OMRON

AUTO ID

Connect Microscan MS-3 Laser Scanner to OMRON PLC

- **Decodes/second: up to 1000**
- **Read Range: 2 to 10" (51 to 254 mm)**
- **Wide Scan Angle**
- **IP54 Enclosure**

- The MS-3 Laser scanner provides an integrated decoding solution for linear codes and stacked symbols.
- It's easy to use and is available in multiple focal distances.
- The MS-3 offers the fastest read performance in embedded compact bar code scanners. The wide scan angle of 70 degrees is coupled with ultra-compact size and flexible mounting.
- Includes Microscan's ESP® Easy Setup Program, a single-point software solution that provides quick and easy setup and advanced features.
- Features Microscan's world-class decode algorithms to ensure accurate reading every time.

All of Microscan's Bar Code Readers are RoHS Compliant

MS-3 Read Ranges

Narrow-bar-width	Read Range
HIGH DENSITY	
.0033" (.084 mm)	2.3" to 2.6" (58 to 66 mm)
.005" (.127 mm)	2" to 3.1" (51 to 79 mm)
.0075" (.191 mm)	1.7" to 3.7" (43 to 94 mm)
.010" (.254 mm)	1.5" to 4" (38 to 102 mm)
LOW DENSITY	
.0075" (.191 mm)	3" to 6" (76 to 152 mm)
.010" (.254 mm)	2" to 7" (51 to 178 mm)
.015" (.381 mm)	2" to 8" (51 to 203 mm)
.020" (.508 mm)	2" to 10" (51 to 254 mm)

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

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

ISO CERTIFICATION ISSUED BY RWTÜV, USA INC.

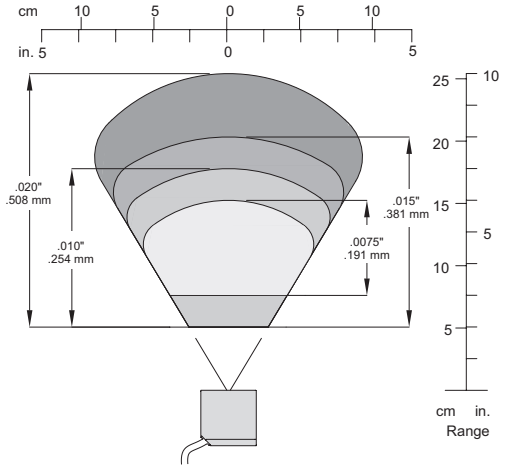
ISO 9001:2000 cert no. 03-1212

MS-3 Available Codes and Symbols

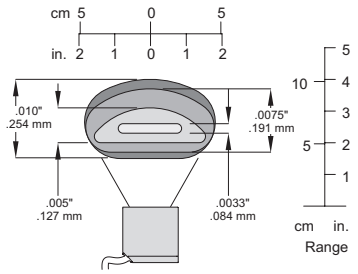
Linear — All Standard

Stacked — MicroPDF, PDF417, GS1 Databar (RSS)

LOW DENSITY SCAN AREA



HIGH DENSITY SCAN AREA



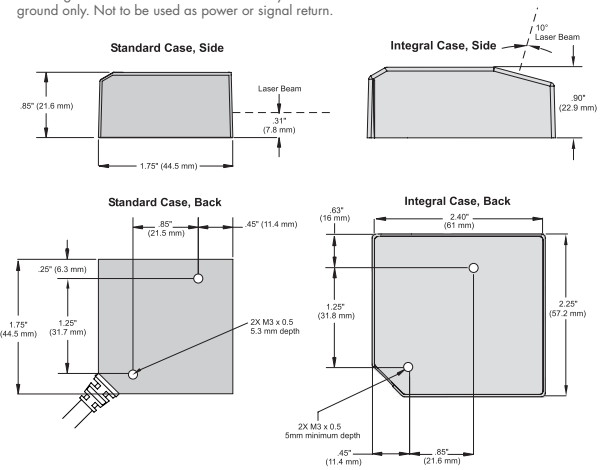
MS3 Specifications

HOST CONNECTOR PIN ASSIGNMENTS

High Density 15 Pin D-sub. socket Connector

Pin No.	Host RS232	Host & Aux RS232	Host RS422/485	In/Out
1	Power +5 VDC			In
2	TxD	TxD	TxD (-)	Out
3	RxD	RxD	RxD (-)	In
4	Power/Signal Ground			
5	NC			
6	RTS	Aux TxD	TxD (+)	Out
7	Output 1 TTL[a]			Out
8	Default configuration[a]			In
9	Trigger			In
10	CTS	Aux RxD	RxD (+)	In
11	Output 3 TTL[a]			Out
12	New Master (NPN)			In
13	Chasiss ground[c]			
14	Output 2 TTL[a]			Out
15	NC			

a. Can sink 10 mA and source 2 mA.
b. The default is activated by connecting pin 8 to ground pin 4.
c. Chassis ground: Used to connect chassis body to earth ground only. Not to be used as power or signal return.



Omron PLC Communications Port Configuration

HOST CONNECTOR PIN ASSIGNMENTS

High Density 9 Pin D-sub. socket Connector

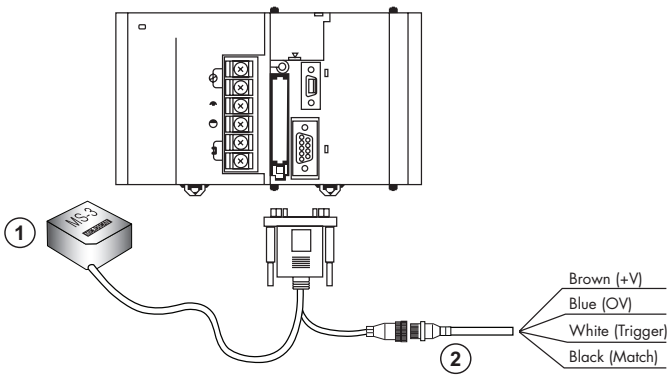
Pin No.	Host RS232	In/Out
1	NC	
2	TXD	Out
3	RXT	In
4	NC	
5	NC	
6	NC	
7	NC	
8	NC	
9	Power/Signal Ground	

HOST CONNECTOR PIN ASSIGNMENTS

4 Pin PicoChange (M8) Jack Connector

Pin No.	Scanner	In/Out
1	Power +5 VDC[b]	
2	Trigger Input	In
3	0 VDC[c]	
4	Match Output[a]	Out

a. Can sink 10 mA and source 2 mA.
b. Pin 2 on the M8 connector (power terminal) is isolated from pin-6 in the 9-pin D-sub connector.
c. Pin 3 on the M8 connector is the Power/Signal Ground. The ground signals are connected to pin 9 in the D-sub host connector.



Connecting to OMRON PLC

REQUIRED EQUIPMENT

Ref. #	Part Number	Description
(1)	FIS-0003-xxxxG	MS3 Laser bar code scanner
	98-000048-01	4" (102 mm) Mounting arm adapter kit
	98-000054-01	Mounting stand base, plate-small
	37-000001-01*	ESP software, 1-free per order
(2)	XS3F-xxxx-xxx	M8 male cable, nM
	S8VS-01505	Input 100~240VAC, output 5VDC 2A/15w

LASER RADIATION
DO NOT STARE INTO BEAM, CLASS 2 LASER PRODUCT
650 NM, 1.0 MW
IEC 60825-1:1993+A1:1997+A2:2001

* Trigger Sensor: Photo, NPN dark-on.

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