

# SB2230,2240 PHILIPS MIFARE READER/WRITER MODULE

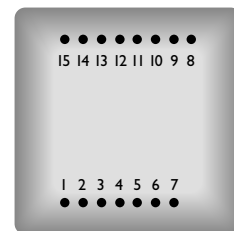
## SPECIFICATION

Item No.	SB2230	SB2240
<b>RFID Technology</b>	<b>Philips Mifare</b>	<b>Philips Mifare</b>
Operating Voltage	5VDC	5VDC
Operating Current	120mA	120mA
Operating Temperature	0°C to 70°C	0°C to 70°C
Operating Frequency	13.56MHz	13.56MHz
Reading Range	Int. ant. 2.5cm, Ext. ant. 8cm	Int. ant. 4.5cm, Ext. ant. 8cm
Read Card Reponse Time	less than 0.1sec	less than 0.1sec
Dimensions (mm)	29 x 29 x 11	40 x 40 x 11
Weight (gm)	5	7
ISO Standard	ISO14443A	ISO14443A
Communication setting	9600,8,1,N(Can be customerized)	9600,8,1,N(Can be customerized)

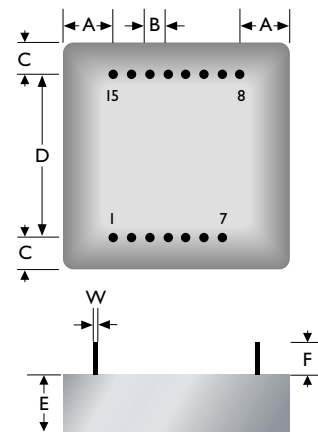
## PIN/SYMBOL/DESCRIPTION

SB2230/SB2240		
Pin	Symbol	Description
1	VCC	Power input 5VDC
2	RXD	RS232, receive from host
3	TXD	RS232, transit to host
4	P4	Select external antenna, connect P4 and P5
5	P5	Internal/External Antenna selector
6	P6	Select internal antenna, connect P5 and P6
7	ANT_COM	Internal/External Antenna common pin
8	GND	Ground
9	CP	Card Present (for ABA trackII purpose)
10	SEL1	Output select pin 1
11	SEL2	Output select pin 2
12	OPL	H/L output in normal, L/L output for card present. (Drive LED or buzzer)
13	OPH	L/L output in normal, H/L output for card present. (Drive LED or buzzer)
14	DI	Data output pin 1 - (Wiegand - Data 1, Magnetic ABA Track 2 - Data, Serial - RS232)
15	D0	Data output pin 2 - (Wiegand - Data 0, Magnetic ABA Track 2 - Clock, Serial - TTL (inverted))

## BOTTOM VIEW



## SB2230 PIN DIMENSIONS(mm)



## DATA OUTPUT FORMAT

SEL1	SEL2	SB2230/SB2240 Data Output Format		
		Protocol	Data Output Pin 1	Data Output Pin 2
0VDC	0VDC	Wiegand	Data 1	Data 0
0VDC	5VDC	Magnetic ABA Track 2	DATA	CLK
5VDC	0VDC	Serial	RS232	TTL (inverted)
5VDC	5VDC	RFU	RFU	RFU

	NORMAL	+/-
A	7.11	1.00
B	2.54	0.10
C	4.57	1.00
D	22.86	0.10
E	8.00	0.50
F	4.60	0.50
W	0.65	0.05

## EXTERNAL ANTENNA

- Antenna size should be 80mmx80mmx1mm
- 50Ω external antenna,Cable length : 200mm