

SPECIFICATIONS

Manual Swipe Card Reader

Single track reader

MCR-560N-1R-0101

MCR-570N-1R-0101

MCR-580N-1R-0101

Track 1

Track 2

Track 3

NEURON Corporation

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1 OUTLINE

This specification describes the technical characteristics of NEURON single track swipe magnetic card reader (MCR-5xxN-1R-0101). This card reader is designed to read the plastic card which meets the standards defined by ISO 7810 ID-1, 7811 / 1-6.

MCR-560N-1R-0101 : Track 1
MCR-570N-1R-0101 : Track 2
MCR-580N-1R-0101 : Track 3

2 APPLICABLE CARD SPECIFICATION

- | | |
|------------------------------|--|
| (1) Physical characteristics | :Accordance with ISO 7810 |
| (2) Card dimensions | :Accordance with ISO 7810 ID-1-type card |
| (3) Embossing | :Accordance with ISO 7811-1,-3 |
| (4) Recording format | :Accordance with ISO 7811-2,-4,-6 |
| (5) Recordable capacity | :Track 1: 79 characters max. (6 bit + 1 parity)
:Track 2: 40 characters max. (4 bit + 1 parity)
:Track 3: 107 characters max. (4 bit + 1 parity) |
| (6) Recording method | :Two Frequency Coherent Phase Recording (F2F) |
| (7) Allowance of card warp | :2mm max. |
| (8) Coercive force | :24k to 320k A/m (300 to 4000 Oe) +/-10% |

3 GENERAL SPECIFICATION

- (1) Card carrying speed :10-150cm/s
- (2) Bit interval :3.3.9ms-226us (10-150cm/s)
- (3) Dielectric strength :DC 500V for 1 min (Between power line and frame)
- (4) Insulation resistance :10M ohm min at DC 500V

4 MAGNETIC HEAD SPECIFICATION

- (1) Construction :1 Track read head
- (2) Number of tracks :1 Track
- (3) Reading width :1.5mm

5 POWER REQUIREMENTS

- (1) Rating voltage :DC +5V +/-5%
- (2) Ripple voltage :50mVp-p max.
- (3) Rating current :Approx. 1.6mA (Max. 2mA)

6 OPERATING CONDITION

- (1) Mounting direction :Horizontal or Vertical
- (2) Operating temperature : 0 to 50°C (non-condensing)
/ humidity 20 to 80% RH (non-condensing)
- (3) Storage temperature :-20 to 70°C (non-condensing)
/ humidity 20 to 80% RH (non-condensing)

7 DURABILITY

- (1) Temperature / humidity :No defect in all items of the characteristics from the 12h on normal condition after exposed 96 h on 40+/-3°C / 90 to 95% RH (non condensing).
- (2) Vibration :No defect in all items of the characteristics under normal condition after exposed 15min each on X,Y and Z directions of 2mm amplitude, from 10 to 50Hz/min vibration.
- (3) Shock :No defect in all items of the characteristics under normal condition after shocked one time on X,Y and Z directions of 294m/s², 11ms peak acceleration shock.
- (4) Life :Magnetic head :500,000 passes min.
One pass means one round-trip.
Normal condition (circumstance) should be defined as 20+/-5°C, 35 to 60% RH. Life value are based on our testing condition.

8 PHYSICAL CHARACTERISTICS

- (1) Dimension :Shown in APPEARANCE
- (2) Mass :Approx. 45g
- (3) Length of card protrusion This reader is shorter than old series to increase functions. Therefore card protrudes from rear side of reader in reading operation. The length of protrusion is 65mm approx.

9 I/O INTERFACE

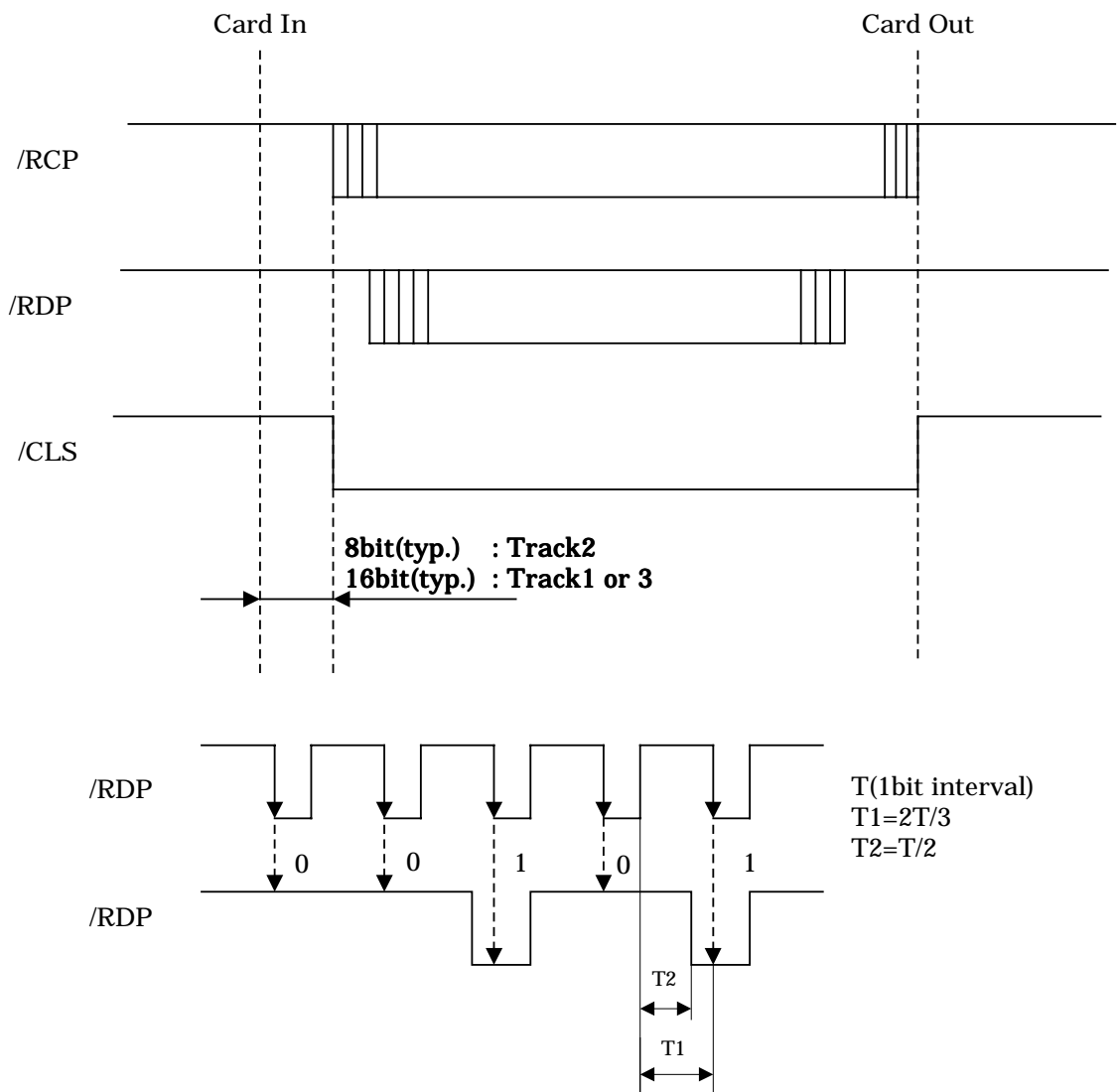
- (1) Signal level

Level	Symbol	Description
Hi level	IOH = -4 mA	3.5 V more
Lo level	IOL = 8 mA	0.4 V less

- (2) Interface connector : IL-5S-S3L2-(N) (Produced by JST)

Pin No.	Signal Symbol	I/O	Color	Description
1	GND	I	Black	Ground
2	/RDP	O	Blue	Read Data Pulse
3	/RCP	O	Green	Read Clock Pulse
4	/CLS	O	Yellow	Card Loading Signal
5	+5V	I	Red	Supply Power

10 TIMING CHART



11 CLEANING

11-1 Method of cleaning

Usual or Having errors frequently

Head : Pass a cleaning card fully involved cleaning solvent several times.

11-2 Recommended cleaning card

Parts No. : MCD-15-33-1

11-3 Cleaning solvent

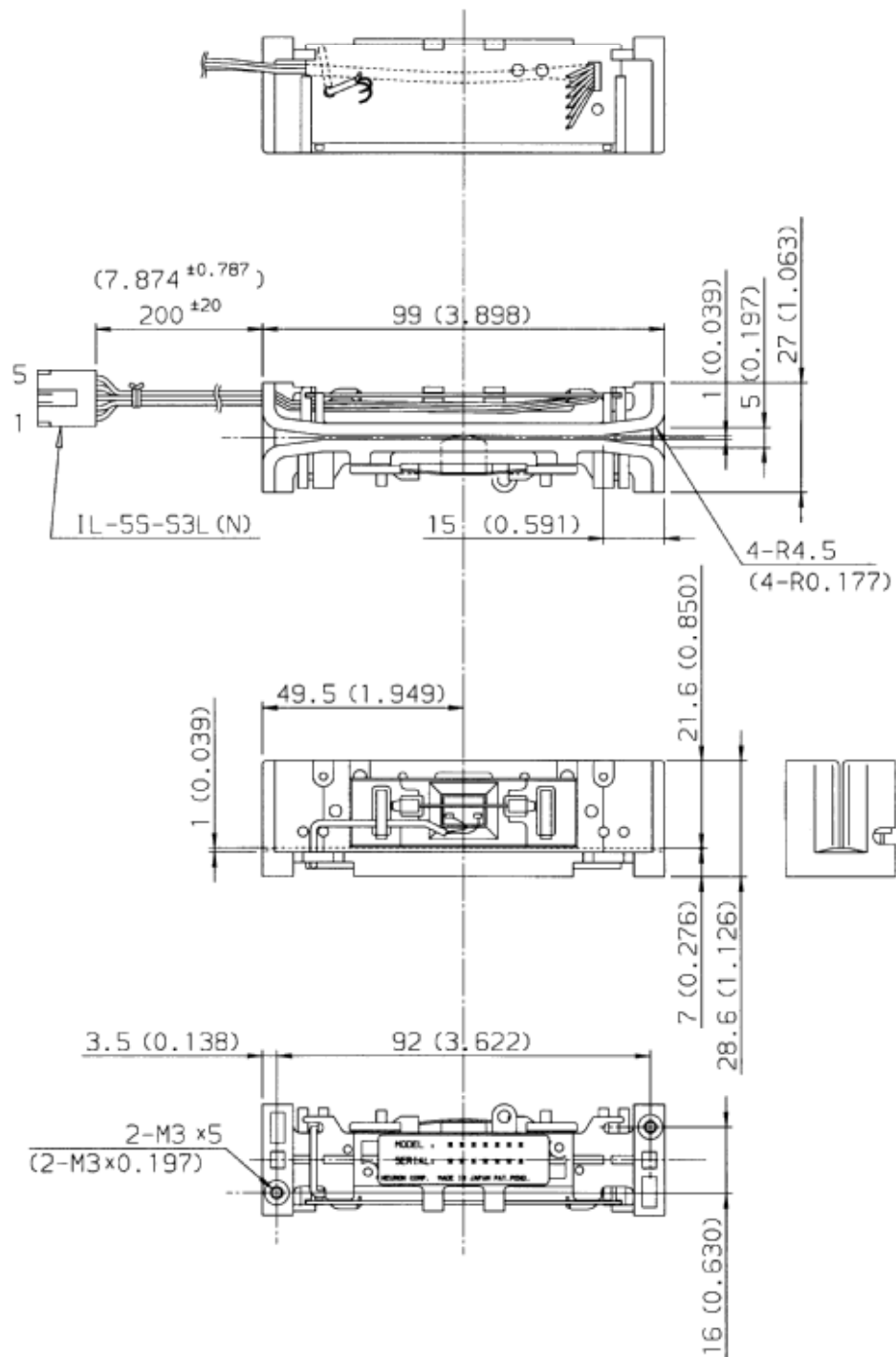
Iso Propyl Alcohol (recommended by NEURON)

11-4 NOTE

Allow 1 min after cleaning for operating.

12 APPEARANCE

DIMENSION IN MILLIMETERS (IN INCHES)
 GENERAL TOLERANCE ± 0.5 (± 0.02)
 MASS : 45g



FB-0001

<u>Rev.No.</u>	<u>Date</u>	<u>Descriptions</u>	<u>NAME</u>
FB-0001-01	94-Sep.-27	1 ^s release	
FB-0001-02	00-Oct.-05	Change of format Change of Head Life 300,000 -> 500,000 passes	M.NOKARIYA