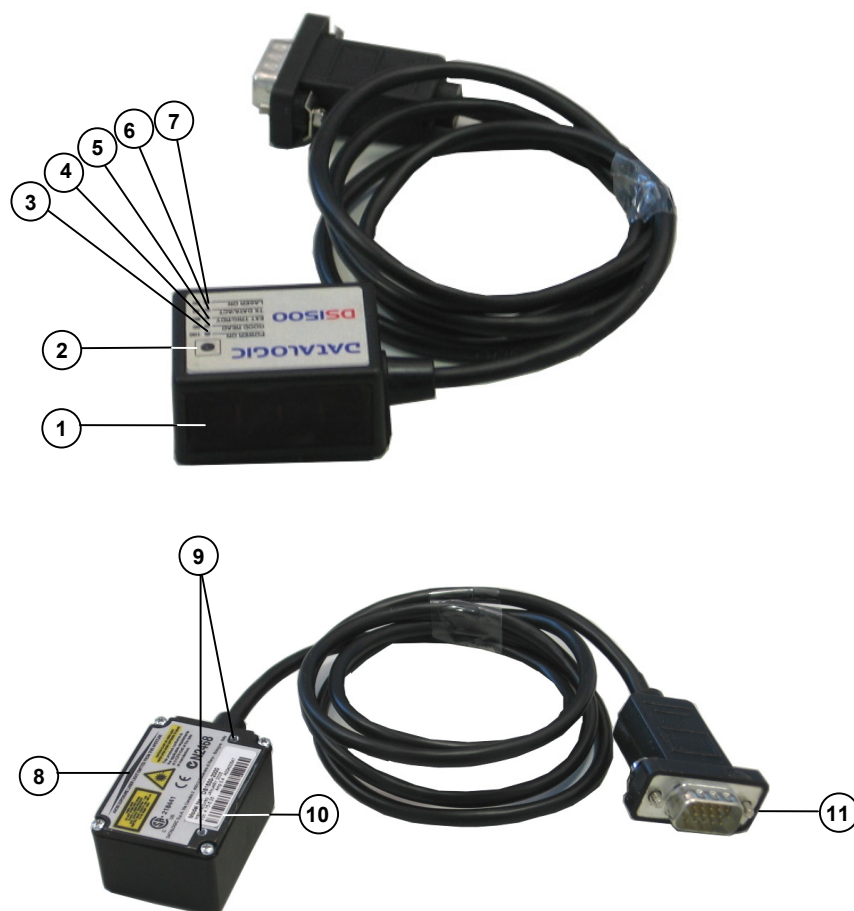


DS1500

General View:



- | | | |
|----------------------------|----------------------------------|-------------------------------|
| ① Laser Beam Output Window | ⑤ External Trigger/Ready LED | ⑨ Mounting Holes |
| ② Test Key | ⑥ Tx Data/Active LED | ⑩ Product Label |
| ③ Power On LED | ⑦ Laser On LED | ⑪ 15-pin D-sub Male Connector |
| ④ Good Read LED | ⑧ Warning and Device Class Label | |

Figure A

For further details on product installation, see the complete Reference Manual.

DS1500 can be configured through the WinHost Windows-based software program available on the installation CD-ROM (part number 93ACC1771).

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.

- All Models:

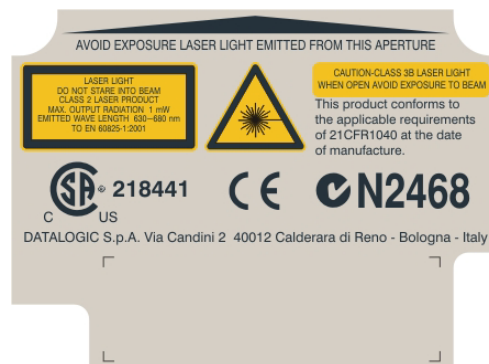
This accessory device is intended to be supplied by a UL Listed or CSA Certified Power Unit with «Class 2» or LPS power source, which supplies power directly to the scanner via the 15-pin connector.

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.

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

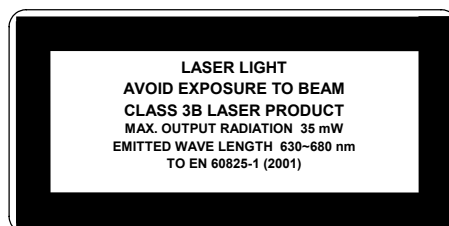
There is a safety device, which allows the laser to be switched on only if the motor is rotating above the threshold for its correct scanning speed.

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



Warning and Device Class 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 IIb 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.



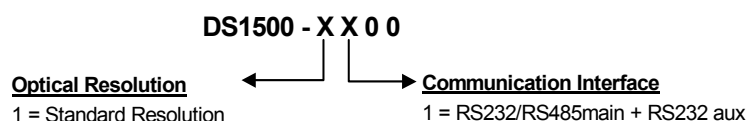
Laser Diode Class Label

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

WEEE Compliance:



Model Description:



Reading Performance:

| Version | Reading Distance | Max Code Resolution | Speed |
|---------|--|---------------------|---------|
| | | mm (mils) | scans/s |
| 1100 | 40 mm (1.6 in) - 240 mm (9.4 in) on 0.50mm (20 mils) codes | 0.20 (8) | 1200 |
| 1100 | 75 mm (2.9 in) - 115 mm (4.5 in) on 0.15mm (6 mils) codes | 0.15 (6) | 800 |

Technical Features:

| ELECTRICAL FEATURES | |
|--|---|
| Input Power Supply voltage Power consumption max. | 5 Vdc± 5% 2 W |
| Serial Interfaces Main Auxiliary Baud Rates | RS232; RS485 Full-duplex / Half-duplex RS232 150 to 115200 |
| Inputs Voltage max. | External Trigger 40 Vdc |
| Outputs V _{CE} max. Collector current max. V _{CE} saturation Power dissipation max. | OUT1, OUT2 40 Vdc 20 mA continuous; 0.3V at 6 mA max. 100 mW at 45 °C (Ambient temp.) |
| OPTICAL FEATURES | |
| Light source Wave length (Note 1) Safety class | Semiconductor laser diode 630 to 680 nm Class 2 - EN 60825-1; Class II - CDRH |
| READING FEATURES | |
| Scan rate (software programmable) Aperture angle Maximum Reading distance Maximum resolution | 800 to 1200 scans/sec See reading diagrams |
| USER INTERFACE | |
| LED indicators | Laser ON, Tx Data/ACT, Ext Trig/RDY, Good Read, Power ON |

| SOFTWARE FEATURES | | | | | | | | | | | |
|---|--|-----------|-----------|---|------------|-------------------|-----------|-------------------------------------|----------|-----------|------------|
| <p>READABLE CODE SYMBOLOGIES</p> <table> <tr> <td>* EAN/UPC</td><td>* Code 93</td></tr> <tr> <td>EAN/UPC (including Add-on 2 and Add-on 5)</td><td>* Code 128</td></tr> <tr> <td>* 2/5 Interleaved</td><td>* EAN 128</td></tr> <tr> <td>* Code 39 (Standard and Full ASCII)</td><td>ISBT 128</td></tr> <tr> <td>* Codabar</td><td>Pharmacode</td></tr> </table> <p>*ACB Readable. Other symbologies available on request.</p> | | * EAN/UPC | * Code 93 | EAN/UPC (including Add-on 2 and Add-on 5) | * Code 128 | * 2/5 Interleaved | * EAN 128 | * Code 39 (Standard and Full ASCII) | ISBT 128 | * Codabar | Pharmacode |
| * EAN/UPC | * Code 93 | | | | | | | | | | |
| EAN/UPC (including Add-on 2 and Add-on 5) | * Code 128 | | | | | | | | | | |
| * 2/5 Interleaved | * EAN 128 | | | | | | | | | | |
| * Code 39 (Standard and Full ASCII) | ISBT 128 | | | | | | | | | | |
| * Codabar | Pharmacode | | | | | | | | | | |
| Code Selection | up to six different codes during one reading phase | | | | | | | | | | |
| Decoding Safety | can enable multiple good reads of same code | | | | | | | | | | |
| Headers and Terminators | up to four headers and four terminators | | | | | | | | | | |
| Operating Modes | On-Line, Serial-On-Line, Automatic, Continuous, Test | | | | | | | | | | |
| Configuration Modes | <ul style="list-style-type: none"> through menus using WinHost utility receiving commands from one of the serial ports (HOST MODE) | | | | | | | | | | |
| Special Functions | ACB (Advanced Code Builder) Motor Off | | | | | | | | | | |
| Parameter Storage | Non-volatile internal EEPROM | | | | | | | | | | |
| ENVIRONMENTAL FEATURES | | | | | | | | | | | |
| Operating temperature (Note 2) | 0° to 45 °C (32° to 113 °F) | | | | | | | | | | |
| Storage temperature | -20° to 70 °C (-4° to 158 °F) | | | | | | | | | | |
| Humidity max. | 90% non condensing | | | | | | | | | | |
| Vibration resistance | 14 mm @ 2 to 10 Hz | | | | | | | | | | |
| IEC 68-2-6 test FC | 1.5 mm @ 13 to 55 Hz | | | | | | | | | | |
| 2 hours on each axis | 2 g @ 70 to 200 Hz | | | | | | | | | | |
| Shock resistance | | | | | | | | | | | |
| IEC 68-2-27 test EA | 30 g; 11 ms | | | | | | | | | | |
| 3 shocks on each axis | | | | | | | | | | | |
| Protection class | IP65 | | | | | | | | | | |
| PHYSICAL FEATURES | | | | | | | | | | | |
| Mechanical dimensions | 40 x 30 x 22 mm (1.57 x 1.18 x 0.86 in) | | | | | | | | | | |
| Weight without cable | 44 g (1.55 oz) | | | | | | | | | | |

Note 1: The features given are typical at a 25 °C ambient temperature (if not otherwise indicated).

Note 2: If the reader is used in high temperature environments (over 40 °C), it is advised the use of the Beam-shutter (see the WinHost configuration program) and/or a thermal conductive support (such as the metal bracket provided).

Accessories:

| Name | Description | Part Number |
|------------------|--|-------------|
| CONFIG / DOC PKG | DS1500 Configuration SW, Reference Manual, Test Chart, other documentation | 93ACC1771 |

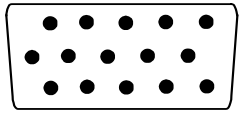
Electrical Connections:

DS1500 is equipped with a cable terminated by a 15-pin male High Density D-sub connector for connection to the power supply and input/output signals.



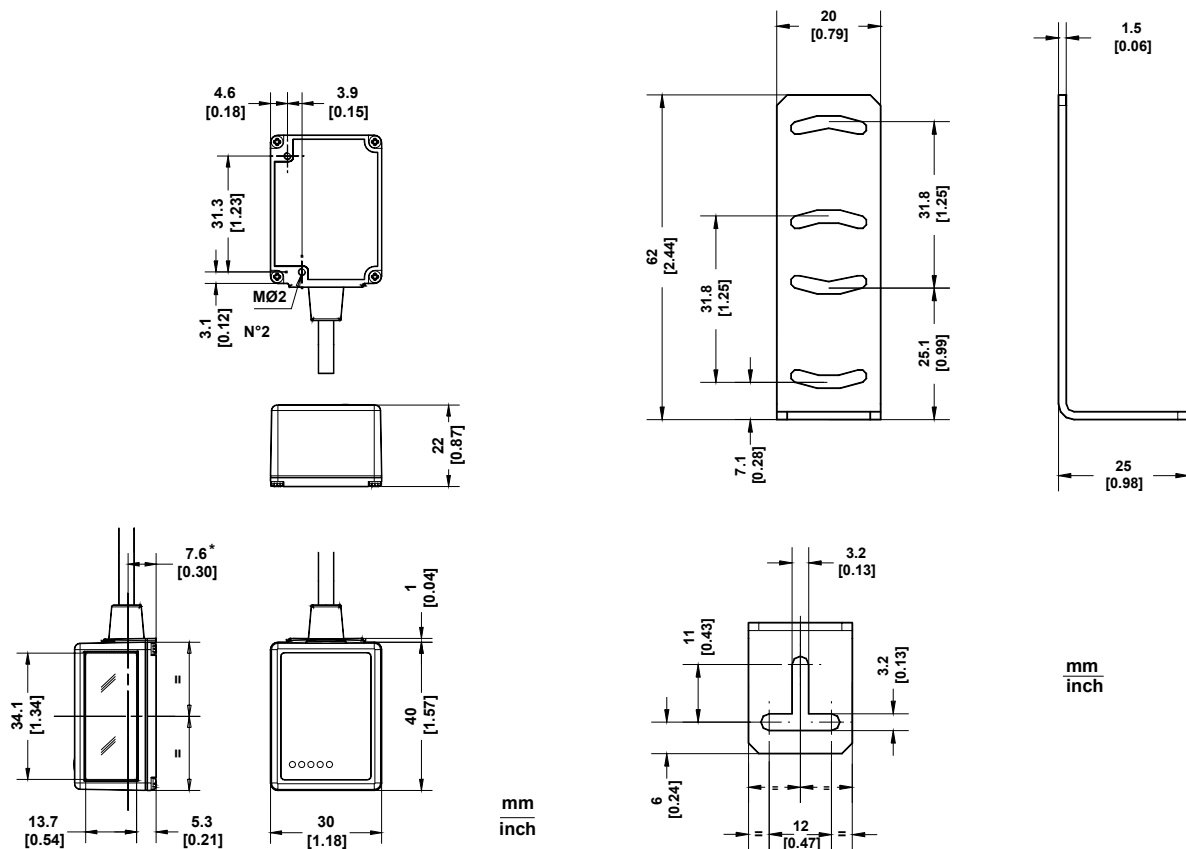
Do not connect GND and SGND to different (external) ground references. GND and SGND are internally connected through filtering circuitry which can be permanently damaged if subjected to voltage drops over 0.8 Vdc.

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

| 15-pin male high density D-sub connector pinout | | | |
|---|------------|------------------------------|--|
| Pin | Name | Function |  15-pin D-sub High-Density Male Connector |
| 1 | VS | Power supply input voltage + | |
| 5 | GND | Power supply input voltage - | |
| 8 | PE | Protective Earth Ground | |
| 13 | SHIELD | Cable Shield | |
| 9 | EXT TRIG - | External Trigger - | |
| 7 | OUT1 + | Output 1 + | |
| 14 | OUT2 + | Output 2 + | |
| 11, 12, 15 | NC | Not Connected | |

| Pin | RS232 | RS485 Full-Duplex | RS485 Half-Duplex |
|-----|------------|-------------------|-------------------|
| 2 | TX232 Main | TX485- | RTX485- |
| 3 | RX232 Main | RX485+ | RTX485+ |
| 6 | TXAUX | TX485+ | RTX485+ |
| 10 | RXAUX | RX485- | |
| 4 | SGND | SGND | SGND |

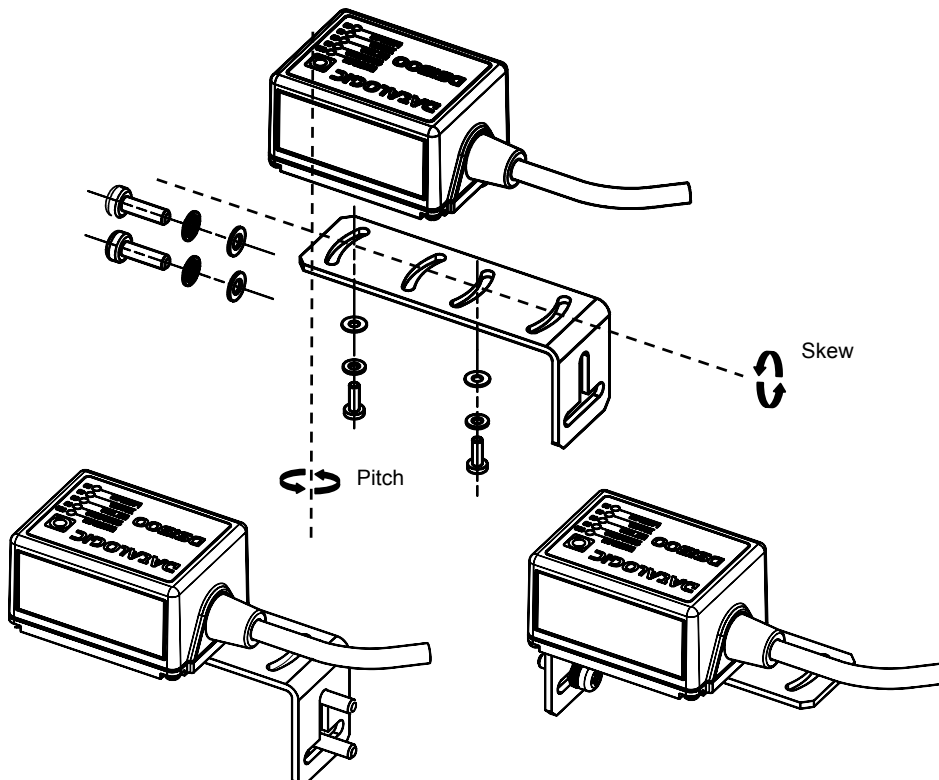
Mechanical Installation:



* The quote refers to the scan line

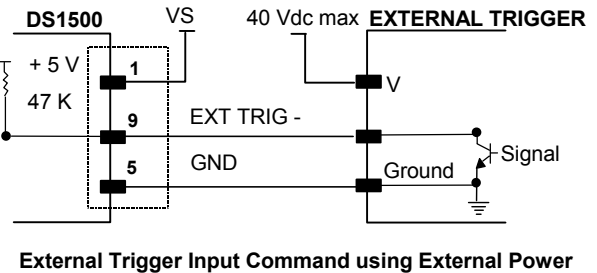
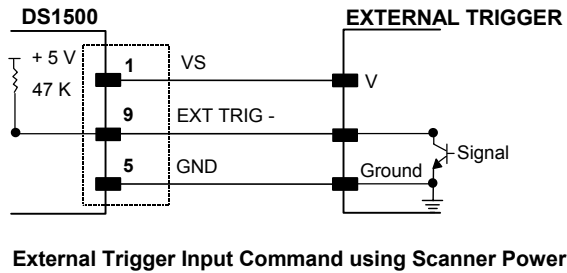
DS1500 Overall Dimensions

Mounting Bracket Overall Dimensions

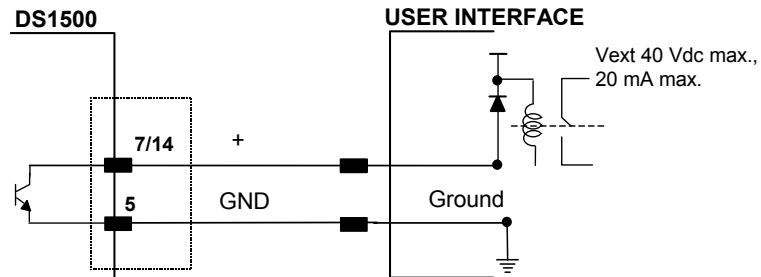


Input/Output Connections:

INPUT CONNECTIONS



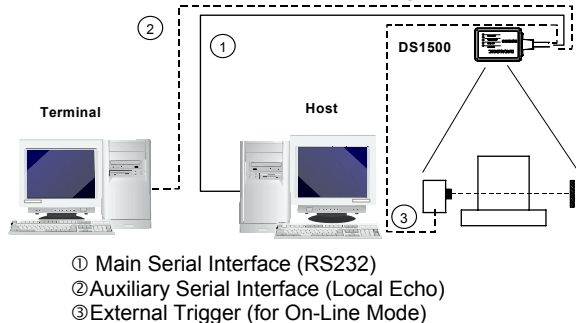
OUTPUT CONNECTIONS



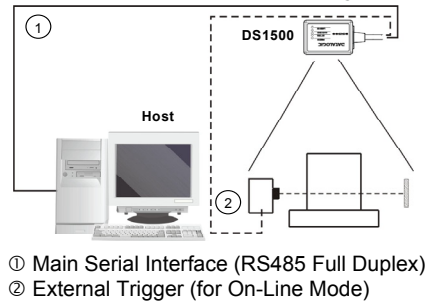
$V_{CE} \text{ max} = 40 \text{ Vdc}$
 $I \text{ max} = 20 \text{ mA continuous}$

Connectivity:

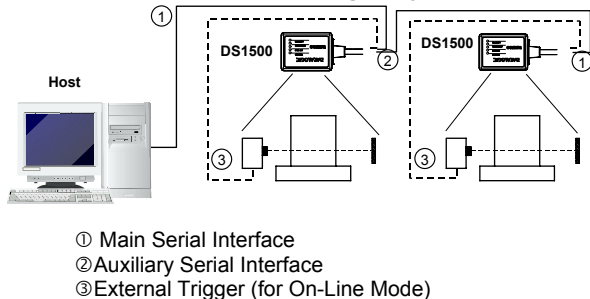
RS232 Point-to-point Layout



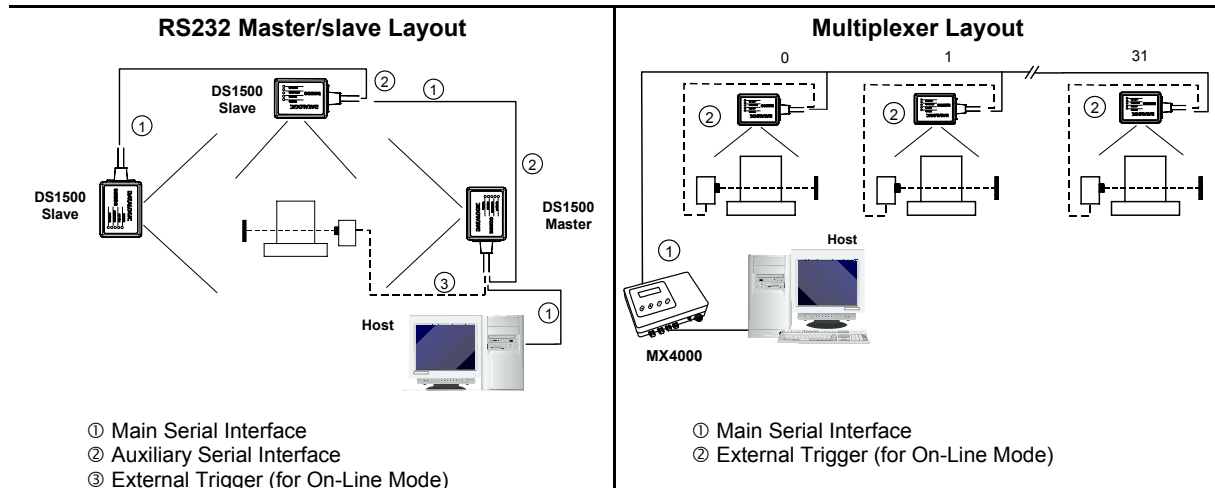
RS485 Point-to-point Layout



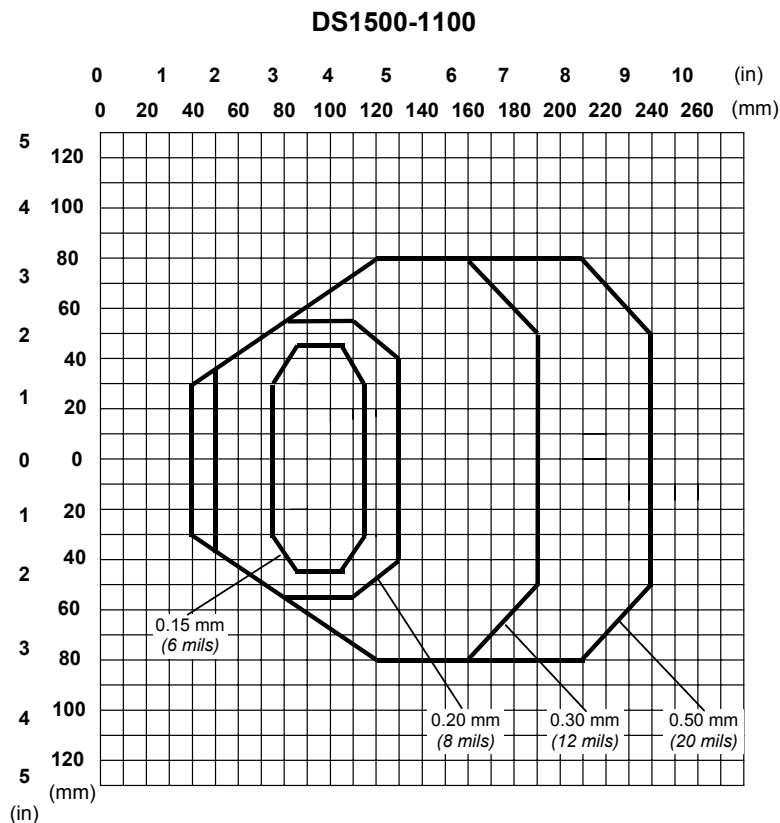
RS232 Pass-through Layout



Connectivity:



Reading Diagrams:



NOTE: (0,0) is the center of the laser beam output window.

CONDITIONS

Code = Interleaved 2/5 or Code 39

PCS = 0.90

"Pitch" angle = 0°

"Skew" angle = 15°

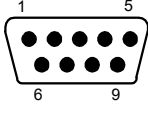
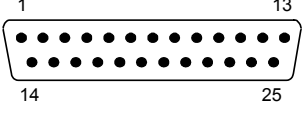
"Tilt" angle = 0°

*Motor Control = Speed_3 (800 scans/s) for 0.15mm codes, Speed_4 (1200 scans/s) for 0.20mm codes and greater

* Parameter selectable in Winhost

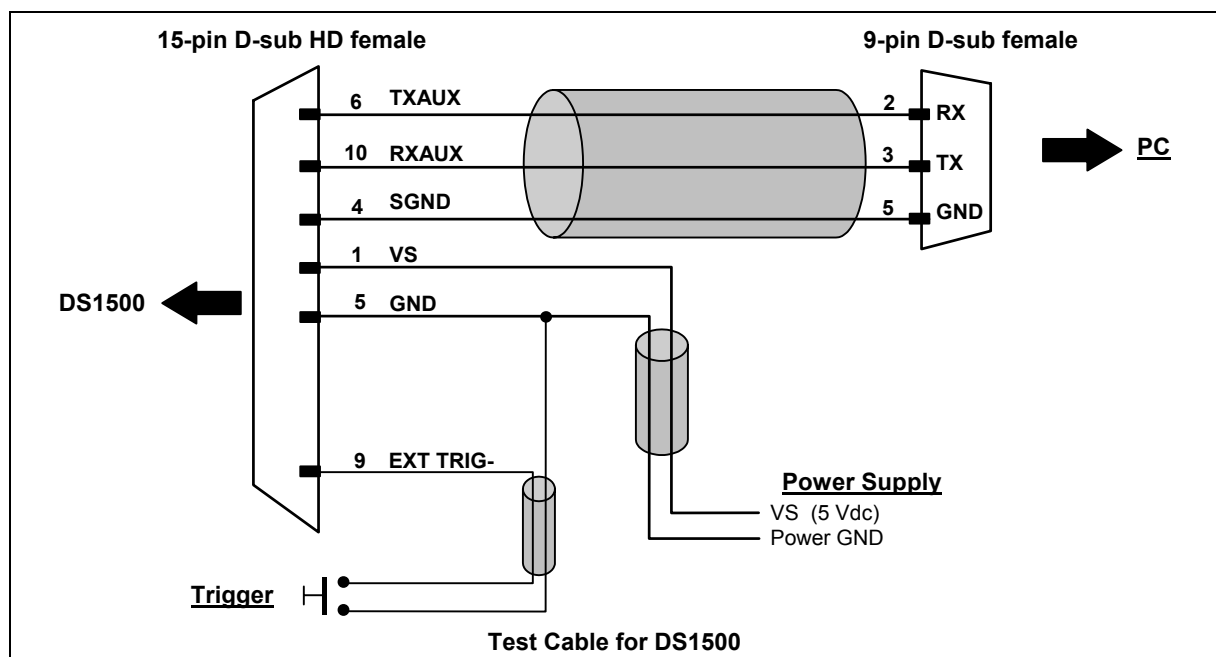
User Interface:

The following table contains the pinout for standard RS232 PC Host interface. For other user interface types please refer to their own manual.

| RS232 PC-side connections | | | | |
|---|------|--|------|--|
|  | |  | | |
| 9-pin male connector | | 25-pin male connector | | |
| 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 diagrams show a simple test cable including power, external (push-button) trigger and PC RS232 COM port connections.



NOTE

The Auxiliary RS232 interface is only available when the main interface is RS232.

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DS1500-XXXX

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:

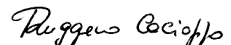
EN 55022 (Class A ITE), August 1994:
AMENDMENT A1 (Class A ITE), October 2000

LIMITS AND METHODS OF MEASUREMENTS OF RADIO DISTURBANCE
CHARACTERISTICS OF INFORMATION TECHNOLOGY EQUIPMENT

EN 61000-6-2, October 2001:

ELECTROMAGNETIC COMPATIBILITY (EMC).
PART 6-2: GENERIC STANDARDS – IMMUNITY FOR INDUSTRIAL
ENVIRONMENTS

Lippo di Calderara, 08/09/2005


Ruggero Cacioppo
Quality Assurance Supervisor