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APPLICATION GUIDE

Version 1.0

(Hybrid Reader/Writer)
SMART CARD READER/WRITER
MAGNETIC STRITE READER

MODEL : 3913-0

ISO-1/2/3 READ ONLY
ISO-7816 READER/WRITER



SEMTEK Corporation

4217 PONDEROSA AVE. Suite A San Diego, CA 92123 – (858) 278-6003 fax (858)-278-6004

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1. General Information

This Magnetic stripe and IC card reader are used for public phone with manual insertion type. Users can insert/extract the card directly manually. This card reader can be applied to credit card, debit card, and prepaid IC card. Hardware equipment is composed of Read-only magnetic head for reading the data described on magnetic stripe and Decoder IC for dividing the reading data into clock and data. When using IC card, 8 pin IC contact connected with IC card chip can communicate with MCU. Available card type is ISO-1/2/3 track of ISO-7810, 11, 12 and IC card of ISO-7816.

2. Features

- 2.1. 8 pin IC contact is plated with gold for stable contact. It contacts exactly according to the insert location after sliding at the contact point.
- 2.2 This product needs low power consumption and low current consumption. It has both standby mode and operating mode.

3. Environmental Requirement

- 3.1. Operating Temperature & Humidity : -10 to 50 C, 20 ~ 90% RH
- 3.2. Conservation Temperature & Humidity: : -30 to 70 C, less than 95% RH
- 3.3 Vibration : Amplitude 2mm,
10~50Hz/min. X,Y,Z directions
- 3.4. Shock : Up to 30G. 11msec

4. Specification

- 4.1. Card Standard : ISO-7810,11,12, ISO-7816
- 4.2. Magnetic Recording Method : F2F (FM)
- 4.3 Recording Density : ISO – 1/2/3
- 4.4 Recording Capacity : 40Cha. (5bit)
- 4.5. Card Thickness : 0.76 ± 0.08mm
- 4.6. Supplying Voltage : +5VDC ± 5%
- 4.7. Power Consumption : 1.5mA(typ.) Stand-by
6mA(typ.) Reading
- 4.8. Ripple : 100mAp-p
- 4.9. IC Contact Resistance : 0.5ohm (max.)
- 4.11. Card Feeding Speed : 10 ~ 150 cm/sec
- 4.12 Head Lifetime : 400,000 Round Trips
- 4.13 IC Contact Lifetime : 700,000 Contact
- 4.14. Permissible Card Warp : 3mm (max.)

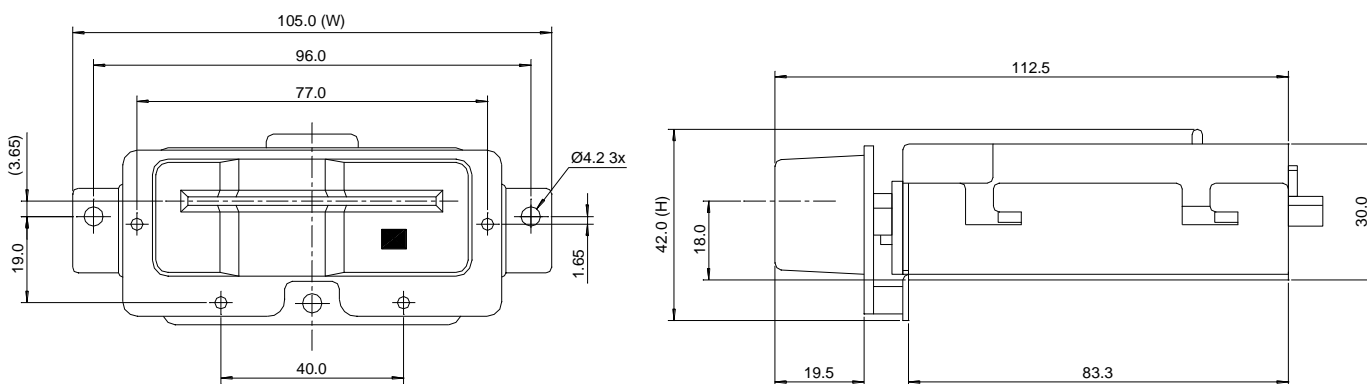
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5. Interface

Pin No.	Pin Name	Description	Input/output
1.	VCC	Power Supply (IC)	Input
2.	RST	Reset Signal (IC)	Input
3.	CLK1	External Clock (IC)	Input
4.	REF1	Not Defined (IC)	-
5.	GND	Ground (IC)	-
6.	VPP	Programming Power Supply (IC)	Input
7.	I/O	Serial Data Input/Output	Input/output
8.	REF2	Not Defined (IC)	-
9.	P1	Card Detection And Power Switch	Output
10.	RDD3	Read Data Signal (Magnetic)	Output
11.	+5V	Card Reader Power Supply	Input
12.	RCP3	Read Clock Signal (Magnetic)	Output
13.	RDD1	Read Data Signal (Magnetic)	Output
14.	RCP1	Read Clock Signal (Magnetic)	Output
15.	RDD2	Read Data Signal (Magnetic)	Output
16.	RCP2	Read Clock Signal (Magnetic)	Output
17.	GND	Ground (Card Reader)	-
18.	STATUS	Card Lock Detect Signal	Output
19.	+5V	Open (Option)	-
20.	CPD1+2+3	Card Present Detect Signal (Magnetic)	Output

6. Out Voltage Level

- 6.1. High Level : 3.5V (Ioh=6mA)
- 6.2. Low Level : 0.4V (Iol=6mA)
- 6.3. Voltage and Ripple : +5VDC(3.0V ~ 5.5V), Less than 50mV p-p.



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7. Timing Chart

