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Find the *Microscan MS-850* at our website: *Click HERE*

Industrial Scanner
2D Reader

The MS-850 boasts of customer-driven features. This 16–oz. (453 g) industrial raster scanner reliably scans multiple labels—and multiple symbologies—simultaneously at a user–adjustable rate between 350 and 1100 scans per second.

The MS-850's programmable raster module allows further adjustments to both raster sweep angle and speed, providing the flexibility to scan a variety of label densities. Built-in mounting holes in the front and back of the scanner allow the MS-850 to be quickly mounted to any flat surface. The MS-850 is ideal for any industry using linear and/or PDF417 labels in high speed and/or industrial environments. It is particularly well suited for packaging, electronics manufacturing, automotive manufacturing, and factory automation applications.

MS-850

INDUSTRIAL RASTER SCANNER

Rugged IP65 Enclosure: Internal circuitry and optical components are protected from dust and moisture by a heavy-duty, die-cast aluminum case. MicroChange twist-lock connectors provide reliable and uninterrupted connection for the power and trigger ports.

Multiple Label and Symbology Reading: The MS-850 offers incredible flexibility not only in its ability to read multiple labels, but also multiple symbology types, both linear and PDF417.

Preventive Maintenance Features: Diagnostic controls monitor the operating conditions of the MS-850. Ultimately, these controls—relating to the operating life and temperature, laser current levels, and frequency of power-ups—help prevent costly downtime. For example, user defined messages alert the operator when thresholds have been exceeded and allow for intervention before problems arise.



Programmable Raster Mirror with Precise Sweeping Arc: The MS-850 raster module allows accurate mirror oscillation up to 30 sweeps per second. The raster sweep angle is also operator controlled from 0° to 30° providing extremely precise coverage.

Real-time Controls: Discrete input/output connections consisting of three opto-isolated programmable outputs, one trigger input, and one programmable input provide versatile programming options. Standard Microscan match code routines such as Match Code, Noread, Mismatch, Sequential Matching, Wild Card Matching, and Number of Good Reads allow for highly controlled automated data acquisition.

Bar Code Symbologies: The MS-850 scans multiple symbologies, including PDF417 and all widely used linear bar code symbologies.

- Interleaved 2 of 5
- PDF417
- Code 39
- Code 93
- Code 128
- Codabar
- UPC/EAN

Applications Standards
- UCC/EAN-128
- AIAG

Other codes are available, call Microscan for details.

Service Options:
- Installation assistance program
- Service agreements
- Training
- On-site service
- Extended warranty

MICROSCAN®

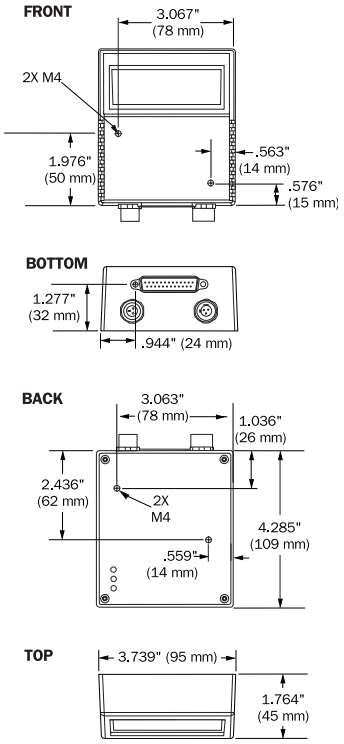
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MS-850 INDUSTRIAL RASTER SCANNER

Specifications and Options

MECHANICAL

Height: 4.28" (109 mm)
Width: 3.74" (95 mm)
Depth: 1.76" (45 mm)
Weight: 16 oz. (453 g)



ENVIRONMENTAL

Enclosure: Cast aluminum 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)

EMISSIONS

Heavy industrial: EN 61000-6-2:1999
Radiated emissions: EN 55022:1998 Class A 30-1000 MHz
Conducted emissions: EN 55022:1998 Class A 0.15-30 MHz
Noise immunity: IEC 801-4 level 3

LASER LIGHT

Type: Semiconductor visible laser diode (650 nm nominal) ***Operating life:*** 50,000 hours @ 25°C
Safety class: CDRH Class II, 1.0 mW max.

SCANNING PARAMETERS

Scanner mirror type: Rotating, 10-faceted
Scan rate: Adjustable from 350 to 1100 scans/second (default = 500 sps)
Scan width angle: Typically 60°
Pitch: ±50° maximum
Skew: ±40° maximum
Label contrast: 25% min. absolute dark to light differential at 650 nm wavelength
Raster mirror performance:

Raster sweep angle	Maximum sweeps per second
1°–10°	30
11°–20°	20
21°–30° (max.)	10

COMMUNICATION

Interface: RS-232, RS-422/485,*DeviceNet, Daisy chain/Auxiliary Port Capable

** Used in conjunction with an accessory protocol box.*

READ RANGES[1]

Narrow-bar-width	High Density
.005" (.127 mm)	1.5" to 2.5" (38 to 64 mm)
.0075" (.190 mm)	1" to 3.5" (25 to 89 mm)

Narrow-bar-width	Medium Density
.0075" (.190 mm)	2.5" to 5" (64 to 127 mm)
.010" (.254 mm)	1" to 6" (25 to 152 mm)
.015" (.381 mm)	1" to 8" (25 to 203 mm)
.020" (.508 mm)	1" to 11" (25 to 279 mm)
.030" (.762 mm)	1" to 14" (25 to 355 mm)

Narrow-bar-width	Low Density
.015" (.381 mm)	6" to 15" (152 to 381 mm)
.020" (.508 mm)	6" to 20" (152 to 508 mm)
.030" (.762 mm)	6" to 24" (152 to 609 mm)
.040" (1.02 mm)	6" to 30" (152 to 762 mm)

1. At 500 decodes per second using Code 39 grade A label.

CODE TYPES

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

CONNECTORS/PIN ASSIGNMENTS

Host Connector: 25-pin D-subminiature plug

Pin No.	Host RS232	Host & Aux RS232	Host RS422/485	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	Default configuration[a]			In
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

[a]The default is activated by connecting pin 11 to ground pin 7.

Trigger Connector: 4-pin MicroChange

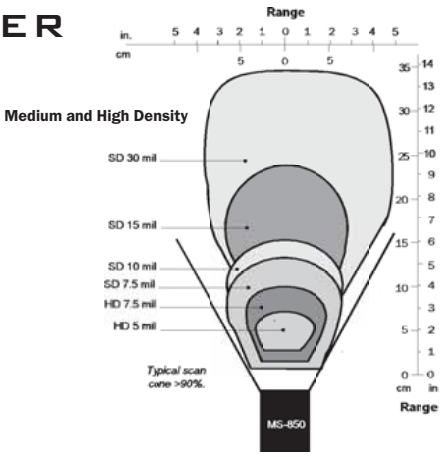


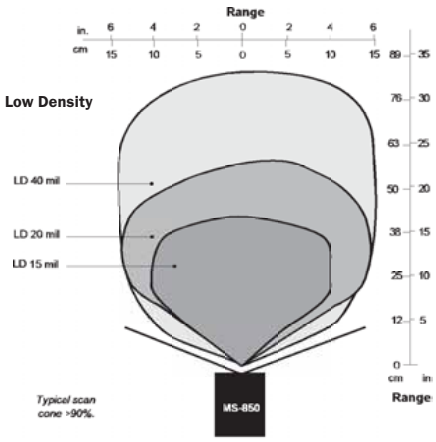
Pin No.	Function	In/Out
1	Power + 10 to 28 VDC	Out
2	NPN	
3	Power Ground	
4	NC	

Power Connector: 3-pin MicroChange



Pin No.	Function	In/Out
1	Power ground	
2	NC	
3	Power +10 to 28 VDC	





ELECTRICAL

Power Requirement: 10-28 VDC, 200 mV p-p max. ripple, 140 mA at 24 VDC (typ.)
Trigger, New Master, Input 1: Optoisolated, 5-28V rated, (12 mA at 24 VDC)
Outputs (1, 2, 3): Optoisolated, 1-28 VDC rated, (I_{CE} <100 mA at 24 VDC, current limited by user)

SAFETY CERTIFICATIONS

FCC, CDRH, CE, UL/cUL, BSMI

ISO 9001/Cert. No. 02-1071

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Specifications subject to change.
Updates to this specification can be found on-line at www.microscan.com.

Product specifications are given for typical performance at 25°C (77°F) using grade A labels. Some performance characteristics may vary at high temperatures or other environmental extremes.

Warranty–One year limited warranty on parts and labor. Extended warranty available.

MICROSCAN

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