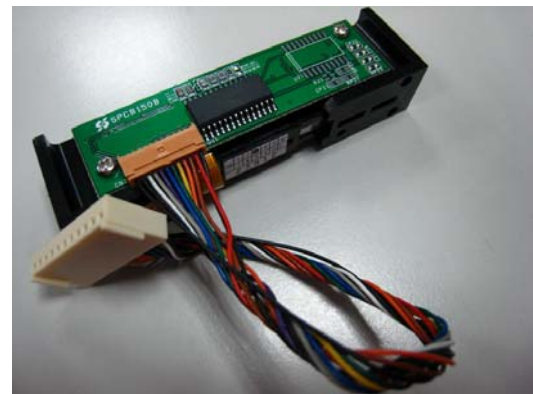


# ST90X Series

## TTL I/F Magnetic Card Reader

### Feature

- Low power consumption, CMOS for TTL interface
- ISO7811 conformance
- Data processing rate: 300 ~ 15,000 bps per track
- Widely operating voltage range 3.3V~5.5V
- Reading single, dual or triple track



### Specification

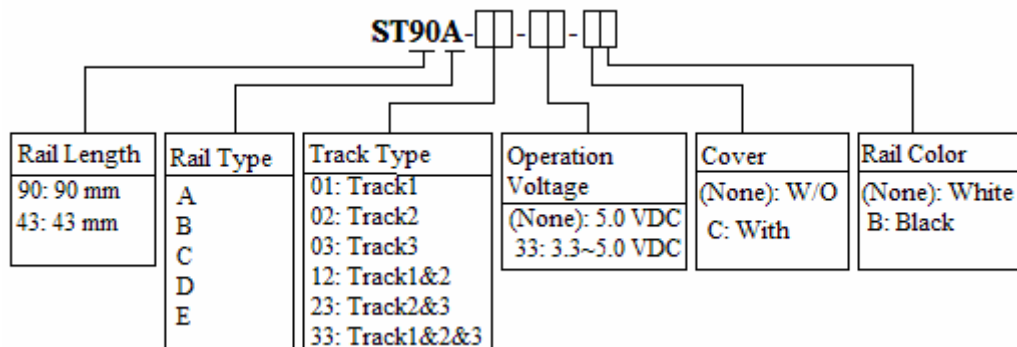
Item	Description		
Magnetic card standard	ISO 7811, UnionPay, credit card (Visa, Master)		
ST90A-XX	Single track	Dual track	Triple track
Max DC Current @ DC5V	3.5 mA	3.5 mA	5.5 mA
ST90A-XX-33	Single track	Dual track	Triple track
Max DC Current @ DC3.3V	1.5 mA	1.5 mA	3.5 mA
Connector	11 pin 2.54mm Molex		
Card operation speed	10 ~ 180 cm/sec		
Decoding method	F/2F		
Operation temperature	-10 ~ 50°C		
Lifetime of head	Approx. 300,000 times pass		
Cable length	15 cm		
Dimension (mm)	90 x 29 x 27		

### Guaranteed operating ranges

Symbol	Parameter	Min.	Typ.	Max.	Unit
Vcc	Supply Voltage	3.3	5	5.25	V
IoH	Output Current-High	—	—	-5	mA
IoL	Output Current-Low	—	—	6	mA

TA=25°C

### Model description

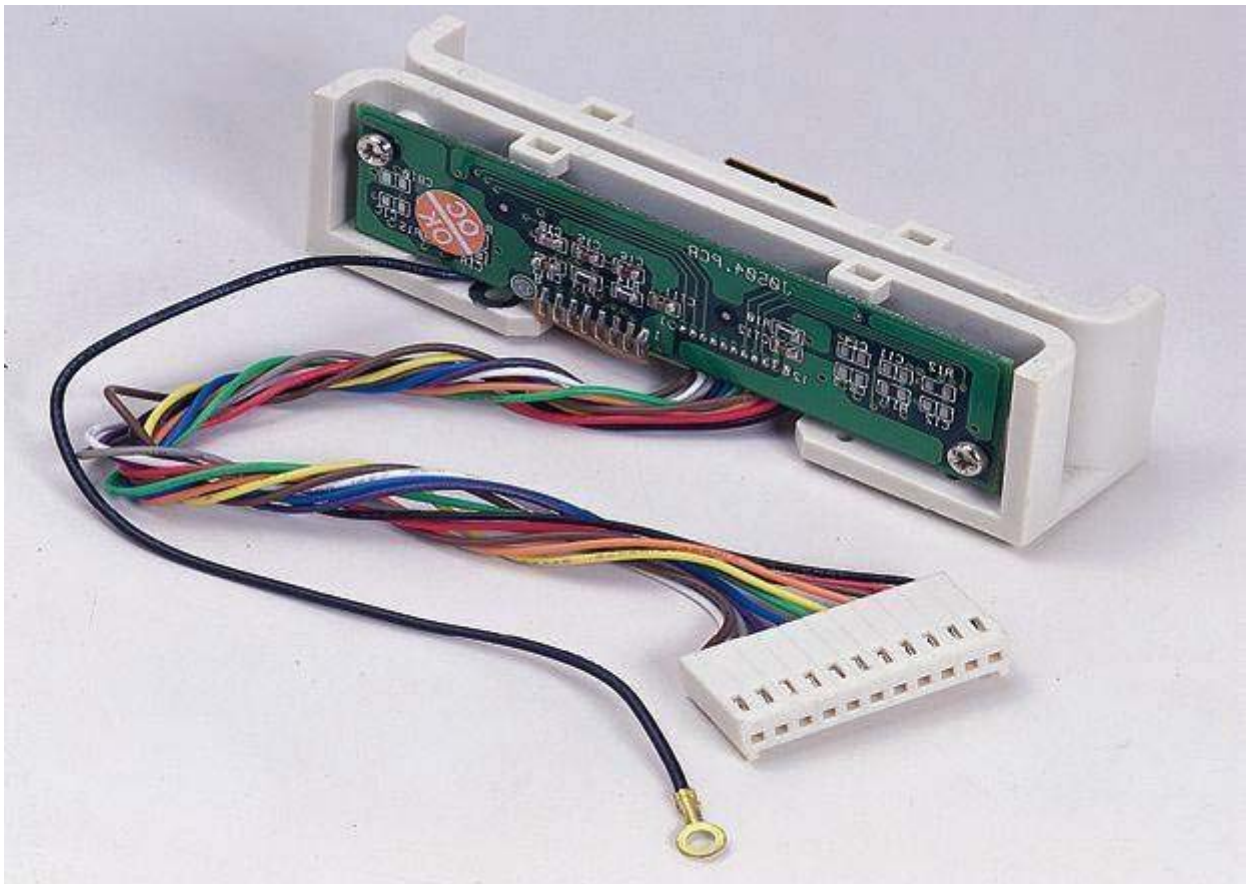
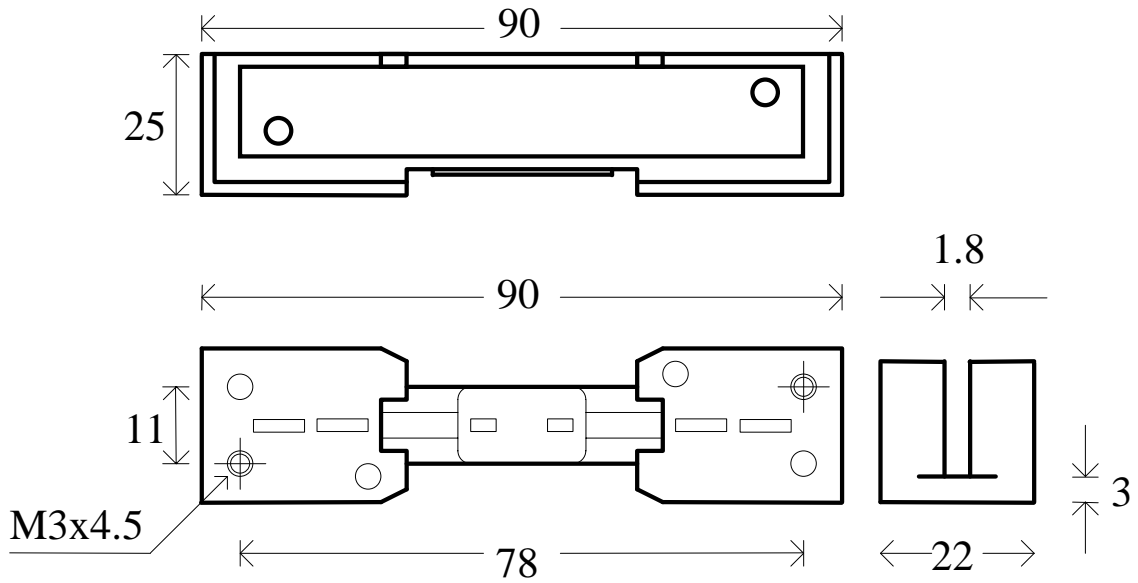


# ST90X Series

## TTL I/F Magnetic Card Reader

### Dimension 90A

- Without Cover

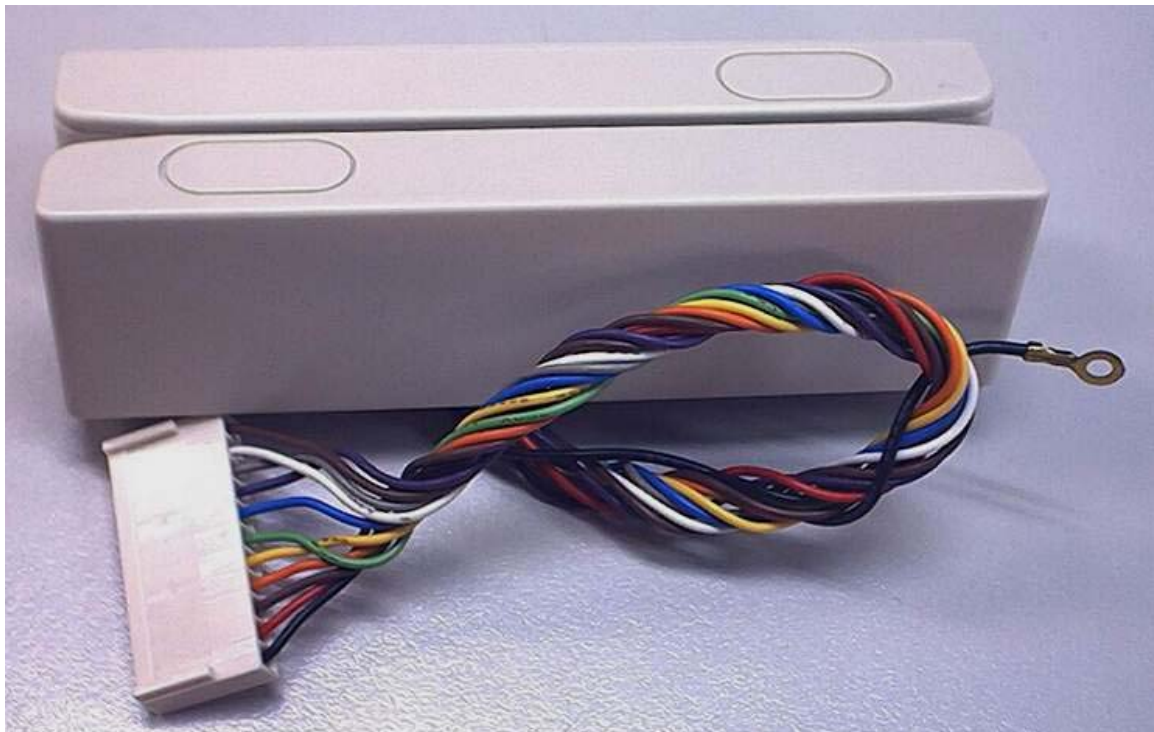
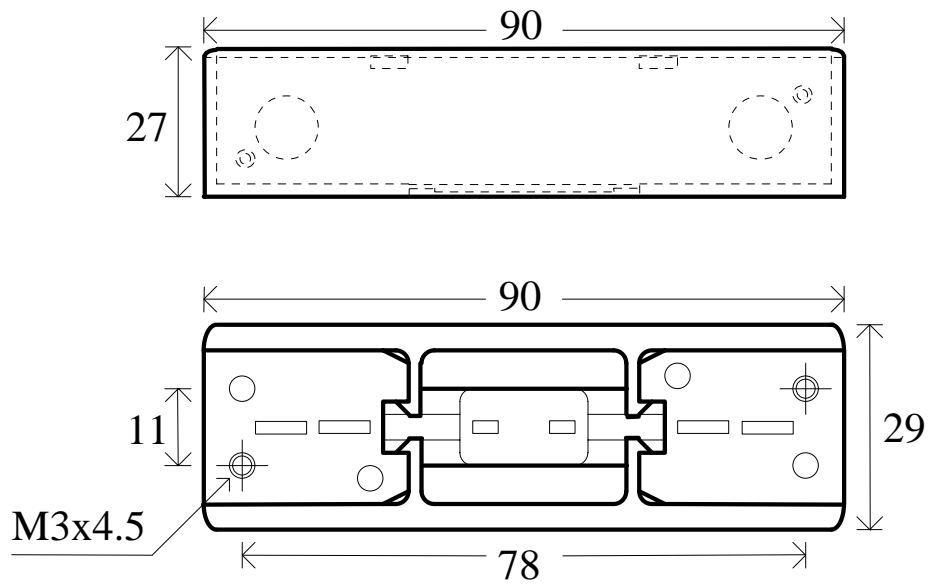


# ST90X Series

*TTL I/F Magnetic Card Reader*

## Dimension 90A

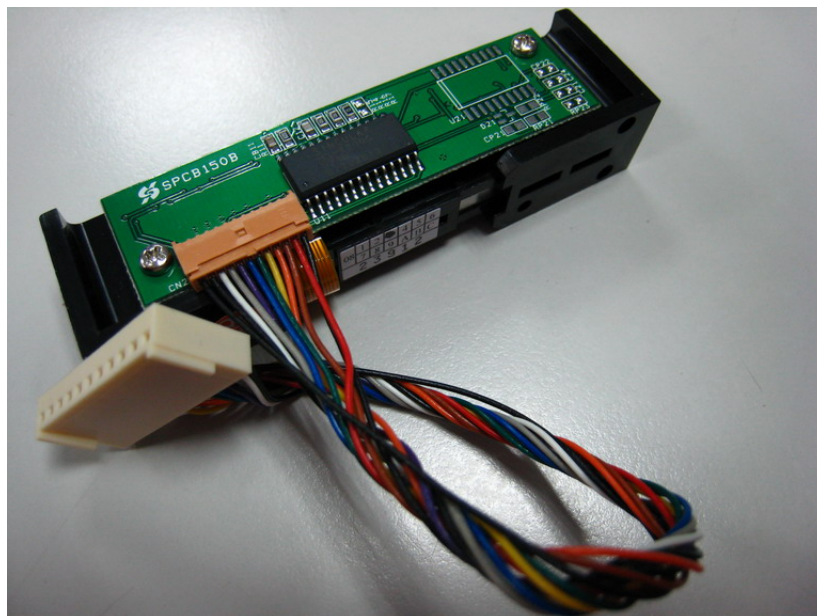
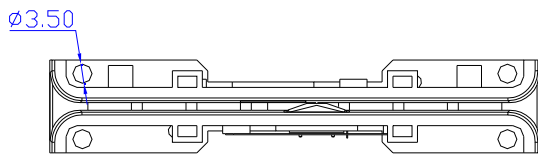
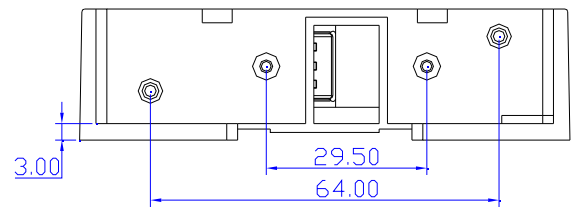
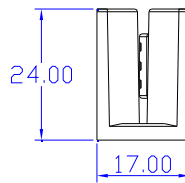
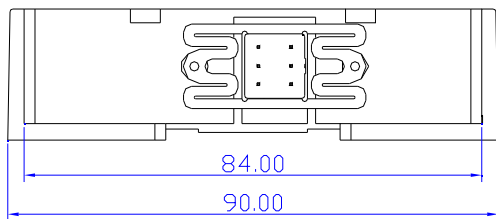
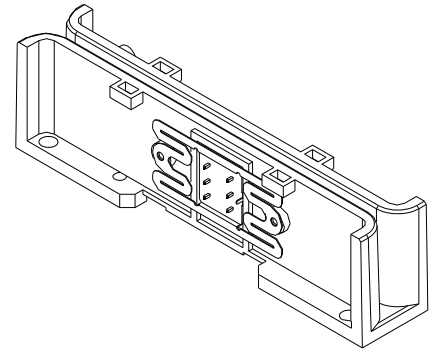
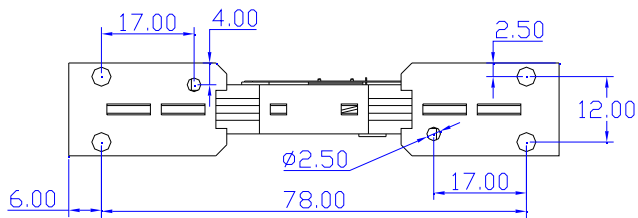
- With Cover



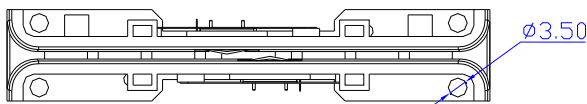
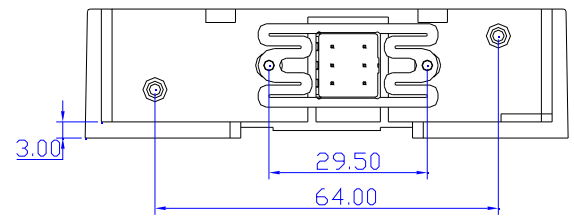
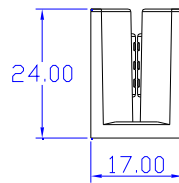
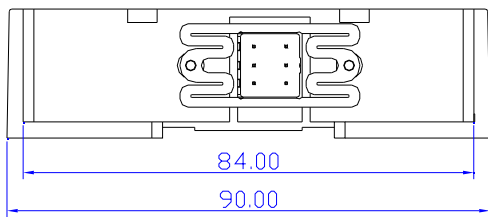
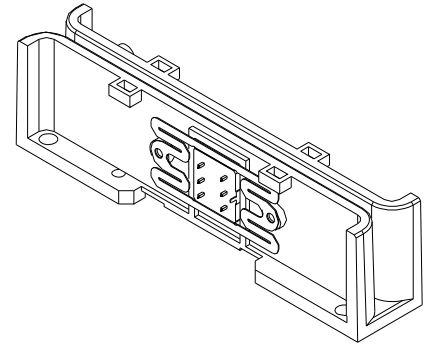
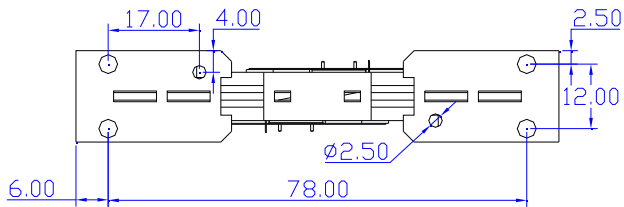
# ST90X Series

## TTL I/F Magnetic Card Reader

### Dimension 90D (single-side magnetic head without cover)



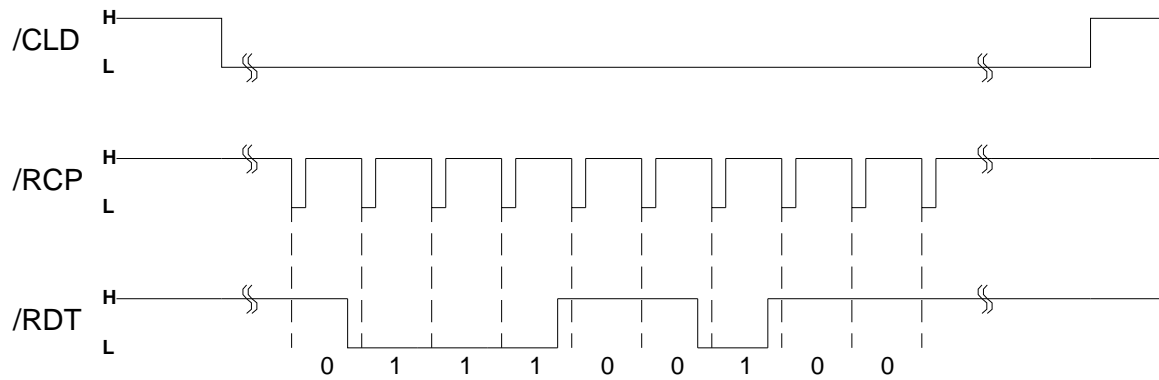
**Dimension 90E (dual-side magnetic head without cover)**



# ST90X Series

*TTL I/F Magnetic Card Reader*

## Timing

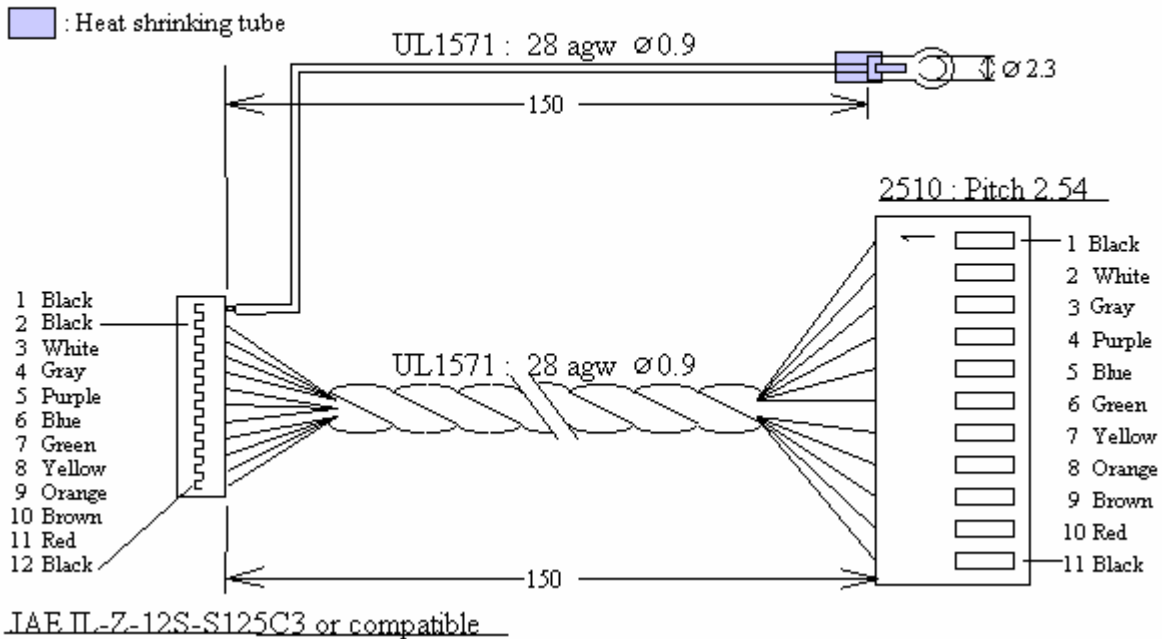


# ST90X Series

## TTL I/F Magnetic Card Reader

### Cable Specification

ST43-33



### Cable pin assignment

Pin NO.	Signal	Wire color	Function
1	/RCP3	Black	Track 3 clock
2	/RDT3	White	Track 3 data
3	/CLD3	Gray	Card load 3
4	/RCP2	Purple	Track 2 clock
5	/RDT2	Blue	Track 2 data
6	/CLD2	Green	Card load 2
7	/RCP1	Yellow	Track 1 clock
8	/RDT1	Orange	Track 1 data
9	/CLD1	Brown	Card load 1
10	VCC	Red	DC power supply
11	GND	Black	Power ground
CG	CGND	Black	Case ground

### Recommend header type

Housing type	SMT type header	Through hole type	
		Straight header	Right angle header
JAE IL-Z-03S-S125C3	JAE IL-Z-03PL-SMTY-E1500	JAE IL-Z-03P-S125T3-E	JAE IL-Z-03P-S125L3-E
JAE IL-Z-07S-S125C3	JAE IL-Z-07PL-SMTY-E1500	JAE IL-Z-07P-S125T3-E	JAE IL-Z-07P-S125L3-E
2510-11P		2520-11P-S	2520-11P-R