gryphon™ ESD

Hand-Held Reader
for Electrostatic Discharge Control

PDF417

General Description

The new Gryphon™ D200 ESD barcode reader has been developed by Datalogic in order to satisfy the strict requirements of EPA (ESD Protected Area).

ESD is a phenomena that occurs when an object has an imbalance in its electric charge: a fast charge transfer between objects with different electrostatic potential caused by contact or by the proximity of the two objects. Wherever electronic components are handled, installed or assembled, ESD poses a threat to product quality. Moreover, an increasing number of electronic components are susceptible to be damaged or destroyed by increasingly lower voltage levels.

ESD events, can also compromise the measurements taken by very sensitive instruments, such as in hospital and medical analysis laboratories.

The most advanced polymer and elastomeric technologies have been used to design and develop the new ESD-safe Gryphon™ reader. Thus the body of the product is composed of a slightly conductive plastic, rather than an insulating one, preventing the accumulation of tribocharges. Moreover, specific cables have been conceived for the new Gryphon™ D200 ESD guaranteeing ESD safety between any two points on it.

All these characteristics are coupled with the same outstanding performances of the standard model, in terms of reading quickness: 270 scans/sec and decoding capability. It allows reading of the most popular stacked codes such as PDF417, CODABLOCK and CODE16K, as well as traditional bar codes. In addition, the Gryphon™ D200 ESD exploits the “green spot”, (Datalogic patent application) which provides "good reading" feedback directly on the code, where the user usually tends to be looking.

Features

- Certified between static dissipative (10^6 Ω and 10^{12} Ω) and conductive (10^3 Ω and 10^6 Ω) range
- Casing and dedicated cable reduce costly component failure
- Complete voltage discharge
- Outstanding reading/decoding speed
- Linear and PDF 417 bar code decoding

Applications

- Electronic Component Manufacturers: PC Board Assembly and Manufacturing, Disk Drive Manufacturing
- Semi-Conductor Fabrication
- Healthcare: hospitals and medical analysis laboratories

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Specifications

ESD FEATURES

CERTIFICATION RANK	Safely between static dissipative (10^6 Ω and 10^{12} Ω) and conductive (10^3 Ω and 10^6 Ω)
RESIDUAL VOLTAGE	< 5V

ELECTRICAL CHARACTERISTICS

POWER SUPPLY	5 VDC ±5%
CONSUMPTION	250 mA operating, 330 mA max.

MECHANICAL CHARACTERISTICS

DIMENSIONS	179 x 81 x 98 mm (7.04 x 3.18 x 3.85 in)
WEIGHT	200 g.
CASE MATERIAL	Antistatic Polycarbonate alloy and co-moulded rubber

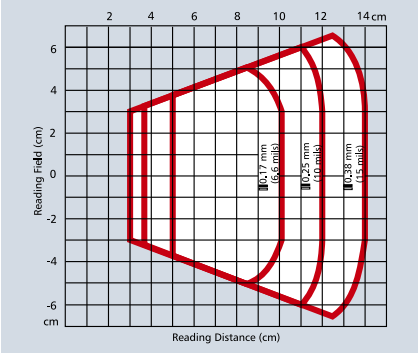
PERFORMANCE

MAX. SCAN RATE	270 scans/sec
MAX. RESOLUTION	0.076 mm (3 mils)
PRINT CONTRAST RATIO	15% (min)
READING ANGLE	Skew: ±80°; Pitch: 65°; Tilt: ±35° (EAN13, M=0.8, PCS=0.9)
SENSOR	CCD solid state (3648 pixels)
READING INDICATORS	"Green spot" on the code, adjustable tone "beeper"
BAR CODES	2/5 family, Code 39 (plus Code 32, Cip 39), EAN/UPC, ISBN/ISSN, EAN 128, Code 128, ISBT 128, Code 93, Code 11, CODABAR, TELEPEN, PLESSEY, Code MSI, Code Delta IBM CODABLOCK, Code 16K, PDF 417, Code 49, RSS variants
PROGRAMMING METHOD	
Manual	Reading special bar codes
Automatic (with RS232)	S/W commands through the serial port
Sm@rtSet	Windows configuration program
INTERFACES	RS232 and Wedge
ENHANCED FEATURES	Puzzle Solver™, data editing and data concatenation

ENVIRONMENT

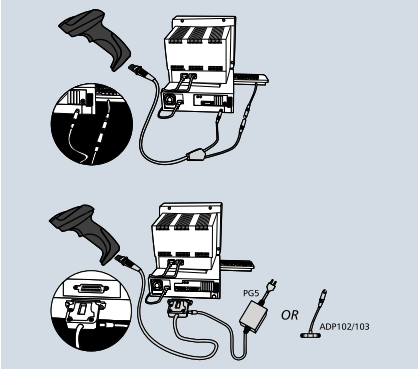
AMBIENT LIGHT CONDITIONS	Up to 100.000 lux
OPERATING TEMP.	0 to 55 °C (32 to 131 °F)
STORAGE TEMP.	-20 to 70 °C (-4 to 158 °F)
HUMIDITY	90% non condensing
DROP RESISTANCE	IEC 68-2-32 Test ED, from 1.2 m onto a concrete surface
ENVIRONMENTAL PROTECTION	IP30
ESD PROTECTION	Functional after 16.5Kv air discharge

Reading Diagram



PDF reading zone

Connectivity



Wedge and RS232 connection

ESD Glossary

1. ESD Electrostatic Discharge. Quick charge transfer between objects with different electrostatic potentials caused either by direct contact or an electrostatic field.

2. ESDS Electrostatic discharge sensitive devices. Devices that can be damaged by Electrostatic discharge.

3. EPA ESD protected area. Area where the ESDS can be managed safely. ESD phenomena are substantially avoided.

4. Surface Resistance The ratio between the D.C. voltage applied to two electrodes on a test surface and the current between them.

5. Surface Resistivity The equivalent of the Surface Resistance,in this case measured on a rectangular surface, with the electrodes positioned on two opposite sides.

6. Conductive Electrostatic Material Material which has a surface resistivity between 10^3 Ω and 10^6 Ω.

7. Dissipative Electrostatic Material Material which has a surface resistivity between 10^6 Ω and 10^{12} Ω.

8. Insulant Electrostatic Material Material which has a surface resistivity over 10^{12} Ω .

9. Hard Grounding A galvanic Earth connection through a highly conductive path which could lead to excessively high or rapid charging/discharging phenomena. To resolve the situation, one must increase the resistance of the overall grounding path.

DATALOGIC™

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