



Magellan™ CSS4400

Customer Service Scanner



Quick Reference Guide

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Patents

See www.patents.datalogic.com for patent list.

See the Regulatory Addendum included with your product for additional regulatory, safety and legal information.



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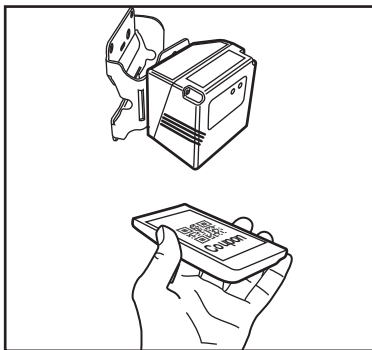
Customer Service Scanner (CSS)

For the purposes of this manual, the Customer Service Scanner can alternatively be termed as the "scanner," or the "CSS."

The CSS is a standard range 2D bar code scanning module which can be optionally teamed with an in-counter Magellan 9300i or 9400i scanner to provide a convenient means for customers to scan their own coupons or input other images to the system.

Because of its convenient size, the CSS can be flexibly mounted in most any suitable location that allows easy access to the customer in a down-facing orientation.

Figure 1. Customer Service Scanner (CSS)

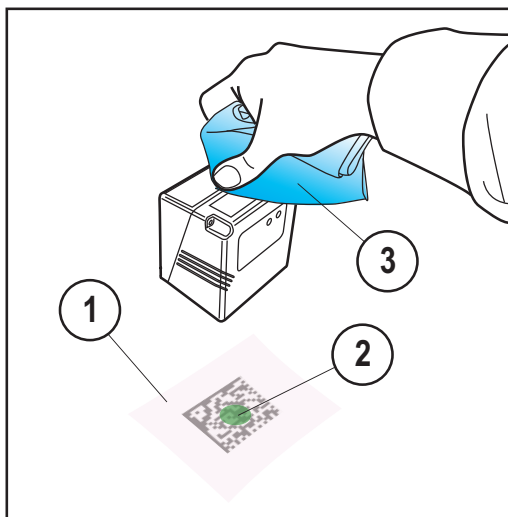


Features

CSS features offer ease of use and maintenance:

1. The illuminated area beneath the CSS is where the bar code label should be placed to be read.
2. For accurate scanning, align the bar code with the Green Spot in its center. In addition, visual feedback for good read is indicated by the Green Spot turning off, then back on.
3. The scanner's enclosure features robust IP54 sealing and resin construction to increase its tolerance to cleaning with solvents and disinfectants.

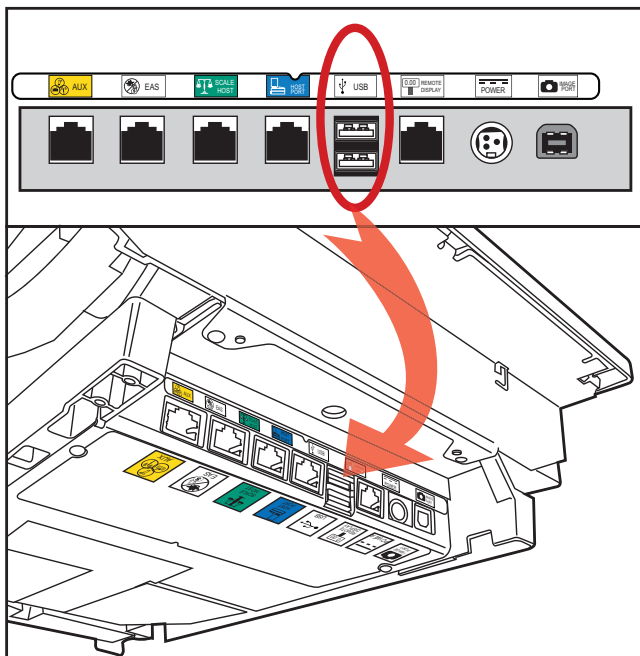
Figure 2. CSS Features



Connection

The CSS connects directly to either of the two stacked USB ports on the connection bulkhead of the Magellan 9300i or 9400i scanner (see [Figure 3](#)), and is powered via this connection. No additional power supply is required.

Figure 3. CSS Connection to the Magellan 9300i or 9400i Scanner



Mounting Bracket

Your scanner kit typically includes a mounting bracket which was pre-selected for its suitability to your installation. Generally, you should mount the face of the CSS 6 cm to 18 cm above the surface to be scanned.

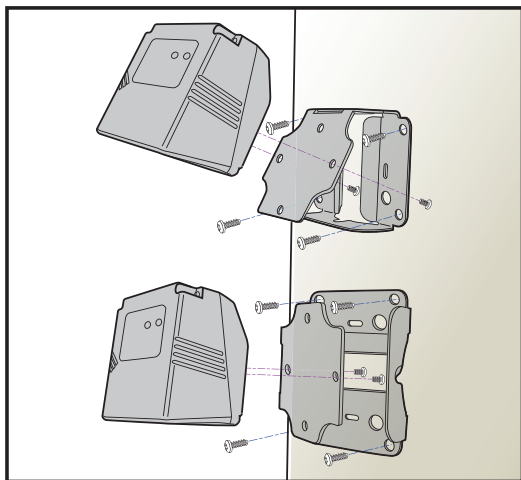
Standard Mounting Bracket

The Standard Mounting Bracket offers several different options for mounting the CSS, as well as routing features for its cable.

Wall Mount

Mount to a wall or other vertical surface using one of the two optional configurations shown in [Figure 4](#).

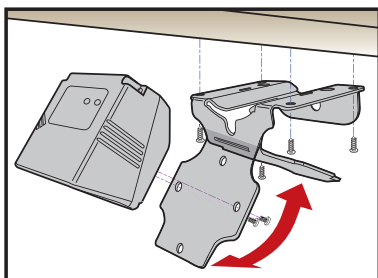
Figure 4. Mounting to a Wall



Under Shelf Mount

If the CSS is to be mounted beneath a shelf, counter, or other horizontal surface; the mounting plate can be carefully bent to the necessary angle as shown in [Figure 5](#).

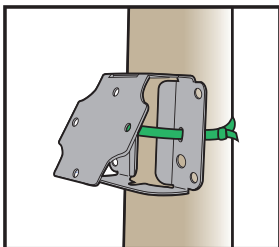
Figure 5. Mounting Under a Shelf



Pole Mount

The Standard Mount will also permit the CSS to be secured to a pole or post as demonstrated in [Figure 6](#). Use the slots shown to attach cable ties or other sturdy cord or line.

Figure 6. Mounting to a Pole or Post



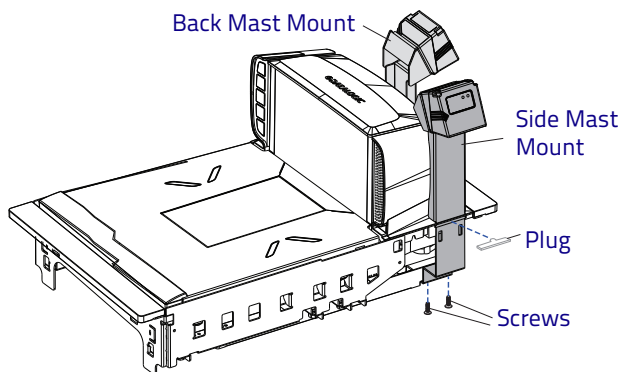
Mast Mounts

Two types of Mast Mounts are available that allow convenient installation of the CSS in a position adjacent to the scanner's bonnet. When installing a Mast Mount, remove the plug from the desired mount location. Retain the plug for re-installation in case the mount is ever removed.

Side Mast Mount

The Side Mast Mount can optionally be installed on either the right or left side of the scanner's bonnet. The mount is secured beneath the scanner using two screws and a cosmetic piece plug, and snugs against the scanner's side, leaving an opening through which the cable for the CSS is routed.

Figure 7. Mast Mounts



Back Mast Mount

The Back Mast Mount secures and contours against the back of the scanner in the same manner.

Programming

The CSS is factory-configured with a set of standard default features. You can select other options and customize your CSS through use of programming bar codes. Contact Tech Support for more information.

Aladdin™ Configuration Utility

Programming can also be performed using the Datalogic Aladdin™ Configuration application, which is downloadable from the Datalogic website listed on the back cover of this manual. This multi-platform utility program allows device configuration using a PC. It communicates with the device via its USB cable and can also create configuration bar codes to print.

Using Programming Bar Codes

The programming bar code label, "[Reset Default Settings](#)" on [page 8](#), requires only the scan of that single label to enact the change.

Resetting Product Defaults

If you aren't sure what programming options are active in your CSS, or you've changed some options and want **your** default settings restored, scan the bar code below to reset the CSS to its initial configuration.



Reset Default Settings

The CSS can also be restored to its **original factory default settings** using the Aladdin Configuration Utility (see [Aladdin™ Configuration Utility on page 7](#)).

Software Product Policy

Datalogic reserves the right to ship its products with the latest version of software/firmware available. This provides our customers with the very latest in Datalogic software technology.

The only exception to this policy is when the buyer has a signed contract with Datalogic that clearly defines the terms and conditions for making software/firmware changes in products shipped to the buyer.

To arrange for a Software Maintenance and Support Agreement please contact your Datalogic sales person.

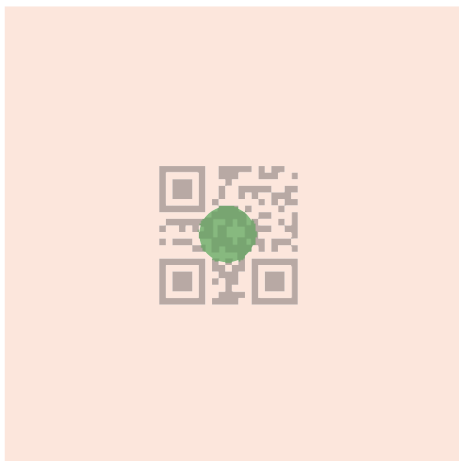
Reading Parameters

Place the bar code to be read beneath the CSS, then center it at an appropriate distance and within the illuminated area (see [Figure 8](#)) to capture and decode the image. The illumination will remain on.

Aiming System

Position the bar code with the Green Spot at its center. The Green Spot will turn off, then back on to indicate a read.

Figure 8. Aiming Using the Green Spot



Technical Features

Item	Description
Physical Characteristics	
Color	Black
Dimensions	Height 1.54" / 39mm Length 2.24" / 57mm Width 2.28" / 58 mm
Weight (with cable, without bracket)	Approximately 6.3 ounces / 170 g
Electrical Characteristics	
Input Voltage	5 VDC \pm 5% Overvoltage tolerant to 14VDC
Current & Power Consumption	
Input current at 5V in Automatic (Object Sense) Reading Mode	
Operating (typical)	200 mA
Operating (max)	250 mA
Idle/standby (typical)	135 mA (Automatic Object Sense Mode) No idle in Automatic Mode

Item	Description				
Performance Characteristics					
Nominal Frame Rate	53 frames/second				
Light Source	Dual Red LEDs				
Roll (Tilt) Tolerance	Up to ± 180°				
Pitch Tolerance	± 40°				
Skew (Yaw) Tolerance	± 40°				
Print Contrast Minimum	25% minimum reflectance				
Field of View	40° H x 26° V				
Depth of Field (Typical)		cm		inches	
		NF	FF	NF	FF
	Code 39 5mil	4.7	17.7	1.8	7.0
	Code 39 10mil	1.7	33.2	0.7	13.1
	Code 39 20mil	1.1	492	0.4	19.4
	EAN 7.5mil	2.8	27.3	1.1	10.8
	EAN 13mil	2.5	41.9	1.0	16.5
	PDF-417 6.6mil	3.3	15.4	1.3	6.0
	PDF-417 10mil	2.2	23.9	0.9	9.4
	PDF-417 15mil	2.5	35.6	1.0	14.0
	DataMatrix 10mil	2.7	17.1	1.1	6.7
	DataMatrix 15mil	1.2	24.6	0.5	9.7
QR Code 10mil	3.5	16.0	1.4	6.3	
QR Code 15mil	0.5	24.3	0.2	9.6	
Minimum Element Width	1D Min Resolution = 4 mil PDF-417 Min Resolution = 5 mil Datamatrix Min Resolution= 7 mil				

* 13 mils DOF based on EAN. All others are Code 39. All labels grade A, minimum illumination 100 lux, 20°C, label inclination 10°, static reading.

Decode Capability

1D Bar Codes

UPC/EAN/JAN (A, E, 13, 8); UPC/EAN/JAN (including P2 /P5); UPC/EAN/JAN (including; ISBN / Bookland & ISSN); UPC/EAN Coupons; Code 39 (including full ASCII); Code 39 Trioptic; Code39 CIP (French Pharmaceutical); LOGMARS (Code 39 w/ standard check digit enabled); Danish PPT; Code 32 (Italian Pharmacode 39); Code 128; Code 128 ISBT; Interleaved 2 of 5 ; Standard 2 of 5; Interleaved 2 of 5 CIP (HR); Industrial 2 of 5; Discrete 2 of 5; Datalogic 2 of 5 (China Post Code/Chinese 2 of 5); IATA 2of5 Air cargo code; Code 11; Codabar; Codabar (NW7); ABC Codabar; EAN 128; Code 93 ; MSI; PZN; Plessey; Anker Plessey; GS1 DataBar Omnidirectional; GS1 DataBar Limited; GS1 DataBar Expanded; GS1 DataBar Truncated; DATABAR Expanded Coupon.

2D / Stacked Codes

The CSS is capable of decoding the following symbologies using multiple frames (i.e. Multi-Frame Decoding):

Datamatrix; Inverse Datamatrix; Datamatrix is configurable for the following parameters; Normal or Inverted; Square or Rectangular Style; Data length (1 - 3600 characters); Maxicode; QR Codes (QR, Micro QR and Multiple QR Codes); Aztec; Postal Codes - (Australian Post; Japanese Post; KIX Post; Planet Code; Postnet; Royal Mail Code (RM45CC); Intelligent Mail Barcode (IMB); Sweden Post; Portugal Post); LaPoste A/R 39; 4-State Canada; PDF-417; MacroPDF; Micro PDF417; GS1 Composites (1 - 12); Codablock F; French CIP13^a; GS1 DataBar Stacked; GS1 DataBar Stacked Omnidirectional; GS1 DataBar Expanded Stacked; GS1 Databar Composites; Chinese Sensible Code; Inverted 2D codes^b.

^aIt is acceptable to handle this with ULE

^bThe SW can apply the Normal/Reverse Decoding Control to the following symbologies: Datamatrix, QR, Micro QR, Aztec and Chinese Sensible Code.

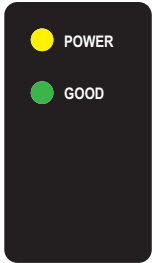
NOTE: The Scanner can also decode mirrored images of 2D matrix codes Datamatrix, QR Code and Maxicode.

Item	Description
User Environment	
Operating Temperature	-4° to 122° F (-20° to 50° C)
Storage Temperature	-4° to 158° F (-20° to 70° C)
Humidity	Operating: 5% to 90% relative humidity, non condensing
Drop specifications	5 drops from 30 inches (0.76 mt.) to concrete
Ambient Light immunity	Up to 100,000 Lux
Contaminants	IEC529-IP54
ESD Level	16 KV
Regulatory	
LED Emission Class	TBD
Electrical Safety	IEC 60950-1 , CAN/CSA C22.2 No. 60950-1-07; UL 60950-1
EMI/RFI	North America (FCC) : Part 15 Class B, Canada (IC) : ICES-003 Class B, European Union EMC Directive, Australian (RCM)

LED and Beeper Indications

LED Status

The CSS provides two indicator LEDs:

	POWER (Yellow LED)	ON = Power ON
		OFF = Power OFF
	GOOD (Green LED)	ON = Good Read
		Blinks = USB enumeration or interface inactive or waiting for change of configuration

Indicators

The scanner's beeper sounds and its LED illuminates to indicate various functions or errors on the CSS. A 'Green Spot' also performs useful functions. The following tables list these indications. One exception to the behaviors listed in the tables is that some functions are programmable, and so may or may not be turned on. For example, certain indications such as the power-up beep can be disabled using programming bar code labels.

Indicator	Description	LED	Beeper
Power-up	The CSS is in the process of power-ing-up.	N/A	The default setting is for the CSS to be silent upon power-up.
Good Read	A label has been successfully scanned by the CSS.	The default setting is that the green indicator LED will flash once. Also, the Green Spot will turn off, then back on.	The Magellan 93/9400 scanner will force the CSS to beep once upon a successful label scan by the CSS.
ROM Failure	There is an error in the scanner's software/programming	The green LED flashes	The CSS sounds one error beep at highest volume.
Limited Scanning Label Read	Indicates that a host connection is not established.	N/A	The CSS 'chirps' six times at the highest frequency and current volume.
CSS Active Mode	The CSS is active and ready to scan.	The amber power LED is lit steadily	N/A
CSS Disabled	The CSS has been disabled by the host.	The green LED blinks continuously	N/A
USB Enumeration	This is the process of detecting, identifying and loading USB drivers.	The green indicator LED blinks during this enumeration period.	N/A

Programming Mode Indications

The following indications ONLY occur when the CSS is in Programming Mode.

Indicator	Description	LED	Beeper
Label Programming Mode Entry	A valid programming label has been scanned.	LED blinks continuously	The CSS sounds four low frequency beeps.
Label Programming Mode Rejection of Label	A label has been rejected.	N/A	The CSS sounds three times at lowest frequency and current volume.
Label Programming Mode Acceptance of Partial Label	In cases where multiple labels must be scanned to program one feature, this indication acknowledges each portion as it is successfully scanned.	N/A	The CSS sounds one short beep at highest frequency and current volume.
Label Programming Mode Acceptance of Programming	Configuration option(s) have been successfully programmed via labels and the reader has exited Programming Mode.	N/A	The CSS sounds one high frequency beep and 4 low frequency beeps followed by reset beeps.
Label Programming Mode Cancel Item Entry	Cancel label has been scanned.	N/A	The CSS sounds two times at low frequency and current volume.

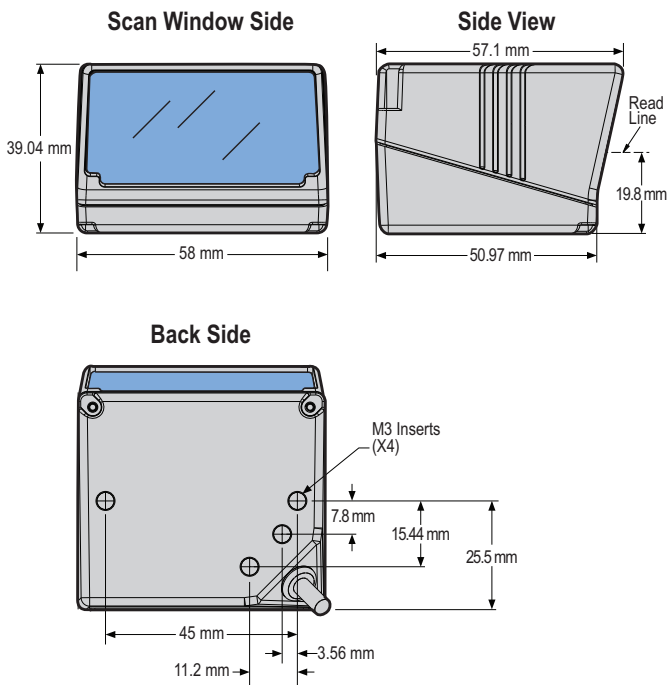
Error Mode

Upon attaching the USB cable at startup, the CSS powers up. If the CSS fails its automatic Selftest, it will enter an Error Mode which is indicated four to five seconds after startup:

- The beeper will sound an error tone for approximately one second.
- After the beeper sounds, the Green Spot and the green good read LED indicator will proceed to blink rapidly. This blinking will continue until power is removed.

If this happens, disconnect the USB cable and contact Tech Support for assistance.

Figure 9. CSS Dimensions



Ergonomic Recommendations



In order to avoid or minimize the potential risk of ergonomic injury, follow the recommendations below. Consult with your local Health & Safety Manager to ensure that you are adhering to your company's safety programs to prevent customer or employee injury.

- Reduce or eliminate repetitive motion
- Maintain a natural position
- Reduce or eliminate excessive force
- Keep objects that are used frequently within easy reach
- Perform tasks at correct heights
- Reduce or eliminate vibration
- Reduce or eliminate direct pressure
- Provide adjustable workstations
- Provide adequate clearance
- Provide a suitable working environment
- Improve work procedures.

Datalogic USA, Inc. Limited Factory Warranty

Warranty Coverage

Datalogic warrants to Customer that Datalogic's products will be free from defects in materials and workmanship for a period of 3 years from product shipment. This warranty does not extend to batteries and cables. As consumable items batteries and cables carry a 90 day warranty from time of purchase for DOA (dead on arrival) defects. In order to obtain service under this Warranty, Customer must notify Datalogic of the claimed defect before the expiration of the Warranty period and obtain from Datalogic a return authorization number for return of the product to designated Datalogic service center. If Datalogic determines Customer's claim is valid, Datalogic will repair or replace product without additional charge for parts and labor. Customer shall be responsible for packaging and shipping the product to the designated Datalogic service center, with shipping charges prepaid. Datalogic shall pay for the return of the product to Customer if the shipment is to a location within the country in which the Datalogic service center is located. Customer shall be responsible for paying all shipping charges, duties, taxes, and any other charges for products returned to any other locations.

Datalogic USA, Inc. ("Datalogic") hardware products are warranted against defects in material and workmanship under normal and proper use. The liability of Datalogic under this warranty is limited to furnishing the labor and parts necessary to remedy any defect covered by this warranty and restore the product to its normal operating condition. Repair or replacement of product during the warranty does not extend the original warranty term. Products are sold on the basis of specifications applicable at the time of manufacture and Datalogic has no obligation to modify or update products once sold.

If Datalogic determines that a product has defects in material or workmanship, Datalogic shall, at its sole option repair or replace the product without additional charge for parts and labor, or credit or refund the defective products duly returned to Datalogic. To perform repairs, Datalogic may use new or reconditioned parts, components, subassemblies or products that have been tested as meeting applicable specifications for equivalent new material and products. Customer will allow Datalogic to scrap all parts removed from the repaired product. The warranty period shall extend from the date of shipment from Datalogic for the duration published by Datalogic for the product at the time of purchase (Warranty period). Datalogic warrants repaired hardware devices against defects in workmanship and materials on the repaired assembly for a 90 day period starting from the date of shipment of the repaired product from Datalogic or until

the expiration of the original warranty period, whichever is longer. Datalogic does not guarantee, and it is not responsible for, the maintenance of, damage to, or loss of configurations, data, and applications on the repaired units and at its sole discretion can return the units in the "factory default" configuration or with any software or firmware update available at the time of the repair (other than the firmware or software installed during the manufacture of the product). Customer accepts responsibility to maintain a back up copy of its software and data.

Warranty Claims Process

In order to obtain service under the Factory Warranty, Customer must notify Datalogic of the claimed defect before the expiration of the applicable Warranty period and obtain from Datalogic a return authorization number (RMA) for return of the product to a designated Datalogic service center. If Datalogic determines Customer's claim is valid, Datalogic will repair or replace product without additional charge for parts and labor. Customer shall be responsible for packaging and shipping the product to the designated Datalogic service center, with shipping charges prepaid. Datalogic shall pay for the return of the product to Customer if the shipment is to a location within the country in which the Datalogic service center is located. Customer shall be responsible for paying all shipping charges, duties, taxes, and any other charges for products returned to any other locations. Failure to follow the applicable RMA policy, may result in a processing fee. Customer shall be responsible for return shipment expenses for products which Datalogic, at its sole discretion, determines are not defective or eligible for warranty repair.

Warranty Exclusions

The Datalogic Factory Warranty shall not apply to:

- (i) any product which has been damaged, modified, altered, repaired or upgraded by other than Datalogic service personnel or its authorized representatives;
- (ii) any claimed defect, failure or damage which Datalogic determines was caused by faulty operations, improper use, abuse, misuse, wear and tear, negligence, improper storage or use of parts or accessories not approved or supplied by Datalogic;
- (iii) any claimed defect or damage caused by the use of product with any other instrument, equipment or apparatus;
- (iv) any claimed defect or damage caused by the failure to provide proper maintenance, including but not limited to cleaning the upper window in accordance with product manual;

- (v) any defect or damage caused by natural or man-made disaster such as but not limited to fire, water damage, floods, other natural disasters, vandalism or abusive events that would cause internal and external component damage or destruction of the whole unit, consumable items;
- (vi) any damage or malfunctioning caused by non-restoring action as for example firmware or software upgrades, software or hardware reconfigurations etc.;
- (vii) the replacement of upper window/cartridge due to scratching, stains or other degradation and/or
- (viii) any consumable or equivalent (e.g., cables, power supply, batteries, keypads, touch screen, triggers etc.).

No Assignment

Customer may not assign or otherwise transfer its rights or obligations under this warranty except to a purchaser or transferee of product. No attempted assignment or transfer in violation of this provision shall be valid or binding upon Datalogic.

DATALOGIC'S LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ORAL OR WRITTEN, STATUTORY OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. DATALOGIC SHALL NOT BE LIABLE FOR ANY DAMAGES SUSTAINED BY CUSTOMER ARISING FROM DELAYS IN THE REPLACEMENT OR REPAIR OF PRODUCTS UNDER THE ABOVE. THE REMEDY SET FORTH IN THIS WARRANTY STATEMENT IS THE CUSTOMER'S SOLE AND EXCLUSIVE REMEDY FOR WARRANTY CLAIMS. UNDER NO CIRCUMSTANCES WILL DATALOGIC BE LIABLE TO CUSTOMER OR ANY THIRD PARTY FOR ANY LOST PROFITS, OR ANY INCIDENTAL, CONSEQUENTIAL IN-DIRECT, SPECIAL OR CONTINGENT DAMAGES REGARDLESS OF WHETHER DATALOGIC HAD ADVANCE NOTICE OF THE POSSIBILITY OF SUCH DAMAGES.

Risk of Loss

Customer shall bear risk of loss or damage for product in transit to Datalogic. Datalogic shall assume risk of loss or damage for product in Datalogic's possession. In the absence of specific written instructions for the return of product to Customer, Datalogic will select the carrier, but Datalogic shall not thereby assume any liability in connection with the return shipment.

Services and Support

Datalogic provides several services as well as technical support through its website. Log on to www.datalogic.com and click on the links indicated for further information.

Products

Search through the links to arrive at your product page where you can download specific **Manuals** and **Software & Utilities**, including:

- **Datalogic Aladdin™**, a multi-platform utility program that allows for both RS-232 and USBCOM communications interfacing. The GUI-based application provides an easy mechanism for setting scanner configuration, as well as configuration bar code printing.

Service & Support

- **Technical Support** - Product documentation and programming guides and Technical Support Department in the world
- **Service Programs** - Warranty Extensions and Maintenance Agreements
- **Repair Services** - Flat Rate Repairs and Return Material Authorization (RMA) Repairs
- **Downloads** – Manuals & Documentation, Data Sheets, Product Catalogs, etc.

Contact Us

- Information Request Form and Sales & Service Network

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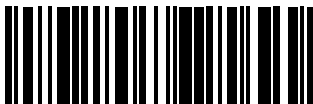


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