



**Heron™**

**D140 READERS**

**QUICK REFERENCE**

**GUIDA RAPIDA**

**GUIDE RAPIDE**

**KURZANLEITUNG**

**GUÍA RÁPIDA**



820001211 (Rev. A)

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## USING HERON™ SERIES READERS



### UK

Heron™ readers automatically scan barcodes **at a distance**. Simply aim and pull the trigger. Code scanning is performed along the light bar emitted from the reading window. This bar must cross the entire code.

Successful scanning is obtained by tilting the scanner with respect to the barcode to avoid direct reflections which impair the reading performance, see the figure above.

### I

Le pistole Heron™ leggono i codici a barre **a distanza**: è sufficiente mirare sul codice e premere il grilletto. La lettura avviene sulla banda luminosa che deve attraversare interamente il codice da leggere. Le condizioni ottimali per la lettura si ottengono inclinando lo scanner rispetto al codice, così da evitare riflessioni dirette, che potrebbero compromettere le prestazioni di lettura (vedere la figura qui sopra).

### F

Les pistolets Heron™ lisent les codes **à distance**. Il suffit de viser le code et d'appuyer sur la gâchette. Le code est lu par le faisceau sortant de la fenêtre de lecture de l'appareil. Ce faisceau doit traverser le code à barres à lire de part en part.

Pour des prestations optimales inclinez la douchette par rapport au code à lire, afin d'éviter des réflexions directes qui pourraient compromettre la performance de lecture (voir figure ci-dessus).

## D

Die Heron™ Lese pistolen lesen Strichcodes **berührungsfrei**. Es genügt auf den Code zu zielen und die Taste zu drücken. Der Code wird mittels eines Lichtbands gelesen, die das Gerät durch das Lesefenster verläßt und den gesamten Code durchqueren muss.

Ein optimales Leseergebnis wird erreicht, wenn der Benutzer den Scanner bzgl. dem Code etwas neigt, um eine direkte Reflexion zu vermeiden, wie im Bild oben gezeigt wird.

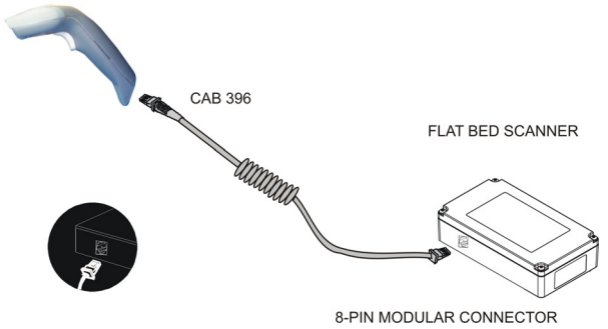
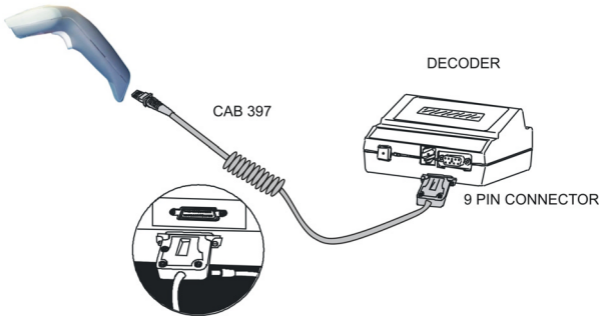
## E

Los lectores Heron™ capturan automáticamente códigos de barras **a distancia**: sólo hay que encuadrar el código y apretar el gatillo. La lectura se realiza sobre el rayo de luz emitida por la ventana de lectura que debe atravesar el código de parte a parte.

Las condiciones óptimas para la lectura se obtienen inclinando el escáner respecto al código de barras para evitar los reflejos directos de luz que podrían perjudicar el rendimiento de lectura (ver figura arriba).

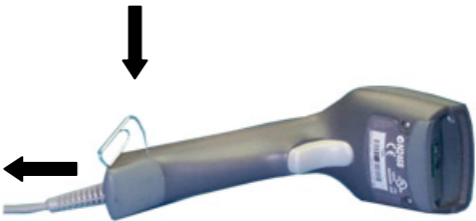
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# CONNECTIONS

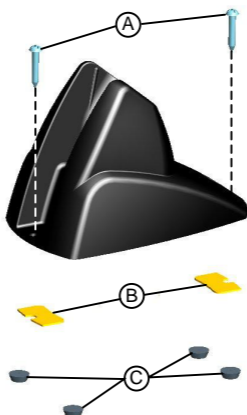


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# DISCONNECTING THE CABLE



## STAND INSTALLATION



### UK

The stand can be mounted by using self-tapping screws, double sided adhesive strips or rubber feet:

- A) mount the stand directly to the surface using the self-tapping screws;
- B) carefully clean the bottom surface of the stand and the table surface. Remove the protective plastic from one side of the adhesive strips and stick them on the stand bottom. Then, remove the plastic from the other side of the strips and affix the stand to the table;
- C) carefully clean the bottom surface of the stand, remove the protective film from the rubber feet and stick them in the corresponding housing on the bottom surface. It is also possible to fix an optional metal plate.

### I

Lo stand può essere montato utilizzando le viti autofilettanti, le strisce adesive oppure i piedini di gomma:

- A) montare lo stand direttamente sulla superficie utilizzando le viti autofilettanti;
- B) pulire accuratamente la superficie inferiore della base dello stand e la superficie d'appoggio. Togliere la plastica protettiva da un lato di ogni striscia e attaccare entrambe le strisce alla base dello stand. Rimuovere la plastica protettiva dall'altro lato delle strisce adesive e attaccare lo stand alla superficie d'appoggio;
- C) Pulire accuratamente la superficie inferiore della base dello stand, quindi togliere la pellicola protettiva dai piedini e attaccarli all'interno delle apposite sedi nella base di plastica. Inoltre, è possibile fissare un base metallica opzionale.

## F

Pour le montage du support il est possible également d'utiliser des vis filetées, des bandes adhésives ou des petits patins en caoutchouc:

- A) utiliser des vis filetées pour le montage sur la surface d'appui;
- B) nettoyer soigneusement la surface inférieure du support et la surface d'appui. Retirer le plastique protecteur de l'une des faces des bandes et la coller sur la surface inférieure du support. Retirer le plastique protecteur sur l'autre face adhésive et coller le support sur la surface d'appui ;
- C) nettoyer soigneusement la surface inférieure du support. Retirer la pellicule protectrice des patins et coller les patins dans les logements correspondants situés sur la surface inférieure du support. Il est possible aussi de fixer une plaque métallique en option.

## D

Der Halter kann mittels der selbstschneidenden Schrauben, der Klebstreifen oder mittels der Gummifüßchen befestigt werden:

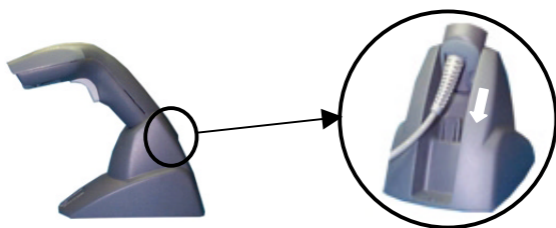
- A) für eine permanente Installation verwenden Sie die zwei selbstschneidenden Schrauben.
- B) die untere Seite des Halters und die Ablagefläche sorgfältig reinigen. Die Schutzschicht von einer Seite jedes Klebstreifens entfernen und beide Klebstreifen auf den Halters kleben. Die Schutzschicht von der anderen Seite der Klebstreifen entfernen und den Halter auf der Ablagefläche befestigen.
- C) die untere Seite des Halters und die Ablagefläche sorgfältig reinigen um die Füßchen auf die Sitzen des Halters zu kleben. Man kann auch eine optionale Metallunterlage befestigen.

## E

El soporte puede ser montado a través de tornillos auto-bloqueantes (A), tiras adhesivas de doble cara (B) o pies de goma (C):

- A) Montar el soporte directamente sobre la superficie utilizando los tornillos auto-bloqueantes;
- B) Limpiar con cuidado la superficie inferior del soporte y la superficie de la mesa. Quitar el plástico de protección de una de las caras de las tiras adhesivas y pegarla a la superficie inferior del soporte. Luego quitar el plástico de la otra cara de la tira adhesiva y posicionar el soporte en la posición deseada sobre la mesa;
- C) Limpiar con cuidado la superficie inferior del soporte, quitar el plástico de protección de los pies de goma e insertarlos en las posiciones correspondientes en la superficie inferior del soporte. Es posible también fijar una placa de metal opcional.

## INSERTION INTO STAND

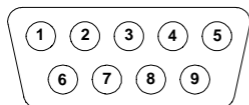


- UK** Pair the reader to the stand paying attention to insert the handle into the stand clip (see figure above).
- I** Posizionare la pistola nello stand assicurandosi che il manico sia inserito nel fermo dello stand stesso (vedi figura sopra).
- F** Placer le pistolet dans le support en faisant attention d'introduire la poignée dans le crochet du support (voir figure ci-dessus).
- D** Positionieren Sie die Pistole im Halter und stecken Sie den Griff in die Öffnung Haken des Halters (siehe Bild oben).
- E** Poner el lector en su soporte insertando la empuñadura en el clip del soporte (ver figura arriba).

## ELECTRICAL CONNECTIONS

The Heron™ D140 scanner can be used with CAB 397 (coiled cable and 9-pin male connector) for direct connection to the DATAPLUS and DLD series decoders.

### CAB 397

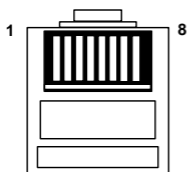


- |                   |                 |
|-------------------|-----------------|
| 1 - Not connected | 5 - TRIGGER     |
| 2 - SCAN          | 6 - BEEPER/LED  |
| 3 - Not connected | 7 - VIDEO       |
| 4 - GND           | 8 - ILLUMINATOR |
|                   | 9 - +VCC        |

### 9-pin male connector

The Heron™ D140 scanner can be used with CAB 396 (coiled cable and 8-pin modular connector) for direct connection to PSC Inc. flat bed scanners.

### CAB 396



- |                   |                   |
|-------------------|-------------------|
| 1 - TRIGGER       | 5 - BEEPER/LED    |
| 2 - ILLUMINATOR   | 6 - Not connected |
| 3 - Not connected | 7 - +VCC          |
| 4 - VIDEO         | 8 - GND           |

### 8-pin modular connector

A definition of the terms used to identify the pins is as follows:

#### SCAN

This scanner "open collector" output signal is used to synchronize the decoding logic with the scanner. Each transition of this signal from low-to-high or high-to-low corresponds to the start of a scan. The signal is a square wave with 36 Hz default frequency (see the following figure Video and Scan signals).

#### GND

Supply ground and signal reference.

#### TRIGGER

This output is connected to GND when the trigger is pressed and is left floating when the trigger is released.

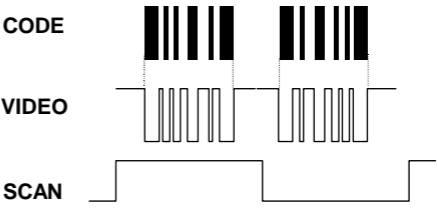


**BEEPER/LED** This scanner input drives the decoding LED, the Good Read Spot and the beeper in the scanner. The LED and Good Read Spot turn on when a positive current is applied to the pin. The beeper sound is obtained pulsating this current at a frequency of about 2 kHz. The maximum voltage that can be applied to this input is 5 Vdc.

**VIDEO** This “open collector” scanner output is electrically identical to the barcode. It supplies a series of pulses the length of which are proportional to the width of the elements within the barcode read. Video polarity is programmable. By default a low output level corresponds to a bar. The frequency of the pulses depends on the density of the code, the distance from code and the programmed output scan frequency (see the following figure Video and Scan signals).

**ILLUMINATOR** A positive voltage (5 Vdc) is applied to this input by the decoder when the decoding logic senses the trigger is pressed; this causes the activation of the illuminator and CCD.

**+VCC** This input must be connected to the positive pin of the supply voltage (5 Vdc  $\pm$  5%). When the ILLUMINATOR pin is positive, all the current necessary to power the scanner flows through +VCC.



**Video and scan signals**

# BEEPER FUNCTIONING

## Heron™ Reader Start-Up

Beeper <sup>1</sup>	Meaning
L L L L	Parameters loaded correctly
H H H H long tones	Parameter loading error, reading or writing in the non-volatile memory
H L H L	Hardware error in EEPROM
OFF	No beeper performed when illuminator line is kept high at power on.

## Heron™ Reader Configuration

Beeper <sup>1</sup>	Meaning
H H H H	Correct entry in Configuration mode
L	Good read of a command
L L L	Command read error
L H H H H	Exit from Configuration mode

<sup>1</sup> Only the Beeper Intensity command can modify these signals.

# RESTORE DEFAULT

- UK** Follow the procedure to restore default.
- I** Seguire la procedura per ripristinare i default.
- F** Suivez dans l'ordre les étapes pour restaurer la configuration par défaut.
- D** Folgen Sie den Anweisungen um die Werkseinstellung wieder herzustellen.
- E** Seguir el procedimiento indicado para restaurar los parámetros de fábrica.

1.

**Set to Interpret Mode**



2.

**Restore Default**



3.

**Set to Transparent Mode**



## OPTIONAL CONFIGURATION PARAMETERS

**UK** To configure the reader with the optional parameters, follow the procedure (5 steps). In step 3 select only the parameters relative to your application.

**I** Seguire la procedura per configurare il lettore con i parametri opzionali (5 passi). All'interno del passo 3 selezionare solamente i parametri relativi alla propria applicazione.

**F** Suivez dans l'ordre les étapes décrites pour configurer le pistolet avec les paramètres optionnels (5 points). Au point 3 vous ne devez sélectionner que les paramètres relatifs à votre application.

**D** Folgen Sie den Anweisungen um die optionalen Parameter der Pistole zu konfigurieren (5 Punkte). Im Punkt 3 wählen Sie nur die Parameter, die Ihrer gewünschte Anwendung entsprechen.

**E** Para configurar el lector con los parámetros opcionales, seguir el procedimiento indicado (5 pasos). En el paso 3 seleccionar sólo los parámetros relativos a la aplicación que se desee realizar.

◆ = default value

### 1. Set to Interpret Mode



### 2. Enter Configuration



### 3. Video Polarity

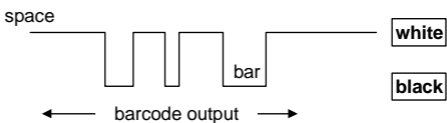
Inverted



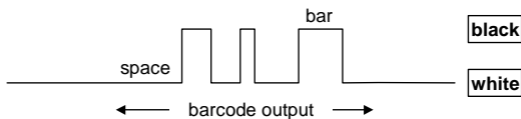
Normal ◆



Video Polarity **Normal**:



Video Polarity **Inverted**:



### Scan Rate

18 scan/sec



36 scan/sec ◆



72 scan/sec



144 scan/sec



### Beeper Intensity

Beeper Off



Low Intensity



Medium Intensity



High Intensity ◆



## Beeper Tone

Tone 1



Tone 2 ◆



Tone 3



Tone 4



## Beeper Length

Long



Short ◆



## Beeper Type

Monotone ◆



Bitonal



4.

## Exit Configuration



5.

## Set to Transparent Mode



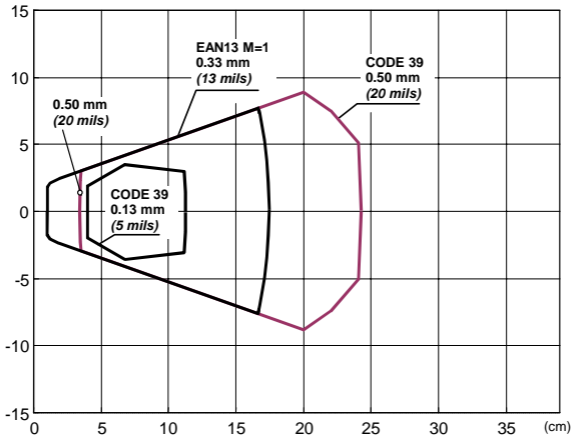
# TECHNICAL FEATURES

## Heron™ D140

<b>Electrical Features</b>	
Power supply	5 Vdc ± 5%
Consumption Operating Stand by	180 mA @ 5 Vdc 50 mA @ 5 Vdc
CCD Scan Rate	256 scans/sec
Max output scan rate	144 scans/sec
Reading Indicators	LED, Good Read Spot, Beeper
<b>Optical Features</b>	
Sensor	CCD solid state (2048 pixels)
Illuminator Wavelength Max. LED Output Power	LED array 630 ~ 670 nm 0.31 mW
LED Safety Class	Class 1 EN 60825-1
Reading Field	see reading diagram
Max. Resolution	0.12 mm (5 mils)
PCS	min. 15% (Datalogic Test Chart)
<b>Environmental Features</b>	
Working Temperature	0 °C to + 40 °C
Storage Temperature	-20 °C to + 60 °C
Humidity	90% non condensing
Drop resistance (on concrete)	IEC 68-2-32 Test ED 1.8 m
Protection Class	IP30
<b>Mechanical Features</b>	
Weight (without cable)	about 165 g (5.8 oz.)
Cable length (CAB 397 – fully extended) (CAB 396 – fully extended)	2.60 m (8 ft. 5 in.) 3.00 m (9 ft. 9 in.)

## READING DIAGRAM

D140 - Reading Zones (10° skew angle)



## FCC COMPLIANCE

**This device complies with PART 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference which may cause undesired operation.**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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## LED CLASS



- UK** Class 1 LED product
- I** Apparecchio LED classe 1
- F** Appareil à LED de classe 1
- D** LED Klasse 1
- E** Clase de LED 1

This product conforms to EN60825-1:2001.

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## PATENTS

This product is licensed by one or more of the following U.S. patents:

4,894,523; 5,021,642; and 6,158,661

This product is covered by one or more of the following patents:

U.S. patents 5,992,740; 6,305,606 B1; 6,631,846 B2; 6,517,003 B2; and 6,712,271 B2

European patents 851,378 B1; 895,175 B1; 962,880 B1; 997,760 B1; and 1,128,315 B1

Additional patents pending.



# WARRANTY

- UK** Datalogic warranties this product against defects in workmanship and materials, for a period of 5 years from the date of shipment, provided that the product is operated under normal and proper conditions. Datalogic has the faculty to repair or replace the product, these provisions do not prolong the original warranty term. The warranty does not apply to any product that has been subject to misuse, accidental damage, unauthorized repair or tampering.
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- F** Datalogic garantit ce produit de tout défaut de fabrication ou des matériaux pendant 5 ans à compter de la date de livraison, à condition que le produit soit utilisé correctement. Datalogic a la faculté de réparer ou de remplacer ce produit. Ces mesures ne prolongeront pas l'échéance de la garantie. La garantie ne s'applique pas aux produits qui ont été utilisés de façon incorrecte, accidentellement endommagés, soumis à des réparations non autorisées ou bien altérés.
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**I** Datalogic fornisce servizi e supporto tecnico tramite il suo sito web. Connettersi al sito **[www.datalogic.com/services](http://www.datalogic.com/services)** e cliccare sui link indicati per avere ulteriori informazioni, come elencato di seguito:

**F** Datalogic fournit différents services et une aide technique en ligne. Connectez-vous sur **[www.datalogic.com/services](http://www.datalogic.com/services)** et cliquez sur le lien indiqué pour obtenir des informations complémentaires sur:

**D** Datalogic bietet unterschiedliche Service-Leistungen, wie auch technische Unterstützung über Internetseiten. Gehen Sie auf die Seite **[www.datalogic.com/services](http://www.datalogic.com/services)** und klicken Sie auf die Links die Sie über folgende Punkte informieren::

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- **[Authorised Repair Centres](#)**
- **[Products](#) >[Hand-Held Readers](#) >[Software Tools](#) - DL Sm@rtSet™**
- 

DL Sm@rtSet™ is a Windows-based utility program which allows device configuration using a PC. It provides RS232 interface configuration as well as configuration barcode printing.



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**Heron D1XX**

e tutti i suoi modelli  
and all its models  
et tous ses modèles  
und seine modelle  
y todos sus modelos

sono conformi alle Direttive del Consiglio Europeo sottoelencate:  
are in conformity with the requirements of the European Council Directives listed below:  
sont conformes aux spécifications des Directives de l'Union Européenne ci-dessous:  
den nachstehenden angeführten Direktiven des Europäischen Rats:  
cumple con los requisitos de las Directivas del Consejo Europeo, según la lista siguiente:

<b>89/336/EEC EMC Directive</b>	e	<b>92/31/EEC, 93/68/EEC</b>	emendamenti successivi
	and		further amendments
	et		ses successifs amendements
	und		späteren Abänderungen
	y		sucesivas enmiendas

Basate sulle legislazioni degli Stati membri in relazione alla compatibilità elettromagnetica ed alla sicurezza dei prodotti.

On the approximation of the laws of Member States relating to electromagnetic compatibility and product safety.

Basée sur la législation des Etates membres relative à la compatibilité électromagnétique et à la sécurité des produits.

Über die Annäherung der Gesetze der Mitgliedsstaaten in bezug auf elektromagnetische Verträglichkeit und Produktsicherheit entsprechen.

Basado en la aproximación de las leyes de los Países Miembros respecto a la compatibilidad electromagnética y las Medidas de seguridad relativas al producto.

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Questa dichiarazione è basata sulla conformità dei prodotti alle norme seguenti:  
This declaration is based upon compliance of the products to the following standards:  
Cette déclaration repose sur la conformité des produits aux normes suivantes:  
Diese Erklärung basiert darauf, daß das Produkt den folgenden Normen entspricht:  
Esta declaración se basa en el cumplimiento de los productos con la siguientes normas:

**EN 55022, August 1994:**

LIMITS AND METHODS OF MEASUREMENTS OF  
RADIO DISTURBANCE OF INFORMATION  
TECHNOLOGY EQUIPMENT (ITE)

**EN 50024, September 1998:**

INFORMATION TECHNOLOGY EQUIPMENT.  
IMMUNITY CHARACTERISTICS. LIMITS AND  
METHODS OF MEASUREMENTS

Lippo di Calderara, 06/02/2004

*Ruggero Cacioppo*  
Ruggero Cacioppo  
Quality Assurance Laboratory Manager