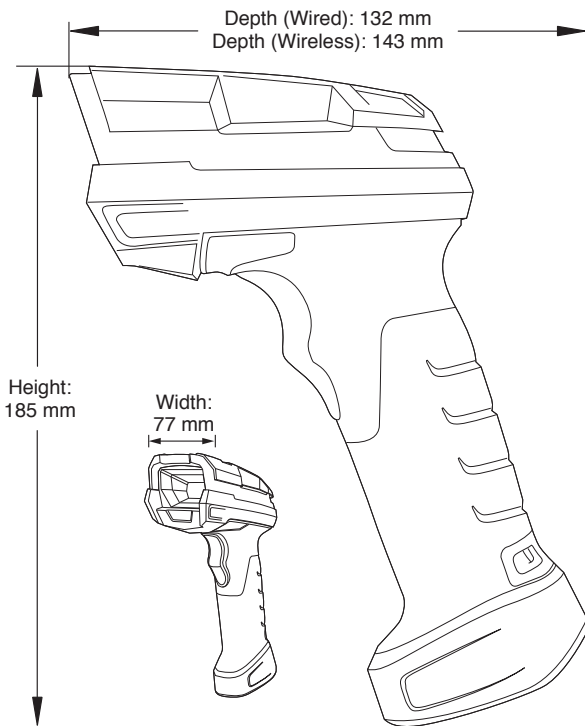
(Unit: mm)

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)



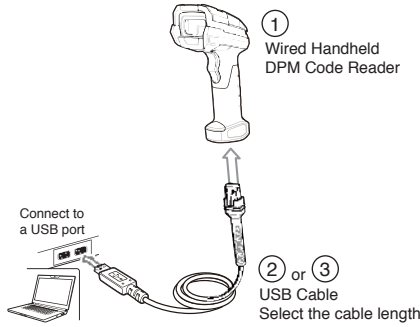
Laser Label Indications

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

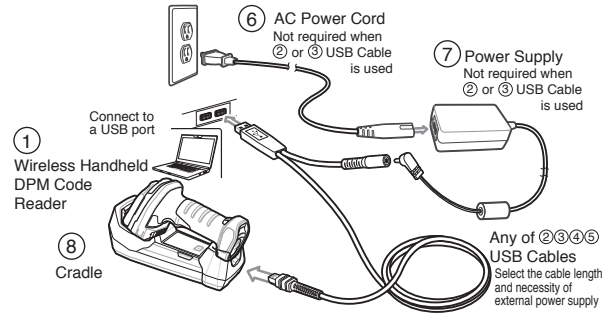
System Configurations

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

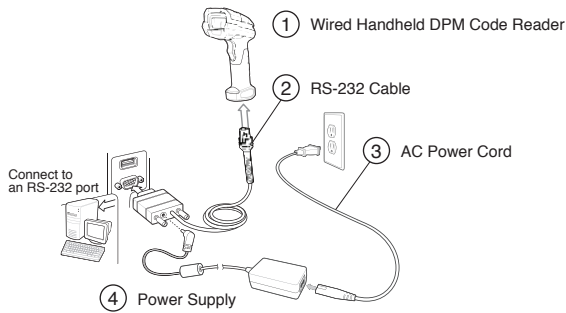
Wireless code reader (USB connection)



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.

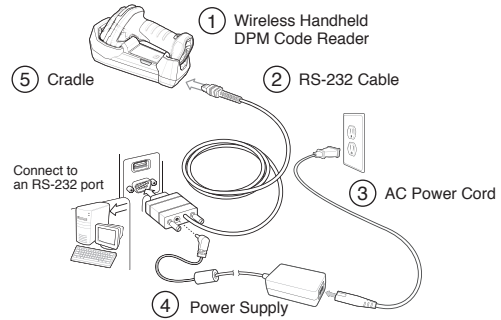
Wired code reader (RS-232 connection)



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)



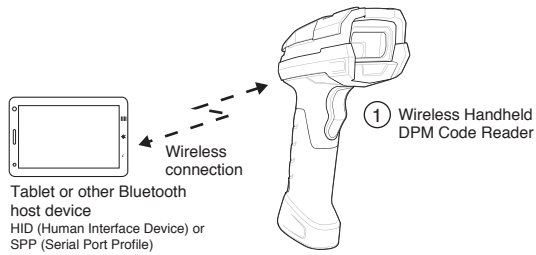
No.	Type	Model
1	Handheld DPM Code Reader, Wireless, HDS-3678	HDS-3678-0001
2	Cable, RS-232, DB9 Socket, 2 m, Straight, HS-360X (power supply required)	12-9000953-01
3	AC Power Cord, 1.8 m, JAPAN, C13 connector *	12-9001046-01
4	KIT, Power Supply for Cradle/Charger, HS-360X Wireless Type (AC power cord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

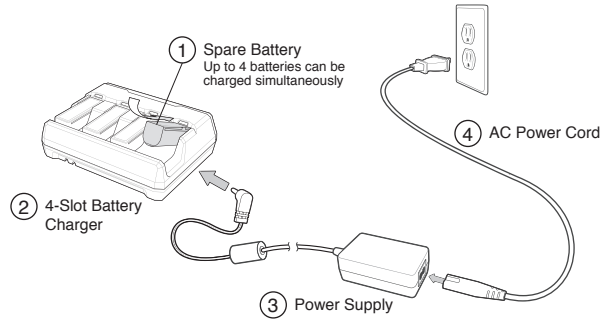
System Configurations

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

Laser Barcode Reader

Handheld Code Reader

Multi Code Reader

Code Verification System

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°

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.

V430-F: Available Codes

Linear			
Stacked	PDF417		
	GS1 Databar		
2D Code	Data Matrix	QR	Micro QR
			

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

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.

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

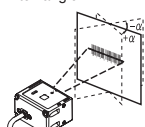
Ratings and Specifications

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		

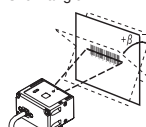
*1. These are the code types supported based on Omron's read capability validation standard. It is recommended that the customer do its own validation in its actual work environment.

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

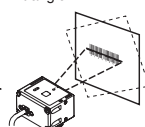
*3. Pitch angle



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

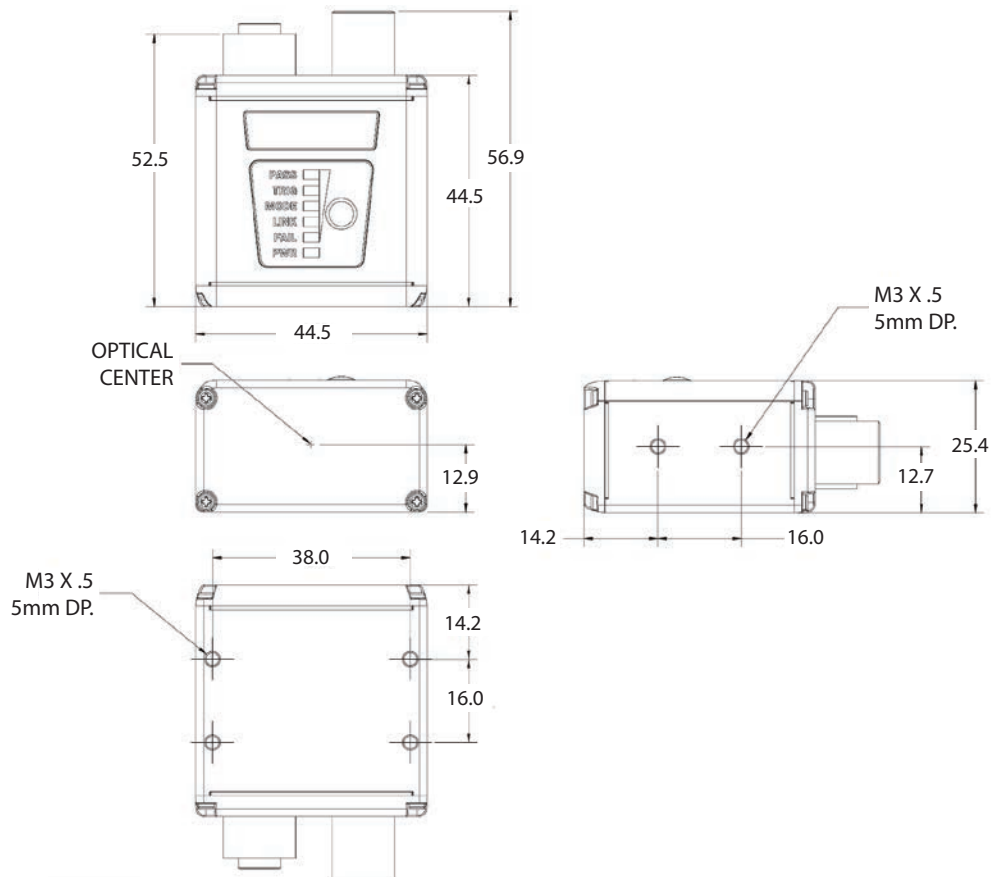
Read Ranges (Reference)

	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



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)				
		Handheld Code Reader	Application standards	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						
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						
Multi Code Reader	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)				
		Code Verification System	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)

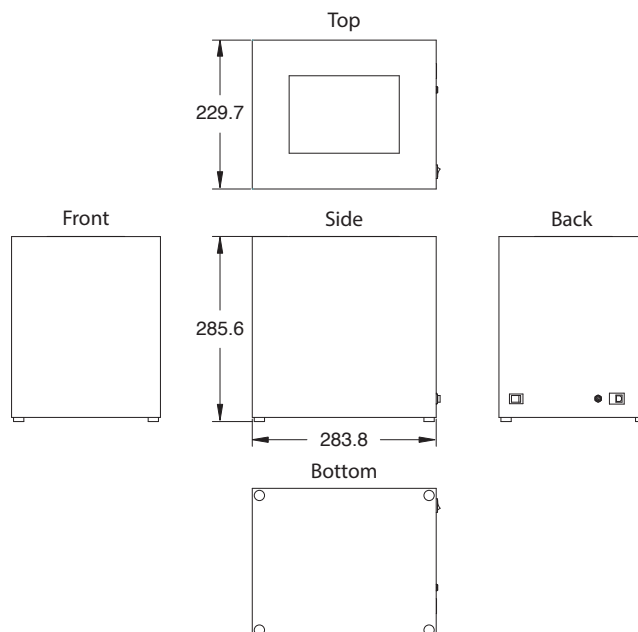
Options

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

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)		
	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
	Multi Code Reader	ISO conformance standards	UCC / EAN-128 with CC
			ISO / IEC 15415, 15416, 15418
			ISO / IEC 15426-1, 15426-2
Code Verification System	Supported symbologies	ISO / IEC TR29158(DPM Cat 0, 1, 2) / AIM DPM-1-2006	
		All supported ISO / IEC symbology specifications	
		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)		
	Code Verification System	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.

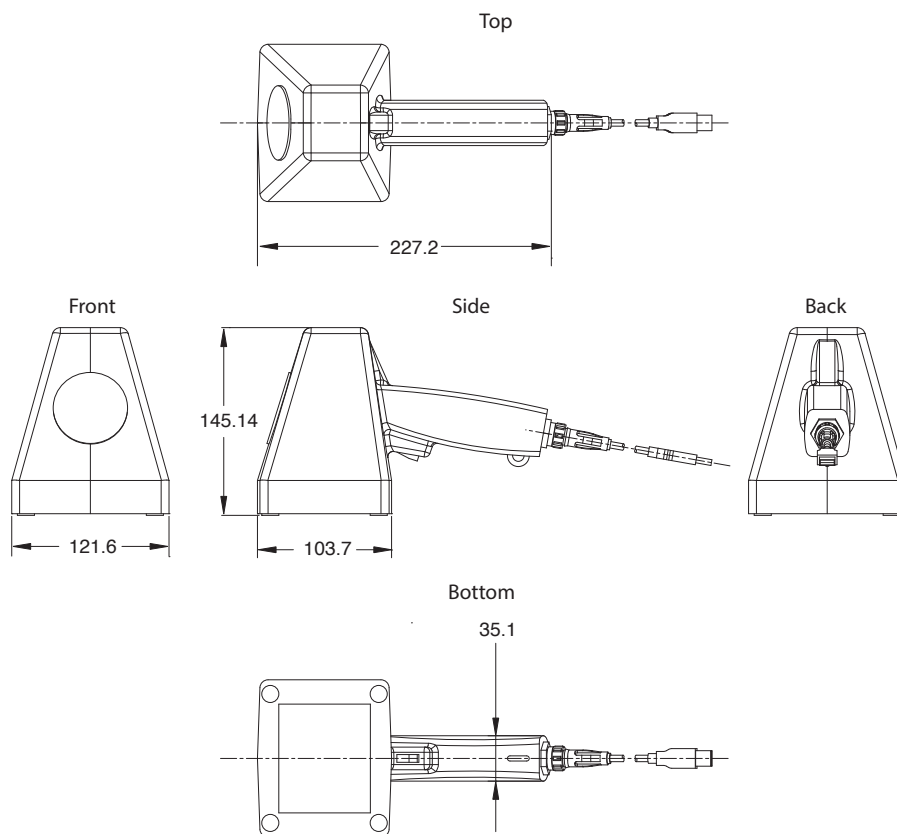
CC=Composite Components

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-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

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

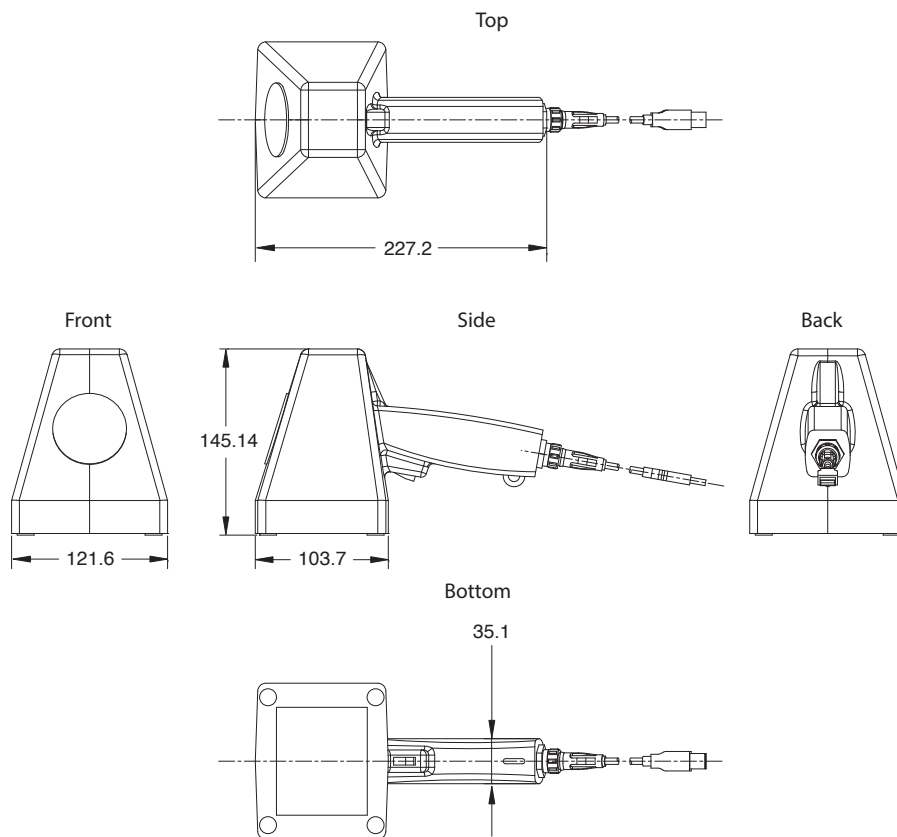
Supported symbologies	Linear (1D) symbologies	Codabar
		Code 128 Code 39 Code 93
Supported symbologies	Linear (1D) symbologies	GS1 DataBar Expanded and Limited
		DataBar
Supported symbologies	Linear (1D) symbologies	DataBar Expanded and Limited
		DataBar Omnidirectional
Supported symbologies	Linear (1D) symbologies	DataBar Stacked and Truncated
		EAN / JAN-13
Supported symbologies	Linear (1D) symbologies	EAN / JAN-8
		Enterprise Intelligent Barcode (EIB) 4-State (4SB)
Supported symbologies	Linear (1D) symbologies	French CIP
		GS1-128
Supported symbologies	Linear (1D) symbologies	Hanxin Code
		HIBC
Supported symbologies	Linear (1D) symbologies	Interleaved 2 of 5 (ITF)
		ITF-14
Supported symbologies	Linear (1D) symbologies	Japan Post
		MaxiCode
Supported symbologies	Linear (1D) symbologies	MSI Plessey
		Pharmacode-Italian and Laetus
Supported symbologies	Linear (1D) symbologies	PZN 7 and PZN 8
		UPC-A and UPC-E
Supported symbologies	Linear (1D) symbologies	USPS-128
		USPS Intelligent Mail Barcode (4-State Barcode)
Supported symbologies	Two-dimensional (2D) symbologies	Aztec Code
		DataBar with CC-A, CC-B, or CC-C
Supported symbologies	Two-dimensional (2D) symbologies	EAN / JAN-13 with CC-A, CC-B, or CC-C
		EAN / JAN-8 with CC-A, CC-B, or CC-C
Supported symbologies	Two-dimensional (2D) symbologies	ECC-200 (Data Matrix)
		Enterprise Intelligent Barcode (EIB) Complex Mail Data Marks (CMDM)
Supported symbologies	Two-dimensional (2D) symbologies	GS1-128 with CC-A, CC-B, or CC-C
		Micro QR Code
Supported symbologies	Two-dimensional (2D) symbologies	MicroPDF417
		PDF417
Supported symbologies	Two-dimensional (2D) symbologies	QR Code
		UPC-A with CC-A, CC-B, or CC-C
Supported symbologies	Two-dimensional (2D) symbologies	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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Read and understand this catalog.

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NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY OR IN LARGE QUANTITIES WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

Programmable Products.

Omron Companies shall not be responsible for the user's programming of a programmable Product, or any consequence thereof.

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Data presented in Omron Company websites, catalogs and other materials is provided as a guide for the user in determining suitability and does not constitute a warranty. It may represent the result of Omron's test conditions, and the user must correlate it to actual application requirements. Actual performance is subject to the Omron's Warranty and Limitations of Liability.

Change in Specifications.

Product specifications and accessories may be changed at any time based on improvements and other reasons. It is our practice to change part numbers when published ratings or features are changed, or when significant construction changes are made. However, some specifications of the Product may be changed without any notice. When in doubt, special part numbers may be assigned to fix or establish key specifications for your application. Please consult with your Omron's representative at any time to confirm actual specifications of purchased Product.

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