



# DS50AF

## High Performance Laser Scanner

### Features

- Reading distance up to 1.7 meters (67 in)
- 800 scans per second
- Adjustable Focus System
- Incorporated LCD display and keypad
- Built-in decoder with menu driven set up
- RS232, RS485, 20 mA C.L. communications
- Solid state laser diode light source
- Avalanche Photo diode Technology

### Applications

- High speed conveyors
- Automatic machinery and robots
- Automated warehouses
- Work-in-Process control
- Quality control

### General Description

The **DS50AF** is a laser beam scanner whose principal features are high performance and high flexibility. It has an Adjustable Focus System, which enables the user to freely select the most suitable reading field for his application. Focus length adjustment can be very easily made, even by novices, by choosing one of the six different positions of the optical system.

The flexibility in the choice of reading field enables one to adapt the scanner to every type of application, and offers the possibility of modifying reading features both when installing and at any other moment, thus saving time and money. A single scanner, moreover, can cover a wide range of applications, allowing one to reduce warehouse stock.

The **DS50AF** has a high level performance from all points of view: it operates at the frequency of 800 scans/sec., and is able to read codes with a resolution of 0.15 mm (6 mils). The maximum reading distance is 1.7 m (67 in) with a depth of field of 1.3 m (51 in). The industrial IP65 housing allows functioning in the most extreme conditions. It contains adjustable optics, a laser source with the relevant receiver (avalanche photo diode), and all the electronic equipment. This includes the decoder, the flash Eprom which can memorize personalized programs written in "C" language, and two serial interfaces.

The **DS50AF** also has an incorporated LCD display and keypad, extremely useful for programming on the spot and visualizing diagnostic messages.

The scanner offers all the most advanced processing functions: multilabel, data formatting, pattern matching, and autodiscrimination. More than one **DS50AF** unit can be connected in multidrop to configurate multipoint reading systems.

The electrical connections can be carried out using connectors or a connecting system (junction box) equipped with a terminal board.

# Models and Accessories

MODEL	RESOLUTION			CONNECTIONS		ORDER NUMBER
	High	Medium	Low	Connectors	Junction Box	
DS50AF-100	•			•		910121000
DS50AF-110	•				•	910121010
DS50AF-200		•		•		910121080
DS50AF-210		•			•	910121090
DS50AF-300			•	•		910121160
DS50AF-310			•		•	910121170

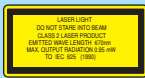
## ACCESSORIES

PG110/50	Power block (110 Vac)	B9751094
PG220/50	Power block (220 Vac)	B9751095
GFC-50	90° reading device	B9751067
GFC-05	Oscillating mirror attachment	B9751098
US-1	Revolving support	91H031000

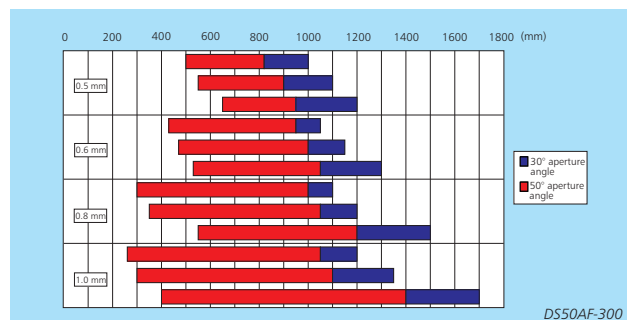
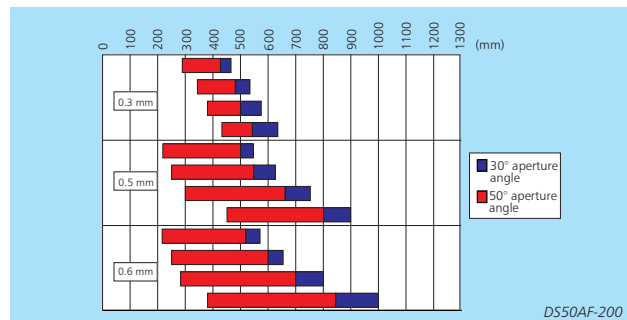
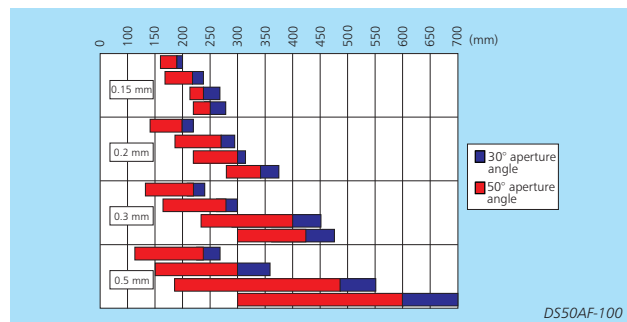
\*All models are available with multi-beam (raster configuration) versions.

## Specifications

POWER SUPPLY	10 to 30 Vdc
POWER CONSUMPTION	6 W
LIGHT SOURCE	Visible Laser Diode (670 nm)
LIGHT RECEIVER	Avalanche photo diode
MAX. RESOLUTION	DS50AF-1XX 0.15 mm (6 mils) DS50AF-2XX 0.30 mm (12 mils) DS50AF-3XX 0.50 mm (20 mils)
SCAN RATE	800 (1000) scans per second
MAX. READING DISTANCE	DS50AF-1XX 700mm (27.6in.) (0.5mm narrow bar) DS50AF-2XX 1000mm (39.4in.) (0.6mm narrow bar) DS50AF-3XX 1700mm (66.9in.) (1.0mm narrow bar)
MAX. READING FIELD	DS50AF-1XX 550mm (21.6in.) (0.5mm narrow bar) DS50AF-2XX 750mm (29.5in.) (0.6mm narrow bar) DS50AF-3XX 1350mm (53.1in.) (1.0mm narrow bar)
MAX. DEPTH OF FIELD	1300 mm (51.2 in.) (1.0 mm narrow bar)
APERTURE ANGLE	55 degrees (typical)
READABLE CODES	15 types incl. 2/5 family, Code 39, Code 93, Code 128, EAN/UPC, Codabar
CODE AUTODISCRIMINATION	Up to 10 different codes
MAIN INTERFACES	RS232 / RS485 Multidrop / 20 mA C.L.
AUX. INTERFACE	RS232
BAUD RATES	300 to 19200 bauds
INPUT SIGNALS	'Presence sensor' plus 1 auxiliary (NPN/PNP transistor)
OUTPUT SIGNALS	'No read', 'Right code', 'Wrong code' (NPN transistor open collector and emitter)
STANDARD PROGRAMMING METHOD	Using built in keypad and menu driven display / Via serial port
STANDARD OPERATING MODES	'On line', 'Automatic', 'Serial on line', 'Test'
DISPLAY	2 line by 16 character LCD
KEYPAD	4 keys
LED INDICATORS	Laser on, 'Reading phase active', 'Label present', 'Data transmit'
LASER CLASSIFICATION	IEC 825 Class 2
LASER CONTROL	Security system to turn laser Off in case of motor slow down or failure
DIMENSIONS	180 x 100 x 72 mm (7.09 x 3.94 x 2.83 in.)
WEIGHT	1.3 Kg (2.87 lbs) approx.
CASE MATERIAL	Cast aluminium
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 1.5 mm 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



## Reading diagrams



# DATA LOGIC DL

Bar Code & More



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**Australia**  
Datalogic PTY. LTD.  
Tel. +61 3/95589299  
Fax +61 3/95584440  
sales@datalogic.com.au

**Austria**  
Datalogic Handelges. MBH  
Tel. +43 2236/25882  
Fax +43 2236/258825  
office@datalogic.co.at

**Denmark**  
Datalogic AB  
Tel. +45 44/209970  
Fax +45 44/209972  
info@datalogic.se

**France**  
Datalogic France S.A.  
Tel. +33 1/60921111  
Fax +33 1/60921340  
dfrance@worldnet.fr

**Germany**  
Datalogic GmbH  
Tel. +49 7026/6080  
Fax +49 7026/5746  
info@datalogic.de

**India**  
Datalogic (India) Private Ltd.  
Tel. +91 80/5584440  
Fax +91 80/5582896  
datalogic@vsnl.com

**Italy**  
Datalogic S.p.A.  
Tel. +39 051/6459211  
Fax +39 051/722003  
info@datalogic.it

**Japan**  
Izumi Datalogic Co., Ltd.  
Tel. +81 78/2723400  
Fax +81 78/2722003  
idlmrke@izumi-datalogic.co.jp

**Netherlands**  
Datalogic Optic Electronics BV  
Tel. +31 346/572888  
Fax +31 346/568736  
info@datalogic.nl

**Spain**  
Datalogic France S.A.  
Tel. +34 93/3221227  
Fax +34 93/4394136  
datalogic@sei.es

**Sweden**  
Datalogic AB  
Tel. +46 40/385000  
Fax +46 40/181849  
info@datalogic.se

**United Kingdom**  
Datalogic UK Ltd.  
Tel. +44 1582/464900  
Fax +44 1582/464999  
enquiries@datalogic.demon.co.uk

**U.S.A.**  
Datalogic Inc.  
Tel. +1 606/6897000  
Fax +1 606/3344970  
info@datalogic.com

**LENZ** LENZ Sp. z o. o.  
Al. Jerozolimskie 202  
02-486 Warszawa

tel/fax: 0 (prefiks) (22) 863 70 06  
tel: 0 (prefiks) (22) 874 03 87

e-mail: biuro@lenz.pl  
www: http://www.lenz.pl

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