

DS2200 Laser Barcode Reader Quick Reference Guide

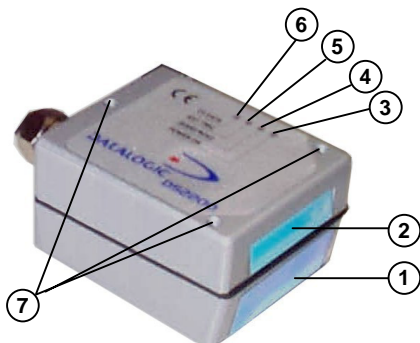


Figure A

- | | |
|------------------------------|--|
| ① Barcode Image Input Window | ⑤ Ext Trig LED |
| ② Laser Beam Output Window | ⑥ TX Data LED |
| ③ Power On LED | ⑦ Mounting Holes |
| ④ Good Read LED | ⑧ Laser Warning and Device Class Label |

For further details on product installation, see the complete Installation Manual. DS2200 can be configured through the WinHost Windows-based software program available on the installation CD-ROM. For configuration it is necessary to create a cable connecting the scanner to the PC as indicated in the "How To Build A Simple Interface Test Cable" section of this guide.

POWER SUPPLY

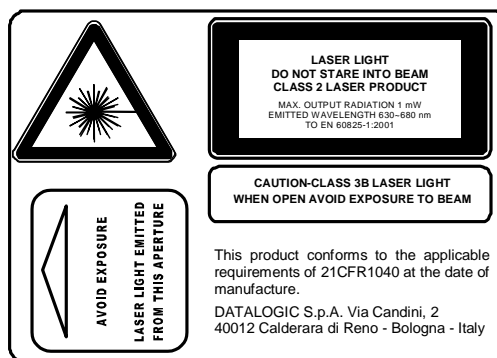
- This product is intended to be installed by Qualified Personnel only.
- **DS2200 All Models:**
This accessory device is intended to be supplied by a UL Listed Power Unit with «Class 2» or LPS power source which supplies power directly to the scanner via the 25-pin connector.

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.

For installation, use and maintenance it is not necessary to open the device.

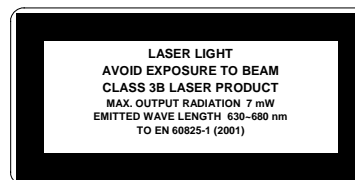
There is a safety device which allows the laser to be switched on only if the motor is rotating above the threshold for its correct scanning speed.

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



Warning and device class labels

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.

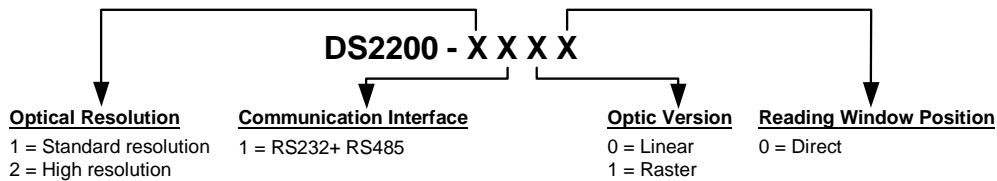


Laser diode class label

Any violation of the optic parts in particular can cause radiation up to the maximum level of the laser diode (7 mW at 630 to 680 nm).



Available Models:



The following tables display each version's reading performance.

Version	Reading Distance	Max Code Resolution mm (mils)	Speed scans/s
1XXX	50 mm (2.0 in) - 220 mm (8.7 in) on 0.60 mm (24 mils) codes	0.15 (6)	500
2XXX	40 mm (1.6 in) - 125 mm (4.9 in) on 0.20 mm (8 mils) codes	0.07 (3)	500


ELECTRICAL FEATURES		SOFTWARE FEATURES	
Power Supply	5 Vdc ± 5%	Readable Codes	EAN/UPC (including Add-on 2 and Add-on 5) Code 39 2/5 Interleaved Code 128 EAN 128 Code 93 Codabar Pharmacode
Power Consumption	2 W maximum		
Main Serial Interface	RS485 Half-Duplex		
Auxiliary Interface	RS232		
Baudrates	150 to 115200		
Inputs			
External Trigger	(optocoupled NPN or PNP)		
Outputs			
OUT1, OUT2	User-defined		
V_{CE} max.	50 Vdc		
Collector Current	40 mA continuous max.	Operating Modes	On-Line, Automatic, Serial-On-Line, Test
V_{CE} Saturation	0.3 V at 10 mA max.	Configuration Modes	Through menus using WinHost utility Host Mode (commands from one of the serial ports)
Power Dissipation max.	200 mW at 40 °C (Ambient temp.)	Decoding Safety	Can enable multiple good reads of the same code
OPTICAL FEATURES		Code Selection	Up to six different codes during one reading phase
Light Source	Semiconductor laser diode	Parameter Storage	Non-volatile internal EEPROM
Wavelength	630 to 680 nm	USER INTERFACE	
Safety Class	Class 2 - EN 60825-1; Class II - CDRH	LED Indicators	Power ON, Good Read, External Trigger, TX Data
ENVIRONMENTAL FEATURES		PHYSICAL FEATURES	
Operating Temperature	0° to +40 °C (+32° to +104 °F)	Dimensions	50x40x28 mm (1.97x1.57x1.1 in)
Storage Temperature	-20° to +70 °C (-4° to +158 °F)	Weight	150 g. (5.29 oz)
Humidity max	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 30G; 11 ms; 3 shocks on each axis		
Protection Class	IP65		

Accessories:

Name	Description	Part Number
DC5-2200	DC converter 4-30 Vdc to 5 Vdc	93ACC1040
GFC-2200	90° Reading Device	93A201030

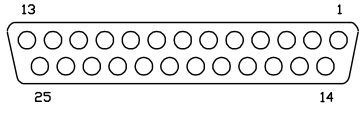
Electrical Connections:

DS2200 is equipped with a cable terminated by a 25-pin female D-sub connector for connection with the power supply and input/output signals.

 CAUTION	<p><i>Do not connect GND and SGND to different (external) ground references. GND and SGND are internally connected through filtering circuitry which can be permanently damaged if subjected to voltage drops over 0.8 Vdc.</i></p>
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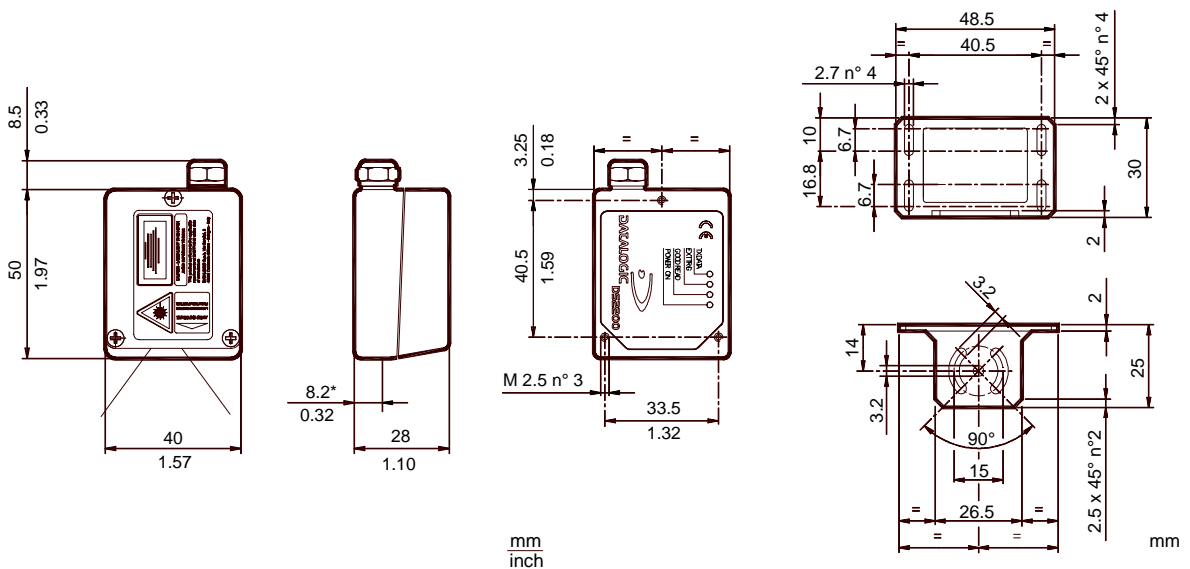
The details of the connector pins are indicated in the following table:

25-pin D-sub female connector pinout		
Pin	Name	Function
9, 13	VS	Power supply input voltage +
25	GND	Power supply input voltage -
1	CHASSIS	Chassis ground
19	EXT TRIG-	External Trigger -
10, 12, 22	I/O REF	I/O Reference
8	OUT1+	Output 1+
11	OUT2+	Output 2+
2	TXAUX	TX RS232 Aux. Interface
3	RXAUX	RX RS232 Aux. Interface
4	RTX485-	RTX- RS485 Main Interface
5	RTX485+	RTX+ RS485 Main Interface
7	SGND	Signal Ground
16	NGND	Internal Use – for Service only
17	FPE	Internal Use – for Service only
6, 14, 15, 18, 20, 21, 23, 24	NC	No Connect



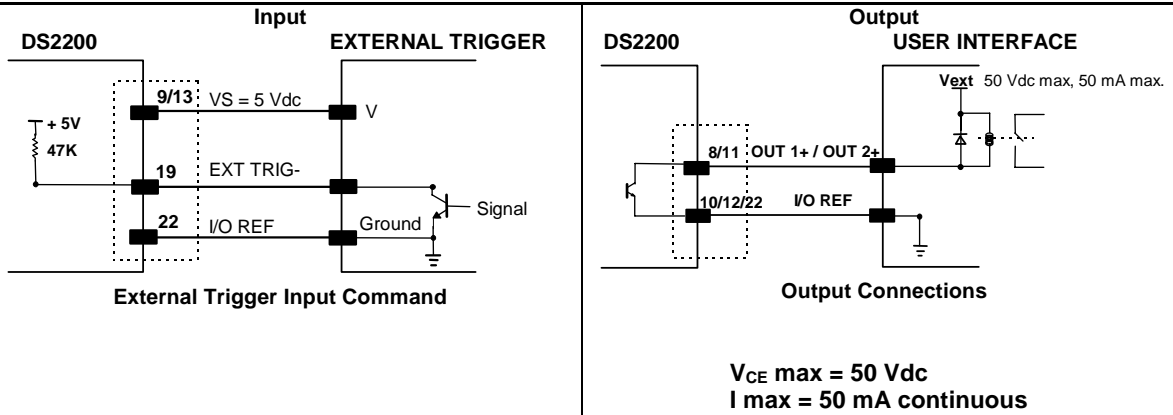
25-pin female connector

Mechanical Installation:



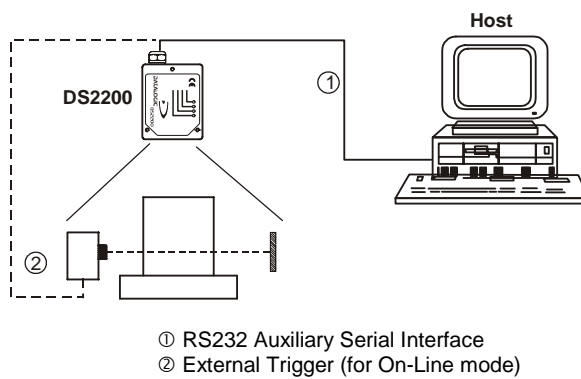
* The quote refers to the scan line

Input/Output Connections:

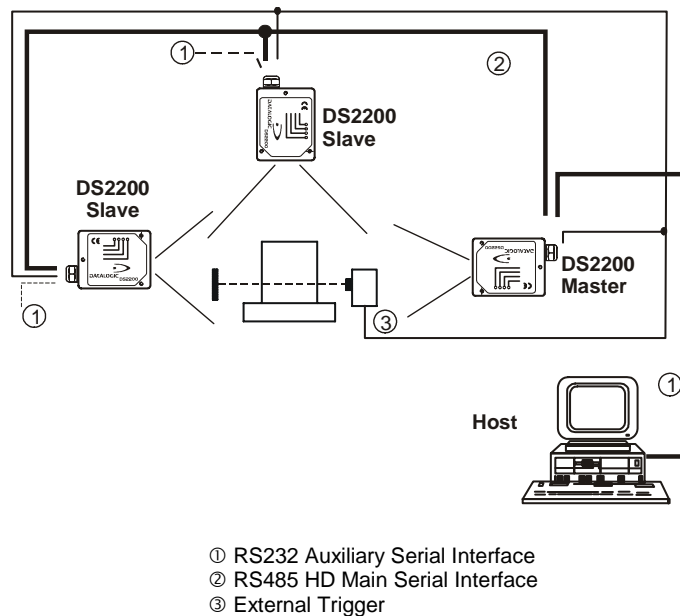


Connectivity:

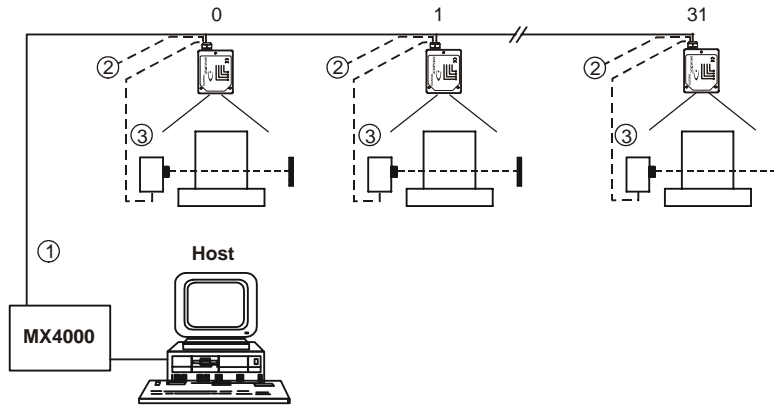
RS232 Point-to-point layout



RS485 Master/Slave layout



Multiplexer layout



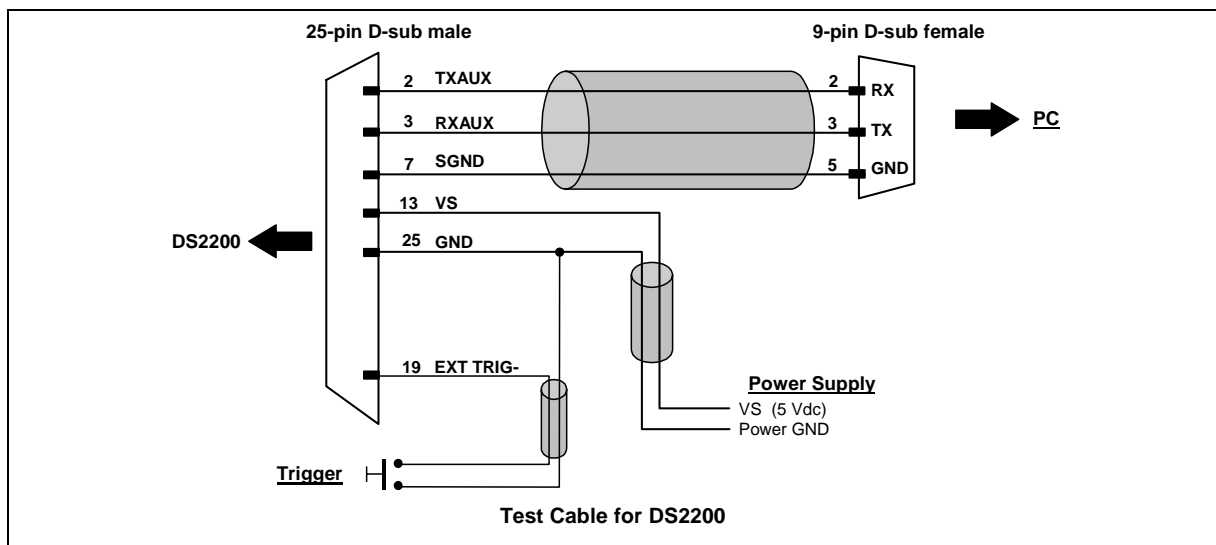
- ① RS485 HD Main Interface
- ② RS232 Auxiliary Interface (Local Echo)
- ③ External Trigger (for On-Line mode)

User Interface:

RS232 PC-side connections			
<p>9-pin male connector</p>		<p>25-pin male connector</p>	
Pin	Name	Pin	Name
2	RX	3	RX
3	TX	2	TX
5	GND	7	GND
7	RTS	4	RTS
8	CTS	5	CTS

How To Build A Simple Interface Test Cable:

The following wiring diagram shows a simple test cable including power, external (push-button) trigger and PC RS232 COM port connections.

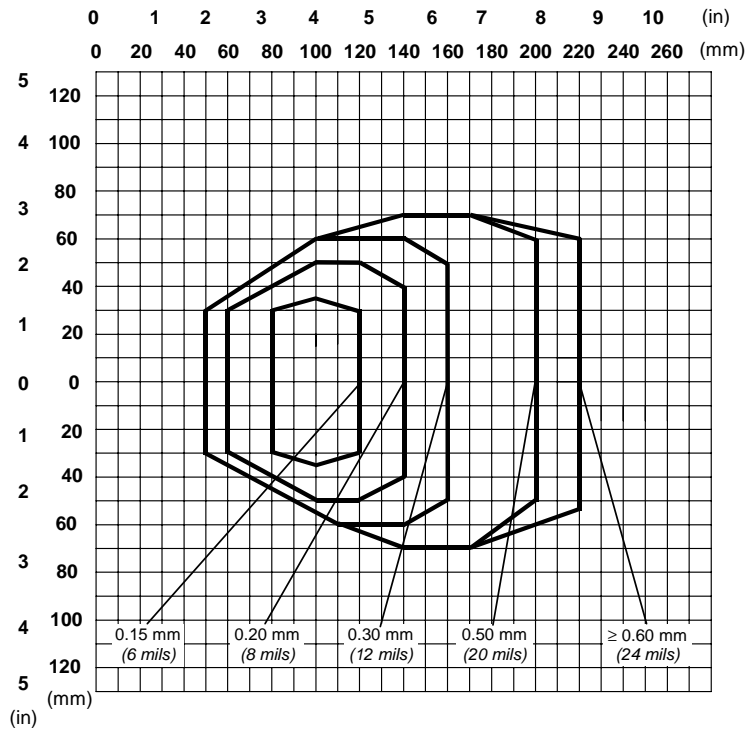


Reading Diagrams:

DS2200-1XXX (Standard Resolution)

CONDITIONS

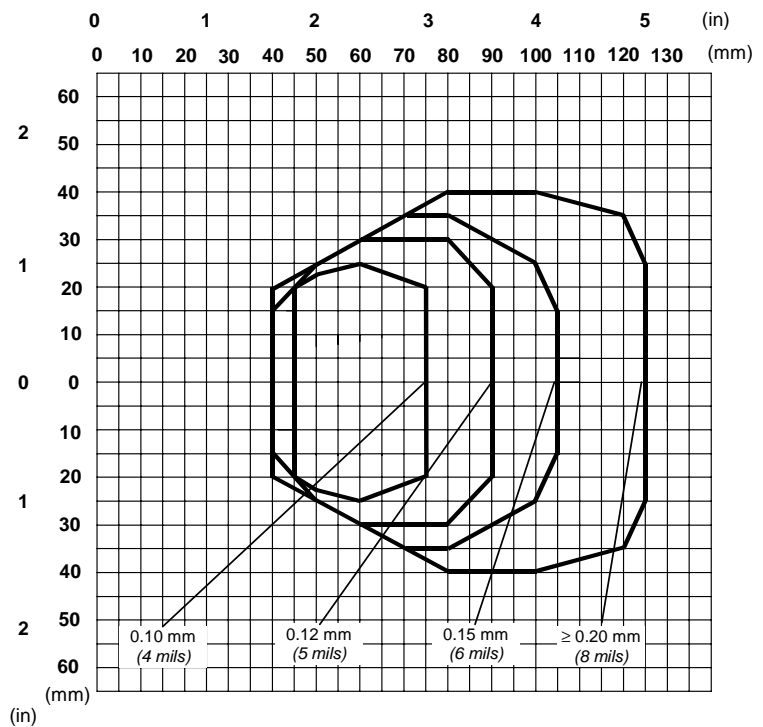
Code = Interleaved 2/5 or Code 39
 PCS = 0.90
 Pitch angle = 0°
 Skew angle = 15°
 Tilt angle = 0°



DS2200-2XXX (High Resolution)

CONDITIONS

Code = Interleaved 2/5 or Code 39
 PCS = 0.90
 Pitch angle = 0°
 Skew angle = 15°
 Tilt angle = 0°





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DS2200-XXXX Laser Scanner e tutti i suoi modelli
and all its models
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 **92/31/EEC, 93/68/EEC** emendamenti successivi
and further amendments
et ses successifs amendements
und späteren Abänderungen
y sucesivas enmiendas

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 Etats 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

Lippo di Calderara, 21/03/2002

Ruggero Cacioppo
Ruggero Cacioppo
Quality Assurance Supervisor