



PROXIMITY MODULE (With antenna)

PIEM-EWS

Ver.18.1

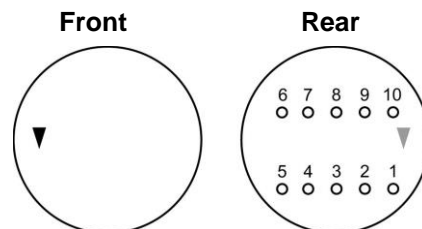
● FEATURES:

- 1.AM 125KHz contactless proximity reading module specially for EM cards,
- 2.Either Wiegand 26 or ASCII output determined by pin assignment
- 3.Read only for EM cards, and the data are sent by Data 0 and Data 1.
- 4.Lower cost with effective performance
- 5.Compact size
6. Including antenna

● SPECIFICATION:

Dimensions	26 (W) x 9 (H) mm
Transmitting Frequency	AM 125 KHz
Power Consumption	27mA(5V) nominal (with coil)
I/O	25mA sink/source
Operating Temperature	0°C ~ 60°C
Storage Temperature	0°C ~ 60°C
Storage Humidity	5~95% RH
Net Weight	9.2g

● Dimensions:



● PIN ASSIGNMENTS:

PIN	NAME	I/O	SYMBLE	MIN	TYP	MAX	DESCRIPTION
1	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---
3	DATA1	O	Vo-H Vo-L	Vcc-0.2V -	Vcc GND	Vcc+0.2V Vss+0.2V	Digital data output
4	DATA0	O	Vo-L Vo-H	Vcc-0.2V -	Vcc GND	Vcc+0.2V Vss+0.2V	Digital data output
5	WRITE	I					Low active
6	ASCII / WIEGAND	I					HI:ASCII LOW:Wiegand26
7	GLED	O	Vo-H Vo-L	Vcc-0.2V -	Vcc GND	Vcc+0.2V Vss+0.2V	High active
8	RLED	O	Vo-H Vo-L	Vcc-0.2V -	Vcc GND	Vcc+0.2V Vss+0.2V	Low active
9	VCC		Vcc	3.5V-	5V	5.25V	VCC
10	GND						Ground

● Data formats

RS232C(ASCII) Output

1. Data output format
 - a. 9600bps, N, 8, 1
 - b. PIN3:TX non-reverse output
 - c. PIN4:TX reverse output

- d. CHECKSUM: Using card 10 bytes DATA for XOR calculation

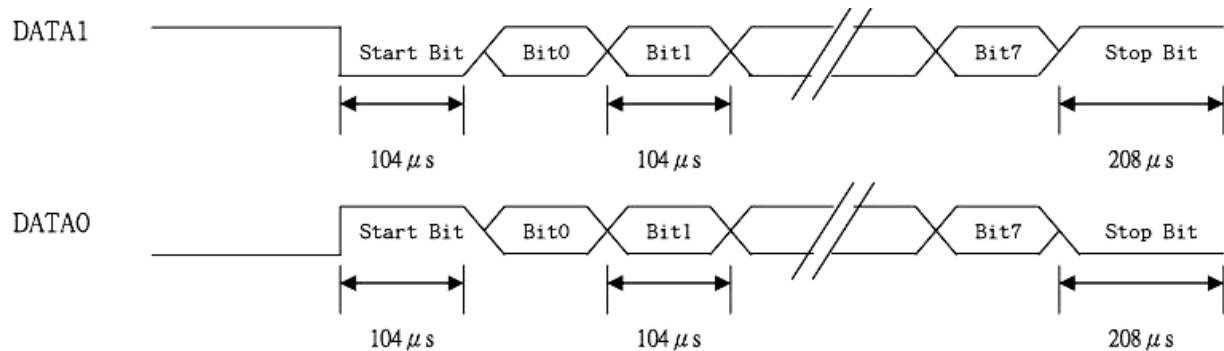
STX(02Hex)	CARD ID(10 ASCII)	CHECK SUM(2 ASCII)	ETX(03H)
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For example: card number : 62E3086CED

ASCII with check sum :36H, 32H, 45H, 33H, 30H, 38H, 36H, 43H, 45H, 44H

Check sum algorism :62(H) XOR (E3H) XOR (08H) XOR (6CH) XOR (EDH)=08H

2. Time period flow chart

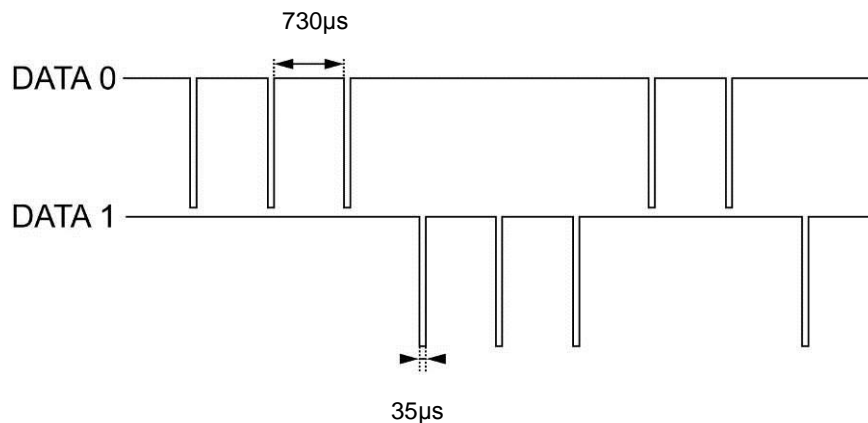


Wiegand 26 bits output format

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
P	E	E	E	E	E	E	E	E	E	E	E	E	O	O	O	O	O	O	O	O	O	O	O	O	P
Summed for even parity(E)													Summed for Odd parity(O)												

P=Starts Even parity bit and stop Odd parity bit.

Even parity "E" is generated by summing from bit2 to bit13; Odd parity "O" is generated by summing from bit14 to bit25.



● Application Wiring:

