



Handheld Reader V450-H

Ultra-Rugged Direct Part Mark Handheld Reader

- Versatile, powerful decode performance for any application
- Simple Application Configuration via WebLinkPC
- Point-and-shoot decode performance and minimal workflow disruption
- Withstands multiple drops from 8' and 5,000 tumbles
- Rated dust proof and spray proof to IP67
- Industry-Leading DPM Decoding Performance with Omron's X-Mode Imaging Technology
- Wired or Wireless Communication



Product Ordering Information

Part	Description	Part Number
	V450-H, Handheld Reader DPM, Wired	V450-HDS3608-0001
	V450-H, Handheld Reader DPM, Wireless	V450-HDS3678-0001


V450-H

Accessories

Appearance	Type	Part Number
	Battery, Spare, V450-H / HS-360X	98-9000224-01
	Power Supply, Cradle, V450-H / HS-360X	98-9000181-01
	Power Supply, 4-Slot Battery Charger, V450-H / HS-360X	98-9000182-01
	4-Slot Battery Charger, V450-H / HS-360X	98-9000185-01
	Stand, Intelligent, V450-H / HS-360X	98-9000186-01
	AC Power Cable, 1.8M, Japan, C13 Connector	12-9001046-01
	AC Power Cable, 1.8M, UK, C13 Connector	12-9000961-01
	AC Power Cable, 1.8M, EU, C13 Connector	12-9000960-01

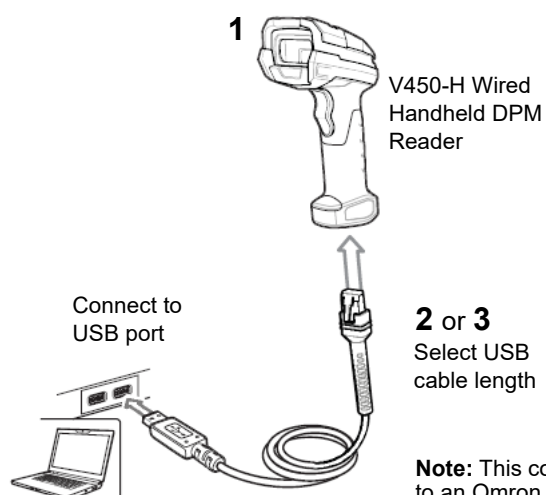
Appearance	Type	Part Number
	AC Power Cable, 1.8M, U.S., C13 Connector	12-9000959-01
	AC Power Cable, 1.8M, China, C13 Connector	12-9000962-01
	Cable, RS232, DB9, Female, 2M, Straight, V450-H / HS-360X	12-9000953-01
	Cable, USB, Shielded, 2M, Ext 12V, V450-H / HS-360X	12-9000942-01
	Cable, USB, Shielded, 4.6M, Ext 12V, V450-H / HS-360X	12-9000943-01
	Cable, USB, Shielded, 2M, V450-H / HS-360X	12-9000946-01
	Cable, USB, Shielded, 4.6M, V450-H / HS-360X	12-9000947-01
	Cable, Adapter, Omron CS/CJ/NJ PLC	V430-WPLC-2M

V450-H

Appearance	Type	Part Number
	Cradle, Charger, Sealed, V450-H / HS-360X	12-9000937-01

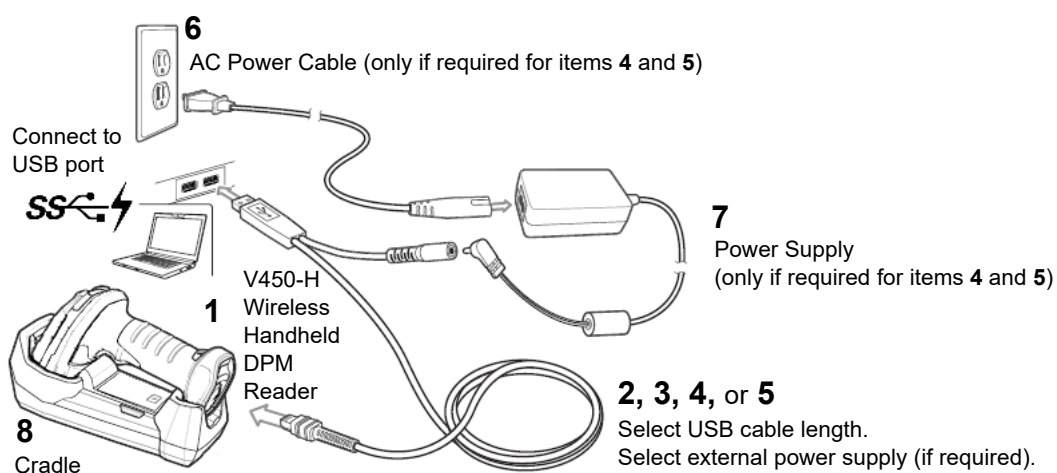
Configurations

• Wired USB



Part	Description	Part Number
1	V450-H Handheld DPM Reader, Wired	V450-HDS3608-0001
2	Cable, USB, Shielded, 2 M, V450-H	12-9000946-01
3	Cable, USB, Shielded, 4.6 M, V450-H	12-9000947-01

• Wireless USB



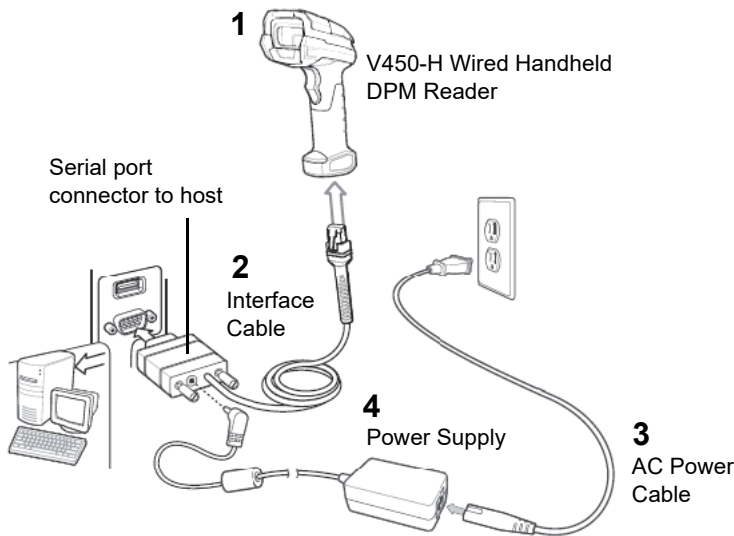
Part	Description	Part Number
1	V450-H Handheld DPM Reader, Wireless	V450-HDS3678-0001
2	Cable, USB, Shielded, 2 M, V450-H *1	12-9000946-01
3	Cable, USB, Shielded, 4.6 M, V450-H *1	12-9000947-01
4	Cable, USB, Shielded, 2 M, Ext. 12V, V450-H *1	12-9000942-01
5	Cable, USB, Shielded, 4.6 M, Ext. 12V, V450-H *1	12-9000943-01
6	AC Power Cable, 1.8M, U.S., C13 Connector *2	12-9000959-01
7	Power Supply for Cradle / Charger, V450-H Wireless	98-9000181-01
8	Cradle, Charger, Sealed, V450-H Wireless	12-9000937-01

*1. Charging is faster with external power supply. Time to full charge: up to 10 hours without; only 3 hours with.

*2. AC Power Cables are available for China, EU, UK, Japan and USA.

V450-H

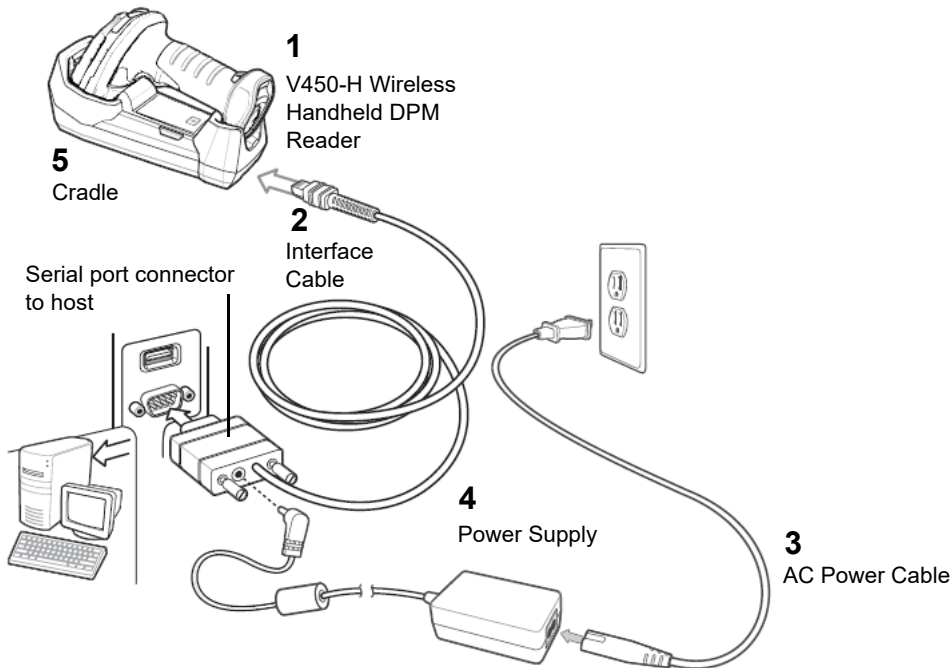
• Wired RS-232



Part	Description	Part Number
1	V450-H Handheld DPM Reader, Wired	V450-HDS3608-0001
2	Cable, RS-232, DB9 Socket, 2 M, Straight, V450-H	12-9000953-01
3	AC Power Cable, 1.8M, U.S., C13 Connector *1	12-9000959-01
4	Power Supply for Cradle / Charger, V450-H Wired	98-9000181-01

*1. AC Power Cables are available for China, EU, UK, Japan and USA.

• Wireless RS-232

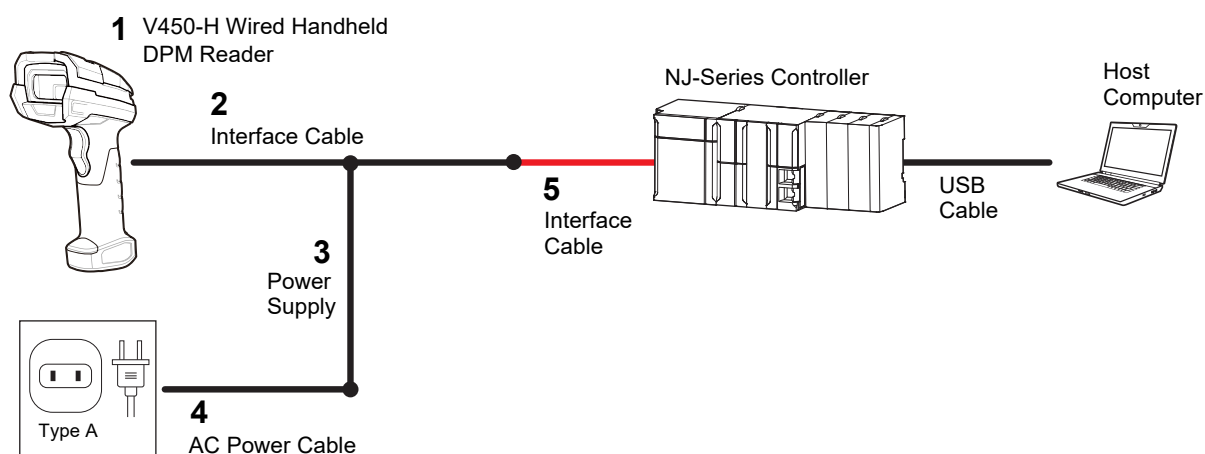


Part	Description	Part Number
1	V450-H Handheld DPM Reader, Wireless	V450-HDS3678-0001
2	Cable, RS-232, DB9 Socket, 2 M, Straight, V450-H	12-9000953-01
3	AC Power Cable, 1.8M, U.S., C13 Connector *1	12-9000959-01
4	Power Supply for Cradle / Charger, V450-H Wireless	98-9000181-01
5	Cradle, Charger, Sealed, V450-H Wireless	12-9000937-01

*1. AC Power Cables are available for China, EU, UK, Japan and USA.

• With NJ-Series PLC

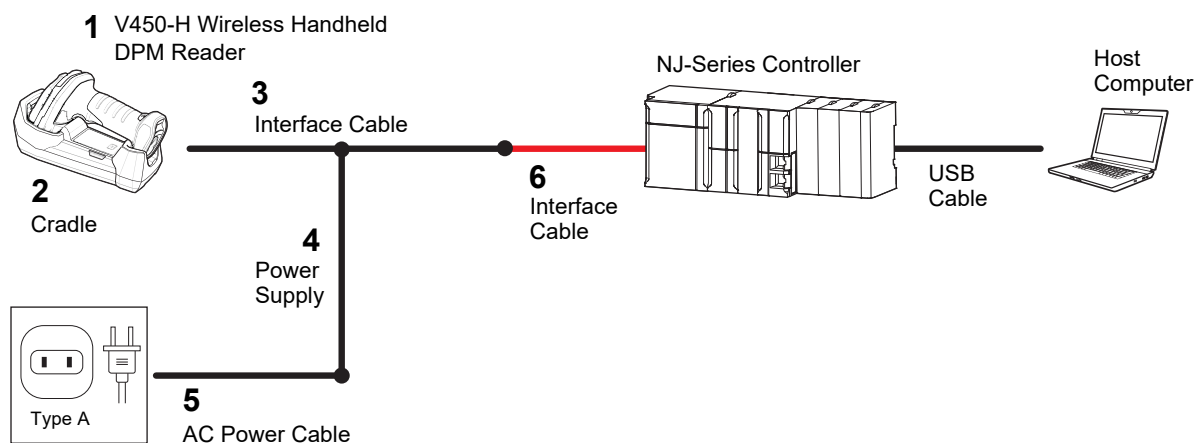
Wired RS-232



Part	Description	Part Number
1	V450-H Handheld DPM Reader, Wired	V450-HDS3608-0001
2	Cable, RS-232, DB9 Socket, 2 M, Straight, V450-H	12-9000953-01
3	Power Supply for Cradle / Charger, V450-H Wired	98-9000181-01
4	AC Power Cable, 1.8M, U.S., C13 Connector *1	12-9000959-01
5	RS-232C Cable for Omron PLCs (CS/CJ/NJ)	V430-WPLC-2M

*1. AC Power Cables are available for China, EU, UK, Japan and USA.

Wireless RS-232

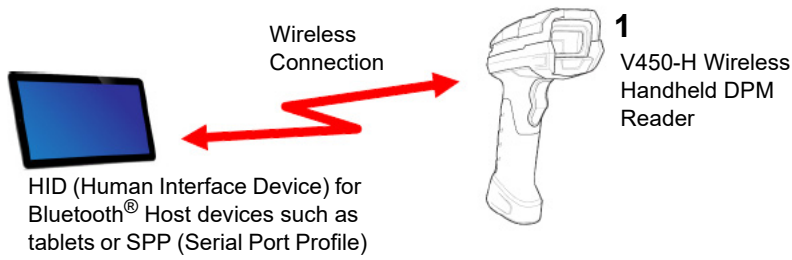


Part	Description	Part Number
1	V450-H Handheld DPM Reader, Wireless	V450-HDS3678-0001
2	Cradle, Charger, Sealed, V450-H Wireless	12-9000937-01
3	Cable, RS-232, DB9 Socket, 2 M, Straight, V450-H	12-9000953-01
4	Power Supply for Cradle / Charger, V450-H Wireless	98-9000181-01
5	AC Power Cable, 1.8M, U.S., C13 Connector *1	12-9000959-01
6	RS-232C Cable for Omron PLCs (CS/CJ/NJ)	V430-WPLC-2M

*1. AC Power Cables are available for China, EU, UK, Japan and USA.

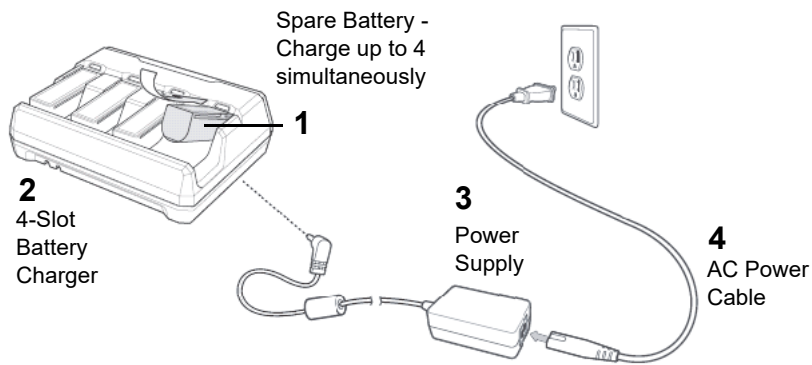
V450-H

• Bluetooth®



Part	Description	Part Number
1	V450-H Handheld DPM Reader, Wireless	V450-HDS3678-0001

• 4-Slot Battery Charger



Part	Description	Part Number
1	Battery, Spare, V450-H Wireless	98-9000224-01
2	4-Slot Battery Charger, V450-H Wireless	98-9000185-01
3	Power Supply for 4-Slot Battery Charger, V450-H Wireless	98-9000182-01
4	AC Power Cable, 1.8 China, C13 Connector	12-9000962-01
	AC Power Cable, 1.8 EU, C13 Connector	12-9000960-01
	AC Power Cable, 1.8 UK, C13 Connector	12-9000961-01
	AC Power Cable, 1.8 Japan, C13 Connector	12-9001046-01
	AC Power Cable, 1.8 U.S., C13 Connector	12-9000959-01

Ratings and Specifications

Item	Description
Physical Characteristics	
V450-H Wireless Reader Dimensions	7.3 in. H x 3.0 in. W x 5.6 in. D 186 mm H x 77 mm W x 143 mm D
V450-H Wired Reader Dimensions	7.3 in. H x 3.0 in. W x 5.2 in. D 185 mm H x 77 mm W x 132 mm D
V450-H Wired Reader Weight (with Battery)	Approximately 14.8 oz. / 402 g
V450-H Wired Reader Weight (without Cable)	Approximately 10.72 oz. / 304 g
Power	5 VDC +/- 10% @ 360 mA (RMS typical)
Color	Black Grey
Performance Characteristics	
Light Source	Aiming Pattern: 655nm Laser / Illumination: Warm white and red 634nm LEDsue green LED
Field of View (Horizontal x Vertical)	31° H x 23° V nominal
Skew Tolerance	+/- 60°
Pitch Tolerance	+/- 60°
Roll Tolerance	0° - 360°
Symbologies	
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 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, Micro PDF417, Composite Codes, TLC-39, Aztec, Data Matrix, QR Code, Micro QR, Han Xin, GS1-QR, GS1-DM, DotCode (Available with X-Mode Only)
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)
Typical Working Distance	See Read Ranges
Interfaces Supported	USB 1.1, RS-232 The reader supports the following protocols over USB 1.1: HID Keyboard (default mode), SNAPI, COM Port Emulation, USB CDC
Minimum Resolution	Code 39: 3 mil PDF417: 4 mil Data Matrix: 4 mil
User Environment	
V450-H Wireless reader Operating Temperature	-4° F to 122° F (-20° C to 50° C)
V450-H Wired reader Operating Temperature	-22° F to 122° F (-30° C to 50° C)
Storage Temperature	-40° F to 158° F (-40° C to 70° C)
Humidity	5% to 95% RH, non-condensing
ESD	20 kV air discharge; 10kV contact discharge
V450-H Wireless reader Drop Specifications	Withstands multiple 8 ft. / 2.4 m drops to concrete at room temperature
V450-H Wired reader Drop Specifications	Withstands multiple 6.5 ft. / 2.0 m drops to concrete at -30° C to 50° C
Environmental Sealing	Reader: IP65 and IP67; Cradle: IP65
Ambient Light Immunity	0 to 10,037 foot-candles 0 to 108,000 lux
Accessories	
V450-H Wired reader Hands-Free Option	V450-H Stand
Power Supplies	Power supplies are available for applications that do not supply power over the host cable.
Regulatory Compliance	
LED Safety Standard	IEC 62471 Exempt Risk Group
EMC Standards	EN 55024, EN 55032, FCC Part 15, Subpart B (Class B)
Safety Standards	EN 60950-1
Certifications	RCM, EAC, BSMI, CE, cULus, UKCA

Cradle (12-9000937-01) Technical Specifications

Item	Description
Power Requirements for Host-Powered	Min 4.5 - Max 5.5
Power Requirements for External Power Supply	Min 11.4 - Max 12.6
Typical Current Draw when Not Charging	80mA @ 5V; 30mA @ 12V
Typical Current Draw in Full Charging Mode	1200mA @ 5V (BC 1.2), 475mA (non-BC 1.2); 700mA @ 12V
Typical Current Draw in Safe Charging Mode	400mA @ 5V; 200mA @ 12V
Interfaces Supported	USB 1.1, RS-232
Operating Temperature	-4° to 122° F (-20° to 50° C)
Storage Temperature	-40° to 158° F (-40° to 70° C)
Charging Temperature	32° to 104° F (0° to 40° C) nominal, 41° to 95° F (5° to 35° C) ideal
Humidity	5% to 95% (non-condensing)
ESD	25 kV air discharge 10 kV contact discharge
Weight	13.7 oz (390 grams)
Dimensions	W 99.8 x L 229.4 x H 82.6 mm
Radio	Bluetooth®, Up to 100 meters / 300 ft. in open air range/environment Serial Port and 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
Regulatory Compliance	
EMC Standards	EN 300 328 V2.1.1, EN 301 489-1 V2.1.1, EN 55024, EN 55032, FCC Part 15, Subpart B (Class B)
Safety Standards	EN 60950-1
Certifications	RCM, KC, EAC, CE, cULus, BIS, NCC

Battery Charger (98-9000185-01) Regulatory Compliance

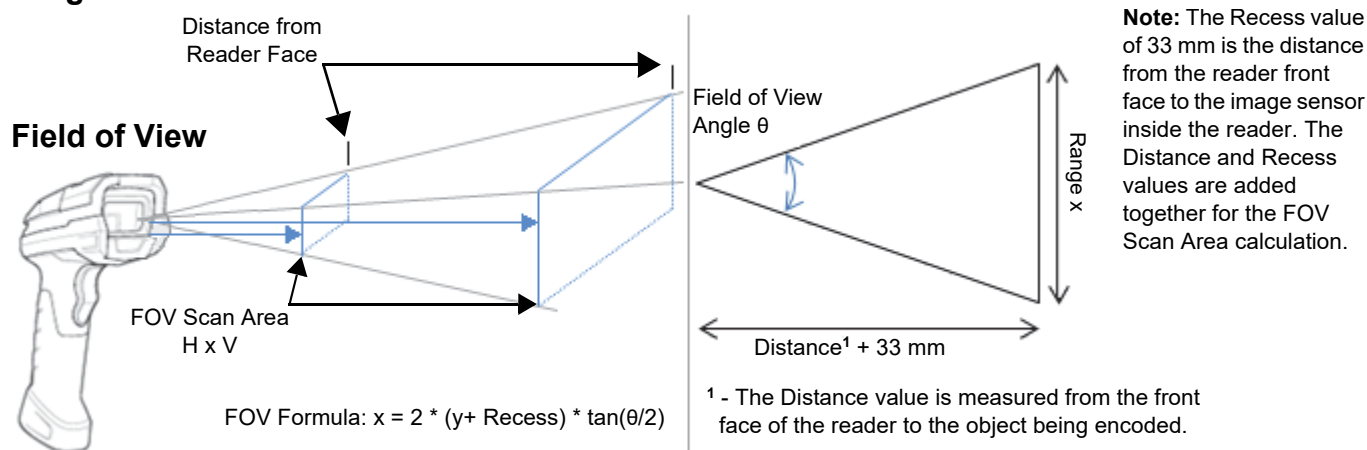
Item	Description
EMC Standards	EN 55024, EN55032, FCC Part 15, Subpart B (Class B)
Safety Standards	EN 60950-1
Certifications	RCM, KC, EAC, CE, cULus

V450-H Read Ranges

Symbology	Resolution	Inside Edge	Outside Edge
Code 39	3.0 mil	0.2 in. (5.0 mm)	2.8 in. (71.0 mm)
PDF417	5.0 mil	0.2 in. (5.0 mm)	2.8 in. (71.0 mm)
	6.6 mil	0.2 in. (5.0 mm)*	3.2 in. (81.0 mm)
Data Matrix	5.0 mil	0.4 in. (10.0 mm)	2.5 in. (63.0 mm)
	10.0 mil	0.0 in. (0.0 mm)	3.4 in. (86.0 mm)
QR Code	5.0 mil	0.4 in. (10.0 mm)	2.5 in. (63.0 mm)
	10.0 mil	0.0 in. (0.0 mm)	3.4 in. (86.0 mm)
UPC	13.0 mil	1.0 in. (25.0 mm)*	5.8 in. (147.0 mm)

* - Field of View and barcode width limited. Read ranges measured with Decoder Effort Level 1. Barcodes printed on photographic paper. Thirty (30) foot-candles ambient light conditions during testing.

Imager Field of View



V450-H: Image Field of View in degrees = 31 (horizontal) x 23 (vertical)

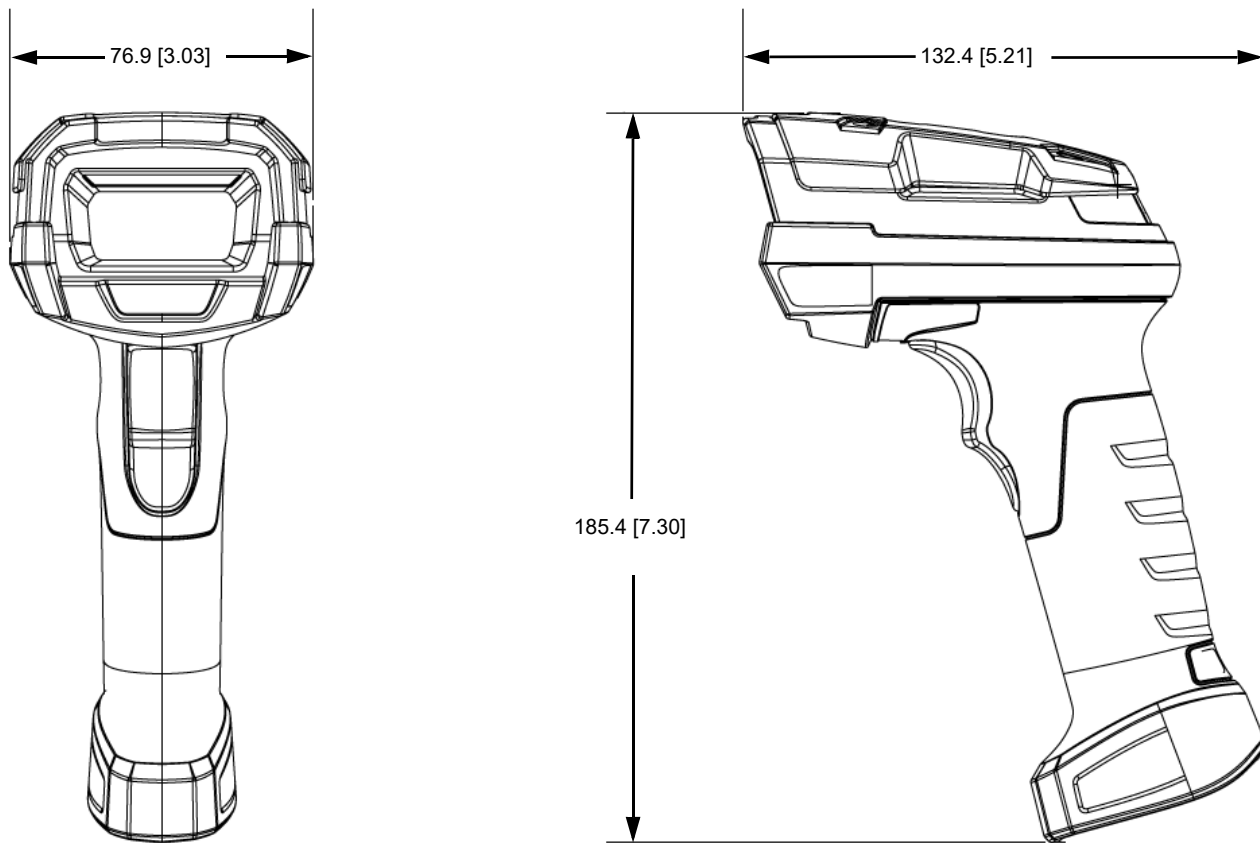
y (mm)	y + Recess	θ	Range x (mm)	FOV Scan Area H x V (mm)	Distance from Reader Face (mm)	FOV Scan Area H x V (in)	Distance from Reader Face (in)
71	104	31	58	58 x 42	71	2.3 x 1.7	2.8
71	104	23	42	-	-	-	-
147	180	31	100	100 x 73	147	3.9 x 2.9	5.8
147	180	23	73	-	-	-	-

V450-H

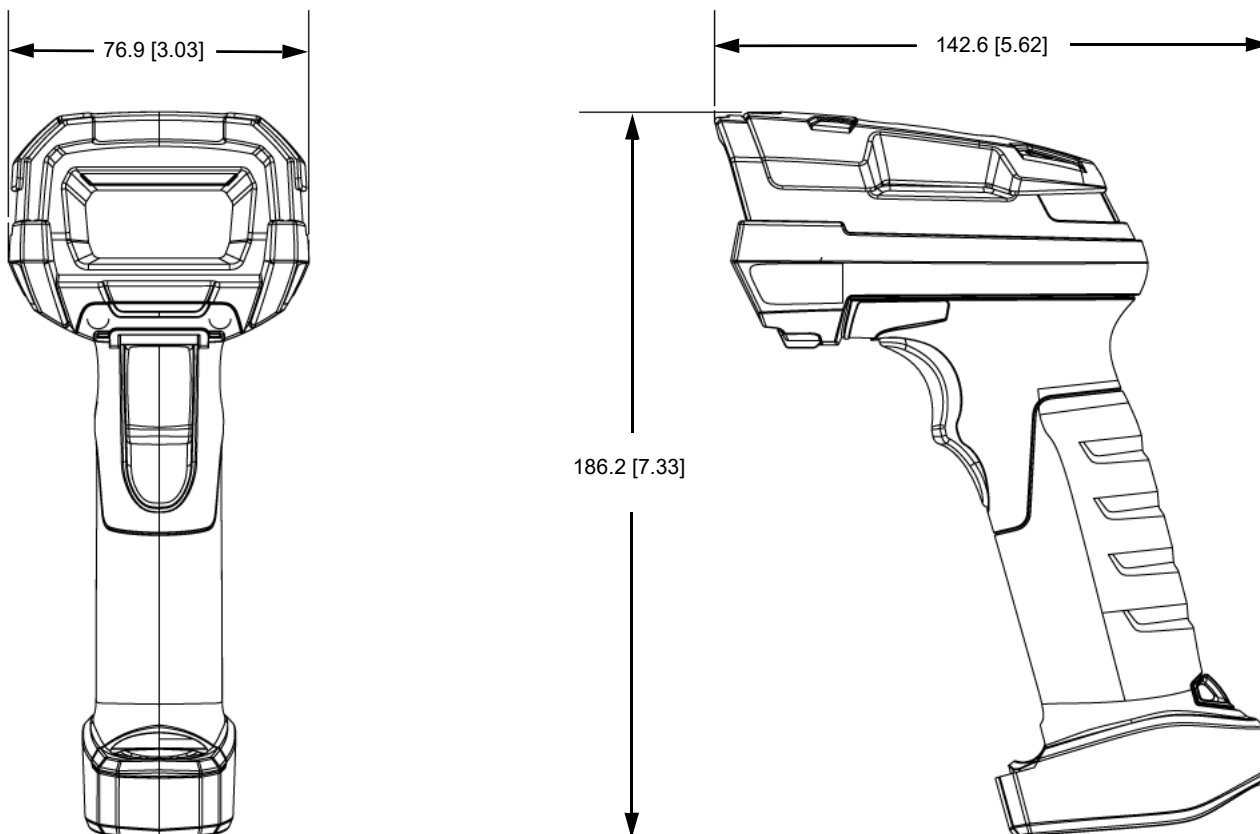
Dimensions

(Unit: mm / [in])

• Wired



• Wireless



WebLinkPC

Screenshot of WebLinkPC Setup screen where the user configures the handheld reader to meet application requirements. To download WebLinkPC, go to www.automation.omron.com/weblinkpc. The V450-H requires WebLinkPC 3.0.0 or later.

The screenshot displays the Omron WebLinkPC Setup interface. The top navigation bar includes 'Start', 'Setup', and 'Run' buttons, along with the Omron logo and a settings icon. The main interface is divided into several sections:

- Read Cycle:** Contains settings for 'Cycle' (Trigger Mode: Auto Aim, No Read Message), 'Decode' (1D Codes, 2D Codes), and 'Format Output' (Symbol Data, Append Return, Append Tab). It also includes 'Function Key Mapping' and 'Advanced' options.
- Counts:** Shows 'Cycle Count' as 296 and 'Cycle Time' as 159 ms.
- Output Data:** A list of decoded data points, each consisting of a Microscan123 code and a CTRL M/B button.
- Reader ID:** Located at the bottom left, showing '7900048'.

Related Manuals

Man. No.	Model	Manual
Z439 (84-9000362-02)	V410-HDS4608SR, V410-HDS4608XD, V410-HDS4608HC, V450-HDS3608-0001	V410-H and V450-H Handheld Barcode Reader User Manual

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OMRON Corporation Industrial Automation Company

Kyoto, JAPAN

Contact : www.ia.omron.com

Regional Headquarters

OMRON EUROPE B.V.

Wegalaan 67-69, 2132 JD Hoofddorp
The Netherlands
Tel: (31) 2356-81-300 Fax: (31) 2356-81-388

OMRON ELECTRONICS LLC

2895 Greenspoint Parkway, Suite 200
Hoffman Estates, IL 60169 U.S.A.
Tel: (1) 847-843-7900 Fax: (1) 847-843-7787

OMRON ASIA PACIFIC PTE. LTD.

438B Alexandra Road, #08-01/02 Alexandra
Technopark, Singapore 119968
Tel: (65) 6835-3011 Fax: (65) 6835-2711

OMRON (CHINA) CO., LTD.

Room 2211, Bank of China Tower,
200 Yin Cheng Zhong Road,
PuDong New Area, Shanghai, 200120, China
Tel: (86) 21-5037-2222 Fax: (86) 21-5037-2200

Authorized Distributor:

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