

MiniScan MS 904HS Series



FIXED-MOUNT SCANNERS

A Compact, Durable and High Performance Fixed-Mount Bar Code Scanner

The MS 904HS from Symbol Technologies is a compact, durable, fixed-mount laser bar code scanner that combines 200 scans per second and high performance scanning into a compact size that is the perfect fit for space-constrained devices.

The MS 904HS is optimized for the fast, accurate laser scanning of linear 1D symbologies, even poorly printed and low contrast bar codes, making this scanner ideal for accurate, automated data collection in a variety of applications:

Markets	Applications
Fixed-mount or standalone	Manufacturing and warehousing Shipping and receiving Conveyor belts Library and document tracking Assembly lines
OEM embedded	Clinical diagnostics Medical instruments Blood and chemical analysis Interactive kiosks and ATMs Vending and lottery machines Gaming equipment Turnstiles/access control

More Performance in Many Environments

The MS 904HS has a working range from near contact to over 23 inches/58.4 cm, which delivers excellent scanning performance in a small package. It is easy to program and configure, enabling you to cut your development time and bring your product to market faster—even if you don't have the in-house technical resources for scanner integration. With its durable housing and built-in RS-232 interface, the MS 904HS enables your project teams to quickly and confidently integrate high-performance 1D bar code data capture into many applications.

Proven Embedded Technology and Services

With millions of installations worldwide, Symbol Embedded Technology solutions are hard at work in a variety of industries and everyday applications. Proven technology from Symbol Technologies allows you to offer your customers superior products and services. In addition, comprehensive training and integration services are available to support your design, testing and approval needs.



Features	Benefits
High performance with a scan rate of 200 scans per second	Fast scanning performance on all types of 1D bar codes, including poorly printed and low contrast
Reads all major 1D symbologies including Reduced Space Symbology® (RSS)	Versatile decode capability enables devices to realize a high first-time read rate for improved productivity
Working range of over 23 in. (58.4 cm)	Flexible decode range for maximum accuracy and efficiency
Compact, durable housing, mounting holes, LEDs and RS-232 interface	Plug-and-play installation reduces development time and speeds up time to market
Easy to program simple serial interface (SSI)	Provides fast, simple communications between scanner and host
Software controlled or manual triggering	Offers flexible control of unattended or hands-free applications
Optional software developer's kit (SDK)	Enables the creation of applications using familiar Microsoft® Windows® 98, 2000 and XP platforms
650 nm bright laser diode	Scan line is easy to see

For more information about Symbol Embedded Technology, contact us at +1.800.722.6234 or +1.631.738.2400, or visit us on the web at www.symbol.com/ms904hs

MS 904HS Specification Highlights

Physical Characteristics

Dimensions:	1.0 in. H x 1.91 in. W x 2.28 in. D 2.54 cm H x 4.85 cm W x 5.79 cm D (nominal)
Weight:	1.7 oz./48.2 gm

Performance Characteristics

Light Source:	Visible Laser Diode 650 nm
Scan Rate:	186 (± 13) scans per second (bi-directional)
Scan Angle:	37° Typical
Scan Pattern:	Linear
Skew Tolerance (Yaw):	± 45° from normal
Pitch Angle:	± 60° from normal
Roll:	± 30° from vertical
Minimum Print Contrast:	Minimum 25% absolute dark/light reflectance measured at 650 nm.
Symbologies:	1D: UPC/EAN, Code 128, UCC.EAN128, Code 39, Code 93, I 2 of 5, Discrete 2 of 5, Codabar, MSI 2D: RSS and 1D Composite codes
Programmable Parameters:	Laser on time, power mode, trigger mode, bidirectional redundancy, symbology types/lengths, data formatting, serial parameters, beeper tone
Interface:	RS-232

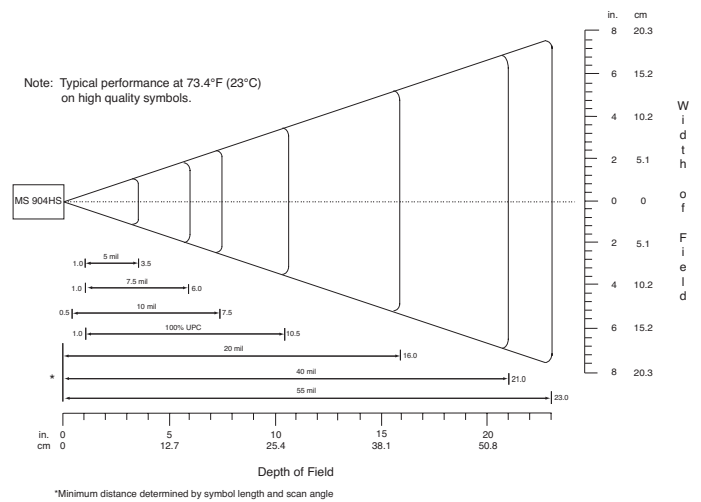
User Environment

Ambient Light:	Artificial light: 450 ft. candles (4,844 Lux) Sunlight: 8,000 ft. candles (86,112 Lux)
Operating Temperature:	32° to 104°F (0° to 40°C)
Storage Temperature:	-40° to 140°F (-40° to 60°C)
Humidity:	5% to 95% non-condensing
Power:	
Input Voltage:	5.0 VDC ±10%
Scanning Current:	130 mA ±30 mA Typical
Standby Current:	20mA ±5mA Typical
Vcc Noise Level:	100mV peak-to-peak max
Drop:	Unit functions normally after multiple 30 in./76 cm drops to concrete

Regulatory

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

MS 904HS Decode Zone



EN410 CE



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