PRODUCT SPEC SHEET
Zebra MiniScan MS12XX Series

Zebra MiniScan MS12XX Series

Fixed Mount Scanner

Superior scanning for fixed-mount, unattended devices
The MS12XX Series is a compact, durable, industrial fixed mount scanner available in fuzzy (FZY) or wide angle (WA) versions for maximum versatility. The Zebra MS12XX FZY versions feature fuzzy logic for premium scanning on 1-D bar codes, including poorly printed and low contrast.
The MS12XX Series is an excellent choice for OEM devices requiring accurate, automated data collection, even in the most demanding environments. It can also be used as a standalone fixed mount scanner.

Plug-and-play installation speeds time to market
MS12XX scanners feature immunity to ambient light and durable design which combine to deliver premium scanning performance in the most demanding environments. MS12XX scanners are easy to program and configure, enabling you to shorten your development time and bring your product to market faster–even if you don't have in-house technical resources for scanner integration. With its rugged durable housing, exit window, integrated beeper and multiple interface options, MS12XX scanners enable your project teams to quickly and confidently integrate high-performance 1-D bar code data capture into many applications.

Proven technology to enhance your solutions
With millions of installations worldwide, our OEM devices are proven to deliver high reliability and superior performance, ensuring the accurate and quick capture of data and images in your mission-critical applications and devices. In addition, an easy-to-integrate design and expert assistance from our world-class OEM support team enable you to bring your systems to market quickly and cost effectively. And since even the most intelligent products require a maintenance plan and a support strategy, we offer superior services to help you maximize uptime and maintain peak performance.

For more information about the Zebra MS12XX, access our global contact directory at **www.zebra.com/contact** or visit us on the web at **www.zebra.com/miniscan12xx**

Zebra MS12XX FZY and WA Specifications

ZEBRA MS-120XFZY SCAN ENGINE SPECIFICATIONS		ZEBRA MS-1207WA SCAN ENGINE SPECIFICATIONS	
PHYSICAL CHARACTERISTICS		**PHYSICAL CHARACTERISTICS**	
Dimensions:	1.60H x 2.28W x 2.94D (in) 40.64H x 57.91W x 74.76D (mm)	Dimensions:	1.60H x 2.28W x 2.94D (in) 40.64H x 57.91W x 74.76D (mm)

FEATURES

High performance fixed-mount scanner with fuzzy logic decode capability
Premium scanning for all 1-D bar codes including poorly printed and low contrast symbols

Reads all major 1-D symbologies including Reduced Space Symbology®
Enables devices to realize a high first-time read rate for improved productivity

MS12XX FZY decode range: near contact to over 60 in./152 cm
Flexible decode range for maximum accuracy and efficiency

MS1207WA features a 60° scan angle
Accommodates wide bar codes at, or near, contact in high-volume scanning applications

Sealed to IP54 standards
Protects against water and dust for reliable performance in rough conditions

Compact rugged, durable housing with integrated beeper, mounting holes, LEDs , decoder and a variety of interfaces
Plug-and-play installation reduces development time and improves time to market

Integrated beeper with external beeper support

Weight:	4.45 oz./126 g
Interface:	Zebra MS1204 FZY: RS 232 Zebra MS1207 FZY: TTL, RS 232, USB, Synapse

USER ENVIRONMENT

Ambient Lighting Tolerance:	Tolerant to typical artificial indoor and natural outdoor (direct sunlight) lighting conditions. Fluorescent, Incandescent, Mercury Vapor, Sodium Vapor, LED1: 450 Ft Candles (4,844 Lux) Sunlight: 8000 Ft Candles (86,111 Lux)
Operating Temp.:	-4° to 122°F (-20° to 50°C)
Storage Temp.:	-40° to 158°F (-40° to 70°C)
Humidity:	5% to 95% non-condensing
Power:	Input Voltage: 5.0 VDC ±10% Scan Current: 160 mA Standby Current: 20 mA (Zebra MS1204 FZY), 20 mA (Zebra MS1207 FZY)
Drop Rating:	Unit functions normally after multiple 30 in (76 cm) drops to concrete
Symbologies Supported:	All major 1-D bar codes
Programmable Parameters:	Laser On Time, Aim Duration, Power Mode, Trigger Mode, Bi-directional Redundancy, Symbology Types/ Lengths, Data Formatting, Serial Parameters, Beeper Tone

REGULATORY

Laser Classification:	CDRH Class II, IEC Class 2
Electrical Safety:	Certified to UL1950, CA C22-2 NO950 ENG60950/IEC950
Environmental:	RoHS compliant
EMI/RFI:	FCC Part 15 Class B, ICES-003 Class B European Union EMC Directive, Australian SMA

PERFORMANCE CHARACTERISTICS

Light Source:	Visible Laser Diode 650 nm
Scan Rate:	35 (± 5) scans/sec (bi-directional)
Scan Angle:	Default (Wide): 42° ± 2°, Alternate (Narrow): 30° ± 2°
Scan Patterns:	Linear
Minimum Print Contrast:	Minimum 20% absolute dark/light reflectance measured at 650 nm

Weight:	4.45 oz./126 g
Interface:	TTL RS 232, USB, Synapse

USER ENVIRONMENT

Ambient Lighting Tolerance:	Tolerant to typical artificial indoor and natural outdoor (direct sunlight) lighting conditions. Fluorescent, Incandescent, Mercury Vapor, Sodium Vapor, LED1: 450 Ft Candles (4,844 Lux) Sunlight: 8000 Ft Candles (86,111 Lux)
Operating Temp.:	32° to 104° F (0 - 40°C)
Storage Temp.:	-40° to 140°F (-40° to 60°C)
Humidity:	5% to 95% non-condensing
Power:	Input Voltage: 5.0 VDC ±10% Scan Current: 110 mA Standby Current: 40 mA (Zebra MS1207 WA)
Drop Rating:	Unit functions normally after multiple 30 in (76 cm) drops to concrete
Symbologies Supported:	All major 1-D bar codes
Programmable Parameters:	Laser On Time, Aim Duration, Power Mode, Trigger Mode, Bi-directional Redundancy, Symbology Types/ Lengths, Data Formatting, Serial Parameters, Beeper Tone

REGULATORY

Laser Classification:	CDRH Class II, IEC Class 2
Electrical Safety:	Certified to UL1950, CA C22-2 NO950 ENG60950/IEC950
Environmental:	RoHS compliant
EMI/RFI:	FCC Part 15 Class B, ICES-003 Class B European Union EMC Directive, Australian SMA

PERFORMANCE CHARACTERISTICS

Light Source:	Visible Laser Diode 670 nm
Scan Rate:	35 (± 5) scans/sec (bi-directional)
Scan Angle:	60° ± 2°
Scan Patterns:	Linear
Minimum Print Contrast:	Minimum 20% absolute dark/light reflectance measured at 670 nm
Ranges - 1-D codes:	**5 mil:** Code 39; 2.5:1 - 80% MRD: 1 - 4 (in) / 2.54 - 10.16 (cm) **7.5 mil:** Code 39; 2.5:1 - 80%

Allows internal or external beeper to be driven depending on application

Automatic software controlled or manual triggering

Flexible control of unattended or hands-free applications

Easy-to-program simple serial interface (SSI)

Provides fast, simple interface communication with advanced features between scanner and host

Optional Software Developer's Kit (SDK)

Enables creation of applications using Windows® 98, 2000 and XP platforms

Supports 123Scan utility (multi-interface 07 versions only)

Easy-to-use utility reduces end-user installation time

Multiple mounting options

Increases development flexibility

Ranges - 1-D codes:

5 mil: Code 39; 2.5:1 - 80%
MRD: 3.25 - 7 (in) / 8.26 - 17.78 (cm)
7.5 mil: Code 39; 2.5:1 - 80%
MRD: 3 - 12.5 (in) / 7.62 - 31.75 (cm)
13 mil: 100% UPC - 80%
MRD: 2.2 - 25.75 (in) / 5.59 - 65.41 (cm)
20 mil: Code 39; 2.2:1 - 80%
MRD: *1 - 34 (in) / 2.54* - 86.36 (cm)
Code 39; 2.2:1 - 25%
MRD: *1 -27.25 (in) / 2.54* - 69.22 (cm)
40 mil: Code 39; 2.2:1 - 80%
MRD: *2.2 - 66.75 (in) / 5.59 - 169.55 (cm)
55 mil reflective: Code 39; 2.2:1 - 80%
MRD: *4 - 75 (in) / 10.16 - 190.5 (cm)

*** = Near ranges on lower densities largely depend on the width of the bar code and the scan angle.**
1 - LED lighting with high AC ripple content can impact scanning performance

MRD: 0.6 - 7.2 (in) / 1.52 - 18.29 (cm)
13 mil: 100% UPC - 80%
MRD: 0.6 - 11 (in) / 1.52 - 27.94 (cm)
20 mil: Code 39; 2.2:1 - 80%
MRD: * - 15 (in) / * - 38.10 (cm)
40 mil: Code 39; 2.2:1 - 80%
MRD: * - 19 (in) / * - 48.26 (cm)
55 mil reflective: Code 39; 2.2:1 - 80%
MRD: * - 24 (in) / * - 60.96 (cm)

*** = Near ranges on lower densities largely depend on the width of the bar code and the scan angle.**
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ZEBRA

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