



Lightweight



Compact Dimensions



Direct and 90° reading



IDENTIFICATION

## APPLICATIONS

- Chemical and biomedical analysis machines
- ATM (Automatic Teller Machines)
- Print & Apply systems
- OEM integration in automatic machines

## ADVANTAGES

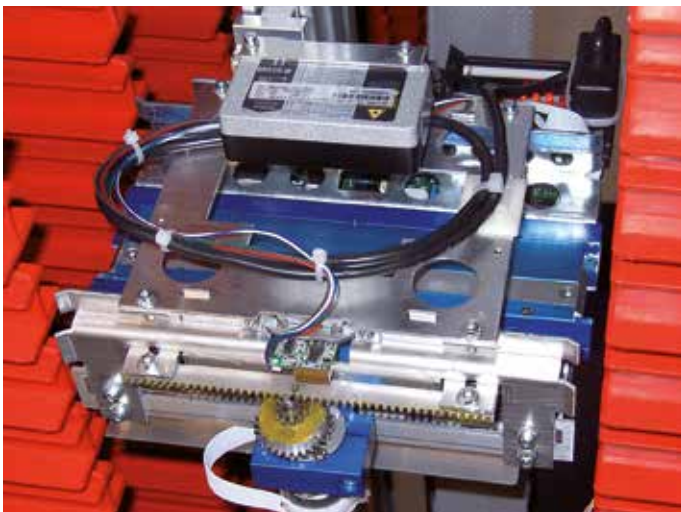
- Extended product applicability in high throughput processes thanks to a scanning speed up to 500 scans/s
- Excellent performance on high resolution codes with reduced minimum reading distance
- The motor can be switched on and off via software commands depending on application needs
- Allows flexible installation thanks to compact dimensions and direct/90° reading window options

## HIGHLIGHTS

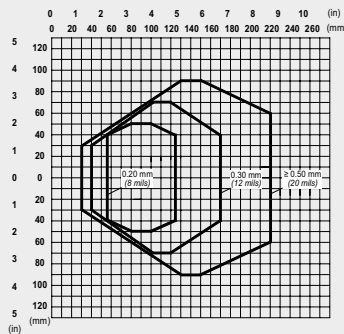
- Cost effective
- Very compact dimensions
- Direct and 90° reading window models for smart mounting
- Wide reading field at a short reading distance
- Motor on/off control via software commands
- Dual serial interface
- Scanning speed up to 500 scans/s
- Light weight (< 100g / 3.53 oz. without cable)
- IP65 (NEMA 4) protection class

## GENERAL DESCRIPTION

- DS1100 is specifically designed to be easily integrated in OEM equipments: very compact dimensions, light weight, direct and 90° reading window models availability allow flexible mounting and positioning in narrow spaces.
- DS1100 is ideal for use in chemical and biomedical analysis machines, pharmaceutical code analyzers, automatic teller machines, printing systems, video rental and film processing machines. It can also be used on assembly lines, as well as simple work in progress and quality control applications.

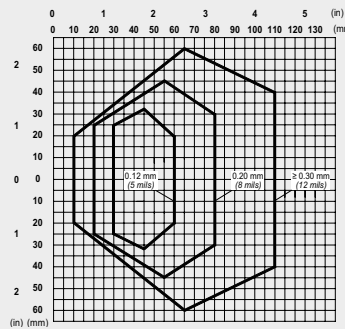


## READING DIAGRAMS



### CONDITIONS

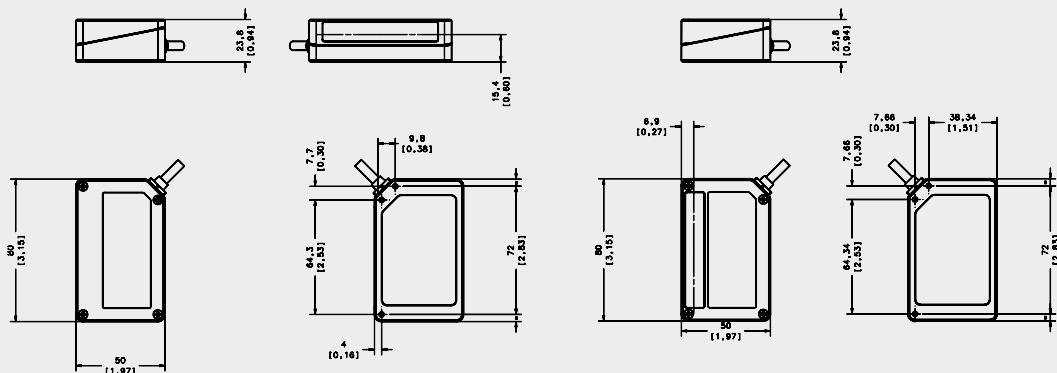
Code = Interleaved 2/5 or Code 39  
 PCS = 0.90  
 Pitch angle = 0°  
 Skew angle = 15°  
 Tilt angle = 0°



### CONDITIONS

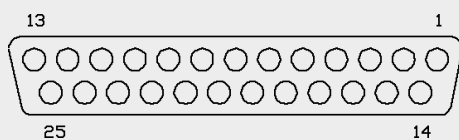
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## DIMENSIONS



mm / inch

## ELECTRICAL CONNECTIONS



### 25-PIN D-SUB CONNECTOR PINOUT

| Pin              | Name      | Function                     |
|------------------|-----------|------------------------------|
| 9,13             | VS        | Power supply input voltage + |
| 25               | GND       | Power supply input voltage - |
| 1 *              | CHASSIS   | Chassis Ground               |
| 2, 21            | TXAUX     | TX RS232 Auxiliary Interface |
| 3, 20            | RXAUX     | RX RS232 Auxiliary Interface |
| 4                | RTX485-   | RTX- RS485 Main Interface    |
| 5                | RTX485+   | RTX+ RS485 Main Interface    |
| 7                | SGND      | Signal Ground                |
| 8                | OUT1 +    | Output 1 +                   |
| 11               | OUT2 +    | Output 2 +                   |
| 18               | IN1 -     | Input 1 -                    |
| 19               | EXT TRIG- | External trigger -           |
| 12, 22           | GND       | Input/Output reference       |
| 23, 24           | NU        | Not Used                     |
| 6,10,14,15,16,17 | NC        | Not Connected                |

\* Pins 1 and 25 are connected together internally.

## MODELS AND ACCESSORIES

| MODELS      |                                                       |
|-------------|-------------------------------------------------------|
| Order No.   | Description                                           |
| 939101000   | DS1100-1100 STD RESOLUTION, RS232+RS485, LINEAR       |
| 939101010   | DS1100-1101 STD RESOLUTION, RS232+RS485, LINEAR, 90°  |
| 939101020   | DS1100-1110 STD RESOLUTION, RS232+RS485, R1           |
| 939101030   | DS1100-1111 STD RESOLUTION, RS232+RS485, R1, 90°      |
| 939101040   | DS1100-2100 HIGH RESOLUTION, RS232+RS485, LINEAR      |
| 939101050   | DS1100-2101 HIGH RESOLUTION, RS232+RS485, LINEAR, 90° |
| 939101060   | DS1100-2110 HIGH RESOLUTION, RS232+RS485, R1          |
| 939101070   | DS1100-2111 HIGH RESOLUTION, RS232+RS485, R1, 90°     |
| ACCESSORIES |                                                       |
| Order No.   | Description                                           |
| 93ACC1040   | DC5-2200 DC CONVERTER 4-30 VDC TO 5 VDC               |

## TECHNICAL DATA

|                          |                                                                         |                                         |
|--------------------------|-------------------------------------------------------------------------|-----------------------------------------|
| Dimensions               | 80 x 50 x 22 mm (3.15 x 1.97 x 0.89 in.)                                |                                         |
| Weight                   | <100 g (<3.53 oz.) without cable                                        |                                         |
| Case material            | Magnesium (body) + Polycarbonate (cover)                                |                                         |
| Operating temperature    | 0 to 45°C (32 to 113 °F)                                                |                                         |
| Storage temperature      | -20 to 70 °C (-4 to 158 °F)                                             |                                         |
| 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)                                     |                                         |
| Scanning speed           | 500 scans/sec                                                           |                                         |
| Resolution               | DS1100-11xx<br>Up to 0.20 mm (8 mils)                                   | DS1100-21xx<br>Up to 0.12 mm (5 mils)   |
| Reading distance         | Up to 220 mm on 0.50 mm (20 mils) codes                                 | Up to 110 mm on 0.30 mm (12 mils) codes |
| Depth of field           | Up to 190 mm on 0.50 mm (20 mils) codes                                 | Up to 100 mm on 0.30 mm (12 mils) codes |
| Aperture angle           | 70 degrees                                                              |                                         |
| Raster aperture          | 15 mm (0.6 in) at 220 mm (8.7 in)                                       |                                         |
| Readable codes           | Code 2/5, Code39, Code93, Code128, EAN/UPC, EAN128, Codabar, Pharmacode |                                         |
| Multilabel reading       | Up to 6 different symbologies during the same reading phase             |                                         |
| Communication interfaces | Main port RS485 Half Duplex up to 115.2 Kbit/s                          |                                         |
|                          | Auxiliary port RS232 up to 115.2 kbps                                   |                                         |
| Digital inputs           | Two SW programmable (NPN only)                                          |                                         |
| Digital outputs          | Two SW programmable, event driven                                       |                                         |
| Device programming       | Windows™ based SW (WinHost™) via serial link                            |                                         |
|                          | Serial Host Mode Programming sequences                                  |                                         |
| Operating modes          | 'On-line', 'Serial On-line', 'Automatic', 'Test', 'Verifier'            |                                         |
| Led indicators           | Power On, Good Read, Trigger, Data TX, Laser On                         |                                         |
| 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             |                                         |
| Power supply             | 5 VDC (4 to 30 VDC with converter)                                      |                                         |
| Power consumption        | 1.5 W max                                                               |                                         |