

Model 400 Long Range Scanner

Technical Specifications



Long Range Scanner Designed for Industrial Applications

Unit available with auto focus to provide maximum depth of field for any size bar code.

NEMA 12 environmental protection standard for harsh environments. (Upgradable to NEMA 4.)

Programmable match code instructions without accessing internal menus.

Maximum system flexibility and adaptability with two inputs and four outputs.

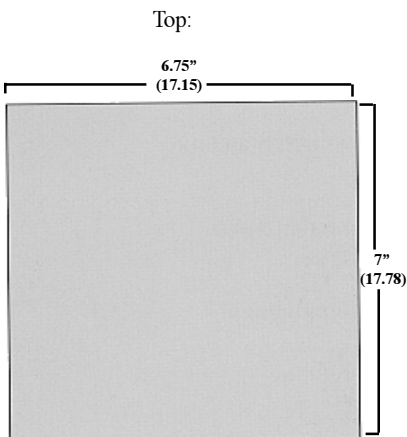
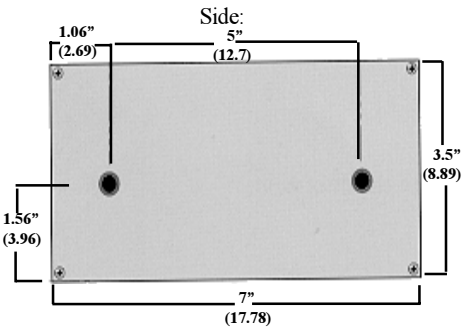
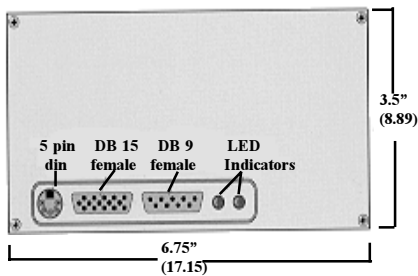
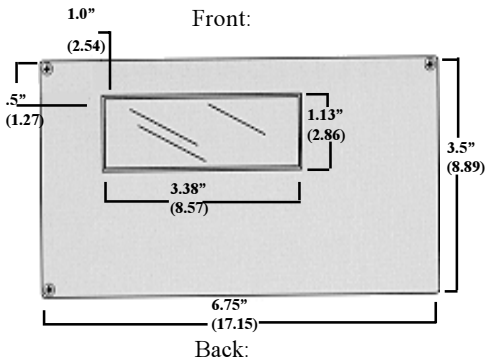
Oversized coaxial optics for flexible positioning and extended depth of field with brushless motor designed for continuous use.

Dynamic AGC (automatic gain control) circuitry to optimize threshold re-



MECHANICAL ENVELOPE/MOUNTING

Measurements in inches (centimeters)



Enclosure:
Extruded aluminum, painted

Weight:
5.5 lbs.

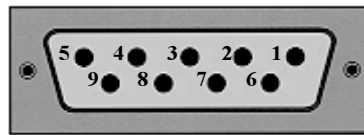
ELECTRICAL TERMINATION

DB-15 Connector (Female)



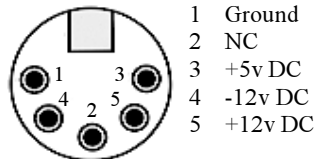
- 1 Input 1 (spare)
- 2 Input 2 (spare)
- 3 Good Read Output (open collector 48ma)
- 4 No Read Output (open collector 48ma)
- 5 Good Compare Output (open collector 48ma)
- 6 No Compare Output (open collector 48ma)
- 7 Input 3 (spare)
- 8 Gate Input (photoeye input)
- 9 5v DC Out
- 10 12v DC Out
- 11 Open collector output (spare)
- 12 Open collector output (spare)
- 13 Sync
- 14 Open collector (spare)
- 15 Ground

DB-9 Connector (Female)



- 1 -TX (RS422)
- 2 RD
- 3 TD
- 4 -RX (RS422)
- 5 Ground
- 6 TX (RS422)
- 7 RTS
- 8 CTS
- 9 RX (RS422)

5 Pin DIN Connector



- 1 Ground
- 2 NC
- 3 +5v DC
- 4 -12v DC
- 5 +12v DC

POWER REQUIREMENTS

+5v DC@400ma
+12v DC@250ma
-12v DC@250ma

ENVIRONMENTAL

Enclosure:
Aluminum extrusion,
NEMA 12 rating

Operating Temperature:
32½° to 104½° Fahrenheit

Relative Humidity:
0 - 95% noncondensing

OPTICAL CHARACTERISTICS

Illumination:
5mw solid state laser diode or
10mw solid state laser diode

Wavelength:
670nm (nominal)

Scan Pattern:
Line or 12 line raster (1" at 10")

Scan Element:
Rotating polygon
(8 or 12 sided) mirror

Scan Speed:
500 scans/second typical

Read Range:
2 to 60 inches - label dependent

Depth of Field:
Dependent of focal point, spot size
and narrow element bar width

LABEL ORIENTATION

Scan Angle: 60 degrees

Scan Pitch: 45 degrees

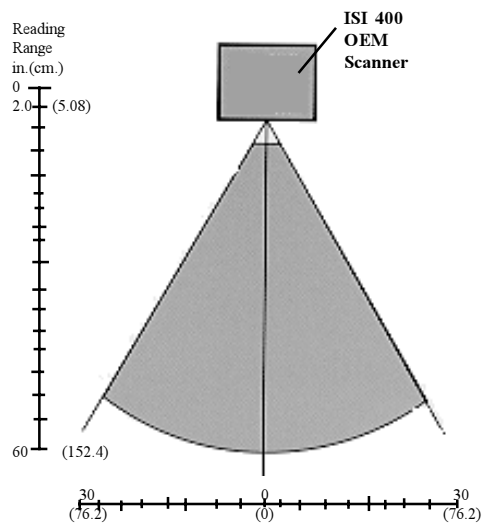
Scan Skew: 45 degrees

READ RANGE AND SCAN WIDTH

	Narrow Bar Width	Depth of Field	Max. Scan Width
5mw Laser:	.012	12-24	24
	.020	10-26	24
10mw Laser:	.012	10-27	36
	.020	10-36	36

This chart is based on a standard focal point with a 14 mil. spot size using grade A type labels. Actual depth of field, scan widths and focal points will be label dependent based on label quality and focal points set to customer requirements by the factory. Auto-Focus will increase range approximately 2.5 - 3 times.

MODEL 400 SCANNING FIELD



OPERATING PARAMETERS USER DEFINED:

Code Types:

- Codabar
- Code 3 of 9
- Interleaved 2 of 5
- EAN/UPC
- Code 128
- Code 93
- Pharmacode

Features Supported:

- Symbology - On/Off
- Compare Mode - On/Off
- Xmit Start/Stop Character - On/Off
- Check Character Required - On/Off
- Xmit Check Character - On/Off
- Read Count - 1 to 32
- Fixed Field Length - up to 5 different lengths

Gate Parameters:

- Reader; Mode of Operation - Continuous, Gate, Host, Change, Autogate
- Laser Beam Tracking - On/Off
- Transmit to Host - Read/Close
- Autogate/Change Mode Time - 5mSec Increments
- Start/Stop Character - Any ASCII Character
- Number of Bar Codes - up to 5 max.

Communications:

- RS 232
- RS 422 - 4 wire
- RS 485 - Multi-Drop
- Baud Rate - 300 to 19.2k
- Data - 7 or 8 bits
- Parity - None, Even, Odd
- Stop - 1 or 2
- Transmission Protocol - None, RTS/CTS, XON/XOFF
- RTS - Low, High, Active
- CTS - Ignore, Active

Programmable Transmission Format:

- Transmit No-Read - Yes/No
- Transmit Symbol ID - Yes/No
- Transmit Direction - Yes/No
- Start Text - Codes or Commands
- Identify Text - Identifier
- No Read Text - 10 Characters Max.
- Good Compare Text - 10 Characters
- No Compare Text - 10 Characters
- End Text - 10 Characters
- End of Message Character - None, LF, CR, CRLF, ETX, TAB
- Multiple Bar Code Delimiter - 1 Digit

Compare Buffer:

- Entries Allowed - 20 (127 digits/characters max.)
- Insert into Compare Buffer-Code type and Characters
- Insert Last Read - Yes/No
- Show Compare Buffer - Yes/No
- Delete Buffer Entry - Yes/No
- Four Open Output Collectors;
 - Good Read - 5m Sec Increments
 - No-Read - 5m Sec Increments
 - Good-Compare - 5m Sec Increments
 - No Compare - 5m Sec Increments
 - Active High/Low
- No Compare On No-Read - Yes/No

CERTIFICATIONS

Laser Classification:

- DHHS Class II
- UL and CE marks submitted

WARRANTY

Parts and Labor: One year

STANDARD FEATURES

Motor:

- Long life brushless motor

Mirror:

- Diamond machined, gold plated aluminum

Coaxial Optics:

- Maximum ease of set-up

Detector Board:

- Oversized precision optics, ambient light & polarizing filters

Aluminum Case:

- Max EMI/RFI protection

Firmware:

- User programmable

FACTORY OPTIONS

Scan Speed:

- Adjustable from 250 to 1000 scans/second

Focal Point:

- Adjustable for spot size and narrow element



Raster Pattern:

- Standard .1" at 10°, or machined to specific application

Electrical Termination:

- Cabling as required

Light Source:

- Standard 670nm, optional 780nm
- 5mw or 10mw laser diode

Symbologies:

- Specials available depending on qty.

Firmware:

- Custom configurations

Environmental:

- Standard NEMA 12, upgradable to NEMA 4

Auto focus:

- Three variable focal points with 50m Sec. response time