

# MSR-90 SERIES

MINI MANUAL SWIPE MAGNETIC  
STRIPE CARD READER



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**1. OVERVIEW**

MSR-90 series is compact size manual swipe card reader.

With programming capability on Enable or change on Prefix, Suffix, LRC, etc

**2. BASIC SPECIFICATION**

Dimension	90mm(L) x 27mm(W) x 28mm(H)
Weight	85g(approx.)
Power Supply	+5V DV ±5%
Power consumption	40mA(max.)
Working Place	Indoor

MODEL	DIMENSION	ISO TRACKS						INTERFACE
		SINGLE			DUAL		TRIPLE	
	L x W x H(mm)	I	II	III	I & II	II & III	I & II & III	
MSR-90-U	90 x27x28	T1	T2	T3	T12	T23	Default	USB
MSR-90-P		T1	T2	T3	T12	T23	Default	PS2
MSR-90-R		T1	T2	T3	T12	T23	Default	RS232

**3. SPECIFICATION**

Card Standard	ISO7811/7812,AAMVA,CADMV		
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)
Interface	USB/PS2/RS232		
Cable length	Black, 1.5m cable		
Card Thickness	Plastic 0.76 ± 0.08mm		
Head Function	Read only 1.5mm		
Operation Speed	10 ~ 150cm/sec		
Life of Head	500,000 card passes (1 pass : one swipe)		
Error Rate	0.5% Less Than (JSE Test card)		

**4. ENVIRONMENTAL REQUIREMENTS**

**Ambient Temperature**

Storage: -30°C to +70°C

Operating: -20°C to +70°C

**Ambient Relative Humidity**

Storage: 0% to 95% RH

Operating: 20% to 90% RH

## 5. INDICATOR LED DESCRIPTION

Color	Signal	Description
Green	Good	Card reading is normal

## 6. DEFINITION OF INTERFACE

### RS-232 interface:

#### JP1 RS-232 Interface

PIN 1	GND
PIN 2	VCC (+5V)
PIN 3	TXD
PIN 4	RXD

#### JP2 Interface of magnetic head wire

PIN1	TK1-
PIN2	TK1+
PIN3	GND
PIN4	TK2-
PIN5	TK2+
PIN6	GND
PIN7	TK3-
PIN8	TK3+

### PS/2 interface:

#### JP1 PS/2 Interface

PIN 1	PC_CLK
PIN 2	PC_DAT
PIN 3	VCC (+5V)
PIN 4	GND
PIN5	KEYBOARD_CLK
PIN6	KEYBOARD_DAT

#### JP2 Interface of magnetic head wire

PIN1	TK1-
PIN2	TK1+
PIN3	GND
PIN4	TK2-
PIN5	TK2+
PIN6	GND
PIN7	TK3-
PIN8	TK3+

### USB interface:

#### JP1 USB Interface

PIN 1	GND
PIN 2	VCC (+5V)
PIN 3	D+
PIN 4	D-

JP3 SPI Interface

PIN1	VCC (+5V)
PIN2	RESETT
PIN3	GND
PIN4	SCK
PIN5	MISO
PIN6	MOSI

JP2 Interface of magnetic head wire

PIN1	TK1-
PIN2	TK1+
PIN3	GND
PIN4	TK2-
PIN5	TK2+
PIN6	GND
PIN7	TK3-
PIN8	TK3+

7. COMMUNICATION PROTOCOL

Data Format:

Track I: (% DATA ?)

Track II: (; DATA ?)

Track III: (+ DATA ?)

CR

8. DIMENSION DRAWING

