DS8100A

DATALOGIC



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

DS8100A

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.

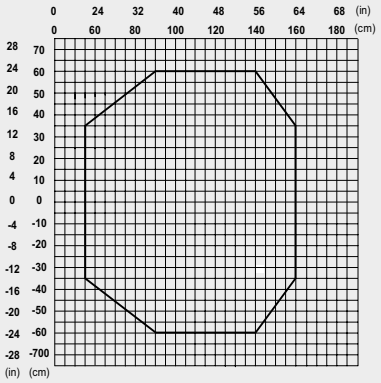




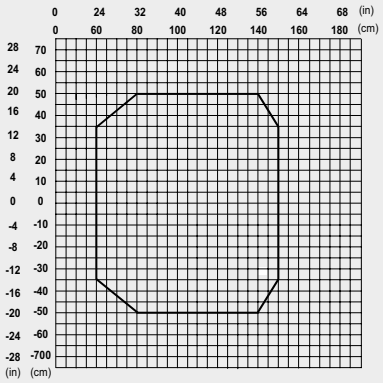


READING DIAGRAMS

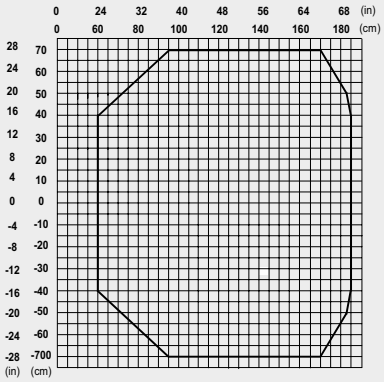
DS8100A-2X10
0.50 mm/20 mils



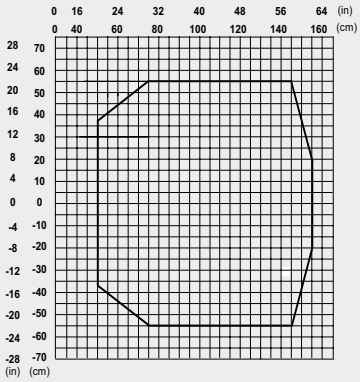
DS8100A-2X10
0.38 mm/15 mils



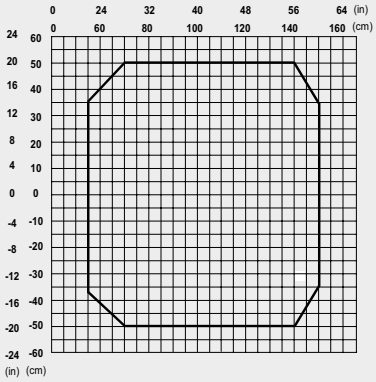
DS8100A-3X00
0.50 mm/20 mils



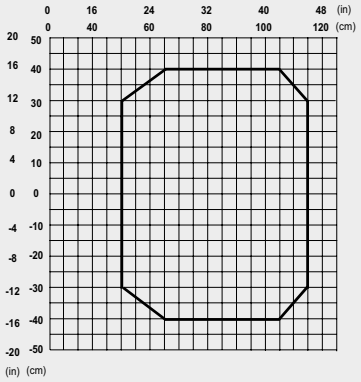
0.38 mm/15 mils



DS8100A-3X20
0.30 mm/12 mils



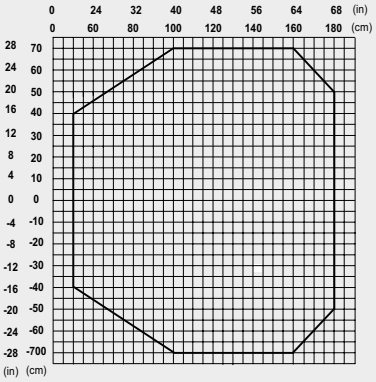
DS8100A-3X30
0.25 mm/10 mils



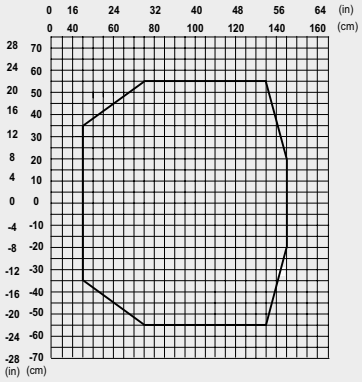
CONDITIONS
Code = Interleaved 2/5 or Code 39
PCS = 0.90
'Pitch" angle = 0°
'Skew" angle = 10°
'Tilt" angle = 0°

READING DIAGRAMS

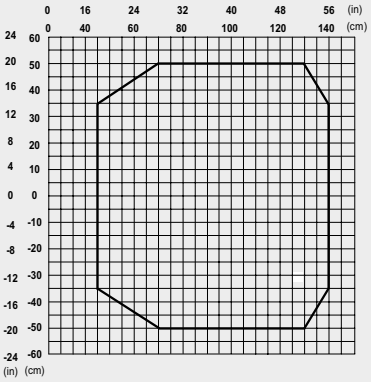
DS8100A-3X05
0.50 mm/20 mils



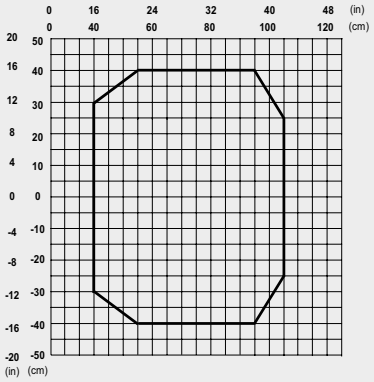
DS8100A-3X15
0.38 mm/15 mils



DS8100A-3X25
0.30 mm/12 mils

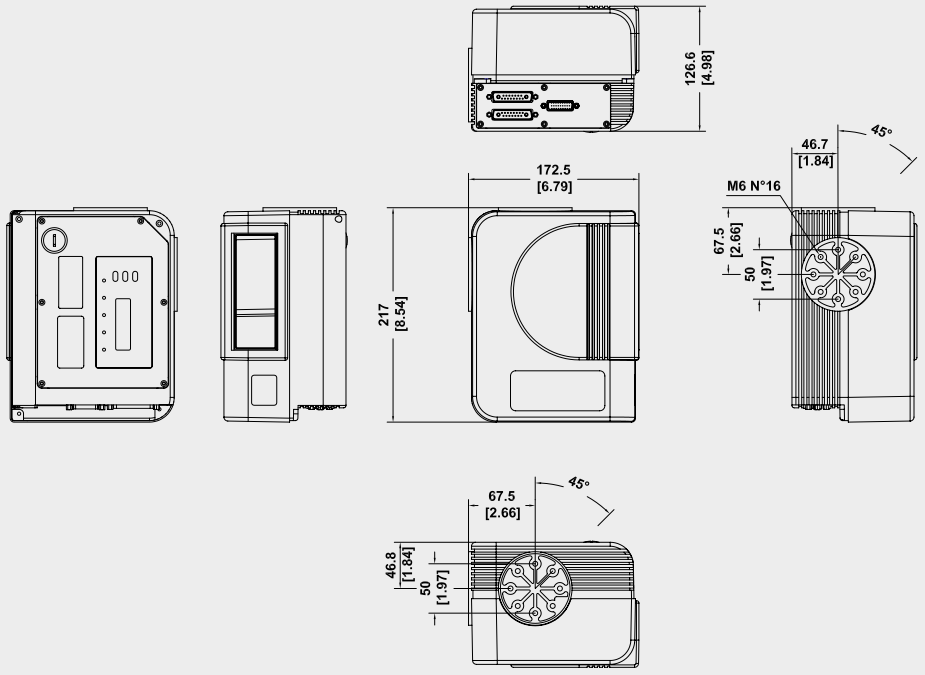


DS8100A-3X35
0.25 mm/10 mils



mm / inch

DIMENSIONS

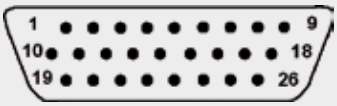


ELECTRICAL CONNECTIONS

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

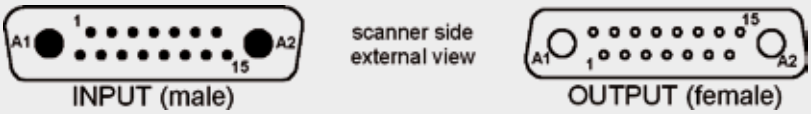
The DS8100A Standard and Fieldbus models are equipped with a 26-pin male D-sub connector for connection to the host computer, power supply and input/output signals.



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

DS8100A

DATALOGIC

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	

MODELS

ORDER NO.	DESCRIPTION
932402742	DS8100A-3030, VERY HIGH RES, LINEAR
932402743	DS8100A-3130, VERY HIGH RES, LINEAR, ETH
932402744	DS8100A-3035, VERY HIGH RES, OM
932402745	DS8100A-3135, VERY HIGH RES, OM, ETH
932402746	DS8100A-3020, HIGH RES, LINEAR
932402747	DS8100A-3120, HIGH RES, LINEAR, ETH
932402748	DS8100A-3025, HIGH RES, OM
932402749	DS8100A-3125, HIGH RES, OM, ETH
932402750	DS8100A-3010, MEDIUM RES, LINEAR
932402751	DS8100A-3110, MEDIUM RES, LINEAR, ETH
932402752	DS8100A-3015, MEDIUM RES, OM
932402753	DS8100A-3115, MEDIUM RES, OM, ETH
932402754	DS8100A-3000, LOW RES, LINEAR
932402755	DS8100A-3100, LOW RES, LINEAR, ETH
932402756	DS8100A-3005, LOW RES, OM
932402757	DS8100A-3105, LOW RES, OM, ETH
932402772	DS8100A-2010 MED RES, LIN, DOUBLE LAS
932402773	DS8100A-2110 MED RES,LIN,DOUBLE LAS,ETH
932402758	DS8100A-3002, LOW RES, LIN.,BHS

ACCESSORIES

ORDER NO.	DESCRIPTION
93ACC1430	ACS-81 AIR CLEANING SYSTEM
93ACC1792	BK-8200 BRACKET 15 DEG
93A051298	BT-8100 TERMINATOR 8K FAMILY
93ACC1090	BTK-8100 BUS TERMINATOR KIT (5PCS)
93A051287	BTK-8102 DOUBLE TERMINATOR KIT (2 PCS)
93A051286	BTK-8500 IP65 TERMINATOR KIT (2 PCS)
93A051000	CAB-8005 CABLE SCANNER CONTROLLER 5m
93A051010	CAB-8010 CABLE SCANNER CONTROLLER 10m
93ACC1120	CAB-8100 10 WIRES SHIELD D 9.5mm, 50m
93A051020	CAB-8101 CABLE SCANNER SCANNER 1.2m
93A051030	CAB-8102 CABLE SCANNER SCANNER 2.5m
93A051040	CAB-8105 CABLE SCANNER SCANNER 5m
93A051268	CAB-8305 POWER & TERMINATION CABLE 5 M
93A051336	CAB-8310 POWER AND BUS RETURN CABLE 10M
93ACC1758	CAB-8402 NO POWER CABLE FAM 8K 2,5m
93ACC1759	CAB-8405 NO POWER CABLE FAM 8K 5m
93A051283	CAB-8501 IP65 CABLE FAM 8K 1,2m
93A051284	CAB-8502 IP65 CABLE FAM 8K 2,5m
93A051285	CAB-8505 IP65 CABLE FAM 8K 5 m
93A051290	CAB-8605 POWER+2TERM. CABLE FAM 8K 5m
93A051295	CAB-PWO 03 CABLE PWO TO PWO, 3M
93A051338	CAB-SC6003 25P SC6K TO PWO, I/O, 3M
93A051337	CAB-SC6013 25p SC6K TO PWO, PWR/NET, 3m
93A051294	CAB-SC6103 9p CAB SC6000 TO PWR, 3m
93ACC1130	FBK-8100 FAST BRACKET KIT (2PCS)
93ACC1750	FS-1 FRAME SHAPER (8PCS)
93ACC1878	FS-2 SMART FRAME SHAPER (2 PCS)
93A251020	GFC-80 90 DEGREES MIRROR DS8100
93A201103	GFC-800 90 DEG MIRROR CL. DIST. DS8100
93ACC1280	PLL-8000 OPTOCOUPLED PLL DEVICE
93ACC1767	PWO-480 POWER OMNI SYSTEM 480W
93ACC1530	PWR-120-JBOX POWER UNIT 110/230VAC 24V
93ACC1070	PWR-240-JBOX POWER UNIT 110/230VAC 24V
93ACC1757	UPT-80 DX8200A-DX8200 ADAPTER
93ACC1140	US-8100 BRACKET KIT (10PCS) DS8100
93A051355	CAB-F01 6K/8K FBUS CABLE TO CBX 1M
93A051356	CAB-F02 6K/8K FBUS CABLE TO CBX 2M
93A051357	CAB-F05 6K/8K FBUS CABLE TO CBX 5M
93A051288	CAB-6502 FAM 6K-8K CABLE 2,5m
93A051289	CAB-6505 FAM 6K-8K CABLE 5m
93ACC1600	OEK-1 OPTICAL ENCODER KIT+ CABLE 10m
93ACC1770	OEK-2 OPTICAL ENCODER (CAB 10m+SPRING)
93ACC1791	MEP-593 PHOTOCELL KIT