RM10C EM Reader Module

Description : Bulit-in "I am alive" features EM reader module

Operational and Physical Characteristics :

Parameters	RM10C
Read Range	> 6 cm
Dimensions	26mm*25mm*7mm
Frequency	125kHz
Card Format	EM 4001 or compatible
Encoding	Manchester 64-bit,modulus 64
Power Requirement	5 VDC @ 60mA nominal
Voltage Supply Range	+4.6V through +5.4V

Pin Description & Output Data Formats :

Pin No.	Description	ASCII	Wiegand26
Pin 1	Zero Volts and Tuning Capacitor Ground	GND 0V	GND 0V
Pin 2	NA	NA	NA
Pin 3	To External Antenna and tuning Capacitor	Antenna	Antenna
Pin 4	To External Antenna	Antenna	Antenna
Pin 5	Format Select (+/-)	Strap to GND	Strap to +5V
Pin 6	Data 1	CMOS	One Output
Pin 7	Data 0	TTL Data(inverted)	Zero Output
Pin 8	2.7kHz logic	Beeper/LED	Beeper/LED
Pin 9	DC Voltage Supply	+5V	+5V

Data Format :

Output Format - ASCII

02	10 Bytes CSN in ASCII format	2 bytes Checksum in ASCII format	CR	LF	03

eg. EM Card serial no. (CSN) is in 40 bits. Four bits as a Hex code, total 10 Hex codes. If the EM CSN is (Hex) 12 34 56 78 9A, then check sum equal to 12 XOR 34 XOR 56 XOR 78 XOR 9A = (Hex) 92

Then output data shall be 02 31 32 33 34 35 36 37 38 39 41 39 32 0D 0A 03, total 16 bytes data.

Output format – 26 bits wiegand, P=Parity Start Bit and Stop Bit

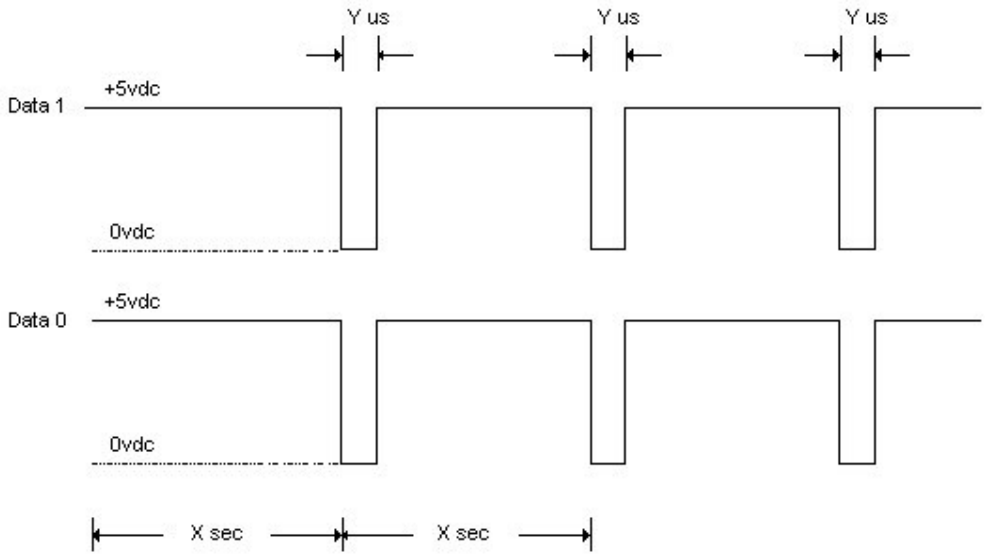
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
P	E	E	E	E	E	E	E	E	E	E	E	E	O	O	O	O	O	O	O	O	O	O	O	O	P
EVEN Parity (E)													ODD Parity (O)												

Pulse width : 60us (+/- 20us) , pulse interval : 2ms (+/- 0.2ms)

I am alive

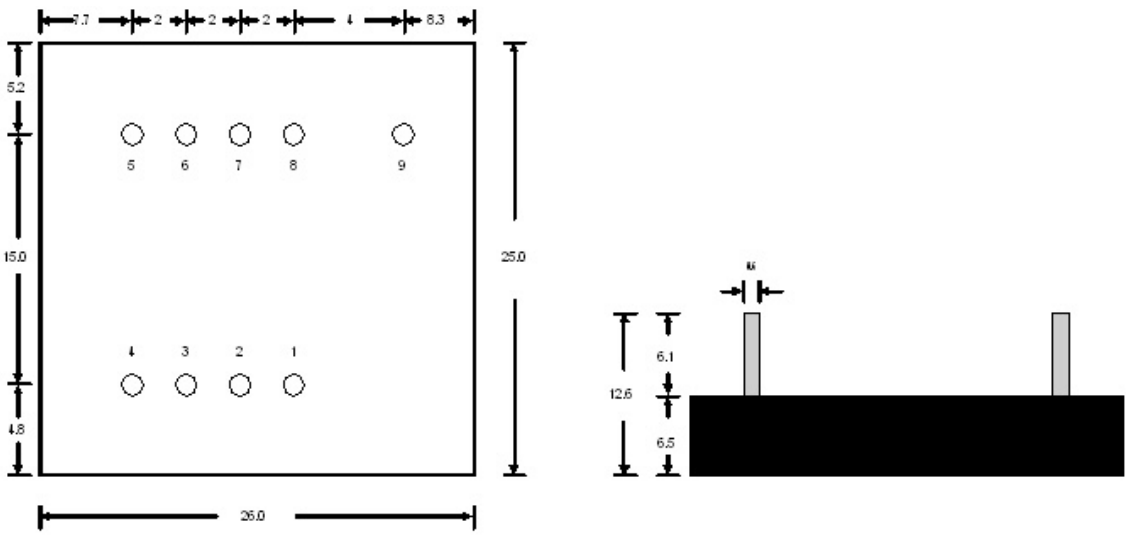
This signal is output through Data 0 & Data 1 in wiegand format. It can let Panel / Host know the device is still alive.

Both “Data 1” and “Data 0” lines sit at 0vdc. X default is **20** seconds Y default is 50us.



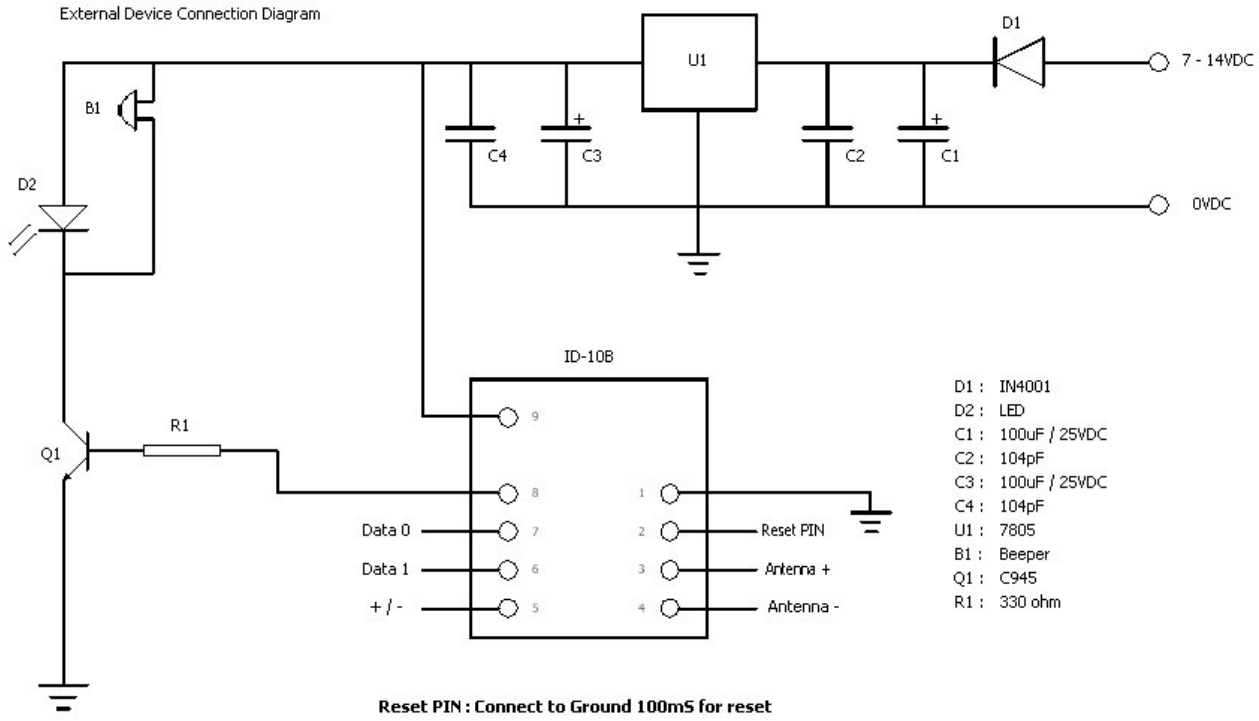
For RS232 output, the TX line will generate a serial data 0x02 + 0xA5 for every **20** seconds.

Dimensions :



EM Module Dimensions (mm)

Remark : Not in Scale, +/- 0.5 mm



Reset PIN : Connect to Ground 100mS for reset