

## Product Information

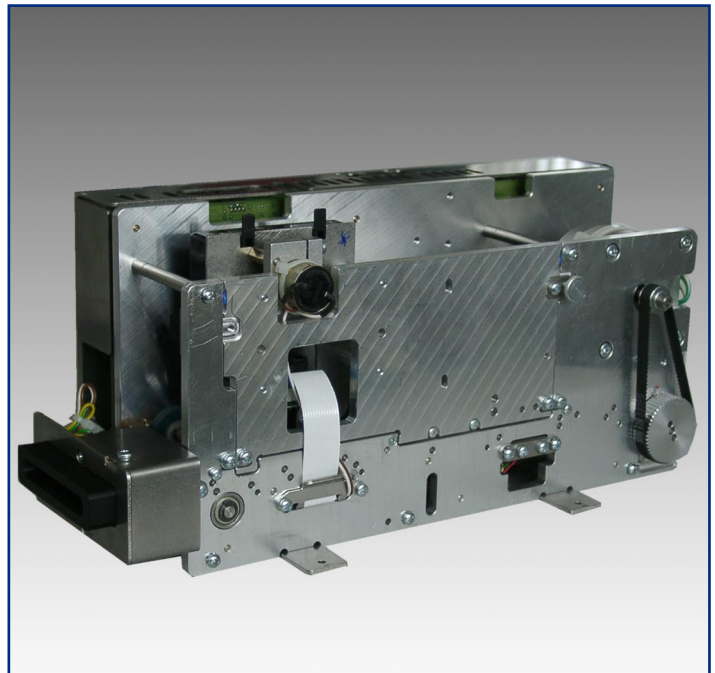
- Processing of magnetic data carriers with ISO track and/or central track and/or smart cards
- LOCO/HICO (ISO 1/2/3 or central track)
- RS-232 interface
- Possibility of adapting different muzzles of the KGB®-series
- Possibility of adapting different feeding units of the KGB®-series
- Flash Memory
- Barcode Reader (optional)
- CSC-antenna (optional)
- Dot matrix printer (optional)

## Información sobre el producto

- Transformación de datos magnéticos con banda ISO y/o banda central y/o tarjetas inteligentes
- LOCO/HICO (ISO 1/2/3 o pista central)
- RS-232 interfaz
- Posibilidad de conexión con diferentes boquillas de la serie KGB®
- Posibilidad de conexión con diferentes módulos de alimentación de papel de la serie KGB®
- Flash Memory
- Lector código de barras (opcional)
- Antena CSC (opcional)
- Impresora Matrix (opcional)

## Information sur le produit

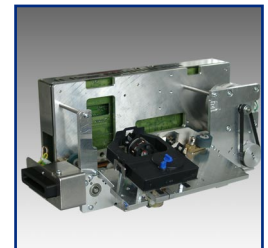
- Traitement de titres à pistes magnétiques, ISO et/ou centrée et/ou cartes à puce
- LOCO/HICO (ISO 1/2/3 ou track centrale)
- Interface RS-232
- Possibilité d'adaptation de différentes bouches d'entrée de la série KGB®
- Possibilité d'adaptation de différents modules d'approvisionnement de la série KGB®
- Flash Memory
- Module code à barres (option)
- Antenne CSC (option)
- Module d'impression impact (option)



## MAGNETIC READER/WRITER

## LECTOGRABADORA MAGNÉTICA

## LECTEUR/CODEUR MAGNETIQUE



CCS Challenge Card Systems GmbH  
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Germany  
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**CCS**  
built-in reliability

## Dimensions

W 120 mm H 143 mm D 277 mm without muzzle  
W 120 mm H 143 mm D 321 mm with muzzle

## Power Supply

24 V DC / 150 W max. (5 V DC internal)

## Tickets

Thickness: 0.16 - 0.86 mm  
Format: 54x85.6 mm, 54x120 mm  
Material: paper, compound, PVC

## Ticket Transport Speed

Normal transport: 350 - 500 mm/s  
Printing depending  
on paper quality: 350 mm/s

## Print Head

Type: matrix (9 needles)  
Print height: 3.1 mm  
Print length: 40 char. per line  
longitudinal and one line  
longitudinal printing

## Character Set

PICA, other character sets on request  
Each character set includes the full IBM set  
of 20h - FFh, Semi-graphic characters are allowed

## Interface

V.24/RS-232: 9 600 to 115 200 Baud (RXD, TXD, GND)  
Communication protocol on request

## Environment

Range of temperature: 0 - 50 °C  
Air humidity (RH): 20 - 80 % non condensing  
Vibration: 10 - 55 Hz  
2 mm amplitude  
along axis x, y and z  
for max. 30 minutes

## Microprocessor System

1 x ATMEL ATmega 1280 (Flash Memory)  
4 x Single chip processor with firmware

## Memory

128 KiB RAM, 32 KiB EEPROM

## Coercivity

LOCO (300 Oe) or HICO (2750 or 3500 Oe)

## Magnetic Characteristics

Track ISO 1, 2, 3 and/or central, max. 3 tracks  
F2F, others on request  
ABA, IATA, THRIFT, others on request

## Bit Densities

75 - 210 bpi, others on request

## Optional Modules

CCS 4002/2-HBL KGB®: cutter/feeder  
CCS 4007-X02 KGB®: burster  
(2 feeder/1 parking unit)  
CCS 4405-X01/02 KGB®: single/double parking unit  
CCS 4502 KGB®: cutting device  
CCS 4814 KGB®: motorized muzzle  
CCS 4818 KGB®: Mifare®-System CSC

## Frontal

Detection by photocell

## Maintenance and Service

Every 50 000 tickets:  
Check ink ribbon  
Every 3 months or every 300 000 tickets:  
Check print head, light barriers and  
magnetic head(s)  
Every 6 months or every 500 000 tickets:  
Check belts and DC-motors  
Every 12 months or every 6 000 000 tickets:  
Check stepping motor and rollers

## Reliability

MTBF\*: > 20 000 h  
MCBF\*: > 200 000 tickets  
MTTR: < 0.5 h in workshop

*\* without wear parts*

