



Engineering peace of mind

Machine Vision - ISO Verification - Serialization



ID-NET™

Enhanced
Connectivity

Xpress
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.

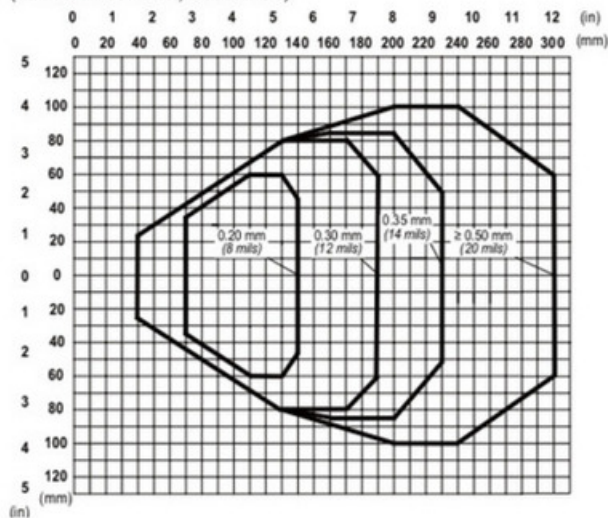
DS2100N and DS2400N are equipped with the innovative X-PRESS™ Human Machine Interface, granting easy scanner installation and maintenance. This interface clearly presents status and diagnostic information by means of a five LED bar graph, while the single multi-function key gives immediate access to relevant functions such as Test Mode, Auto Learn and Auto Setup.



READING DIAGRAMS

DS2100N-1200

(Standard Resolution, 500 scans/s)

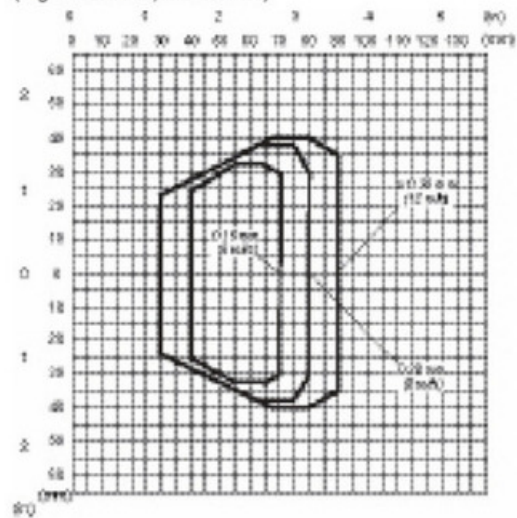


CONDITIONS

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)

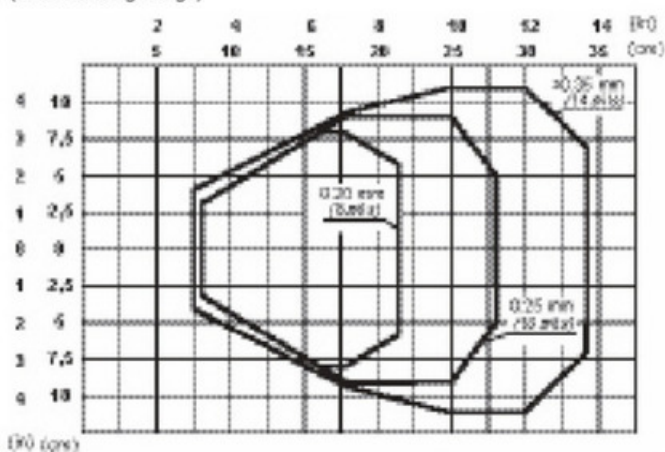


CONDITIONS

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)

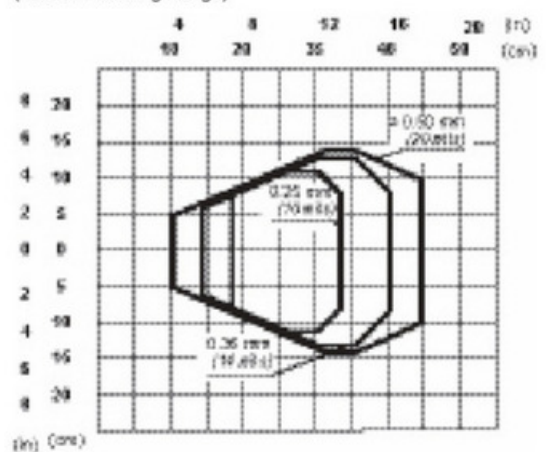


CONDITIONS

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)

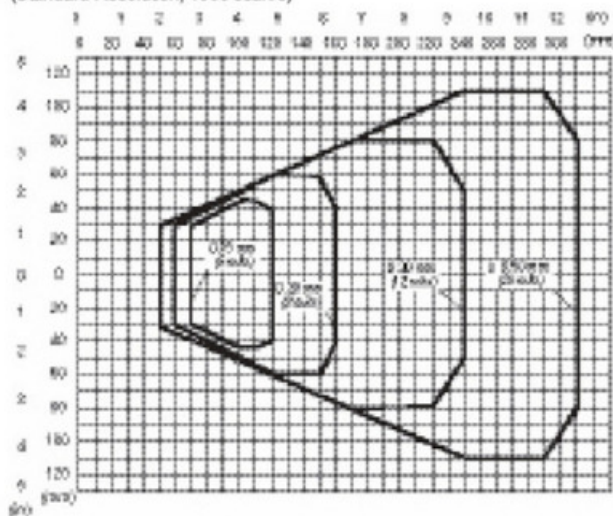


CONDITIONS

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 DIAGRAMMS

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

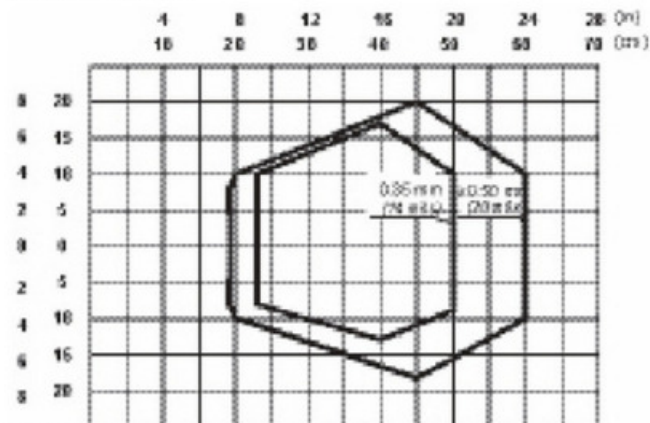
Standard - for 0.50 mm (20 mils) codes and greater

*Reading Conditions = Standard

*Parameter selectable in Genius

DS2400N-2200

(Long Reading Range)



(in) (mm)

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

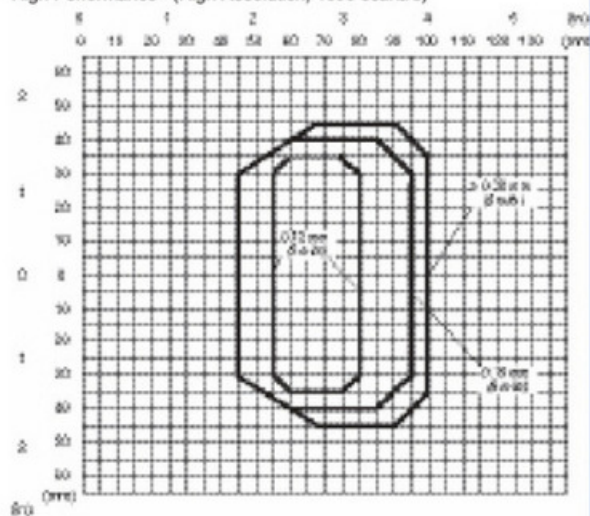
*Reading Conditions = Standard

*Scan Speed = Speed_3 (800 scans/s)

*Parameters selectable in Genius.

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:

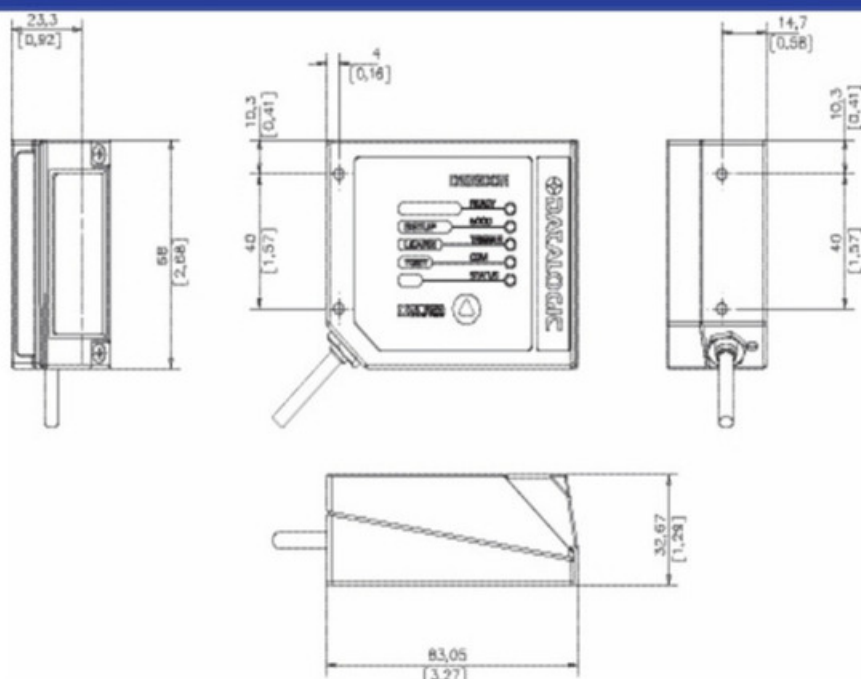
High - for 0.15 mm (6 mils) codes and smaller

Standard - for 0.20 mm (8 mils) codes

*Reading Conditions = Standard

*Parameter selectable in Genius

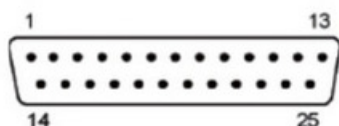
DIMENSIONS



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-	

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



Engineering peace of mind

Machine Vision - ISO Verification - Serialization

AIS Vision Systems
(+34) 931 003 035

info@aisvision.com
www.aisvision.com