ZEBRA

Symbol LS3408-FZ

Rugged handheld scanner

Reads damaged 1-D bar codes for maximum industrial productivity

The rugged LS3408-FZ handheld scanner features fuzzy logic technology for fast and accurate reading of damaged, dirty and poorly printed one-dimensional (1-D) bar codes typically found in industrial environments. In the yard, warehouse, distribution center, manufacturing plant or retail store, the LS3408-FZ handheld scanner offers superior performance, reliability and user-friendly ergonomics to improve productivity. Multiple on-board interfaces ensure flexible plug-and- play host connectivity.

Advanced data capture technology for tough environments

As innovative as it is rugged, the LS3408-FZ delivers the ergonomic and operational features for scan intensive industrial applications. Industry-leading impact tests ensure reliable performance in spite of the inevitable accidental drops. The device is 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. For applications requiring quick access and convenient storage, the LS3408-FZ features a built-in metal hook for attachment to a pulley. Two large LED-enhancing windows and extra loud 80 decibel (db) beeper are strategically placed on the scanner to ensure that decode feedback is clearly visible and audible to users.

Capturing mission-critical information the smart way

The standard range LS3408-FZ is designed specifically for industrial applications. When you choose the LS3408-FZ, you receive the added assurance of purchasing from Zebra — a company with proven advanced data capture capabilities and millions of scanner installations worldwide.

For more information on the rugged LS3408-FZ handheld scanner and the full line of accessories, access our global contact directory at **www.zebra.com/contact** or visit us on the web at **www.zebra.com/ls3408fz**

FEATURES

High-performance scanner with fuzzy
Premium scanning for all 1-D codes including poorly printed, damaged or low contrast bar codes

Ergonomic, rugged industrial design withstands up to 50 drops to concrete from 6.5 ft. (2m) and 2,500 3 ft. (1m) tumbles (5,000 hits)
Reduces user fatigue and ensures less down time due to accidental drops

IP65 sealing rating (electronic enclosure)
Protects against water and dust to ensure reliable performance in harsh industrial conditions

Bright LED and beeper with adjustable volume
Multiple modes of confirmation ensure positive user feedback in noisy environments

Bright 650nm laser aiming dot
Delivers clearly visible line for precise, accurate bar code data capture

Supports GS1DataBar Symbologies (formerly RSS)
Compatibility with emerging symbologies helps you to leverage your hardware investment

Global Trade Item Number™ (GTIN™) compliant

Symbol LS3408-FZ Specifications

PHYSICAL CHARACTERISTICS		USER ENVIRONMENT	
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	Operating Temp.:	-22° to 122° F/-30° to 50° C
		Storage Temp.:	-40° to 158° F/-40° to 70° C
Weight (w/o cable):	12.35 oz./350 g	Humidity:	5% to 95% relative humidity, non-condensing
Power Requirements:	4.5 - 14 VDC	Sealing:	Sealed to IP65 specifications

ZEBRA

SYMBOL LS3408-ER

EXTENDED RANGE RUGGED SCANNER

REDEFINING PERFORMANCE FOR MAXIMUM INDUSTRIAL MOBILITY

The rugged LS3408-ER handheld scanner delivers superior performance and versatility for your scan-intensive industrial applications. In the yard, warehouse, distribution center, manufacturing plant or retail store, the LS3408-ER handheld scanner offers best-in-class performance, excellent reliability and user-friendly ergonomics to create a more productive mobile environment. Multiple on-board interfaces ensure flexible plug and play host connectivity.

ADVANCED DATA CAPTURE FEATURES FOR INDUSTRIAL-GRADE APPLICATIONS

The LS3408-ER offers an outstanding reading range, providing the flexibility to enable a wide range of industrial applications. Industry leading impact tests ensure reliable performance in spite of the inevitable accidental drops. The device is 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. For applications requiring quick access and convenient storage, the LS3408-ER features a built-in metal hook for attachment to a pulley. Two large LED-enhancing windows and an extra loud 80 decibel (db) beeper are strategically placed on the scanner for clear and audible feedback to users.

THE SMARTEST WAY TO CAPTURE MISSION CRITICAL INFORMATION

The extended range LS3408-ER is designed specifically for industrial applications. When you choose the LS3408-ER, you receive the added assurance of purchasing from Zebra — a company with proven advanced data capture capabilities and millions of scanner installations worldwide.

For more information on how the LS3408-ER can benefit your business, please visit us on the web at **www.zebra.com/ls3408er** or access our global contact directory at **www.zebra.com/contact**.

SPECIFICATIONS CHART

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)	Weight (w/o cable) 12.56 oz./356 g
Power Requirements	4.5 - 14 VDC
Stand-by Current	50 mA

USER ENVIRONMENT

Operating Temp.	-22° to 122° F/-30° to 50° C
Storage temperature	-40˚ to 158˚F (-40˚ to 70˚C)
Humidity	5% to 95% relative humidity, noncondensing
Sealing	Sealed to IP65 specifications
Drop specifications	Unit functions normally after 50 drops to

FEATURES

Wide working range: .25"/.64 cm to 45 ft./ 13.7 m
Improves user productivity

Ergonomic, rugged industrial design withstands up to 50 drops to concrete from 6.5 ft. (2m) and 2,500 3 ft. (1m) tumbles (5,000 hits)
Ensures maximum reliability with less down time due to accidental drops

IP65 sealing rating (electronic enclosure)
Protects against water and dust to ensure reliable performance in rough conditions

Bright 650nm laser aiming dot
Delivers clearly visible line for more accurate scanning

Dual-scan angle switches from standard to wide under software control
Offers fast, accurate bar code reading on menus and pick lists

Multiple on-board interfaces
Ensures flexible connectivity, allowing for host "future proofing"

Advanced data formatting (ADF)
Eliminates costly modifications to the host software

Flash memory

Power Sources	Depending on host: • Host power • External power supply		concrete from 6.5 ft. (2m)	Facilitates updates and customization of product in the field
Color	Twilight Black/Yellow	Ambient lighting tolerance	Tolerant to typical artificial indoor and natural outdoor (direct sunlight) lighting conditions. Fluorescent, Incandescent, Mercury Vapor, Sodium Vapor, LED4: 450 Ft Candles (4,844 Lux) Sunlight: 8000 Ft Candles (43,040 Lux)	**Universal cable set** Allows for easy replacement and/or upgrades

PERFORMANCE CHARACTERISTICS

Scanner type	Retrocollective
Light source	650 nm visible laser diode
Scan repetition	36 scans per second typical
Minimum element width	7.5 mil (0.191 mm)
Nominal working distance	See decode zone
Print contrast	25% minimum reflective difference
Roll (Tilt)[1]	+/- 10 degrees from normal
Pitch[2]	+/- 65 degrees from normal
Skew (Yaw)[3]	+/- 60 degrees from normal
Decode capability	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)
Interfaces supported	RS232, Keyboard Wedge, Wand Emulation, Scanner Emulation, IBM 468X/469X, USB and Synapse

Supports GS1DataBar Symbologies (formerly RSS)
Compatible with emerging symbology to leverage your hardware investment

Electrostatic discharge	Conforms to 20 kV air discharge and 8 kV of contact discharge

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/MITI/Dentori
Laser safety	IEC825-1 Class 2

WARRANTY

The LS3408-ER 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.

RECOMMENDED SERVICES

Support Services	Service from the Start - Bronze

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
4- LED lighting with high AC ripple content can impact scanning performance

DEPTH OF FIELD

LABEL DENSITY	LS3408-ER	
Paper Label	**English**	**Metric**
Code 39 – 7.5 mil	0.25" – 20.00"	0.64 – 50.80 cm
Code 39 – 10 mil	2.00" – 32.00"	5.08 – 81.28 cm
Code 39 – 15 mil	3.00" – 69.00"	7.62 – 175.26 cm
Code 39 – 20 mil	3.00" – 94.00"	7.62 – 238.76 cm
Code 39 – 55 mil	15.00" – 180.00	38.10 – 457.20 cm

REFLECTIVE LABEL

Code 39 – 70 mil	Up to 30 ft.	Up to 9.27 m
Code 39 – 100 mil	Up to 45 ft.	Up to 13.72 m

For more detailed information, please see the Product Reference Guide in the Resource tab at **www.zebra.com/ ls3408er**

CN410 **CE**

C A U T I O N
LASER LIGHT—
DO NOT STARE INTO BEAM
630nm-680nm LASER
1.0 MILLIWATT MAX. OUTPUT
CLASS II LASER PRODUCT

ZEBRA

ZEBRA TECHNOLOGIES

Stand-by Current:	50 mA
Power Sources:	Depending on host: • Host power • External power supply
Color:	Twilight Black/Yellow

PERFORMANCE CHARACTERISTICS

Scanner Type:	Retrocollective
Light Source:	650 nm visible laser diode
Scan Repetition:	36 scans per second typical
Min. Element Width:	5 mil/0.127 mm
Print Contrast:	25% minimum reflective difference
Roll (Tilt):1	± 20° from normal
Pitch:2	± 65° from normal
Skew (Yaw):3	± 50° from normal
Decode Capability:	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)
Interfaces Supported:	RS232, Keyboard Wedge, Wand Emulation, Scanner Emulation, IBM 468X/469X, USB and Synapse

* Minimum distance determined by symbol length and scan angle

Drop Specifications:	Unit functions normally after 50 drops to concrete from 6.5 ft. (2m)
Ambient Lighting Tolerance:	Tolerant to typical artificial indoor and natural outdoor (direct sunlight) lighting conditions. Fluorescent, Incandescent, Mercury Vapor, Sodium Vapor, LED4: 450 Ft Candles (4,844 Lux) Sunlight: 8000 Ft Candles (86,111 Lux)
Electrostatic Discharge:	Conforms to 20 kV air discharge and 8 kV of contact discharge

REGULATORY

Input Transient	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/MITI/Dentori
Laser Safety:	IEC825-1 CLASS 2

WARRANTY

The LS3408-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.

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
4 - LED lighting with high AC ripple content can impact scanning performance

Decodes and transmits 14-digit GTINs where appropriate

Advanced data formatting

Eliminates costly modifications to the host software

Flash memory

Facilitates updates/ customization of product in the field

Universal cable set

Allows for easy replacement and/or upgrades

Multiple onboard interfaces

Ensures flexible connectivity, allowing for host "future proofing"

Hands-free Intellistand ™ (optional)

Enables presentation scanning and easy switching between hands-free and handheld modes

DEPTH OF FIELD

LABEL DENSITY   LS3408-FZ

Paper Label	English	Metric
Code 39 – 5 mil	2.50" – 7.25"	6.35 – 18.42 cm
Code 39 – 7.5 mil	2.00" – 15.75"	5.08 – 40.00 cm
100% UPC – 13 mil	1.00" – 24.00"	2.54 – 60.96 cm
Code 39 – 20 mil	0 – 39.50"	0 – 100.33 cm
Code 39 – 40 mil	2.00" – 67.00"	5.08 – 170.18 cm
Code 39 – 55 mil	4.00" – 84.00"	10.16 – 213.36 cm

For more detailed information, please see the Product Reference Guide in the Resource tab at **www.zebra.com/ls3408fz**

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