

SPECIFICATION

Customer : _____

Customer's Model No. : _____

Model No. : MR800 Series _____

Date : _____

Sample Serial No. : _____

Spec. Version & Revision Date: V03 2009.05.05 _____

Received/Approved by



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Revision History

Version	Date	Context
00	2004.04.22	Golden release
01	2004.12.01	JIS II Tracks Information
02	2006.03.06	
03	2009.05.05	Change New USB Cable drawing

TABLE OF CONTENTS

A. General Description	1
B. Physical Characteristics	2
C. Electrical Characteristics.....	6
D. Tracks Information	7
E. Performance	8
F. Environmental	8
G. TTL-Timing Chart.....	8
H. Pin Assignment	9
I. Reliability.....	11

A. General Description

This magnetic stripe reader is well designed and constructed with high quality components. It conforms to ISO 7810-7813 standards and is designed for use in access control, retail and time attendance applications, etc. The TTL output allows the reader to be universally accepted by most decoders. The built-in decoder is an advanced and versatile decoding facility which works with variety of computer interfaces.



“Captures 3 tracks of data from all ISO- and AAMVA-encoded magnetic stripe cards. “

B. Physical Characteristics

Weight

Body Weight 145 g (4.67 oz)

Material PC&ABS

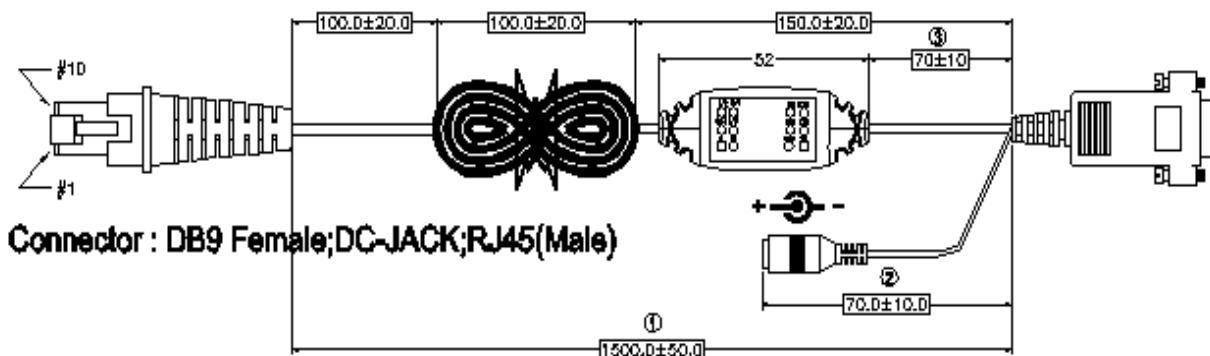
Dimension 150.23 mm X43.35 mm X 43.00 mm

Cable Drawing

Unit : mm

RS232 Interface :

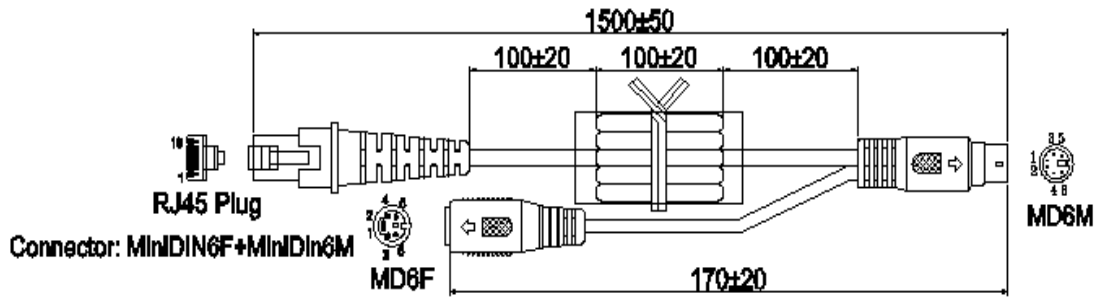
Unit : mm



RJ45C	L	R	DB9F	DC-JACK	Color	Function
3	4	6	5	Shell	BROWN	GND
5	1	1	9	CORE	RED	POWER
7	3	2	2		Orange	TXD
9	6	3	3		YELLOW	RXD
1	5	5	8		Green	RTS
10	2	4	7		Blue	CTS
	4	6	Shell		SHIELDING	SHIELDING

Keyboard Interface :

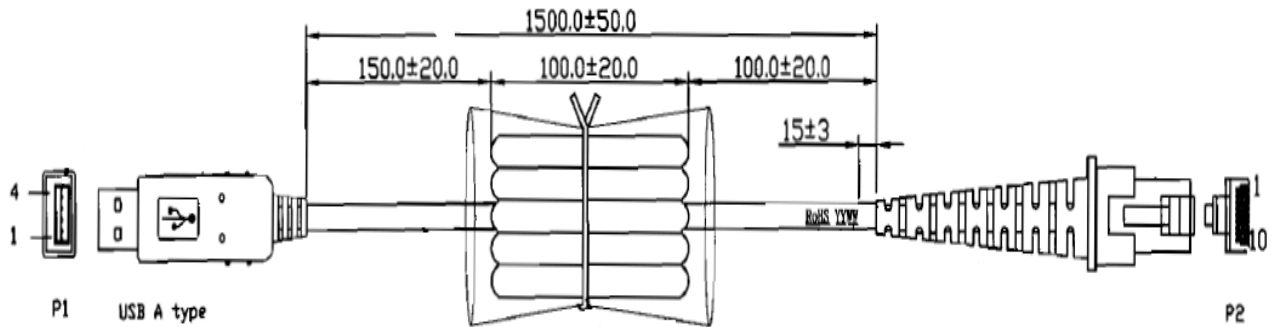
Unit : mm



RJ45C	Mini DIN6M	Mini DIN6F	Color	Function
2	1		Green	HOST DATA
3	3	3	Brown	GND
4	5		Blue	HOST CLK
5	4	4	RED	Vcc
6		5	Orange	KB CLK
8		1	YELLOW	KB DATA
	Shell	Shell		SHIELDING

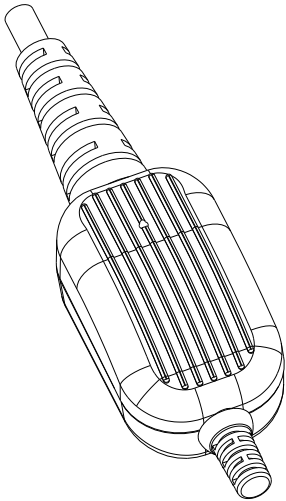
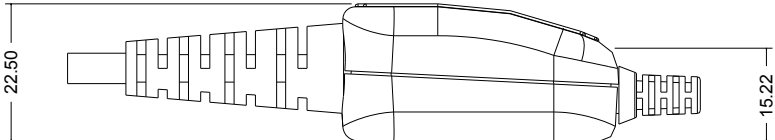
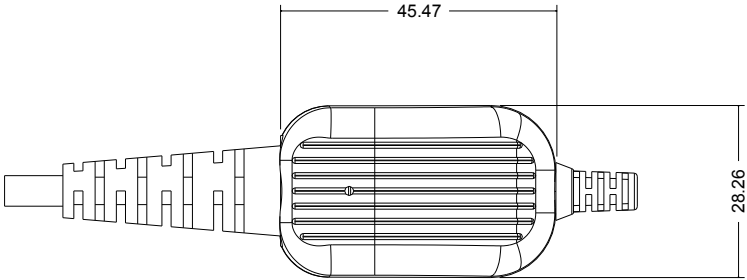
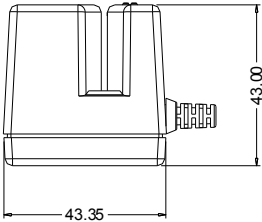
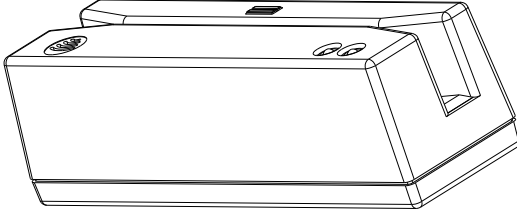
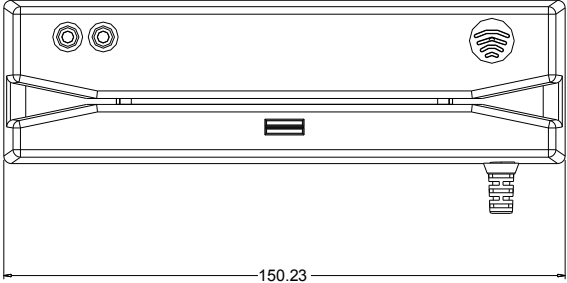
USB Interface :

Unit : mm



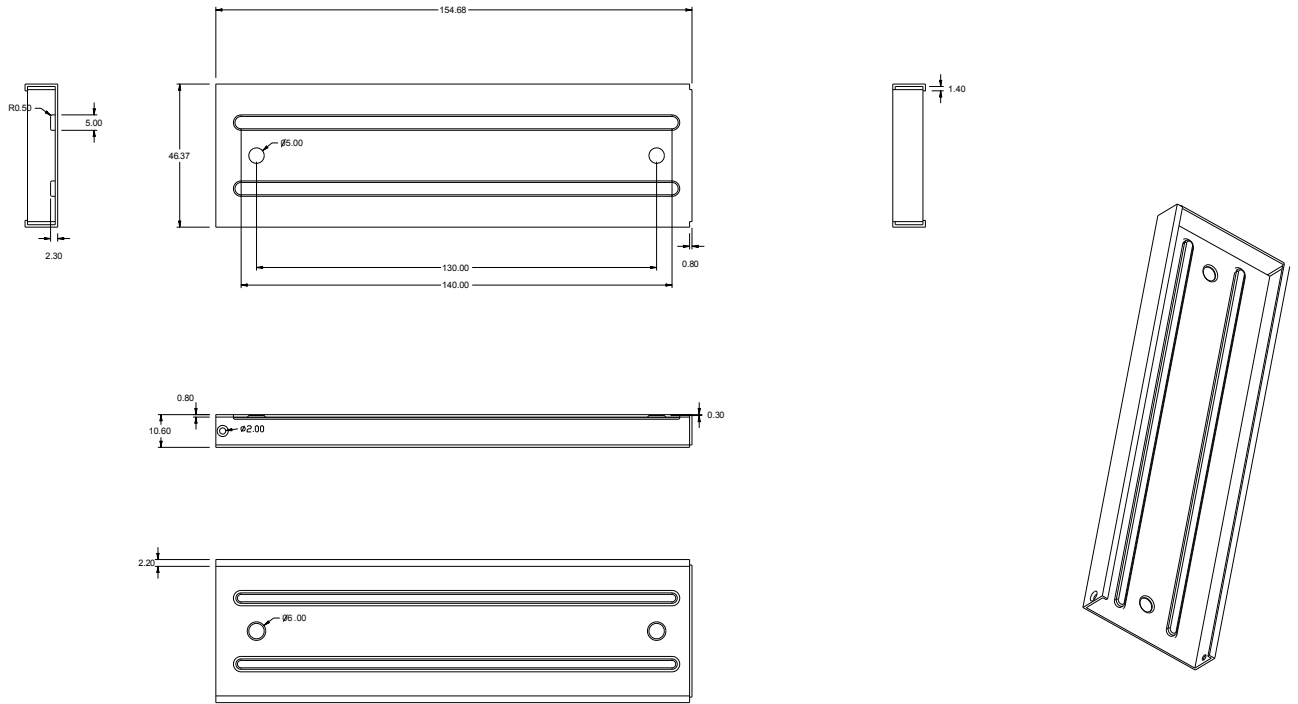
線位表			功能定義		
P1&L	R	顏色	P2	P1	P2
4	4	棕	3	GND	GND
3	3	綠	2	D+	HOST CLK
2	2	藍	4	D-	HOST DATA
1	1	紅	5	VCC	VCC
鐵殼	4	GND	3		SHIELDING

Mechanical drawing :

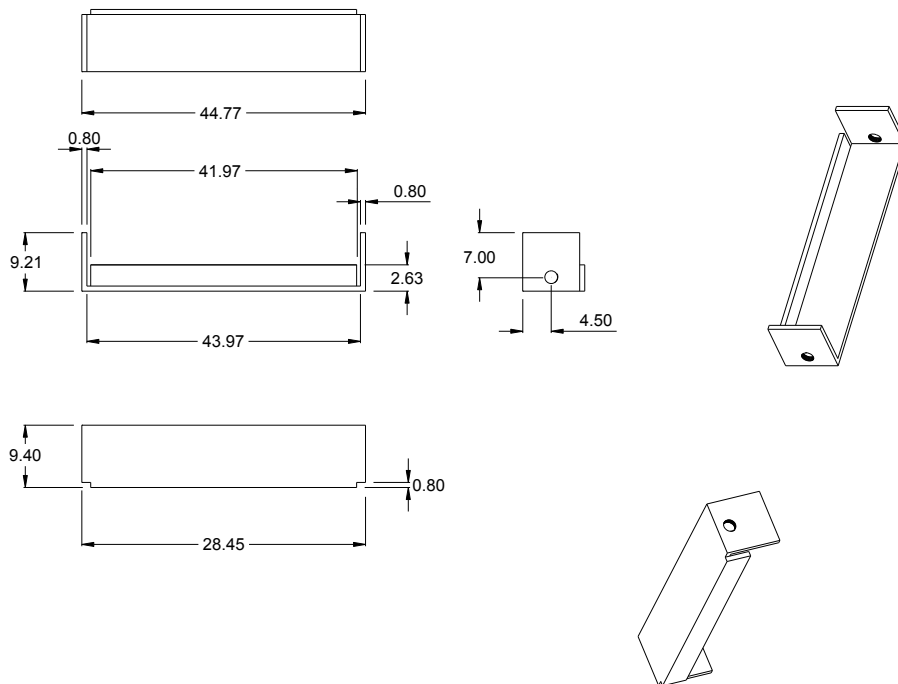


Bracket(Optional)

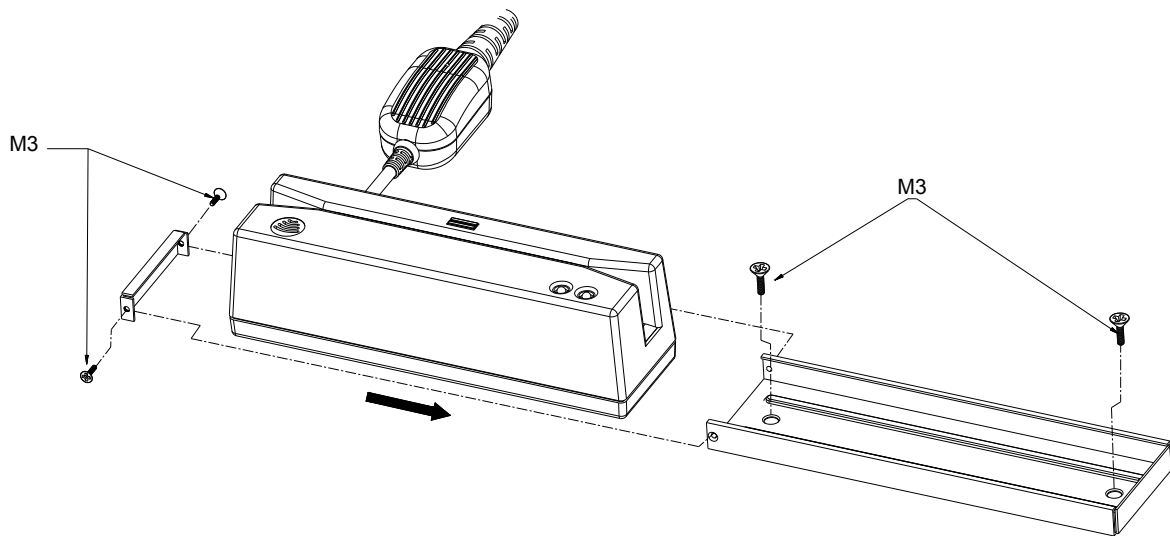
(a)



(b)



(c)



C. Electrical Characteristics

a) Single Track

Interface	RS232	KB	RS232 TTL	USB
Supply Voltage	DC +5V ±5%			
Output Voltage (Typ.)	±9V	+5V±5%	+5V±5%	+5V±5%
Output low Voltage (Max.)	-	0.4V	0.4V	0.4V
Current Draw	±10%			
Power On (Typ.)	70 mA	67 mA	67 mA	70 mA
Stand by (Typ.)	46 mA	42 mA	42 mA	45 mA
Operation (Typ.)	67 mA	64 mA	64 mA	66 mA

b) 2 Tracks

Interface	RS232	KB	RS232 TTL	USB
Supply Voltage	DC +5V $\pm 5\%$			
Output Voltage (Typ.)	$\pm 9V$	+5V $\pm 5\%$	+5V $\pm 5\%$	+5V $\pm 5\%$
Output low Voltage (Max.)	-	0.4V	0.4V	0.4V
Current Draw	$\pm 10\%$			
Power On (Typ.)	85 mA	82 mA	82 mA	85 mA
Stand by (Typ.)	60 mA	57 mA	57 mA	60 mA
Operation (Typ.)	83 mA	80 mA	80 mA	82 mA

c) 3 Tracks

Interface	RS232	KB	RS232 TTL	USB
Supply Voltage	DC +5V $\pm 5\%$			
Output Voltage (Typ.)	$\pm 9V$	+5V $\pm 5\%$	+5V $\pm 5\%$	+5V $\pm 5\%$
Output low Voltage (Max.)	-	0.4V	0.4V	0.4V
Current Draw	$\pm 10\%$			
Power On (Typ.)	87 mA	85 mA	85 mA	87 mA
Stand by (Typ.)	62 mA	58 mA	58 mA	61 mA
Operation (Typ.)	88 mA	86 mA	86 mA	88 mA

D. Tracks Information

Track	1	2	3	JIS II
Standard	IATA	ABA	THRIFT/MINTS	THRIFT/MINTS
Recording Method	F2F(FM)	F2F(FM)	F2F(FM)	F2F(FM)
Recording Density	210 BPI	75 BPI	210 BPI	
Capacity	79 Characters	40 Characters	107 Characters	79 Characters
	7	5	5	7
	Bits/Characters	Bits/Characters	Bits/Characters	Bits/Characters

E. Performance

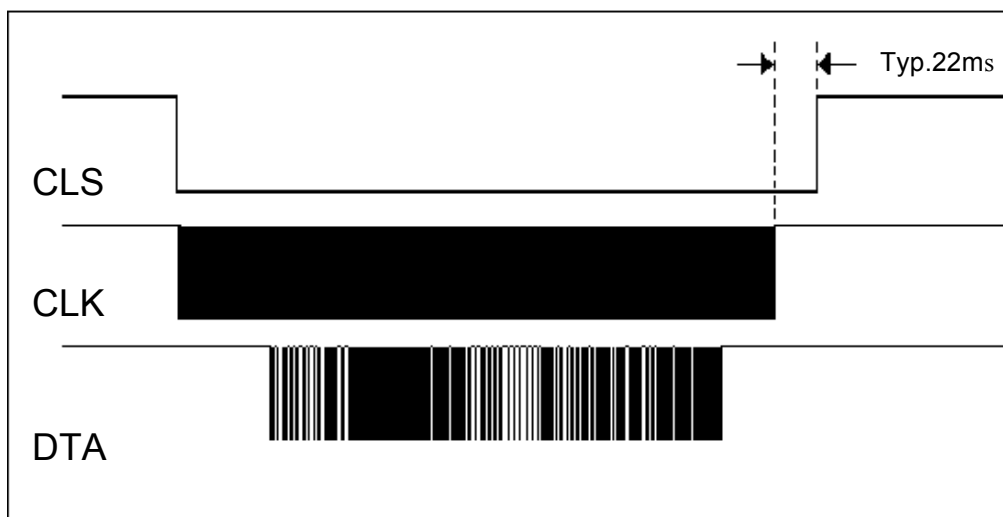
Read/Write	Read
Scan Speed	100 - 1000 mm / sec (3.9 - 39 inch / sec)
Direction	Bi-direction
Life Cycle	1,000,000 passes

F. Environmental

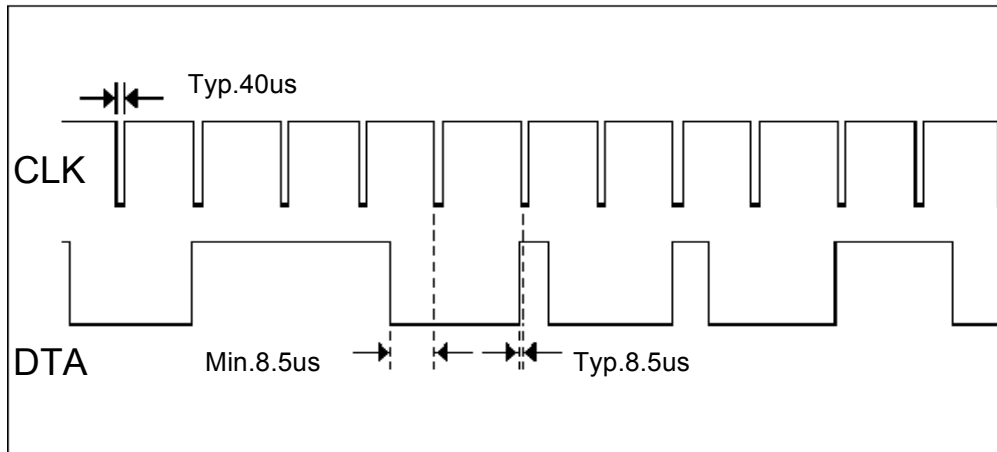
Operating Temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage Temperature	-20 °C to 70 °C (-4 °F to 158 °F)
Relative Humidity	20% to 95% (Non-condensing)

G. TTL-Timing Chart

1.Relationship between CLS, CLK and DTA



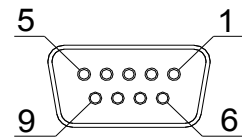
2. Detail relationship between CLK and DTA



H. Pin Assignment

(a) TTL Interface(DB 9 Female)

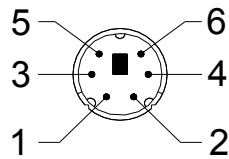
Pin No.	Function
1	S.O.S.
2	DATA
3	N.C.
4	N.C.
5	TRIGGER
6	P. E.
7	GND
8	N.C.
9	+5V



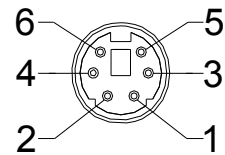
DB 9 Female

(b) PC Keyboard Interface**MiniDIN 6 MALE**

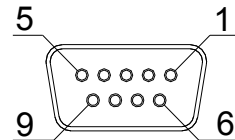
Pin No.	Function
1	HOST DATA
3	GND
4	Vcc(+5V)
5	HOST CLK

**MiniDIN 6 FEMALE**

Pin No.	Function
1	KB DATA
3	GND
4	Vcc(+5V)
5	KB CLK

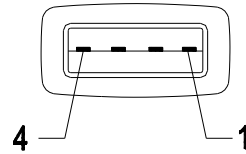
**(c) RS-232 Keyboard Interface****DB9 Female without Power Lead**

Pin No.	Function
2	TXD
3	RXD
5	GND
7	CTS
8	RTS
9	Vcc (+5V)

**DB 9 Female**

(d)USB Interface**USB A Type Male**

Pin No.	Function
1	Vcc
2	D-
3	D+
4	GND

**I. Reliability****Life Time**

MTBF(Calculated)	24,000 hours
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Thermal Shock

High Temp.	60 °C (140 °F)
Low Temp.	-20 °C (-4 °F)
Cycle time	20 minutes for high temp. , 20 minutes for low temp.
Cycles	5 cycles

Cable Bending Test	25,000 times minimum (30 times/min @ 500g/90°)
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Drop	40 inch (100 cm) Drop on Concrete Surface
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