DS6300

INSTALLATION QUICK REFERENCE

CONTENTS

NOTE

For further details on product installation, see the complete Reference Manual available on the configuration CD-ROM included with this product.

DS6300-100-010
Master/Slave Models

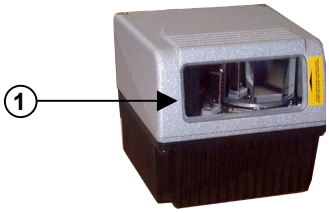


Figure A

(1) Laser Beam Output Window

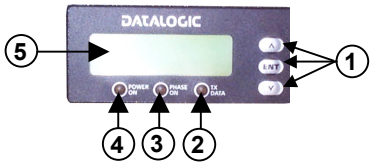


Figure B

(1) Programming Keypad
(2) TX Data LED (Green)
(3) Phase On LED (Yellow)
(4) Power On LED (Red)
(5) LCD Display

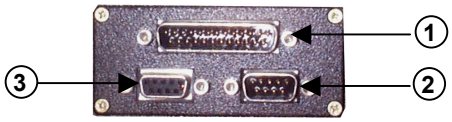


Figure C

(1) Main/Aux. Interface 25-pin Connector
(2) Lonworks 9-pin Male Connector
(3) Lonworks 9-pin Female Connector

Available Models:

DS6300 - 10X - 0YY

Optical Model
0 = Standard
5 = Oscillating Mirror

Decoder Model
10 = Master/Slave
11 = Profibus
12 = Ethernet
15 = Devicenet

The following tables display each version's reading performance.

ELECTRICAL FEATURES			
Supply Voltage	12 - 30 Vdc		
Power Consumption	15 W typical 20 W Max. (including startup current)		
Communication Interfaces	**Main (isolated)**	**Aux**	**Other**
	RS232 RS485 full-duplex RS485 half-duplex	RS232	Lonworks
Baud Rates	2400 to 115200		115200
Inputs **Ext. Trigger 1, 3 aux. digital inputs**	(optocoupled NPN or PNP)		
Outputs **3 software programmable digital outputs**	(optocoupled)		

OPTICAL FEATURES	
Light Receiver	Avalanche photodiode
Wavelength	630 to 680 nm
Safety Class	Class 2-EN 60825-1; Class II-CDRH
Laser Control	Security system to turn laser off in case of motor slow down
READING FEATURES	
Scan Rate	600-1200 scans/s
Max. Resolution	0.2 mm (8 mils)
Max. Read. Distance **Max. Read. Width** **Max. Depth of Field** **Aperture Angle**	(see reading diagram)
USER INTERFACE	
LCD Display	2 lines by 16 characters LCD
Keypad	3 keys
LED Indicators	Power ON (red color) Phase ON (yellow color) TX Data (green color)

SOFTWARE FEATURES	
Readable Codes	Interleaved 2/5 2/5 compressed Code 39 standard Codabar Code 128 EAN 128 Code 93 (standard & full ASCII) EAN/UPC
Code Selection	Up to 10 codes during one reading phase
Headers and Terminators	Up to 128-byte headers and 128-byte terminators
Operating Modes	On Line, Automatic, Test,
Config. Mode	Genius™ utility program
Parameter Storage	Non-volatile internal FLASH

ENVIRONMENTAL FEATURES		
Operating Temperature	0° to +40 °C (+32 to +104 °F)	
Storage Temperature	-20° to +70 °C (-4° to +158 °F)	
Humidity	90% non condensing	
Vibration Resistance	IEC 68-2-6 test FC 1.5 mm; 10 to 55 Hz 2 hours on each axis	
Shock Resistance	IEC 68-2-27 test EA 30 G; 11 ms 3 shocks on each axis	
Protection Class	IP64	
PHISYCAL FEATURES		
	Std Models	**Oscill. Mirror**
Dimensions mm (inch)	110x113x99 (4.33x4.45x3.9)	113x180x104.5 (4.45x7.08x4.11)
Weight	1.5 kg (3.3 lb)	2.0 kg (4.4 lb)

Accessories:

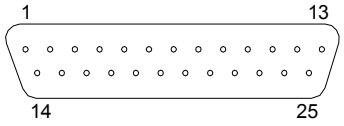
Name	Description	Part Number
GFC-60	90° mirror	93A201100
GFC-600	90° mirror close distance	93A201102
CAB-6001	Cable to C-BOX100 1 m	93A051190
CAB-6002	Cable to C-BOX100 2 m	93A051200
CAB-6005	Cable to C-BOX100 5 m	93A051210
CAB-6101	Cable master/slave 1 m	93A051220
CAB-6102	Cable master/slave 2 m	93A051230
CAB-6105	Cable master/slave 5 m	93A051240
CAB-6112	Cable master/slave no power 2 m	93A051224
CAB-6115	Cable master/slave no power 5 m	93A051225
CAB-6205	Cable to SC8000 5 m	93A051250
CAB-6210	Cable to SC8000 10 m	93A051260
INT-60	20 mA C.L. interface board	93A151021
PWR-120	Power unit 110/230 V AC - 24 V DC	93ACC1530
BTK-6000	Terminator kit (5 pcs)	93ACC1710
PG6002	Single unit power supply – US	93ACC1718
PG6001	Single unit power supply – UK	93ACC1719
PG6000	Single unit power supply – EU	93ACC1720
FBK-6000	Fast bracket kit (2 pcs)	93ACC1721
USX-60	Adjustable bracket	93ACC1729

Electrical Connections:

The DS6300 reader provides a 25-pin male D-sub connector for connection to power supply, Host interface (Main and Aux), and input/output signals.
Two 9-pin connectors provide access to the scanner's local Lonworks network used for both input and output connections to build a multi-sided or omni-station system.

The details of the connector pins are indicated in the following table:

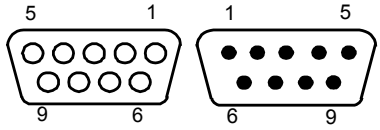
25-pin D-Sub Male Connector Pinout			
Pin	**Name**	**Function**	
1	Shield	Internally connected by capacitor to chassis	
20	RXAUX	Receive data of auxiliary RS232 (referred to GND)	
21	TXAUX	Transmit data of auxiliary RS232 (referred to GND)	
8	OUT 1+	Configurable digital output 1 – positive pin	
22	OUT 1-	Configurable digital output 1 – negative pin	
11	OUT 2+	Configurable digital output 2 – positive pin	
12	OUT 2-	Configurable digital output 2 – negative pin	
16	OUT 3A	Configurable digital output 3 – polarity insensitive	
17	OUT 3B	Configurable digital output 3 – polarity insensitive	
18	EXT_TRIG A	External trigger (polarity insensitive)	
19	EXT_TRIG B	External trigger (polarity insensitive)	
6	IN2A	Input signal 2 (polarity insensitive)	
10	IN2B	Input signal 2 (polarity insensitive)	
14	IN3A	Input signal 3 (polarity insensitive)	
15	IN4A	Input signal 4 (polarity insensitive)	
24	IN_REF	Common reference of IN3 and IN4 (polarity insensitive)	
9, 13	VS	Supply voltage – positive pin	
23, 25	GND	Supply voltage – negative pin	



25-pin male D-sub Connector

Pin	**RS232**	**RS485 Full-Duplex**	**RS485 Half-Duplex**
2	TX	TX485+	RTX485+
3	RX	RX485+	
4	RTS	TX485-	RTX485-
5	CTS	RX485-	
7	GND_ISO	GND_ISO	GND_ISO

9-pin Lonworks Connector Pinout			
Pin	**Name**	**Function**	
1	Shield	Cable shield	
9	VS	Supply voltage – positive pin	
2	GND	Supply voltage – negative pin	
6	VS_I/O	Supply voltage of I/O circuit	
3	Ref_I/O	Reference voltage of I/O circuit	
4	SYS_ENC_I/O	System signal	
5	SYS_I/O	System signal	
7	LON A	Lonworks line (polarity insensitive)	
8	LON B	Lonworks line (polarity insensitive)	



Local Lonworks Connectors

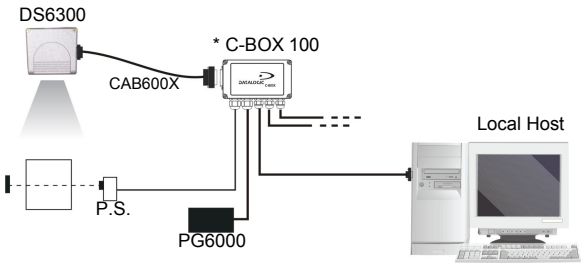
Network Termination:

When building a local Lonworks system the network must be properly terminated by positioning a BTK-6000 terminator on the DS6300 master reader (BTK-6000 female side) and on the last slave reader (BTK-6000 male side).

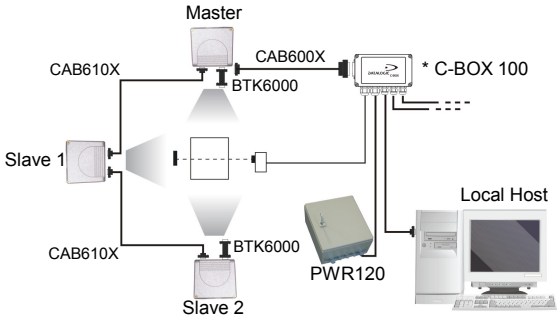
BTK-6000 Network Terminator

Connectivity:

Point-to-point layout

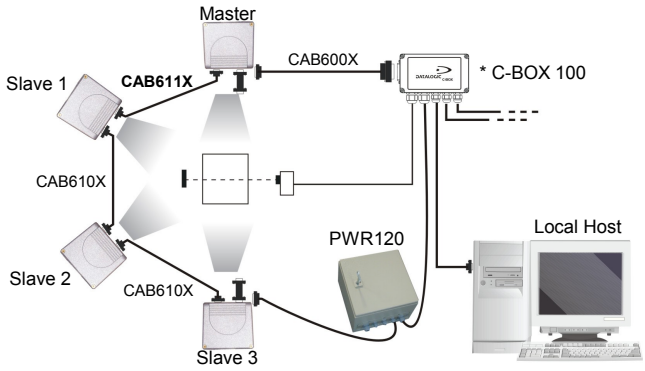


Local Lonworks Network (Single P.S.)



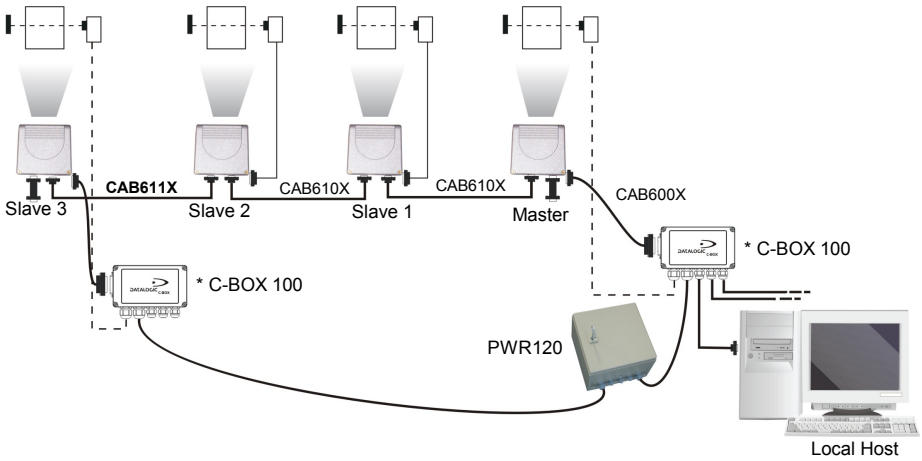
Single P.S. with 3 Readers

Local Lonworks Network (Single P.S.)



Single P.S. with more than 3 Readers

Local Lonworks Network (Multi P.S.)



* C-BOX 100 can support up to 2 DS6300 readers. Please contact Datalogic USS Technical Support, if your application requires a multi-slave network.

DS6300-100-012
Ethernet Models

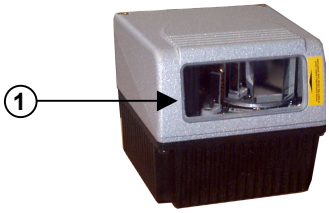


Figure A

1 Laser Beam Output Window

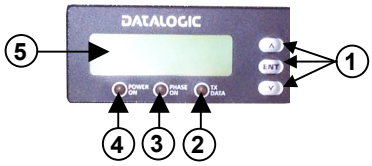


Figure B

1 Programming Keypad
2 TX Data LED (Green)
3 Phase On LED (Yellow)
4 Power On LED (Red)
5 LCD Display

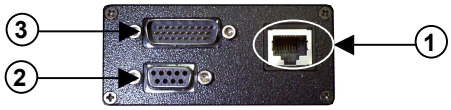


Figure C

1 RJ45 Modular Connector for Ethernet Interface
2 Lonworks 9-pin Female Connector
3 Main/Aux. Interface 26 D-Sub Male Connector

Available Models:

DS6300 - 10X - 0YY

Optical Model
0 = Standard
5 = Oscillating Mirror

Decoder Model
10 = Master/Slave
11 = Profibus
12 = Ethernet
15 = Devicenet

The following tables display each version's reading performance.

ELECTRICAL FEATURES			
Supply Voltage	12 - 30 Vdc		
Power Consumption	15 W typical 20 W Max. (including startup current)		
Communication Interfaces	**Main (isolated)**	**Aux**	**Other**
	RS232 RS485 full-duplex RS485 half-duplex	RS232	Lonworks Ethernet
Baud Rates	2400 to 115200		115200
Inputs **Ext. Trigger 1, 3 aux. digital inputs**	(optocoupled NPN or PNP)		
Outputs **3 software programmable digital outputs**	(optocoupled)		

OPTICAL FEATURES	
Light Receiver	Avalanche photodiode
Wavelength	630 to 680 nm
Safety Class	Class 2-EN 60825-1; Class II-CDRH
Laser Control	Security system to turn laser off in case of motor slow down
READING FEATURES	
Scan Rate	600-1200 scans/s
Max. Resolution	0.2 mm (8 mils)
Max. Read. Distance **Max. Read. Width** **Max. Depth of Field** **Aperture Angle**	(see reading diagram)
USER INTERFACE	
LCD Display	2 lines by 16 characters LCD
Keypad	3 keys
LED Indicators	Power ON (red color) Phase ON (yellow color) TX Data (green color)

SOFTWARE FEATURES	
Readable Codes	Interleaved 2/5 2/5 compressed Code 39 standard Codabar Code 128 EAN 128 Code 93 (standard & full ASCII) EAN/UPC
Code Selection	Up to 10 codes during one reading phase
Headers and Terminators	Up to 128-byte headers and 128-byte terminators
Operating Modes	On Line, Automatic, Test,
Config. Mode	Genius™ utility program
Parameter Storage	Non-volatile internal FLASH

ENVIRONMENTAL FEATURES		
Operating Temperature	0° to +40 °C (+32 to +104 °F)	
Storage Temperature	-20° to +70 °C (-4° to +158 °F)	
Humidity	90% non condensing	
Vibration Resistance	IEC 68-2-6 test FC 1.5 mm; 10 to 55 Hz 2 hours on each axis	
Shock Resistance	IEC 68-2-27 test EA 30 G; 11 ms 3 shocks on each axis	
PHISYCAL FEATURES		
	Std Models	**Oscill. Mirror**
Dimensions mm (inch)	110x113x99 (4.33x4.45x3.9)	113x180x104.5 (4.45x7.08x4.11)
Weight	1.5 kg (3.3 lb)	2.0 kg (4.4 lb)

Accessories:

Name	Description	Part Number
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GFC-600	90° mirror close distance	93A201102
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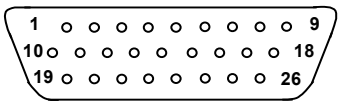
CAB-6012	Cable to C-BOX100 2 m	93A051222
CAB-6015	Cable to C-BOX100 5 m	93A051223
CAB-6205	Cable to SC8000 5 m	93A051250
CAB-6210	Cable to SC8000 10 m	93A051260
INT-60	20 mA C.L. interface board	93A151021
PWR-120	Power unit 110/230 V AC - 24 V DC	93ACC1530
BTK-6000	Terminator kit (5 pcs)	93ACC1710
PG6002	Single unit power supply – US	93ACC1718
PG6001	Single unit power supply – UK	93ACC1719
PG6000	Single unit power supply – EU	93ACC1720
FBK-6000	Fast bracket kit (2 pcs)	93ACC1721
USX-60	Adjustable bracket	93ACC1729

Electrical Connections:

The DS6300 Ethernet reader provides a 26-pin male D-sub connector for connection to power supply and input/output signals.
An Ethernet connector is used for connection to the remote Host (for ex. Remote PC connected via Internet), while a local Lonworks 9-pin male connector connects the Ethernet master to the first slave reader of the system.

The details of the connector pins are indicated in the following table:

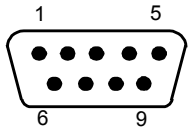
26-pin D-Sub Male Connector Pinout			
Pin	**Name**	**Function**	
1	Shield	Internally connected by capacitor to chassis	
20	RXAUX	Receive data of auxiliary RS232 (referred to GND)	
21	TXAUX	Transmit data of auxiliary RS232 (referred to GND)	
8	OUT 1+	Configurable digital output 1 – positive pin	
22	OUT 1-	Configurable digital output 1 – negative pin	
11	OUT 2+	Configurable digital output 2 – positive pin	
12	OUT 2-	Configurable digital output 2 – negative pin	
16	OUT 3A	Configurable digital output 3 – polarity insensitive	
17	OUT 3B	Configurable digital output 3 – polarity insensitive	
18	EXT_TRIG A	External trigger (polarity insensitive)	
19	EXT_TRIG B	External trigger (polarity insensitive)	
6	IN2A	Input signal 2 (polarity insensitive)	
10	IN2B	Input signal 2 (polarity insensitive)	
14	IN3A	Input signal 3 (polarity insensitive)	
15	IN4A	Input signal 4 (polarity insensitive)	
24	IN_REF	Common reference of IN3 and IN4 (polarity insensitive)	
9, 13	VS	Supply voltage – positive pin	
23, 25, 26	GND	Supply voltage – negative pin	



26-pin male D-sub Connector

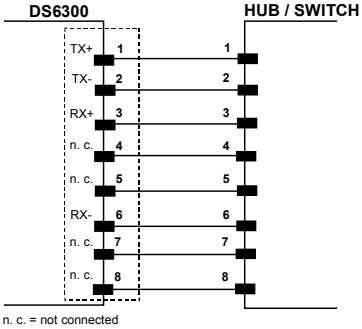
Pin	RS232	RS485 Full-Duplex	RS485 Half-Duplex
2	TX	TX485+	RTX485+
3	RX	RX485+	
4	RTS	TX485-	RTX485-
5	CTS	RX485-	
7	GND_ISO	GND_ISO	GND_ISO

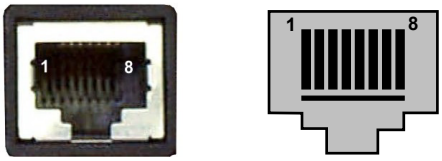
9-pin Lonworks Connector Pinout			
Pin	**Name**	**Function**	
1	Shield	Cable shield	
9	VS	Supply voltage – positive pin	
2	GND	Supply voltage – negative pin	
6	VS_I/O	Supply voltage of I/O circuit	
3	Ref_I/O	Reference voltage of I/O circuit	
4	SYS_ENC_I/O	System signal	
5	SYS_I/O	System signal	
7	LON A	Lonworks line (polarity insensitive)	
8	LON B	Lonworks line (polarity insensitive)	



Male Local Lonworks Connectors

RJ45 Female Modular Connector

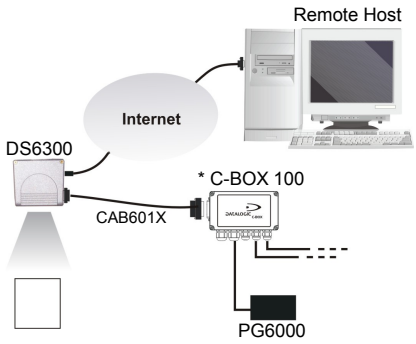




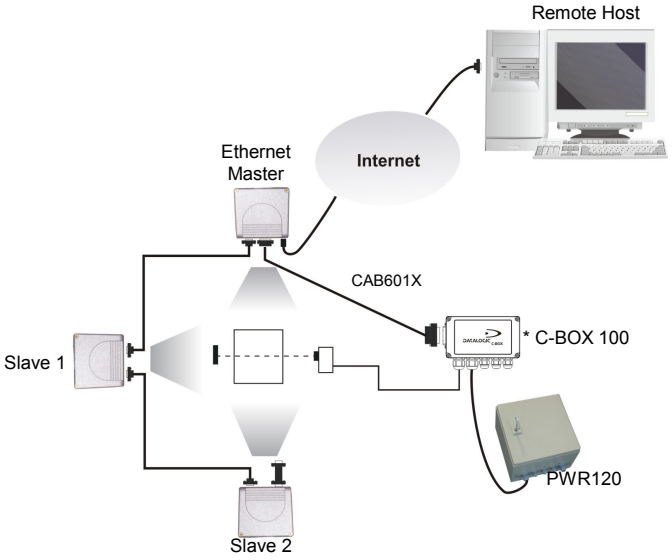
RJ45 Female Modular Connector

Connectivity:

Point-to-point layout



Ethernet Network



* C-BOX 100 can support up to 2 DS6300 readers. Please contact Datalogic USS Technical Support, if your application requires a multi-slave network.

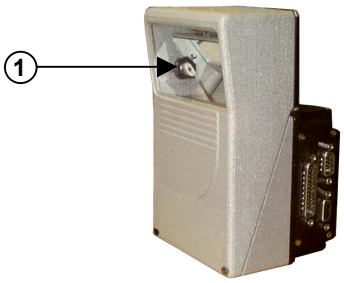
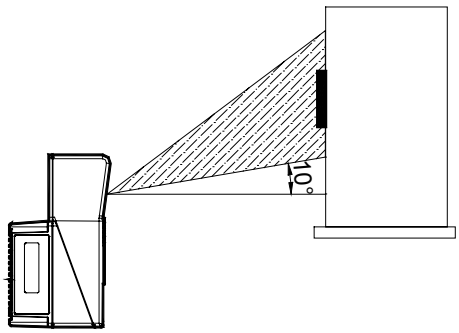


Figure A
1 Laser Beam Output Window

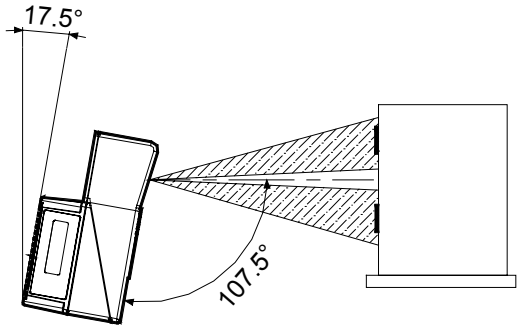
Oscillating mirror models are used when coverage of a large reading area is required, mainly in picket fence applications.
The DS6300 scanner mounts a dedicated optic head with integrated oscillating mirror driven by a linear motor. The speed, precision, repeatability, and reliability of this driving technology assure high level performance.
The new oscillating mirror is completely software controlled and software programmable. The Genius™ software tool allows adjusting the linear motor speed (oscillating frequency) and the upper and lower limits of the oscillation by defining the top and bottom line limit angles.

When the oscillating mirror is programmed to read barcode labels at very small angles, position the reader to **assure at least 10°** for the Skew angle (see DS6300 Reference Manual). This angle refers to the most inclined or external laser line, so that all other laser lines assure more than 10° Skew. This avoids the direct reflection of the laser light emitted by the reader.



Oscillating Mirror Skew Angle

Otherwise, the scanner can be mounted at an angle of inclination of 17.5° in order to attain symmetrical deflection ranges.



Oscillating Mirror Reading Position

In the above case, the zone where the scan line is perpendicular to the reflecting surface corresponds to a neutral zone at the center of the reading field.

The mirror can be deflected up to 40°. Oscillation with respect to the output window median axis is asymmetrical (see figure below).

Oscillating Mirror Maximum Aperture and Asymmetry

By configuring the oscillating speed up to the maximum value of 19 Hz, raster emulation can be performed for reading fast moving objects.

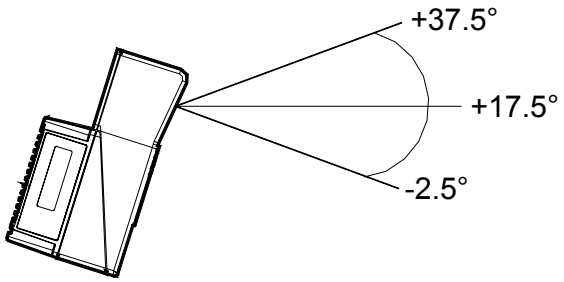
Hz	Max. Aperture
0-5	40°
6-10	30°
11-15	20°
6-19	10°

NOTE

By limiting the raster width to the minimum necessary, the number of scans on the reading surface is increased.

Oscillating angles are selected in software where the minimum and maximum angles correspond to –2.5° and +37.5°.

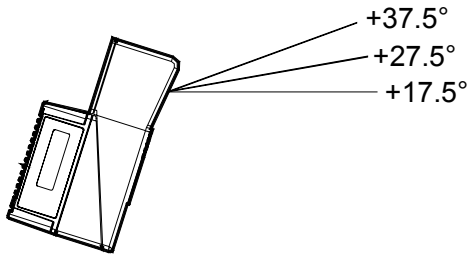
The scanner can be tilted in order for the 17.5° software setting to correspond with the 0° horizontal plane.



Oscillating Mirror Extreme Angle Positions

These models provide higher scanning speed (1200 scans/sec) compared to standard models and the reading performance is not adversely effected by the oscillating mirror.

The example represents the selection of an angle of +10° for the bottom line and an angle of +20° for the top line (see figure below).



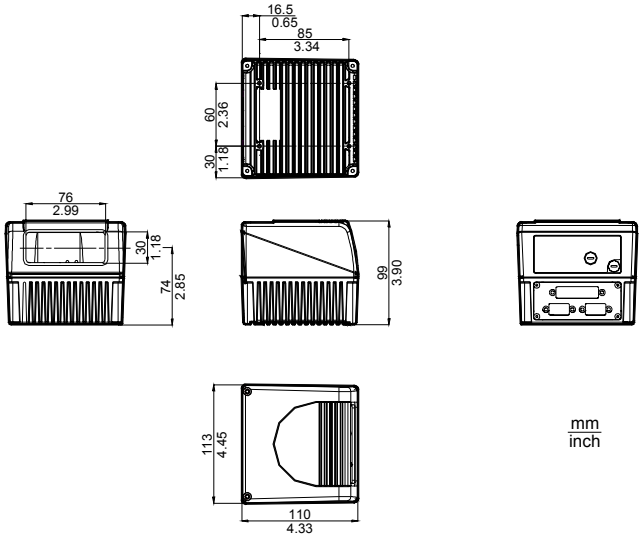
Oscillating Mode

Mechanical Installation:

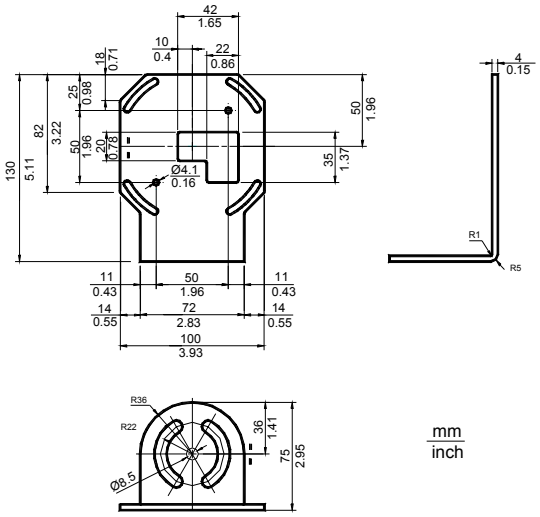
The DS6300 reader can be positioned and installed in the best way possible as a result of the Step-A-Head™ feature. Thanks to the separation between Head and Base, you can modify the orientation of the decoder base, and therefore display-keypad and connector panels, while keeping the optic head in the correct reading position. The reading head and the decoder base can be rotated independently from each other allowing the installation even in the most critical locations.

Step-A-Head™ Feature

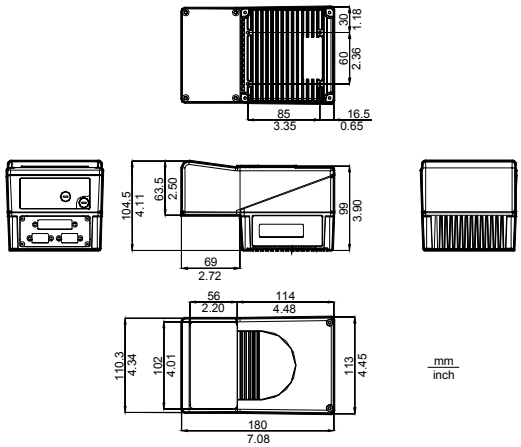
The following diagrams give the overall dimensions of the reader standard model, oscillating mirror model and mounting bracket. They may be used for their installation:



DS6300 Overall Dimensions



DS6300 Mounting Bracket Overall Dimensions



DS6300 Oscillating Mirror Model Overall Dimensions

Focus Adjustment:

The DS6300 provides a manual adjustment of the optics to optimize the reading performance by choosing the best focus between two extreme positions. The focus adjustment is continuous and not by step; thus, allowing an optimum adjustment around the selected position. The relative focus positions range from 0 to 100.
The adjustment can be simply made through an external screw placed on the back of the optic HEAD and protected by a cap. The screw may be rotated either clockwise or counterclockwise in order to move the scanner internal lenses. In particular, a clockwise rotation causes a farther focus from the scanner, while a counterclockwise rotation causes a nearer focus to the scanner.
An internal sensor tracks the exact laser beam focusing position allowing it to be shown on the reader display or through the Genius™ software program.

WARNING

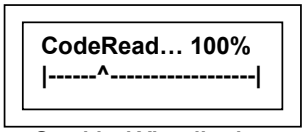
Do not stare at the laser beam output window during this operation to avoid hazardous visible laser light.

Refer to the following instructions when adjusting the focus:

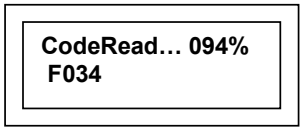
1) Remove the regulation screw protecting cap (see following Figure) positioned on the back of the optic Head;
2) Press and hold both the ▲ (up arrow) or ▼ (down arrow) key for about 2 seconds to enter the Main menu;
3) Use the ▲ (up arrow) or ▼ (down arrow) key to select “Test Mode” item, then press the ENT (enter) key to confirm. The reader enters Test Mode;
4) Press the ENT (enter) key to toggle between the graphical (default) and numerical visualization of the focus position;

   Display Visualization
   The first line of the display shows the read code and Good Read percentage. Possible suspending commas at the end of the code mean that the code is too long to be displayed.
   The second line of the display indicates the value of the focus position according to the table below. The indications “Too Near” or “Too Far” are represented for values outside the focus range.

	Graphical Visualization	Numerical Visualization
A	|---^----------| → where **.** indicates the focus position	**F**xxx → where xxx ranges from 000 to 100
B	**N**----------| → where **N** indicates that the focus position is “Too Near”	TooNear
C	|----------**F** → where **F** indicates that the focus position is “Too Far”	**F**xxx* → where xxx is greater than 100



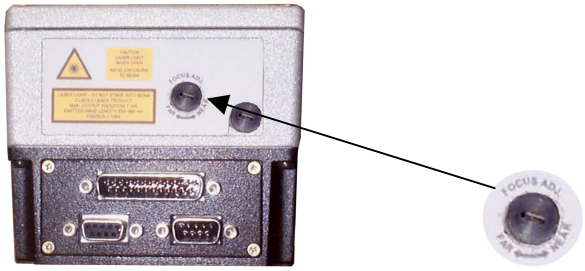
Graphical Visualization



Normal Visualization

5) Rotate the focus adjustment screw to reach the desired focus position. The display is refreshed with the new values;
6) Press the ▲ (up arrow) key to exit the Test Mode;

7) Use the ▲ (up arrow) and ▼ (down arrow) key to select the “Exit” item, then press the ENT (enter) key to confirm. The scanner exits the Main Menu and returns to its current operating mode.



Focus Adjustment Screw

NOTE

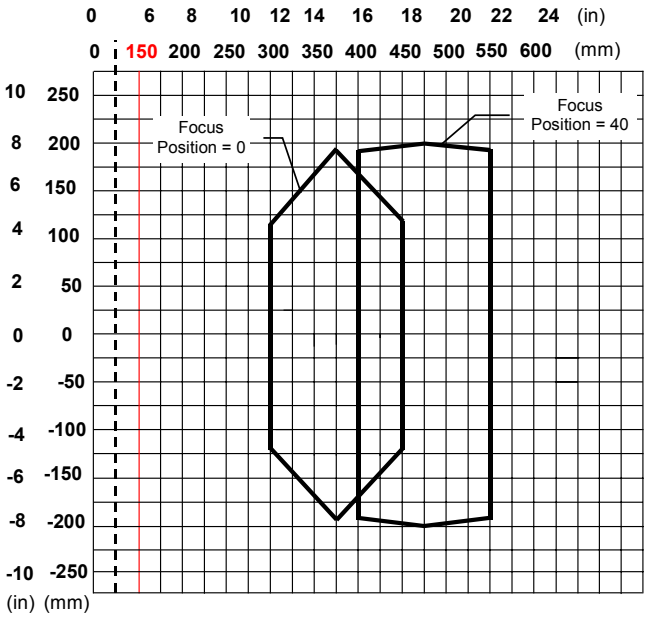
The reader display shows the focus position only when the laser beam is activated.

It is possible to visualize the focus position and the reading percentage on the terminal tool provided by the Genius™ configuration program (see Genius™ Help On-Line for details).

Reading Diagrams:

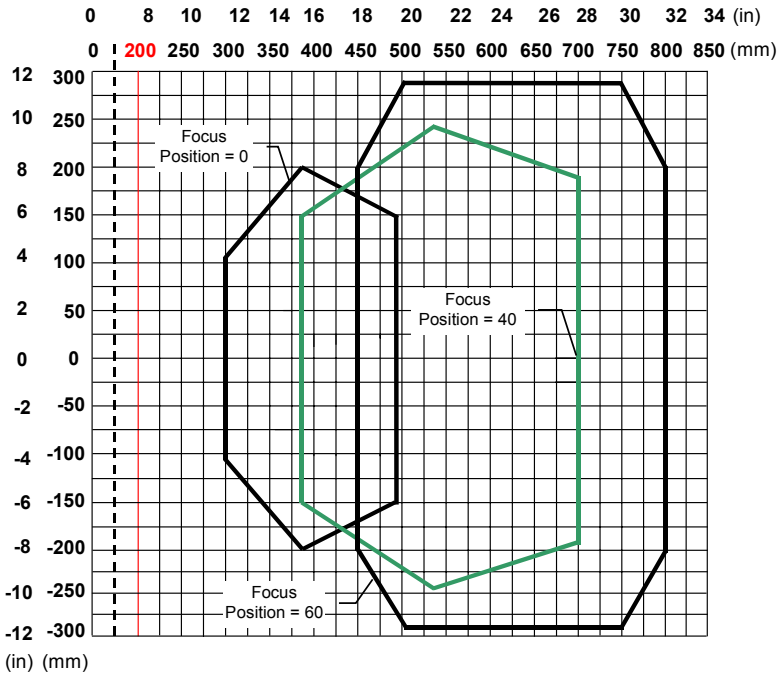
In the following reading diagrams (0,0) is the center of the laser beam output window.

DS6300-100-0XX – Resolution: 0.20 mm/8 mils

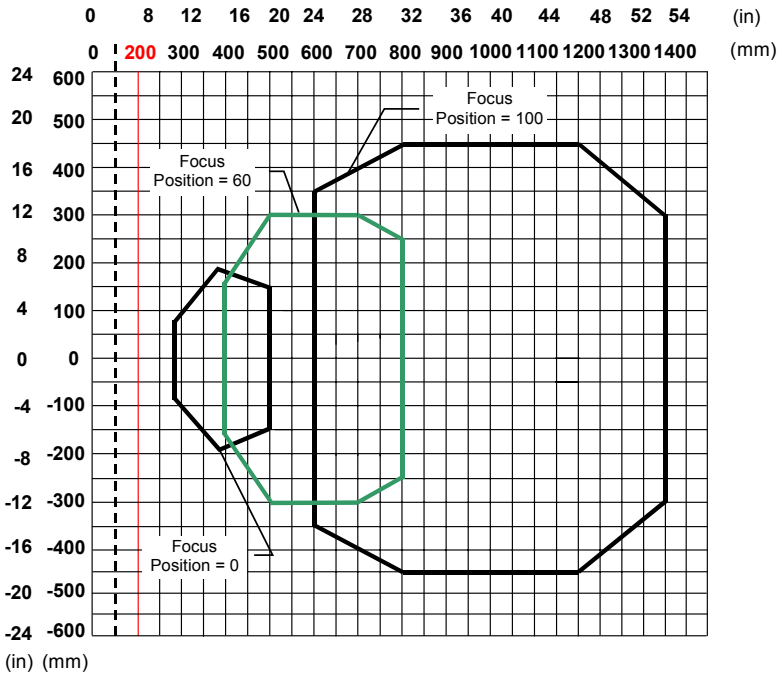


Reading Diagrams:

DS6300-100-0XX – Resolution: 0.30 mm/12 mils

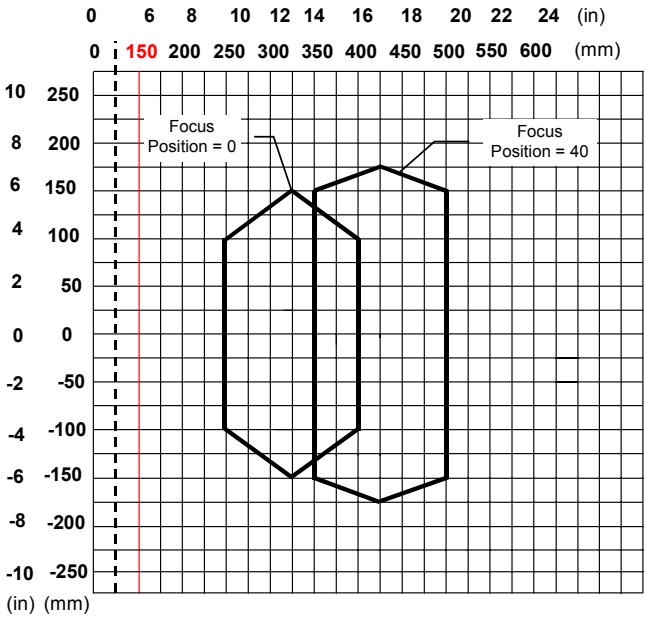


DS6300-100-0XX – Resolution: 0.50 mm/20 mils

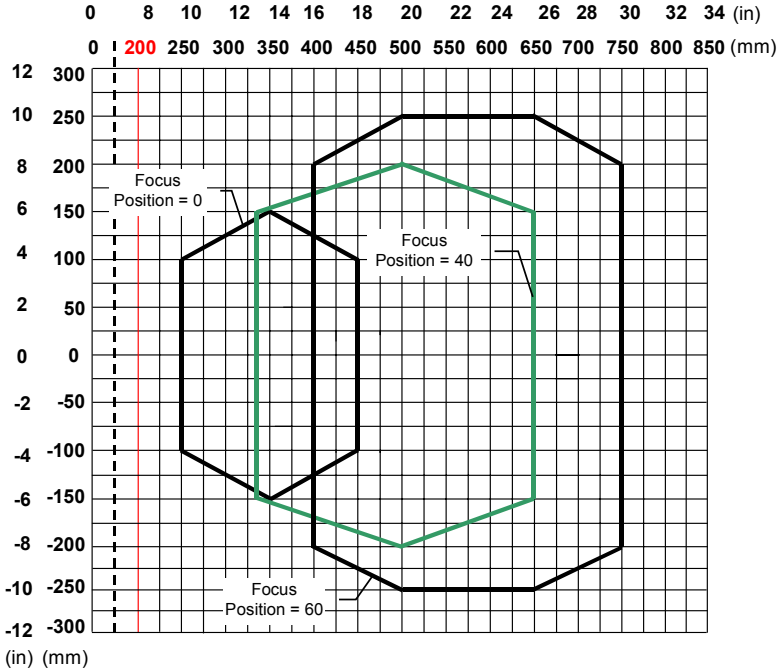


Reading Diagrams:

DS6300-105-0XX (Oscillating Mirror) – Resolution: 0.20 mm/8 mils

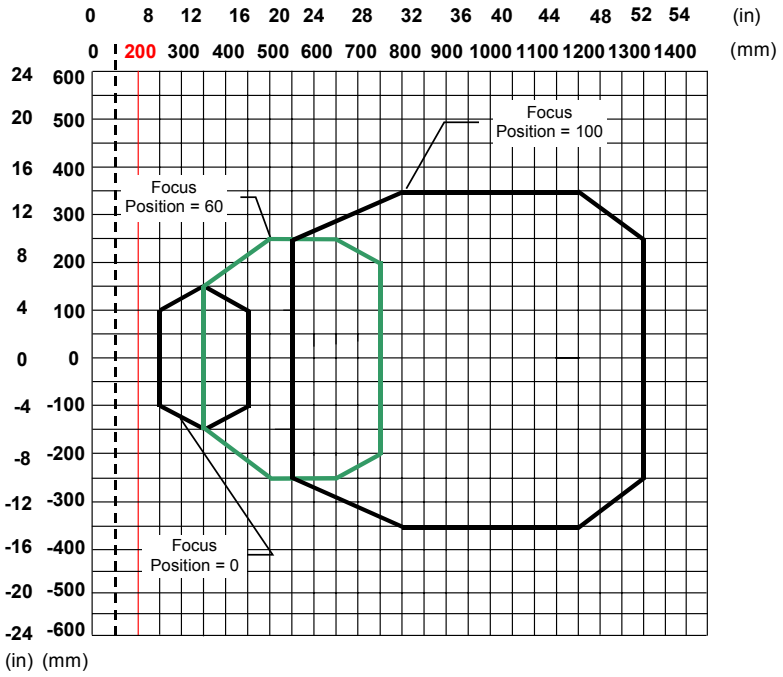


DS6300-105-0XX (Oscillating Mirror) – Resolution: 0.30 mm/12 mils



Reading Diagrams:

DS6300-105-0XX (Oscillating Mirror) – Resolution: 0.50 mm/20 mils



Safety Precautions

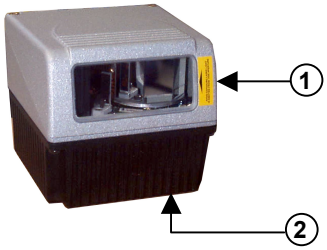


Figure A

(1) Laser Safety Label

(2) Identification Label

Figure B

(1) Warning and Device Class Label

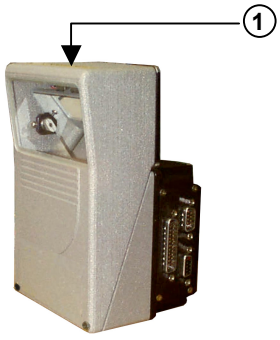


Figure C

(1) Laser Safety Label

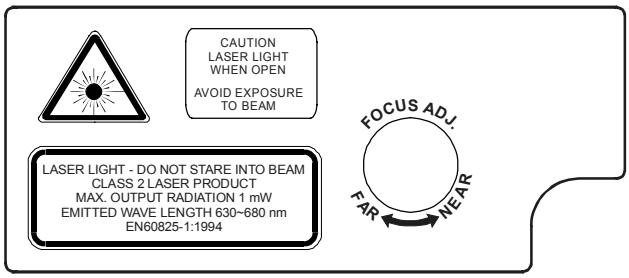
The scanner is classified as a Class 2 laser product according to EN 60825-1 regulations and as a Class II laser product according to CDRH regulations.

Disconnect the power supply when opening the device during maintenance or installation to avoid exposure to hazardous laser light.

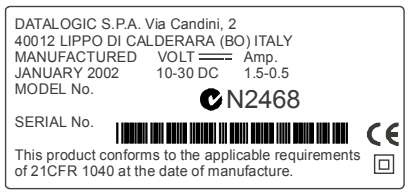
There is a safety device which allows the laser to be switched on only if the motor is rotating above the threshold for its correct scanning speed.

The laser beam can be switched off through a software command (see also the Genius™ Help On-Line).

Laser Safety Label for Oscillating Mirror and Standard Models

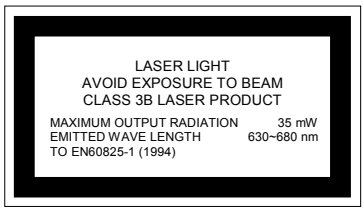


Warning and Device Class Label



Device Identification Label

The laser diode used in this device is classified as a Class 3B laser product according to EN 60825-1 regulations and as a Class IIIb laser product according to CDRH regulations. As it is not possible to apply a classification label on the laser diode used in this device, the following label is reproduced below:



Laser Diode Class Label

Any violation of the optic parts in particular can cause radiation up to the maximum level of the laser diode (35 mW at 630 ~ 680 nm).

Power Supply

- **This product is intended to be installed by Qualified Personnel only.**

- **All DS6300 Models:**

  This device is intended to be supplied by a UL Listed Power Unit marked “Class 2” or LPS power source which supplies power directly to the scanner via the 25/26-pin connector.

DATALOGIC S.p.A.,
Via Candini, 2
40012 - Lippo di Calderara
Bologna - Italy

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declares that the
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declare que el

DS6300-XXX-XXX, Laser Scanner **and all its models**
e tutti i suoi modelli
et tous ses modèles
und seine modelle
y todos sus modelos

sono conformi alle Direttive del Consiglio Europeo sottoelencate:
are in conformity with the requirements of the European Council Directives listed below:
sont conformes aux spécifications des Directives de l'Union Européenne ci-dessous:
der nachstehend angeführten Direktiven des Europäischen Rats:
cumple con los requisitos de las Directivas del Consejo Europeo, según la lista siguiente:

89/336/EEC EMC Directive e and et und y **92/31/EEC, 93/68/EEC** emendamenti successivi / further amendments / ses successifs amendements / späteren Abänderungen / succesivas enmiendas

73/23/ECC Low Voltage Directive

Basate sulle legislazioni degli Stati membri in relazione alla compatibilità elettromagnetica ed alla sicurezza dei prodotti.
On the approximation of the laws of Member States relating to electromagnetic compatibility and product safety.
Basée sur la législation des Etates membres relative à la compatibilité électromagnétique et à la sécurité des produits.
Über die Annäherung der Gesetze der Mitgliedsstaaten in bezug auf elektromagnetische Verträglichkeit und Produktsicherheit entsprechen.
Basado en la aproximación de las leyes de los Países Miembros respecto a la compatibilidad electromagnética y las Medidas de seguridad relativas al producto.

Questa dichiarazione è basata sulla conformità dei prodotti alle norme seguenti:
This declaration is based upon compliance of the products to the following standards:
Cette déclaration repose sur la conformité des produits aux normes suivantes:
Diese Erklärung basiert darauf, daß das Produkt den folgenden Normen entspricht:
Esta declaración se basa en el cumplimiento de los productos con las siguientes normas:

EN 55022, August 1994: LIMITS AND METHODS OF MEASUREMENTS OF RADIO DISTURBANCE CHARACTERISTICS OF INFORMATION TECHNOLOGY EQUIPMENT (ITE)

EN 61000-6-2, April 1999: ELECTROMAGNETIC COMPATIBILITY (EMC).
PART 6-2: GENERIC STANDARDS - IMMUNITY FOR INDUSTRIAL ENVIRONMENTS

EN 60950, October 1996: SAFETY OF INFORMATION TECHNOLOGY EQUIPMENT, INCLUDING ELECTRICAL BUSINESS EQUIPMENT

EN 60825, March 1993: RADIATION SAFETY OF LASER PRODUCTS, EQUIPMENT CLASSIFICATION, REQUIREMENTS AND USER'S GUIDE

Lippo di Calderara, 16/04/2002

Ruggero Cacioppo
Quality Assurance Supervisor