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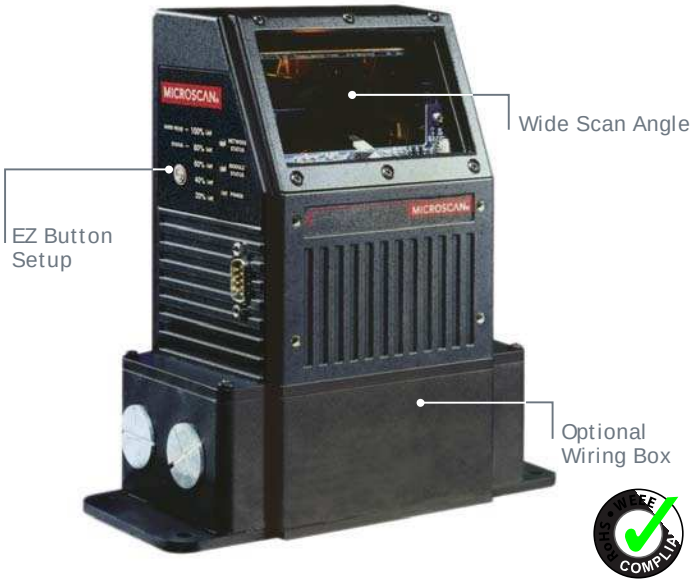
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Find the *Microscan MS-890* at our website: *Click HERE*

MS–890



MS–890: At a Glance

- Scans/ second: 400 to 1000
- Read Range: 10 to 120” (254 to 3048 mm)
- IP65 Enclosure
- Optional IB-890 Wiring Box

ESP® Easy Setup Program: Single-point software solution provides quick and easy setup and configuration of all Microscan readers.

EZ Button: This performs reader setup and configuration with no computer required.

Visible Indicators: Performance indicators include “good read” green flash and LEDs.

Sweeping Raster: This programmable feature enables the reader for multiple symbols at varying distances and locations.

For more information on this product, visit www.microscan.com.

MS–890: Available Codes

Linear — All Standard

Stacked — PDF417, AIAG Formats

Industrial Automation Scanner

The MS-890 is a heavy duty scanner with the flexibility to solve a multitude of applications under a variety of factory conditions. The extended read range and intelligent sweeping raster provide robust reading of both linear barcodes and stacked symbologies.

Versatility and rugged design make the MS-890 an ideal scanner for industrial applications.

Long Read Range
The MS-890 optics were engineered for successful reading at extended or varying distances, such as a safety or clearance zone required around conveyor or assembly areas.

Visible Indicators
Illuminated LEDs on the MS-890 provide instant visual confirmation of successful reads. A “good read green flash” is projected from the front window and is visible within a 360 degree radius from the scanner.

Optional Wiring Box
The IB-890 wiring box provides easy and flexible integration, without any special cables or connectors. Features include:

- Pluggable relay modules
- Terminal strip connectivity
- Connectivity with handheld scanners

Intelligent Raster
The MS-890 features an intelligent raster which can be optimized for scan angle and speed to read multiple symbols or inconsistently placed labels.

Autocalibration
The autocalibration feature automatically determines and selects optimal read settings for focus, gain and tracking.

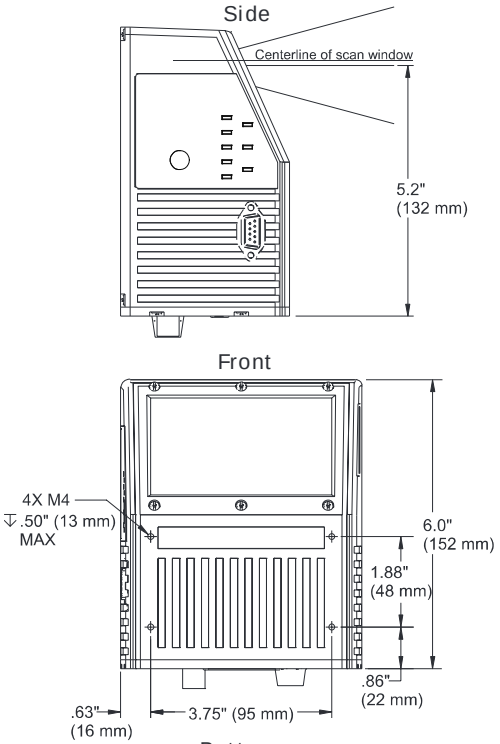
Barcode Programming
Changing scanner configuration on the factory floor is as simple as presenting a barcode and pushing the EZ button. This feature makes it simple to replicate settings on multiple MS-890 scanners.

Application Examples
- Light to heavy industry
- Forklifts or conveyor lines

MICROSCAN®

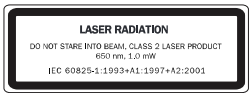
MS–890 Scanner Specifications and Options

MECHANICAL
Length: 3.5" (88 mm)
Width: 5" (127 mm)
Height: 6" (152 mm)
Weight: 5 lbs. (2268 g)



ENVIRONMENTAL
Enclosure: IP65
Operating Temperature: 0° to 50° C (32° to 122° F)
Storage Temperature: -50° to 75° C (-63° to 167° F)
Humidity: Up to 90% (non-condensing)

LASER LIGHT
Type: Semiconductor visible laser diode (650 nm nominal)
Operating Life: 50,000 hours @ 25° C (77° F)
Safety Class: CDRH Class II



SCANNING PARAMETERS
Scanner Mirror Type: Rotating, single line, 14-faceted mirror
Scan Rate: Adjustable from 400 to 1000 scans/ second (default = 500 sps)
Raster Sweep Speed: 1 to 30 sweeps per second
Raster Sweep Angle: 30° maximum
Scan Width Angle: Typically 60°
Pitch Angle: ±50° maximum
Skew Angle: ±40° maximum
Label Contrast: 25% min. absolute dark to light differential at 650 nm wavelength

READ RANGES[1]

Narrow-Bar-Width	Read Range
.0075" (0.190 mm)	10" to 35" (254 to 889 mm)
.010" (0.254 mm)	10" to 44" (254 to 1118 mm)
.015" (0.381 mm)	10" to 74" (254 to 1880 mm)
.020" (0.508 mm)	10" to 90" (254 to 2286 mm)
.030" (0.762 mm)	10" to 100" (254 to 2540 mm)
.040" (1.020 mm)	10" to 110" (254 to 2794 mm)
.050" (1.27 mm)	10" to 120" (254 to 3048 mm)

[1] Ranges based on a Code 39 Grade A label.

CONNECTORS/ PIN ASSIGNMENTS
Program Connector: 9-pin D-subminiature plug

Pin No.	Function
2	RX-232
3	TX-232
5	Signal Ground
9	Boot Mode

Power Connector: 3-pin MicroChange plug



Pin No.	Function
1	Power Ground
2	NC
3	Power 10 to 28 VDC (in)



Trigger Connector: 4-pin MicroChange socket

Pin No.	Function
1	Power 10 to 28 VDC (out)
2	NPN
3	Ground
4	N/ C

Host Connector: 25-pin D-subminiature plug

Pin No.	Host RS-232	Host & Aux RS-232	Host RS-422/ 485	In/ Out
1	Chassis Ground			
2	Host TxD			Out
3	Host RxD			In
4	RTS	Aux TxD		Out
5	CTS	Aux RxD		In
6	Output 1 (+)			Out
7	Signal Ground			
8	Output 2 (+)			Out
9	Trigger (–)			In
10	Trigger (+)			In
11	N/ C			
12	Input 1 (+)			In
13			RxD (+)	In
14			TxD (–)	Out
15	Noread/ Output 3 (+)			Out
16			RxD (–)	In
17	Power Ground			
18	Power +10 to 28 VDC			In
19			TXD +	Out
20	Output 1 (–)			Out
21	Output 2 (–)			Out
22	Noread/ Output 3 (–)			Out
23	Input 1 (–)			In
24	New Master (–)			In
25	New Master (+)			In

COMMUNICATION
Interface: RS-232, RS-422/ 485, daisychain/ auxiliary port capable, dedicated configuration port

SYMBOLOGIES
Standard: Code 39, Code 128, UPC/ EAN, Interleaved 2 of 5, Codabar, Code 93, PDF417
Applications Standard: AIAG, UCC/ EAN-128

ELECTRICAL
Power Requirement: Input, 10-28 VDC, 200 mV p-p max. ripple, 230mA at 24 VDC (typ.)

EMISSIONS AND IMMUNITY
EN61000-6-3:2001: for Class A products
EN61000-3-2:2000+A2:2005
EN61000-3-3:1995+A1:2001
EN61000-6-2: Immunity

INDICATORS
Beeper: Good read, match/ mismatch, noread, serial command conàrmation
LEDs: 1 status, 1 power, 1 good read, and 5 read performance (representing percentage of good decodes), network/ include status, green áash

DISCRETE I/ O
Trigger, New Master, Input 1: Optoisolated, 5-28V rated, (12mA at 24 VDC)
Outputs (1, 2, 3): Opto-isolated, 1–28 VDC rated, (I_{CE} <100 mA @ 24 VDC, current limited by user)

SAFETY CERTIFICATIONS DESIGNED FOR
FCC, CDRH, CE, UL/ cUL, BSMI

ROHS/ WEEE COMPLIANT

ISO CERTIFICATION
Certiàed ISO 9001:2008 Quality Management System

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Read Range and other performance data is determined using high quality Grade A symbols per ISO/ IEC 15415 and ISO/ IEC 15416 in a 25° C environment. For application-speciàc Read Range results, testing should be performed with symbols used in the actual application. Microscan Applications Engineering is available to assist with evaluations. Results may vary depending on symbol quality. Warranty–One year limited warranty on parts and labor. Free extended 3 year warranty upon online product registration.

MICROSCAN®

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