

43mm and 90mm OEM Magnetic Card Reader Module

WTR-100 SERIES

*MANUAL SWIPE MAGNETIC
CARD READER MODULE*

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1. OVERVIEW

WTR-100 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

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2. CONFIGURATION TABLE

MODEL	DIMENSION (mm) L*W*H	ISO TRACKS						NOTE
		SINGLE			DUAL		TRIPLE	
		ISO1	ISO2	ISO3	ISO1/2	ISO2/3	ISO1/2/3	
WTR-100	43*22*23	101	102	103	105	106	107	
WTR-120	90*21*24	121	122	123	125	126	127	

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 Spring and steel axis-Action Card Guidance System aids Simple and Compact Structure.
- 3.4 Customers 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

Operating Temperature	-10°C ~55°C
Storage Temperature	-30°C ~ 70°C
Vibration	Amplitude 2mm , 2 G , 10-55Hz/min in x,y,z direction
Shock Resistance	Up to 30 G, 11 m/sec
Input Current	25mA
Output Current	Less than 7mA

5. SPECIFICATIONS

Card Standard	ISO 7811		
Track No.	(IATA)	(ABA)	(MINTS)
Reading Method	F2F (FM)		
Recording Density	210 BPI	75 BPI	210 BPI
Recording Capacity	79 Characters (7-bit code)	40 Characters (5-bit code)	107 Characters (5-bit code)
Card Thickness	0.76 + 0.08 mm		

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Power Supply	3.0~5.5V DC
Power Consumption	Less than 2.0mA (Single), 5mA(Double), 7mA(Triple) /5V
Ripple	Less than 50mVp-p
Reading Track Width	1.5mm
Operation Locus	Indoors only
Card Feeding Speed	15- 120 cm/sec (6-50inch/sec)
Head Life time	500,000 passes min.
Error Rate	Less than 0.5%
Insulation Voltage & Resistance	500 V DC for 1min., 10M Ohm or more at 500 V DC(Between ground and frame)
Weight	Approx. 45g

6. OUTPUT VOLTAGE LEVELS

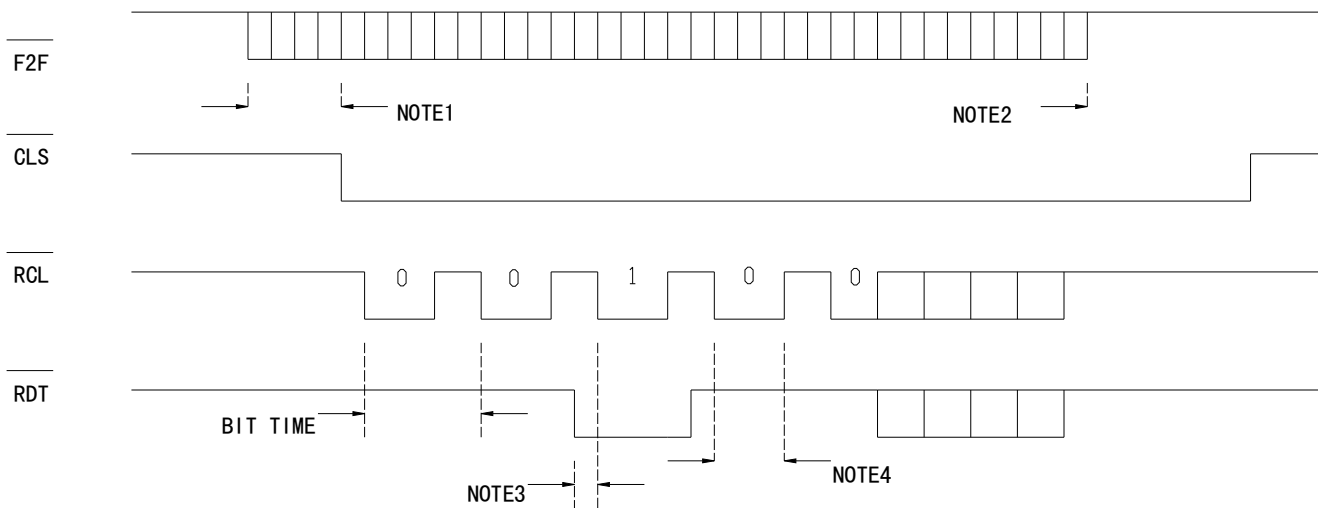
- 6.1 Level : 3.5V max (at 8.0 mA)
- 6.2 Low Level : 0.4V max (at 8.0 mA)

7. NOTES FOR BETTER OPERATION

- 7.1 The card should be inserted in the specified direction.
- 7.2 Cards which meet standards should be used.
- 7.3 Cards should not be dirty, scratched or deformed.
- 7.4 Cards should not be placed near magnets or damp.
- 7.5 Standard condition is temperature at $20^{\circ}\text{C} \pm 50^{\circ}\text{C}$ and humidity at 35% - 60% RH.
- 7.6 Specification to be changed or revised without notice.

8. TIMING CHART

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NOTE:

1. 8 or 9 head flux reversal for low density configuration.
2. TIMEOUT of CLS signal occurs approx. 25mSec. After last Head Signal transition.
3. The RDT is valid at 1.4 U sec(min.) before the negative edge of the RCL.
4. The Low pulse width of RCL is approx. 70% of the bit time.

*** RDT**

The Data signal is valid while the RCL is low. If the RDT Signal is high, the bit is zero (0), And if low, the bit is one (1).

*** RCL**

The RCL signal indicates that RDT is valid. The RDT Should be loaded by the user when the RCL signal goes low. (Negative edge).

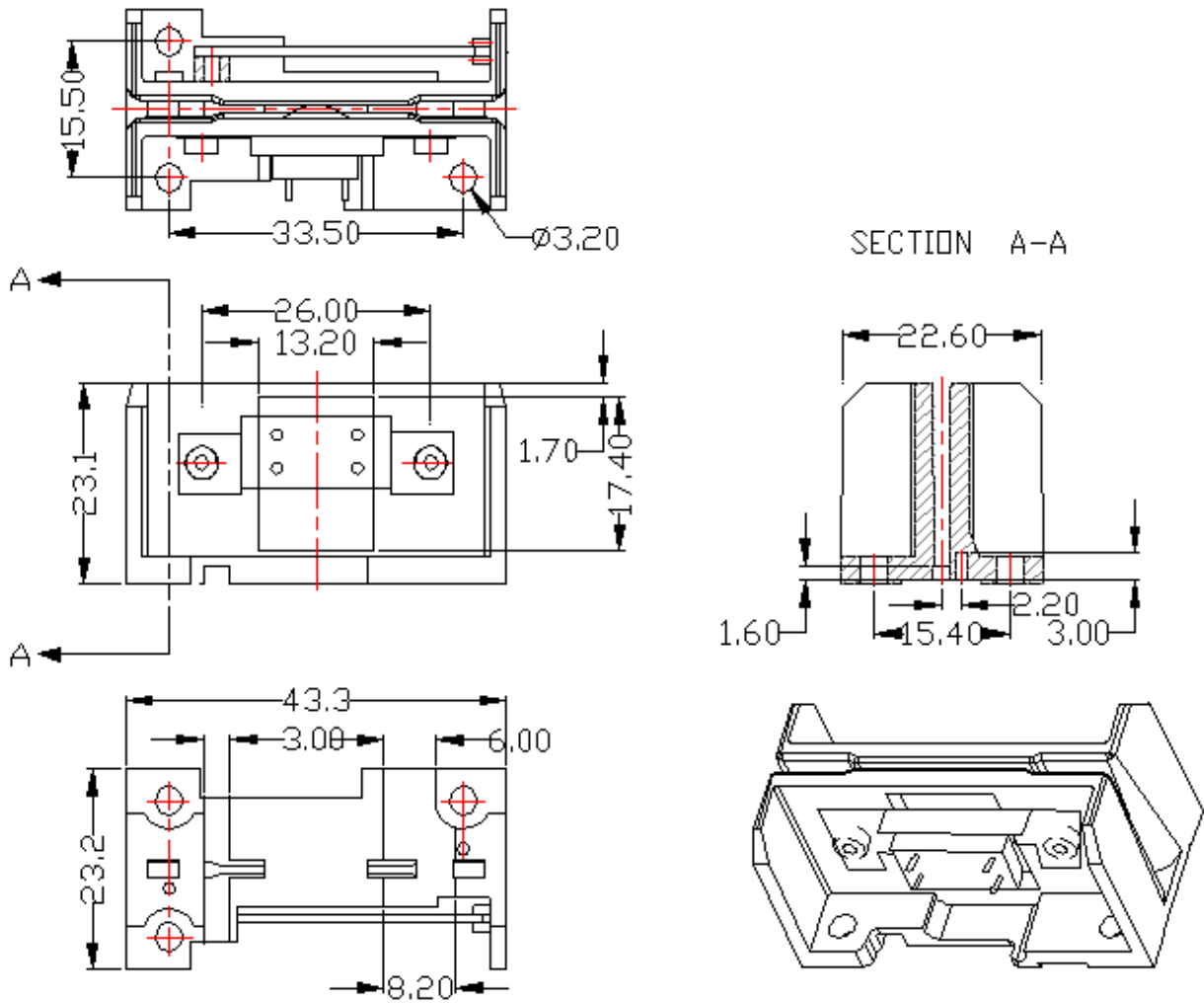
*** CLS**

Card Present will go low after the 8 or 9th flux reversal and it will return high when the 25mSec Approx. was elapsed.
When no card is being moved through the unit, the RDT, RCL and CLS signals stay high.

9. OUTLINE DRAWINGS

9.1 WTR – 100

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9.2 WTR-120

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