

<h1>SPECIFICATION</h1>
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Customer : \_\_\_\_\_

Customer's Model No. : \_\_\_\_\_

Model No. : **MR300 Series** \_\_\_\_\_

Date: \_\_\_\_\_

Sample Serial No. : \_\_\_\_\_

Spec. Version & Revision Date: V04 2014.01.20

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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	Update Firmware version
03	2009.09.23	Update Cable drawing
04	2014.01.20	Firmware update

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## 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.



## B. Physical Characteristics

### Weight

Body Weight	52 g ( 1.82 oz )
KBW	67g (2.36 oz)
Cable Weight	USB 50.6g (1.78 oz)
	RS232 70.4g (2.48 oz)

### Material

Cable Length 150 mm ( 5.91 inch )

### Dimension

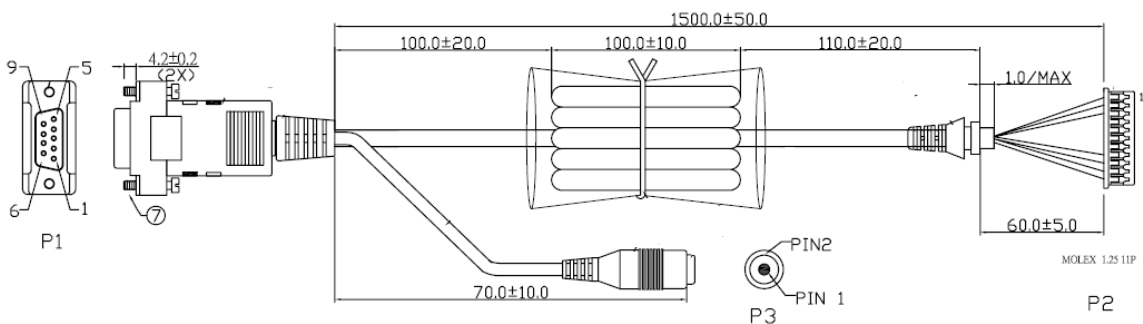
90.00 mm X29.00 mm X 38.00 mm

### Cable Drawing

Unit : mm

#### RS232 Interface :

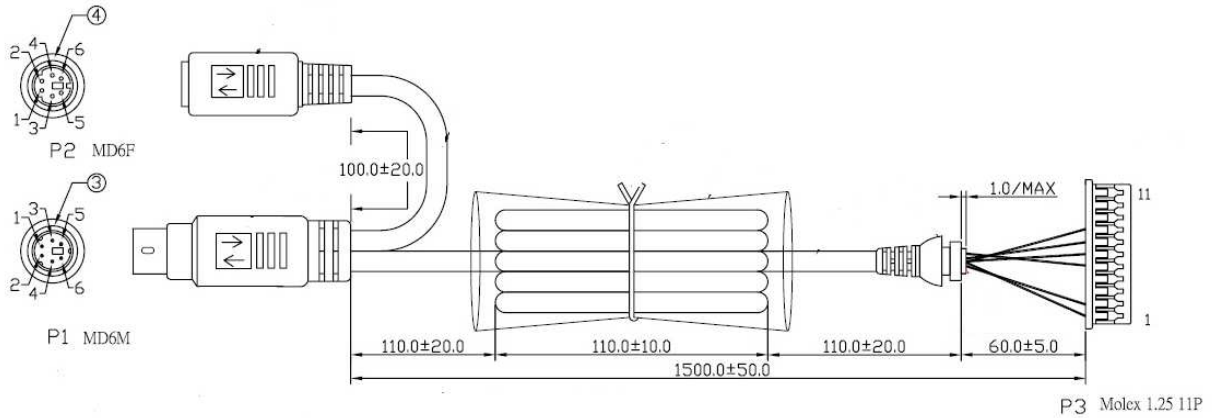
Unit : mm



Wire table					Function
P1	Color	P2	Color	P3	
9	red	2	red	1	VCC
3	yellow	4			RXD
2	orange	3			TXD
5	brown	1	brown	2	GND
8	green	9			RTS
7	blue	10			CTS
Iron case	shielding	11			shielding

**Keyboard Interface :**

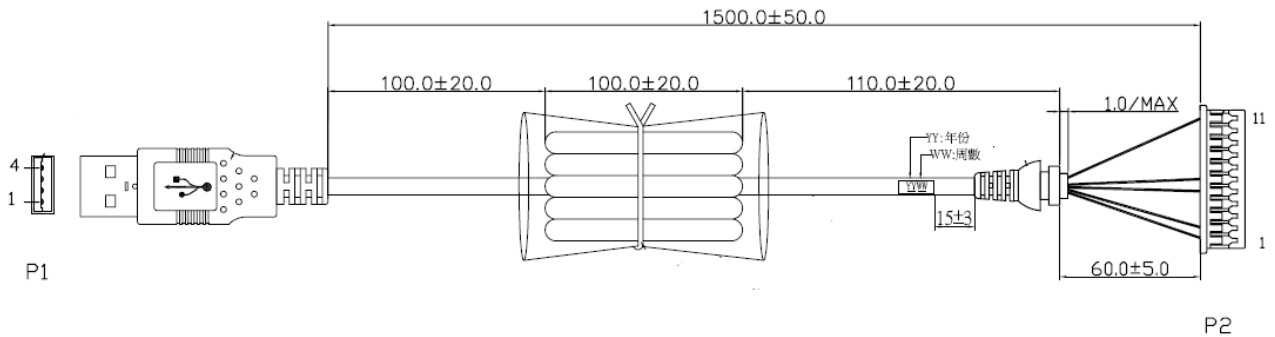
Unit : mm



Wire table					Function
P3	Color	P1	Color	P2	
2	red	4	red	4	VCC
8	orange		orange	5	KB CLK
6	blue	5			HOST CLK
7	yellow		yellow	1	KB DATA
5	green	1			HOST DATA
1	brown	3	brown	3	GND
		Iron case	shielding	Iron case	shielding

**USB Interface :**

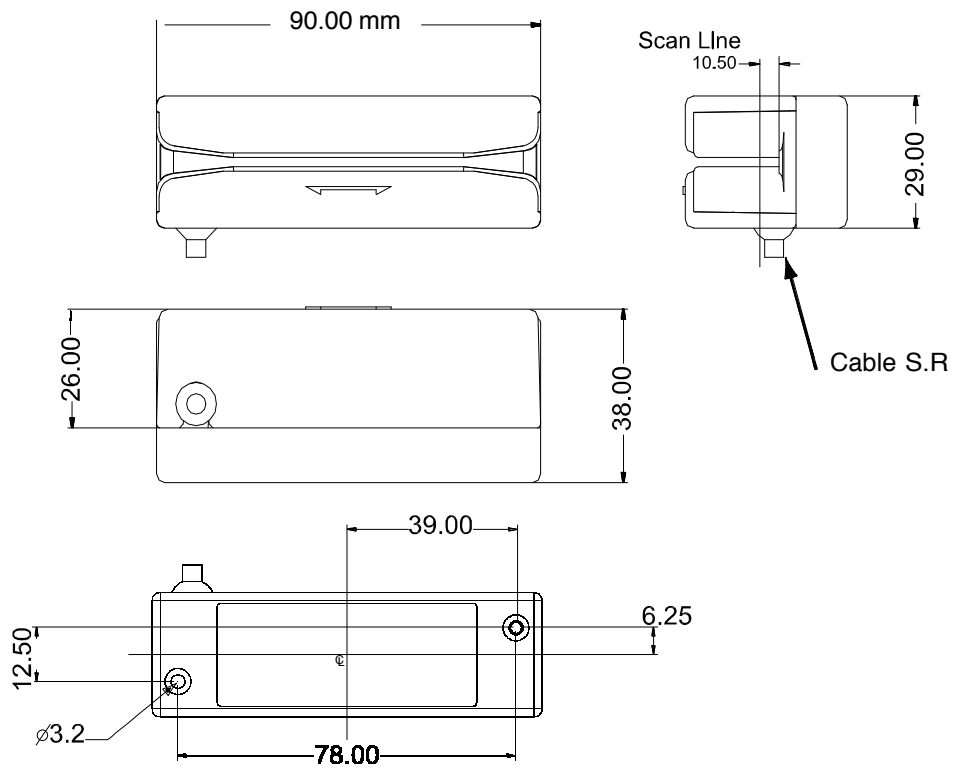
Unit : mm



Wire table			Function
P1	Color	P2	
1	red	2	VCC
2	blue	6	D-
3	green	5	D+
4	brown	1	GND
Iron case	shielding	11	shielding

**Mechanical drawing**

Unit : mm





### C. Electrical Characteristics

Interface	RS232	KB	USB
Supply Voltage		DC +5V $\pm$ 5%	
Output Voltage (Typ.)	$\pm$ 9V	+5V $\pm$ 5%	+5V $\pm$ 5%
Output low Voltage (Max.)	-	0.4V	0.4V
Current Draw		$\pm$ 10%	
Power On (Typ.)		Approx. 150 mA	
Stand by (Typ.)		Approx. 50 mA	
Operation (Typ.)		Approx. 100 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	75 BPI	
Capacity	79 Characters	40 Characters	107 Characters	79 Characters
	7 Bits/Characters	5 Bits/Characters	5 Bits/Characters	7 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

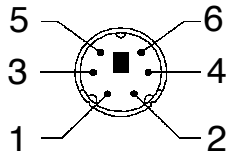
Operating Temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage Temperature	-20 °C to 70 °C (-4 °F to 158 °F)
Relative Humidity	20% to 95% (Non-condensing)

## G. Pin Assignment

### (a) PC Keyboard Interface

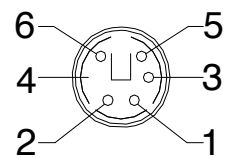
#### MiniDIN 6 MALE

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



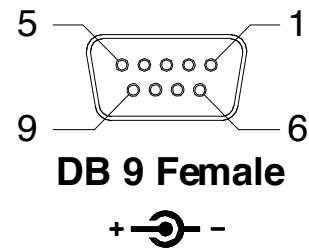
#### MiniDIN 6 FEMALE

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

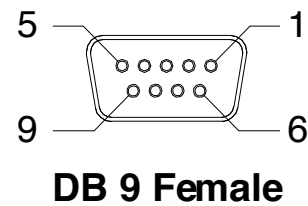


**(b)RS-232 Keyboard Interface****DB9 Female with Power Lead**

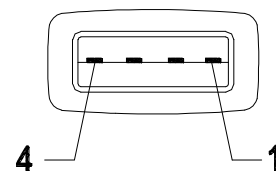
Pin No.	Function
2	TXD
3	RXD
5	GND
7	CTS
8	RTS
Power Lead	Vcc (+5V)

**DB9 Female without Power Lead**

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

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

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



## H. Reliability

Life Time MTBF(Calculated)	24,000 hours
Thermal Shock	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°)
Drop	40 inch (100 cm) Drop on Concrete Surface