

## Industrial Bar Code Scanners

**ID-NET™**

Enhanced  
Connectivity

**Xpress  
interface**

Ease of use

**Genius™**

Configuration  
SW Tool



ACR4™  
technology



Smart focus  
adjustment



### APPLICATIONS

- Automated warehousing
- Reading on pallets
- Picking systems
- Automated shop floor
- Items and parts tracking
- Process control systems
- Outdoor application (Subzero models)
- Frozen industry (Subzero models)

### ADVANTAGES

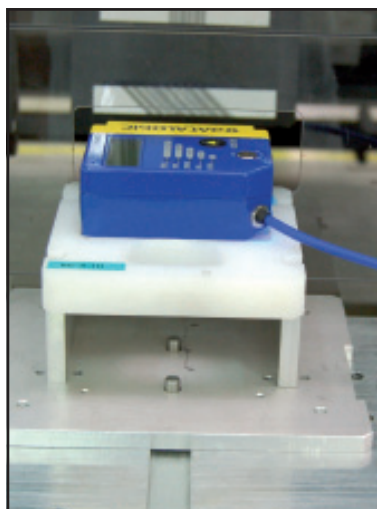
- Performance optimization and extended reading area through smart focus adjustment
- DIGITECH™ technology permits full software control over signal processing parameters. Scanner setup can therefore be optimized simply loading optimized software recipes, thus enabling excellent performance in all reading conditions
- Improved reading rate on low contrast barcodes and excellent performance at high skew angles
- ACR4™ reconstruction technology increases the maximum tilt angle and overall read rate on damaged barcodes
- Overall cost reduction and simple network wiring thanks to ID-NET™ high-speed connectivity
- Extended Fieldbus and Ethernet connectivity through a complete range of modular connection boxes and accessories
- Subzero versions extended operating temperature range -35 +50 °C

## HIGHLIGHTS

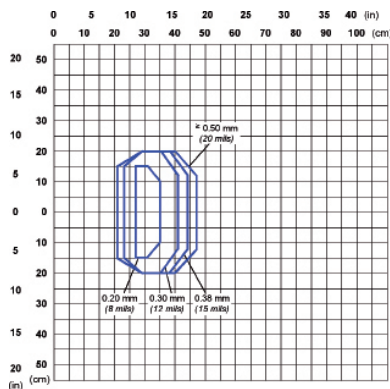
- Smart Focus adjustment for flexible reading area selection
- DIGITECH™ technology enables excellent reading performance
- ACR4™ reconstruction technology improves reading of damaged barcodes
- Linear and integrated Oscillating Mirror versions
- Intuitive X-PRESS™ interface for quick scanner installation and troubleshooting
- Easy setup through multilanguage Genius™ software tool
- ID-NET™ embedded interface for high-speed communication networks
- Multilanguage display improves scanner monitoring and diagnostics
- Total ambient light immunity thanks to high frequency laser modulation
- IP65 rugged industrial housing
- Subzero versions available

## GENERAL DESCRIPTION

DS4800 features excellent reading performance satisfying all main identification needs of manufacturing plants, especially in automated shop floor and automated warehousing applications. Through smart focus adjustment, DS4800 allows to optimize the reading performance based on reading distance. Thanks to DIGITECH™ technology and optimized reading recipes, DS4800 provides excellent reading performance on low quality and low contrast barcodes as well as at high skew angles. DS4800 is equipped with the innovative X-PRESS™ Human Machine Interface, granting easy scanner installation and maintenance. This interface clearly presents status and diagnostic information by means of a five LED bar graph, while the single multi-function key gives immediate access to relevant functions such as Test Mode, Auto Setup, Auto Learn and Focus Adjustment. Thanks to subzero models, DS4800 can operate smoothly down to -35°C. Internal heater and de-frost window heater assures correct operation anywhere in the allowed -35 + 50 °C range. With its rugged construction, IP65 protection class, 0 to 50°C operating temperature range and total ambient light immunity, DS4800 is the ideal product for industrial applications.



## READING DIAGRAMS

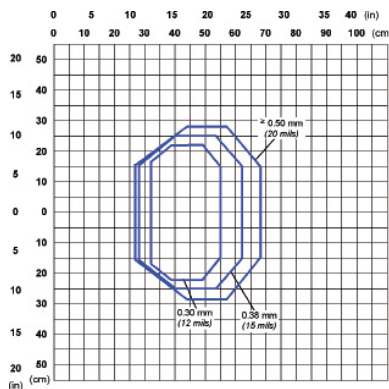


**DS4800-1000**

Focus Distance 30 cm / 11.81 in (Near)

| CONDITIONS          |   |                |
|---------------------|---|----------------|
| Code                | = | Code 128       |
| PCS                 | = | 0.90           |
| Pitch angle         | = | 0°             |
| Skew angle          | = | 15°            |
| Tilt angle          | = | 0° to 30°      |
| * Scan Speed        | = | 800 scans/sec. |
| * Reading Condition | = | Standard       |
| * Reading Mode      | = | Linear         |

\* Parameter selectable in Genius™

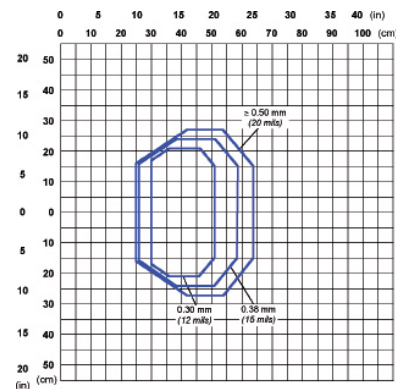


**DS4800-1000**

Focus Distance 40 cm / 15.75 in (Medium)

| CONDITIONS          |   |                |
|---------------------|---|----------------|
| Code                | = | Code 128       |
| PCS                 | = | 0.90           |
| Pitch angle         | = | 0°             |
| Skew angle          | = | 15°            |
| Tilt angle          | = | 0° to 30°      |
| * Scan Speed        | = | 800 scans/sec. |
| * Reading Condition | = | Standard       |
| * Reading Mode      | = | Linear         |

\* Parameter selectable in Genius™

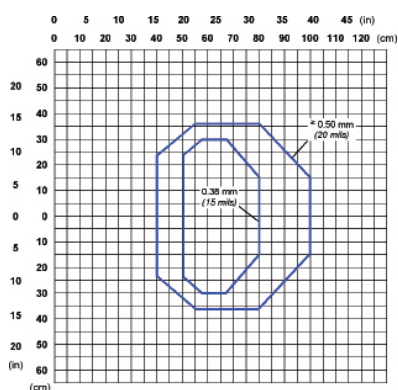


**DS4800-1100**

Focus Distance 40 cm / 15.75 in (Medium)

| CONDITIONS          |   |                |
|---------------------|---|----------------|
| Code                | = | Code 128       |
| PCS                 | = | 0.90           |
| Pitch angle         | = | 0°             |
| Skew angle          | = | 15°            |
| Tilt angle          | = | 0° to 30°      |
| * Scan Speed        | = | 800 scans/sec. |
| * Reading Condition | = | Standard       |
| * Reading Mode      | = | Linear         |

\* Parameter selectable in Genius™

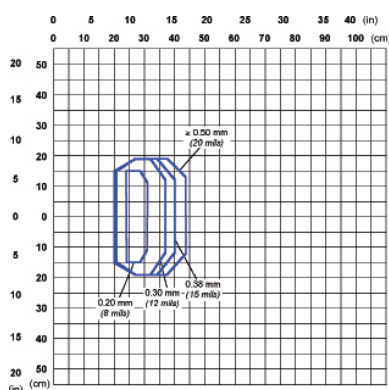


**DS4800-1000**

Focus Distance 60 cm / 23.62 in (Far)

| CONDITIONS          |   |                |
|---------------------|---|----------------|
| Code                | = | Code 128       |
| PCS                 | = | 0.90           |
| Pitch angle         | = | 0°             |
| Skew angle          | = | 15°            |
| Tilt angle          | = | 0° to 30°      |
| * Scan Speed        | = | 800 scans/sec. |
| * Reading Condition | = | Standard       |
| * Reading Mode      | = | Linear         |

\* Parameter selectable in Genius™

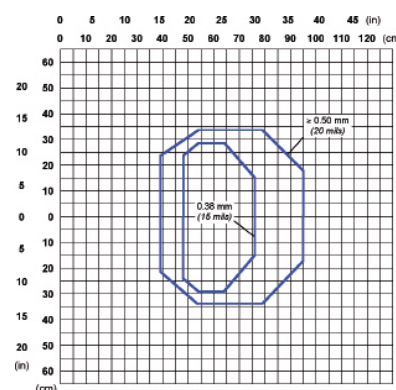


**DS4800-1100**

Focus Distance 30 cm / 11.81 in (Near)

| CONDITIONS          |   |                |
|---------------------|---|----------------|
| Code                | = | Code 128       |
| PCS                 | = | 0.90           |
| Pitch angle         | = | 0°             |
| Skew angle          | = | 15°            |
| Tilt angle          | = | 0° to 30°      |
| * Scan Speed        | = | 800 scans/sec. |
| * Reading Condition | = | Standard       |
| * Reading Mode      | = | Linear         |

\* Parameter selectable in Genius™



**DS4800-1100**

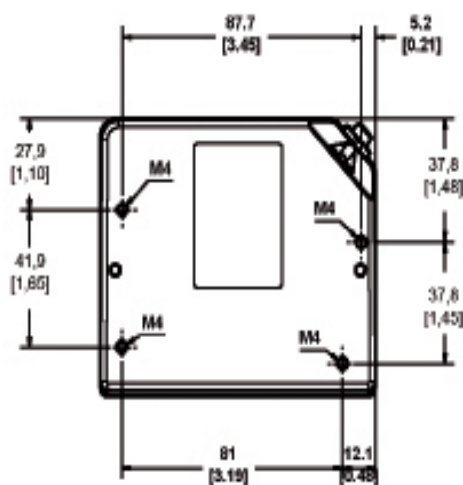
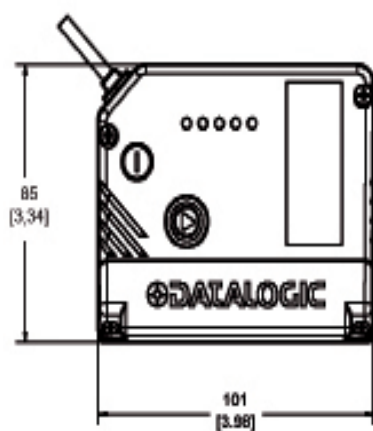
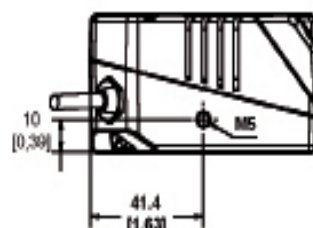
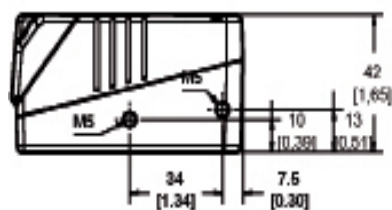
Focus Distance 60 cm / 23.62 in (Far)

| CONDITIONS          |   |                |
|---------------------|---|----------------|
| Code                | = | Code 128       |
| PCS                 | = | 0.90           |
| Pitch angle         | = | 0°             |
| Skew angle          | = | 15°            |
| Tilt angle          | = | 0° to 30°      |
| * Scan Speed        | = | 800 scans/sec. |
| * Reading Condition | = | Standard       |
| * Reading Mode      | = | Linear         |

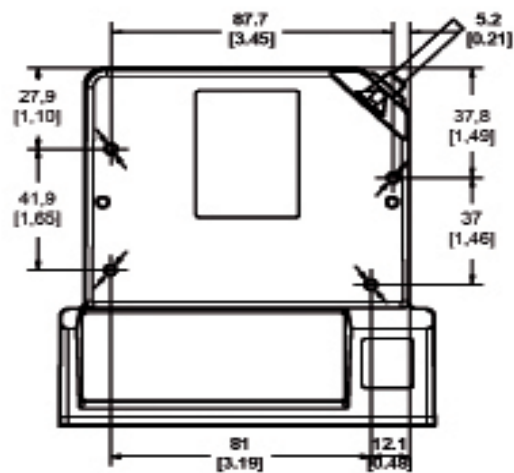
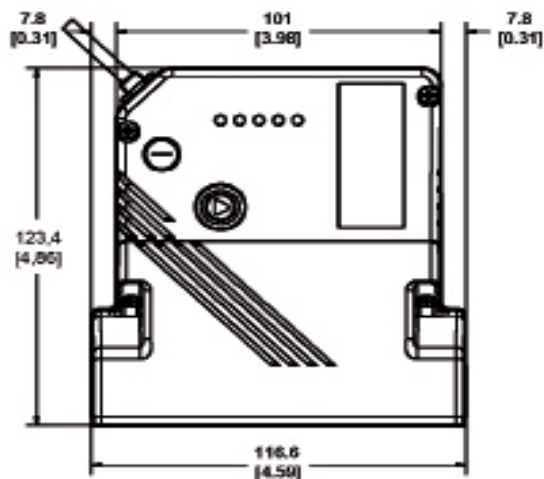
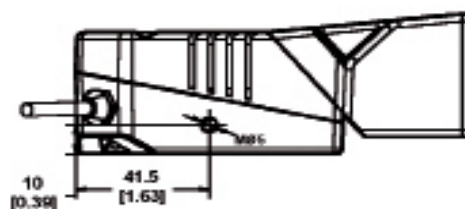
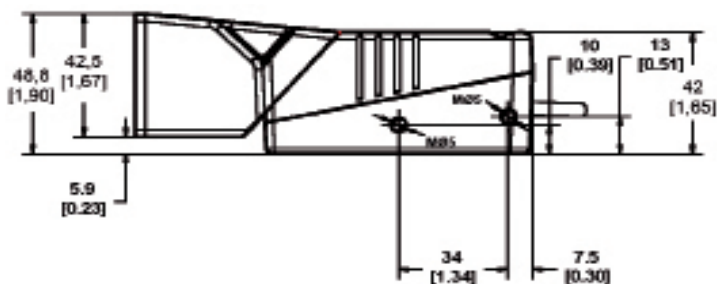
\* Parameter selectable in Genius™

## DIMENSIONS

### LINEAR MODELS



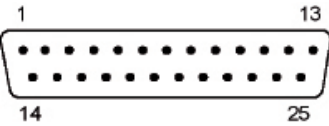
### OSCILLATING MIRROR MODELS



mm / inch

ELECTRICAL CONNECTIONS

All DS4800 models are equipped with a cable terminated by a 25-pin male D-sub connector for connection to the power supply and input/output signals.



25-pin Female D-sub Connector

| 25-PIN D-SUB MALE CONNECTOR PINOUT |                                           |       |                                           |                   |
|------------------------------------|-------------------------------------------|-------|-------------------------------------------|-------------------|
| Pin                                | Name                                      |       | Function                                  |                   |
| 13,9                               | VDC                                       |       | Power supply input voltage +              |                   |
| 25,7                               | GND                                       |       | Power supply input voltage -              |                   |
| 1                                  | CHASSIS                                   |       | Cable shield connected to chassis         |                   |
| 18                                 | I1A                                       |       | External Trigger A (polarity insensitive) |                   |
| 19                                 | I1B                                       |       | External Trigger B (polarity insensitive) |                   |
| 6                                  | I2A                                       |       | Input 2 A (polarity insensitive)          |                   |
| 10                                 | I2B                                       |       | Input 2 B (polarity insensitive)          |                   |
| 8                                  | O1+                                       |       | Output 1 +                                |                   |
| 22                                 | O1-                                       |       | Output 1 -                                |                   |
| 11                                 | O2+                                       |       | Output 2 +                                |                   |
| 12                                 | O2-                                       |       | Output 2 -                                |                   |
| 20                                 | RX                                        |       | Auxiliary Interface RX                    |                   |
| 21                                 | TX                                        |       | Auxiliary Interface TX                    |                   |
| 23                                 | ID+                                       |       | ID-NET™ network +                         |                   |
| 24                                 | ID-                                       |       | ID-NET™ network -                         |                   |
| 14,15,16,17                        | NC                                        |       | Not Connected                             |                   |
| Pin                                | RS232                                     | RS232 | RS485 Full-Duplex                         | RS485 Half-Duplex |
| 2                                  | Main Interface Signals<br>(SW selectable) | TX    | TX+                                       | RTX+              |
| 3                                  |                                           | RX    | * RX+                                     |                   |
| 4                                  |                                           | RTS   | TX-                                       | RTX-              |
| 5                                  |                                           | CTS   | * RX-                                     |                   |

\* Do not leave floating, see DS4800 Reference Manual for connection details.

## MODELS AND ACCESSORIES

| MODELS    |                                             |
|-----------|---------------------------------------------|
| Order No. | Description                                 |
| 931061318 | DS4800-1000 ADJ FOCUS, LINEAR               |
| 931061321 | DS4800-1100 ADJ FOCUS, OSCILLATING MIRROR   |
| 931061322 | DS4800-1005 ADJ FOCUS, LINEAR, SUBZERO      |
| 931061325 | DS4800-1105 ADJ FOCUS, OSC. MIRROR, SUBZERO |

| ACCESSORIES |                                 |
|-------------|---------------------------------|
| Order No.   | Description                     |
| 3ACC1837    | BK-4000 L-SHAPE BRACKET (5 PCS) |
| 3ACC1838    | BK-4001 U-SHAPE BRACKET (5 PCS) |

## TECHNICAL DATA

| MODELS                   | DS4800-100X                                                                               |              | DS4800-110X                               |              |
|--------------------------|-------------------------------------------------------------------------------------------|--------------|-------------------------------------------|--------------|
| DIMENSIONS               | 101 x 85 x 42 mm (3.97 x 3.33 x 1.65 in)                                                  |              | 117 x 123 x 48 mm (4.60 x 4.84 x 1.89 in) |              |
| WEIGHT                   | 570 gr. (20.11 oz.)                                                                       |              | 780 gr. (27.9 oz.)                        |              |
| CASE MATERIAL            | Aluminum                                                                                  |              |                                           |              |
| OPERATING TEMPERATURE    | 0 to 50 °C (32 to 122 °F)                                                                 |              |                                           |              |
| STORAGE TEMPERATURE      | -35 to 50 °C (-31 to 122 °F) for subzero models                                           |              |                                           |              |
| HUMIDITY                 | 90% non condensing                                                                        |              |                                           |              |
| VIBRATION RESISTANCE     | IEC 68-2-6 test FC 1.5mm; 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         | IP65                                                                                      |              |                                           |              |
| LIGHT SOURCE             | Visible laser diode (630 to 680 nm)                                                       |              |                                           |              |
| AMBIENT LIGHT REJECTION  | 30000 LUX                                                                                 |              |                                           |              |
| SCANNING SPEED           | 600 to 1000 scan/s                                                                        |              |                                           |              |
| RESOLUTION               | Up to 0.20 mm (8 mils)                                                                    |              |                                           |              |
| READING DISTANCE         | Up to 1000 mm on 0.50 mm (20 mils) barcodes                                               |              |                                           |              |
| DEPTH OF FIELD           | Up to 600 mm on 0.50 mm (20 mils) barcodes                                                |              |                                           |              |
| APERTURE ANGLE           | 50 degrees                                                                                |              |                                           |              |
| READABLE CODES           | Code 2/5, Code39, Code93, Code128, EAN/UPC, EAN128, Codabar, Pharmacode, Plessey, ISBT128 |              |                                           |              |
| MULTILABEL READING       | Up to 10 different symbologies during the same reading phase                              |              |                                           |              |
| COMMUNICATION INTERFACES | Main port RS232/RS422/RS485 up to 115.2 Kbit/s                                            |              |                                           |              |
|                          | Auxiliary port RS232 up to 115.2 kbps                                                     |              |                                           |              |
|                          | ID-NET™ port up to 1 Mbps                                                                 |              |                                           |              |
| CONNECTIVITY MODES       | Pass Through, Master/Slave, Multiplexer                                                   |              |                                           |              |
| DIGITAL INPUTS           | Two SW programmable, optocoupled, NPN/PNP                                                 |              |                                           |              |
| DIGITAL OUTPUTS          | Two SW programmable, event driven, optocoupled                                            |              |                                           |              |
| DEVICE PROGRAMMING       | X-PRESS™ Human Machine Interface                                                          |              |                                           |              |
|                          | Windows™ based SW (Genius™) via serial link                                               |              |                                           |              |
|                          | Serial Host Mode Programming sequences                                                    |              |                                           |              |
| OPERATING MODES          | ‘On-line’, ‘Serial On-line’, ‘Automatic’, ‘Continuous’, ‘Test’, ‘Verifier’                |              |                                           |              |
| USER INTERFACE           | X-PRESS™ Human Machine Interface                                                          |              |                                           |              |
|                          | Programmable Push Button, LEDs (Status, Com, Trigger, Good, Ready, Power On)              |              |                                           |              |
| DISPLAY                  | 16 x 2 characters                                                                         |              |                                           |              |
| LASER CLASSIFICATION     | IEC 825-1 Class2; CDRH Class II                                                           |              |                                           |              |
| LASER CONTROL            | Safety system to turn laser off in cases of motor slowdown or failure                     |              |                                           |              |
| MOTOR CONTROL            | Motor On/Off command string and Motor Speed SW programmable                               |              |                                           |              |
|                          | DS4800-1000                                                                               | DS4800-1005  | DS4800-1100                               | DS4800-1105  |
| POWER SUPPLY             | 10 to 30 VDC                                                                              | 24 Vdc ± 10% | 10 to 30 VDC                              | 24 Vdc ± 10% |
| POWER CONSUMPTION        | 6 W                                                                                       | 28.8 W       | 7.5 W                                     | 32 W         |