

# **KDR-1932 SERIES**

**MANUAL SWIPE TYPE MAGNETIC  
CARD READER**

## INDEX

1. OVERVIEW
2. CONFIGURATION TABLE
3. FEATURES
4. ENVIRONMENTAL REQUIREMENTS
5. SPECIFICATIONS
6. INTERFACE
7. OUTPUT VOLTAGE LEVELS
8. NOTES FOR BETTER OPERATION
9. TIMING CHART
10. OUTLINE DRAWINGS

## 1. OVERVIEW

KDR-1000 series is a set of manual swipe type modules that read magnetically encoded data from magnetic stripes that conform to ISO standards and decode them to CLS,RCL, and RDT.

## 2. CONFIGURATION TABLE

MODEL	DIMENSION W x D x H(mm)	ISO TRACKS						REMARKS
		SINGLE			DOUBLE		TRIPLE	
		¥°	¥±	¥²	¥°,¥±	¥±,¥²	¥°,¥±,¥²	
KDR-1100	21.4 x 99 x 25	1110	1120	1130	1150	1160	1180	
KDR-1101	30 x 99 x 29	1111	1121	1131	1151	1161	1181	*
KDR-1300	27 x 99 x 28.5	1310	1320	1330	1350	1360	1380	
KDR-1301	31 x 99 x 32.5	1311	1321	1331	1351	1361	1381	*
KDR-1302	29.5 x 99 x 28.5	1312	1322	1332	1352	1362	1382	**
KDR-1400	21 x 90 x 24	1410	1420	1430	1450	1460	1480	
KDR-1402	23.7 x 90 x 24	1412	1422	1432	1452	1462	1482	**
KDR-1500	22 x 43 x 23	1510	1520	N/A	N/A	N/A	N/A	

\* WITH COVER

\*\* WITH GND LUG.

## 3. FEATURES

- 3.1 3-Dimensional Head Mounting Design achieves Optimal Adhesion with Minimal Wear.
- 3.2 Universal Head Mounting makes Switching between Tracks Quick and Easy.
- 3.3 Silicone rubber-Action Card Guidance System aids Simple and Compact Structure.
- 3.4 Custom ICs provide 24% Jitter compensation over a Wide Range of Card Feeding Speeds.
- 3.5 High Coercive Magnetic Stripe up to 3,500Oe can be read.

## 4. ENVIRONMENTAL REQUIREMENTS

- 4.1 Operating Temperature and Humidity : 0 90 -j 20 , i 50 -j % RH
- 4.2 Conservation Temperature and Humidity : -20 i 70 -j , less than 95% RH
- 4.3 Vibration : Amplitude 2mm , 2 G , 1055-j Hz/min in x,y,z direction
- 4.4 Shock Resistance : Up to 30 G, 11 msec

## 5. SPECIFICATIONS

- 5.1 Card Standard
- 5.2 Track No.
- 5.3 Reading Method
- 5.4 Recording Density
- 5.5 Recording Capacity

ISO 7811		
¥° (IATA)	¥± (ABA)	¥² (MINTS)
F2F (FM)		
210 BPI	75 BPI	210 BPI
79 Characters (7-bit code)	40 Characters (5-bit code)	107 Characters (5-bit code)
0.76 ± 0.08 mm		

- 5.6 Card Thickness : 0.76 ± 0.08 mm
- 5.7 Power Supply : 5V DC ± 5%
- 5.8 Power Consumption : Less than 10mA (Single), 20mA (Double), 30mA (Triple)
- 5.9 Ripple : Less than 50mVp-p
- 5.10 Reading Track Width : 1.5mm
- 5.11 Operation Locus : Indoors only
- 5.12 Card Feeding Speed : 15 120 -j cm/sec (6-50inch/sec)
- 5.13 Head Life time : 300,000 passes min.
- 5.14 Error Rate : Less than 0.5%
- 5.15 Insulation Voltage & Resistance : 500 V DC for 1min., 10M¥Ø or more at 500 V DC (Between ground and frame)
- 5.16 Weight : Approx. 45g

## 6. INTERFACE

### 6.1 Interface Signals

Pin NO.	Signal	Color	Pin No.	Signal	Color
<b>1</b>	<b>GND</b>	<b>BLACK</b>	<b>4</b>	<b>RCL</b>	<b>GREEN</b>
<b>2</b>	<b>VCC</b>	<b>RED</b>	<b>5</b>	<b>RDT</b>	<b>BLUE</b>
<b>3</b>	<b>CLS</b>	<b>YELLOW</b>			

### 6.2 Connector

6.2.1. Connector Housing: 6471 – 051 Molex

6.2.2. Harness Length : 250 +/- 10 mm.

## 7. OUTPUT VOLTAGE LEVELS

7.1 High Level : 2.4V min ( $I_{OH} = 0.4$  mA)

7.2 Low Level : 0.8V max ( $I_{OL} = 8.0$  mA)

## 8. NOTES FOR BETTER OPERATION

8.1 The card should be inserted in the specified direction.

8.2 Cards which meet standards should be used.

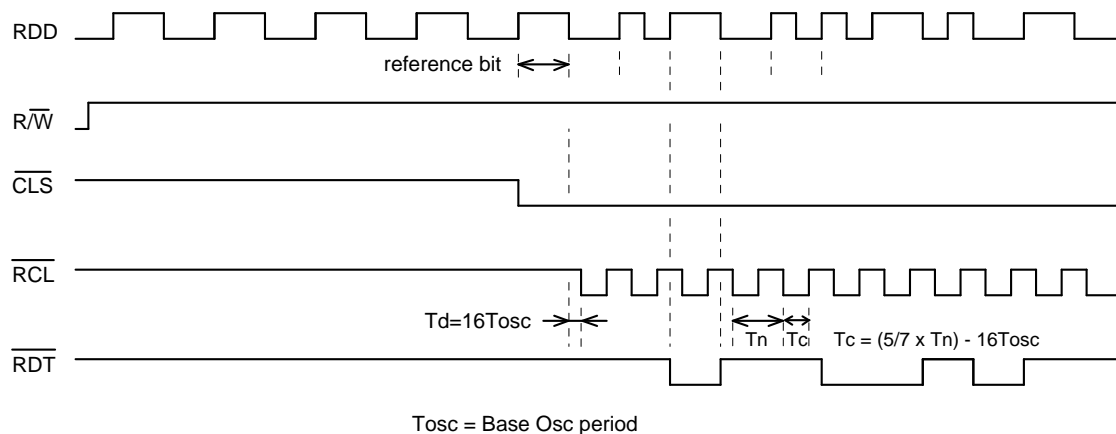
8.3 Cards should not be dirty, scratched or deformed.

8.4 Cards should not be placed near magnets or damp.

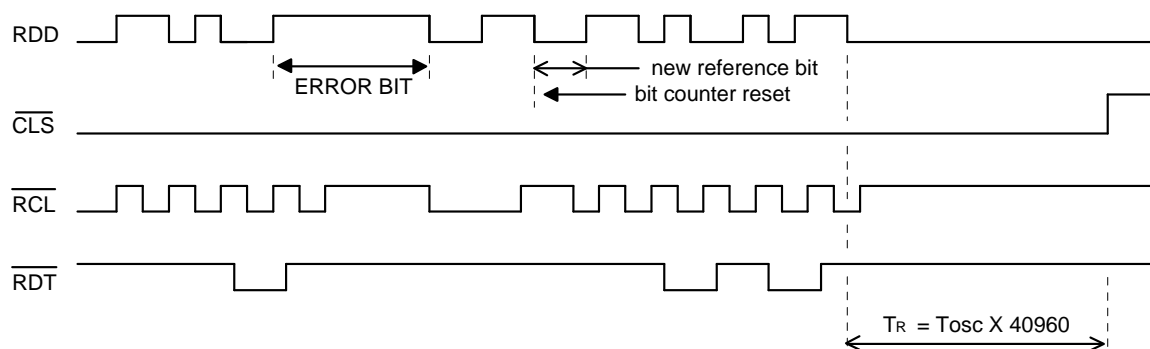
8.5 Standard condition is temperature at  $20^{\circ} \pm 5^{\circ}$  and humidity at 35% 60 -% RH.

8.6 Specification to be changed or revised without notice.

## 9. TIMING CHART



BPI	75 BPI		210 BPI	
SPEED	10 Cm/sec	120 Cm/sec	10 Cm/sec	120 Cm/sec
$T_n$	3.38 $\mu$ S	$\approx 282$ S	1.2 $\mu$ S	$\approx 100$ $\mu$ S
$T_c$	2.4 $\mu$ S	$\approx 193.4$ S	$\approx 849$ $\mu$ S	$\approx 63.4$ $\mu$ S



.  $\overline{\text{CLS}}$  generation ( SELECT input voltage is low )

