

SPECIFICATION

Model IDMSR1321-1
ISO-2 Track Read Only

100mm Cover Series
Manual Swipe Type
Magnetic Card Reader
With TTL Interface & Cover

February, 2009

1. OVERVIEW

This specification describes the Electrical, Operational, Environmental and Mechanical requirements of the model IDMSR-1300 Series respectively. IDMSR hand swipe module for reading magnetically encoded data from cards with either high or low energy stripes that conform to all ANSI/ISO track combination.

2. ABBREVIATIONS AND DEFINITIONS

| | |
|-------|---|
| ANSI | American National Standard Institute |
| ISO | International Standard Organization |
| BPI | Bit per Inch |
| IATA | International Air Transportation Association |
| ABA | American Banks Association |
| MINTS | Mutual Institutions National Transfer Systems |
| CPD | Card Present Detect |
| RCP | Read Clock Pulse |
| RDD | Read Data |

3. CARD SPECIFICATION

The cards which is being used in IDMSR-1300 Series should be complied with ISO 7810, 7811 and 7812.

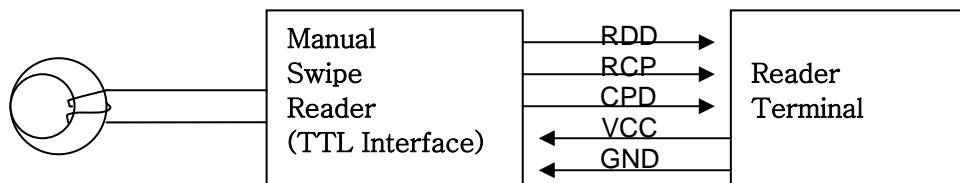
| Track Position | ISO-1 | ISO-2 | ISO-3 |
|--------------------|---------------------|---------------------|----------------------|
| Recording Density | 210BPI | 75BPI | 210BPI |
| Recording Capacity | 79characters(7bits) | 40characters(5bits) | 107characters(5bits) |
| Card Thickness | 0.76mm +/-0.08mm | | |

4. ELECTRICAL REQUIREMENTS

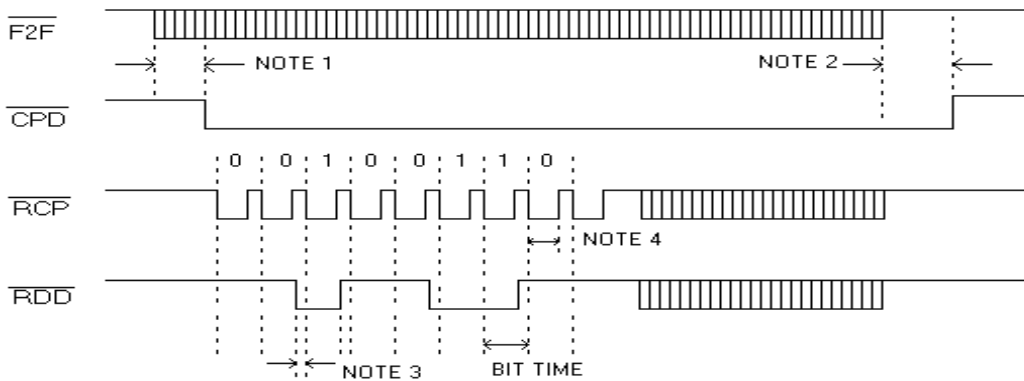
- a. Voltage and Ripple +5V(+3.0V~+5.5V), Less than 50mVp-p
- b. Current : Stand-by 2.0mA/max. (400uA/3.0V)
- Operation 2.5mA/max. (1.0mA/3.0V)
- c. Output Levels High Level ⇒ 4.5V min. (Ioh = 8.0mA)
- Low Level ⇒ 0.4V max. (Iol = 8.0mA)
- d. Interface (Molex Connector, 2.5mm Pitch x 5Pin, P/N 5103-05)

| Pin No. | Color | MSR1321-1 | Function |
|---------|--------|-----------|-------------------------------|
| 1 | Red | VCC | Power Supply DC +3.0V~5.5V |
| 2 | Orange | CPD | Card Present Detect |
| 3 | Yellow | RCP-2 | ISO-2 Track, Read Clock Pulse |
| 4 | Green | RDD-2 | ISO-2 Track, Read Data |
| 5 | Black | GROUND | Ground |

- e. Block Diagram and Output Signal



f. Timing Chart



NOTES :

1. 8 or 9 head flux reversals for low density configuration.
2. TIMEOUT of the CPD signal occurs approx. 12mSec. After last head signal transition.
3. The RDD is valid at 1.0 μ Sec(min.) before the negative edge of the RCP.
4. The Low pulse width of RCP is approx. 70% of the bit time.

- **RDD**
The DATA signal is valid while the RCP is low. If the RDD signal is high, the bit is zero, and if low, the bit is one(1).
- **RCP**
The RCP signal indicates that RDD is valid. The RDD should be loaded by the user when the RCP signal goes low.(Negative edge)
- **CPD**
Card Present will go low after the 8 or 9th flux reversal and it will return high when the 12mSec Approx. was elapsed.

When no card is being moved through the unit, the RDD, RCP and CPD signals are high.

5. OPERATIONAL REQUIREMENTS

- | | |
|---------------------|---------------------------|
| a. Installation | Indoors only |
| b. Performance | 10 - 150 cm / sec |
| c. Head Reliability | 300,000 passes |
| d. Error Rate | Less than 0.5 % |
| e. Noise Protection | Noise Interval 9msec/min. |

6. ENVIRONMENTAL REQUIREMENTS

- | | |
|----------------------|--|
| a. Temperature Range | -30°C ~ +60°C (Working) / -35°C ~ 75°C (Storage) |
| b. Humidity | 90% relative humidity to 40°C. Non condensing. |
| c. Shock Resistance | 10ms at 3G along the 3 axis . |
| d. Vibrations | 0.2mm from 10 - 50 Hz along the 3 axes for 15 min. |

7. MECHANICAL REQUIREMENTS

- | | |
|-----------------|--|
| a. Weight | 35g |
| b. Connector | Molex Connector P/N 5103-05 |
| c. Cable length | 280mm |
| d. Dimension | 100.0mm (D) x 34.0mm (W) x 30.5mm (H) |