



# Symbol DS3400 Series

Rugged corded digital scanners



## FEATURES

### Ability to read both 1D and 2D bar codes

Increases productivity and lowers costs by providing one device that can be used to read all industry-standard bar codes

### Ability to capture high density bar codes (HD unit only)

Increases productivity by enabling users to read high density 2D bar codes in addition to all industry-standard bar codes.

### Ability to read a wide variety of DPM marks (DPM unit only)

Enhances quality processes and improves lifetime product traceability

### Capture bar codes, images and direct part marks with laser-like precision

The Symbol DS3400 Series of rugged digital scanners is designed to bring high performance data capture to harsh industrial environments to improve business efficiency. This scanner family offers digital imaging technology, providing the rapid and accurate capture of one-dimensional (1D) and two-dimensional (2D) bar codes, images and direct part marks (DPM) with the high performance typically found only in laser scanners. Regardless of the types of data capture required in your enterprise, there is a DS3400 Series model that will fit your needs.

### High performance that speeds productivity

With the Symbol DS3400 Series, you benefit from a scanning solution designed specifically for fast-paced production environments. The charge-coupled device (CCD) image sensors allow the accurate capture and processing of bar codes at a faster pace than the typical digital scanner. In addition, the omni-directional scanning functionality allows operators to quickly capture bar codes from any angle, eliminating the need to align bar codes with laser lines. The Symbol DS3400 Series offers the widest working range of any scanner in its class.

The two-position smart focus technology, unique to Motorola, enables fast and accurate reading of bar codes, regardless of size or density.

### Built for industrial environments

As innovative as it is rugged, the DS3400 Series delivers the ergonomic and operational features for scan-intensive industrial applications under the harshest operating conditions. The device is designed to perform reliably despite the inevitable bumps and drops — even on concrete. An IP65-rated seal makes it impervious to dust and water, and the exit window is scratch-resistant and recessed for the highest level of durability. As a result, enterprises enjoy a low total cost of ownership — employee and device downtime as well as equipment repair and replacement costs are minimized.

In addition, noisy machinery and poor lighting can make it difficult for operators to see or hear scanner feedback to ensure proper completion of scans. Symbol's DS3400 Series addresses this challenge with bright LEDs and an adjustable volume beeper, ensuring that decode feedback is clearly visible and audible to users, saving valuable worker time.

#### **Omni-directional scanning**

Speeds reading time by eliminating the need to line up the bar code with the scan line

#### **Rugged design withstands multiple 6.5 ft./2 m drops to concrete**

Ensures maximum reliability with less downtime resulting from accidental drops

#### **IP65-rated sealing**

Protects against water and dust for reliable performance in harsh industrial conditions

#### **Integrated image capture and transfer capabilities (Symbol DS3407-SF and Symbol DS3407-DP)**

Reduces the costs associated with operating and maintaining multiple devices by integrating the technology needed for image capture and transfer

#### **Multiple on-board interfaces and universal cable set (DS3408-SF and DS3408-HD)**

Ensures flexible connectivity with different hosts; enables easy upgrading of hosts and cable replacement; provides investment protection

#### **Bright LED and beeper with adjustable volume**

Multiple confirmation modes for positive user feedback in noisy environments

#### **Two-position smart focus**

Unique to the Symbol DS3400 Series, this feature provides two focal positions for optimum application flexibility and performance

#### **Advanced data formatting**

Eliminates costly modifications to the host software

#### **Four models to meet many needs**

This diverse product line offers a number of models designed to meet a wide variety of application needs across a variety of industries:

##### **DS3408-SF: Flexible 1D and 2D bar code capture**

The DS3408-SF offers the flexibility to meet the needs of a wide variety of applications and environments, with 1D and 2D bar code scanning as well as support for a wide variety of interfaces for easy integration with new and legacy systems. The DS3408-SF is designed to streamline inventory management in scan intensive, fast-paced environments, from the largest warehouse to the retail backroom, where a quick scan enables the automatic and accurate capture of the information required to increase productivity and reduce errors. At the receiving dock, a scan of the bar code on the boxes, pallets or bill of lading enables automatic reconciliation of incoming shipments for faster processing of incoming goods. In put-away and picking, a quick scan can determine where product should be stored and also verify that product was placed on the right shelf, eliminating false out-of-stocks due to misplacement — and lost sales. In shipping, a quick scan verifies that the right shipment is addressed to the right person, eliminating costly mis-ships.

##### **DS3407-SF: Combination 1D and 2D bar code scanning plus image capture**

The DS3407-SF builds on the capabilities of the DS3408-SF, adding the capture and high-speed transfer of photographs via the USB or RS232 interface. In addition to improving the efficiency of inventory management, the device can also provide invaluable photographic proof of condition. For example, with a quick press of the trigger, a worker can capture a photograph of a damaged shipment or product.

##### **DS3408-HD: Optimized for comprehensive 2D bar code capture**

The DS3408-HD offers the same capabilities as the DS3408-SF, but adds optimization for the very tiny and dense 2D bar codes frequently found in warehousing, transportation and logistics, and manufacturing environments. In manufacturing operations, the DS3408-HD allows even small parts with small bar code labels to be easily scanned to verify that the right part is used at the right time. As a result, product quality improves, increasing customer satisfaction and retention. Real-time inventory visibility allows manufacturers to reduce standard stocking levels, reducing warehouse space requirements and increasing inventory turns and profitability. And in the event you are notified of a defective part, you can easily trace the location of defective product for more rapid and

targeted recalls, protecting brand image, customer perception and recall costs. And companies involved in warehousing, shipping and delivery of smaller items can easily read the small, dense 2D bar codes that may be utilized on smaller packages.

##### **DS3407-DP: Comprehensive bar code scanning with support for 1D, 2D and DPM bar codes**

In automotive, aerospace, medical and other heavy manufacturing environments, a wide variety of bar codes are typically in use, including 1D and 2D bar codes as well as permanent bar codes, known as direct part marks (DPM). The DS3407-DP provides manufacturers with a single flexible device capable of capturing all 1D and 2D bar codes as well as every type of direct part mark — including dot peen. This powerful scanner combines highly advanced DPM-specific software with the functionality of the DS3407-SF and the focusing capability of the DS3408-HD, allowing workers to easily capture even the very tiny and dense marks frequently utilized in DPM applications.

#### **Reduce capital and operational expenses**

The ability to capture 1D and 2D bar codes as well as direct part marks with a single device eliminates the need to purchase, manage and maintain multiple devices to accommodate multiple bar code symbologies in the enterprise. As a result, the enterprise enjoys a fast return on investment. Since one device does it all, capital and operational costs are reduced — and productivity is increased. Less training is required. And the simplification of the mobility architecture translates into less demand on your IT staff, who will have more time to address more crucial IT business initiatives.

#### **An investment for now and the future**

In addition to the productivity-enhancing features you need to keep business moving, the DS3400 Series provides you with investment protection. Onboard support for multiple interfaces, a standard feature, allows you to use your scanner with many different types of systems for seamless integration now, as well as painless migration to the new systems of the future. We back up our leading scanner design with a full three-year warranty. And to help protect your investment, Motorola Enterprise Mobility Services offers Service from the Start with Comprehensive Coverage. This unique service goes far beyond normal wear and tear to include accidental damage to exit windows, scan elements and more at no additional charge.

#### **For more information**

For more information about the Symbol DS3400 Series, please access our global contact directory at [www.motorola.com/enterprise/contactus](http://www.motorola.com/enterprise/contactus) or visit us on the web at [www.motorola.com/ds3400](http://www.motorola.com/ds3400)

# Symbol DS3400 Series Specifications

## Physical Characteristics

Dimensions:	7.34 in. H x 4.82 in. W x 2.93 in. D 18.65 cm H x 12.25 cm W x 7.43 cm D
Weight (w/o cable):	12.56 oz. (356 gm)
Input Voltage:	5 volts $\pm$ 10%
Operating Current:	250mA (average)
Power Sources:	Depending on host: Host power; External power supply
Color:	Twilight Black/Yellow

## Performance Characteristics

Light Source	650 nm visible laser diode
Resolution	640 x 480
Min Element Width:	4 mil (0.102 mm)
Nominal Working Distance:	Please see decode zone
Print Contrast:	25% minimum reflective difference
Roll (Tilt) <sup>1</sup> :	$\pm$ 180 degrees from normal
Pitch <sup>2</sup> :	$\pm$ 60 degrees from normal
Skew (Yaw) <sup>3</sup> :	$\pm$ 50 degrees from normal

## Decoding Capability

1D Codes:	UPC.EAN, UPC.EAN with Supplementals, GS1-128 (formerly UCC/EAN 128), JAN 8 & 13, Code 39, Code 39 Full ASCII, Code 39 Trioptic, Code 128, Code 128 Full ASCII, Codabar (NW7), Interleaved 2 of 5, Discrete 2 of 5, Code 93, MSI, Code 11, Code 32, Bookland EAN, IATA, GS1DataBar (formerly RSS)
2D Codes:	PDF417, microPDF417, MaxiCode, DataMatrix (ECC 2000), Composite Codes, QR Code

Postal Codes:	U.S. Postnet, U.S. Planet, U.K. Postal, Japan Postal, Australian Postal, Dutch Postal
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DPM Marks (DPM unit only):	Data matrix marks applied by dot peening, laser etching, chemical etching, ink marking, molding, stamping or casting methods to multiple substrates including metal, plastic or glass
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Interfaces Supported:	RS232, Keyboard Wedge, Wand Emulation, Scanner Emulation, IBM 468X/469X, USB and Synapse
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## User Environment

Operating Temp:	-4° to 122° F (-20° to 50° C)
Storage Temp:	-40° to 158° F (-40° to 70° C)
Humidity:	5% to 95% relative humidity, noncondensing
Drop Specs:	Unit functions normally after repeated 6.5 ft. (2 m) drops to concrete
Ambient Light Immunity:	Immune to direct exposure to normal office and factory lighting conditions, as well as direct exposure to sunlight
Sunlight:	10,000 ft. candles (107,644 LUX)
Electrostatic Discharge (ESD):	Conforms to 15 kV air discharge and 8 kV of contact discharge

## Regulatory Information

Electrical Safety:	Certified to UL1950, CSA C22.2 No. 950, EN60950/IEC950
Laser Safety:	CDRH Class II, IEC Class 2
EMI/RFI:	FCC Part 15 Class B, ICES-003 Class B, European Union EMC Directive, Australian SMA

1 - Roll (Tilt): Controlled by rotating the wrist clockwise or counterclockwise  
 2 - Pitch: Controlled by dropping or raising the wrist  
 3 - Skew (Yaw): Controlled by rotating the wrist from left to right or vice versa

*\*See back for decode zone.*

**SPECIFICATION SHEET**

Symbol DS3400 Series

**DS3400 Series Decode Zone**

Label Density	Depth of Field			
	DS340X-SF		DS3408-HD/DS3407-DP	
	English	Metric	English	Metric
Code 39 - 5 mil	2.00" - 6.00"	5.08 - 15.24 cm	1.64" - 7.50"	4.17 - 19.05 cm
Code 39 - 7.5 mil	1.30" - 8.50"	3.30 - 21.59 cm	2.10" - 9.50"	5.33 - 24.13 cm
Code 39 - 20 mil	Up to 20.00"	Up to 50.80 cm	Up to 15.00"	Up to 38.10 cm
100% UPC - 13 mil	0.80" - 14.50"	2.03 - 36.83 cm	2.70" - 11.00"	6.86 - 27.94 cm
PDF417 - 6.67 mil	2.30" - 4.50"	5.84 - 11.43 cm	2.50" - 7.60"	6.35 - 19.30 cm
PDF417 - 10 mil	1.80" - 8.80"	4.57 - 22.35 cm	Up to 9.50"	Up to 24.13 cm
PDF417 - 15 mil	Up to 12.3"	Up to 31.24 cm	Up to 10.70"	Up to 27.18 cm
Data Matrix - 4 mil	N/A	N/A	0.88" - 1.92"	2.24 - 4.88 cm
Data Matrix - 5 mil	1.79" - 3.58"	4.55 - 9.09 cm	0.63" - 2.00"	1.60 - 5.08 cm
Data Matrix - 7.5 mil	1.58" - 4.54"	4.01 - 11.53 cm	0.58" - 2.38"	1.47 - 6.05 cm
Data Matrix - 10 mil	1.25" - 5.00"	3.18 - 12.70 cm	0.50" - 2.42"	1.27 - 6.15 cm
QR Code - 4 mil	N/A	N/A	0.83" - 1.63"	2.11 - 4.14 cm
QR Code - 5 mil	2.07" - 3.00"	5.26 - 7.62 cm	0.83" - 1.96"	2.11 - 4.98 cm
QR Code - 7.5 mil	1.71" - 4.25"	4.34 - 10.80 cm	0.67" - 2.34"	1.70 - 5.94 cm
QR Code - 10 mil	1.21" - 4.83"	3.07 - 12.27 cm	0.33" - 2.54"	0.84 - 6.45 cm

For more information, including decode zone pictorial, see the Product Reference Guide located in the Resources tab at [www.motorola.com/ds3400](http://www.motorola.com/ds3400).



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