DATALOGIC™

DATALOGIC AUTOMATION

IDENTIFICATION

GENERAL CATALOGUE

Embedded Bar Code Readers
Industrial Bar Code Scanners
Vision Systems
Image-Based ID readers

DATALOGIC

DATALOGIC AUTOMATION

DATALOGIC AUTOMATION FOR INDUSTRIAL AUTOMATION

Datalogic Automation is one of the worldwide leading producers of automatic identification, detection and marking solutions for industrial automation. The ideal partner for companies that aim at developing a real competitive advantage through product traceability and automation of manufacturing processes in industrial and logistics fields.

The five Product Groups:

- IDENTIFICATION (BAR CODE & RFID)
- SENSORS
- SAFETY & MEASUREMENT
- VISION
- LASER MARKING

that today form Datalogic Automation, guarantee product focalization aimed at satisfying specific customer applications as well as offering a very wide and complete product range for Industrial Automation, particularly in the following sectors:

- AUTOMOTIVE
- HEALTHCARE - PHARMACEUTICAL
- FOOD - BEVERAGE - TOBACCO
- ELECTRONICS & SOLAR
- GENERAL MANUFACTURING
- TRANSPORTATION & LOGISTICS

Identification Product Group

The automatic identification products have been developed in order to supply compact and extremely functional solutions. Datalogic Automation offers all the technologies available today: state-of –the-art laser scanners and imagers for bar code reading (traditional and 2D) together with RFID systems.

Sensor Product Group

Datalogic Automation is specialized in the development and manufacturing of photoelectric, luminescence and contrast sensors, slot sensors for label detection, fiber optic amplifiers, area sensors, inductive sensors and temperature controllers.

Safety & Measurement Product Group

Datalogic Automation offers a complete range of safety light curtains. Extremely reliable and flexible, these light curtains protect operators that pass, stay near or operate directly with dangerous automatic machines. Datalogic Automation also supplies a wide range of measurement sensors, commonly used in level and position control, as well as in the precise and accurate detection of the material dimensions during working.

Vision Product Group

The Vision Product Group includes vision sensors for inspection and 2D readers for identification based on the state-of-the-art technology, that however remain easy to use:

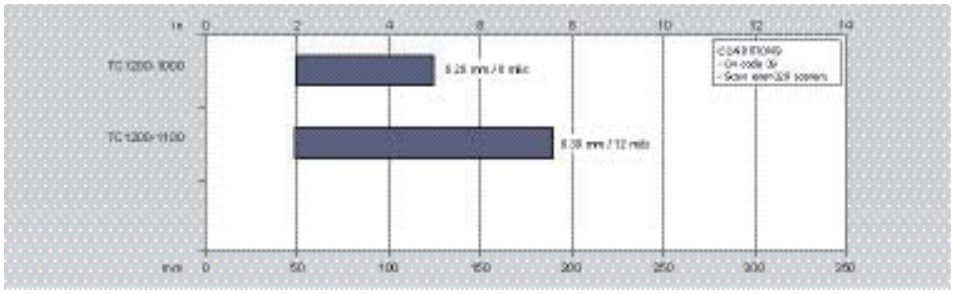
Laser Marking Product Group

Datalogic Automation supplies a wide array of solutions able to suit all marking needs: CO2, Fiber and DPSS laser technology. The DPSS technology is available in two different versions (infra-red laser), with harmonic duplication (green laser) and harmonic triplication (UV laser). The complete range of technologies available satisfy all laser marking applications on a wide spectrum of materials: metal alloys – such as steel, titanium and aluminum – plastic materials, as well as organic materials such as paper, cardboard or fabric, leather, wood, glass, silicon and rare earth elements.

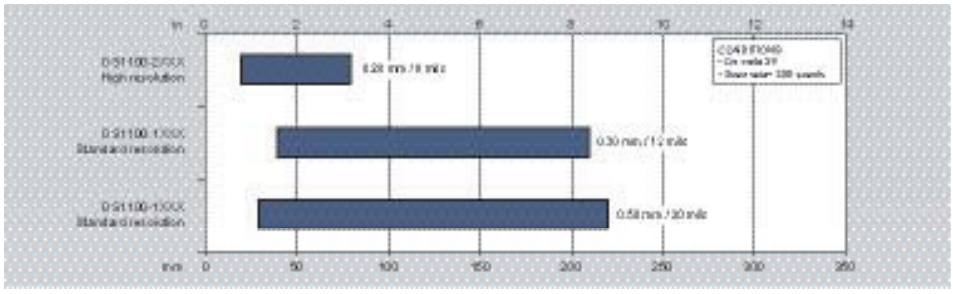
Index

READING DISTANCE AND DEPTH OF FIELD

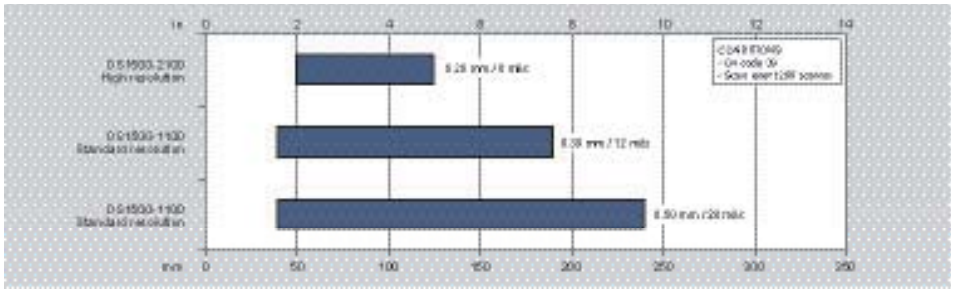
TC1200



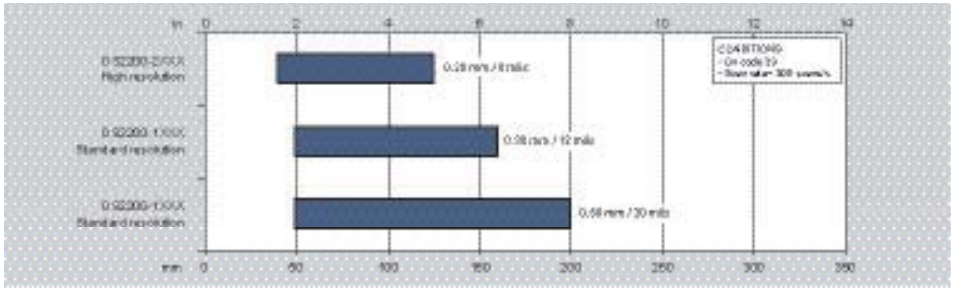
DS1100



DS1500



DS2200

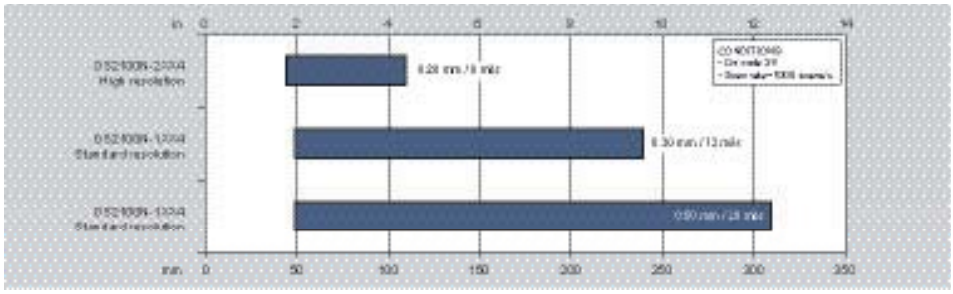


For the real sizes of the products shown here,
please check the “Dimensions” section on the following pages.

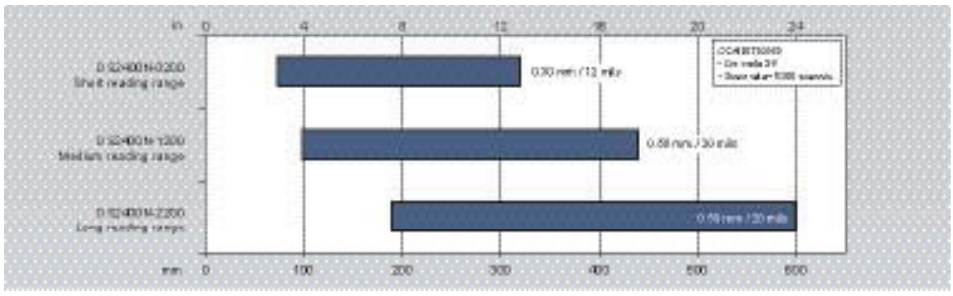
Communication I/O	Decoding Features & Technologies	Mechanical	Output scan pattern	Applications
• Input trigger • Two digital outputs • USB or serial (RS232) versions	• 1 D codes • Linear CCD engine • Full digital signal elaboration • GS1 ready	• Dimensions TC1200-1x00: 57x31x50 mm (2.24x1.22x1.97 in) • Dimensions TC1200-0x00: 50x20.8x43 mm (1.97x0.82x1.69 in)	• Linear	• Laboratory automation • Chemical and biomedical analysis machines • ATM (Automatic Teller Machines) • OEM integration in automatic machines
• Two digital inputs • Two digital outputs • Dual serial interface	• 1 D codes • Laser engine	• Dimensions: 80x50x24 mm (3.15x1.9x1 in) • Weight without cable: <100 g. (3.53 oz.) • Case material: Magnesium (body) + Polycarbonate (cover)	• Linear • Raster	• Chemical and biomedical analysis machines • ATM (Automatic Teller Machines) • OEM integration in automatic machines
• One digital input • Two digital outputs • Dual serial RS232 interface or single serial RS485 interface	• 1 D codes • Laser engine • ACR-Lite	• Dimensions: 40 x 30 x 22 mm (1.57 x 1.18 x 0.86 in) • Weight without cable: 44 g (1.55 oz.) • Case material: ZAMA (zinc, aluminium, magnesium alloy)	• Linear	• OEM integration in automatic machines • Chemical and biomedical analysis machines • Document handling machines • Print & Apply systems • Packaging machines • ATL (Automated Tape Libraries)
• One digital input • Two digital outputs • Dual serial interface	• 1 D codes • Laser engine	• Dimensions: 50x40x28 mm (1.97x1.57x1.1 in) • Weight: 160 g. (5.64 oz.) • Case material: Die-cast zinc	• Linear • Raster	• OEM integration in automatic machines • Chemical and biomedical analysis machines • Document handling machines • Print & Apply systems • Packaging machines • ATL (Automated Tape Library)

READING DISTANCE AND DEPTH OF FIELD

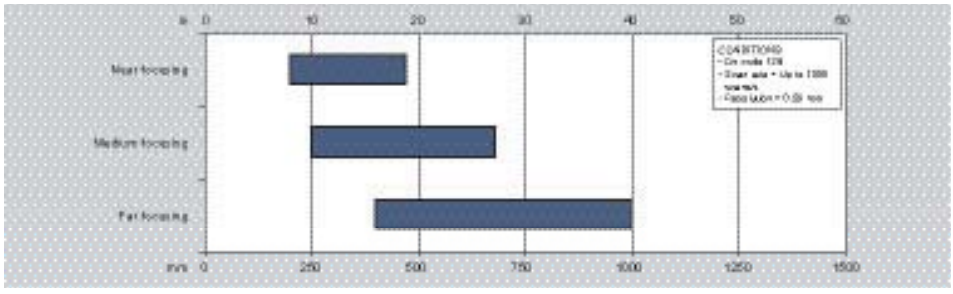
DS2100N



DS2400N



DS4800

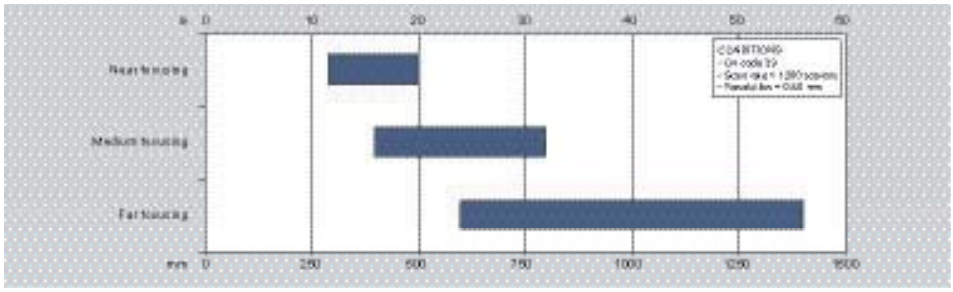


For the real sizes of the products shown here,
please check the “Dimensions” section on the following pages.

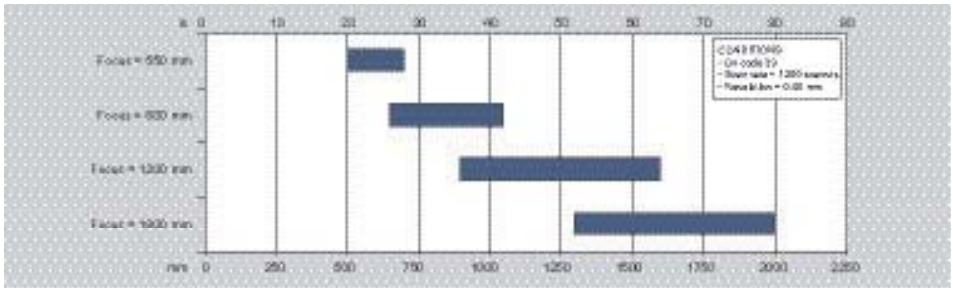
Communication I/O	Decoding Features & Technologies	Mechanical	Output scan pattern	Applications
• Two digital inputs • Two digital outputs • Dual serial interface • ID-NET™ Interface	• 1D codes • ACR-Lite • GS1 ready • Laser engine • X-PRESS™ • ID-NET™	• Dimensions: 68 x 84 x 34 mm (2.68 x 3.31 x 1.34 in) • Weight: 330 g (11.6 oz.) • Case material: Aluminum	• Linear • Raster • Oscillating mirror	• Small conveyor sorting • Picking systems • Items and parts tracking • Process control and packaging • Document Handling machines • Print & Apply systems
• Two digital inputs • Two digital outputs • Dual serial interface • ID-NET™ Interface	• 1D codes • ACR-Lite • GS1 ready • Laser engine • X-PRESS™ • ID-NET™	• Dimensions: 68 x 84 x 34 mm (2.68 x 3.31 x 1.34 in) • Weight: 330 g (11.6 oz.) • Case material: Aluminum	• Linear • Raster • Oscillating mirror	• Small conveyor sorting • Picking systems • Items and parts tracking • Process control and packaging • Print & Apply systems • Automated shop floor
• Two digital inputs • Two digital outputs • Dual serial interface • ID-NET™ Interface	• 1D codes • ACR4™ • GS1 ready • Laser engine • X-PRESS™ • ID-NET™ • Smart focus adjustment	• Dimensions: 85 x 101 x 42 mm (3.3 x 4 x 1.7 in) • Weight: 570 g (20.1 oz.) • Case material: Aluminium	• Linear • Oscillating mirror	• Automated warehousing • Reading on pallets • Picking systems • Automated shop floor • Items and parts tracking • Process control systems

READING DISTANCE AND DEPTH OF FIELD

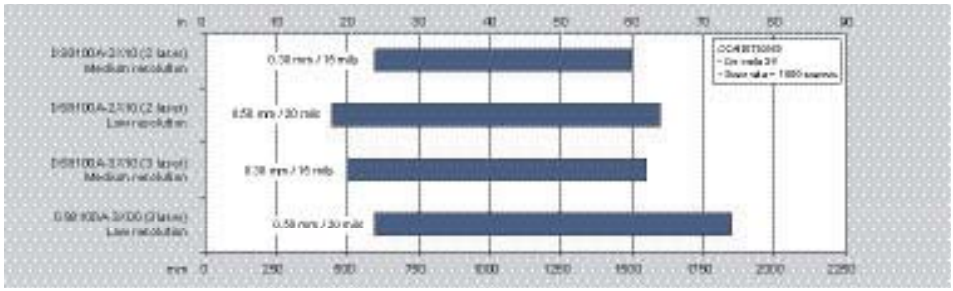
DS6300



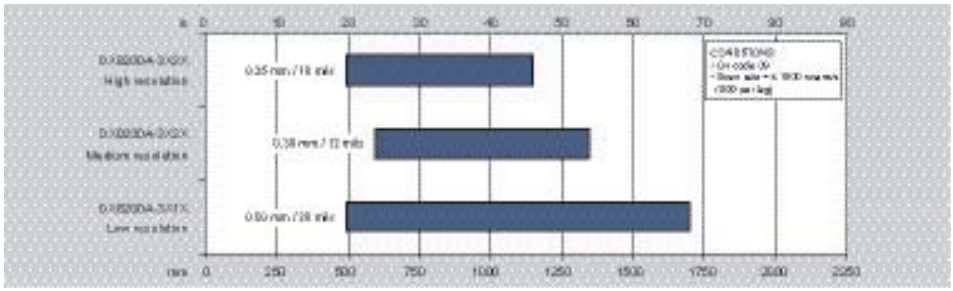
DS6400



DS8100A



DX8200A



NVS9000™

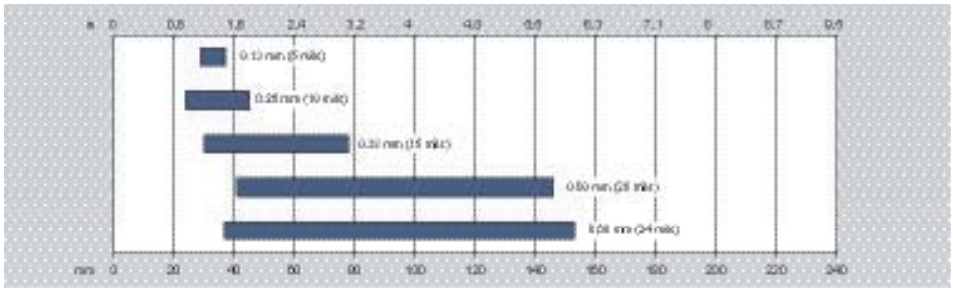
Reading performance depends on application requirements
(i.e. code resolution, conveyor speed, etc.).
For further information and feasibility analysis please contact
your local Datalogic office.

For the real sizes of the products shown here,
please check the “Dimensions” section on the following pages.

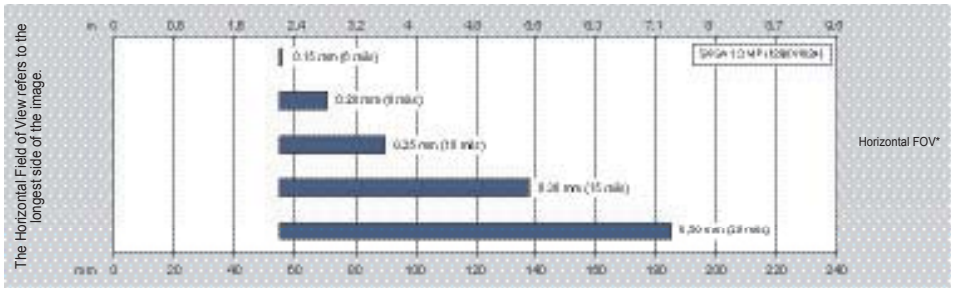
Communication I/O	Decoding Features & Technologies	Mechanical	Output scan pattern	Applications
• Four digital inputs • Three digital outputs • Dual serial interface • Lonworks interface • Ethernet/Devicenet/ Profibus interfaces (optional)	• 1D codes • ACR4™ • GS1 ready • Laser engine • Smart focus adjustment	• Dimensions: 110x113x99 mm (4.33x4.45x3.9 in) • Weight: 1.5 kg (3.3 lb) • Case material: Aluminium	• Linear • Oscillating mirror	• Automated warehousing • Reading on forklift trucks • Picking systems • Automated shop floor
• Four digital inputs • Three digital outputs • Dual serial interface • Lonworks interface • Ethernet/Devicenet/ Profibus interfaces (optional)	• 1D codes • ACR4™ • GS1 ready • Laser engine • Flash™ • Pack-Track™	• Dimensions: 110x113x99 mm (4.33x4.45x3.9 in) • Weight: 1.5 kg (3.3 lb) • Case material: Aluminium	• Linear • Oscillating mirror	• Automated warehousing • Medium conveyor sorting • Reading on forklift trucks • Picking systems • Automated shop floor
• Four digital inputs • Three digital outputs • Dual serial interface • Built-in Connectivity: Ethernet (optional) Serial interfaces: RS232, RS485 - 4 digital input - 3 digital output	• 1D codes • ACR4™ • GS1 ready • Astra™ • Laser engine • Pack-Track™	• Dimensions: 217 x 172.5 x 126.6 mm (8.54 x 6.79 x 4.98 in) • Weight: 5 kg (11 lbs) • Case material: Aluminium	• Linear • Oscillating mirror	• Postal/Courier parcel sorting and tracking • Automated warehousing identification systems • Airport baggage sorting systems • Cargo applications • Loading/unloading systems
• Four digital inputs • Three digital outputs • Built-in Connectivity: Ethernet, Profibus, Devicenet (optional) Serial interfaces: RS232, RS485 - 4 digital input - 3 digital output	• 1D codes • ACR4™ • Omnidirectional reading • GS1 ready • Astra™ • Laser engine • Pack-Track™	• Dimensions: 470 x 300 x 141 mm 18.50 x 11.81 x 5.55 in) • Weight: 11 kg (24 lbs. 3 oz.) • Case material: Steel	• X-pattern	• Postal/Courier parcel sorting and tracking • Automated warehousing identification systems • Airport baggage sorting systems • Cargo applications • Loading/unloading systems
• Presence sensor input, Speed sensor input • 4 Input / 4 Output NPN or PNP open collector input/output, optoisolated • Gigabit Ethernet, C-Link	• 2D, 1D, stacked and postal symbologies • Omnidirectional reading • High speed • Linear CCD engine	• Dimensions: 320x216x206 mm (12.6”x8.5”x8.11”) • Weight: 11Kg (24 lbs) • Case material: Alluminium die casting	Linear imager	• Postal and logistics applications • Distribution applications • Garment and multimedia sorting • Reverse logistic processes • Suitable for OCR and video-coding

HORIZONTAL FIELD OF VIEW

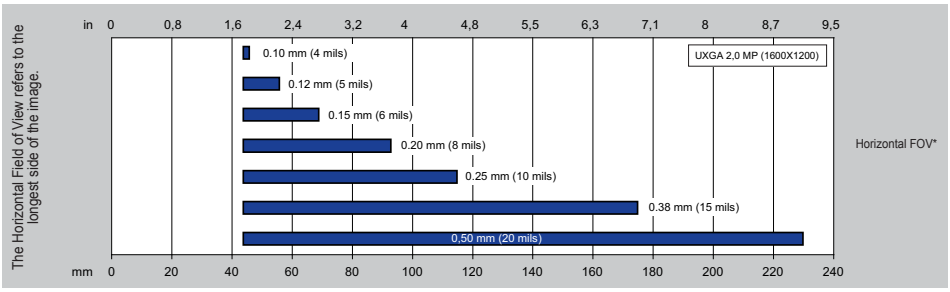
MATRIX 210™



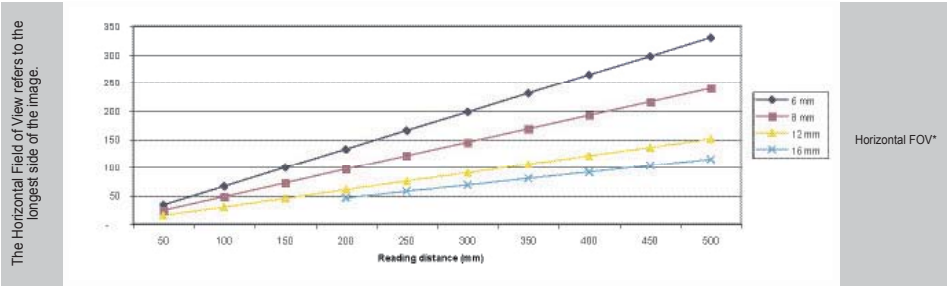
MATRIX 410™ 400-0x0



MATRIX 410™ 600-0x0



DATAVS2 ID



For the real sizes of the products shown here,
please check the “Dimensions” section on the following pages.

Communication I/O	Decoding Features	Mechanical	Output scan pattern	Applications
• Two digital inputs • Two digital outputs • Integrated Ethernet • Dual serial interface • ID-NET™ port up to 1 Mbps • USB Serial (supports USB 2.0)	• 2D, 1D, Stacked and Postal symbologies • Symbol verification • DPM reading • Omnidirectional reading	• MATRIX 200 21x-1x0 dimensions: 50 x 25 x 45 mm (1.97 x 0.98 x 1.77 in) • MATRIX 200 21x-0x0 dimensions: 50 x 31 x 45 mm (1.97 x 1.22 x 1.77 in) • Weight: 60g. (2.1 oz.) without cable • Case material: Aluminium	• Area imager	Automotive • DPM reading and verification Electronics • PCBs assembly process • Electronic products tracking Pharmaceutical & Chemical • Pharmaceutical Manufacturing • Chemical & Biomedical Analysis Machines Postal & Distribution • Document Handling • CD/DVD Identification Food & Beverage Work-in-Progress Traceability • Reverse Vending Machines
• Two digital inputs • Two digital outputs • Integrated Ethernet • Dual serial interface • ID-NET™ port up to 1 Mbps • USB Serial (supports USB 2.0)	• 2D, 1D, Stacked and Postal symbologies • Symbol verification • DPM reading • Omnidirectional reading	• Dimensions: 123 x 60.5 x 87 mm (4.85 x 2.38 x 3.43 in.) with lens cover • Weight: 482 g. (17 oz.) with lens and internal illuminator • Case Material: Aluminium	• Area imager	Automotive • DPM reading and verification Electronics • Large PCBs tracking • Electronic products tracking Distribution & Retail • Presentation scanner • Warehouse applications Pharmaceutical & Chemical • Medical devices traceability • Pharmaceutical Industries • Chemical & Biomedical analysis machines Food & Beverage • Work in Progress Traceability • Code Quality Control
• Two digital inputs • Two digital outputs • Integrated Ethernet • Dual serial interface • ID-NET™ port up to 1 Mbps • USB Serial (supports USB 2.0)	• 2D, 1D, Stacked and Postal symbologies • Symbol verification • DPM reading • Omnidirectional reading	• Dimensions: 123 x 60.5 x 87 mm (4.85 x 2.38 x 3.43 in.) with lens cover • Weight: 482 g. (17 oz.) with lens and internal illuminator • Case Material: Aluminium	'- Area imager	Automotive • DPM reading and verification • Tires sorting Electronics • Large PCBs tracking • Electronic products tracking Distribution & Retail • Presentation scanner • Warehouse applications Pharmaceutical & Chemical • Medical devices traceability • Pharmaceutical Industries • Chemical & Biomedical analysis machines Food & Beverage • Work in Progress Traceability • Code Quality Control
• One digital input • Three digital outputs • Ethernet • RS232	• 1D, PDF417, ECC200 codes • OCV • Omnidirectional reading	• Dimension: 60x52x40 mm (2.36x2.05x1.57 in) • Weight: 125 g (4.4 oz.) • Case material: Aluminium/Plastic	• Area imager	• Food & Beverage - Work in Progress Traceability • Labelling -Print & Apply systems • Pharmaceutical & Chemical - Medical devices traceability - Chemical & Biomedical analysis machines

TECHNOLOGIES

GENIUS™

GENIUS™

Windows-based configuration program providing an easy way to set up the barcode scanner and perform functions such as remote control, SW updates or any kind of scanner check-up. Defined configuration directly stored in the reader and communication protocol independent from the physical interface means the reader can be considered a remote object to be configured and monitored.

ACR-Lite

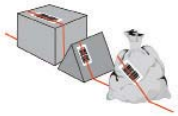
ACR-Lite

Based on ACR4™, it is a scaled version to run on entry level readers, offering the possibility to effectively read codes positioned close-to-linear, small height codes, damaged codes, or poor print quality codes.

ACR4™ (Advanced Code Reconstruction - 4th Generation)

The traditional method for barcode reading could be called “Linear Reading”. In this case, the laser beam crosses the barcode symbol from beginning to end. Thanks to ACR4™ it is no longer necessary for the laser beam to cross the label from beginning to end. With just a set of partial scans on the label (obtained using the motion of the label itself), the barcode reader is able to ‘reconstruct’ the barcode.

PACKTRAK™



PACKTRACK™

Datalogic patented parcel tracking system which improves the reading features in omnidirectional stations. Packtrack™ is used to read and correctly assign codes read on different packs when placed in the scanner Reading Area at the same time. PacktrackTM, allowing really short gaps between nearby objects, drammatically enhances
the productivity of the reading system

ASTRA™

ASTRA™ (Automatically SwiTched Reading Area™)

The new Datalogic technology based on a multi-laser architecture and a fixed mounted optic system which concentrates the multiple laser emissions in a single laser beam. As each laser emitter is focused on a specific range of the reading area, a sophisticated electronic controller selects the best focused laser emitter with respect to the code to read. This enables reading medium-high density codes in a large reading area on very fast conveyors.

ID-NET™

ID-NET™

The ID-NET™ network is a high-speed, built-in, up to 1 Mbit/s reader interconnection-dedicated interface ID-NET™ can be used in addition to the standard Main and Auxiliary serial interfaces. ID-NET™ can be configured as a Single station/Multiple readers: this enables local connection of up to 16 readers reading different sides of the same target. In addition, ID-NET™ can be configured as a Multiple stations/Single reader: this enables connection of up to 32 readers reading objects placed on independent conveyors.

X-PRESS™

X-PRESS™

The intuitive X-PRESS™ Human Machine Interface designed to improve ease of installation and maintenance. Status and diagnostic information are clearly presented by a five LED bar-graph and the multi-function key providing immediate access to relevant functions: Test Mode (for bar code verification), AutoLearn (for automatic code setting) and AutoSetup (for self optimization of reading performance).

VISISET™

VISISET™

Windows-based configuration SW providing an immediate path to properly setting up the imager. It is suitable for parameter setting, code analysis, general service operation and firmware upgrade.

BLUE DIAMONDS™

BLUE DIAMONDS™

Patented optical technology which enables easy focusing and positioning of the reader. The Blue Diamonds™ are accessed through the X-PRESS™ Interface.

FLASH™

FLASH™

The new dynamic focusing system implemented in the DS6400, FLASH™, is able to move the focus position rail to rail, from the minimum position to the maximum position, in less than 10 msec. In typical applications, where a DOF <1 metre is required, the focus position is adjusted in 4 msec. With FLASH™, the DS6400 is able to cover a reading range of more than 2 metres.

IDENTIFICATION
Laser Bar Code Scanner

Embedded Bar Code Readers

Lightweight


Compact Dimensions

APPLICATIONS

- Hand free solutions for factory automation
- Lab automation and biomedical analysis machines
- Kiosk and atms terminal service
- Access control and ticketing
- Game and Lottery

ADVANTAGES

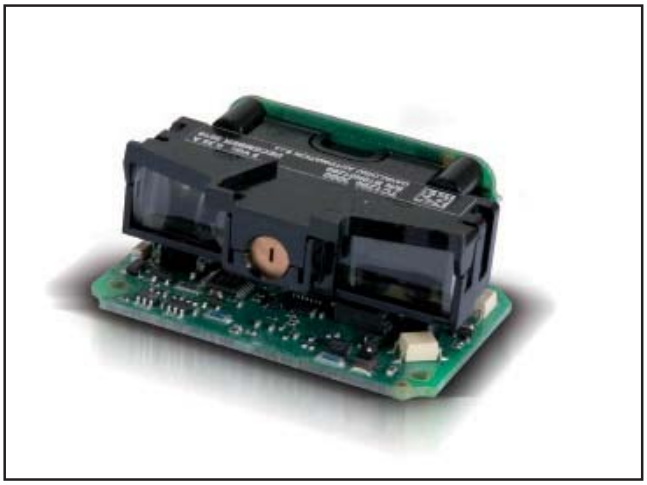
- Cost effective linear CCD reader for entry-level applications
- Excellent performance on high resolution codes with reduced minimum reading distance
- Scan engine model
- USB/RS232 connectivity options
- Excellent performances on Bad Quality Codes

HIGHLIGHTS

- Linear CCD Technology
- Static reading applications
- Excellent Reading performance on bad label codes
- Extended reading distance and long DOF
- High Scan Rate @320 scans/sec
- Very high resolution codes up to 3 mils
- Serial and USB standard Interface
- Multiple Operative conditions
- IP64 protection class enclosure
- Scan Engine module version
- Easy set up with Aladdin software tool or Programming Bar Code Labels.

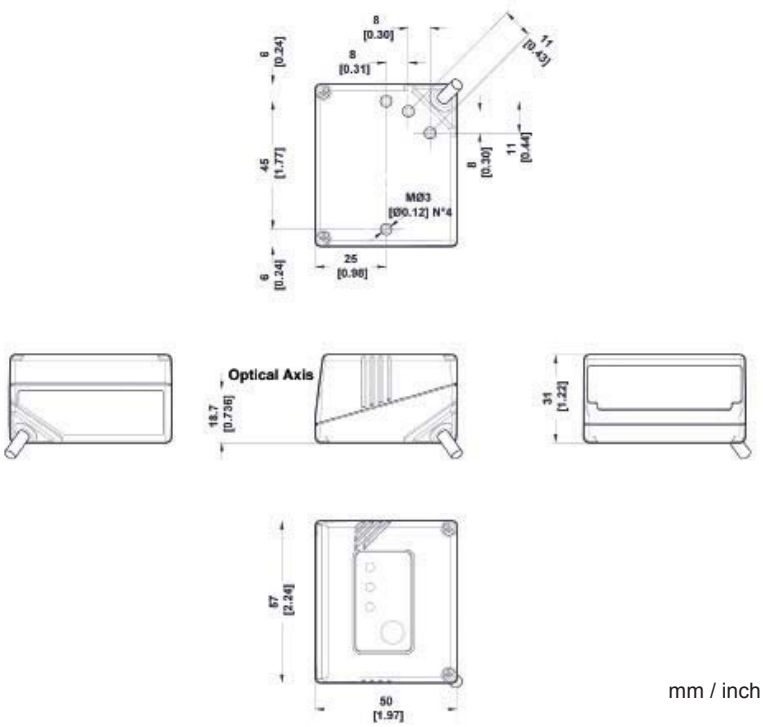
GENERAL DESCRIPTION

Datalogic's TC 1200 Compact CCD Reader provides cost-effective solution for many OEM applications and entry level Factory Automation, combining the benefits of CCD technology, excellent decoding capability and maximum flexibility. TC1200 has great optics features with wide scan angle and long depth of field also on very high resolution codes. Its high-performance CCD executes 320 scans/sec, and renewed decoding capabilities increase throughput on hard-to-read, poor or damaged codes. TC1200 is characterized by maximum reliability (MTFB > 240.000 hours) and very low power consumption 1.75W. TC1200 can set different operative modes in order to easily work in a large variety of operative conditions. USB connection and serial port interface combined with opto-coupled input/output lines satisfy all the need for external communication with any type of controller. TC 1200 is also available as "Scan Engine" very useful for embedded applications where the size is a key factor (electronics module without case). Aladdin™ configuration software (via PC) or direct configuration through Bar codes, they both offer user-friendly approach to start-up and set-up procedure.



READING DIAGRAMS

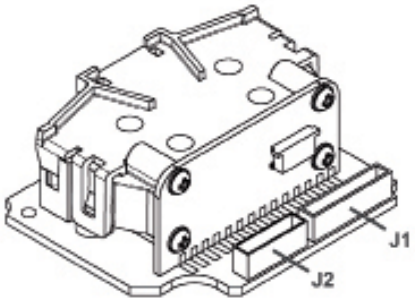
DIMENSIONS



mm / inch

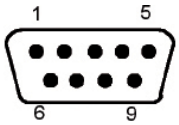
ELECTRICAL CONNECTIONS

The TC1200-0X00 Scan Engine is equipped with an 8-pin and a 10-pin DF13 connector for connection to the power supply and input/output signals. The details of the connector pins are indicated in the following table:



10 and 8-pin Connectors

The TC1200-1000 Scanner is equipped with a 9-pin Male D-Sub connector for connection to the power supply and input/output signals. The details of the connector pins are indicated in the following table



J1		
Pin	**Signal**	**Description**
1	D-	USB Data negative
2	D+	USB Data positive
3	GND	power ground
4	GND	power ground
5	TX	transmit data
6	RTS	NOT USED
7	RX	receive data
8	CTS	NOT USED
9	VCC	+5 Vdc
10	GND	power ground

J2		
Pin	**Signal**	**Description**
1	GND	power ground
2		NC
3	OUT2 +	Output 2 positive
4	OUT1/2 -	Output 1/2 negative
5	OUT1 +	Output 1 positive
6		NC
7	EXT TRIG A	External Trigger Input (polarity insensitive)
8	EXT TRIG B	External Trigger Input (polarity insensitive)

J1		
Pin	**Signal**	**Description**
1	VCC	+5 Vdc
2	GND	Ground
3	RX	Receive Data
4	TX	Transmit Data
5	OUT1 +	Output signal 1, positive
6	OUT1/2 -	Output signal 1/2, negative
7	OUT2 +	Output signal 2, positive
8	EXT TRIG A	External Trigger Input (polarity insensitive)
9	EXT TRIG B	External Trigger Input (polarity insensitive)

MODELS AND ACCESSORIES

MODELS	
Order No.	**Description**
939501108	TC1200-1000 CCD READER, RS232
939501109	TC1200-1100 CCD READER, USB
939501110	TC1200-0000 SCAN ENGINE CCD READER, RS232
939501111	TC1200-0100 SCAN ENGINE CCD READER, USB

ACCESSORIES	
Order No.	**Description**
93A051388	CAB-TC1200 to CBX 10-30 VDC PWR Supply
93ACC1891	GFC1200 - 105° REFLECTING MIRROR TC1200

TECHNICAL DATA

	TC1200-1X00	**TC1200-0X00**
DIMENSIONS	57x31x50 mm (2.24x1.22x1.97 in)	50x20.8x43 mm (1.97x0.82x1.69 in)
WEIGHT	**RS232:** 120 g. (4.2 oz.) **USB:**105 g. (3.7 oz.) (without Cable)	30 g. (1 oz.)
CASE MATERIAL	ABS	N/A
OPERATING TEMPERATURE	0° to +50 °C (+32° to +122 °F)	
STORAGE TEMPERATURE	-20° to +70 °C (-4° to +158 °F)	
HUMIDITY	90% non condensing	
PROTECTION CLASS	IP64	N/A
COMMUNICATION INTERFACE	RS232	USB
Max Scans/sec	320	
Max resolution	0.10 mm (4mils)	
READABLE SYMBOLOGIES	EAN/UPC, Code 39, Code 32, Code 128, GS1-128, ISBT 128, Inter- leaved and Standard 2 of 5, Codabar, ABC Codabar, GS1 Databar (Omnidirectional, Limited, Expanded), Code 93, Code 11, MSI	
DIGITAL INPUTS	One (trigger input), optocoupled, polarity insensitive	
DIGITAL OUTPUTS	Two (software programmable), optocoupled, MAX Voltage=30V, MAX Current = 30mA	
OPERATING MODES	OnLine, Serial OnLine, Automatic, Automatic Object Sense, Test	
USER INTERFACE	3 LEDs (Power, Good read, Trigger) 1 Button for manual triggering	
POWER SUPPLY	5 Vdc ± 5%	
POWER CONSUMPTION	350 mA; 1.75 W	

Embedded Bar Code Readers


Lightweight


Compact Dimensions


Direct and 90° reading

APPLICATIONS

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

ADVANTAGES

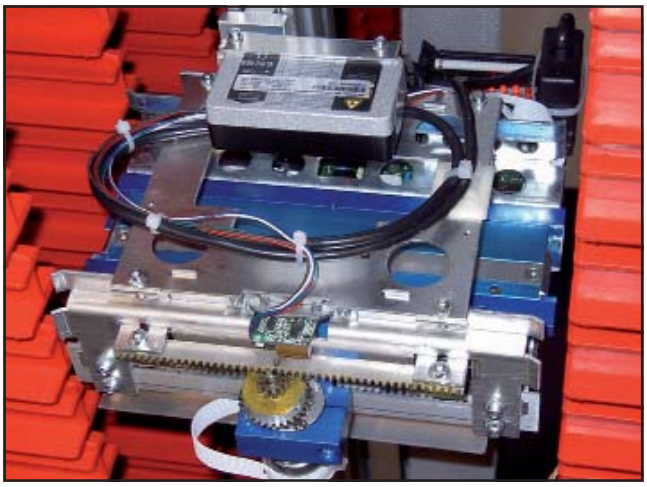
- Extended product applicability in high throughput processes thanks to a scanning speed up to 500 scans/s
- Excellent performance on high resolution codes with reduced minimum reading distance
- The motor can be switched on and off via software commands depending on application needs
- Allows flexible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

HIGHLIGHTS

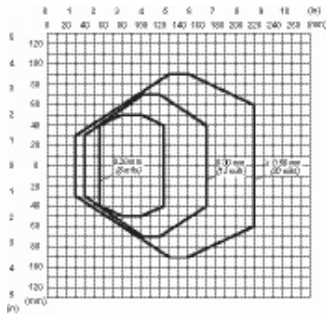
- Cost effective
- Very compact dimensions
- Direct and 90° reading window models for smart mounting
- Wide reading field at a short reading distance
- Motor on/off control via software commands
- Dual serial interface
- Scanning speed up to 500 scans/s
- Light weight (< 100g / 3.53 oz. without cable)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

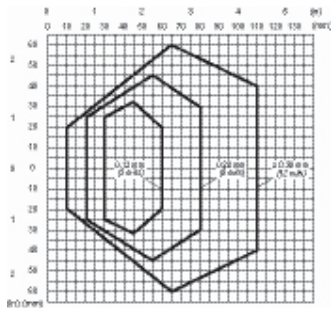


READING DIAGRAMS



CONDITIONS

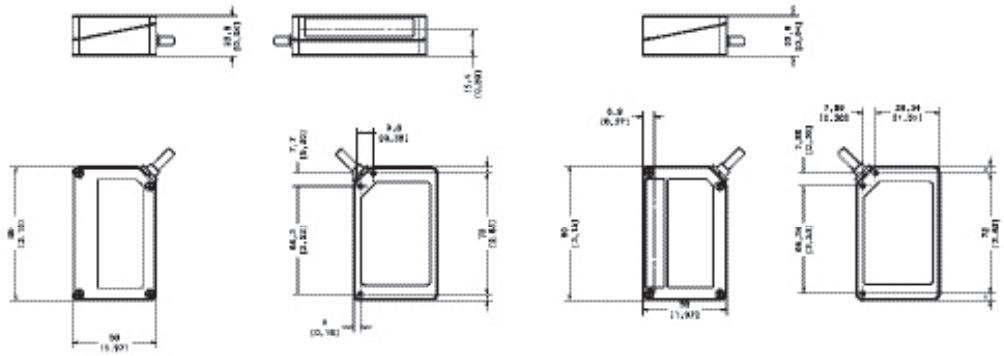
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 15°
Tilt angle = 0°



CONDITIONS

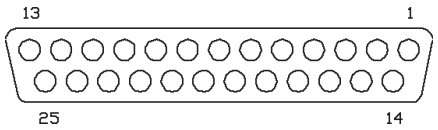
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 15°
Tilt angle = 0°

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	
	DS1100-11xx	DS1100-21xx
RESOLUTION	Up to 0.20 mm (8 mils)	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	

Embedded Bar Code Readers


Lightweight


Compact Dimensions


1200 scan/s


Test Mode with Bar-graph


ACR-Lite

APPLICATIONS

- OEM integration in automatic machines
- Chemical and biomedical analysis machines
- Document handling machines
- Print & Apply systems
- Packaging machines
- ATL (Automated Tape Libraries)

ADVANTAGES

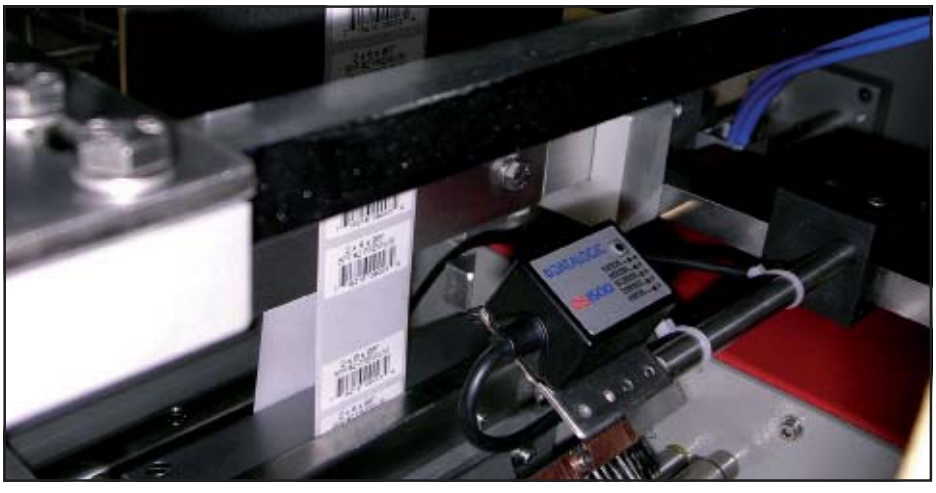
- Improves reading effectiveness in difficult and fast reading conditions thanks to the high number of scans on the same moving code (1200 scans/s)
- Consistent decoding of damaged or low contrast labels due to the embedded ACR-Lite
- Double high speed serial interface option (two RS232 or one RS485 software selectable) to guarantee the maximum flexibility

HIGHLIGHTS

- Extremely compact dimensions
- Scanning speed up to 1200 scan/s
- ACR-Lite
- Test Mode with bar graph
- Motor on/off and speed control via software commands
- Software selectable RS232/485 dual serial interface
- Light weight (44 g / 1.55 oz. without cable)
- IP65 (NEMA 4) rugged industrial housing

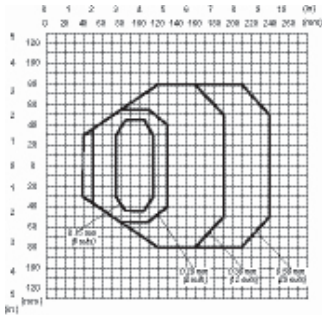
GENERAL DESCRIPTION

The combination of extremely compact dimensions and powerful high speed reading capabilities makes the DS1500 particularly suitable for integration in automatic machinery, such as in chemical and biomedical analysis machines, automated tape libraries, pharmaceutical packaging and document handling machines. In conformity with the needs of automatic machinery, DS1500 features IP65 rugged industrial housing.
DS1500 ease of installation and configuration is guaranteed by compact size and a new intuitive test mode with bar graph, activated by means of a programmable push button. This feature also simplifies repositioning of the scanner during product changeovers in automated machinery.



READING DIAGRAMS

DS1500-1100



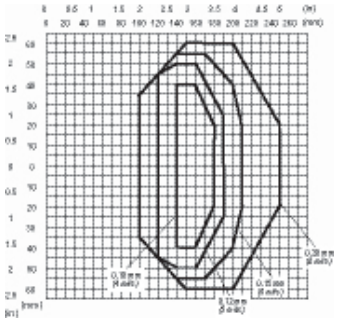
NOTE: (0,0) is the center of the laser beam output window.

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

DS1500-2100



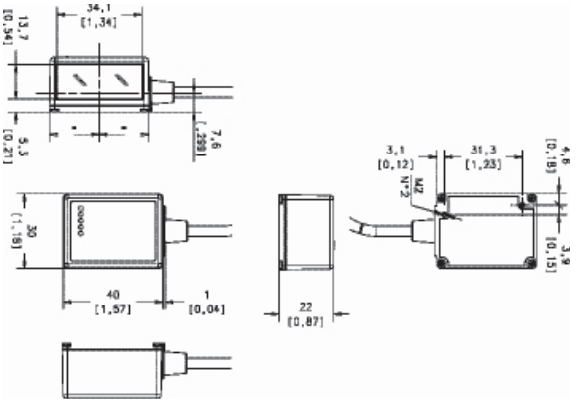
NOTE: (0,0) is the center of the laser beam output window.

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)

• Parameter selectable in Winhost

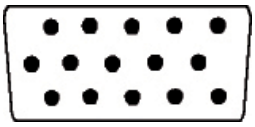
DIMENSIONS



mm / inch

ELECTRICAL CONNECTIONS

All DS1500 models are equipped with a cable terminated by a 15-pin male D-sub high-density connector for connection to the power supply and input/output signals.



15-pin D-sub High-Density Male Connector

15-PIN D-SUB HD MALE CONNECTOR PINOUT				
Pin	**Name**		**Function**	
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**	**RS232**	**RS485 Full-Duplex**	**RS485 Half-Duplex**
2	Serial Interface Signals	TX232 Main	TX485-	RTX485-
3	Serial Interface Signals	RX232 Main	RX485+	
6	Serial Interface Signals	TXAUX	TX485+	RTX485+
10	Serial Interface Signals	RXAUX	RX485-	
4	Serial Interface Signals	SGND	SGND	SGND

MODELS AND ACCESSORIES

MODELS	
Order No.	**Description**
939201000	DS1500-1100 STD RESOLUTION, RS232+RS485, LINEAR, 5V
939201001	DS1500-2100 HIGH RESOLUTION, RS232+RS485, LINEAR, 5V

TECHNICAL DATA

DIMENSIONS	40 x 30 x 22 mm (1.6 x 1.2 x 0.9 in)	
WEIGHT	44 g (1.55 oz.) without cable	
CASE MATERIAL	ZAMA (Zinc, Aluminum, Magnesium alloy)	
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	800 to 1200 scans/sec	
	DS1500-1100	DS1500-2100
RESOLUTION	Up to 0.15 mm (6 mils)	Up to 0.10 mm (4 mils)
READING DISTANCE	Up to 240 mm on 0.50 mm (20 mils) codes	Up to 125 mm on 0.20 mm (8 mils) codes
DEPTH OF FIELD	Up to 200 mm on 0.50 mm (20 mils) codes	Up to 75 mm on 0.20 mm (8 mils) codes
APERTURE ANGLE	60 degrees	
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	1 x RS422/RS485 or 2 x RS232 or up to 115.2 Kbit/s	
CONNECTIVITY MODES	Pass Through, Master/Slave, Multiplexer	
DIGITAL INPUTS	External Trigger (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’	
USER INTERFACE	Push Button, 5 LEDs (scanner status/performance monitor)	
LED INDICATORS	(Power on/100%, Good Read/80%, Ext. Trig./60%, TX Data/40%, Laser On/20%	
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	
POWER CONSUMPTION	2 W max	

Embedded Bar Code Readers

APPLICATIONS

- OEM integration in automatic machines
- Chemical and biomedical analysis machines
- Document handling machines
- Print & Apply systems
- Packaging machines
- ATL (Automated Tape Library)

ADVANTAGES

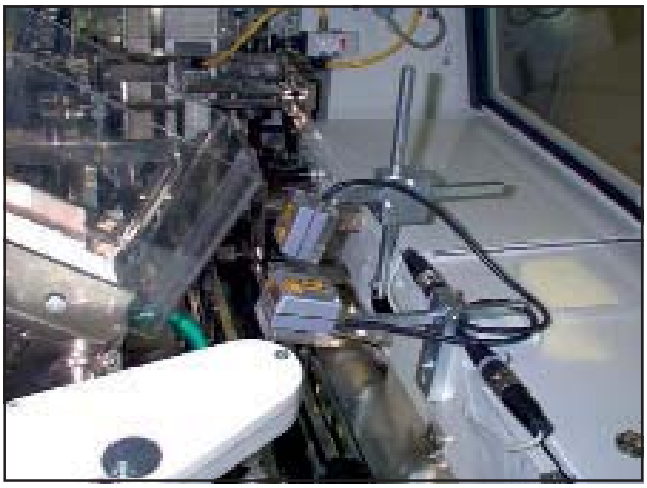
- Excellent performance and reliability on all main bar code symbologies thanks to high scanning speed and advanced optic features.
- High reading performance on damaged or poorly printed bar codes
- Excellent performance on high resolution codes with reduced minimum reading distance

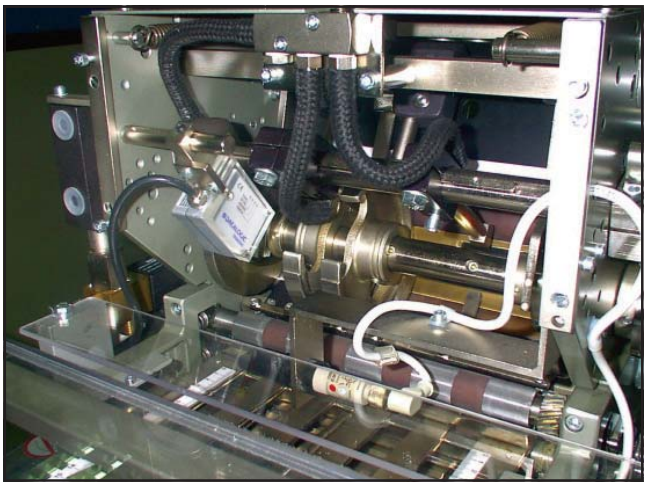
HIGHLIGHTS

- Extremely compact dimensions
- Very high density code reading (up to 0.076 mm / 3mils)
- Scanning speed up to 500 scans/s
- Dual serial interface
- Light weight (150 g / 5.29 oz. without cable)
- IP65 (NEMA 4) rugged industrial housing

GENERAL DESCRIPTION

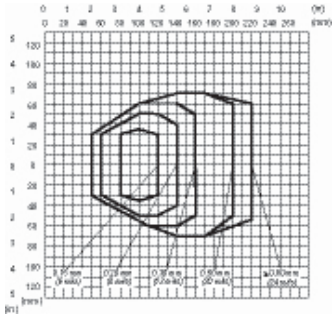
DS2200 is designed for OEM and other applications requiring easy integration, high reliability and cost effectiveness. Datalogic Automation's advanced technology and experience in miniaturized laser components enables development of a compact industrial laser scanner without compromising reading performance and industrial quality standards.
In conformity with the needs of automatic machinery, DS2200 features very compact dimensions, light weight and IP65 rugged industrial housing.





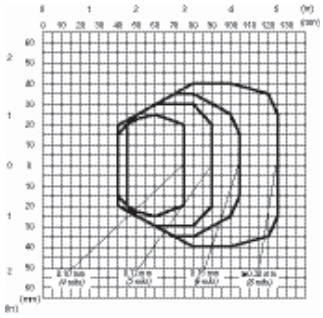
READING DIAGRAMS

DS2200-1XXX (STANDARD RESOLUTION)



CONDITIONS

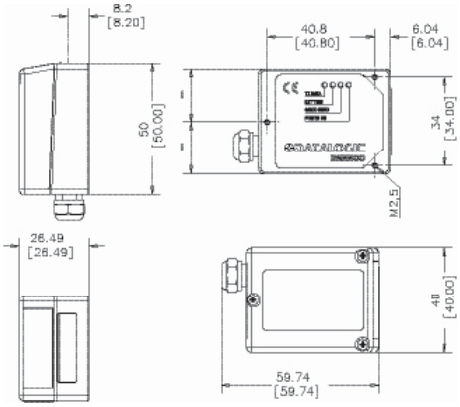
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 15°
Tilt angle = 0°



CONDITIONS

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

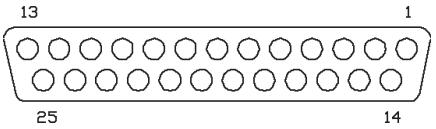
DIMENSIONS



mm / inch

ELECTRICAL CONNECTIONS

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



25-pin Female D-sub Connector

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
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	Not Connected

MODELS AND ACCESSORIES

MODELS	
Order No.	**Description**
930161000	DS2200-1100 STD RESOLUTION, LINEAR, RS485+RS232, 5V
930161030	DS2200-1110 STD RESOLUTION, R1, RS485+RS232, 5V
930161040	DS2200-2100 HIGH RESOLUTION, LINEAR, RS485+RS232, 5V
930161050	DS2200-2110 HIGH RESOLUTION, R1, RS485+RS232, 5V

ACCESSORIES	
Order No.	**Description**
93A201030	GFC-2200 90° READING MIRROR
93ACC1040	DC5-2200 DC CONVERTER 4-30 VDC TO 5 VDC

TECHNICAL DATA

DIMENSIONS	50 x 40 x 28 mm (1.97 x 1.57 x 1.10 in)	
WEIGHT	150 g (5.29 oz.)	
CASE MATERIAL	Die-cast Zinc	
OPERATING TEMPERATURE	0 to 40 °C (32 to 104 °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	
	DS2200-11x0	DS2200-21x0
RESOLUTION	Up to 0.15 mm (6 mils)	Up to 0.076 mm (3 mils)
READING DISTANCE	Up to 220 mm on 0.60 mm (24 mils) codes	Up to 125mm on 0.20 mm (8 mils) codes
DEPTH OF FIELD	Up to 170 mm on 0.60 mm (24 mils) codes	Up to 85 mm on 0.20 mm (8 mils) codes
APERTURE ANGLE	52 degrees	62 degrees
RASTER APERTURE	15 mm (0.6 in) at 220 mm (8.7 in) for R1 Raster models	
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	External Trigger (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, External Trigger, Good Read, TX Data	
LASER CLASSIFICATION	IEC 825-1 Class2; CDRH Class II	
LASER CONTROL	Safety system to turn laser off in cases of motor slowdown or failure	
POWER SUPPLY	5 VDC (4 to 30 VDC with converter)	
POWER CONSUMPTION	2 W max	

Industrial Bar Code Scanners

ID-NET™ Enhanced Connectivity

press interface Ease of use

Genius™ Configuration SW Tool

ACR-Lite

APPLICATIONS

- Small conveyor sorting
- Picking systems
- Items and parts tracking
- Process control and packaging
- Document Handling machines
- Print & Apply systems

ADVANTAGES

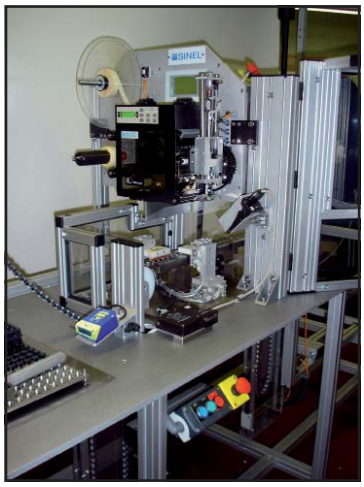
- Decoding of partially damaged or normally unreadable barcodes due to high tilt angle thanks to the embedded ACR-Lite technology
- Easy and rapid scanner configuration thanks to Datalogic Genius™ intuitive and multilanguage software tool.
- Overall cost reduction and simple network wiring thanks to ID-NET™ embedded high-speed connectivity
- Extended Fieldbus and Ethernet connectivity through a complete range of modular connection boxes and accessories

HIGHLIGHTS

- Increased read rate on low contrast and dirty bar codes
- ACR-Lite
- ID-NET™ embedded interface for high-speed communication networks
- Intuitive X-PRESS™ interface for quick scanner installation and troubleshooting
- Easy setup through multilanguage Genius™ software tool
- Motor on/off and motor speed control via software commands
- IP65 (NEMA 4) rugged industrial housing

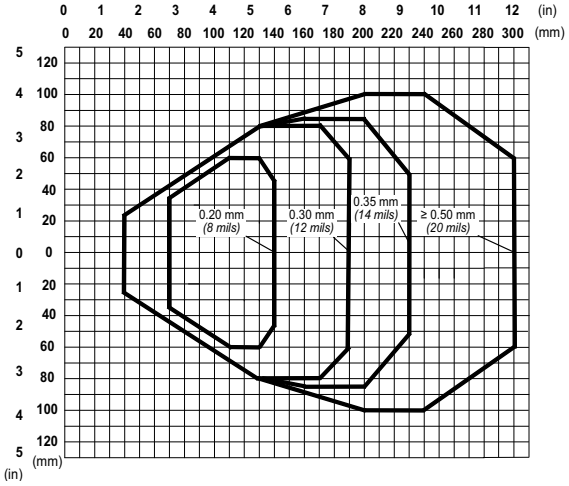
GENERAL DESCRIPTION

DS2100N and DS2400N are designed to offer ease of use combined with excellent reading performance.
Typical applications are in automated warehousing (conveyor sorting and picking systems), automated shop floor (for items and parts tracking), process control and packaging. In OEM integration these scanners are suitable for integration into automatic machinery (chemical and biomedical analysis machines) and in packaging and document handling machines.
These scanners guarantee high reading performance thanks to the high performance optics and ACR-Lite code reconstruction technology.
DS2100N and DS2400N are 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 Learn and Auto Setup.



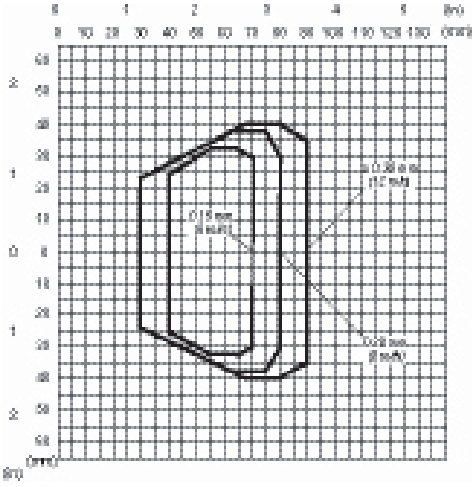
READING DIAGRAMS

DS2100N-1200
(Standard Resolution, 500 scans/s)



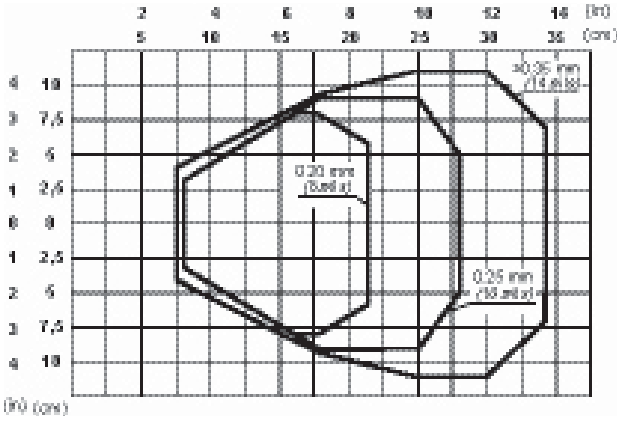
CONDITIONS
Optic Version = Linear
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 15°
Tilt angle = 0°
* Reading Conditions = Standard
* Parameter selectable in Genius

DS2100N-2200
(High Resolution, 500 scans/s)



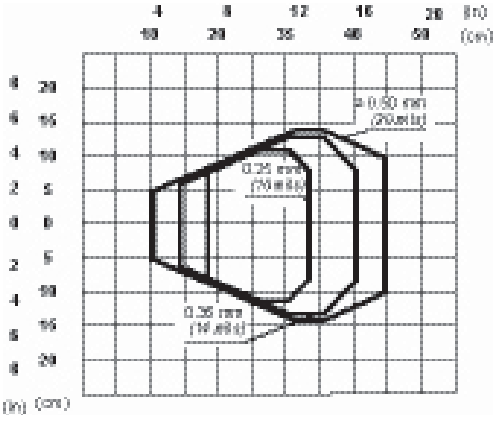
CONDITIONS
Optic Version = Linear
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 15°
Tilt angle = 0°
* Reading Conditions = Standard
* Parameter selectable in Genius

DS2400N-0200
(Short Reading Range)



CONDITIONS
Optic Version = Linear
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10°
Tilt angle = 0°
* Code Resolution = High
* Reading Conditions = Standard
* Scan Speed = Speed_3 (800 scans/s)
* Parameter selectable in Genius

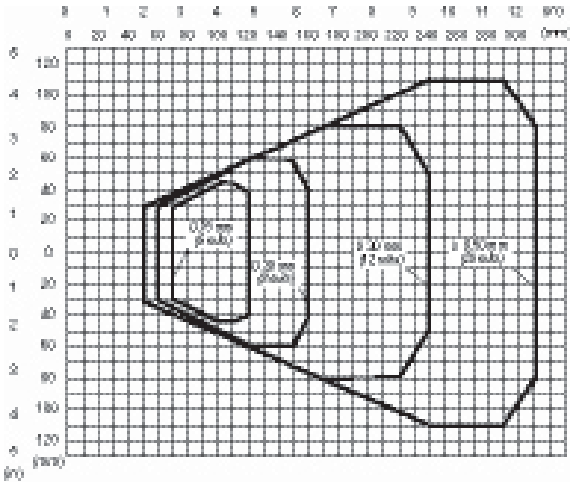
DS2400N-1200
(Medium Reading Range)



CONDITIONS
Optic Version = Linear
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10°
Tilt angle = 0°
* Code Resolution:
High – for 0.25 mm (10 mils) codes
Std – for 0.35 mm (14 mils) codes and greater
* Reading Conditions = Standard
* Scan Speed = Speed_3 (800 scans/s)
* Parameters selectable in Genius.

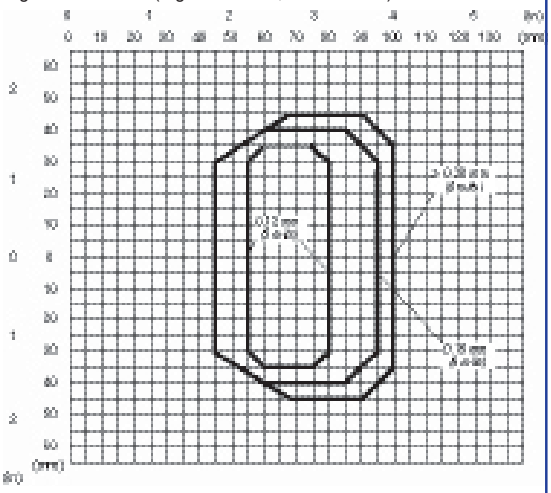
READING DIAGRAMS

DS2100N-1204 HIGH PERFORMANCE
(Standard Resolution, 1000 scan/s)



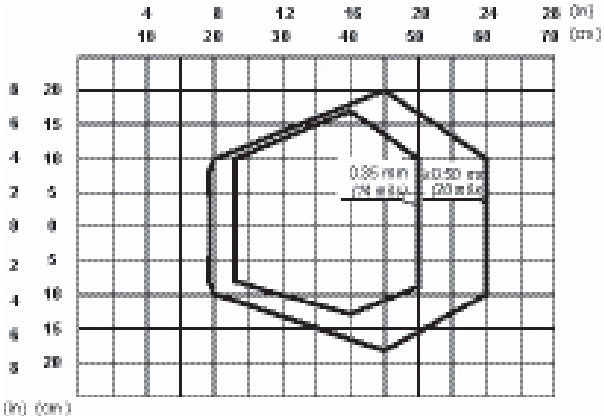
CONDITIONS
Optic Version = Linear
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 15°
Tilt angle = 0°
*Code Resolution:
High - for 0.30 mm (12 mils) codes and smaller
Standard - for 0.50 mm (20 mils) codes and greater
*Reading Conditions = Standard
* Parameter selectable in Genius

DS2100N-2204
High Performance - (High Resolution, 1000 scans/s)



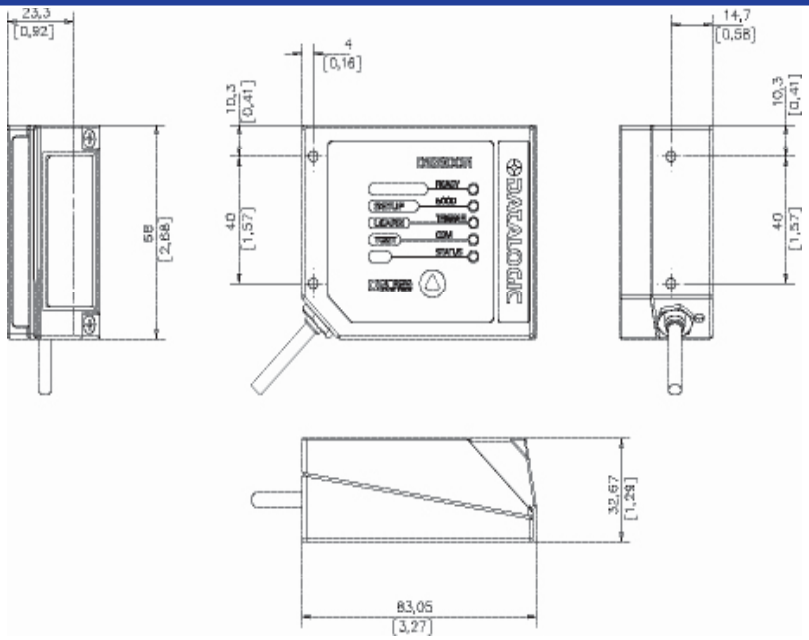
CONDITIONS
Optic Version = Linear
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 15°
Tilt angle = 0°
*Code Resolution:
High - for 0.15 mm (6 mils) codes and smaller
Standard - for 0.20 mm (8 mils) codes
*Reading Conditions = Standard
* Parameter selectable in Genius

DS2400N-2200
(Long Reading Range)



CONDITIONS
Optic Version = Linear
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10°
Tilt angle = 0°
* Code Resolution:
High – for 0.35 mm (14 mils) codes
Std – for 0.50 mm (20 mils) codes and greater
* Reading Conditions = Standard
* Scan Speed = Speed_3 (800 scans/s)
* Parameters selectable in Genius.

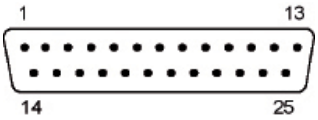
DIMENSIONS



mm / inch

ELECTRICAL CONNECTIONS

All DS2100N and DS2400N 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	TX	TX+	RTX+
3		RX	* RX+	
4		RTS	TX-	RTX-
5		CTS	* RX-	

* Do not leave floating, see DS2100N and DS2400N Reference Manuals for connection details.

MODELS AND ACCESSORIES

MODELS	
Order No.	**Description**
930153183	DS2100N-1200 STD RESOLUTION, LINEAR, NSC
930153184	DS2100N-2200 HIGH RESOLUTION, LINEAR, NSC
930153185	DS2100N-1210 STD RESOLUTION, RASTER, NSC
930153186	DS2100N-2210 HIGH RESOLUTION, RASTER, NSC
930153187	DS2100N-1204 STD RESOLUTION, LINEAR, HI PERF, NSC
930153189	DS2100N-2204 HIGH RESOLUTION, LINEAR, HI PERF, NSC
930153188	DS2100N-1214 STD RESOLUTION, RASTER, HI PERF, NSC
930153190	DS2100N-2214 HIGH RESOLUTION, RASTER, HI PERF, NSC
930181379	DS2400N 0200 SHORT RANGE, LINEAR, NSC
930181380	DS2400N 0210 SHORT RANGE, RASTER, NSC
930181381	DS2400N 1200 MEDIUM RANGE, LINEAR, NSC
930181382	DS2400N 1210 MEDIUM RANGE, RASTER, NSC
930181383	DS2400N 2200 LONG RANGE, LINEAR, NSC
930181384	DS2400N 2210 LONG RANGE, RASTER, NSC

ACCESSORIES	
Order No.	**Description**
93ACC1839	OM2000N OSCILLATING MIRROR, NSC
93A201108	GFC-200 85° MIRROR CONTACT READING, NSC
93A201080	GFC-2000 105° READING MIRROR

TECHNICAL DATA

DIMENSIONS	84 x 68 x 34 mm (3.31 x 2.68 x 1.34 in)	
WEIGHT	330 g (11.6 oz)	
CASE MATERIAL	Aluminum	
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)	
	DS2100N	DS2400N
SCANNING SPEED	500 to 1000 scans/sec	600 to 1000 scans/sec
RESOLUTION	Up to 0.12 mm (5 mils)	Up to 0.20 mm (8 mils)
APERTURE ANGLE	60 degrees	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	External Trigger (optocoupled, NPN/PNP), IN2 (not optocoupled, NPN only)	
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, Good read Spot)	
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	
	DS2100N	DS2400N
POWER SUPPLY	10 to 30 VDC	10 to 30 VDC
POWER CONSUMPTION	3W (xxx0 models), 5W (xxx4 models)	5W

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

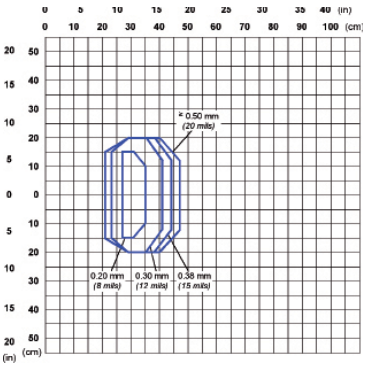
HIGHLIGHTS

- 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 anywher in the allowed -35 + 50 °C range.
With its rugged construction, IP65 protection class, 0 to 50°C operating temperature range temperature and total ambient light immunity, DS4800 is the ideal product for industrial applications.

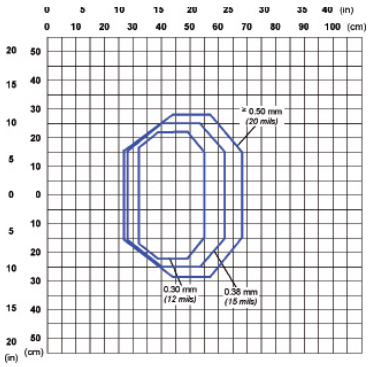
READING DIAGRAMS



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

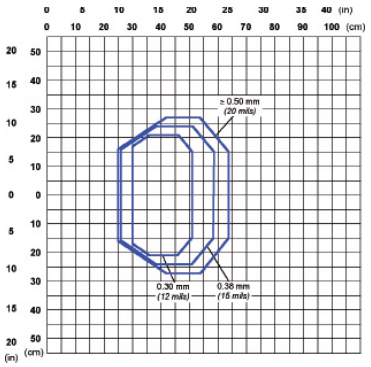
* Parameter selectable in Genius™



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

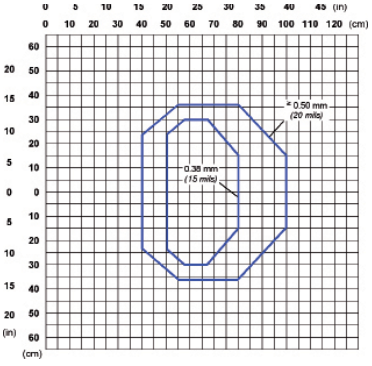
* Parameter selectable in Genius™



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

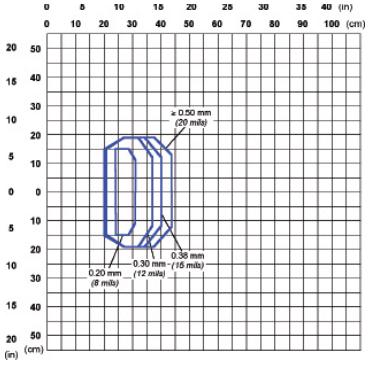
* Parameter selectable in Genius™



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

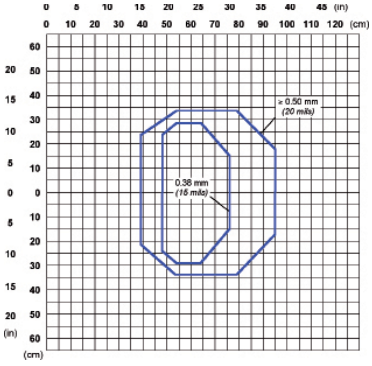
* Parameter selectable in Genius™



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™



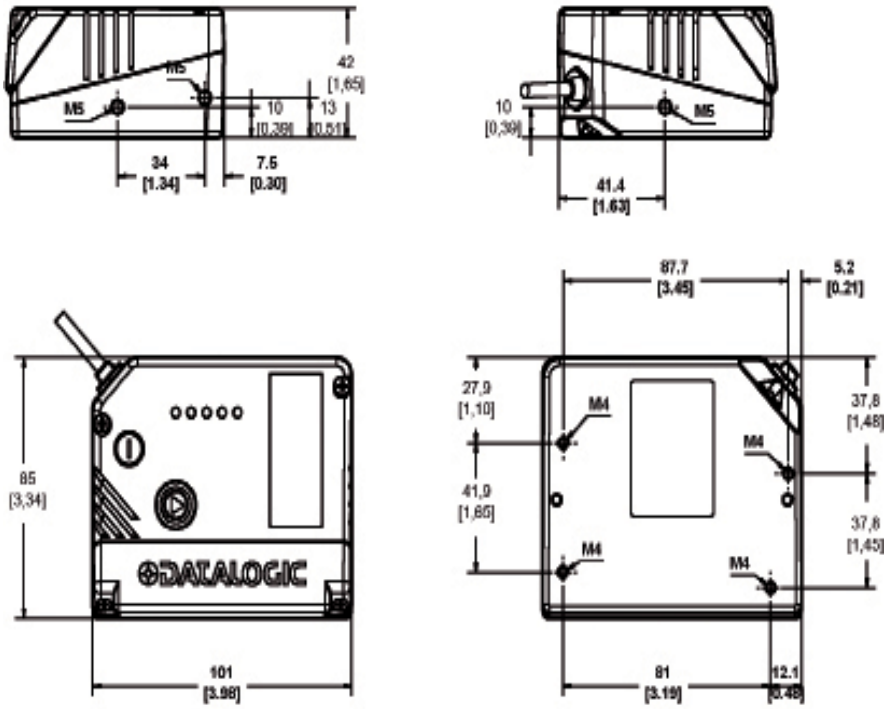
DS4800-1100
Focus Distance 60 cm / 23.62 in (Far)

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

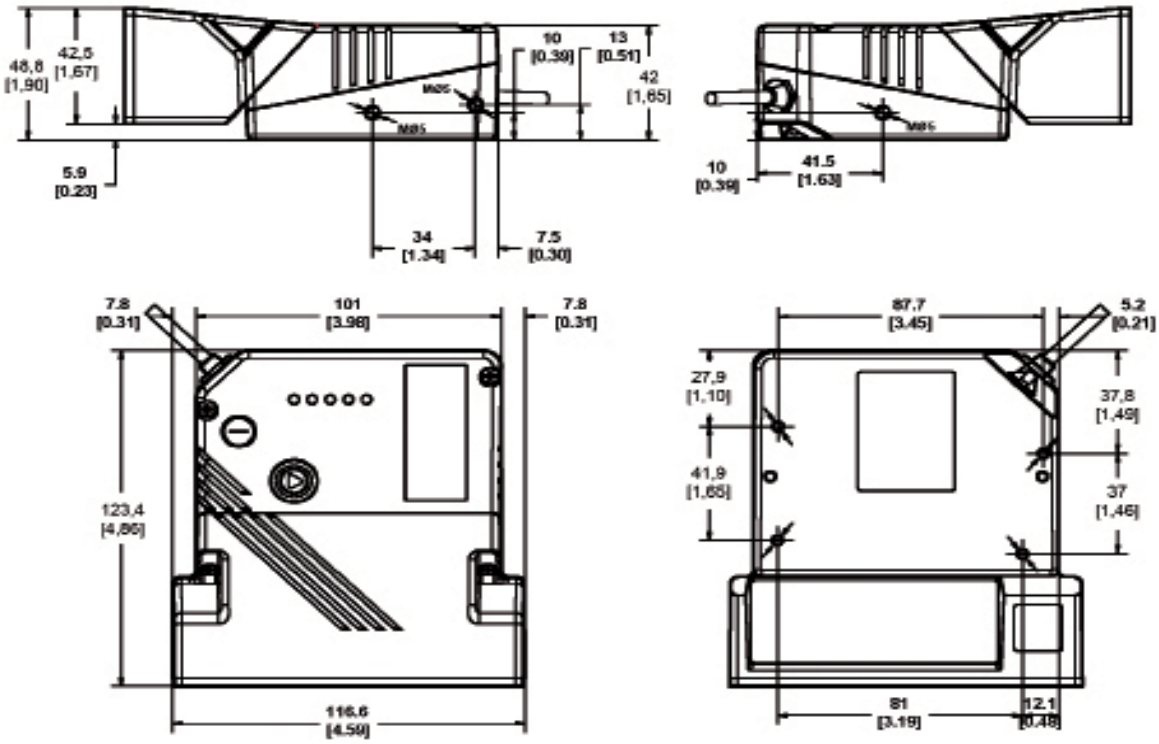
* Parameter selectable in Genius™

DIMENSIONS

LINEAR MODELS



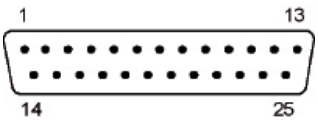
OSCILLATING MIRROR MODELS



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 (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

Industrial Bar Code Scanners

Configuration Sw Tool


ACR4™ technology

APPLICATIONS

- Automated warehousing
- Reading on forklift trucks
- Picking systems
- Automated shop floor

ADVANTAGES

- Extended reading range from 250 to 2000 mm thanks to the “2-step” mechanically adjustable focus system
- 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
- ACR4™ reconstruction technology increases the maximum tilt angle and overall read rate on damaged barcodes
- Available with integrated software programmable Oscillating Mirror and built-in connectivity to Ethernet, Profibus and DeviceNet
- Easy and simple configuration thanks to Genius™ multi-language software tool

HIGHLIGHTS

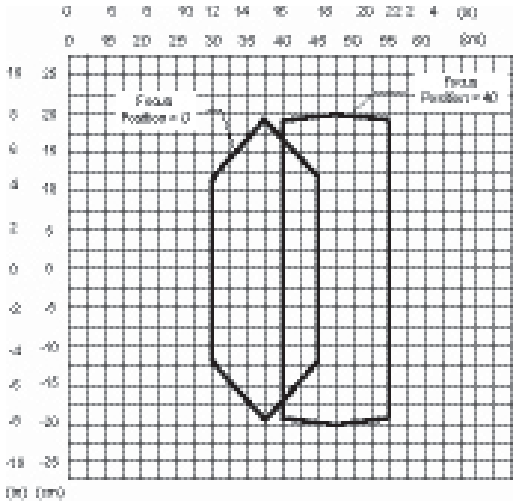
- Good reading performance on very low contrast bar codes
- Focus adjustable optics
- Reading range from 250 to 2000mm
- ACR4™ reconstruction technology improves reading of damaged barcodes
- DIGITECH™ technology enables excellent reading performance
- Linear and integrated Oscillating Mirror versions
- Built-in connectivity to Ethernet / Profibus / DeviceNet
- Display and keyboard for scanner monitoring and diagnostics

GENERAL DESCRIPTION

DS6300 scanner is designed to offer a complete modular solution in terms of reading performance, built-in connectivity, ease of use and maintenance. With DS6300, Datalogic Automation provides mid-range industrial bar code readers with top class performance.
DS6300 is therefore the optimal solution for a wide range of manufacturing applications both in the automated shop floor and in the automated warehousing.
DS6300 features a practical display with keyboard that increases the scanner's ease of use by showing barcode data read (local echo), statistics and diagnostic information. Moreover, it offers built-in connectivity to Ethernet, DeviceNet and Profibus networks.

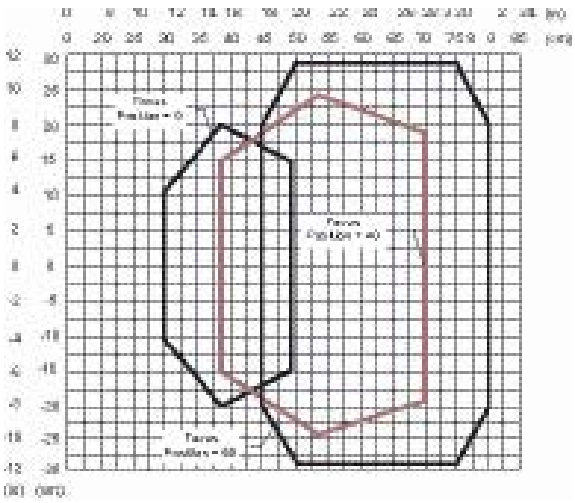
READING DIAGRAMS

DS6300-100-0XX
Resolution: 0.20 mm/8 mils



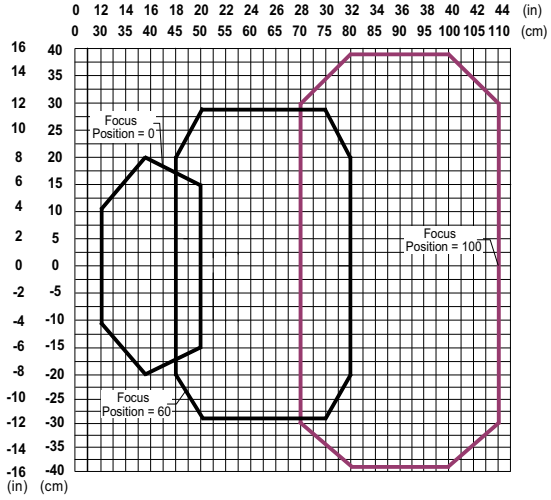
CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10° - 20°
Tilt angle = 0°

DS6300-100-0XX
Resolution: 0.30 mm/12 mils



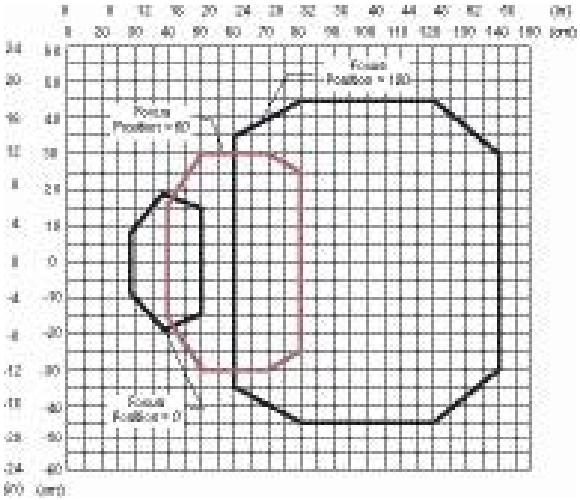
CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10° - 20°
Tilt angle = 0°

DS6300-100-0XX
Resolution: 0.38 mm/15 mils



CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10° - 20°
Tilt angle = 0°

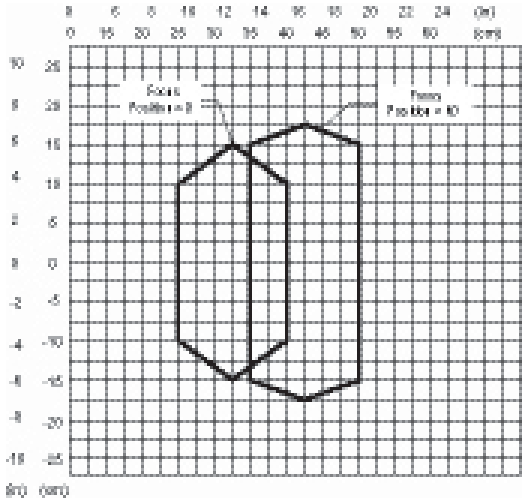
DS6300-100-0XX
Resolution: 0.50 mm/20 mils



CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10° - 20°
Tilt angle = 0°

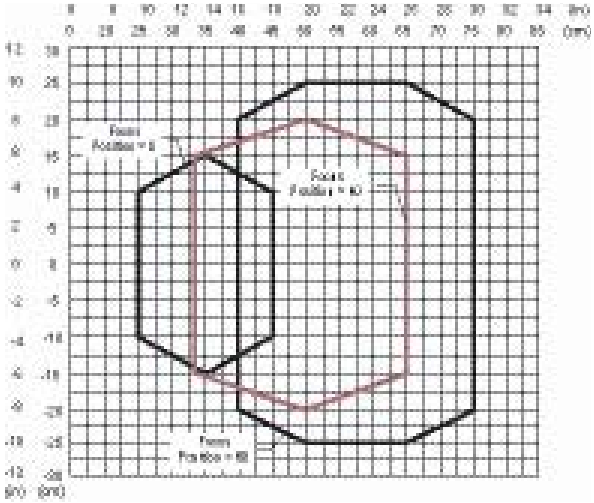
READING DIAGRAMS

DS6300-105-0XX (Oscillating Mirror)
Resolution: 0.20 mm/8 mils



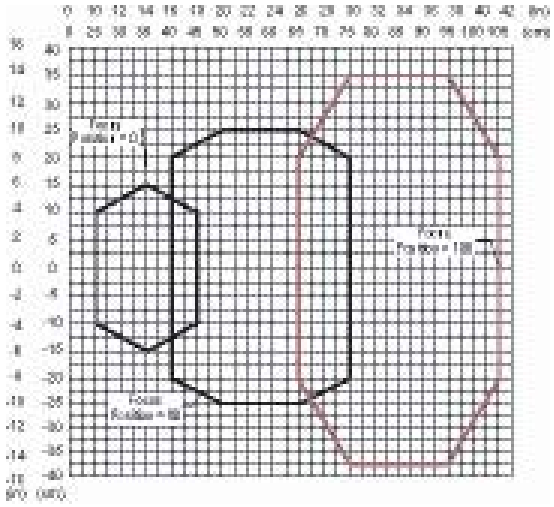
CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10° - 20°
Tilt angle = 0

DS6300-105-0XX (Oscillating Mirror)
Resolution: 0.30 mm/12 mils



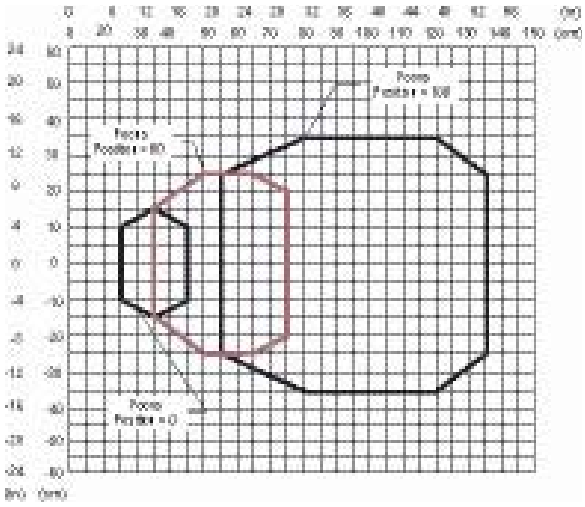
CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10° - 20°
Tilt angle = 0°

DS6300-105-0XX (Oscillating Mirror)
Resolution: 0.38 mm/15 mils



CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10° - 20°
Tilt angle = 0°

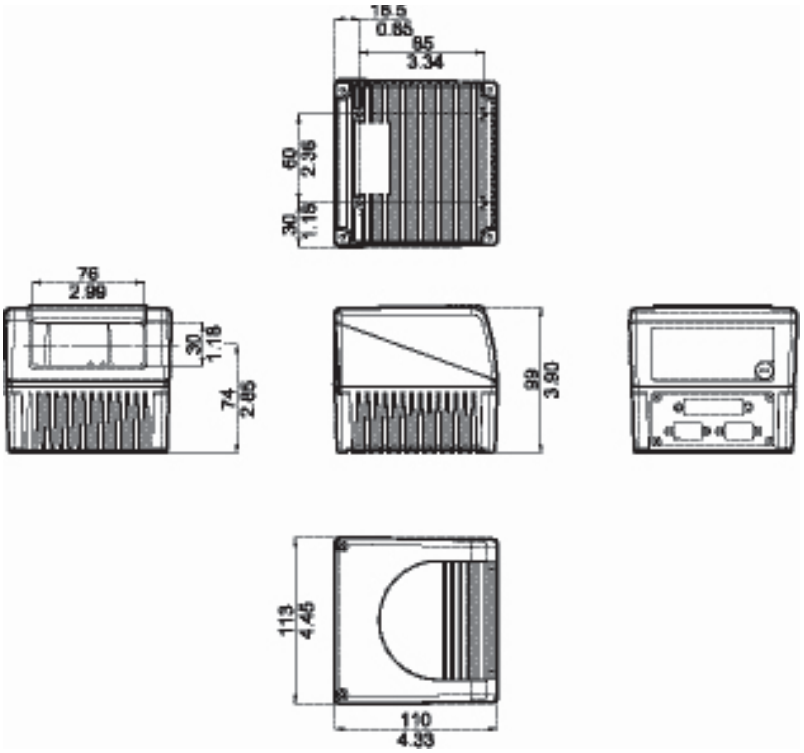
DS6300-105-0XX (Oscillating Mirror)
Resolution: 0.50 mm/20 mils



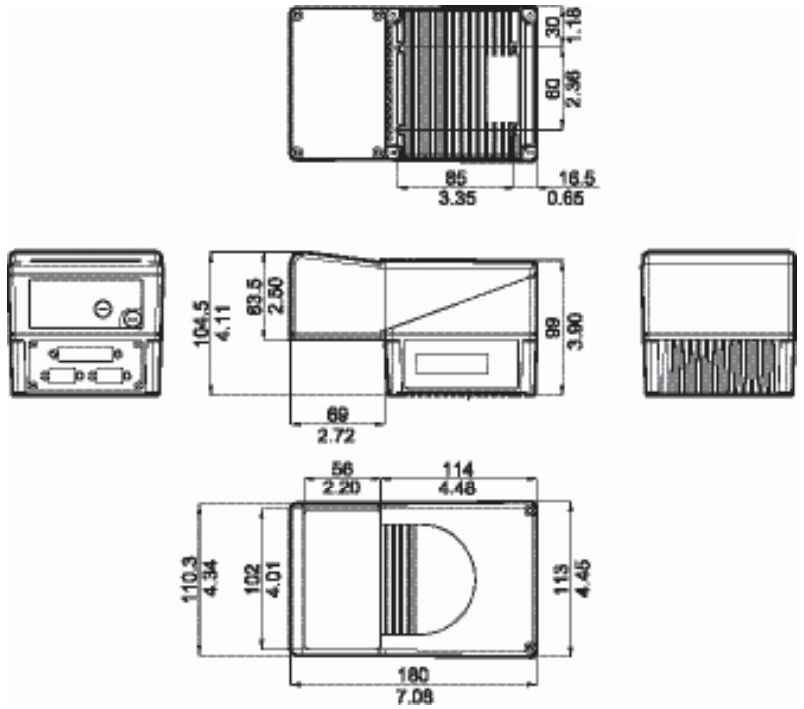
CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10° - 20°
Tilt angle = 0°

DIMENSIONS

OSCILLATING MIRROR VERSION



OSCILLATING MIRROR VERSION



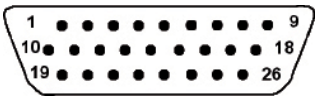
mm / inch

ELECTRICAL CONNECTIONS

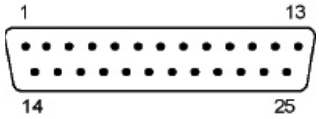
All the connectors available for each DS6300 model are the following:

SCANNER MODEL	CONNECTORS
Master/Slave	25-pin male serial interface and I/O connector 9-pin male Lonworks connector* 9-pin female Lonworks connector
Ethernet	26-pin male serial interface and I/O connector 9-pin female Lonworks connector RJ45 modular connector

The DS6300 Master/Slave models are equipped with a 25-pin male D-sub connector for connection to the host computer, power supply and input/output signals. The DS6300 Ethernet models adopt a 26-pin male connector instead of the 25-pin one.



26-pin Connector

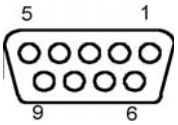


25-pin Connector

25-PIN D-SUB MALE CONNECTOR PINOUT				
Pin	**Name**		**Function**	
1	CHASSIS		Chassis - internally connected to GND	
			Cable 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	
6	IN 2/ENC A		Input signal 2 (polarity insensitive) for Encoder	
10	IN 2/ENC B		Input signal 2 (polarity insensitive) for Encoder	
14	IN 3A		Input signal 3 (polarity insensitive)	
15	IN 4A		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	
Pin	**RS232**	**RS232**	**RS485 Full-Duplex**	**RS485 Half-Duplex**
2	Main Interface Signals (SW Selectable)	TX	TX485 +	RTX485 +
3		RX	* RX485 +	
4		RTS	TX485 -	RTX485 -
5		CTS	* RX485 -	
7		GND_ISO	GND_ISO	GND_ISO

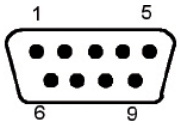
* Do not leave floating, see DS6300 Reference Manual for connection details.

ELECTRICAL CONNECTIONS



Female (all models)

9-pin Local Lonworks Connectors

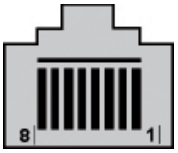


Male (Master/Slave model)

9-pin Local Lonworks Connectors

9-PIN LONWORKS CONNECTOR PINOUT		
Pin	**Name**	**Function**
1	CHASSIS	Cable shield internally connected by capacitor to chassis
2	GND	Supply voltage - positive pin
6	VS_I/O	Supply voltage - negative pin
3	REF_I/O	Supply voltage of I/O circuit
4	SYS_ENC_I/O	Reference voltage of I/O circuit
5	SYS_I/O	System signal
7	LON A	System signal
8	LON B	Lonworks line (polarity insensitive)

In DS6300 Ethernet models a RJ45 Modular Jack is provided for Ethernet connection.
This interface and the connector pinout are IEEE 802.3 10 BaseT and IEEE 802.3u 100 BaseTX compliant.



RJ45 Modular Jack

RJ45 MODULAR JACK PINOUT		
Pin	**Name**	**Function**
1	TX +	Transmitted data (+)
2	TX -	Transmitted data (-)
3	RX +	Received data (+)
6	RX -	Received data (-)
4,5,7,8	NC	Not connected

MODELS AND ACCESSORIES

MODELS	
Order No.	**Description**
931351010	DS6300-100-010 ADJ FOCUS, LINEAR, M/S
931351020	DS6300-100-011 ADJ FOCUS, LINEAR, PROFIBUS
931351030	DS6300-100-012 ADJ FOCUS, LINEAR, ETHERNET
931351040	DS6300-100-015 ADJ FOCUS, LINEAR, DEVICENET
931351060	DS6300-105-010 ADJ FOCUS, OSC. MIRROR, M/S
931351070	DS6300-105-011 ADJ FOCUS, OSC. MIRROR, PROFIBUS
931351080	DS6300-105-012 ADJ FOCUS, OSC. MIRROR, ETHERNET
931351090	DS6300-105-015 ADJ FOCUS, OSC. MIRROR, DEVICENET

ACCESSORIES	
Order No.	**Description**
93A201100	GFC-60 90° MIRROR
93A201102	GFC-600 90° MIRROR CLOSE DISTANCE
93ACC1730	GFX-60 X-PATTERN MIRROR
93ACC1721	FBK-6000 FAST BRACKET KIT (2 PCS)

TECHNICAL DATA

	DS6300-100-01X	DS6300-105-01X
DIMENSIONS	110 x 113 x 99 mm (4.33 x 4.45 x 3.9 in)	113 x 180 x 104.5 mm (4.45 x 7.08 x 4.11 in)
WEIGHT	1.5 kg. (3.3 lb)	2.0 kg. (4.4 lb)
CASE MATERIAL	Aluminum	
OPERATING TEMPERATURE	0 to 40 °C (32 to 104 °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	IP64 for standard models; IP65 on request	
LIGHT SOURCE	Visible laser diode (630 to 680 nm)	
SCANNING SPEED	600 to 1200 scan/s SW programmable	
RESOLUTION	Down to 0.20 mm (8 mils)	
READABLE SYMBOLOGIES	Code 2/5, Code39, Code93, Code128, EAN/UPC, EAN128, Codabar, Pharmacode, ISBN128	
MULTILABEL READING	Up to 10 different symbologies during the same reading phase	
COMMUNICATION INTERFACES	Main Port: RS232/RS485 up to 115.2 Kbit/s	
	Auxiliary Port: RS232 up to 115.2 Kbit/s	
OTHER AVAILABLE INTERFACES	Lonworks (Master/Slave), Ethernet, Profibus, DeviceNet	
DIGITAL INPUTS	Four SW programmable, optocoupled, NPN/PNP	
DIGITAL OUTPUTS	Three SW programmable, optocoupled, event driven	
DISPLAY & KEYPAD	LCD 16 x 2 characters & 3 keys	
LED INDICATORS	Power On, Phase On, Data Tx	
DEVICE PROGRAMMING	Windows™ based SW (Genius™) via serial or Ethernet link	
	Serial Host Mode Programming sequences	
OPERATING MODES	‘On-line’, ‘Serial On-line’, ‘Automatic’, ‘Continuous’, ‘Test’	
LASER CLASSIFICATION	Class 2 - EN60825-1; Class II - CDRH	
LASER CONTROL	Safety system to turn laser off in cases of motor slowdown or failure	
POWER SUPPLY	15 to 30 VDC	
POWER CONSUMPTION	15 W typical, 20 W max	

Industrial Bar Code Scanners

Configuration SW Tool


ACR4™ technology


PackTrack™

APPLICATIONS

- Automated warehousing
- Medium conveyor sorting
- Reading on forklift trucks
- Picking systems
- Automated shop floor

ADVANTAGES

- Extended reading range from 300 to 2500 mm thanks to FLASH™ dynamic focus technology
- 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
- ACR4™ reconstruction technology increases the maximum tilt angle and overall read rate on damaged barcodes
- Available with integrated software programmable Oscillating Mirror and built-in connectivity to Ethernet, Profibus and DeviceNet
- Easy and simple configuration thanks to Genius™ multi-language software tool

HIGHLIGHTS

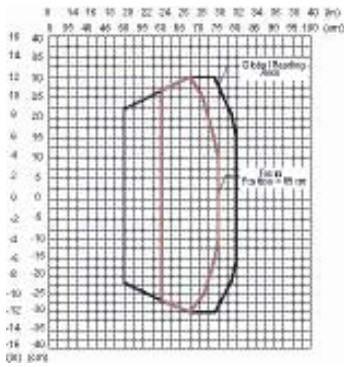
- FLASH™ dynamic focus technology
- Reading range from 300 to 2500 mm
- ACR4™ reconstruction technology improves reading of damaged barcodes
- DIGITECH™ technology enables excellent reading performance
- PACKTRCK™ technology to minimize the gap between objects and increase system productivity
- Linear and integrated Oscillating Mirror versions
- Built-in connectivity to Ethernet / Profibus / DeviceNet
- Display and keyboard for scanner monitoring and diagnostics

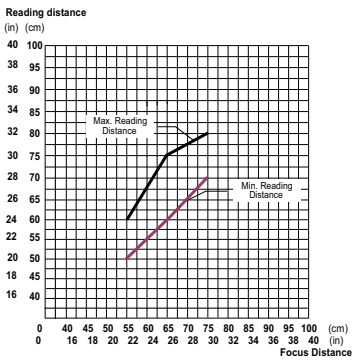
GENERAL DESCRIPTION

DS6400 is an industrial fixed position barcode reader specifically designed for the needs of various Auto ID applications in manufacturing and logistics. DS6400 is based on the same concept as DS6300: a complete modular solution in terms of reading performance, built-in connectivity, ease of use and maintenance.
The DS6400 embeds a linear motor providing a dynamic focus system called FLASH™, fully controlled via software, which covers an impressive reading range of over 2 meters. FLASH™ is capable of moving the focus position from the minimum to the maximum position in less than 10 ms.
DS6400 features a practical display with keyboard that increases the scanner's ease of use by showing barcode data read (local echo), statistics and diagnostic information; moreover, it offers built-in connectivity to Ethernet, DeviceNet and Profibus networks.

READING DIAGRAMS

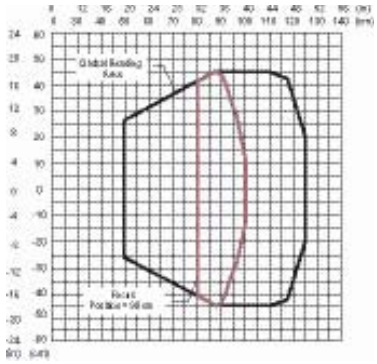
DS6400-100-0XX
Resolution: 0.20 mm/8 mils

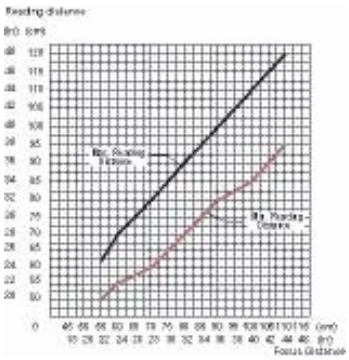




CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10° - 20°
Tilt angle = 0°

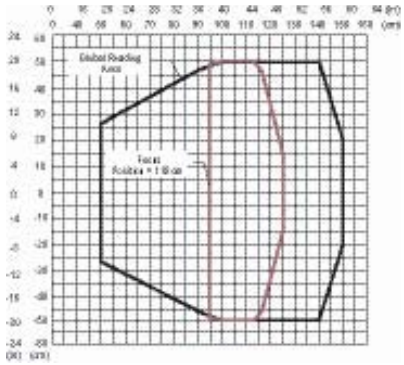
DS6400-100-0XX
Resolution: 0.25 mm/10 mils

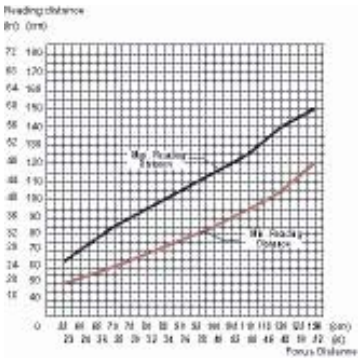




CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10° - 20°
Tilt angle = 0°

DS6400-100-0XX
Resolution: 0.30 mm/12 mils

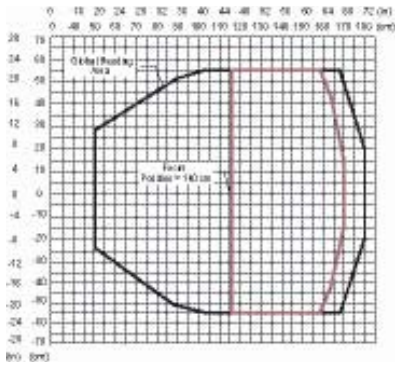


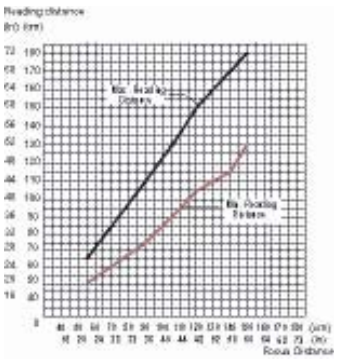


CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10° - 20°
Tilt angle = 0°

READING DIAGRAMS

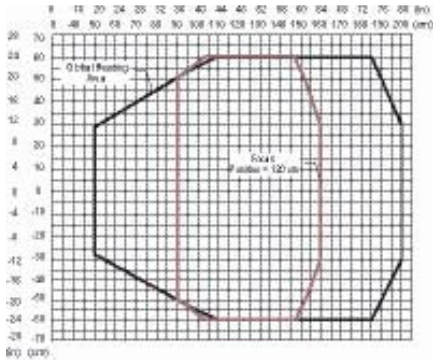
DS6400-100-0XX
Resolution: 0.38 mm/15 mils

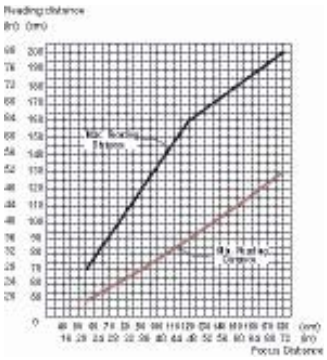




CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10° - 20°
Tilt angle = 0°

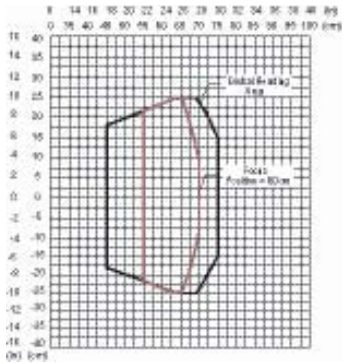
DS6400-100-0XX

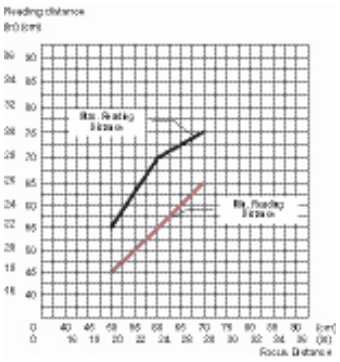




CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10° - 20°
Tilt angle = 0°

(Oscillating Mirror)
Resolution: 0.20 mm/8 mils

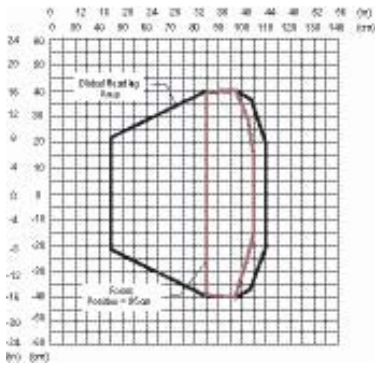


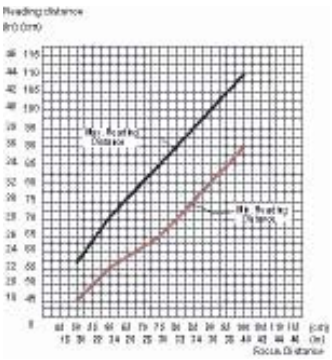


CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10° - 20°
Tilt angle = 0°

READING DIAGRAMS

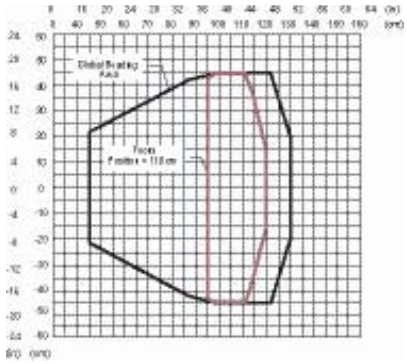
DS6400-105-0XX (Oscillating Mirror)
Resolution: 0.25 mm/10 mils

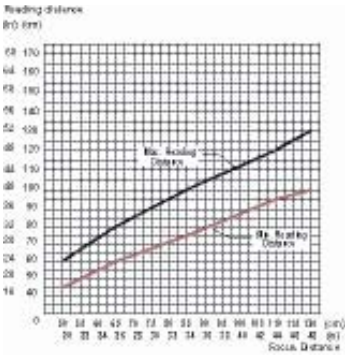




CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10° - 20°
Tilt angle = 0°

DS6400-105-0XX (Oscillating Mirror)
Resolution: 0.30 mm/12 mils

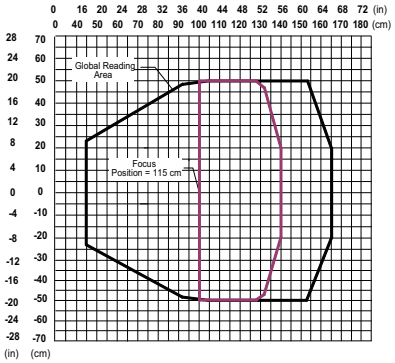


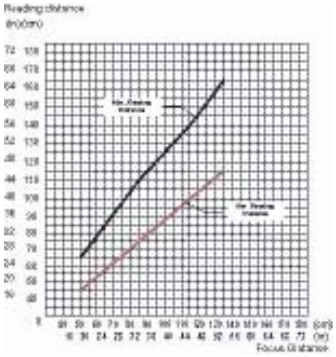


CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10° - 20°
Tilt angle = 0°

READING DIAGRAMS

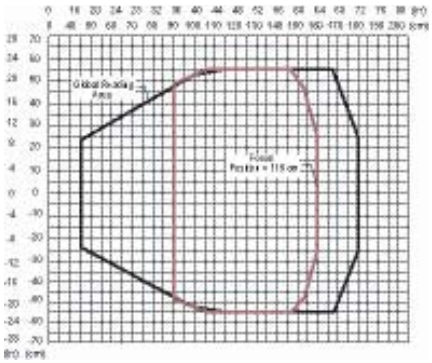
DS6400-105-0XX (Oscillating Mirror)
Resolution: 0.38 mm/15 mils

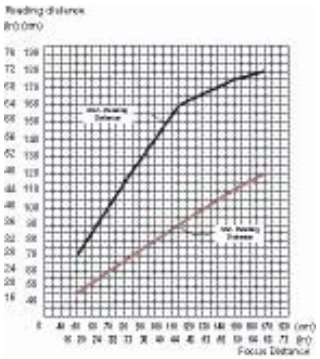




CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10° - 20°
Tilt angle = 0°

DS6400-105-0XX (Oscillating Mirror)
Resolution: 0.50 mm/20 mils

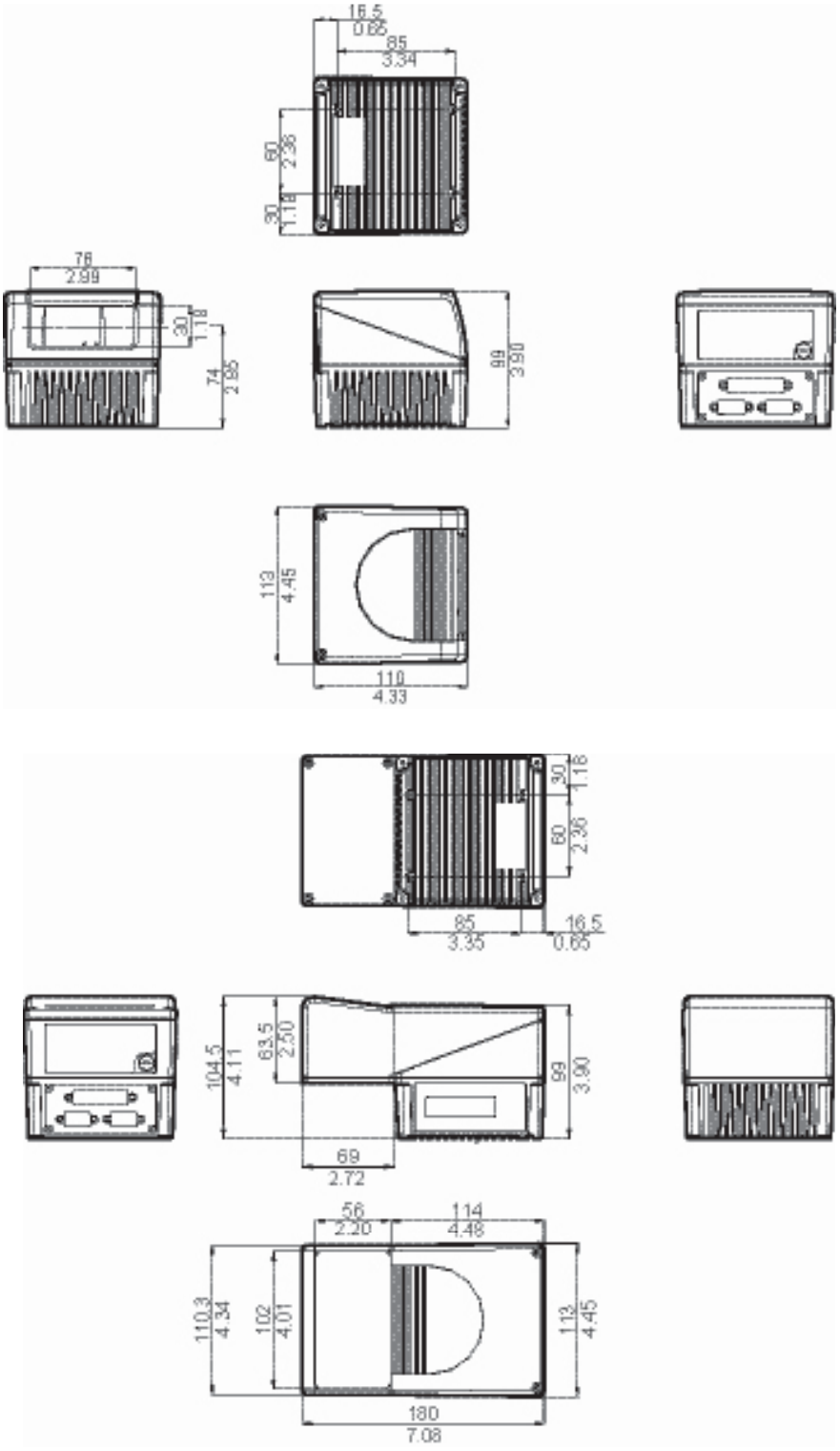




CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
Pitch angle = 0°
Skew angle = 10° - 20°
Tilt angle = 0°

DIMENSIONS

OSCILLATING MIRROR VERSION



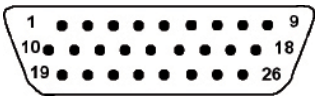
mm / inch

ELECTRICAL CONNECTIONS

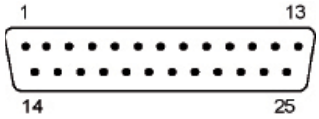
All the connectors available for each DS6400 model are the following:

SCANNER MODEL	CONNECTORS
Master/Slave	25-pin male serial interface and I/O connector 9-pin male Lonworks connector* 9-pin female Lonworks connector
Ethernet	26-pin male serial interface and I/O connector 9-pin female Lonworks connector RJ45 modular connector

The DS6400 Master/Slave models are equipped with a 25-pin male D-sub connector for connection to the host computer, power supply and input/output signals. The DS6400 Ethernet models adopt a 26-pin male connector instead of the 25-pin one.



26-pin Connector

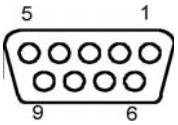


25-pin Connector

25-PIN/26-PIN D-SUB CONNECTOR PINOUT				
Pin	**Name**		**Function**	
1	CHASSIS		Chassis - internally connected to GND	
			Cable 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	
6	IN 2/ENC A		Input signal 2 (polarity insensitive) for Encoder	
10	IN 2/ENC B		Input signal 2 (polarity insensitive) for Encoder	
14	IN 3A		Input signal 3 (polarity insensitive)	
15	IN 4A		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	
Pin	**RS232**	**RS232**	**RS485 Full-Duplex**	**RS485 Half-Duplex**
2	Main Interface Signals (SW Selectable)	TX	TX485 +	RTX485 +
3		RX	* RX485 +	
4		RTS	TX485 -	RTX485 -
5		CTS	* RX485 -	
7		GND_ISO	GND_ISO	GND_ISO

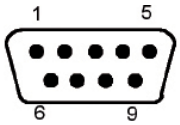
* Do not leave floating, see DS6400 Reference Manual for connection details.

ELECTRICAL CONNECTIONS



Female (all models)

9-pin Local Lonworks Connectors



Male (Master/Slave model)

9-pin Local Lonworks Connectors

1	CHASSIS	Cable shield internally connected by capacitor to chassis
9	VS	Supply voltage - positive pin
2	GND	Supply voltage - negative pin
6	VS_I/O	Supply voltage of I/O circuit
3	REF_I/O	Reference voltage of I/O circuit
4	SYS_ENC_I/O	System signal
5	SYS_I/O	System signal
7	LON A	Lonworks line (polarity insensitive)
8	LON B	Lonworks line (polarity insensitive)

In DS6400 Ethernet models a RJ45 Modular Jack is provided for Ethernet connection. This interface and the connector pinout are IEEE 802.3 10 BaseT and IEEE 802.3u 100 BaseTX compliant.

RJ45 Modular Jack

RJ45 MODULAR JACK PINOUT		
Pin	**Name**	**Function**
1	TX +	Transmitted data (+)
2	TX -	Transmitted data (-)
3	RX +	Received data (+)
6	RX -	Received data (-)
4,5,7,8	NC	Not connected

MODELS AND ACCESSORIES

MODELS	
Order No.	**Description**
931351093	DS6400-100-010 DYN. FOCUS, LINEAR, M/S
931351095	DS6400-100-011 DYN. FOCUS, LINEAR, PROFIBUS
931351097	DS6400-100-012 DYN. FOCUS, LINEAR, ETHERNET
931351099	DS6400-100-015 DYN. FOCUS, LINEAR, DEVICENET
931351103	DS6400-105-010 DYN. FOCUS, OSC. MIRROR, M/S
931351105	DS6400-105-011 DYN. FOCUS, OSC. MIRROR, PROFIBUS
931351107	DS6400-105-012 DYN. FOCUS, OSC. MIRROR, ETHERNET
931351109	DS6400-105-015 DYN. FOCUS, OSC. MIRROR, DEVICENET

ACCESSORIES	
Order No.	**Description**
93A201100	GFC-60 90° MIRROR
93A201102	GFC-600 90° MIRROR CLOSE DISTANCE
93ACC1721	FBK-6000 FAST BRACKET KIT (2 PCS)

TECHNICAL DATA

	DS6400-100-01X	DS6400-105-01X
DIMENSIONS	110 x 113 x 99 mm (4.33 x 4.45 x 3.9 in)	113 x 180 x 104.5 mm (4.45 x 7.08 x 4.11 in)
WEIGHT	1.5 kg. (3.3 lb)	2.0 kg. (4.4 lb)
CASE MATERIAL	Aluminum	
OPERATING TEMPERATURE	0 to 40 °C (32 to 104 °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	IP64 for standard models; IP65 on request	
LIGHT SOURCE	Visible laser diode (630 to 680 nm)	
SCANNING SPEED	600 to 1200 scan/s SW programmable	
RESOLUTION	Down to 0.20 mm (8 mils)	
READABLE SYMBOLOGIES	Code 2/5, Code39, Code93, Code128, EAN/UPC, EAN128, Codabar, Pharmacode, ISBN128	
MULTILABEL READING	Up to 10 different symbologies during the same reading phase	
COMMUNICATION INTERFACES	Main Port: RS232/RS485 up to 115.2 Kbit/s	
	Auxiliary Port: RS232 up to 115.2 Kbit/s	
OTHER AVAILABLE INTERFACES	Lonworks (Master/Slave), Ethernet, Profibus, DeviceNet	
DIGITAL INPUTS	Three SW programmable and One “Encoder”, optocoupled, NPN/PNP	
DIGITAL OUTPUTS	Three SW programmable, optocoupled, event driven	
DISPLAY & KEYPAD	LCD 16 x 2 characters & 3 keys	
LED INDICATORS	Power On, Phase On, Data Tx	
DEVICE PROGRAMMING	Windows™ based SW (Genius™) via serial or Ethernet link	
	Serial Host Mode Programming sequences	
OPERATING MODES	‘On-line’, ‘Serial On-line’, ‘Continuous’, ‘Test’, ‘PackTrack™’	
LASER CLASSIFICATION	Class 2 - EN60825-1; Class II - CDRH	
LASER CONTROL	Safety system to turn laser off in cases of motor slowdown or failure	
POWER SUPPLY	15 to 30 VDC	
POWER CONSUMPTION	15 W typical, 20 W max	

DS8100A

Industrial Bar Code Scanners

Configuration Sw Tool


ACR4™ technology


PackTrack™

ASTRA™ Technology

APPLICATIONS

- Postal/Courier parcel sorting and tracking
- Automated warehousing identification systems
- Airport baggage sorting systems
- Cargo applications
- Loading/unloading systems

ADVANTAGES

- Easily and rapidly configured thanks to Datalogic GENIUS™ (intuitive and multilanguage configuration program)
- DIGITECH™ Digitech technology permits full SW control over signal processing parameters. Scanner setup can therefore be optimized quite simply by loading the right SW recipe, thus enabling excellent performance in all reading conditions
- A simplified replacement procedure enables reduced down time due to automatic SW configuration restore in the new device
- Unbeatable reading performance and reliability on fast moving conveyor systems are ensured by ASTRA™ electronic focusing system (no mechanical moving parts)
- PackTrack™ function reduces the minimum object gap while enabling higher system throughput
- Fully compatible with DX8200A, 6000 series (DS6300, DS6400) and SC6000 industrial controller

HIGHLIGHTS

- Reading performance benchmark
- ACR4™ code reconstruction algorithm
- ASTRA™ technology for the electronic focusing system
- DIGITECH™ signal processing technology
- PACKTRACK™ to minimize the gap between objects and increase system productivity
- GENIUS™ multilanguage SW for easy scanner configuration/setup
- Display and keyboard
- Built-in Ethernet TCP/IP connectivity

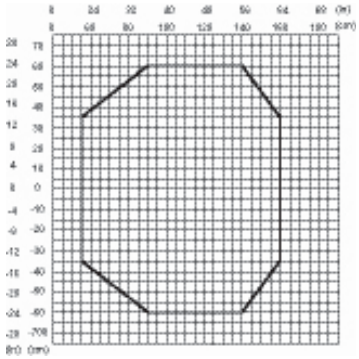
GENERAL DESCRIPTION

DS8100A represents the evolution of a winning concept which started in 1998: the use of state-of-the-art technology to design the best performing fixed position scanner on the market. DS8100A is based on an innovative 3-diode structure that offers an unbeatable real time depth of field.
Connectivity has been improved with the introduction of built-in Ethernet connectivity with implemented TCP-IP, Ethernet/IP and Modbus TCP protocols. A practical display with keyboard increases DS8100A ease of use by offering a simple and complete human machine interface without PC. The SW platform of the new DS8100A, based on GENIUS™ configuration program, permits 100% control of scanner functionality via SW. Moreover, DIGITECH™ technology enables excellent reading performance along the entire depth of field.

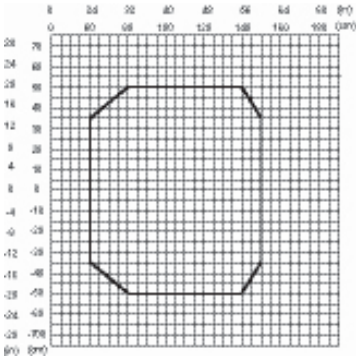


READING DIAGRAMS

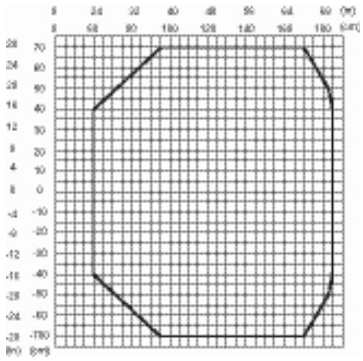
DS8100A-2X10
0.50 mm/20 mils



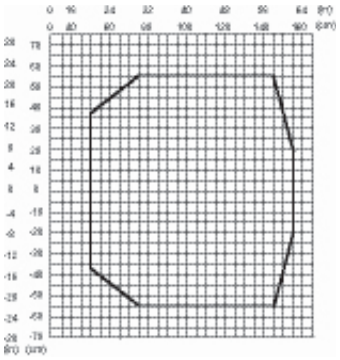
DS8100A-2X10
0.38 mm/15 mils



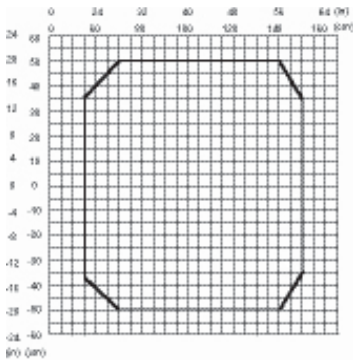
DS8100A-3X00
0.50 mm/20 mils



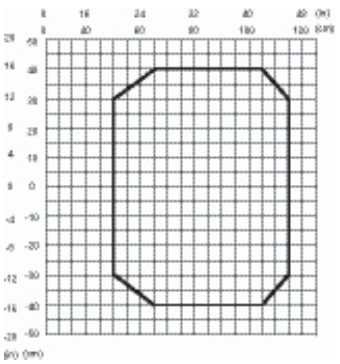
0.38 mm/15 mils



DS8100A-3X20
0.30 mm/12 mils



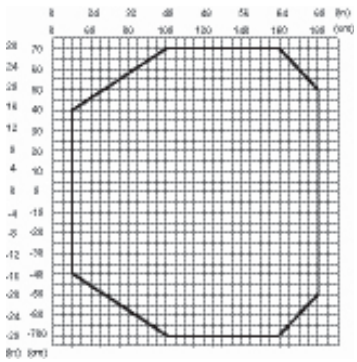
DS8100A-3X30
0.25 mm/10 mils



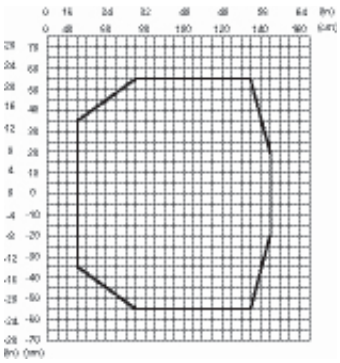
CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
“Pitch” angle = 0°
“Skew” angle = 10°
“Tilt” angle = 0°

READING DIAGRAMS

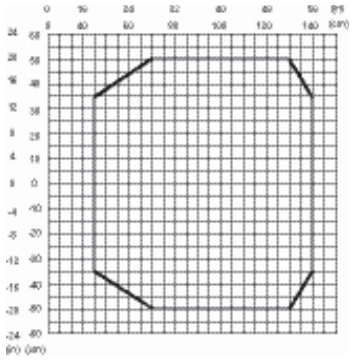
DS8100A-3X05
0.50 mm/20 mils



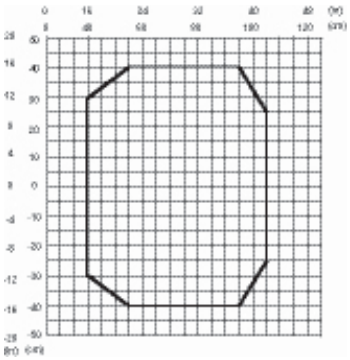
DS8100A-3X15
0.38 mm/15 mils



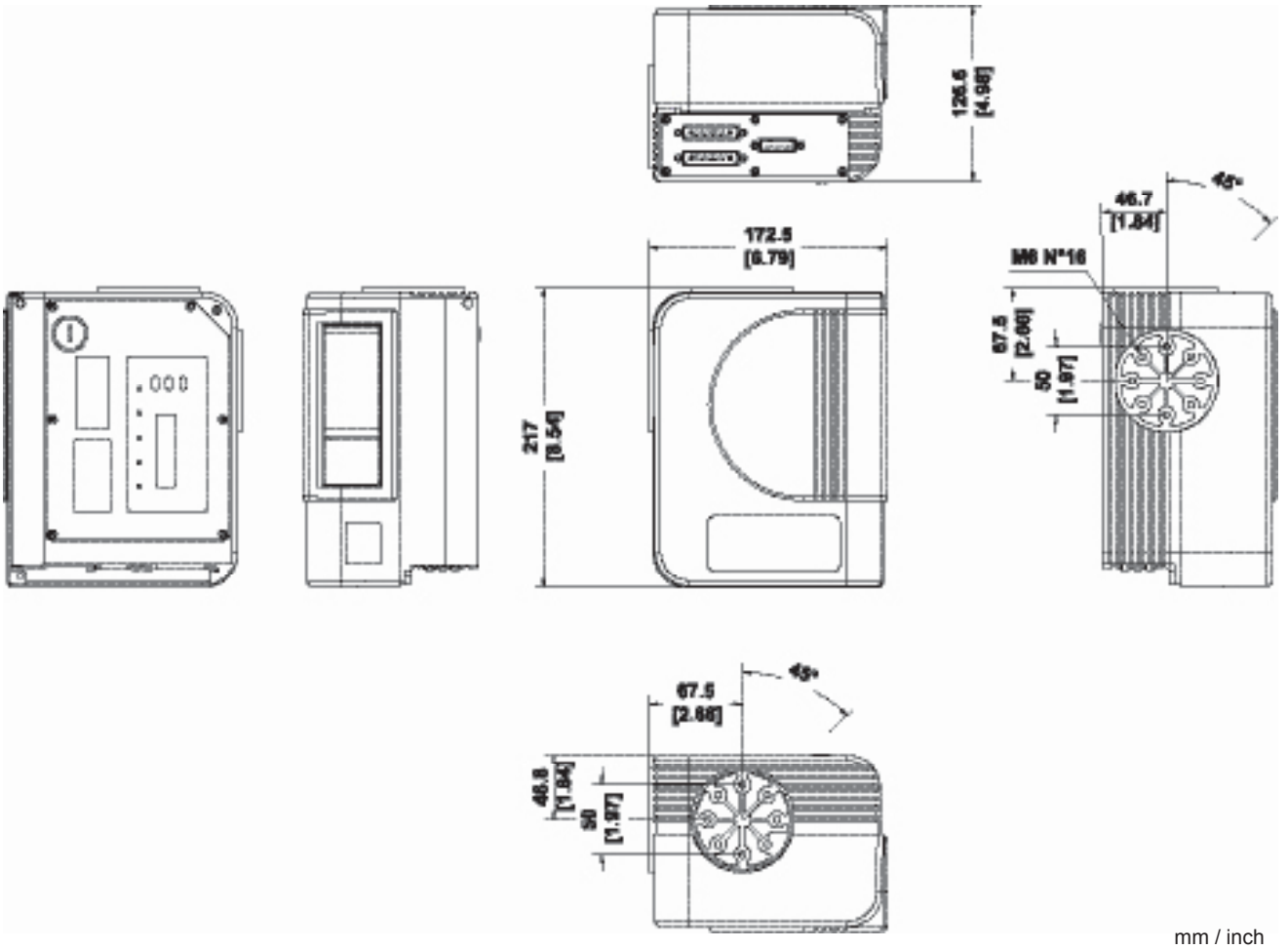
DS8100A-3X25
0.30 mm/12 mils



DS8100A-3X35
0.25 mm/10 mils



DIMENSIONS



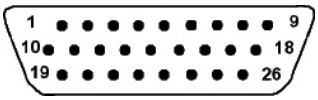
mm / inch

ELECTRICAL CONNECTIONS

All the connectors available for each DS8100A model are the following:

SCANNER MODEL	CONNECTORS
Standard	26-pin male serial interface and I/O connector 17-pin male Lonworks connector* 17-pin female Lonworks connector*
Ethernet	26-pin male serial interface and I/O connector 17-pin male Lonworks connector* 17-pin female Lonworks connector* RJ45 Industrial modular connector

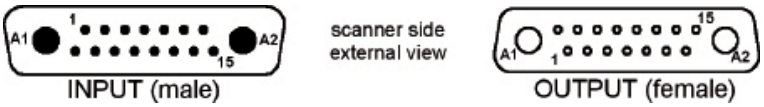
The DS8100A Standard and Fieldbus models are equipped with a 26-pin male D-sub connector for connection to the host computer, power supply and input/output signals.



26-pin Connector

26-PIN D-SUB CONNECTOR PINOUT				
Pin	**Name**		**Function**	
1	CHASSIS		Chassis - internally connected to GND	
			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	
6	IN 2/ENC A		Input signal 2 (polarity insensitive) for Encoder	
10	IN 2/ENC B		Input signal 2 (polarity insensitive) for Encoder	
14	IN 3A		Input signal 3 (polarity insensitive)	
15	IN 4A		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	
Pin	**RS232**	**RS232**	**RS485 Full-Duplex**	**RS485 Half-Duplex**
2	Main Interface Signals (SW Selectable)	TX	TX485 +	RTX485 +
3		RX	RX485 +	
4		RTS	TX485 -	RTX485 -
5		CTS	RX485 -	
7		GND_ISO	GND_ISO	GND_ISO

ELECTRICAL CONNECTIONS



Lonworks INPUT/OUTPUT Connectors

LONWORKS INPUT/OUTPUT 17-PIN 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
3	CHASSIS	Cable shield B – internally connected by capacitor to chassis
7	VS_I/O	Supply voltage of I/O circuit
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
13	SYS_ENC_I/O	System signal
14	RES	Internally connected
15	REF_I/O	Reference voltage of I/O circuit
2,4,5,6	NC	Not Connected

RJ45 Modular Jack

RJ45 MODULAR JACK PINOUT		
Pin	**Name**	**Function**
1	TX +	Transmitted data (+)
2	TX -	Transmitted data (-)
3	RX +	Received data (+)
6	RX -	Received data (-)
4,5,7,8	NC	Not connected

TECHNICAL DATA

DIMENSIONS	215.5 x 170.5 x 126.5 mm (8.48 x 6.71 x 4.98 in)	280 x 254 x 195 mm (11.03 x 10 x 7.68 in)
WEIGHT	5.0 Kg (176.3 oz.)	6.4 Kg (225.7 oz.)
CASE MATERIAL	Aluminum	
OPERATING TEMPERATURE	0 to 50 °C (32 to 122 °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; OM: 15 G 11 ms; 3 shocks on each axis	
PROTECTION CLASS	IP64 for standard models; IP65 on request	
LIGHT SOURCE	Visible laser diode (630 to 680 nm)	
SCANNING SPEED	1000 scans/s	
RESOLUTION	See diagrams	
READABLE SYMBOLOGIES	22 symbologies including 2/5 family, Code39, Code93, Code128, EAN/UPC, EAN128, ISBN128	
MULTILABEL READING	Up to 10 different symbologies during the same reading phase	
COMMUNICATION INTERFACES	Main Port: RS232/RS485 up to 115.2 Kbit/s	
	Auxiliary Port: RS232 up to 115.2 Kbit/s	
OTHER AVAILABLE INTERFACES	Lonworks (Master/Slave), Ethernet (optional)	
DIGITAL INPUTS	Three SW programmable and One “Encoder”, optocoupled, NPN/PNP	
DIGITAL OUTPUTS	Three SW programmable, optocoupled, event driven	
DISPLAY & KEYPAD	LCD 16 x 2 characters & 3 keys	
LED INDICATORS	1) Power On (red) Good Read (red);	
	2) Trigger (yellow) TX Data (green); 3) Encoder (yellow) Network (red)	
DEVICE PROGRAMMING	Windows™ based SW (Genius™) via serial or Ethernet link	
	Serial Host Mode Programming sequences	
OPERATING MODES	‘On-line’, ‘Serial On-line’, ‘Automatic’, ‘Continuous’, ‘PackTrack™’, ‘Test’	
LASER CLASSIFICATION	Class 2 - EN60825-1; Class II - CDRH	
LASER CONTROL	Safety system to turn laser off in cases of motor slowdown or failure	
POWER SUPPLY	20 to 30 VDC	
POWER CONSUMPTION	20 W typical, 30 W max	

DX8200A

Industrial Bar Code Scanners

Configuration SW Tool


ACR4™ technology


PackTrack™

ASTRA™ technology

APPLICATIONS

- Postal/Courier parcel sorting and tracking
- Automated warehousing identification systems
- Airport baggage sorting systems
- Cargo applications
- Loading/unloading systems

ADVANTAGES

- Improved connectivity thanks to the introduction of built-in Ethernet with implemented TCP-IP, Ethernet/IP and Modbus TCP protocols
- DIGITECH™ Digitech technology permits full SW control over signal processing parameters Scanner setup can therefore be optimized quite simply by loading the right SW recipe, thus enabling excellent performance in all reading conditions
- Ease of use is increased due to a practical display with keyboard, offering a simple and complete human machine interface without PC
- Fully compatible with the DS8100A, the 6000 series (DS6300, DS6400) and the SC6000 industrial controller

HIGHLIGHTS

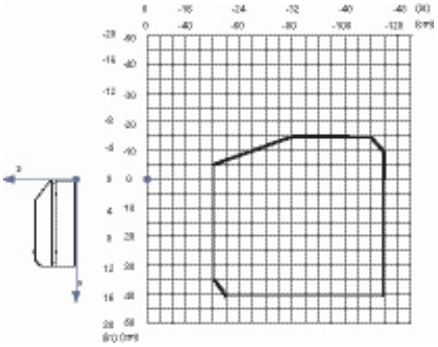
- Omnidirectional reading
- ACR4™ code reconstruction algorithm
- ASTRA™ technology for the electronic focusing system
- DIGITECH™ signal processing technology
- PACKTRACK™ to minimize the gap between objects and increase system productivity
- GENIUS™ multilanguage SW for easy scanner configuration/setup
- Display and keyboard
- Display and keyboard
- Built-in Ethernet TCP/IP connectivity

GENERAL DESCRIPTION

DX8200A is based on an innovative 3-diode structure that offers an unbeatable real time depth of field. As a result of improved ASTRA™ technology that increases its already impressive performance, 3 laser diodes are electronically switched from one to the other, depending on the bar code distance from the scanner. This means that the scanner is able to capture the bar code on an object of any possible shape and in any position, since as the DX8200A focuses on the bar code and not on the object profile. The PackTrack™ function reduces minimum object gap and increases system throughput. The SW platform of DX8200A, based on GENIUS™ configuration program, permits 100% control of scanner functionality via SW. Moreover, DIGITECH™ technology enables excellent reading performance along the entire depth of field.

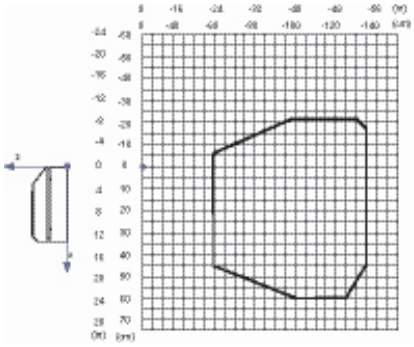
READING DIAGRAMS

(0.25 mm/10 mils)



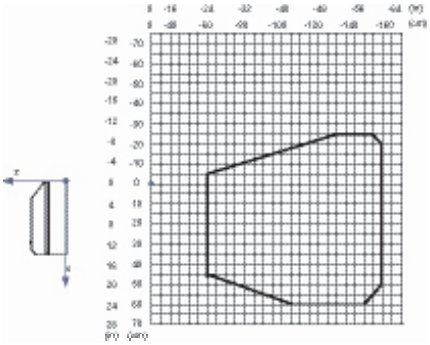
CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90

DX8200A-3X2X
(0.30 mm/12 mils)



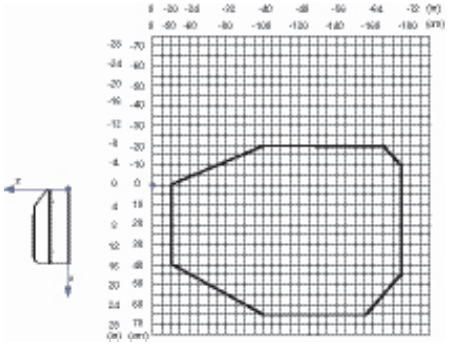
CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90

DX8200A-3X1X
(0.38 mm/15 mils)



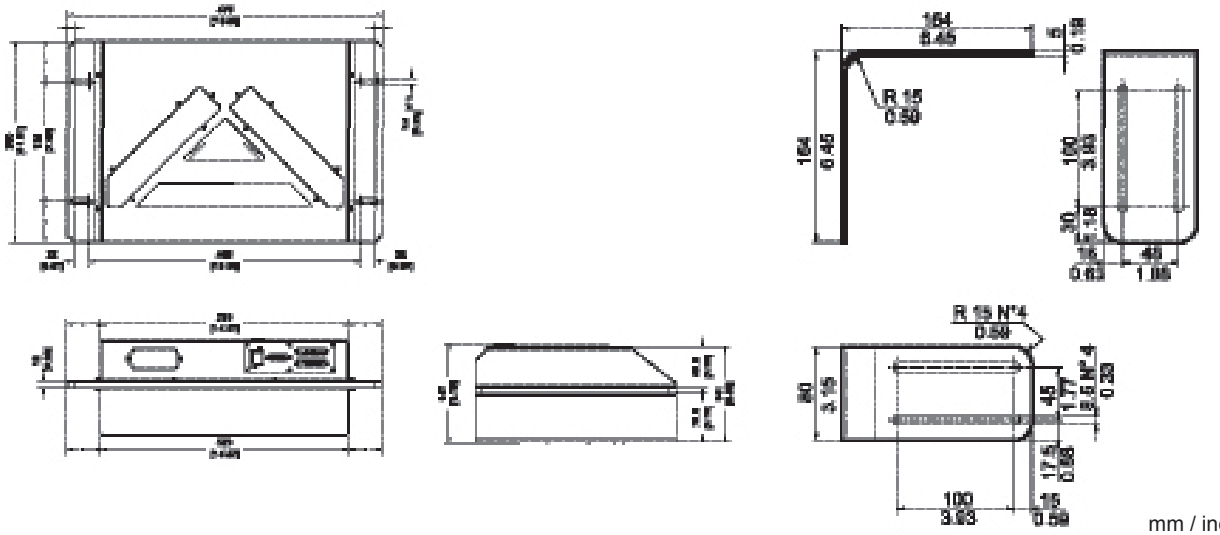
CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90

DX8200A-3X1X
(0.50 mm/20 mils)



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

DIMENSIONS



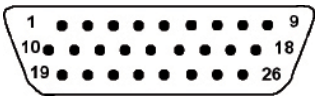
mm / inch

ELECTRICAL CONNECTIONS

All the connectors available for each DX8200A model are the following:

SCANNER MODEL	CONNECTORS
Standard	26-pin male serial interface and I/O connector 17-pin male Lonworks connector* 17-pin female Lonworks connector*
Ethernet	26-pin male serial interface and I/O connector 17-pin male Lonworks connector* 17-pin female Lonworks connector* RJ45 Industrial modular connector

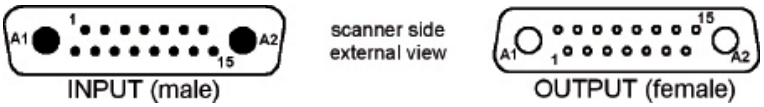
The DX8200A Standard and Fieldbus models are equipped with a 26-pin male D-sub connector for connection to the host computer, power supply and input/output signals.



26-pin Connector

26-PIN D-SUB CONNECTOR PINOUT				
Pin	**Name**		**Function**	
1	CHASSIS		Chassis - internally connected to GND	
			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	
6	IN 2/ENC A		Input signal 2 (polarity insensitive) for Encoder	
10	IN 2/ENC B		Input signal 2 (polarity insensitive) for Encoder	
14	IN 3A		Input signal 3 (polarity insensitive)	
15	IN 4A		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	
Pin	**RS232**	**RS232**	**RS485 Full-Duplex**	**RS485 Half-Duplex**
2	Main Interface Signals (SW Selectable)	TX	TX485 +	RTX485 +
3		RX	RX485 +	
4		RTS	TX485 -	RTX485 -
5		CTS	RX485 -	
7		GND_ISO	GND_ISO	GND_ISO

ELECTRICAL CONNECTIONS



Lonworks INPUT/OUTPUT Connectors

LONWORKS INPUT/OUTPUT 17-PIN 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
3	CHASSIS	Cable shield B – internally connected by capacitor to chassis
7	VS_I/O	Supply voltage of I/O circuit
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
13	SYS_ENC_I/O	System signal
14	RES	Internally connected
15	REF_I/O	Reference voltage of I/O circuit
2,4,5,6	NC	Not Connected

In DS8100A Ethernet models a RJ45 Modular Jack is provided for Ethernet connection. This interface and the connector pinout are IEEE 802.3 10 BaseT and IEEE 802.3u 100 BaseTX compliant.

RJ45 Modular Jack

RJ45 MODULAR JACK PINOUT		
Pin	**Name**	**Function**
1	TX +	Transmitted data (+)
2	TX -	Transmitted data (-)
3	RX +	Received data (+)
6	RX -	Received data (-)
4,5,7,8	NC	Not connected

TECHNICAL DATA

DIMENSIONS	319.5 x 248.7 x 99.7 mm (12.58 x 9.79 x 3.93 in)
WEIGHT	3.3 Kg (7.26 lbs)
CASE MATERIAL	Steel
OPERATING TEMPERATURE	0 to 50 °C (32 to 122 °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; OM: 15 G 11 ms; 3 shocks on each axis
PROTECTION CLASS	IP64 for standard models; IP65 on request
LIGHT SOURCE	Visible laser diode (630 to 680 nm)
SCANNING SPEED	1000 scans/s (500 scans per line)
READING PATTERN	Single-cross
RESOLUTION	See diagrams
READABLE SYMBOLOGIES	22 symbologies including 2/5 family, Code39, Code93, Code128, EAN/UPC, EAN128, ISBN128
MULTILABEL READING	Up to 10 different symbologies during the same reading phase
COMMUNICATION INTERFACES	Main Port: RS232/RS485 up to 115.2 Kbit/s
	Auxiliary Port: RS232 up to 115.2 Kbit/s
OTHER AVAILABLE INTERFACES	Lonworks (Master/Slave), Ethernet, Profibus, DeviceNet (optional)
DIGITAL INPUTS	3 programmable and 1 Encoder (optocoupled);
	Auxiliary Input, NPN/PNP transistor (optocoupled)
DIGITAL OUTPUTS	Three SW programmable, optocoupled, event driven
DISPLAY & KEYPAD	LCD 16 x 2 characters & 3 keys
LED INDICATORS	6 LED status indicators
DEVICE PROGRAMMING	Windows™ based SW (Genius™) via serial or Ethernet link
	Serial Host Mode Programming sequences
OPERATING MODES	‘On-line’, ‘Serial On-line’, ‘Automatic’, ‘Continuous’, ‘PackTrack™’, ‘Test’
LASER CLASSIFICATION	Class 2 - EN60825-1; Class II - CDRH
LASER CONTROL	Safety system to turn laser off in cases of motor slowdown or failure
POWER SUPPLY:	10 to 30 VDC
POWER CONSUMPTION:	< 10 W

Vision Systems

APPLICATIONS

- Transportation & Logistic
- Postal and Courier Express sorting
- Video-Coding and OCR
- DWS systems for Revenue Recovery
- Distribution and Retail
- Large distribution centres
- Multimedia sorting
- Reverse Logistics process

ADVANTAGES

- Large conveyor coverage with extended DOF up to 1400mm (55”) that allows to load parcels with larger dimension perpendicular to conveyor direction (i.e cross-belt)
- High image quality for easy decoding and for OCR and VideoCoding application
- Outstanding reading performance on barcode, 2D-code even when damaged or with low quality
- Easy integration with OCR and VCS sw
- Smart Bottom solution with reduced required room
- NVS9000™ is ready to be integrated with standard OCR and Videocoding system to improve overall reading capability
- System supervisor sw provides diagnostics and statistics with a very intuitive visual on screen information
- Ready to use in high temperature environment

HIGHLIGHTS

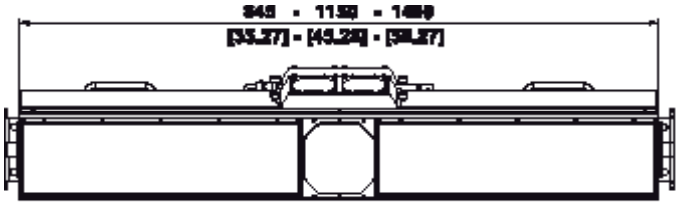
- Excellent reading performance for higher system throughput
- Extended Field of View: 1400mm (55”)
- High reading performance on high speed conveyors: 4,8 m/s (945 fpm)
- Reduced overall System Dimension: 2,2 m (7ft)
- Video-Coding & OCR ready
- Integration with dimensioning and scale system
- Integration with Laser systems
- Easy installation by a single installer in few hours
- Easy maintenance and quick replacement
- Industrial reliability and consistency

GENERAL DESCRIPTION

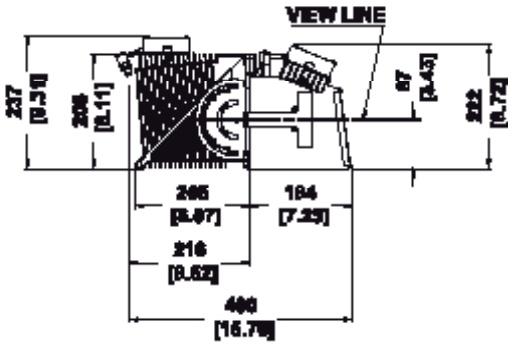
NVS9000™ is an industrial high-end vision system that has been designed to drastically improve the productivity of postal, mail order and distribution companies. The integration of a new 8K linear sensor and a powerful lighting systems provides high quality image detection with extended depth of field on large conveyor up to 1400mm (55”). The new sensor frame rate, up to 240 frame/s, makes NVS9000™ to feature excellent dynamic performance, up to 4.5m/s on high resolution images (170dpi). This feature, combined with a new high speed autofocus system, guarantees excellent reading capabilities on high speed conveyor even on parcel with a very small gap. Every single detail of NVS9000™ has been designed to reduce the overall cost of installation. Unique point of configuration, a simple step by step automatic routine, a smart mechanical hang&fix bracket, the product lightweight and its handles, the reduced number of cables and devices allow a single installer to complete the system installation and setup in few hours.

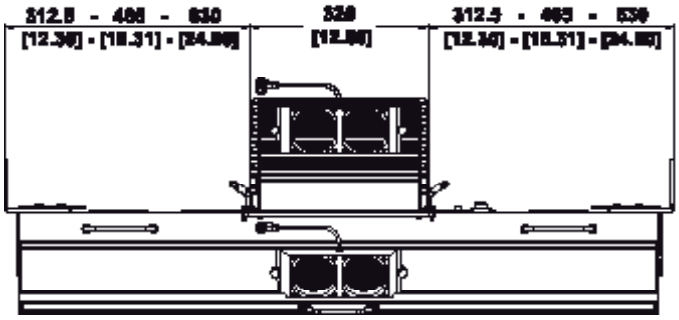
DIMENSIONS

NLS9000



NVS9000





mm / inch

MODELS AND ACCESSORIES

MODELS	
Order No.	**Description**
933701002	NVS9000-1100 8K-8, 135mm, AF, CLINK
933701001	NVS9000-1200 8K-8, 105mm, AF, CLINK
933701000	NVS9000-1600 8K-8, 80mm, AF, CLINK
933701006	NVS9000-1700 8K-8, 60mm, AF, CLINK
933701003	NLS9000-800 SHORT LIGHTING SYS
933701004	NLS9000-1100 MEDIUM LIGHTING SYS
933701005	NLS9000-1500 LONG LIGHTING SYS

ACCESSORIES	
Order No.	**Description**
93ACC1610	AST-9000 AF SETTING TOOL
93A051274	CAB-9202 SERIAL CABLE 9 PIN, M/F, 2 m
93A051269	CAB-9305 VIDEO CAB. CLINK, 5 m
93A051270	CAB-9310 VIDEO CAB. CLINK, 10 m
93A051276	CAB-PW24 24VDC POWER CABLE, 10 m
93ACC1733	DK-500 DISTANCE KIT RS485 + CABLE 5 m
93ACC1781	LCC-9501 LIGHT CURTAIN 150mm+CABLE 10m
93ACC1763	LCC-9506 LIGHT CURTAIN 600mm+CABLE 10m
93ACC1764	LCC-9509 LIGHT CURTAIN 900mm+CABLE 10m
93ACC1765	LCC-9512 LIGHT CURTAIN 1200mm+CABLE 10m

TECHNICAL DATA

DIMENSIONS	See drawings
WEIGHT	NVS9000: 11 kg (24 lbs)
	NLS9000:
	Short 12kg (26 lbs) Medium 15kg (33 lbs) Long 19kg (41 lbs)
HOUSING	Alluminium die casting
OPERATING TEMPERATURE	0° to + 50 °C (32 to 122°F)
STORAGE TEMPERATURE	-20° to + 70 °C (-4 to 158°F)
HUMIDITY	95% non condensing
PROTECTION CLASS	IP65
CCD SENSOR	8192 pixels, 8 taps
SCAN RATE	Max 30KHz
LENS OPTIONS	60 mm, 80 mm, 105 mm, 135 mm
ILLUMINATOR (NLS9000) MODELS	Short, Medium, Long
DEFLECTION MIRROR MODELS	Short, Medium, Long
FOCUS	Dynamic
IMAGE RESOLUTION RANGE	110-260 DPI (application dependant)
FOV FROM TOP	up to 1400 mm
DOF FROM TOP	up to 1200 mm
MAX. CONVEYOR SPEED	3 m/s (590 ft/min) for a resolution of 250 DPI
	4.5 m/s (885 ft/min) for a resolution of 170 DPI
	> 5 m/s (985 ft/min) for a resolution of 100 DPI
DECODER CPU	Core 2 Duo
RAM	2 Gbytes
MEMORY CARD FOR PARAMETERS SAVING	2 GB Compact-Flash
OPERATING SYSTEM	Windows XP Embedded
DECODER SOFTWARE	Datalogic Automation proprietary
READABLE SYMBOLOGIES	All standard 1D and 2D symbologies
SETUP INTERFACES	USB port, VGA port, Ethernet Gb
HOST DATA INTERFACE	RS232/RS485 full duplex up to 115.2 Kbit/s (optoisolated)
	Ethernet Gb
IMAGE DATA OUTPUT	Gigabit Ethernet, C-Link
DIGITAL I/O	Presence Sensor input, Speed sensor input
	4 Input / 4 Output NPN or PNP open collector input/output, optoisolated
LEDS AND INDICATORS	GENERAL: Power, Ready, Good, Status
	COMMUNICATION: Position Sensor, Speed Sensor, Trigger, Video Sync, Chain Sync, COM
SUPPLY VOLTAGE	24 VDC +/-10%
POWER CONSUMPTION	360 W average (450 max)
LED CLASS	Class 2M

IDENTIFICATION
Connectivity

Controllers

APPLICATIONS

- Automated Warehousing
- Work-in-progress Control
- Product Traceability and Quality Control

ADVANTAGES

- Industrial controller designed for high speed data collection from up to 31 Datalogic Automation's 1D/2D code readers connected in an ID-NET™ network.
- Easy and simple network configuration thanks to Genius™ multi-language software tool via RS232 serial link or remote Ethernet connectivity.
- Availability of advanced software tools for monitoring and control of data collection network.
- Increased overall network reliability and minimized system downtime thanks to the embedded Backup and Restore memory unit.
- IP65 (NEMA 4) protection class and 0 to 50 °C (32 to 122 °F) operating temperature.

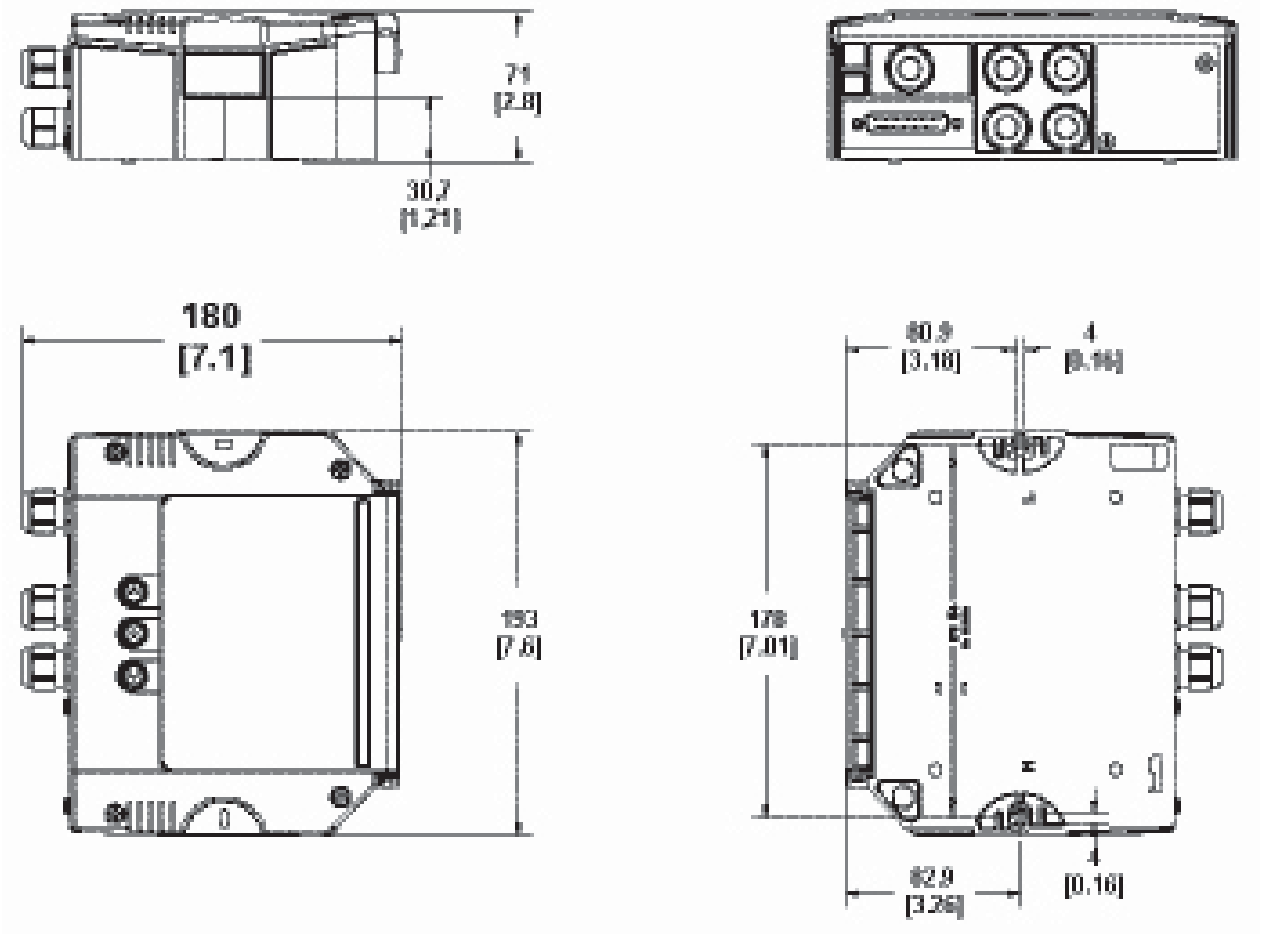
HIGHLIGHTS

- Industrial controller for high speed data collection from up to 31 reading stations
- ID-NET™ interface for data collection network
- Open architecture allows comfortable connectivity to Ethernet TCP/IP, Profibus, DeviceNet, Ethernet/IP and other common networks.
- Complete network monitoring, statistics and diagnostics through WebSentinel™ software
- Multi-language Display and Keypad for easy network monitoring and diagnostics
- Embedded Backup and Restore feature to minimize plant downtime
- Visible Power, Communication and I/O indicators and convenient Power on/off switch
- Multi-language Genius™ SW tool allows rapid network configuration
- Flexible mounting and simplified wiring to speed up the installation.
- IP65 (NEMA 4) rated industrial design

GENERAL DESCRIPTION

SC4000 is an industrial controller designed for high speed data collection in an ID-NET™ network of Datalogic Automation's 1D/2D code readers. SC4000 offers high communication performance and connectivity to the most common fieldbus systems by means of a complete range of optional modules.
Through SC4000, a multi-station reading system can be realized in a very simple way. SC4000 allows complete monitoring of the network status, immediately providing useful information about performance and malfunctioning to users as well as to Datalogic WebSentinel™, the new surveillance software solution for the total remote control and monitoring of the readers.
Basic diagnostic and statistic information is directly available on the backlit 4-lines display while intuitive LEDS provide indications about the status of the device as well as of the entire network. When quick and reliable replacement of any code reader in the network is needed, SC4000 takes advantage of the embedded Backup & Restore memory unit.
SC4000 features IP65 (NEMA 4) protection class and 0 to 50 °C (32 to 122 °F) operating temperature.

DIMENSIONS



mm / inch

MODELS AND ACCESSORIES

MODELS	
Order No.	**Description**
935201000	SC4000-1000 ID-NET CONTROLLER STD

ACCESSORIES	
Order No.	**Description**
93ACC1851	BM200 ETHERNET TCP/IP MODULE
93ACC1852	BM210 ETHERNET TCP/IP IP65 MODULE
93ACC1810	BM300 PROFIBUS MODULE
93ACC1811	BM310 PROFIBUS IP65 MODULE
93ACC1814	BM400 DEVICENET MODULE
93ACC1812	BM500 ETHERNET/IP MODULE
93ACC1813	BM510 ETHERNET/IP IP65 MODULE
93ACC1840	BM520 ETHERNET/IP IP54 MODULE
93ACC1815	BM600 CAN OPEN MODULE
93ACC1816	BM700 PROFINET MODULE
93ACC1845	BM1100 CC-LINK MODULE
93ACC1848	BM1200 MODBUS TCP MODULE
93ACC1849	BM1210 MODBUS TCP IP65 MODULE
93ACC1821	BA100 DIN RAIL ADAPTERS
93ACC1822	BA200 BOSCH ADAPTERS
93ACC1847	BA900 TWO CABLE GLANDS PANEL

TECHNICAL DATA

DIMENSIONS	193 x 180 x 71 mm (7.60 x 7.09 x 2.79 in.)
WEIGHT	960 g. (33.86 oz.)
POWER SUPPLY	10 to 30 VDC
POWER CONSUMPTION	5 W max
OPERATING TEMPERATURE	0 to 50 °C (32 to 122 °F)
STORAGE TEMPERATURE	-20 to 70 °C (-4 to 158 °F)
HUMIDITY	90% non condensing
PROTECTION CLASS	IP65
SHOCK RESISTANCE	EN 60068-2-27 30G; 11ms; 3 shocks on each axis
VIBRATION RESISTANCE	EN 60068-2-6 1.5mm; 10 to 55 Hz; 2 hours on each axis
DISPLAY & KEYPAD	20 x 4 characters & 3 keys
DIAGNOSTIC LEDS	Power On/Polarity Error, Trigger, IN2, OUT1, OUT2, Ready, Host Interface 1, Host Interface 2, ID-NET, OUT3
COMMUNICATION INTERFACES	Auxiliary: RS232 up to 115.2 Kbit/s
	Host Interface 1: RS232/RS485 up to 115.2 Kbit/s
	Host Interface 2: RS232/RS485 up to 115.2 Kbit/s
	ID-NET™ port up to 1 Mbps
	Optional Host Interface modules
COMMUNICATION PROTOCOL	Datalogic Application Driver (DAD Driver)
HANDSHAKING	Message fragmentation and flow control
ADDRESS SETTING	HW Switches, Genius™
EXCHANGE MEMORY FOR I/O DATA	Up to 128 bytes
DIGITAL INPUTS	Two SW programmable, optocoupled and polarity insensitive
DIGITAL OUTPUTS	Three SW programmable optocoupled
DEVICE PROGRAMMING	Windows™ based SW (Genius™) via Serial or Ethernet link
	Serial Host Mode Programming sequences
COMPATIBLE DEVICES	DS2100N, DS2400N, DS4800, MATRIX 200™,MATRIX 400™

Controllers

Configuration Sw Tool

APPLICATIONS

- Sorting for Transportation & Logistics (Express Couriers, Postal applications)
- Sorting for Distribution (large Logistic/Distribution Centers)
- Sorting for Baggage Handling Systems

ADVANTAGES

- Increased overall product reliability and easy replacement by means of Compact-Flash memory
- Easy and simple configuration thanks to Datalogic GENIUS™ software via simple RS232 serial link or remote Ethernet connectivity
- Features a special 9-pin port for standard Modem connectivity
- Compatible with 6000 and 8000 Family scanners (bus versions)

HIGHLIGHTS

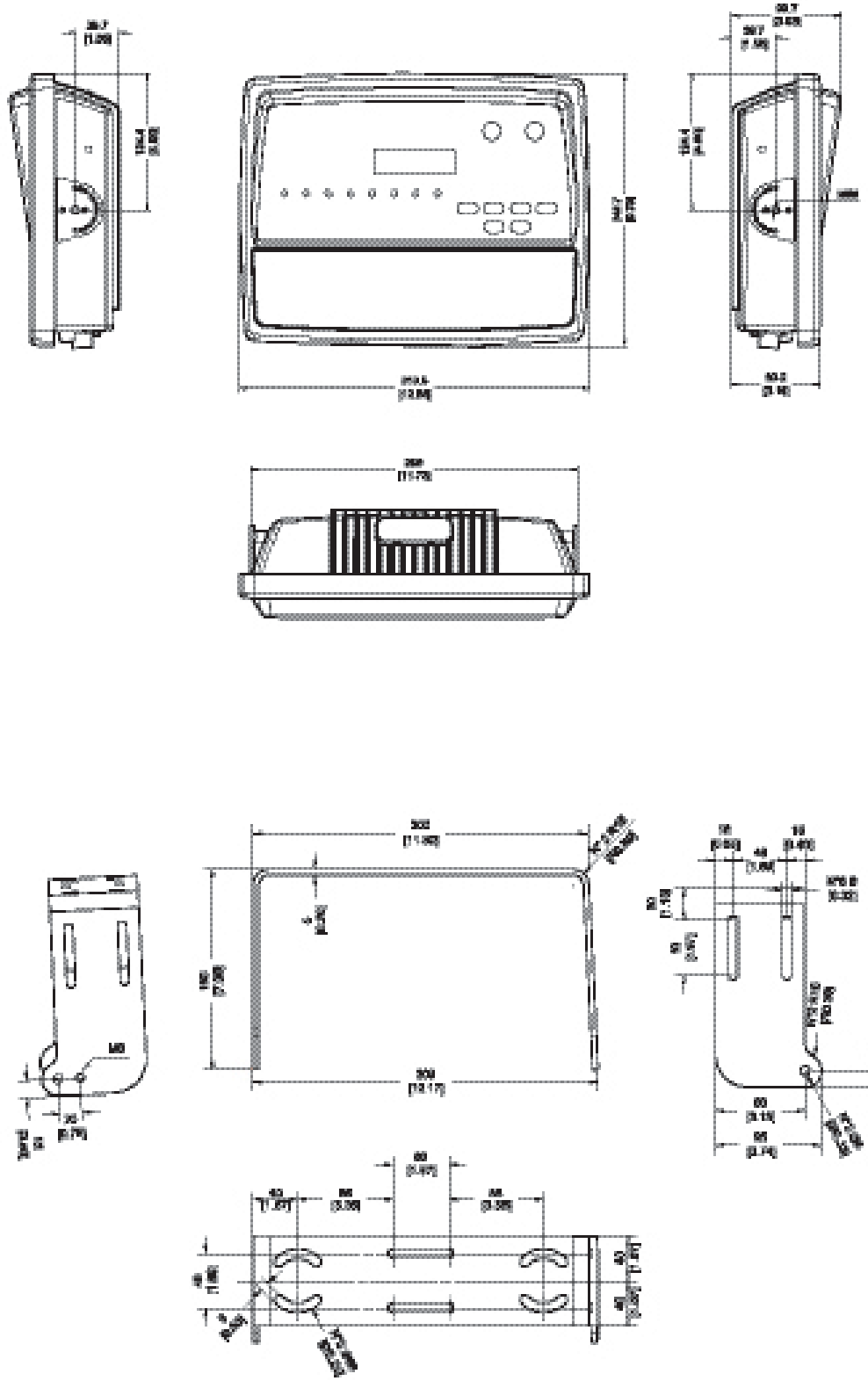
- Industrial controller for multi-side reading stations
- GENIUS™ configuration program
- Display and 6-key keypad for diagnostics/statistics
- Rugged industrial housing
- Built-in Ethernet, Profibus and Devicenet connectivity
- Modem connection support
- Enables management of systems redundancy and fast scanner replacement in cases of failure

GENERAL DESCRIPTION

SC6000 is a Datalogic industrial controller specifically designed for omnidirectional and multi-side reading tunnels. SC6000 is based on a robust alloy case divided into two sections: the upper section is composed of a display, keypad and LEDs. The lower section contains the mother board, removable Compact-Flash memory, field bus boards and connector panel. It offers all necessary tools enabling System Installation and Setup, Testing and Maintenance of an omnidirectional reading tunnel. The SC6000 key features are:

- Bus Controller: cluster management and Host interface of a multi-side reading tunnel based on a Lonworks bus.
- Simple and effective diagnostic indications based on a display and LEDs, enabling quick and easy maintenance.
- Remote visibility of all main reading station information thanks to built-in Ethernet, field bus Modem connectivity.

DIMENSIONS



mm / inch

MODELS

MODELS	
Order No.	**Description**
935701000	SC6000-1200 UNIV. CONTROLLER, ETHERNET
935701001	SC6000-1211 UNIV. CONTROLLER, ETHERNET, PROFIBUS
935701002	SC6000-1215 UNIV. CONTROLLER, ETHERNET, DEVICENET
935701003	SC6000-1230 UNIV. CONTROLLER, ETHERNET, ETHERNET

TECHNICAL DATA

DIMENSIONS	193 x 180 x 71 mm (7.60 x 7.09 x 2.79 in.)
WEIGHT	960 g. (33.86 oz.)
POWER SUPPLY	10 to 30 VDC
POWER CONSUMPTION	5 W max
OPERATING TEMPERATURE	0 to 50 °C (32 to 122 °F)
STORAGE TEMPERATURE	-20 to 70 °C (-4 to 158 °F)
HUMIDITY	90% non condensing
PROTECTION CLASS	IP64
SHOCK RESISTANCE	EN 60068-2-27 30G; 11ms; 3 shocks on each axis
VIBRATION RESISTANCE	EN 60068-2-6 1.5mm; 10 to 55 Hz; 2 hours on each axis
DISPLAY & KEYPAD	20 x 4 characters & 6 keys
DIAGNOSTIC LEDS	Power, TX/RX Data, Ethernet, PS, PS AUX, TACH, Network, Scanner, Controller
COMMUNICATION INTERFACES	Auxiliary: RS232 up to 115.2 Kbit/s
	Main: RS232/RS485 up to 115.2 Kbit/s, optocoupled
	Modem: RS232
OTHER AVAILABLE INTERFACES	Ethernet
	Ethernet and Profibus
	Ethernet and DeviceNet
	Ethernet and Ethernet
RAM MEMORY	16 MB
STORAGE MEMORY	2MB FLASH; 32 MB Compact FLASH
DIGITAL I/O	3 inputs/6 outputs, optocoupled
SENSOR SIGNALS	3 inputs (TACH, PS, PS AUX), optocoupled
RELAY SIGNALS	3 outputs
DEVICE PROGRAMMING	Windows™ based SW (Genius™) via Serial or Ethernet link
	Serial Host Mode Programming sequences

Connectivity

APPLICATIONS

Connection modules connect 2K, 4K, 6K, 8K and Matrix family to host system. Provide also connectivity to most important fieldbus network.

ADVANTAGES

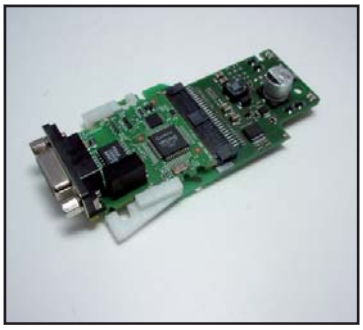
- Designed to speed up installation, configuration and maintenance tasks for Datalogic Automation's 1D/2D code readers
- Ownership costs are considerably lowered by reduced installation time, and, in cases of replacement, by minimized system down time
- Installation is simplified thanks to accessible through holes for mounting screws with closed box.
- Pinout standardization simplifies wiring to the appropriate terminal block
- IP65 (NEMA 4) protection class and 0 to 50 °C (32 to 122 °F) operating temperature.

HIGHLIGHTS

- Standard connectivity solution for Datalogic Automation offer
- Extremely low cost of ownership
- IP65 (NEMA 4) rated industrial design
- Flexible mounting and simplified wiring to speed up the installation
- Reliable Backup and Restore feature to minimize plant downtime
- Open architecture allows comfortable connectivity to Ethernet TCP/IP, Profibus, DeviceNet, Ethernet/IP and other common networks.
- Multilanguage Display for easy monitoring and troubleshooting
- Visible Power and I/O indicators and Power On/Off switch

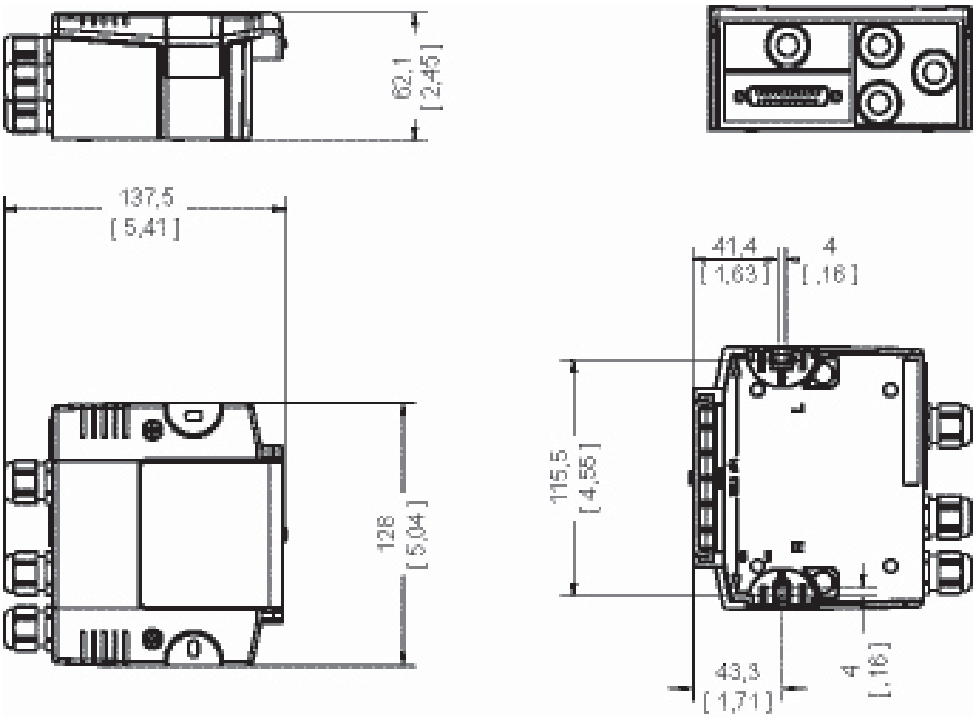
GENERAL DESCRIPTION

The CBX100 and CBX500 are industrial connection boxes designed to speed up Datalogic Automation 1D/2D code readers installation, configuration and maintenance tasks. CBX100 and CBX500 feature an extremely low cost of ownership by reducing installation time, and, in cases of replacement, minimizing system downtime.
CBX100 and CBX500 feature IP65 (NEMA 4) protection class and 0 to 50 °C (32 to 122 °F) operating temperature. With its specific plastic and rubber materials, CBX100LT dedicated model features an operating temperature down to -35°C (-31°F).

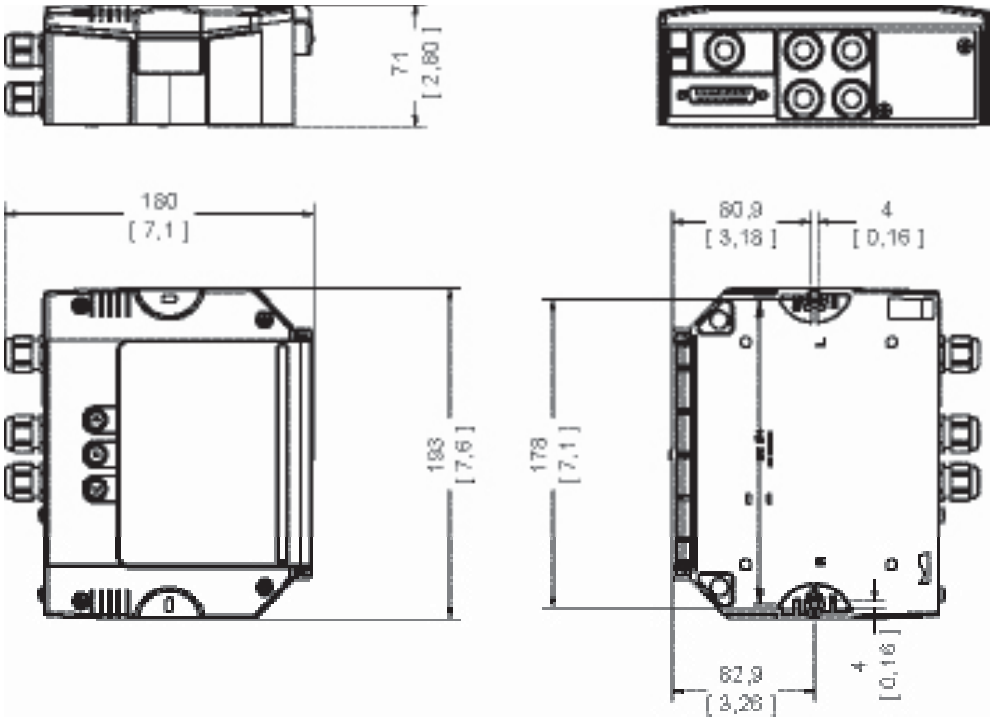


DIMENSIONS

CBX100



CBX500



mm / inch

MODELS AND ACCESSORIES

MODELS	
Order No.	**Description**
93A301067	CBX100 CONNECTION BOX COMPACT
93A301068	CBX500 CONNECTION BOX MODULAR
93A301069	CBX100LT CONNECTION BOX COMPACT LOW TEMP.

ACCESSORIES			
Order No.	**Description**		
93ACC1808	BM100 BACKUP MODULE	CBX100	CBX500
93ACC1809	BM150 DISPLAY MODULE		CBX500
93ACC1851	BM200 ETHERNET TCP/IP MODULE		CBX500
93ACC1852	BM210 ETHERNET TCP/IP IP65 MODULE		CBX500
93ACC1810	BM300 PROFIBUS MODULE		CBX500
93ACC1811	BM310 PROFIBUS IP65 MODULE		CBX500
93ACC1814	BM400 DEVICENET MODULE		CBX500
93ACC1812	BM500 ETHERNET/IP MODULE		CBX500
93ACC1813	BM510 ETHERNET/IP IP65 MODULE		CBX500
93ACC1840	BM520 ETHERNET/IP IP54 MODULE		CBX500
93ACC1815	BM600 CAN OPEN MODULE		CBX500
93ACC1816	BM700 PROFINET MODULE		CBX500
93ACC1845	BM1100 CC-LINK MODULE		CBX500
93ACC1848	BM1200 MODBUS TCP MODULE		CBX500
93ACC1849	BM1210 MODBUS TCP IP65 MODULE		CBX500
93ACC1821	BA100 DIN RAIL ADAPTERS	CBX100	CBX500
93ACC1822	BA200 BOSCH ADAPTERS	CBX100	CBX500
93ACC1847	BA900 TWO CABLE GLANDS PANEL		CBX500
93ACC1877	BA300 M12 3P F. PANEL CONN. (SERVICE)		
93ACC1853	BA400 M12 3P M. PANEL CONN. (EXT.POWER)		
93ACC1854	BA500 M12 4P F. PANEL CONN. (TRIGGER)		
93ACC1855	BA600 M12 5P F. PANEL CONN. (ID-NET OUT)		
93ACC1856	BA700 M12 5P M. PANEL CONN. (ID-NET IN)		

TECHNICAL DATA

MODELS	CBX100	CBX500
DIMENSIONS	128 x 138 x 62 mm	193 x 180 x 71 mm
WEIGHT	380 g. (13.40 oz.)	780 g. (27.5 oz.)
POWER SUPPLY	10 to 30 VDC	
POWER CONSUMPTION	2.5 W max	
OPERATING TEMPERATURE	0 to 50 °C (32 to 122 °F)	
STORAGE TEMPERATURE	-20 to 70 °C (-4 to 158 °F)	
HUMIDITY	90% non condensing	
PROTECTION CLASS	IP65	
SHOCK RESISTANCE	EN 60068-2-27 30G; 11ms; 3 shocks on each axis	
VIBRATION RESISTANCE	EN 60068-2-6 1.5mm; 10 to 55 Hz; 2 hours on each axis	
DISPLAY & KEYPAD	20 x 4 characters & 3 keys	
DIAGNOSTIC LEDS	Power On/Polarity Error, Trigger, IN2, OUT1, OUT2	
COMMUNICATION PROTOCOL	Datalogic Application Driver (DAD Driver)	
HANDSHAKING	Message fragmentation and flow control	
ADDRESS SETTING	HW Switches, Genius™, VisiSet™	
EXCHANGE MEMORY FOR I/O DATA	Up to 128 bytes	
COMPATIBLE DEVICES	DS2100N, DS2400N, DS4800, DS6300, DS6400, DX6400, DS8100A, DX8200A, MATRIX-2000™, MATRIX 200™, MATRIX 400™	DS2100N, DS2400N, DS4800, MATRIX 200™, MATRIX 400™

Connectivity

GENERAL DESCRIPTION

Quick Link (QL) connectivity accessories provides an easy, fast, modular and cost-effective solution whenever “plug-in connection” is preferable.
QL Series is compatible with DS2100N, DS2400N, DS4800, Matrix 210™ and Matrix 410™.
The QL300 and QL500 connection modules simplify connectivity by directly linking the Datalogic Automation’s 1D/2D code readers to the Power Supply, External Trigger, IDNET™ network, Digital I/O and Communication connections. They are designed to be used as Standalone, ID-NET™ Master Synchronized/Multidata or ID-NET™ Slave Multidata connectors (QL300 only).
QL100/150/200 provides an ID-NET™ network “T” connection module passing network and power supply signals to the connected reader, including service port connection (QL150) and tap power connection (QL200)

HIGHLIGHTS

- Plug-In connection (M12 connectors)
- Quick set-up of ID-NET™ networks with different layouts in modular way, reducing installation time and cost (full of cables and T-conenctors)
- Serial-to-Ethernet TCP/IP, Ethernet IP, Modbus conversion (QL500)
- Back-up and Restore function (QL500)

MODELS AND ACCESSORIES

MODELS	
Order No.	**Description**
93ACC1860	QL100 ID-NET T-CONNECTION
93ACC1868	QL150 ID-NET + SERVICE T-CONNECTION
93ACC1861	QL200 ID-NET + POWER T-CONNECTION
93ACC1862	QL300 STANDARD CONNECTION MODULE
93ACC1864	QL500 CONNECTION MODULE + ETHERNET

ACCESSORIES	
Service Cables	
Order No.	**Description**
93A051385	CAB-AUX03 M12 3P TO DB9 SERIAL CABLE 3M (for QL150)
93A051381	CAB-PW-EXT M12 POWER EXTENSION CABLE
93ACC1883	FMC300 M12 3P M. CONN. SERVICE (for QL150)
93ACC1884	FMC400 M12 3P F. CONN. POWER
93A051386	CAB-AUX04 15P DSUB TO DB9 SERIAL CABLE

ACCESSORIES	
ID-NET cables	
Order No.	**Description**
970101021	CBL-1480-01 THIN M12/5P MALE/FEMALE 1M
970101022	CBL-1480-02 THIN M12/5P MALE/FEMALE 2M
970101069	CBL-1490 TERM. RESIST. THIN M12/5P/MALE
970101082	CBL-1496 TERM. RESIST. THIN M12/5P/FEM.

QL SERIES TECHNICAL FEATURES

QL100, QL150, QL200

ELECTRICAL FEATURES
Power Supply 10 to 30 VDC
Limited QL + Reader Current consumption 4 A Max.

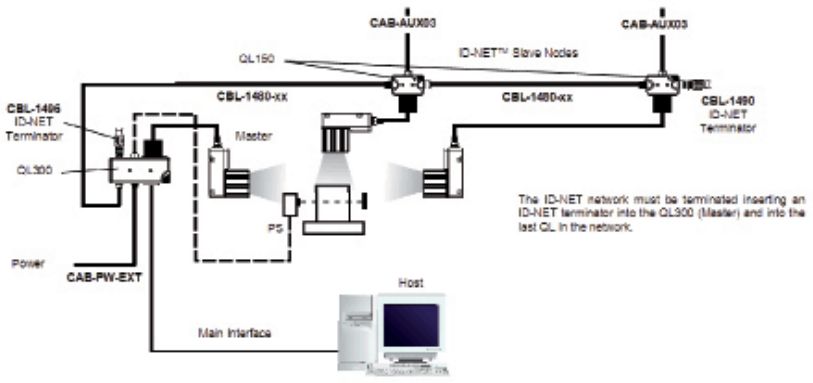
ENVIRONMENTAL FEATURES
Protection Class IP65 (1)
Operating Temperature 0° to 50 °C (+32° to 122 °F)
Storage Temperature -20° to 70 °C (-4° to 158 °F)
Humidity Max. 90% non condensing
(1) When IP protection caps or IP cables and reading device are correctly connected.

QL300, QL500

ELECTRICAL FEATURES
Power Supply 10 to 30 VDC
Limited QL + Reader Current consumption 4 A Max.

ENVIRONMENTAL FEATURES
Protection Class IP65 (1)
Operating Temperature 0° to 50 °C (+32° to 122 °F)
Storage Temperature -20° to 70 °C (-4° to 158 °F)
Humidity Max. 90% non condensing

PHYSICAL FEATURES
Mechanical Dimensions 129 x 76 x 27 mm(5.1 x 3 x 1.1 in.)
Weight QL300=312 g.(11 oz.); QL500=309 (10.9 oz.)
When IP protection caps or IP cables and reading device are correctly connected.



ID-NET™ Synchronized Network - QL300 + Matrix 410™ Master with QL | 150 + Matrix 410™ Slaves

Connectivity

APPLICATIONS

Connection modules connect 2K, 4K, 6K, 8K and Matrix family to host system. Provide also connectivity to most important fieldbus network.

ADVANTAGES

- Modular and flexible industrial gateway designed to interface devices equipped with a standard RS232 communication port to several networks (e.g. Ethernet TCP/IP, industrial Fieldbus systems, ID-NET™).
- Extended connectivity to satisfy all the most common demands.
- Installation is simplified thanks to accessible through holes for mounting screws with closed box.
- Pinout standardization simplifies wiring to the appropriate terminal block
- IP65 (NEMA 4) protection class and 0 to 50 °C (32 to 122 °F) operating temperature.

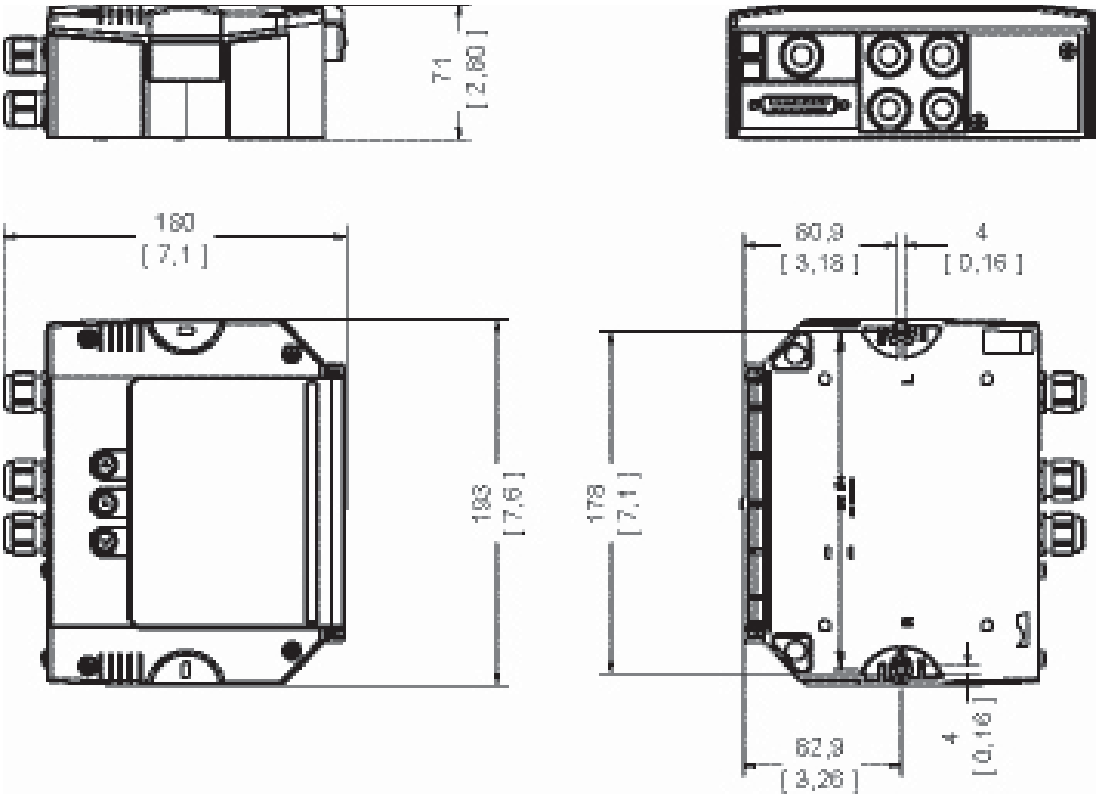
HIGHLIGHTS

- Serial to Fieldbus, Ethernet TCP/IP or ID-NET™ industrial gateway
- Open architecture allows flexible interfacing to Ethernet TCP/IP, Profibus, DeviceNet, Ethernet/IP and other common networks.
- Flexible mounting and simplified wiring to speed up the installation.
- Visible Power, Communication and I/O indicators and Power On/Off switch
- Multi-language Genius™ SW Tool allows rapid device configuration.
- IP65 (NEMA 4) rated industrial design.

GENERAL DESCRIPTION

CBX800 is an industrial gateway allowing connection of devices equipped with a standard RS232 communication interface to the most common fieldbus systems, by means of a complete range of optional modules, and to ID-NET™ high speed communication network. CBX800 allows, with the same model, flexible interfacing of several devices (e.g. Datalogic Automation's 6K and 8K series, Hand Held Readers) to different networks. Three serial ports and high speed ID-NET™ communication interface, always available, can be combined with a complete range of optional modules providing connectivity to standard Ethernet TCP/IP network or to the most common fieldbus systems.
CBX800 features IP65 (NEMA 4) protection class and 0 to 50 °C (32 to 122 °F) operating temperature.

DIMENSIONS



mm / inch

MODELS AND ACCESSORIES

MODELS	
Order No.	**Description**
93A301077	CBX800 GATEWAY

ACCESSORIES	
Order No.	**Description**
93ACC1851	BM200 ETHERNET TCP/IP MODULE
93ACC1852	BM210 ETHERNET TCP/IP IP65 MODULE
93ACC1810	BM300 PROFIBUS MODULE
93ACC1811	BM310 PROFIBUS IP65 MODULE
93ACC1814	BM400 DEVICENET MODULE
93ACC1812	BM500 ETHERNET/IP MODULE
93ACC1813	BM510 ETHERNET/IP IP65 MODULE
93ACC1840	BM520 ETHERNET/IP IP54 MODULE
93ACC1815	BM600 CAN OPEN MODULE
93ACC1816	BM700 PROFINET MODULE
93ACC1845	BM1100 CC-LINK MODULE
93ACC1848	BM1200 MODBUS TCP MODULE
93ACC1849	BM1210 MODBUS TCP IP65 MODULE
93ACC1821	BA100 DIN RAIL ADAPTERS
93ACC1822	BA200 BOSCH ADAPTERS
93ACC1847	BA900 TWO CABLE GLANDS PANEL
93ACC1827	ADP-FF1 GENDER CHANGER 25P F/F (5PCS)

TECHNICAL DATA

DIMENSIONS	193 x 180 x 71 mm (7.60 x 7.09 x 2.79 in.)
WEIGHT	830 g. (29.28 oz.)
POWER SUPPLY	10 to 30 VDC
POWER CONSUMPTION	2.5 W max
OPERATING TEMPERATURE	0 to 50 °C (32 to 122 °F)
STORAGE TEMPERATURE	-20 to 70 °C (-4 to 158 °F)
HUMIDITY	90% non condensing
PROTECTION CLASS	IP65
SHOCK RESISTANCE	EN 60068-2-27 30G; 11ms; 3 shocks on each axis
VIBRATION RESISTANCE	EN 60068-2-6 1.5mm; 10 to 55 Hz; 2 hours on each axis
DIAGNOSTIC LEDS	Power On/Polarity Error, Trigger, IN2, OUT1, OUT2, Ready, Host Interface 1, Host Interface 2, ID-NET, OUT3
COMMUNICATION INTERFACES	Auxiliary: RS232 up to 115.2 Kbit/s
	Data Source: RS232 up to 115.2 Kbit/s
	Host Interface: RS232/RS485 up to 115.2 Kbit/s
	ID-NET™ port up to 1 Mbps
	Optional Host Interface modules
COMMUNICATION PROTOCOL	Datalogic Application Driver (DAD Driver)
HANDSHAKING	Message fragmentation and flow control
ADDRESS SETTING	HW Switches, Genius™
EXCHANGE MEMORY FOR I/O DATA	Up to 128 bytes
DEVICE PROGRAMMING	Windows™ based SW (Genius™) via Serial or Ethernet link
	Serial Host Mode Programming sequences
COMPATIBLE DEVICES	All devices supporting standard RS232 communication interface

VISION
Image-Based ID readers

Image-Based ID readers

APPLICATIONS

Electronics
- PCBs assembly process
- Electronic components manufacturing

Pharmaceutical & Chemical
- Pharmaceutical manufacturing & logistic
- Supply chain traceability

OEM
- Chemical & biomedical analysis machines
- Document Handling machines
- Access control systems
- Self Service Systems (ATM, Kiosks)
- Print & Apply systems

ADVANTAGES

- High reading performance and reliability
- Industrial and flexible ultra compact 2D imager
- Integrated Ethernet connectivity for effective data and image transfer
- Easy and intuitive setup thanks to X-PRESS™ interface
- Overall cost reduction and simple network wiring thanks to IDNET™ high-speed connectivity
- Extended Fieldbus and Ethernet connectivity through a complete range of modular connection boxes and accessories
- ESD Safe and ESD Safe + YAG Cut Filter versions availability
- IP65 (NEMA 4) rugged industrial housing

HIGHLIGHTS

- Embedded Ethernet
- Ultra compact dimensions
- Direct and 90° window models for smart mounting
- WVGA (752x480) image sensor
- Outstanding decoding capability on 1D, 2D, Stacked and Postal symbologies
- High performance on dynamic reading applications
- X-PRESS™ interface for easy and intuitive setup
- Optical aiming system
- 10 to 30 VDC power supply
- USB interface models availability
- ID-NET™ embedded interface for highspeed communication networks

GENERAL DESCRIPTION

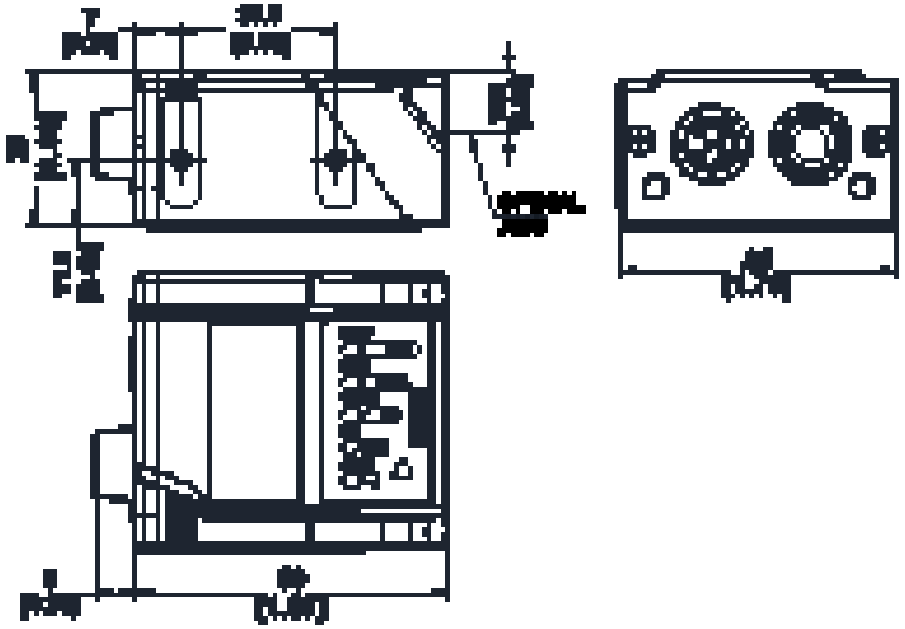
Matrix 210™ is the new Datalogic 2D reader offering extreme reading performance and integrated Ethernet in a ultra-compact housing.Thanks to the WVGA image sensor,capturing up to 60 frames per second and to the powerful internal illuminator, Matrix 210™ offers extreme dynamic reading capabilities.

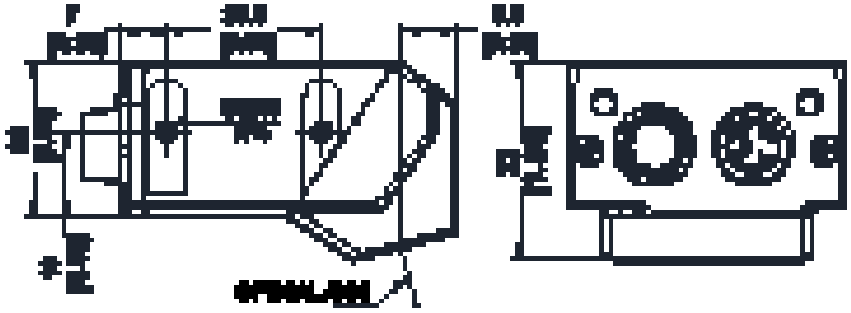
The unrivalled decoding libraries running on the new high speed hardware platform deliver superior reading robustness and impressive decoding rates, supporting high system throughput and so improving the overall production efficency. The on-board Ethernet makes effective the transfer of both reading data and captured images, that can be easily and quickly uploaded on external PCs or servers, simply for storage or also for offline process analysis.

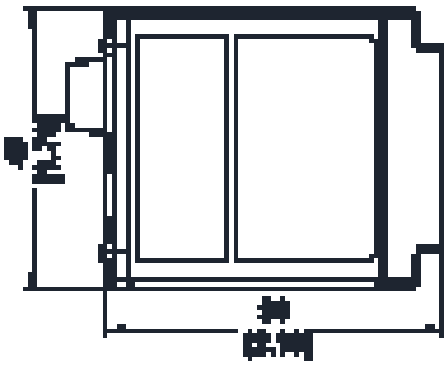
Compactness and straight - 90° optical options allow a perfect contact reading capability and a simple mechanical integration into narrow spaces. Installation and maintenance are extremely easy thanks to the X-PRESS™ Interface with five LEDs bar graph and with the multi-function key for immediate access to relevant functions such as Aiming, Setup, Automatic Learning, Test Mode. The Green Spot - projected onto the scanned object provides an easy and real-time feedback of the reading status without any additional supervisory softwares.

DIMENSIONS

STRAIGHT MODELS







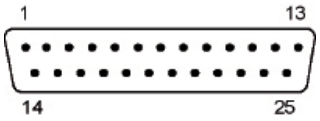
mm / inch

READING CHARACTERISTICS

Models	Focus Distance	Field of View @ Focus Distance	PPI @ Focus Distance	Typ. 1D And Stacked Code Resolution	2D Code Resolution	Reading Distance		
	mm (in)	mm (in)		mm (mils)	mm (mils)	mm (in)	Min	Max
MATRIX 210 214-xxx	30 (1.38)	16.5 x 10.5 (0.65 x 0.41)	1150	0.063 (2.5)	Typ.	0.076 (3)	28 (1.10)	32 (1.26)
					Max.	0.13 (5)	23 (0.91)	38 (1.50)
MATRIX 210 211-xxx	45 (1.77)	35 x 22 (1.38 x 0.87)	545	0.10 (4)	Typ.	0.13 (5)	42 (1.65)	53 (2.08)
					Max.	0.19 (7.5)	36 (1.42)	61 (2.40)
MATRIX 210 212-xxx	65 (2.56)	50 x 32 (1.97 x 1.26)	380	0.15 (6)	Typ.	0.19 (7.5)	54 (2.13)	90 (3.54)
					Max.	0.25 (10)	47 (1.85)	101 (3.97)
MATRIX 210 213-xxx	105 (4.13)	80 x 50 (3.15 x 1.97)	238	0.20 (8)	Typ.	0.25 (10)	85 (3.35)	135 (5.31)
					Max.	0.38 (15)	70 (2.76)	192 (7.55)

ELECTRICAL CONNECTIONS

All Matrix 210™ models are equipped with a cable terminated by a 25-pin male D-sub connector for connection to the power supply, serial interfaces 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 RS232 RX	
21	TX		Auxiliary RS232 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 (SW selectable)	TX	TX+	RTX+
3		RX	* RX+	
4		RTS	TX-	RTX-
5		CTS	* RX-	

* Do not leave floating, see Matrix 210™ Reference Manual for connection details.

MODELS

Order No.	Description
937501026	MATRIX 210 211-100 WVGA-NEAR-25P-ST
937501027	MATRIX 210 212-100 WVGA-MED-25P-ST
937501028	MATRIX 210 213-100 WVGA-FAR-25P-ST
937501029	MATRIX 210 214-100 WVGA-UHD-25P-ST
937501030	MATRIX 210 211-110 WVGA-NEAR-ETH-ST
937501031	MATRIX 210 212-110 WVGA-MED-ETH-ST
937501032	MATRIX 210 213-110 WVGA-FAR-ETH-ST
937501033	MATRIX 210 214-110 WVGA-UHD-ETH-ST
937501034	MATRIX 210 211-120 WVGA-NEAR-USB-ST
937501035	MATRIX 210 212-120 WVGA-MED-USB-ST
937501036	MATRIX 210 213-120 WVGA-FAR-USB-ST
937501037	MATRIX 210 214-120 WVGA-UHD-USB-ST
937501038	MATRIX 210 211-000 WVGA-NEAR-90-25P-ST
937501039	MATRIX 210 212-000 WVGA-MED-90-25P-ST
937501040	MATRIX 210 213-000 WVGA-FAR-90-25P-ST
937501041	MATRIX 210 214-000 WVGA-UHD-90-25P-ST
937501042	MATRIX 210 211-010 WVGA-NEAR-90-ETH-ST
937501043	MATRIX 210 212-010 WVGA-MED-90-ETH-ST
937501044	MATRIX 210 213-010 WVGA-FAR-90-ETH-ST
937501045	MATRIX 210 214-010 WVGA-UHD-90-ETH-ST
937501046	MATRIX 210 211-020 WVGA-NEAR-90-USB-ST
937501047	MATRIX 210 212-020 WVGA-MED-90-USB-ST
937501048	MATRIX 210 213-020 WVGA-FAR-90-USB-ST
937501049	MATRIX 210 214-020 WVGA-UHD-90-USB-ST
937501120	MATRIX 210 211-101 WVGA-NEAR-25P-ES
937501121	MATRIX 210 212-101 WVGA-MED-25P-ES
937501122	MATRIX 210 213-101 WVGA-FAR-25P-ES
937501123	MATRIX 210 214-101 WVGA-UHD-25P-ES
937501124	MATRIX 210 211-111 WVGA-NEAR-ETH-ES
937501125	MATRIX 210 212-111 WVGA-MED-ETH-ES
937501126	MATRIX 210 213-111 WVGA-FAR-ETH-ES
937501127	MATRIX 210 214-111 WVGA-UHD-ETH-ES
937501128	MATRIX 210 211-121 WVGA-NEAR-USB-ES
937501129	MATRIX 210 212-121 WVGA-MED-USB-ES
937501130	MATRIX 210 213-121 WVGA-FAR-USB-ES
937501131	MATRIX 210 214-121 WVGA-UHD-USB-ES
937501132	MATRIX 210 211-001 WVGA-NEAR-90-25P-ES
937501133	MATRIX 210 212-001 WVGA-MED-90-25P-ES
937501134	MATRIX 210 213-001 WVGA-FAR-90-25P-ES
937501135	MATRIX 210 214-001 WVGA-UHD-90-25P-ES
937501136	MATRIX 210 211-011 WVGA-NEAR-90-ETH-ES
937501137	MATRIX 210 212-011 WVGA-MED-90-ETH-ES
937501138	MATRIX 210 213-011 WVGA-FAR-90-ETH-ES
937501139	MATRIX 210 214-011 WVGA-UHD-90-ETH-ES
937501140	MATRIX 210 211-021 WVGA-NEAR-90-USB-ES
937501141	MATRIX 210 212-021 WVGA-MED-90-USB-ES
937501142	MATRIX 210 213-021 WVGA-FAR-90-USB-ES
937501143	MATRIX 210 214-021 WVGA-UHD-90-USB-ES
937501220	MATRIX 210 211-112 WVGA-NEAR-ETH-ESYF
937501221	MATRIX 210 212-112 WVGA-MED-ETH-ESYF
937501222	MATRIX 210 213-112 WVGA-FAR-ETH-ESYF
937501223	MATRIX 210 214-112 WVGA-UHD-ETH-ESYF
937501224	MATRIX 210 211-012 WVGA-NEAR-90-ETH-ESYF
937501225	MATRIX 210 212-012 WVGA-MED-90-ETH-ESYF
937501226	MATRIX 210 213-012 WVGA-FAR-90-ETH-ESYF
937501227	MATRIX 210 214-012 WVGA-UHD-90-ETH-ESYF

TECHNICAL DATA

ELECTRICAL FEATURES	MATRIX 210 21X-X0X MODELS	MATRIX 210 21X-X1X MODELS	MATRIX 210 21X-X2X MODELS
Power Supply Voltage	10 to 30 Vdc	10 to 30 Vdc	5 Vdc
Consumption	0.35 to 0.13 A, 3.9 W max 0.16 A @ 24 V	0.4 to 0.15 A, 4.5 W max 0.18 A @ 24 V	0.5 A, 2.5 W max
Communication Interfaces Main - RS232 - RS485 full-duplex - RS485 half-duplex	 2400 to 115200 bit/s 2400 to 115200 bit/s 2400 to 115200 bit/s	 2400 to 115200 bit/s 2400 to 115200 bit/s 2400 to 115200 bit/s	
Auxiliary - RS232	2400 to 115200 bit/s	2400 to 115200 bit/s	
ID-NET™	Up to 1MBaud	Up to 1MBaud	USB 2.0 up to 921600 bit/s
Ethernet	-	10/100 Mbit/s	
Inputs: Input 1(External Trigger) and Input 2	Opto-coupled and polarity insensitive	Opto-coupled and polarity insensitive	
Outputs: Output 1 and Output 2	Opto-coupled	Opto-coupled	
OPTICAL FEATURES			
Image Sensor	CMOS sensor with Global Shutter		
Image Format	WVGA (752x480)		
Frame Rate	up to 60 frames/sec. @ full window size		
Pitch	± 35°		
Tilt	0° - 360°		
Lighting System Internal Illuminator	Internal Illuminator		
LED Safety Class Class 1 to EN60825-1	Class 1 to EN60825-1		
PHYSICAL FEATURES	**MATRIX 210 21X-1XX MODELS**		**MATRIX 210 21X-0XX MODELS**
Dimensions	50 x 25 x 45 mm (1.97 x 0.98 x 1.77 in)		54 x 32 x 45 mm (2.13 x 1.26 x 1.77 in)
Weight	190 g. (6.7 oz.) with cable		
Material	Aluminium alloy		
ENVIRONMENTAL FEATURES			
Operating Temperature *	0 to 50 °C (32 to 122 °F)		
Storage Temperature	-20 to 70 °C (-4 to 158 °F)		
Max. Humidity	90% non condensing		
Vibration Resistance	14 mm @ 2 to 10 Hz; 1.5 mm @ 13 to 55 Hz;		
EN 60068-2-6	2 g @ 70 to 200 Hz; 2 hours on each axis		
Bump Resistance	30g; 6 ms;		
EN 60068-2-29	5000 shocks on each axis		
Shock Resistance	30g; 11 ms;		
EN 60068-2-27	3 shocks on each axis		
Protection Class EN 60529	IP65		
* high ambient temperature applications should use metal mounting bracket for heat dissipation.			
SOFTWARE FEATURES			
Readable Code Symbologies			
1-D and stacked		**2-D**	**POSTAL**
• PDF417 Standard and Micro PDF417 • Code 128 (GS1-128) • Code 39 (Standard and Full ASCII) • Code 32 • MSI • Standard 2 of 5 • Matrix 2 of 5 • Interleaved 2 of 5	• Codabar • Code 93 • Pharmacode • EAN-8/13 - UPC-A/E (including Addon 2 and Addon 5) • GS1 DataBar Family • Composite Symbologies Aluminium alloy	• Data Matrix ECC 200 (Standard, GS1 and Direct Marking) • QR Code (Standard and Direct Marking) • Micro QR Code • MAXICODE • Aztec Code • Microglyph (this symbology requires an activation procedure – contact your local Datalogic Automation distributor for details)	• Australia Post • Royal Mail 4 State Customer • Kix Code • Japan Post • PLANET • POSTNET • POSTNET (+BB) • Intelligent Mail • Swedish Post
Operating Mode	ONE SHOT, CONTINUOUS, PHASE MODE		
Configuration Methods	X-PRESS™ Human Machine Interface Windows-based SW (VisiSet™) via serial, Ethernet or USB link Serial Host Mode Programming sequences		
Parameter Storage	Permanent memory (Flash)		
CODE QUALITY VERIFICATION			
Standard	Supported Symbologies		
ISO/IEC ISO/IEC ISO/IEC ISO/IEC AS9132A AIM DPM	16022 Data Matrix ECC 200 18004 QR Code 15415 Data Matrix ECC 200, QR Code 15416 Code 128, Code 39, Interleaved 2 of 5, Codabar, Code 93, EAN-8/13, UPC-A/E Data Matrix ECC 200 Data Matrix ECC 200, QR Code		
USER INTERFACE			
LED Indicators	Power, Ready, Good, Trigger, Com, Status, (Ethernet Network), (Green Spot)		
Other	Keypad Button (configurable via VisiSet™), Beeper		

Image-Based ID readers

APPLICATIONS

Automotive
- DPM reading and verification
- Tires manufacturing & logistic

Electronics
- Large PCBs tracking
- Electronic products tracking

Distribution & Retail
- Presentation scanner
- Warehouse applications

Chemical & Pharmaceutical
- Medical devices traceability
- Pharmaceutical Industries
- Chemical & Biomedical analysis machines

Food & Beverage
- Work in Progress Traceability
- Code Quality Control

ADVANTAGES

- Industrial and modular compact 2D imager combining 1.3 or 2.0 MP sensors base with C-Mount lenses and powerful internal lighting systems
- High reading and verification performance and high reliability
- Easy and intuitive setup thanks to X-PRESS™ interface
- Overall cost reduction and simple network wiring thanks to ID-NET™ high-speed connectivity
- Extended Fieldbus connectivity through a complete range of modular connection boxes and accessories
- IP67 (NEMA 6) rugged industrial housing

HIGHLIGHTS

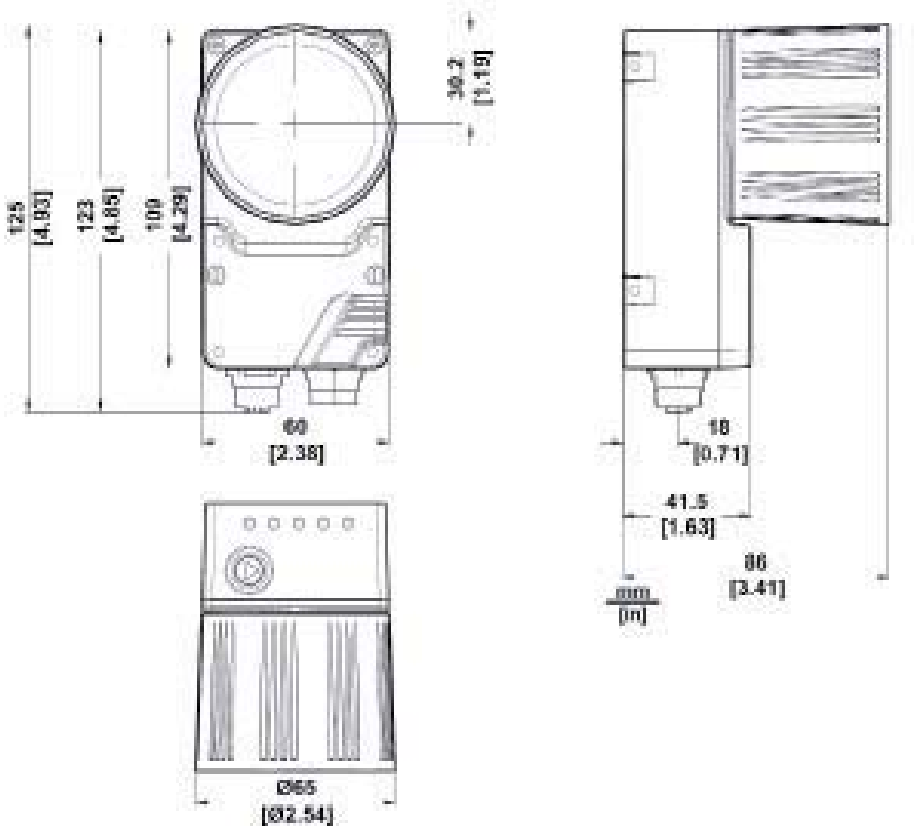
- 2.0 (UXGA) & 1.3 (SXGA) megapixel models
- Adjustable reading distance through C-Mount lenses
- Blue Diamonds™ optical aiming and focusing system
- Outstanding decoding capability on 1D, 2D, Stacked and Postal symbologies
- Excellent reading performance on DPM applications
- Code quality verification capability
- X-PRESS™ interface for easy and intuitive setup
- Built-in Ethernet connectivity
- ID-NET™ embedded interface for high-speed communication networks

GENERAL DESCRIPTION

Matrix 410™ is an industrial compact 2D reader that combines image capturing, decoding and communicating in a single compact and versatile product.
MATRIX 410™ is powered by a new engine, a high speed industrial micro-processor, optimized for image processing and Ethernet connectivity.
The result is a superior barcode reading speed and robustness, especially for 2D codes and DPM; the powerful proprietary decoding libraries provide the Matrix 410™ with unrivalled performance even on damaged and low quality codes.

MATRIX 410™strongly excels for throughput in data transfer over the Ethernet; it is capable to transmit over 4 SXGA (1.3 MP) images per second, while capturing and decoding at the normal rate; the high capacitance channel enables real time massive image transfer, even with a full working resolution.
The embedded high speed ID-NET™ communication interface enables an efficient and fast clustering of multiple reader; this offers the best modularity of the building block approach and always the optimal balance between price and performance.
MATRIX 410™ makes better the remote slave reader configuration, a new function enabling the reader parameter setup over an ID-NET link; the system configuration and maintenance are so easier and efficient than ever.

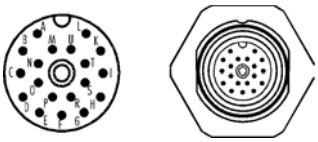
DIMENSIONS



mm / inch

ELECTRICAL CONNECTIONS

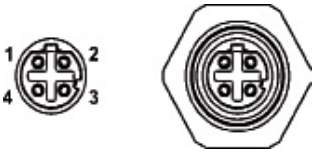
All Matrix 410™ models are equipped with an M16 19-pin male connector (Binder, 423 Series) for connection to the power supply, serial interfaces and input/output signals.



M16 19-pin Male Connector

19-PIN M16 MALE CONNECTOR PINOUT				
Pin	**Name**		**Function**	
A	VDC		Power supply input voltage +	
L	GND		Power supply input voltage -	
K	CHASSIS		Cable shield internally connected by capacitor to the chassis	
B	I1A		External Trigger A (polarity insensitive)	
C	I1B		External Trigger B (polarity insensitive)	
D	I2A		Input 2 A (polarity insensitive)	
E	I2B		Input 2 B (polarity insensitive)	
H	O1+		Output 1 +	
F	O1-		Output 1 -	
G	O2+		Output 2 +	
I	O2-		Output 2 -	
S	RX		Auxiliary RS232 RX	
O	TX		Auxiliary RS232 TX	
R	ID+		ID-NET™ network +	
P	ID-		ID-NET™ network -	
Pin	**RS232**	**RS232**	**RS485 Full-Duplex**	**RS485 Half-Duplex**
M	Main Interface Signals (SW selectable)	TX	TX+	RTX+
U		RX	* RX+	
N		RTS	TX-	RTX-
T		CTS	* RX-	

In Matrix 410 xxx-x1x models, an M12 D-Coded connector is provided for the on-board Ethernet connection. This interface is IEEE 802.3 10 BaseT and IEEE 802.3u 100 BaseTX compliant.



M12 D-Coded Female Ethernet Network Connector

M12 D-CODED ETHERNET NETWORK CONNECTOR PINOUT		
Pin	**Name**	**Function**
1	TX +	Transmitted data (+)
2	RX +	Received data (+)
3	TX -	Transmitted data (-)
4	RX -	Received data (-)

MODELS AND ACCESSORIES

MODELS & ACCESSORIES		
	P/N	**Description**
MODELS	937401031	MATRIX 410 400-000 SXGA-BS-CM-SER-STD
	937401032	MATRIX 410 400-010 SXGA-BS-CM-ETH-STD
	937401033	MATRIX 410 600-000 UXGA-BS-CM-SER-STD
	937401034	MATRIX 410 600-010 UXGA-BS-CM-ETH-STD
INTERNAL LIGHTING SYSTEMS	93A401019	LT-001 INTERNAL LT RED NARROW ANGLE
	93A401020	LT-002 INTERNAL LT RED WIDE ANGLE
	93A401021	LT-003 INTERNAL LT WHITE NARROW ANGLE
	93A401022	LT-004 INTERNAL LT WHITE WIDE ANGLE
	93A401024	LT-006 INTERNAL LT RED SUPER NARROW ANGLE
	93A401026	LT-010 HI POWER LT BLUE SUPERNARROW
	93A401025	LT-020 ULTRA POWER LT BLUE SUPERNAR.
C-MOUNT LENSES	93ACC1793	LNS-1006 6MM C-MOUNT LENS
	93ACC1794	LNS-1109 9MM C-MOUNT LENS
	93ACC1795	LNS-1112 12,5MM C-MOUNT LENS
	93ACC1796	LNS-1116 16MM C-MOUNT LENS
	93ACC1797	LNS-1125 25MM C-MOUNT LENS
	93ACC1798	LNS-1135 35MM C-MOUNT LENS
	93ACC1799	LNS-1150 50MM C-MOUNT LENS

TECHNICAL DATA

DIMENSIONS	123 x 60.5 x 87 mm (4.84 x 2.38 x 3.42 in) with protective lens cover	
WEIGHT	482 g (17 oz.) with lens and internal illuminator	
CASE MATERIAL	Aluminum	
OPERATING TEMPERATURE	0 to 50 °C (32 to 122 °F)	
STORAGE TEMPERATURE	-20 to 70 °C (-4 to 158 °F)	
HUMIDITY	90% non condensing	
PROTECTION CLASS	IP67	
	MATRIX 410 -4xx-xxx	MATRIX 410 -6xx-xxx
OPTICAL FEATURES	SXGA (1280 x 1024)	UXGA (1600 x 1200)
	CMOS sensor	CCD sensor
FRAME RATE	27 frames/s	15 frames/s
READING ANGLES	Max. Pitch: ± 35°; Tilt: 0-360°	
READABLE SYMBOLOGIES	1D and Stacked: IL 2/5, Code 128, Code 39, EAN/UPC, PDF417, Micro PDF417, Pharmacode, GS1 DataBar (RSS) family, and many more	
	2D: Data Matrix, QR Code, Micro QR, Maxicode, Aztec, Microglyph	
	Postal: Royal Mail, Japan Post, Planet, Postnet and many more	
COMMUNICATION INTERFACES	RS232 + RS232/RS422/RS485 up to 115.2 Kbit/s	
	Ethernet IEEE 802.3 10 Base T and IEEE 802.3U 100 BaseTX compliant	
	ID-NET™ port up to 1 Mbps	
CONNECTIVITY MODES	Pass Through, Master/Slave, Multiplexer, Ethernet point to point	
DIGITAL INPUTS	Two SW programmable, optocoupled and polarity insensitive	
DIGITAL OUTPUTS	Two SW programmable, optocoupled, event driven	
DEVICE PROGRAMMING	X-PRESS™ Human Machine Interface	
	Windows™ based SW (VisiSet™) via serial or Ethernet link	
	Serial Host Mode Programming sequences	
USER INTERFACE	X-PRESS™ Human Machine Interface	
	Beeper, Programmable Push Button, LEDs (Status, Com, Trigger, Good, Ready, Power on, Network presence, Good Read Spot)	
CODE QUALITY VERIFICATION	ISO/IEC 16022 (Data Matrix), ISO/IEC 18004 (QR Code)	
	ISO/IEC 15415 (Print quality test specifications for 2D codes)	
	ISO/IEC 15416 (Print quality test specifications for linear codes)	
	AS9132A (Data Matrix Quality Requirements for Parts Marking)	
	AIM DPM (Global Direct Part Mark Quality Guideline)	
POWER SUPPLY	10 to 30 VDC	
POWER CONSUMPTION	8 W max; 5W typical	

Image-Based ID readers

APPLICATIONS

- Food & Beverage
  - Work in Progress Traceability
- Labelling
  - Print & Apply systems
- Pharmaceutical & Chemical
  - Medical devices traceability
  - Chemical & Biomedical analysis machines

ADVANTAGES

- The DataVS2 compact dimensions (70 x 52 x 40mm) allow to install the device even in extremely narrow spaces.
- The four different focal lengths, together with the possibility to adjust the focus, simplify the device mounting.
- The 640 x 480 pixel imager (VGA resolution) is able to acquire high quality images thus allowing to read even the smallest codes
- The ethernet and RS232 communication standard allows to connect DataVS2 to external devices in a simple and reliable way.

HIGHLIGHTS

- Compact housing
- Red light LED illuminator
- Selectable lenses
- 640x480 pixel greyscale image sensor
- Flexible and intuitive setup via PC through Ethernet
- Logical operators: AND, OR, NOT, NAND, NOR, etc.

GENERAL DESCRIPTION

DataVS2 Identification is the new Datalogic vision sensor devoted to Auto-ID applications. The device perfectly matches ease-of-use and cost-effectiveness of the DataVS2 series with powerful decoding libraries coming from the Datalogic tradition thus representing a perfect solution for all the identification needs. DataVS2 ID is able to read all the most common code simbologies among which EAN/UPC, Code 39, Code 128, Interleaved 2 of 5, PDF417, ECC200. The device also includes an OCV functionality that allows to check readability of writings like best before date or lot number. The vision sensor can be easily configured with the DataVS2 Graphical User Interface and does not require complex and time consuming operations. The software is very intuitive and can be used also by unskilled people. Moreover, the number of parameters has been dramatically reduced in order to keep the setup as simple as possible.

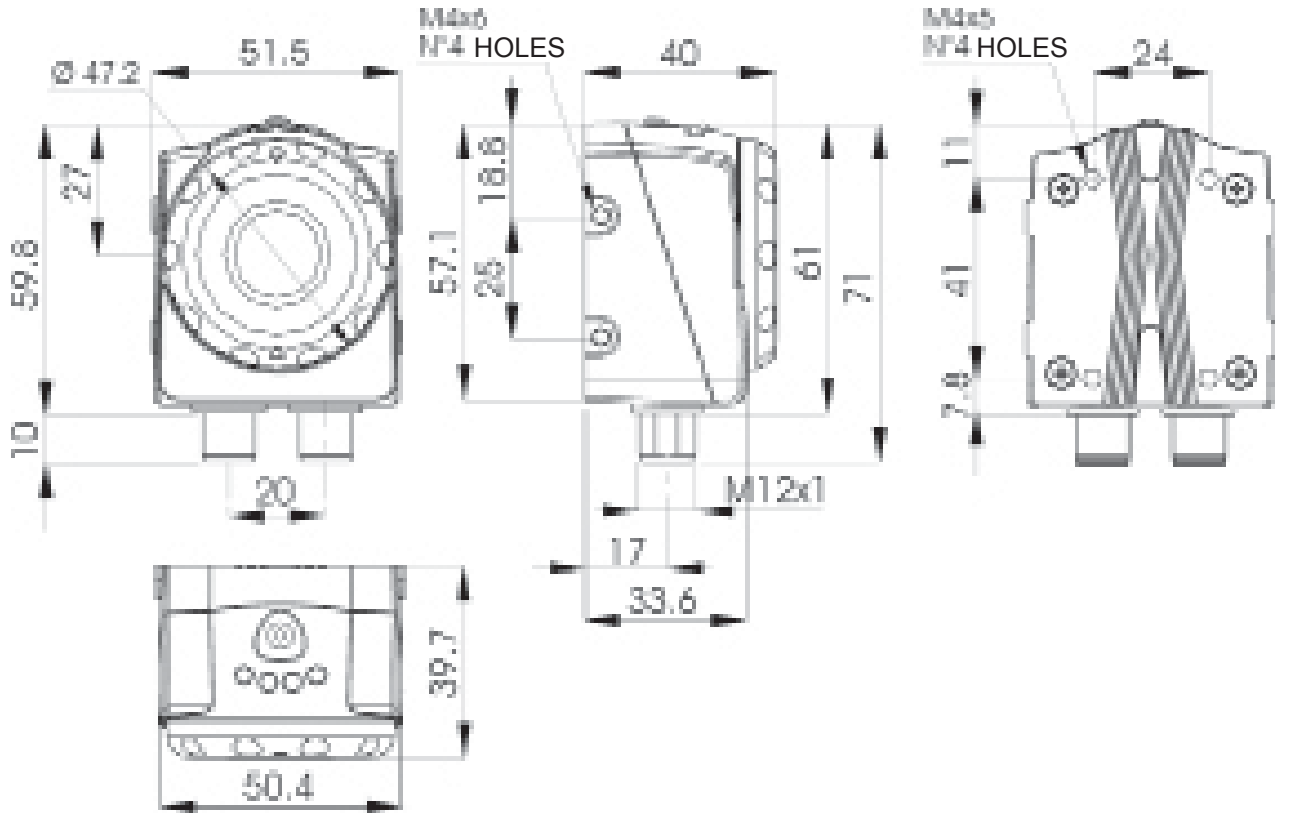
IDENTIFICATION MODELS (ID)

Control	Functioning	Image
Barcode reader	**Decode**: read and decode one (or more) barcode in the Region Of Interest. **String match:** read and decode one (or more) barcode and compare it with a set of reference strings. **Counter:** count the number of barcodes in the Region Of Interest.	
Datamatrix reader	**Decode**: read and decode one (or more) datamatrix in the Region Of Interest. **String match:** read and decode one (or more) datamatrix and compare it with a set of reference strings. **Counter:** count the number of datamatrix in the Region Of Interest.	
OCV	Verify the readability of printed characters	

Symbologies

	Codabar		UPC-A
	Code 39		UPC-E
	Code 128		PDF417
	EAN-8		Pharmacode
	EAN-13		Postnet
			IMB
	Interleaved 2 of 5		ECC200

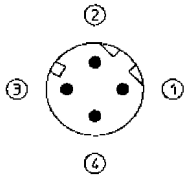
DIMENSIONS



mm

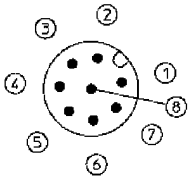
ELECTRICAL CONNECTIONS

M12 4-pole Ethernet



PIN 1 = white/orange = RX+
PIN 2 = white/green = TX+
PIN 3 = orange = RX-
PIN 4 = green = TX-

M12 8-pole (power supply and I/O)



PIN 1 = white = RS232 RX
PIN 2 = brown = 24 Vdc
PIN 3 = green = configurable output
PIN 4 = yellow = output 1
PIN 5 = grey = output 2
PIN 6 = pink = RS232 TX
PIN 7 = blue = GND
PIN 8 = red = external trigger

MODELS

MODELS	
Order No.	**Description**
959951130	DATAVS2-06-RE-ID
959951140	DATAVS2-08-RE-ID
959951120	DATAVS2-12-RE-ID
959951190	DATAVS2-16-RE-ID

ACCESSORIES	
Order No.	**Description**
95A255430	CV-A1-36-B-03 M12 8-pin shielded cable 3m
95A255440	CV-A1-36-B-05 M12 8-pin shielded cable 5m
95A255450	CV-A1-36-B-10 M12 8-pin shielded cable 10m
95A901320	DATAVS-ST-5068 L-shaped fixing bracket for 90° mounting
95A901330	DATAVS-ST-5066 U-shaped fixing bracket for angle adjustment
95A901340	DATAVS-CV-RJ45C-03 3 m crossed Ethernet cable
95A901350	DATAVS-CV-RJ45D-03 3 m direct Ethernet cable
95A901380	DATAVS-MK-01 Mounting kit

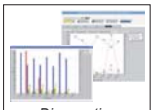
TECHNICAL DATA

Power supply:	24 Vcc ±10 %
Ripple:	1 Vpp max with illuminator2 Vpp without illuminator
Consumption:	100 mA at 24 Vdc (without illuminator)
Output type:	2+1 PNP
Output current:	100 mA max
Saturation voltage:	< 2 V
Network interface:	M12 4-poleEthernet 10/100 Mbs
Serial interface:	RS232
External illuminator interface:	Strobe signal (24 V PNP N.O.)
Frame rate:	60 fps
Optics:	integrated (6 mm / 8 mm / 12 mm / 16 mm)
Setting:	TEACH push-button
Indicators:	4 LED
Connections:	M12 8 pole A-code M12 4 pole D-code
Mechanical protection:	IP50
Protection devices:	A, B
Housing material:	aluminium alloy / ABS
Weight:	125 g
Operating temperature:	-10 ... +50°C
Storage temperature:	-25 ... +70°C

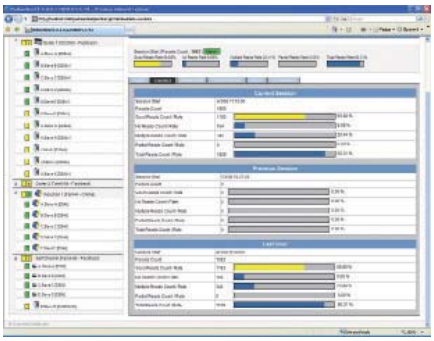
WEBSENTINEL™

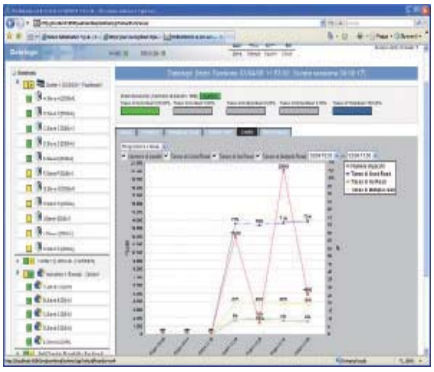
Español
English Français
日本の
Italiano
한국어 Deutsch
Multilanguage

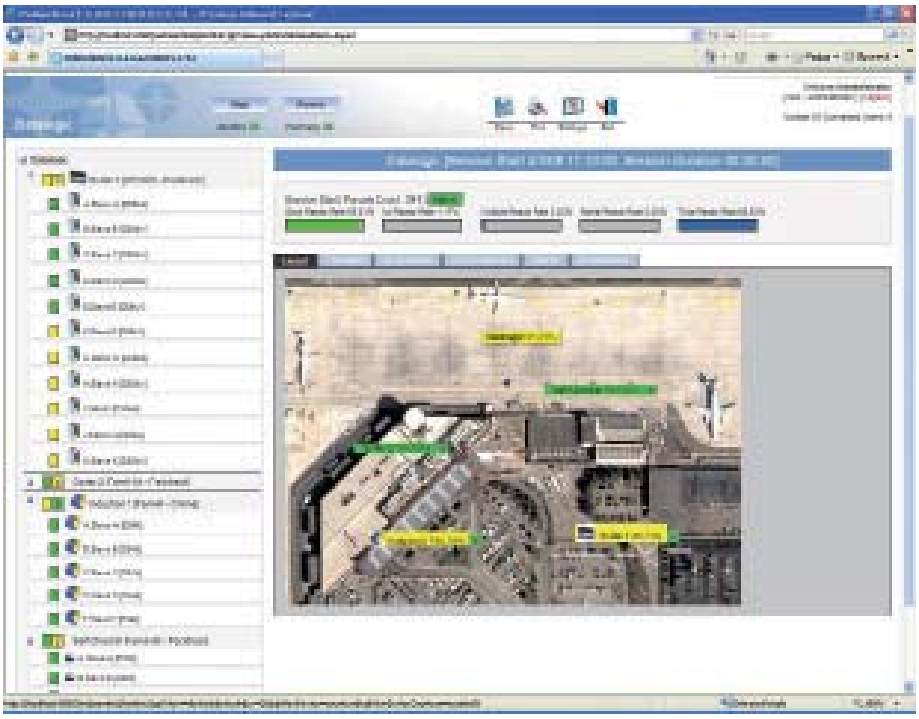
Up to 256 Arrays
High flexibility


Diagnostics & statistics

Genius
Genius™ Pass-Thru







APPLICATIONS

- Postal/Courier parcel sorting and tracking
- Airport baggage sorting systems
- Automated warehousing identification systems
- Shopfloor identification systems

HIGHLIGHTS

- Multiple reading systems surveillance and monitoring
- Ideal base for maintenance programs
- Extended diagnostics and statistics
- Multilanguage support
- Remote data access through Web browser
- Remote maintenance through Genius™ integration
- Multiple-user support
- Supports up to 256 arrays
- Email client for diagnostic notification

GENERAL DESCRIPTION

Datalogic WebSentinel™ SW supervisor offers a complete remote surveillance and control of a plant with a large number of multisided reading arrays. It collects data from the arrays through an Ethernet TCP/IP bus. It computes the received information flow as intuitive visual onscreen data and makes them accessible through the Internet.
Datalogic WebSentinel™ offers extended statistic and diagnostic information at plant, array and single scanner level. Ease of use is highly improved thanks to the multilanguage capability system (English, Japanese, Korean, German, Italian, French, Spanish).
Web browser data access guarantees the ease of a standard access throughout any PC connected to the Internet. Scanning system control, configuration and monitoring are easier than ever thanks to the Genius™ passthrough feature, which allows direct remote access even to the single device level. Datalogic WebSentinel™ supports all the main Datalogic products and can be configured up to 256 arrays on the plant.

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