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Find the *Microscan MS-820* at our website: *Click HERE*

MS-820

Laser Barcode Scanner



Compact Shape/Size

The MS-820 is a compact single-line scanner optimized for reading high density codes. Its small size, robust reading and industrial features have established the MS-820 as the standard barcode scanner on the assembly lines of many large manufacturers.

The MS-820's IP54 enclosure rating makes it ideal for applications such as conveyors, assembly lines or integration within machinery.

MS-820: At a Glance

- *Scans/second: 350 to 1100*
- *Read Range: 1 to 30" (25 to 762 mm)*
- *High density code reading (3 mil)*
- *IP54 Enclosure*

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

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

Reliability
The MS-820 offers time-tested reading performance and design. Microscan's unmatched customer support is available to assist with custom configurations.

Read Performance
The MS-820 optics allow successful reading of codes out to 30" (762 mm), at a 60˚ scan angle and up to a 10" (254 mm) beam width.

Real-time Controls
Discrete input/output connections consist of three optoisolated programmable outputs, one trigger input, and one programmable input.

Ease of Use
A fully programmable feature set allows users of all experience levels to quickly and easily configure the scanner.

Flexibility
The compact size of the MS-820 allows flexibile positioning for a variety of applications. Custom software options are available to further adapt the scanner to the needs of the user.

Reverse Video
This feature allows users the flexibility to read light-on-dark or dark-on-light bar codes.

Application Examples
- Any industrial environment from light to heavy duty
- Conveyor lines
- Embedded within machinery

MS-820: Available Codes

Linear — All Standard

Stacked — PDF417

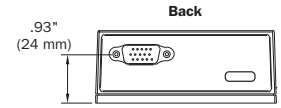
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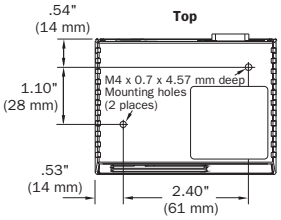
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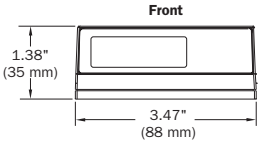
MS–820 LASER BARCODE SCANNER

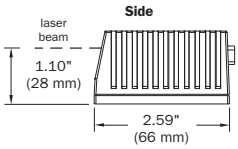
Specifications/Options

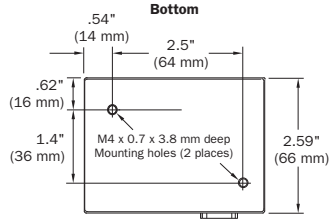
MECHANICAL
Depth: 2.59" (66 mm)
Width: 3.47" (88 mm)
Height: 1.38" (35 mm)
Weight: 7.5 oz. (212 g)







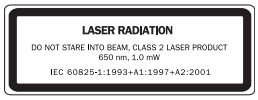




ENVIRONMENTAL
Enclosure: Die-cast aluminum, IP54 rated
Operating Temperature: 0° to 50° C (32° to 122° F)
Storage Temperature: –50° to 75° C (-58° to 167° F)
Humidity: Up to 90% (non-condensing)
Ambient Light Immunity:
- 450 foot candles (indoor: fluorescent, incandescent, mercury vapor, sodium vapor)
- 1800 foot candles (soft outdoors)

EMISSIONS
Heavy Industrial: EN 61000-6-2:1999
Radiated Emission: EN 55022:1998 Class A 30-1000 MHz
Conducted Emissions: EN 55022:1998 Class A .15-30 MHz

LASER LIGHT
Type: Laser diode
Output Wavelength: 650 nm nominal
Infrared Option: 780 nm nominal (MS-825)
Operating Life: 50,000 hours @ 25° C
Safety Class:
- Visible laser: CDRH Class II, 650 nm
- Infrared laser: CDRH Class I, 780 nm



LOW DENSITY RANGE DATA

Narrow-bar-width	Read Range
.0075" (.191 mm)	10 to 12" (254 to 305 mm)
.010" (.254 mm)	7 to 16" (178 to 406 mm)
.015" (.381 mm)	6 to 19" (152 to 483 mm)
.020" (.508 mm)	5 to 22" (127 to 558 mm)
.040" (1.02 mm)	4 to 30" (102 to 762 mm)

MEDIUM DENSITY RANGE DATA

.0075" (.191 mm)	2.5 to 5.5" (64 to 140 mm)
.010" (.254 mm)	1.5 to 7.0" (38 to 178 mm)
.015" (.381 mm)	1.5 to 8.5" (38 to 216 mm)
.020" (.508 mm)	1.5 to 11" (38 to 280 mm)
.030" (.762 mm)	1.0 to 12" (25 to 304 mm)

HIGH DENSITY RANGE DATA

.0033" (.084 mm)	Call Microscan
.005" (.127 mm)	4 to 5.0" (102 to 127 mm)
.0075" (.191 mm)	3.5 to 6.75" (89 to 171 mm)
.010" (.254 mm)	3.25 to 8" (82 to 203 mm)
.015" (.381 mm)	3.25 to 9" (82 to 228 mm)

*Ranges based on a Grade A, Code 39 label. If your read range falls outside the above ranges, please call Microscan.

SCANNING PARAMETERS
Mirror Type: Rotating, 10-faceted
Optional Raster Mirror Image: 10 raster scan lines over a 2° arc (or 0.500" raster height at 8" [203 mm] distance)
Scan Rate: Adjustable from 350 to 1100 scans/sec. **Scan Width Angle:** Typically 60°
Pitch: ±50° max. **Skew:** ±40° max.
Label Contrast: 25% min. absolute dark to light differential at 650 nm wavelength

COMMUNICATION INTERFACE
Interface: RS-232/422/485
Optional I/O: Available for DeviceNet

PROTOCOLS
Point-to-Point, Point-to-Point w/RTS/CTS, Point-to-Point w/XON/XOFF, Point-to-Point w/RTS/CTS & XON/XOFF, Polling Mode D, Multidrop, Daisy Chain, User-Defined, User-Defined Multidrop

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

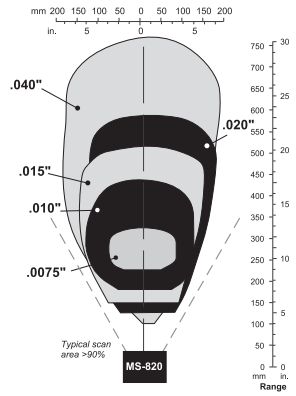
ELECTRICAL
Power Requirement: 10–28 VDC, 200 mV p-p max ripple, 120mA at 24 VDC (typ.)

HOST CONNECTOR PIN ASSIGNMENTS
Type: 15-pin high density D-sub. plug

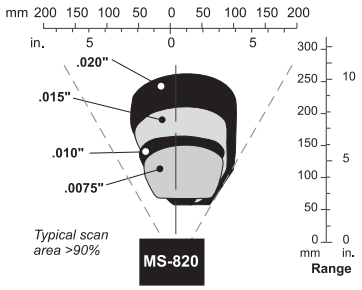
Pin No.	Host RS232	Host/Aux RS232	Host RS422/485	In/Out
1	Power +10 to 28 VDC			In
2	TxD	TxD	TxD(–)	Out
3	RxD	RxD	RxD(–)	In
4	Power/Signal Ground			
5	Trigger (–)			In
6	RTS	Aux TxD	TxD(+)	Out
7	Output 1 (+)			Out
8	Default configuration[a]			In
9	Trigger (+)			In
10	CTS	Aux RxD	RxD (+)	In
11	Output 3 (+)			Out
12	New Master (+)			In
13	Chassis ground[b]			
14	Output 2 (+)			Out
15	Outputs 1,2,3 (–)			Out

a. The default is activated by connecting pin 8 to ground pin 4.
b. Chassis ground: Used to connect chassis body to earth ground only. Not to be used as power or signal return.

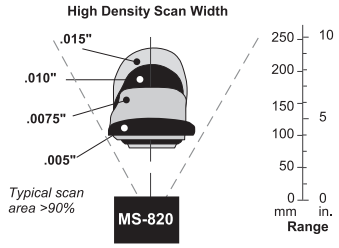
Low Density Scan Width



Medium Density Scan Width



High Density Scan Width



DISCRETE I/O
Trigger Input: Optoisolated, 4.5–28V rated, (12 mA at 24 VDC)
New Master Input: Optoisolated, 4.5–28V rated, (12 mA at 24 VDC), New Master (–) to signal ground
Outputs (1, 2 & 3): Optoisolated, 1–28V rated, (I_{CE} <100 mA at 24 VDC, current limited by user)

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

ROHS/WEEE COMPLIANT

ISO CERTIFICATION
Issued by TüV USA Inc, Member of TÜV NORD Group, Cert No. 06–1080

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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-specific 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. Extended warranty available.

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