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# Hybrid(Mag. & IC) Card Reader

## KYL - 73XX Series

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### Overview

IC Card reader KYL-73XX Series is used for public phone, Kiosk, POS, or other applications with manual insertion type. This specification describes the electrical, operational and mechanical requirements of the model KYL-73XX. KYL-73XX is for reading and writing electrically to IC card and reading Magnetic card that conforms to ISO-7816, ISO-7811/2.

### Features

8pin IC contact is plated with gold for stable contact. 8pins make secure contact with IC card chip after the pins land on surface of IC chip as card is fully inserted.

### Ordering

K Y X - 7 3 X X X X

INTERFACE	FUNCTION	BODY	TRACK	OPTION	BEZEL & EJECT SPEC	OPTION II
T: RS-232C L: TTL	7: MANUAL INSERTION MS/IC CARD READER	0: - 3: STANDARD BASE	0: - 1: ISO 1 TRK 2: ISO 2 TRK 3: ISO 3 TRK 4: ISO 1,2 TRK 5: ISO 1,3 TRK 6: ISO 2,3 TRK 7: ISO 1,2,3 TRK	0: WITHOUT IC 1: WITH IC 2: WITH SHUTTER 3: IC+SHUTTER 4: IC+SAM 5: IC+SAM+ SHUTTER 6: WITH SAM 7: SAM+SHUTTER	M: AUTO EJECT & METAL BEZEL P: AUTO EJECT & PLASTIC BEZEL A: AUTO & MANUAL EJECT + METAL BEZEL B: AUTO & MANUAL EJECT + PLASTIC BEZEL C: MANUAL EJECT & METAL BEZEL D: MANUAL EJECT & PLASTIC BEZEL	R: RS-232C & RTS,CTS 제외

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### Environmental Requirements

Operating Temperature & Humidity	0 ~ 50°C., 20 ~ 90 % RH
Conservation temperature and humidity	-30 ~ 70°C., Less than 95%RH

### Specification

Card standard	ISO 7811/2, ISO 7816
Weight	70g(max)
Card Thickness	0.76 ± 0.08mm
Supplying Voltage	+12V DC ±5%
Max Current	600Ma
Total Logic Current	20Ma
Solenoid operation Current	580Ma
Life Cycle	500,000 cycles(Magnetic head & IC contacts)
Mounting Style	Horizontal Mounting is recommended

### Interface

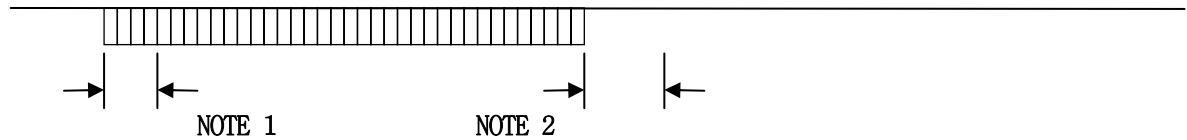
#### HEADER (10x2/SM Right angle) : Standard SPEC

PIN No.	Pin Name	Description	Operating	Input/output
1	RST	Reset	High Active (min.≥50us)	Input
2	DETECT SW1	Card Input Check(Front)		Output
3	CLK	Clock(Default:External)		Input
4	IC_POWER	IC_POWER		Input
5	REF1	Reserved		
6	CARD_CHK12	Card Present Detect		Output(/CPD)
7	I/O	Input/Output		Input/Output
8	READ DATA1	Read Data		Output(/RDD)
9	REF2	Reserved		
10	READ CLK1	Read Clock Pulse		Output(/RCP)
11	DETECT SW2	Card In Check(Rear)		Output
12	READ DATA2	Read Data		Output(/RDD)
13	SYNC/ASYNC_DIR	SYNC/ASYNC Select		Input
14	READ CLK2	Read Clock Pulse		Output(/RCP)
15	SOL	Solenoid	Low active	Input
16	CARD_CHK3	Card Present Detect		Output(/CPD)
17	+12V	Card Reader Power Supply		Input
18	READ DATA3	Read Data		Output(/RDD)
19	GND	Ground		Input
20	READ CLK3	Read Clock Pulse		Output(/RCP)

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**SIGNAL TIMING DIAGRAM**

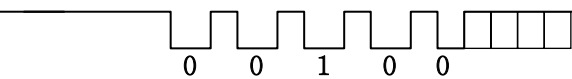
**/F2F**



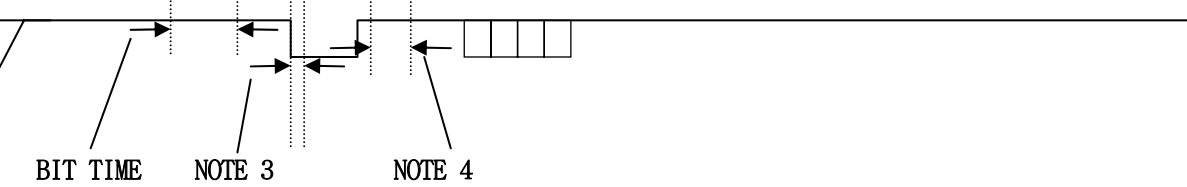
**/CPD**



**/RCP**



**/RDD**



**NOTE:**

1. 8 or 9 head flux reversal for low density configuration.
2. TIMEOUT of the CPD signal occurs approx. 25mSec. After last Head Signal transition.
3. The RDD is valid at 1.4  $\mu$ Sec(min.) before the negative edge of the RCP.
4. The Low pulse width of RCP is approx. 70% of the bit time.

**/RDD**

The Data signal is valid while the RCP is low. If the RDD Signal is high, the bit is zero(0), and if low, the bit is one(1).

**/RCP**

The RCP signal indicates that RDD is valid. The RDD Should be loaded by the user when the RCP signal goes low. (Negative edge)

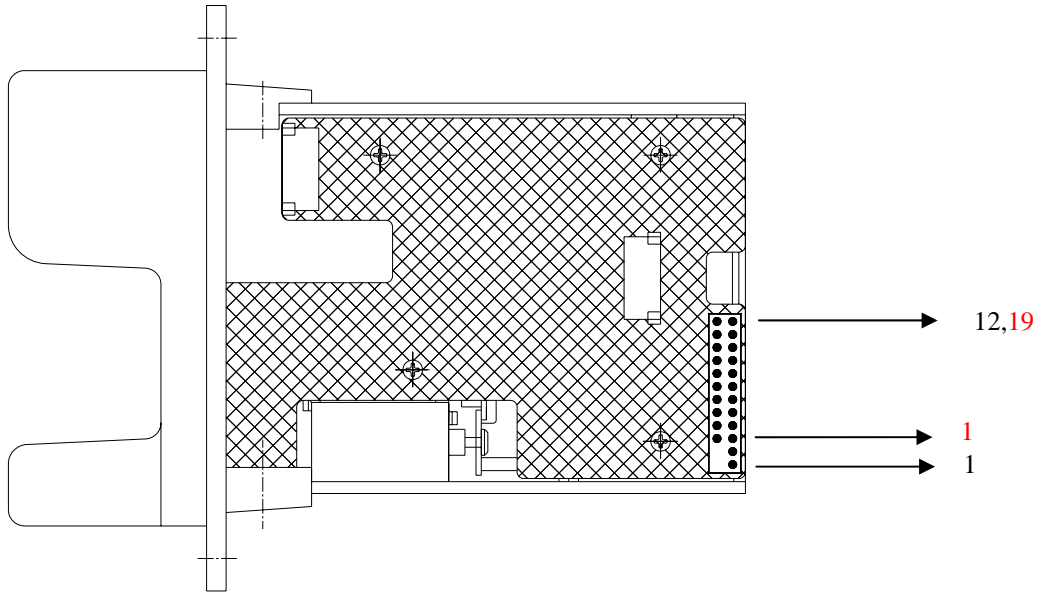
**/CPD**

Card Present will go low after the 8 or 9th flux reversal and it will return high when the 25mSec Approx. was elapsed.

When no card is being moved through the unit, the RDD, RCP and CPD signals stay high.

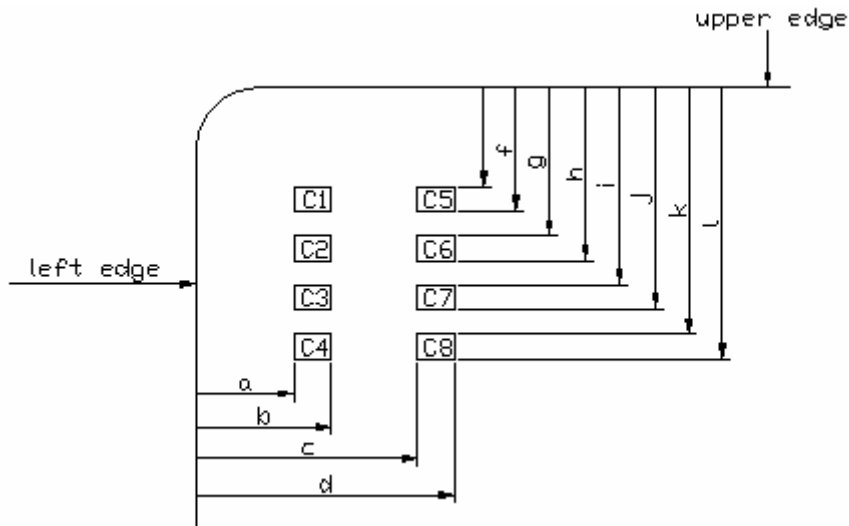
- GREEN LED : IC CONTACT POWER(If power is supplied into IC card, The Green Led is On)

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TOP VIEW

IC Contact Location(ISO 7816-2)



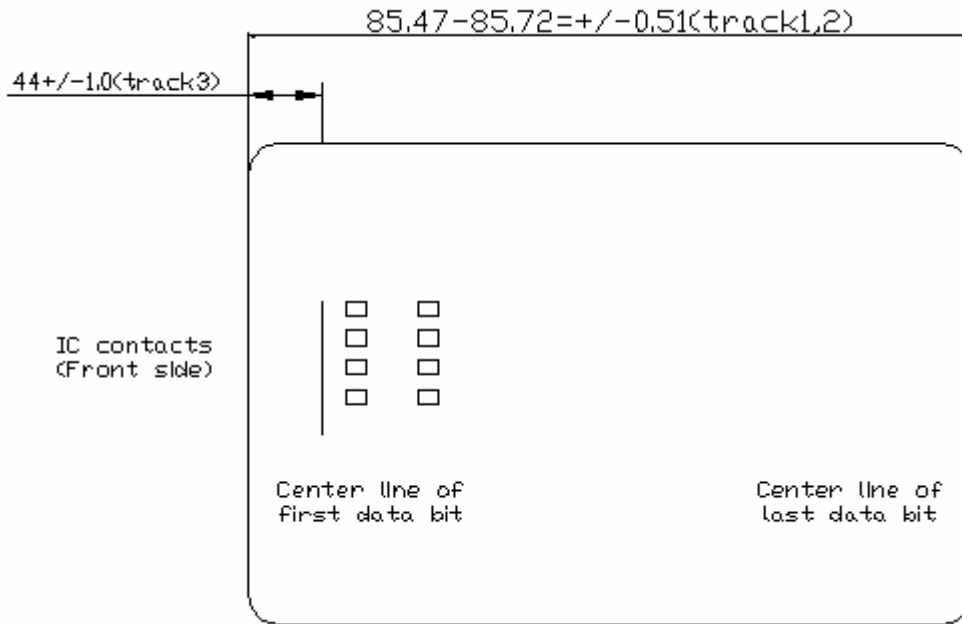
Card

(Transitional contacts location)

A = 10.25 max	G = 21.77 max
B = 12.25 min	H = 23.47 min
C = 17.87 max	I = 24.31 max
D = 19.87 min	J = 26.01 min
E = 19.23 max	K = 26.85 max
F = 20.93 min	L = 28.55 min

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Specification



Opt in

Interface

PIN No.	Pin Name	Description	Operating	Input/output
1	DETECT SW1	Card Input Check(Front)		Output
2	IC_POWER	IC_POWER		Input
3	RST	Reset	High Active (min.≥50us)	Input
4	CLK	Clock(Default:External)		Input
5	REF1	Reserved		
6	I/O	Input/Output		Input/Output
7	REF2	Reserved		
8	DETECT SW2	Card In Check(Rear)		Output
9	SYNC/ASYNC_DIR	SYNC/ASYNC Select		Input
10	SOL	Solenoid	Low active	Input
11	+12V	Card Reader Power Supply		Input
12	GND	Ground		Input

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Dimensions

KYT-73XX DIMENSIONS

