# DX8200A

# QUICK REFERENCE GUIDE


**NOTE**

*This manual illustrates Local Lonworks network applications. For other types of installations, such as ID-NET™, Pass-Through, Multiplexer Layout, etc., refer to the DX8200A Reference Manual available on the CD. For complete scanner configuration using the Genius™ configuration program refer to the Help On Line.*

821001203 (Rev. D)

# UPDATES AVAILABILITY

**UK/US** The latest drivers and documentation updates for this product are available on Internet. Log on to: **www.automation.datalogic.com**

**I** Su Internet sono disponibili le versioni aggiornate di driver e documentazione di questo prodotto. Collegarsi a: **www.automation.datalogic.com**

**F** Les versions mises à jour de drivers et documentation de ce produit sont disponibles sur Internet. Cliquez sur : **www.automation.datalogic.com**

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- **SERVICE**
  - **Overview -** Warranty Extensions and Maintenance Agreements
  - **Sales Network-** Listing of Subsidiaries, Repair Centers, Partners
  - **Helpdesk**
  - **Material Return Authorization**

# LEGAL NOTICES

# DX8200A GENERAL VIEW

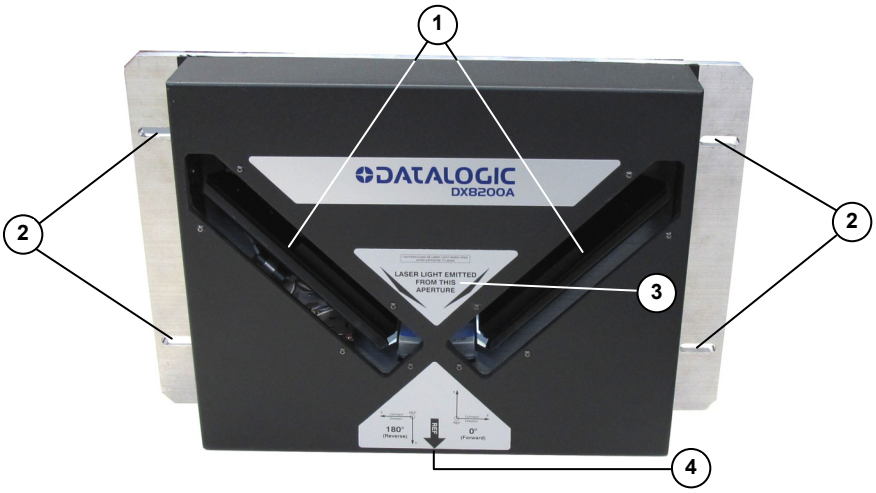



**Figure A**

① Laser Beam Output Windows ② Mounting Slots ③ Laser Safety Label ④ Mounting Reference Label


**Figure B**

① Programming Keypad
② Power On LED (Green)
③ Phase On LED (Yellow)
④ Encoder LED (Yellow)
⑤ TX Data LED (Green)
⑥ Network LED (Red)
⑦ LCD Display

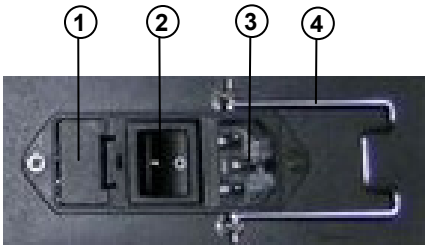



**Figure D**
(VAC Models Only)

① Line Fuses
② Line Switch
③ Power Inlet
④ Cord Retaining Clamp

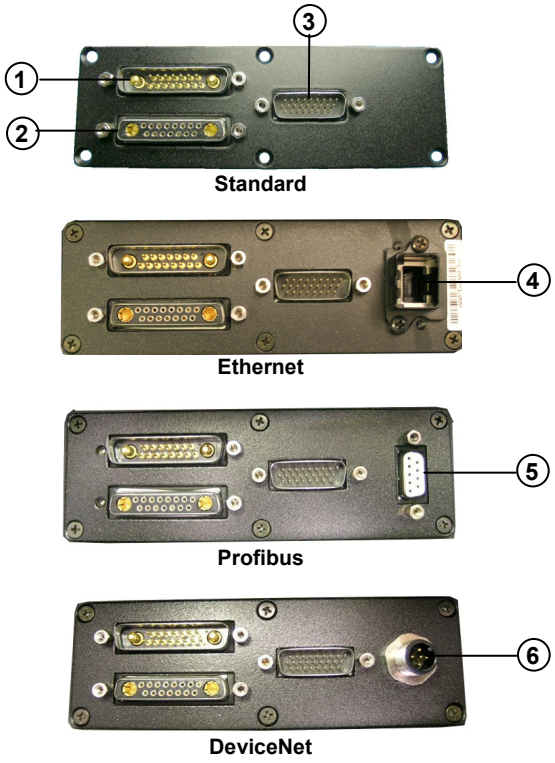


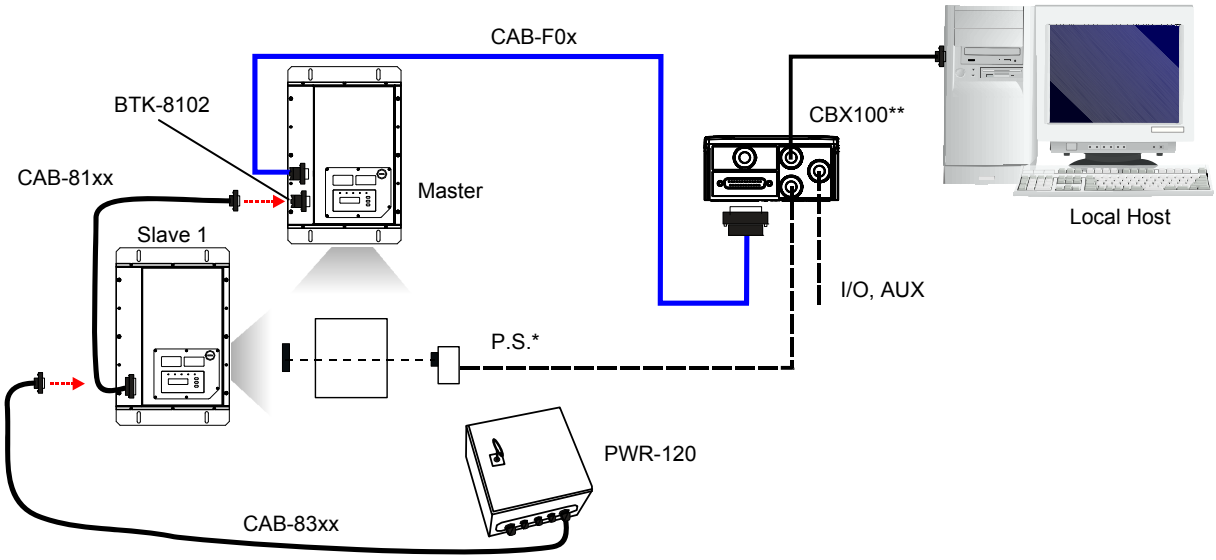

**Figure C**

① Lonworks 17-pin Male Connector
② Lonworks 17-pin Female Connector
③ Serial Interface and I/O 26-pin male Connector
④ Harting RJ Industrial® Modular female Connector
⑤ Profibus 9-pin female Connector
⑥ DeviceNet 5-pin male Connector

# CONNECTIVITY

Examples of the most common system layouts are shown in this section, for additional layouts refer to the Reference Manual.

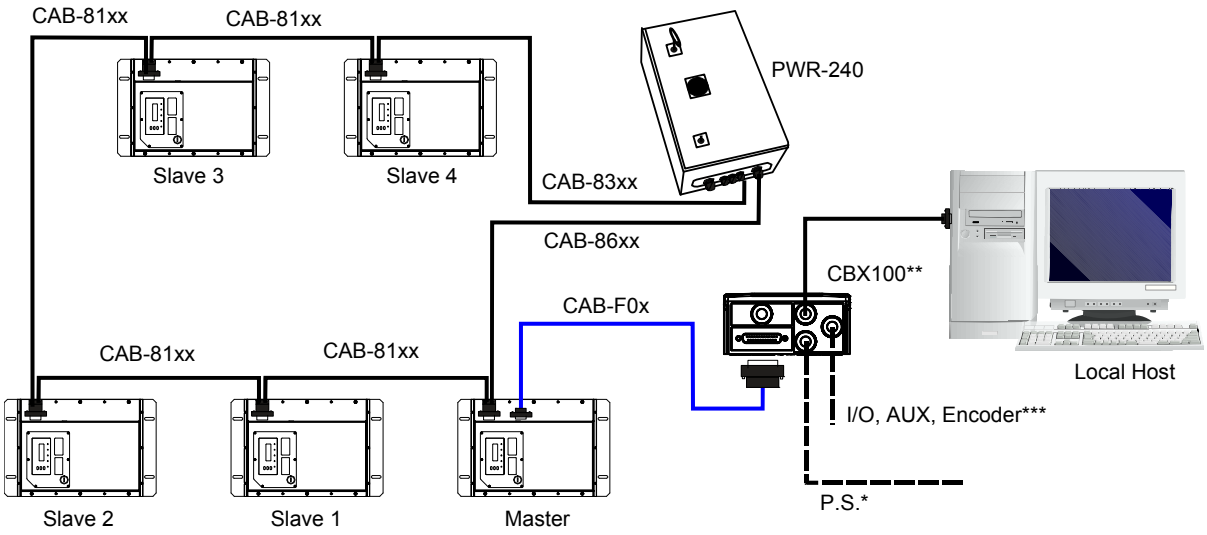
**Local Lonworks Networks**




* P.S. (Presence Sensor) connected to Input 1 (External Trigger/PS) input.

** CBX100 jumper set to accept scanner power.

**Small Synchronized Network with 2 Readers**



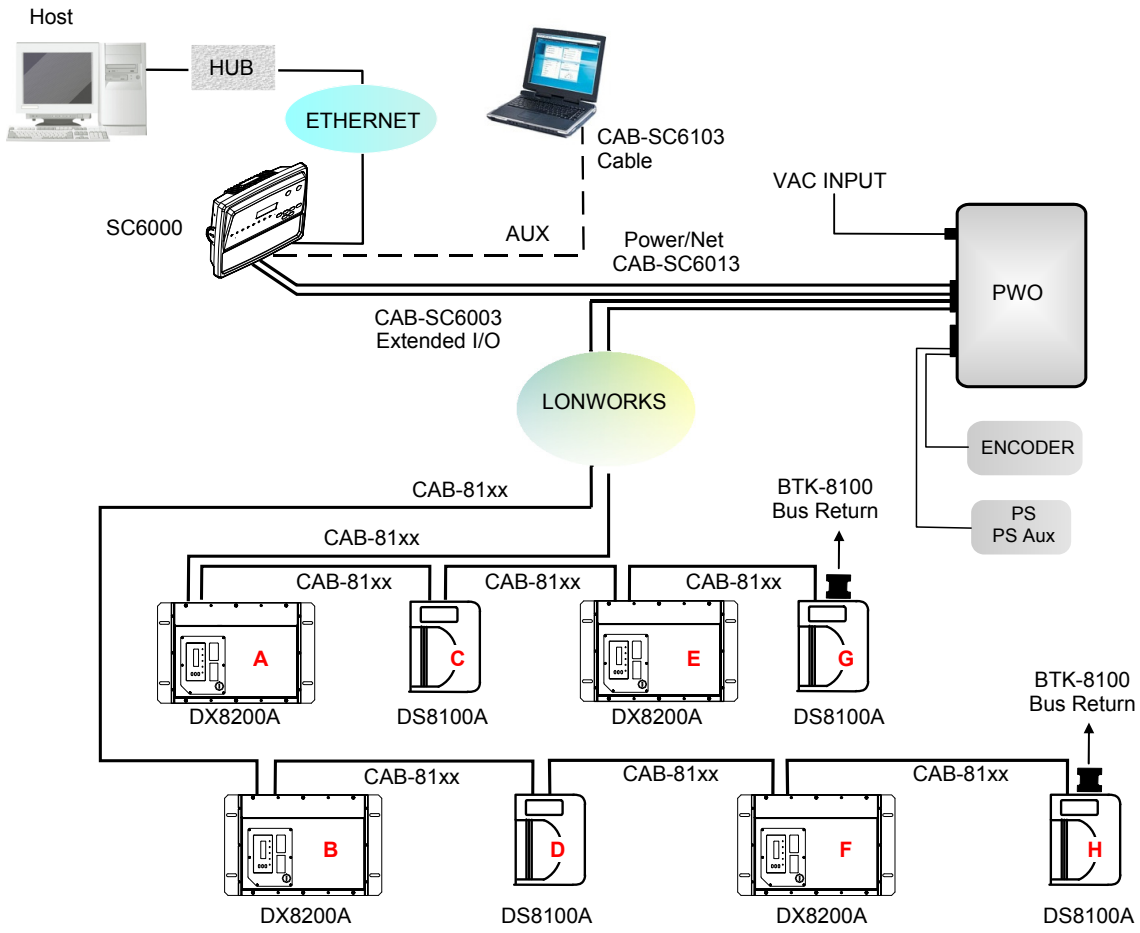

* P.S. (Presence Sensor) connected to Input 1 (External Trigger/PS) input.

** CBX100 jumper set to accept scanner power.

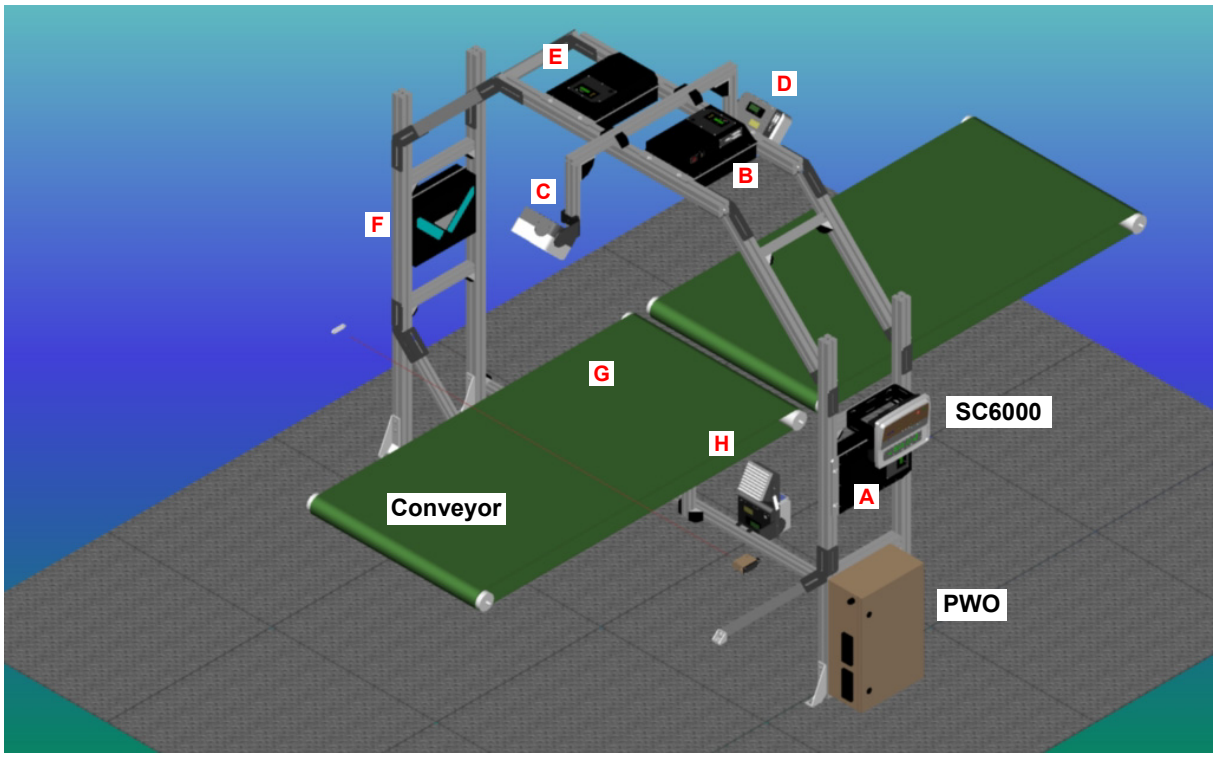
*** Encoder connected to Input 2 (Encoder) input.

**Small Synchronized Network with more than 2 Readers and Single Power Unit**

**Local Lonworks Networks**




**Large Synchronized Network with DX8200A and DS8100A Scanners**

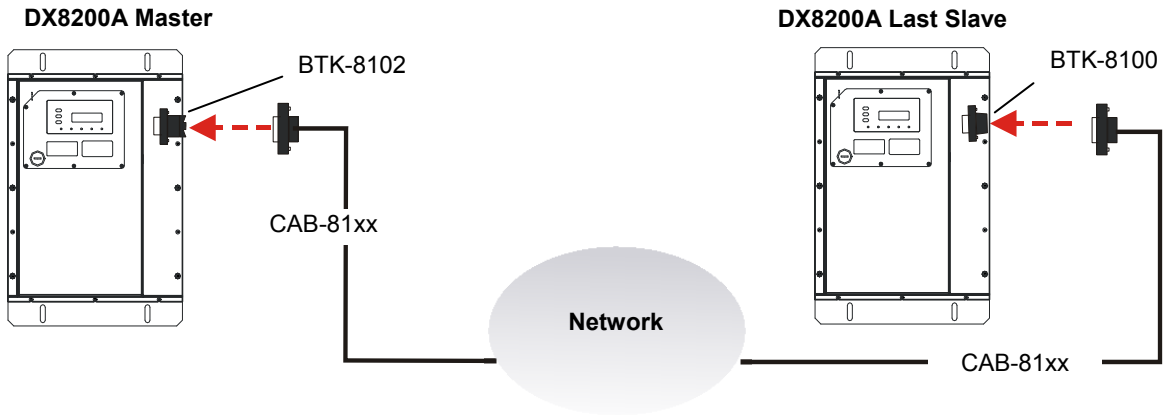



**Example Large Synchronized Network Reading Station**

## NETWORK TERMINATION

When building a Lonworks system the network must be properly terminated by positioning the BTK-8102 Lonworks terminator in the DX8200A master reader and the BTK-8100 Lonworks bus return in the last DX8200A slave reader.

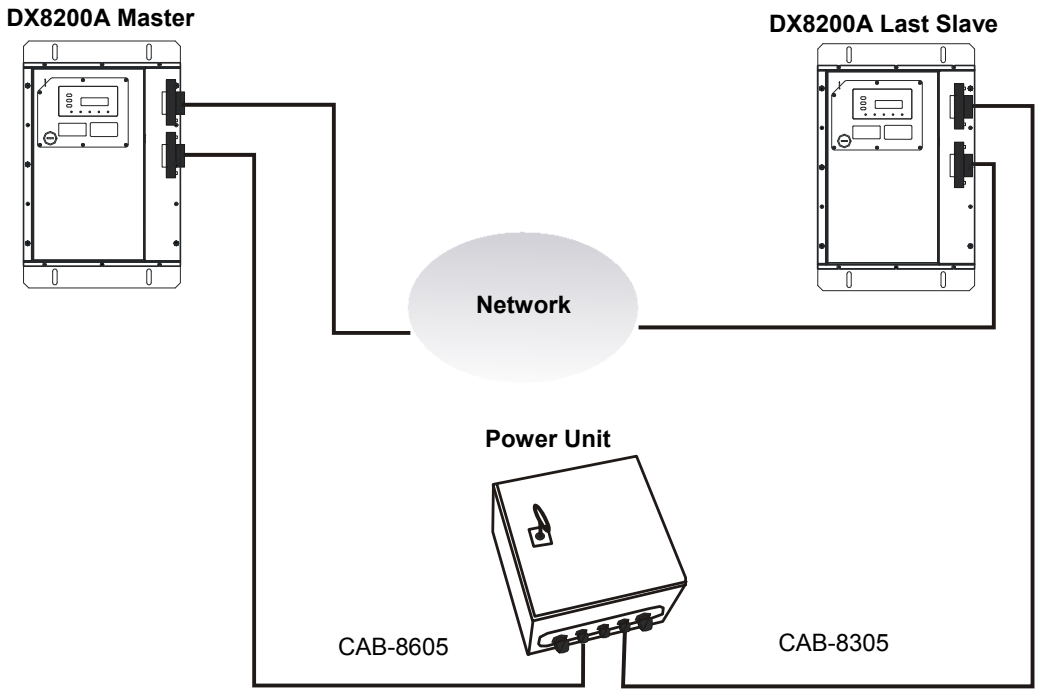
The BTK-8100 bus return provides a connector to be inserted in the Lonworks 17-pin female connector of the last slave reader in the network; while the BTK-8102 Lonworks terminator provides a different connector to be inserted in the Lonworks 17-pin male connector of the master reader:




**BTK-8102 and BTK-8100**

Two cables are also provided as accessories to terminate and power the network: CAB-8605 and CAB-8305.

CAB-8605 is a power and Lonworks termination cable to be used for connecting the DX8200A master to an external power unit within the network; while CAB-8305 is a power and bus return cable to be used for connecting the last DX8200A slave to an external power unit. **These two cables must only be used for VDC models**.




**CAB-8605 and CAB-8305**

# ELECTRICAL CONNECTIONS

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

The table below gives the pinout of the CBX100/CBX500 terminal block connectors. Use this pinout when the DX8200A reader is connected by means of the CBX100/CBX500:

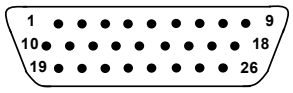
| CBX100/500 Terminal Block Connectors | | | |
|---|---|---|---|
| **Power** | | | |
| Vdc | Power Supply Input Voltage + | | |
| GND | Power Supply Input Voltage - | | |
| Earth | Protection Earth Ground | | |
| | | | |
| **Inputs** | | | |
| +V | Power Source – Inputs | | |
| -V | Power Reference – Inputs | | |
| I1A | EXT TRIG/PS A (polarity insensitive) for PS | | |
| I1B | EXT TRIG/PS B (polarity insensitive) for PS | | |
| I2A | IN 2/ENC A (polarity insensitive) for Encoder | | |
| I2B | IN 2/ENC B (polarity insensitive) for Encoder | | |
| I3A | IN 3A (polarity insensitive) (only with CBX500) | | |
| I4A | IN 4A (polarity insensitive) (only with CBX500) | | |
| I34B | IN 3B/IN 4B Reference (polarity insensitive) (only with CBX500) | | |
| **Outputs** | | | |
| +V | Power Source - Outputs | | |
| -V | Power Reference - Outputs | | |
| O1+ | OUT 1+ | | |
| O1- | OUT 1- | | |
| O2+ | OUT 2+ | | |
| O2- | OUT 2- | | |
| O3A | OUT 3A (polarity insensitive) (only with CBX500) | | |
| O3B | OUT 3B (polarity insensitive) (only with CBX500) | | |
| **Auxiliary Interface** | | | |
| TX | Auxiliary Interface TX | | |
| RX | Auxiliary Interface RX | | |
| SGND | Auxiliary Interface Reference | | |
| **Shield** | | | |
| Shield | Network Cable Shield | | |
| **Main Interface** | | | |
| | **RS232** | **RS485 Full-Duplex** | **RS485 Half-Duplex** |
| | TX | TX+ | RTX+ |
| | RTS | TX- | RTX- |
| | RX | *RX+ | |
| | CTS | *RX- | |
| | SGND | SGND | SGND |

* Do not leave floating, see Reference Manual for connection details.

**CAUTION**

*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.*

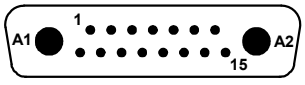
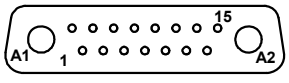
The DX8200A scanner provides a 26-pin male D-sub connector for connection to power supply, Host interface (Main and Aux), and input/output signals.

| 26-pin D-Sub Connector Pinout | | | |
|---|---|---|---|
| **Pin** | **Name** | **Function** | |
| 1 | CHASSIS | Chassis - internally connected to GND<br>Cable shield connected 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/PS A | External trigger (polarity insensitive) for PS | |
| 19 | EXT_TRIG/PS B | External trigger (polarity insensitive) for PS | **26-pin male D-sub Connector** |
| 6 | IN2/ENC A | Input signal 2 (polarity insensitive) for Encoder | |
| 10 | IN2/ENC B | Input signal 2 (polarity insensitive) for Encoder | |
| 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 | |

| Main Interface | | | |
|---|---|---|---|
| **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 |

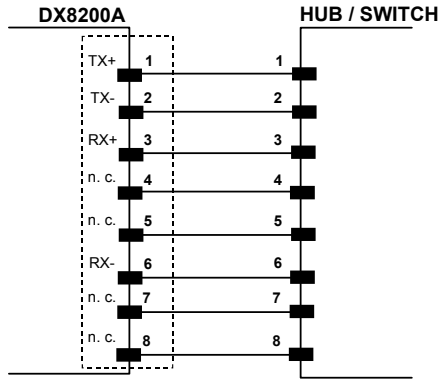
* Do not leave floating, see Reference Manual. for connection details.

Two 17-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.

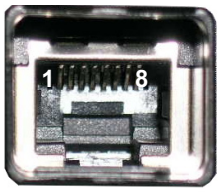
| 17-pin Lonworks Connector Pinout | | | |
|---|---|---|---|
| **Pin** | **Name** | **Function** | |
| A1 | GND | Supply voltage (negative pin) | |
| A2 | VS | Supply voltage 20 to 30 Vdc (positive pin) | |
| 1 | CHASSIS | Cable shield A - internally connected by capacitor to chassis | |
| 2 | n.c. | Not connected |  |
| 3 | CHASSIS | Cable shield B - internally connected by capacitor to chassis | **Male - Input** |
| 4 | n.c. | Not connected | |
| 5 | n.c. | Not connected | |
| 6 | n.c. | Not connected |  |
| 7 | VS_I/O | Supply voltage of I/O circuit | **Female - Output** |
| 8 | Lon A+ | Lonworks a line (positive pin) | |
| 9 | Lon A- | Lonworks a line (negative pin) | |
| 10 | Lon B+ | Lonworks b line (positive pin) | |
| 11 | Lon B- | Lonworks b line (negative pin) | |
| 12 | SYS_I/O | System signal | **17-pin Local Lonworks Connectors** |
| 13 | SYS_ENC_I/O | System signal | |
| 14 | Reserved | Internally connected | |
| 15 | Ref_I/O | Reference voltage of I/O circuit | |

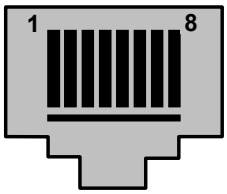
**Ethernet Model**

**Harting RJ Industrial® Modular Connector**




n. c. = not connected




**Harting RJ Industrial Female Connector**

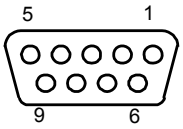
**NOTE**

*For Ethernet connections, always use the Harting RJ Industrial® Push Pull Ethernet connector (included in the package). This connector assures a robust connection and full IP rated protection.*

**Profibus Model**

**Profibus Connector**

| Pin | Name | Function |
|---|---|---|
| 1 | Shield* | Shield, protective ground resp. |
| 2 | Free | |
| 3 | B-LINE (RxD/TxD-P) | Received/Transmitted data-P |
| 4 | CNTR-P** | Repeater control signal |
| 5 | DGND | Data ground (M5V) |
| 6 | +5 V | Voltage plus (P5V) |
| 7 | Free | |
| 8 | A-LINE (RxD/TxD-N) | Received/Transmitted data |
| 9 | CNTR-N** | Repeater control signal |




**Profibus 9-pin D-sub Female Connector**

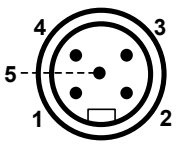
* signal is optional

** signal is optional; RS485 level

**DeviceNet Model**

**DEVICENET CONNECTOR**

| Pin | Name | Function |
|---|---|---|
| 2 | V+ | Supply voltage – positive pin |
| 5 | CAN_L | CAN bus data line – L |
| 1 | SHIELD | Shield |
| 4 | CAN_H | CAN bus data line – H |
| 3 | V- | Supply voltage – negative pin |




**5-pin male DeviceNet Connector**

# APPENDIX

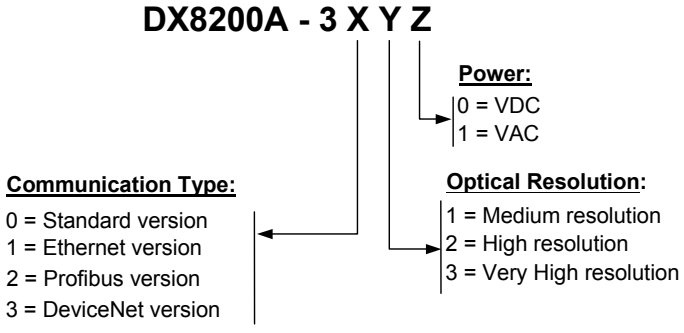
## TECHNICAL FEATURES

| **ELECTRICAL FEATURES** | | |
|---|---|---|
| | **VAC models** | **VDC models** |
| Supply Voltage | 110 to 230 Vac | 20 to 30 Vdc |
| Power Consumption | 30 VA typical<br>1.75 to 1.17 A; 35 W Max. (including startup current) | 1.5 to 1.0 A; 30 W typical |
| Common Communication Interfaces | **Main** | **Baud Rate** |
| | RS232 | 1200 to 115200 |
| | RS485 full-duplex | |
| | RS485 half-duplex | |
| | **Auxiliary** | |
| | RS232 | 1200 to 115200 |
| | **Other** | |
| | Lonworks | 1.25 Mb/s |
| Model-Dependent Communication Interfaces | Ethernet<br>DeviceNet<br>Profibus | 100 Mb/s<br>up to 500 K/bs<br>up to 12 M/bs |
| Inputs<br>Ext. Trigger 1, Encoder<br>2 aux. digital inputs | (optocoupled NPN or PNP) | |
| Outputs<br>3 software programmable digital outputs | (optocoupled) | |
| **OPTICAL FEATURES** | | |
| Light Receiver | Avalanche photodiode | |
| Wavelength | 630 to 680 nm | |
| Safety Class | Class 2 - EN60825-1; Class II - CDRH | |
| Light Source | Up to 4 semiconductor laser diodes | |
| Laser Control | Security system to turn laser off in case of motor slow down | |
| **READING FEATURES** | | |
| Scan rate | ≤ 1000 scans/s (500 per leg) | |
| Maximum Resolution<br>Max. Reading Distance<br>Max. Reading Width<br>Max. Depth of Field | (see reading diagrams on page 15) | |
| **USER INTERFACE** | | |
| LCD Display | 2 lines by 20 characters LCD | |
| Keypad | 3 keys | |
| LED Indicators | Power On (green)<br>Phase On (yellow)<br>Encoder (yellow)<br>TX Data (green)<br>Network (red) | |

| **SOFTWARE FEATURES** | | |
|---|---|---|
| Readable Codes | Interleaved 2/5<br>Code 39 Standard<br>Codabar<br>Code 128<br>GS1-128 (ex EAN 128)<br>Code 93 (standard and full ASCII)<br>EAN/UPC (including Add-on 2 and Add-on 5)<br>GS1 DataBar (including Limited and Expanded) | |
| Code Selection | Up to 10 codes during one reading phase | |
| Headers and Terminators | Up to 128-bytes headers and 128-bytes terminators | |
| Operating Modes | On Line, Serial On Line, Automatic, Test, PackTrack™, Continuous | |
| Configuration Modes | Genius™ utility program | |
| Parameter Storage | Non-volatile internal FLASH | |
| **ENVIRONMENTAL FEATURES** | | |
| Operating Temperature | 0° to +50 °C (+32° to +122 °F) | |
| Storage Temperature | -20° to +70 °C (-4° to +158 °F) | |
| Humidity | 90% non condensing | |
| Ambient Light Immunity | 20000 lux | |
| Vibration Resistance<br>EN 60068-2-6<br>2 hours on each axis | Frequency range from 5 to 150 Hz;<br>Constant displacement 3 mm pk-pk from 5 to 9 Hz;<br>Constant acceleration 0.5 g from 9 to 150 Hz; | |
| Shock Resistance<br>EN 60068-2-27<br>3 shocks on each axis | 30 g; 11 ms | |
| | **VAC models** | **VDC models** |
| Protection Class – EN 60529 | IP40 | IP64* |
| **PHYSICAL FEATURES** | | |
| Mechanical Dimensions | 470 x 300 x 141 mm (18.50 x 11.81 x 5.55 in) | |
| Weight | about 11 kg (24 lbs. 3 oz.) | |

* sealed connectors required, including the Harting RJ Industrial® Push Pull Ethernet connector for Ethernet models.

## MODEL DESCRIPTION



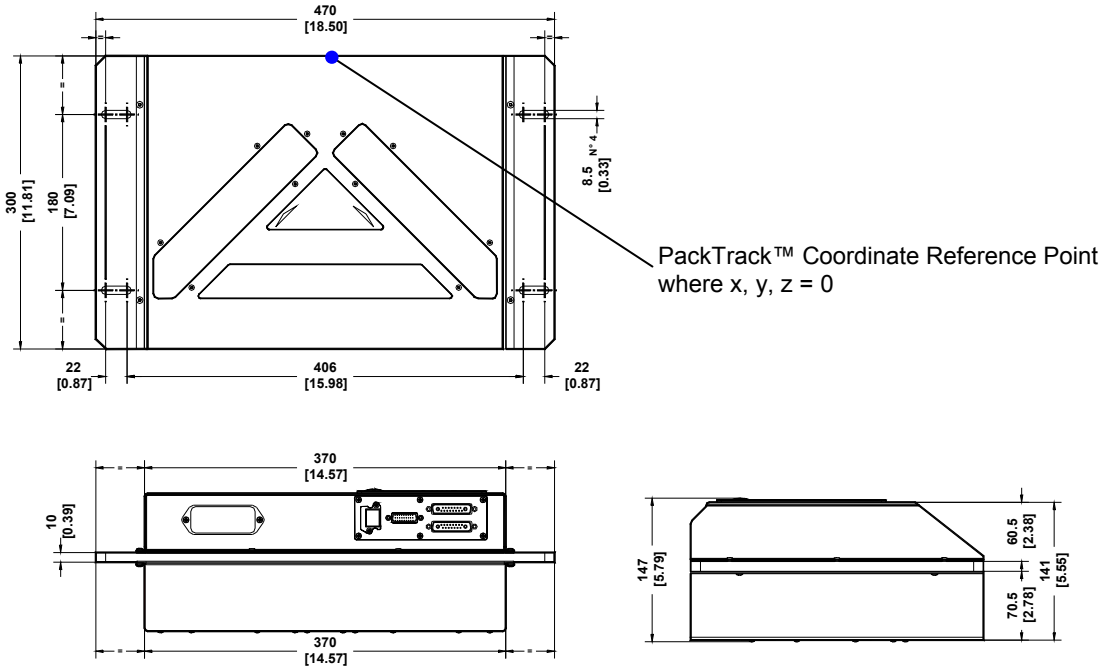
# ACCESSORIES

| Name | Description | Part Number |
|---|---|---|
| **Power Supplies** | | |
| PWR-120 | J-box power unit 110/230 VAC 24 V 120 W | 93ACC1530 |
| PWR-240 | J-box power unit 110/230 VAC 24 V 240 W | 93ACC1070 |
| PWR-480A | J-box power unit 110/230 VAC 24 V 480 W | 93ACC1850 |
| **Cables and Terminators** | | |
| BTK-8100 | Bus terminator kit (5 pcs) | 93ACC1090 |
| BTK-8102 | Double terminator kit (2 pcs) | 93A051287 |
| CAB-8100 | 10 wire shielded cable D 9.5 mm – 50 m | 93ACC1120 |
| CAB-8101 | 17-pin scanner/scanner connection cable 1.2 m | 93A051020 |
| CAB-8102 | 17-pin scanner/scanner connection cable 2.5 m | 93A051030 |
| CAB-8105 | 17-pin scanner/scanner connection cable 5 m | 93A051040 |
| CAB-8305 | Power and bus return cable (last Slave) 5 m | 93A051268 |
| CAB-8310 | Power and bus return cable (last Slave) 10 m | 93A051336 |
| CAB-8402 | No power cable 2.5 m | 93ACC1758 |
| CAB-8405 | No power cable 5 m | 93ACC1759 |
| CAB-F01 | 6K-8K FBUS cable to CBX 1 m | 93A051355 |
| CAB-F02 | 6K-8K FBUS cable to CBX 2 m | 93A051356 |
| CAB-F05 | 6K-8K FBUS cable to CBX 5 m | 93A051357 |
| CAB-6502 | Fam 6K-8K cross cable 2.5 m | 93A051288 |
| CAB-6505 | Fam 6K-8K cross cable 5 m | 93A051289 |
| CAB-8605 | Power and Lonworks termination cable (Master) 5 m | 93A051290 |
| CAB-DX8000 | Power cable DX8200A VAC (EU) | 93A051333 |
| CAB-DX8001 | Power cable DX8200A VAC (US) | 93A051334 |
| **Software Management** | | |
| Datalogic WebSentinel-005 | Supervisor (up to 5 arrays) | 93A101014 |
| Datalogic WebSentinel-010 | Supervisor (up to 10 arrays) | 93A101015 |
| Datalogic WebSentinel-020 | Supervisor (up to 20 arrays) | 93A101016 |
| Datalogic WebSentinel-032 | Supervisor (up to 32 arrays) | 93A101017 |
| Datalogic WebSentinel-064 | Supervisor (up to 64 arrays) | 93A101018 |
| Datalogic WebSentinel-128 | Supervisor (up to 128 arrays) | 93A101019 |
| Datalogic WebSentinel-256 | Supervisor (up to 256 arrays) | 93A101020 |
| *** Connection Boxes** | | |
| CBX100 | Compact Connection Box | 93A301067 |
| CBX500 | Modular Connection Box | 93A301068 |
| CBX800 | Gateway Connection Box | 93A301077 |
| BM100 | Backup Module | 93ACC1808 |
| BA100 | DIN Rail Adapters for CBX | 93ACC1821 |
| BA200 | Bosch Adapters for CBX | 93ACC1822 |
| BA900 | Two Cable Glands Panel | 93ACC1847 |
| **Sensors** | | |
| MEP-593 | Photocell kit – PNP (PH-1) | 93ACC1791 |
| MEP-543 | Photocell kit – NPN | 93ACC1728 |
| OEK-2 | Optical encoder kit (10 m cable + spring) | 93ACC1770 |
| OEK-1 | Optical encoder kit + 10 m cable | 93ACC1600 |
| UPT-80 | DX8200A – DX8200 Adapter | 93ACC1757 |
| **Miscellaneous** | | |
| PLL-8000 | Optocoupled PLL device | 93ACC1280 |
| FS-1 | Frame shaper (8 pcs) | 93ACC1750 |

* DX8200A application software does not support any of the CBX500 Host Interface Module accessories nor the BM150 Display accessory. Use the CBX800 Gateway for Host Interface Applications, (Fieldbus and non Fieldbus).

## MECHANICAL DIMENSIONS

DX8200A can be installed to operate in any position. There are 4 slots (dia. 8.5 mm) on the sides of the scanner for mounting. The diagram below can be used for installation; refer to the Reading Diagrams for correct positioning of the scanner with respect to the reading zone and scanner orientation.

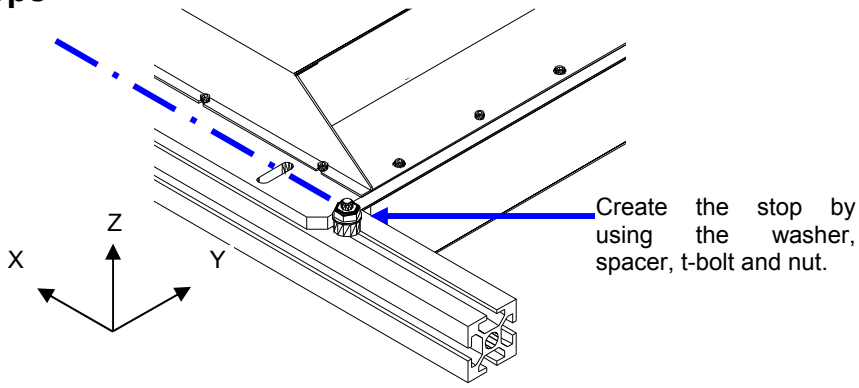



**DX8200A Overall Dimensions**

**WARNING**

*When installing several scanners, take care to position them correctly so that no laser beam enters the reading window perpendicularly and at the same level of the output beam of the other scanners. This condition could occur more frequently for side mounted applications. If these precautions are not followed, it may occur that the laser of the blinded scanner starts blinking due to an internal circuit which temporarily turns the laser off when detecting a power anomaly. To resolve this problem, it is sufficient to slightly change the inclination and position of one of the two scanners involved.*

## Mounting Stops




**X-axis Reference Point Stops**

Two washers and two spacers are provided in the DX8200A package to create two stops which can be used to facilitate DX8200A mounting and positioning. Create each stop by mounting a washer and spacer to the Reading Station Frame using Bosch T-bolts and nuts. See the figure above.

- During initial mounting, affix the stops in approximation to the mounting position. The weight of the DX8200A can rest against this reference while the mounting bolts are being set. This avoids having to hold and maneuver the scanner (especially for vertical side mounted positions) while simultaneously affixing it to the frame.

- Once the scanner is correctly positioned for PackTrack, fix the stops against the scanner. The stops remain fixed to the station frame so that the scanner can be replaced without having to recalibrate the PackTrack coordinates. Referring to the figure above, the stop provides a reference point for the X-axis while the scanner should be centered on the frame to have a fixed reference for the Y-axis.

## READING CONDITIONS

- ANSI Grade B minimum
- 500 scans/sec per leg

The following tables describe the requirements for standard applications.

| Minimum Code Height for Omnidirectional Reading (mm) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Conveyor Speed (m/s)** | | **0.5** | **1** | **1.5** | **2** | **2.5** | **3** |
| **2/5 Interleaved Code Resolution (mm)** | **0.25** | 11 | 13 | 15 | 17 | 19 | 21 |
| | **0.30** | 12 | 14 | 16 | 18 | 20 | 23 |
| | **0.33** | 13 | 15 | 17 | 19 | 21 | 23 |
| | **0.38** | 14 | 16 | 18 | 20 | 23 | 25 |
| | **0.50** | 18 | 19 | 22 | 24 | 26 | 28 |
| | **0.72** | 24 | 26 | 27 | 29 | 32 | 34 |
| | **1.00** | 33 | 34 | 35 | 37 | 39 | 41 |

Ratio 3:1

**Table 1**

| Minimum Code Height for Omnidirectional Reading (mm) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Conveyor Speed (m/s)** | | **0.5** | **1** | **1.5** | **2** | **2.5** | **3** |
| **Code 39 Code Resolution (mm)** | **0.25** | 9 | 11 | 13 | 15 | 17 | 19 |
| | **0.30** | 10 | 11 | 14 | 16 | 18 | 20 |
| | **0.33** | 11 | 12 | 14 | 16 | 18 | 20 |
| | **0.38** | 12 | 13 | 15 | 17 | 19 | 21 |
| | **0.50** | 15 | 16 | 17 | 19 | 21 | 23 |
| | **0.72** | 20 | 22 | 23 | 24 | 25 | 27 |
| | **1.00** | 27 | 28 | 29 | 30 | 32 | 33 |

Ratio 3:1; Interdigit = Module Size

**Table 2**

| Minimum Code Height for Omnidirectional Reading (mm) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Conveyor Speed (m/s)** | | **0.5** | **1** | **1.5** | **2** | **2.5** | **3** |
| **Code 128 – Ean 128 Code Resolution (mm)** | **0.25** | 8 | 10 | 12 | 14 | 16 | 18 |
| | **0.30** | 9 | 11 | 13 | 15 | 17 | 19 |
| | **0.33** | 9 | 11 | 13 | 15 | 18 | 20 |
| | **0.38** | 10 | 12 | 14 | 16 | 18 | 20 |
| | **0.50** | 12 | 14 | 16 | 18 | 20 | 22 |
| | **0.72** | 16 | 18 | 19 | 21 | 24 | 26 |
| | **1.00** | 22 | 23 | 24 | 26 | 28 | 30 |

**Table 3**

| Minimum Code Height for Omnidirectional Reading (mm) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Conveyor Speed (m/s)** | | **0.5** | **1** | **1.5** | **2** | **2.5** | **3** |
| **Codabar Code Resolution (mm)** | **0.25** | 8 | 10 | 12 | 14 | 16 | 18 |
| | **0.30** | 9 | 11 | 13 | 15 | 17 | 19 |
| | **0.33** | 9 | 11 | 13 | 15 | 18 | 20 |
| | **0.38** | 10 | 12 | 14 | 16 | 18 | 20 |
| | **0.50** | 13 | 14 | 16 | 18 | 20 | 22 |
| | **0.72** | 17 | 18 | 19 | 21 | 24 | 26 |
| | **1.00** | 23 | 24 | 25 | 26 | 28 | 30 |

Ratio 3:1; Interdigit = Module Size

**Table 4**

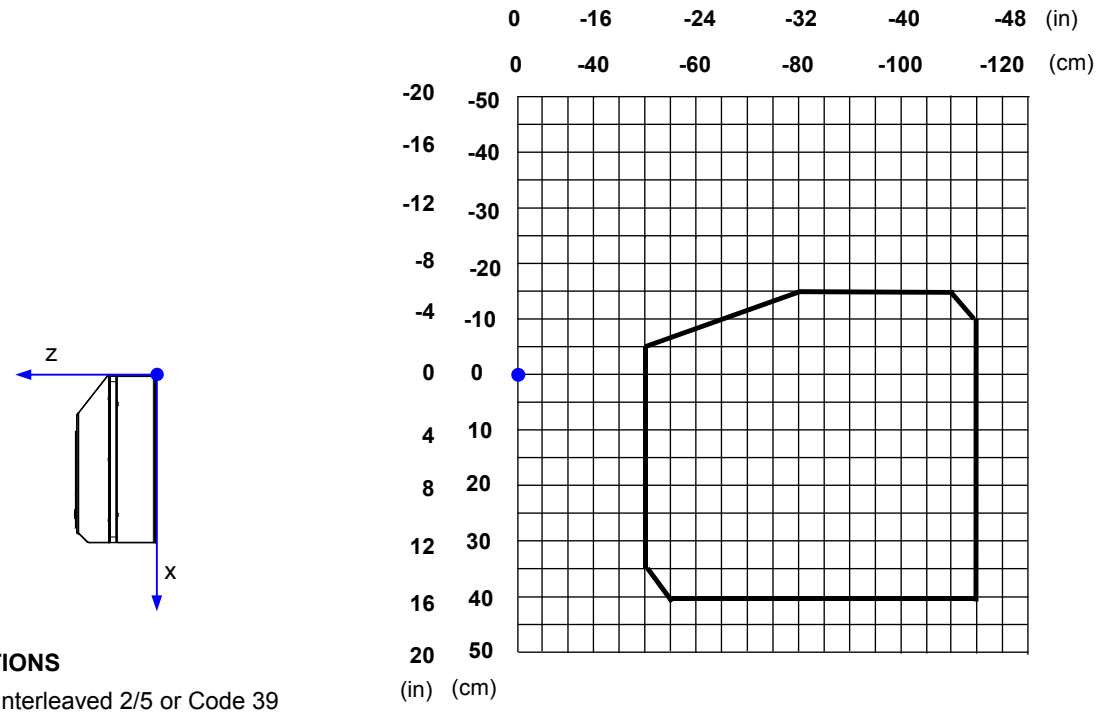
| Minimum Code Height for Omnidirectional Reading (mm) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Conveyor Speed (m/s)** | | **0.5** | **1** | **1.5** | **2** | **2.5** | **3** |
| **EAN 8-13, UPC-A Code Resolution (mm)** | **0.25** | 8 | 9 | 11 | 13 | 15 | 18 |
| | **0.30** | 9 | 10 | 12 | 14 | 16 | 18 |
| | **0.33** | 9 | 10 | 12 | 14 | 16 | 19 |
| | **0.38** | 10 | 11 | 13 | 15 | 17 | 19 |
| | **0.50** | 12 | 13 | 14 | 16 | 19 | 21 |
| | **0.72** | 16 | 18 | 19 | 20 | 21 | 23 |
| | **1.00** | 22 | 23 | 24 | 25 | 26 | 27 |

**Table 5**

## READING DIAGRAMS

**Note:** x = 0 and z = 0 correspond to the edge of the DX8200A scanner as shown in the figure below.

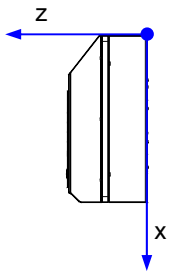
**DX8200A-3X3X (0.25 mm/10 mils)**

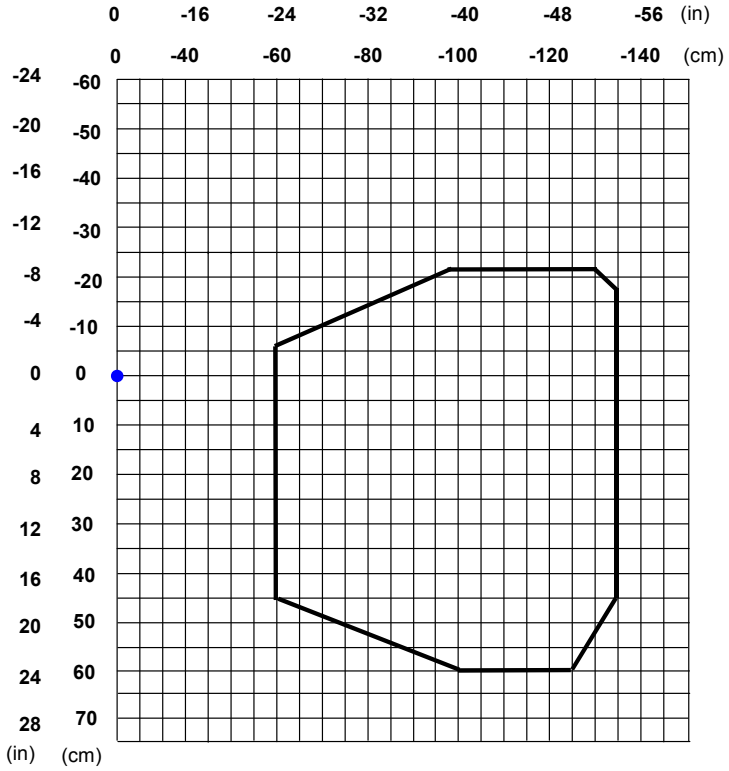



**CONDITIONS**

Code = Interleaved 2/5 or Code 39
PCS = 0.90

## DX8200A-3X2X (0.30 mm/12 mils)

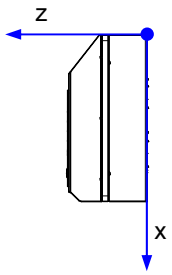


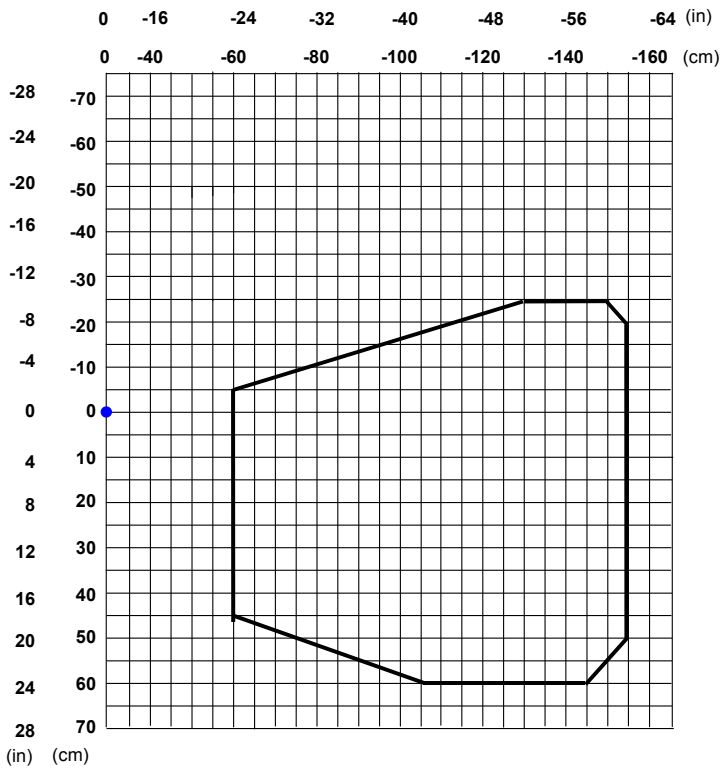




**CONDITIONS**

Code = Interleaved 2/5 or Code 39
PCS = 0.90

## DX8200A-3X1X (0.38 mm/15 mils)

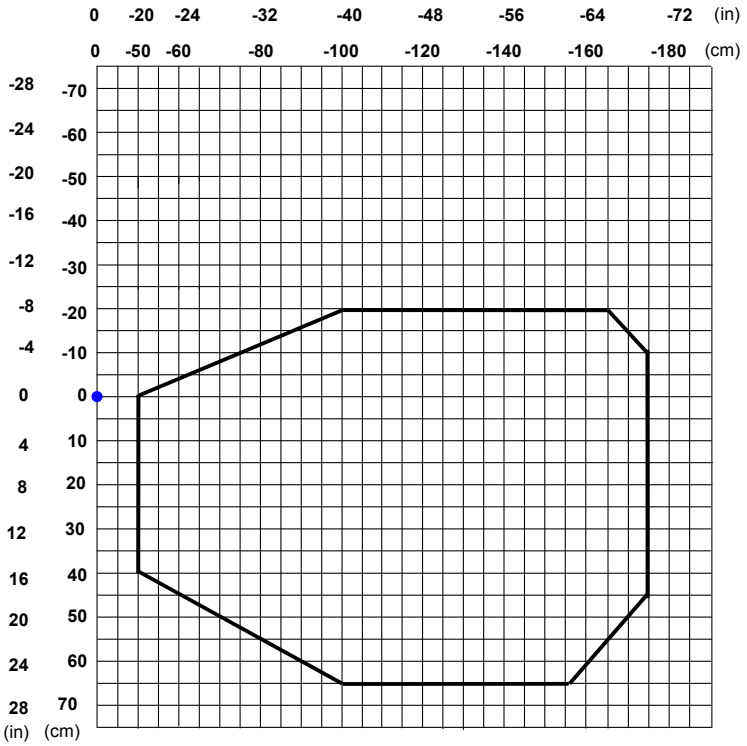


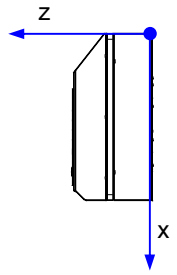




**CONDITIONS**

Code = Interleaved 2/5 or Code 39
PCS = 0.90

**DX8200A-3X1X (0.50 mm/20 mils)**




**CONDITIONS**

Code = Interleaved 2/5 or Code 39
PCS = 0.90

# COMPLIANCE

See the DX8200A Reference Manual for the Declaration of Conformity.

## LASER SAFETY

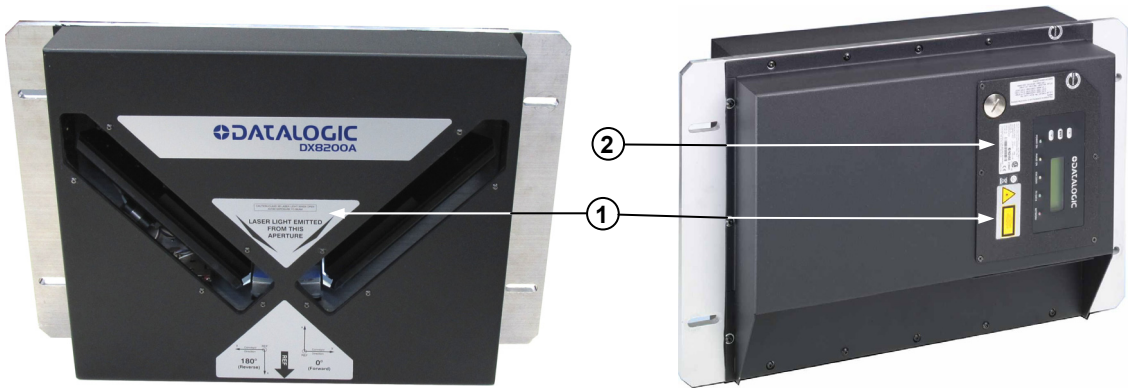



**Figure E**

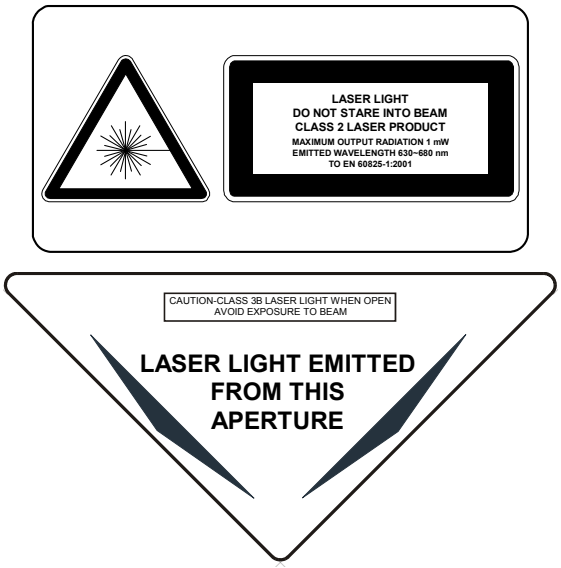
(1) Warning and Device Class Label (2) Device Identification Label

The scanner is classified as a Class 2 laser product according to EN60825-1 regulations and as a Class II laser product according to CDRH regulations.

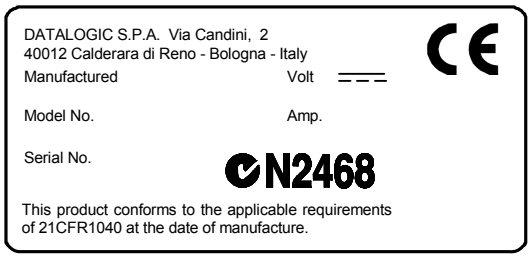
Disconnect the power supply when opening the device during maintenance or installation to avoid exposure to hazardous laser light.

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).




**Warning and Device Class Labels**




**Device Identification Label**

The laser diodes used in this device are classified as Class 3B laser products according to EN 60825-1 regulations and as Class IIIb laser products according to CDRH regulations. Any violation of the optic parts in particular can cause radiation up to the maximum level of the laser diode (30 mW at 630~680 nm).

## FCC COMPLIANCE

Modifications or changes to this equipment without the expressed written approval of Datalogic could void the authority to use the equipment.

This device complies with PART 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference which may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## POWER SUPPLY

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

For DX8200A VDC models:

- This scanner is intended to be supplied by either a UL Listed power supply marked 'Class 2' or 'LPS', output rated 20 - 30 V dc, minimum 1.75 A or by a UL Listed computer with LPS outputs.
- This scanner must be supplied by a Class II Power Supply Unit conforming to the EN 60950 safety regulation.

**Line Fuse Replacement (VAC Models only)**

**CAUTION**

*Caution - double pole/neutral fusing.*

*For continued protection against risk of fire, replace with same type and rating of fuse (250V, 3.15 A).*

## CE COMPLIANCE

**Warning:**
This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

# PATENTS

This product is covered by one or more of the following patents.

U.S. patents: Re. 36,251; 5,483,051; 5,992,740; 6,347,740 B1; 6,177,979 B1; 6,394,352 B1; 6,443,360 B1; 6,527,184 B1; 6,629,639 B2; 6,688,524 B1; 6,742,710 B2; 7,161,685 B1; 5,028,772; 5,124,538; 5,466,921; 5,548,107; 6,206,289 B1; 6,669,091 B2; 7,000,838 B2.

European patents: 652,530 B1; 789,315 B1; 851,376 B1; 926,615 B1; 959,426 B9; 1,096,416 B1; 1,217,571 B1; 1,363,228 B1; 1,607,901 B1.

Japanese patents: 3,793,585; 4,033,958; 4,376,353.

Additional patents pending.