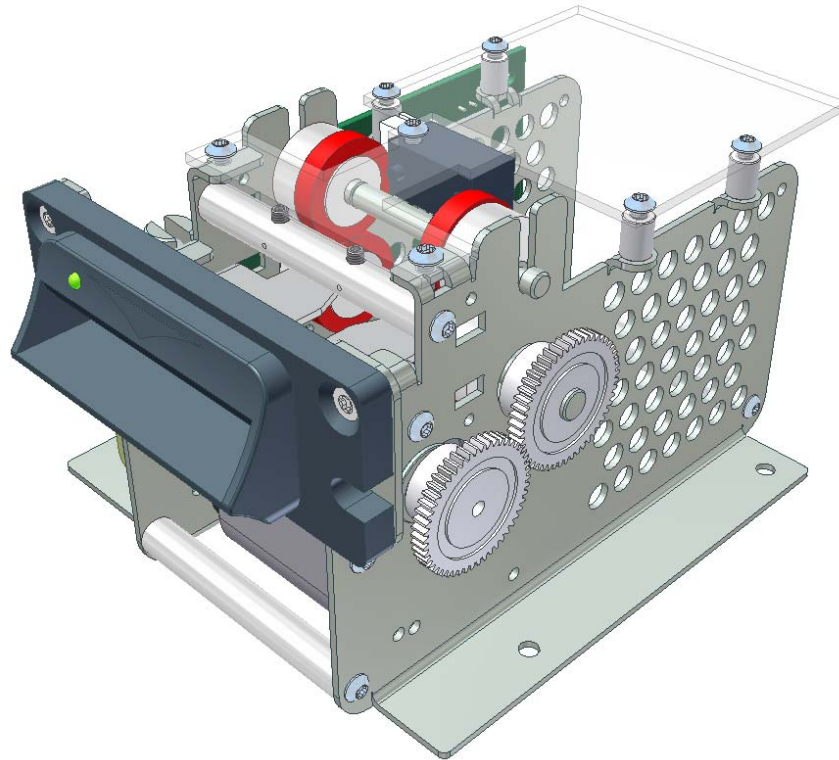


LSC5460 MOTORIZED RFID CARD READER

Specifications

RS232c Protocol, V0.4

03 2008



Summary

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1. Overview

The LSC5460 is a motorized RFID cards reader of the newest generation, with the RS232c interface.

The LSC5460 only operates under PC control

The LSC5460 does not contain its own RFID coupler. A polycarbonate support allows the integrator to install his own.

2. General specifications

Accepted cards:	Laminated Plastic PVC (non-transparent) with a thickness between 1 and 0.4mm
Card Transport:	Motorized at 150 mm/s
Storage Capacity	210 0.76mm cards
Minimum card detection:	approx. 25 cards
Communication:	EIA RS232c 9600 N 8 1
Range:	15 meters
Power Supply:	24v DC +/- 10%
Consumption:	250mA 1.2A peak
Operating Conditions:	indoor use only Temperature range: 0 – 40°C Humidity range: 30 – 80%
Dimensions:	110(L) 280(H) 250(P) (mm)
Weight:	approx 1.5kg

3. Functions

Front:

Slot for card entry/exit (bezel), with a shutter and green led controlled by the computer software

Left side:

Electronic board with:

Sub-D 9 female RS232c connector

24V terminal block power connector

4. Physical specifications of transmission and pin out connectors

Transmission mode: asynchronous, EIA RS232c
Format: 96,N,8,1

Characters service:
 Stx: '!' 21hex
 Etx: 'cr' 0dhex

Connection Com.

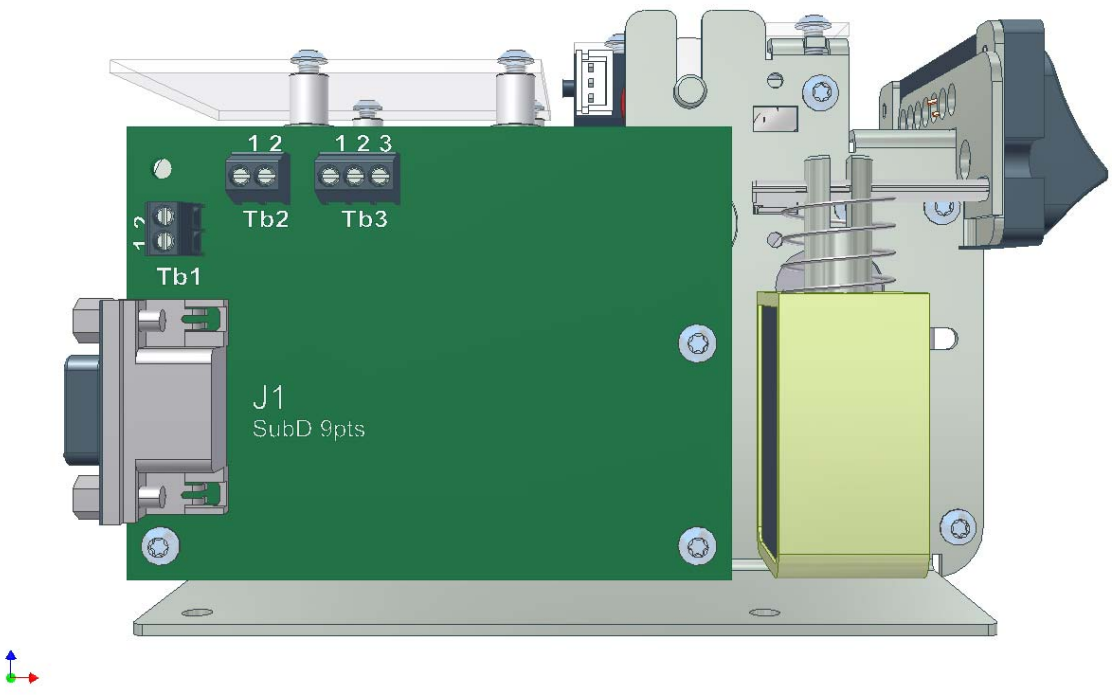
LED pins Sub-D fem.

PC pins Sub-D m.

Pin 2: receive data	←	3
Pin 3: transmit data	→	2
Pin 5: Signal Gnd		5
		4---
		6---
		7---
		8---

Power connector:

Terminal block TB 1
 - 1 = + 24v
 - 2 = Gnd



5. Command definitions and status word

Command	definition
ASCII hex	
! A cr 21h 41h 0Dh	asks for status word
! C cr “ 43h “	presents a card on the bezel from antenna
! D cr “ 44h “	internal capture of card
! E cr “ 45h “	accepts a card presented from exterior and carry it under antenna.
! H cr “ 48h “	green led on
! I cr “ 49h “	green led off
! N cr “ 4dh “	clean rollers procedure
! V cr “ 56h “	asks for firmware version
! S cr “ 53h “	asks for status word
X 58h	clear any accept a card pending command

After receiving a command, the LSC5460 sends ack cr

After executing a command the LSC5460 sends the status word

6. Status and Firmware Version

(s) status word (1 byte)

Bit 0: = 1, indicates that a card is present under the RFID antenna

Bit 1: = 1, indicates that a card is present on the bezel

Bit 2: = always 0

Bit 3: = always 0

Bit 4: = 1, indicates a mechanical problem, or jam.

The firmware version allows the software application to know the n°. of the firmware version of the reader.

7. Transmission protocol

Principe.

The Host sends commands, then the LSC5460 sends ack, executes the operation requested and automatically sends the status word.

The Host cannot send a new command before receiving the status word, which is the acknowledgment of the previous command.

If the next command is sent before, it's lost.

Card on bezel

LSC5460 transfers card to bezel.

Host		LSC5460
! C cr	→	
	←	ack cr
Moves the card from the antenna to the exit bezel. The shutter is automatically lifted. It closes as soon as the card is taken or captured.		
	←	! [s] cr

Capture a card

Internal card capture

Host		LSC5460
! D cr	→	
	←	ack cr
LSC5460 captures ejected card underneath.		
	←	! [s] cr

Acceptor

Acceptance of card from exterior and carry it under antenna:

Host		LSC5460
! E cr	→	
	←	ack cr
Waits for card and places it under antenna. Automatic shutter function. If the card is not presented within 15 seconds or if the host sends the cancellation code, the operation is cancelled. Cancellation code: X (58 hex) When card is under the antenna or if the card isnt present after 15s, DE5240 return:		
	←	! [s] cr

Clean rollers

It is recommended to clean the rollers every 100 000 passes (1 pass is a round trip)
Use solvent preimpregnated card, like Cardclene* card.

Host LSC5460

! N cr →
← **ack cr**

After receive this command, the user must introduce a Cardclene*, and then the LED will make 16 passes and return the card. After cleaning, wait 1 minute to continue operation.

The LSC5460 return ← **! [s] cr**

Status word

Ask for status word

Host LSC5460

! A cr →
LSC5460 return ← **! [s] cr**

This command can be send at any time, except when LSC5460 process an opération.
Then, the command is lost.

Led turn on/off

LSC5460 can turn on and turn off a green led present on the bezel.
This led is used like an information for the user indicate when he must take out the card, or introduce it.

Host LSC5460

Green led on: **! H cr** →
Green led off: **! I cr** →
← **ack cr**

No return status word for these commands.

Firmware version

LSC5460 can send his firmware version

Host LSC5460

! V cr →
LSC5460 return ← **! text ASCII cr**

9 Dimensions

