



# RFID 125KHz Dual Decoding Read Module

## RFID 125KHz ASK/FSK Read Module

PIEH-FW-DBI

Ver.16.1

### ● Introduction

The 125KHz proximity reading module equipped with the **ASK / FSK** dual decoding circuits to read the both EM & H.I.D. contactless cards or tags into Wiegand formats. Additionally, we supported various module versions to answer different requirements, please refer to our products catalog.



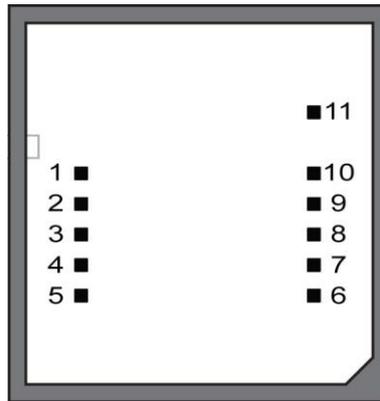
### ● Features

- 125KHz proximity dual decoding technologies reading for EM, TEMIC, H.I.D. cards at the same mode.
- Embedded with internal antenna or external bigger antenna at the same model.
- Epoxy potted for weather resistant with reliable quality.
- Compact size with high performance.
- Ease system design for access control, fingerprint, mobile handheld device etc.

### ● Specification

Type	EM	H.I.D.
Dimensions	26 (L) x 25 (W) x 7 (H) mm	
Net weight	7g ± 5%	
Enclosure material	ABS	
Card	EM 4001, EM 4102 or compatible / TEMIC 5557	H.I.D., TEMIC 5557
Operation frequency	125KHz, ASK	125KHz, FSK
Reading range	Proximity card (T)0.8mm: Max.7cm	Proximity card (T)0.8mm: Max.2.5cm
	Proximity card (T)1.8mm: Max.8cm	Proximity card (T)1.8mm: Max.3.5cm
Output format	Wiegand 26~40 bits	
Power requirements	5VDC @ 24mA nominal	
Operating temperature	-10°C ~ 75°C	
Storage temperature	-20°C ~ 85°C	

- **Bottom view**



- **Pin assignments**

Pin No.	Description	Wiegand
Pin 1	Zero Volts and Tuning Capacitor Ground	GND 0V
Pin 2	Reset	Strap to GND
Pin 3	To External Antenna and Tuning Capacitor	Antenna
Pin 4	To External Antenna	Antenna
Pin 5	Card Present output	No function
Pin 6	Future	Future
Pin 7	Format Selector(+/-)	No function
Pin 8	Data 1	One Output*
Pin 9	Data 0	Zero Output*
Pin 10	3.1 kHz Logic	Beeper/LED
Pin 11	DC Voltage Supply	+5V

- **Data formats**

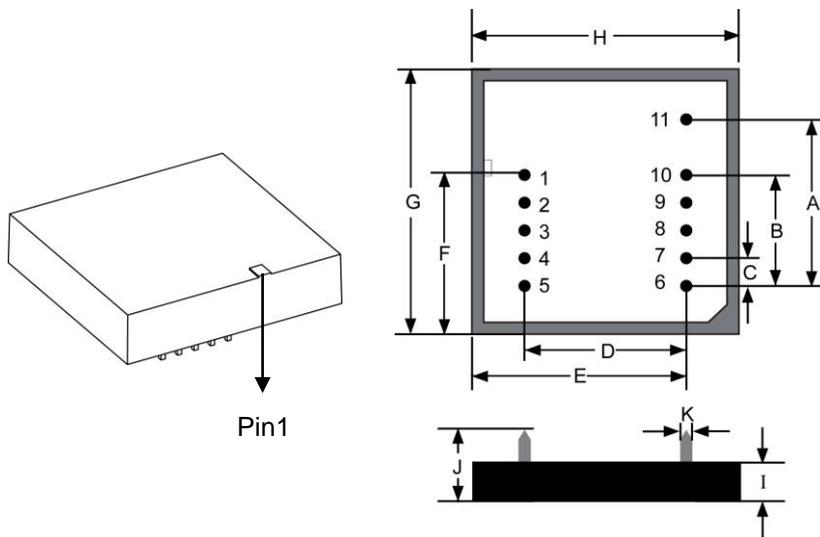
**Wiegand 26 bits output format**

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	O	P
Summed for even parity(E)													Summed for Odd parity(O)													

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

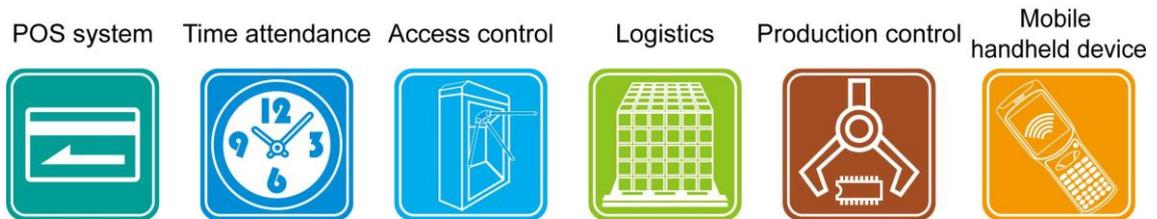
Even parity "E" is generated by summing bit b1 until b12; Odd parity "O" is generated by summing bit b13 until b24.

● Dimension: Unit: mm[inch]



	Min	Nom.	Max.
A	11.6	12.0	12.4
B	7.6	8.0	8.4
C	1.8	2.0	2.2
D	14.6	15.0	15.4
E	19.8	20.3	20.9
F	15.8	16.3	16.9
G	26.1	26.4	27.1
H	24.9	25.3	25.9
I	5.8	6.0	6.6
J	9.40	9.9	10.5
K	0.62	0.66	0.67

● Application fields



Specifications subject to change without notice for further modification.