

The MS-3 CCD excels at reading difficult symbols and is offered in Microscan's smallest scanner size.

At up to 270 decodes per second, the **MS-3 CCD** offers the best read performance in its class of embedded compact CCD readers. Advanced CCD technology coupled with proprietary algorithms makes reading small, damaged, or poorly printed symbols routine. The ultra-compact size and wide read angle allow for flexible mounting and positioning when embedded into OEM instruments.

The **MS-3 CCD** reader is in the mid-range of Microscan's MS-3 trio that also includes the **MS-3 Laser** scanner and **MS-3 Engine**. All three are well suited for any embedded bar code application where size, performance and budget savings are core factors.

MS-3 CCD

ULTRA-COMPACT BAR CODE SCANNER

Compact Size

The 1.75" (44.5 mm) square by .85" (21.6 mm) tall scanner weighs only 2 ounces (57 g), for easy mounting onto robotic equipment or into tight spaces.

Scan Speed

With a scan speed of up to 270 decodes per second, the MS-3 CCD is one of the fastest CCD scanners available on the market today.

Scan Angle

The MS-3 CCD offers a wide scan angle of 48 degrees allowing for flexibility with positioning.

Low Power Draw

The MS-3 CCD comes standard as 5V for low power draw (150mA). 10-30V input also available with interface accessory.

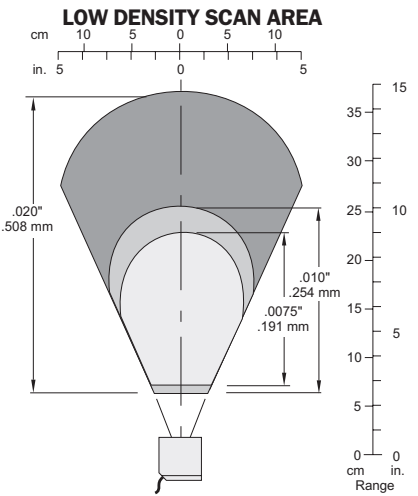
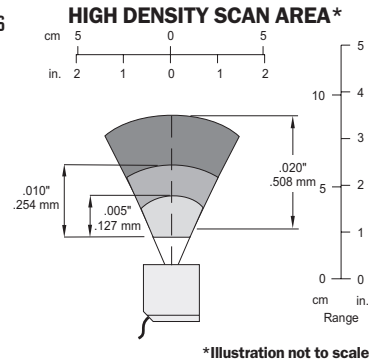
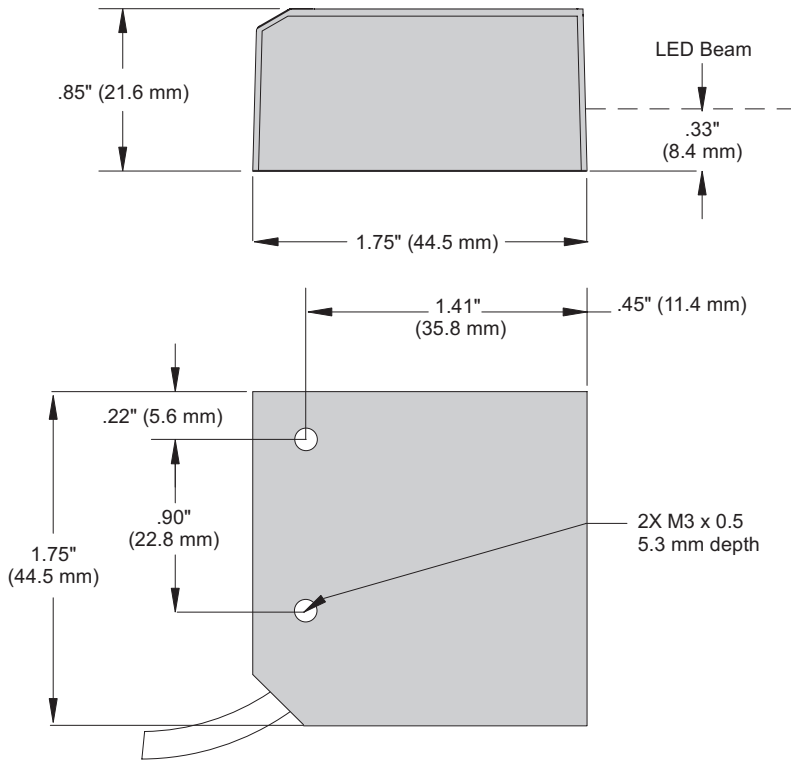
Symbologies

Like all Microscan scanners, the MS-3 CCD reads virtually all widely used bar code symbologies, including:

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



MS-3 CCD SCANNER SPECIFICATIONS AND OPTIONS



GENERAL

Compact CCD scanner for OEM devices.

MECHANICAL

Weight: 2 oz. (57 g)

DESIGN

Flash memory sensor:

CCD linear image sensor

Optics: 645 nm visible LED

Bright and sharp scanning line

SCANNING PERFORMANCE

Scan rate:

Decoded mode: 270 scans/sec auto-adaptive.

Min. X dimension: down to 0.05 mm (2mil) on Code 39

Depth of field: 0 to 49.2 cm (19.4")

Bar code width: up to 18 cm (7") on 0.3 mm (12 mil) resolution code

Print contrast: down to 20%

Scan angle: 48° nominal

COMMUNICATION

Interface: RS-232

CONNECTOR

Type: 3 ft. cable terminated with 15-pin high density D-Sub socket connector

SYMBOLOGIES

UPC (E&A), EAN, Code 11, Code 39, Code 128, UCC EAN 128, ISBN, ISBT, Interleaved, Industrial and Standard 2 of 5, Codabar, Code 93, MSI, Plessey, Telepen.

ENVIRONMENTAL CHARACTERISTICS

Operating temperature: -30 to 60° C (-22 to 140° F)

Storage temperature: -40 to 60° C (-40 to 140° F)

Relative humidity:

5% to 95% (non-condensing)

HOST CONNECTOR/PIN ASSIGNMENTS

15 Pin High Density D-sub Socket Connector

| Pin No. | Host/RS-232 | In/Out |
|---------|-----------------------|--------|
| 1 | Power +5 VDC | In |
| 2 | TxD | Out |
| 3 | RxD | In |
| 4 | Power/Signal Ground | |
| 5 | NC | |
| 6 | RTS | Out |
| 7 | NC | |
| 8 | Default Configuration | |
| 9 | Trigger (NPN) | In |
| 10 | CTS | In |
| 11 | NC | |
| 12 | NC | |
| 13 | Chassis Ground | |
| 14 | NC | |
| 15 | NC | |

Shock: 2000G **Vibration:** 50G r.m.s.

Ambient light: works in any lighting conditions, from 0 to 100 000 lux

CE MARK

Immunity designed for:

EN 55-24:1998 ITE Immunity Standard

Radiated and conducted emissions

designed for:

EN 55022:98 ITE disturbances class A

ELECTRICAL

Power: 5V +/-5%, 200 m/V p-p max ripple, 150 mA @ 5 VDC (typ.)

DISCRETE I/O

Trigger Inputs: 4.7 to 24V rated (0µA @ 5V, -600 µA @ 0V)

SAFETY CERTIFICATION DESIGNED FOR:

CDRH, FCC, UL/CUL, CE, BSMI

READ RANGES

| Narrow-bar-width | Read Range |
|---------------------|------------------------------|
| HIGH DENSITY | |
| .005" (.127 mm) | .9" to 1.8" (23 to 46 mm) |
| .010" (.254 mm) | .8" to 2.4" (20 to 61 mm) |
| .020" (.508 mm) | 1" to 3.5" (25 to 89 mm) |
| LOW DENSITY | |
| .0075" (.191 mm) | 2.8" to 9" (70 to 228 mm) |
| .010" (.254 mm) | 2.5" to 10" (64 to 254 mm) |
| .020" (.508 mm) | 2.5" to 14.5" (64 to 370 mm) |

Note: For Right Angle option, subtract 0.6" (15 mm) from read range. Read ranges are base upon optimal scan speed for specific symbol density.

ISO CERTIFICATION

Issued by RWTÜV, USA Inc.

ISO 9001:2000 – Cert No. 03-1212

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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.

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