

Specification

Manual Swipe Type Magnetic Stripe Card Reader(slim)

| | | |
|-----------------|----------------|------------------|
| JCR-1020 | ISO-2 | Read Only |
| JCR-1030 | ISO-3 | Read Only |
| JCR-1050 | ISO-1/2 | Read Only |
| JCR-1060 | ISO-2/3 | Read Only |

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Overview

This specification describes the electrical, operational, environmental and mechanical requirements of the model JCR-10X0 respectively. JCR manual swipe modules are for reading magnetically encoded data on the cards with either high or low energy stripe that confirm to all ANSI/ISO track combination.

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 |

Card Specification

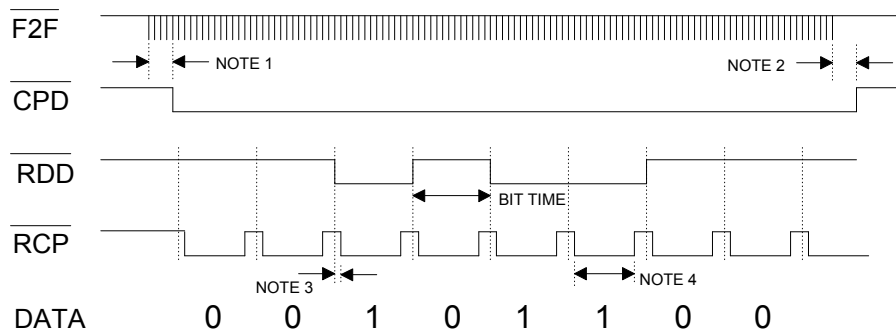
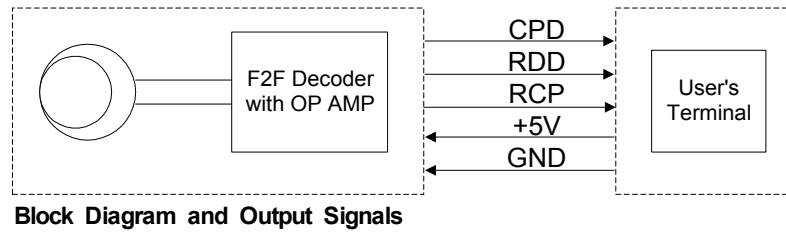
The cards which are used in JCR-10X0 should be complied with ISO 7810, 7811 and 7812.

| Track Position | ISO 1 (IATA) | ISO 2 (ABA) | ISO 3 (MINTS) |
|--------------------|-----------------------|-----------------------|------------------------|
| Recording Density | 210 BPI | 75 BPI | 210 BPI |
| Recording Capacity | 79 Characters (7bits) | 40 Characters (5bits) | 107 Characters (5bits) |
| Card Thickness | 0.76 mm ± 0.08 mm | | |

Electrical Requirements

| | |
|---------------------------|---|
| Voltage and Ripple | +5 VDC (3.0 V ~ 5.5 V), Less then 50 mVp-p |
| Current Standby | Less than 1.5 mA (Single) / Less than 3.0 mA (Dual) |
| Current Operating | Less than 3.0 mA (Single) / Less than 6.0 mA (Dual) |
| Output Levels | High Level (0) : 3.5Vmin. Low Level (1) : 0.4Vmax. |
| Interface | |

| Pin No. | Cable Color | Signal Name | |
|---------|-------------|----------------|----------------------------|
| | | JCR-1050, 1060 | JCR-1010, 1020, 1030, 1040 |
| 1 | Red | +5 V | +5 V |
| 2 | Black | Ground | Ground |
| 3 | Brown | RDD2 | RDD |
| 4 | Orange | RCP2 | RCP |
| 5 | Yellow | CPD1+2 / 2+3 | CPD |
| 6 | Green | RDD1/3 | |
| 7 | Blue | RCP1/3 | |
| 8 | | | |



Timing Chart

- NOTES:** 1. 8 or 9 head flux reversals for low density configuration.
2. TIMEOUT of the CPD signal approx. 50msec after last Head Signal transition.
3. The RDD is valid at 1.6us (min.) before negative edge of the RCP.
4. The low pulse width of RCP is approx. 70% of the bit time.

| | |
|---|---|
| $\overline{\text{RDD}}$ | The DATA signal is valid while the RCP is low. If the RDD signal is high, the bit is zero. If low, the bit is one |
| RCP | The RCP signal indicates that RDD is valid. The RDD should be loaded by the user when the RCP signal goes low. |
| CPD | CPD signal will go to low after the 8 or 9 th flux reversal and will return to high when the 20msec approx. was elapsed. |

Operational Requirements

| | |
|-------------------------|-------------------------------|
| Installation | Indoors only |
| Performance | 10 – 120Cm/sec |
| Head Reliability | Standard 500,000 passes (min) |
| Error Rate | Less than 0.5% |

Environmental Requirements

| | |
|--------------------------|---|
| Temperature Range | -20°C ~ 50°C (Working) / -30°C ~ 70°C (Storage) |
| Humidity | 90% relative humidity to 40°C. Non condensing |
| Shock Resistance | 10 ms at 10G along the 3 axes |
| Vibration | Amplitude 2mm within 2G or less, 10 ~ 55Hz X, Y, Z directions for 30min |

Mechanical Requirements

| | |
|------------------------|-------|
| Weight | 25 g |
| Connector (STD) | Molex |
| Cable Length | 80 mm |

* Customized connector are also available.

Dimension; Attached