



MS-880



Industrial Automation Scanner

The MS-880 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 bar codes and stacked symbologies.

Versatility and rugged design make the MS-880 an ideal scanner for industrial applications.

MS-880: At a Glance

- Decodes/second: 350 to 1000
- Read Range: 10 to 120" (254 to 3048 mm)
- IP65 Enclosure
- Optional IB-880 Wiring Box



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



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-880: Available Codes



Long Read Range

The MS-880 optics were designed for successful reading at extended or varying distances, such as a safety or clearance zone required around conveyor or assembly areas.

Autocalibration

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

Visible Indicators

Illuminated LEDs on the MS-880 provide instant visual confirmation of successful reads.

Intelligent Raster

The MS-880 features an intelligent raster which can be optimized for scan angle and speed to read multiple symbols or inconsistently placed labels.

Optional Wiring Box

The IB-880 wiring box provides easy and flexible integration, without any special cables or connectors. Features include:

- Pluggable relay modules
- Terminal strip connectivity
- Connectivity with handled scanners
- Ethernet

Programming Methods

The MS-880 can be programmed while still on the line via a separate programming port or the wireless IrDA port. The IrDA port also allows programming via palm or laptop computers.

Application Examples

- Light to heavy industry
- Forklifts or conveyor lines

MS-880 SCANNER SPECIFICATIONS AND OPTIONS

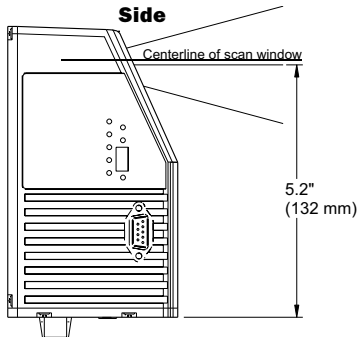
MECHANICAL

Length: 3.5" (88 mm)

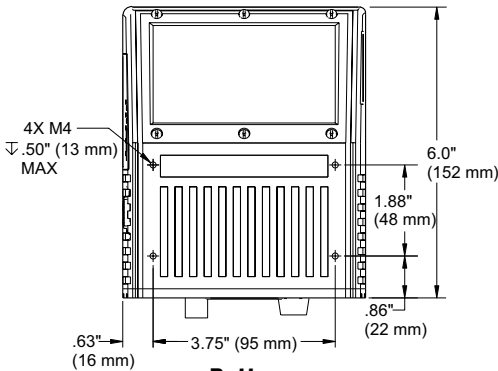
Width: 5" (127 mm)

Height: 6" (152 mm)

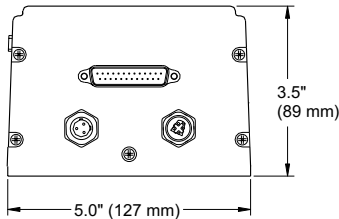
Weight: 5 lbs. (227 g)



Front



Bottom



ENVIRONMENTAL

Enclosure: IP65

Operating temperature: 0° to 50°C (32° to 122°F)

Storage temperature: -50° to 75°C (-63° to 167°F)

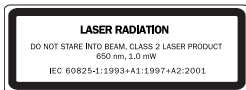
Humidity: Up to 90% (non-condensing)

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 RANGES₁

Symbol/Narrow Bar Width	Read Range
7.5 mil (.190 mm)	10" to 35" (254 to 889 mm)
10 mil (.254 mm)	10" to 44" (254 to 1118 mm)
15 mil (.381 mm)	10" to 74" (254 to 1880 mm)
20 mil (.508 mm)	10" to 90" (254 to 2286 mm)
30 mil (.762 mm)	10" to 100" (254 to 2540 mm)
40 mil (1.020 mm)	10" to 110" (254 to 2794 mm)
50 mil (1.27 mm)	10" to 120" (254 to 3048 mm)

¹ Readings are using a Code 39 grade A label

CONNECTORS/PIN ASSIGNMENTS

Program Connector: 9-pin D-subminiature plug

Pin No.	Function
2	RX232
3	TX232
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 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	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, IrDA port, Daisychain/auxiliary port capable, Dedicated configuration port

Interface with IB-880 Wiring Box (optional): Ethernet

CODE TYPES

Standard codes: 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

EN55022: 1998 Limits & Methods: ITE Disturbances (radiated and conducted)

EN55024: 1998 (General Immunity: Residential)

EN61000-6-2: 1999 (Heavy Industrial: Immunity)

INDICATORS

Beeper: Good read, match/mismatch, no read, serial command confirmation

LEDs: 1 status, 1 power, 1 good read, and 5 read performance (representing percentage of good decodes), network/include status

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

ISO CERTIFICATION

Issued by RWTÜV, USA Inc.

ISO 9001:2000 – Cert No. 03-1212



ISO 9001:2000

Certified QMS

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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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