

# LS3478-FZ Scanner

## Rugged cordless scanner

### DATA SHEET

### Accurately scan damaged or poorly printed bar codes

Symbol's rugged LS3478-FZ cordless scanner provides fuzzy logic technology so you're able to rapidly and accurately read the often damaged, dirty and poorly printed one-dimensional (1D) bar codes found in your industrial environment.

In the yard, warehouse, distribution center, manufacturing plant or retail store, these cordless handheld devices offer superior performance and reliability, as well as a user-friendly form factor to help your employees comfortably operate the scanner even over eight-hour shifts. Multiple on-board interfaces ensure you'll be able to use the data capture devices with existing hosts, while giving you the flexibility to upgrade your systems without having to buy new scanners. You'll lay the foundation for an advanced data capture and management solution that grows with you as your business needs evolve.

### Eliminate the cord, not performance

Your warehouse, manufacturing and even retail employees operate more efficiently when you eliminate the cable between the device and the host. Your production line technician is able to scan damaged and dirty bar codes without being cabled to the host, enabling you to save time and create more accurate data. And, you've probably noticed the cable is a common point of failure in handheld devices operating in industrial facilities. Having no cord translates into less downtime from cable breakdowns.

### Minimize equipment downtime

As innovative as it is rugged, the LS3478-FZ delivers the ergonomic and operational features for scan-intensive industrial applications under the harshest operating conditions. During industry tumble tests, it continued to provide reliable performance even when subjected to multiple drops of 6.5 feet (2 meters) to concrete. An IP65-rated seal makes it impervious to dust and water, and its exit window is scratch-resistant and recessed for the highest level of durability. As a result, you avoid unnecessary equipment downtime or expensive equipment replacement costs.

### Provide versatility for your industrial applications

When you require quick scanner access and convenient out-of-the-way storage, such as on a forklift in a warehouse, the LS3478-FZ features a built-in metal hook for attachment to a pulley. Workers will be able to access the scanner easily and stow it quickly when they're finished.

Working around noisy machinery and in poorly lit areas, your operators aren't always able to see or hear scanner feedback to quickly determine if scans have completed. Bright LEDs and an adjustable-volume beeper on the LS3478-FZ ensure that decode feedback is clearly visible and audible to users, saving valuable worker time.



#### FEATURES

#### BENEFITS

**High-performance scanner with fuzzy logic decode capability**

Quickly and accurately scans all 1D bar codes on the first scan, including poorly printed, dirty, damaged or low-contrast bar codes

**Cordless scanning**

Enables real-time bar code data collection unrestricted by a cable, reducing repairs made necessary by cable failure

**Rugged design withstands multiple 6.5-ft. (2-m) drops to concrete; 2,500 3.5-ft. (1-m) tumbles (5,000 hits)**

Ensures maximum reliability with less downtime resulting from accidental drops.

**IP65-rated seal (electronic enclosure)**

Protects against water and dust to ensure reliable performance in harsh industrial conditions, reducing unplanned downtime because of equipment failure

**Bright LED and beeper with adjustable volume**

Ensure positive user feedback in noisy environments with multiple modes of confirmation, so employees don't waste time trying to determine if a scan has been completed

**Multi-point communication**

Four scanners communicate to a single cradle for increased productivity

**Bright 650 nm laser aiming dot**

Delivers clearly visible line for more accurate scanning

**Supports reduced space symbologies (RSS)**

Ensures compatibility with emerging symbologies to protect your hardware investment

**Advanced data formatting**

Eliminates costly modifications to the host software

**Flash memory**

Simplifies updates and customization of product in the field

**Universal cable set**

Allows for easy replacement and upgrades

**Multiple on-board interfaces**

Ensures flexible connectivity with different hosts, enabling you to maximize use of your existing technology

## End maintenance worries with a full suite of services and support

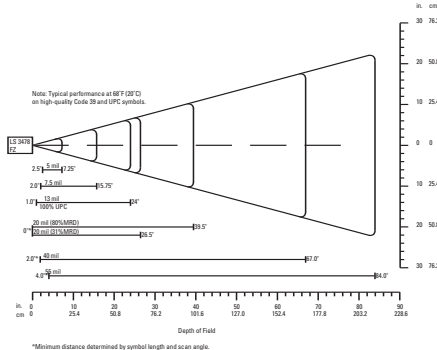
Even the most rugged scanners need a support plan to cover maintenance. That's why Symbol covers every aspect of your mobility solution — from network design to ongoing operations — providing unsurpassed breadth and depth of coverage to ensure all of your services and support needs are met.

Symbol Services offer:

- Professional planning, assessment and implementation services, forming the foundation of a successful solution
- A global team with unrivaled industry and product expertise, focused on Symbol product support
- Responsive customer support and maintenance services, ensuring your solution operates seamlessly and efficiently

For more information on the cordless rugged LS3478-FZ handheld scanner and the full line of accessories, contact us at +1.800.722.6234 or +1.631.738.2400, or visit us at [www.symbol.com/ls3478fz](http://www.symbol.com/ls3478fz)

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



## LS3478-FZ specification highlights

### Physical characteristics

Dimensions	7.34 in. L 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 (without cable)	14.6 oz. (414 gm)
Battery	2200 mAh Lithium Ion Battery
Battery charge time:	Fully charged (100%) in 3 hours
Color	Twilight Black and Yellow

### Performance characteristics

Scanner type	Retrocollective
Light source	650 nm visible laser diode
Scan repetition	36 scans per second typical
Minimum element width	5 mil (0.127 mm)
Nominal working distance	See decode zone
Print contrast	25% minimum reflective difference
Roll (Tilt) <sup>1</sup>	+/- 20 degrees from normal
Pitch <sup>2</sup>	+/- 65 degrees from normal
Skew (Yaw) <sup>3</sup>	+/- 50 degrees from normal
Decode capability:	UPC/EAN, UPC/EAN with Supplementals, 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, UCC/EAN RSS and RSS variants
Interfaces supported	RS232, Keyboard Wedge, Wand Emulation, Scanner Emulation, IBM 468X/469X, USB and Synapse

### User environment

Operating temperature	-4° to 122°F (-20° to 50°C)
Storage temperature	-40° to 140°F (-40° to 60°C)
Humidity	5% to 95% relative humidity, noncondensing
Sealing	Sealed to IP65 specifications
Drop specifications	Unit functions normally after repeated 6.5-ft. (2-m) drops to concrete
Ambient light immunity	Immune to direct exposure of normal office and factory lighting conditions, as well as direct exposure to sunlight: Indoor: 450 foot candles/4,842 LUX Outdoor: 8,000 foot candles/86,080 LUX
Electrostatic discharge	Conforms to 20 kV air discharge and 8 kV of contact discharge

Cradles	STB 3408 and FLB 3408	STB 3478 and FLB 3478
Power requirements	4.75 – 14 VDC	4.75 – 14 VDC
Typical current draw		
Not charging	10 mA	105 mA @5V 45 mA @9V
Fast rate charge	915 mA @5V 660 mA @9V	915 mA @5V 660 mA @9V
Slow rate charge	480 mA @5V 345 mA @9V	480 mA @5V 345 mA @9V
Radio link	N/A	Bluetooth class 1 (2.4 GHz), Class 2

### Radio specification

Radio range	100 meters direct line of sight
Frequency	2.4 GHz

### Regulatory

Input transient protection	IEC 1000-4-(2,3,4,5,6,11)
EMI/RFI	FCC Part 15 Class B, ICES-003 Class B, European Union EMC Directive, Japan VCCI/MTI/Dentori
Laser safety	IEC825-1 Class 2

### Warranty

The LS3478-FZ is warranted against defects in workmanship and materials for a period of 3 years (36 months) from date of shipment, provided that the product remains unmodified and is operated under normal and proper conditions. See full warranty for details.

### Decode zone

LS3478-FZ decode zone

## About Symbol Technologies

Symbol Technologies, Inc., The Enterprise Mobility Company™, is a recognized worldwide leader in enterprise mobility, delivering products and solutions that capture, move and manage information in real time to and from the point of business activity. Symbol enterprise mobility solutions integrate advanced data capture products, radio frequency identification technology, mobile computing platforms, wireless infrastructure, mobility software and world-class services programs under the Symbol Enterprise Mobility Services brand. Symbol enterprise mobility products and solutions are proven to increase workforce productivity, reduce operating costs, drive operational efficiencies and realize competitive advantages for the world's leading companies. More information is available at [www.symbol.com](http://www.symbol.com)



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### Symbol Web site

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