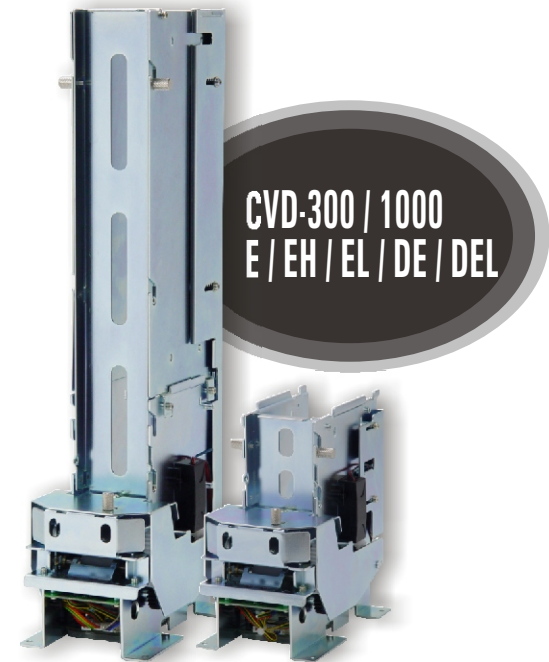




Card Vending Dispenser

Installation Guide



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1. Introduction:

1-1. Overview

CVD-300/1000 Series is a card vending dispenser which is based on the design of CVD-300/1000 but features low level sensor function with Standard type or Drop type as a reliable card dispenser which is able to work steadily in fast card dispensing time to approx. 1 second per card.

1-2. Features

- Low Level Sensor Function. (Optional)
- Easy Cards Filling.
- Pulse, Hopper and RS-232 Interface Available.
- 12V and 24V Acceptable.
- Card Capacity Available from 300 Cards to 1000 Cards.
- Standard Type and Drop Type Card Dispenser Available.

2. Specifications:

CVD

Common

Card Dispensing Time

Approx. 1 seconds

Installation

Indoor

Electrical

Power Source

12V DC $\pm$ 5%

24V DC $\pm$ 5%

Interface

Hopper, Pulse, RS232

Operation Environment

Operation Temperature: -10°C~+40°C

Humidity: 30%~90%(non-condensation)

Power Consumption

Maximum : 12V DC	2.4A	Standby : 12V DC	450mA
24V DC	1.6A	24V DC	300mA

Mechanical

Dispensing Way

Standard Type: (CVD-300 E/ 300 EL/ 300 EH) (CVD-1000 E/ 1000 EL/ 1000 EH)
Card will be held in slot when dispensing.

Drop Type : (CVD-300 DE/ 300 DEL) (CVD-1000 DE/ 1000 DEL)
Card will be dropped out from slot when dispensing.

Applicable Cards

Material: Plastic, Paper Cards

Size: Thickness...0.2~1.0mm(max.)

Width.....53~58 $\pm$ 0.5mm

Length.....76~90 $\pm$ 0.5mm

Card Capacity

CVD- 300 Series...Approx. 300 Cards

CVD-1000 Series...Approx.1000 Cards

(a card thickness of 0.2mm)

Outline Dimension

Standard Type: see page.3

Drop Type : see Page.4

Weight

CVD- 300 Series....Approx.1.9kg

CVD-1000 Series....Approx.3.2kg

Install Angle

Vertical

3. Packing List:

Main

Card Vending Dispenser

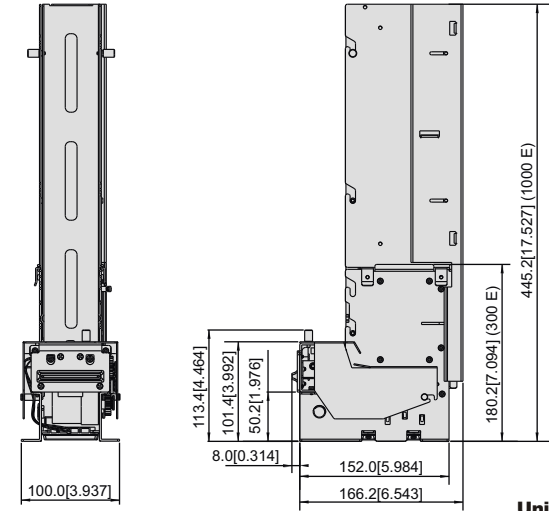
Accessory

CVD- 300/ 1000 Series Installation Guide
Harness: see 5-1

4. Dimensions:

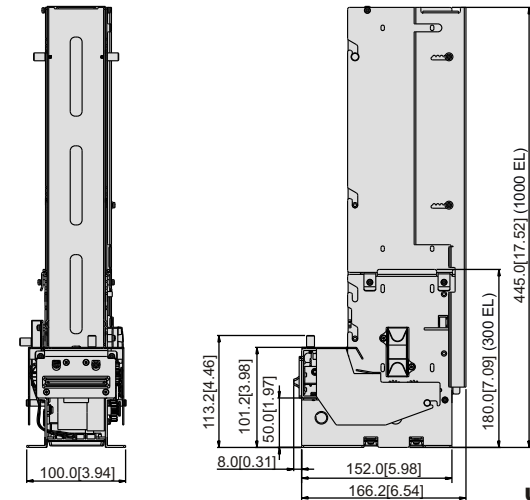
► Standard Type

CVD-300 E / 1000 E, CVD-300 EH/ 1000EH



Unit : mm [inch]

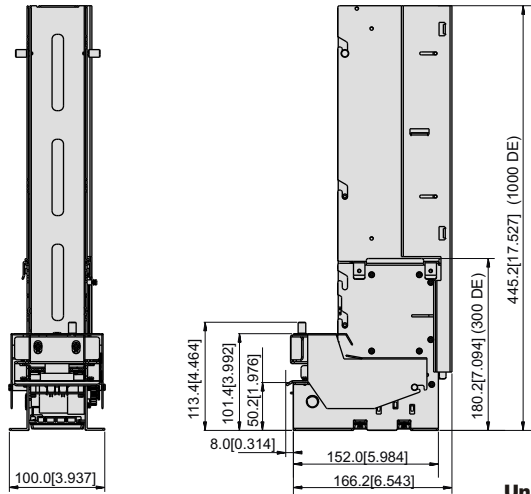
CVD-300 EL / 1000 EL (Low Level)



Unit : mm [inch]

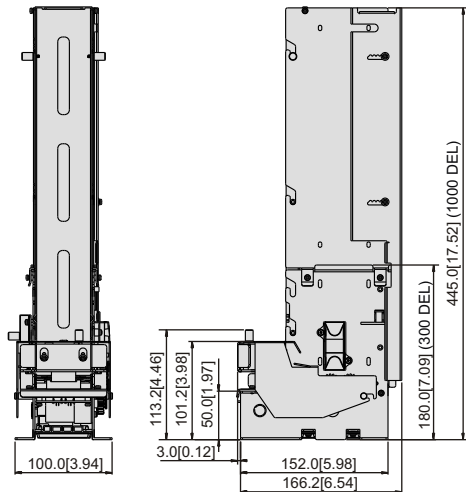
► Drop Type

CVD-300 DE / 1000 DE



Unit : mm [inch]

CVD-300 DEL / 1000 DEL (Low Level)

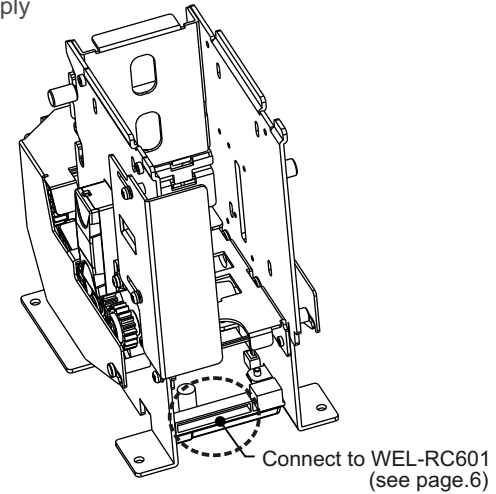


Unit : mm [inch]

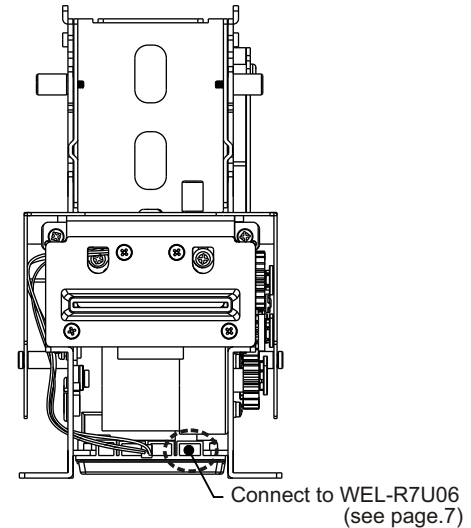
5. Installation:

5-1. Harness Application

Power Supply

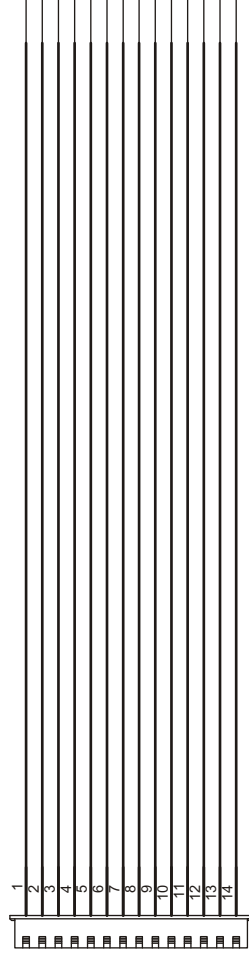


RS232 Only



WEL-RC601

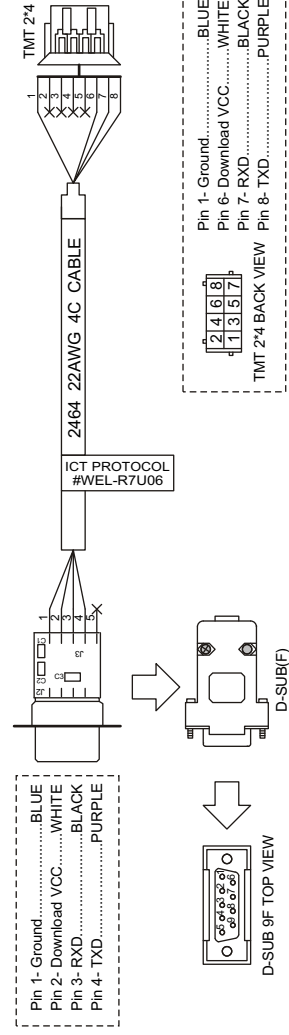
XH-14P(2.5mm)



PIN 1- GND.....	BLACK	PIN 8- OUTPUT SIGNAL.....	BLUE
PIN 2- +24V.....	ORANGE	PIN 9- VCC.....	PURPLE
PIN 3- GND.....	BLACK	PIN 10- OUTPUT SIGNAL.....	GRAY
PIN 4- CARD_DATA.....	BROWN	PIN 11- VCC.....	WHITE
PIN 5- CARD_RESET.....	YELLOW	PIN 12- EMPTY_O.....	PINK
PIN 6- GND.....	BLACK	PIN 13- GND.....	BLACK
PIN 7- VCC.....	GREEN	PIN 14- +12V.....	RED

CVD

WEL-R7U06



CVD



5-1-1. Pin Assignment

❖ Pulse/ Hopper Signal Mode

<For E/DE models only>

Pin	Assign	Function		Harness Color (WEL-RC601)
1	CN_ 1	POWER SUPPLY	GND	BLACK
2	CN_ 2	POWER SUPPLY(option)	+24V	ORANGE
3	CN_ 3	POWER SUPPLY	GND	BLACK
4	CN_ 4	CARD_DATA	Input signal controller	BROWN
5	CN_ 5	CARD_RESET	Input signal controller	YELLOW
6	CN_ 6	POWER SUPPLY	GND	BLACK
7	CN_ 7	VCC	Ouput DC+5V	GREEN
8	CN_ 8	BUSY_O (for E models only)	Ouput signal controller	BLUE
		READY_O (for DE models only)		
9	CN_ 9	VCC	Ouput DC+5V	PURPLE
10	CN_ 10	READY_O (for E models only)	Ouput signal controller	GRAY
		BUSY_O (for DE models only)		
11	CN_ 11	VCC	Ouput DC+5V	WHITE
12	CN_ 12	ERROR_O AND EMPTY_O	Ouput signal controller	PINK
13	CN_ 13	POWER SUPPLY	GND	BLACK
14	CN_ 14	POWER SUPPLY(option)	+12V	RED

❖ Can be selected +12V or +24V.

<For EH models only>

Pin	Assign	Function		Harness Color (WEL-RC601)
1	CN_ 1	POWER SUPPLY	GND	BLACK
2	CN_ 2	POWER SUPPLY(option)	+24V	ORANGE
3	CN_ 3	POWER SUPPLY	GND	BLACK
4	CN_ 4	CARD_DATA	Dispensing signal	BROWN
5	CN_ 5	CARD_RESET	Input signal controller	YELLOW
6	CN_ 6	POWER SUPPLY	GND	BLACK
7	CN_ 7	VCC	Ouput DC+5V	GREEN
8	CN_ 8	CREDIT	Ouput signal controller	BLUE
9	CN_ 9	VCC	Ouput DC+5V	PURPLE
10	CN_ 10	N/A	N/A	GRAY
11	CN_ 11	VCC	Ouput DC+5V	WHITE
12	CN_ 12	ERROR_O AND EMPTY_O	Ouput signal controller	PINK
13	CN_ 13	POWER SUPPLY	GND	BLACK
14	CN_ 14	POWER SUPPLY(option)	+12V	RED

❖ Can be selected +12V or +24V.

<For EL/DEL models only>

Pin	Assign	Function		Harness Color (WEL-RC601)
1	CN_ 1	POWER SUPPLY	GND	BLACK
2	CN_ 2	POWER SUPPLY(option)	+24V	ORANGE
3	CN_ 3	POWER SUPPLY	GND	BLACK
4	CN_ 4	CARD_DATA	Dispensing signal	BROWN
5	CN_ 5	CARD_RESET	Input signal controller	YELLOW
6	CN_ 6	POWER SUPPLY	GND	BLACK
7	CN_ 7	VCC	Ouput DC+5V	GREEN
8	CN_ 8	CREDIT	Ouput signal controller	BLUE
9	CN_ 9	VCC	Ouput DC+5V	PURPLE
10	CN_ 10	LOW LEVEL SIGNAL	Ouput signal controller	GRAY
11	CN_ 11	VCC	Ouput DC+5V	WHITE
12	CN_ 12	ERROR_O AND EMPTY_O	Ouput signal controller	PINK
13	CN_ 13	POWER SUPPLY	GND	BLACK
14	CN_ 14	POWER SUPPLY(option)	+12V	RED

❖ Can be selected +12V or +24V.

❖ RS232 Signal Mode

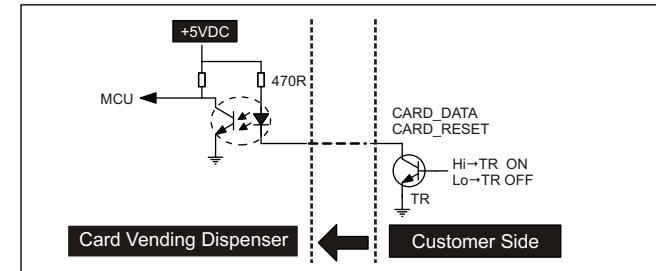
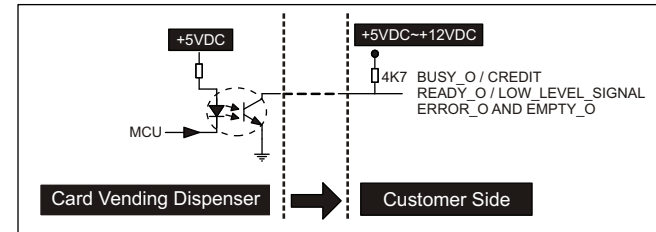
Pin	Assign	Function		Harness Color (WEL-RC601)
1	CN_1	POWER SUPPLY	GND	BLACK
2	CN_2	POWER SUPPLY(option)	+24V	ORANGE
3	CN_3	POWER SUPPLY	GND	BLACK
4	CN_4	N/A	N/A	BROWN
5	CN_5	N/A	N/A	YELLOW
6	CN_6	POWER SUPPLY	GND	BLACK
7	CN_7	N/A	N/A	GREEN
8	CN_8	N/A	N/A	BLUE
9	CN_9	N/A	N/A	PURPLE
10	CN_10	N/A	N/A	GRAY
11	CN_11	N/A	N/A	WHITE
12	CN_12	N/A	N/A	PINK
13	CN_13	POWER SUPPLY	GND	BLACK
14	CN_14	POWER SUPPLY(option)	+12V	RED

❖ Can be selected +12V or +24V.

Pin	Function	I/O	Harness Color (WEL-R7U06)
1	GND	N/A	BLUE
2	N/A	N/A	N/A
3	N/A	N/A	N/A
4	N/A	N/A	N/A
5	N/A	N/A	N/A
6	+5V	O	WHITE
7	RXD	I	BLACK
8	TXD	O	PURPLE

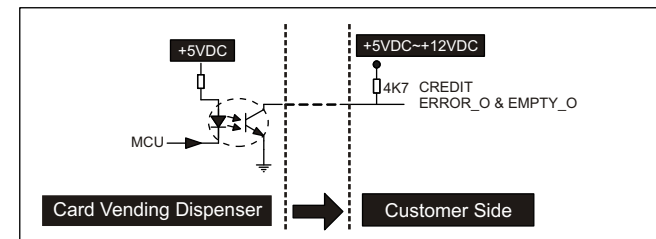
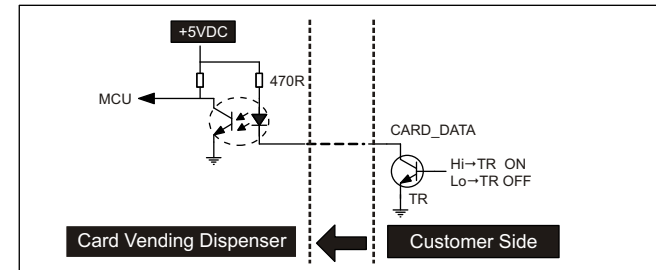
5-1-2. I/O Circuits

Hopper & Pulse Interface Customer Recommend Circuit.

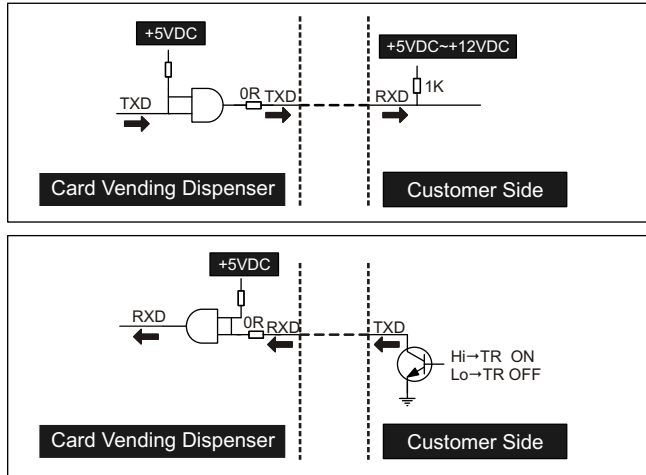


< EH Models only >

Hopper & Pulse Interface Customer Recommend Circuit.

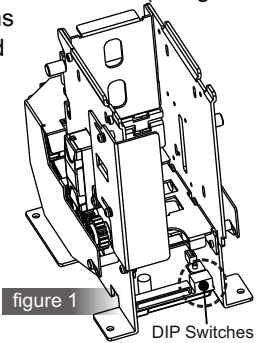


RS232 Interface Customer Recommend Circuit.



5-2. DIP Switch Setting

A serial DIP switches are located on rare CVD-300/1000 Series (as figure 1). According to different interfaces and other functions which are used by users, DIP switch settings could be varied to fit users' need. For more DIP switch settings, please refer to the following charts.



❖ Function Setting:

A. Retry Times Setting:

Retry Times	SW1	SW2
1	OFF	OFF
★ 2	ON	OFF
4	OFF	ON
8	ON	ON

(★) Pulse Default.

(For EL/DEL models only)

B. Interface Setting:

Interface	SW3	SW4
Pulse	OFF	OFF
Hopper	OFF	ON
RS232	ON	OFF
N/A	ON	ON

C. Card Dispenser Signal Setting:

Signal	SW5
★ Normal Low (Active High)	OFF
Normal High (Active Low)	ON

(★) Pulse Default.

D. RS232 ID Setting:

RS232 ID	SW6	SW7
★ No.1 CVD Setting	OFF	OFF
No.2 CVD Setting	OFF	ON
No.3 CVD Setting	ON	OFF
No.4 CVD Setting	ON	ON

(★) RS232 Default.

E. Others:

Function	SW8
★ Reserved	OFF
Reserved	ON

(For E models only)

B. Pulse Memory Setting

For Pulse Memory:(Max 20)

Pulse Memory	SW4
★ Memory ON	OFF
Memory OFF	ON

(★) Pulse Default

Note: Maximum 20 pulses per request. Any additional request will be accumulated to maximum 20 pulses for card needs to be dispensed.

(For EH models only)

B. Card Dispenser Signal Setting:

Signal	SW3
★ Normal Low (Active High)	OFF
Normal High (Active Low)	ON

(★) Default

C. Interface Setting:

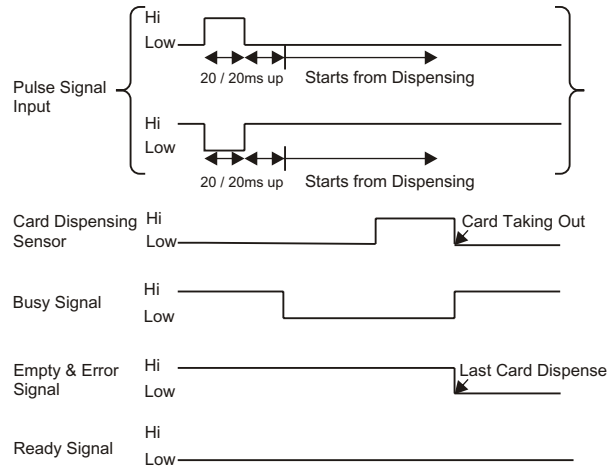
Interface	SW4
★ Pulse(non-Memory)	OFF
Hopper	ON

(★) Default

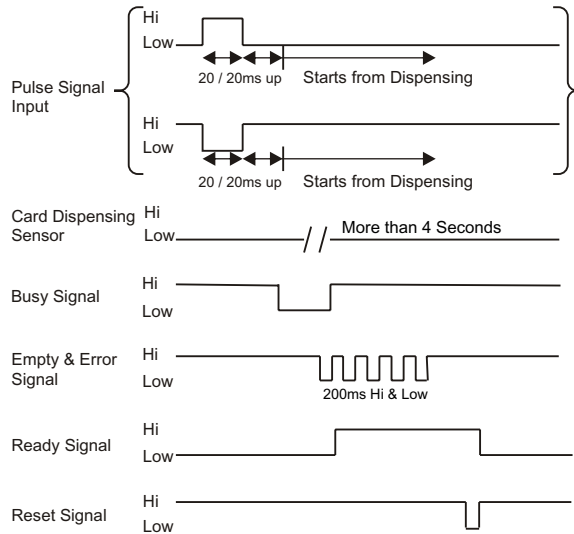
5-3. Time Chart

❖ Pulse <For E Models only>

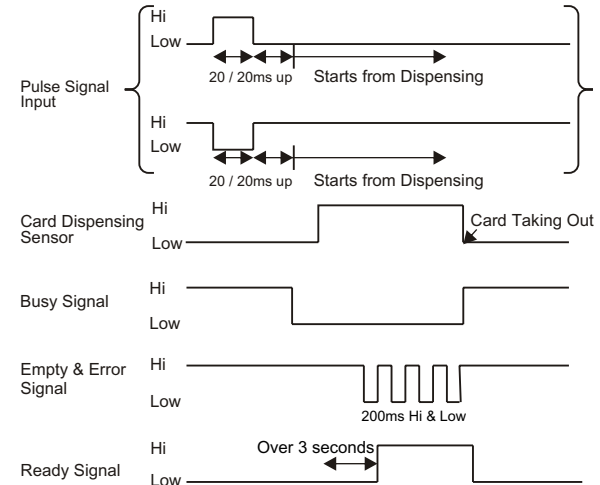
Normal Card Dispensing :



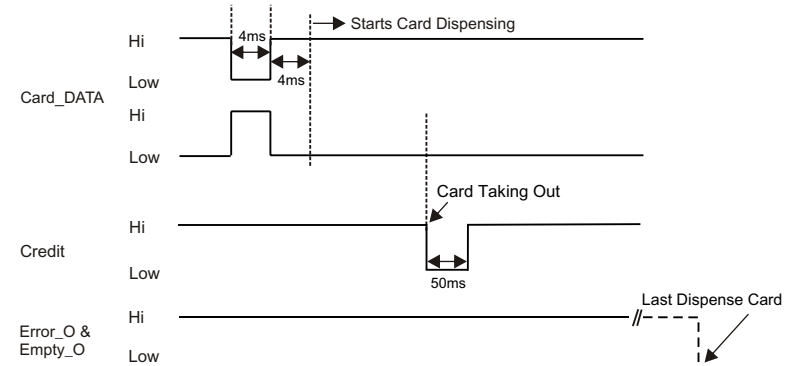
Card Dispensing Disable :



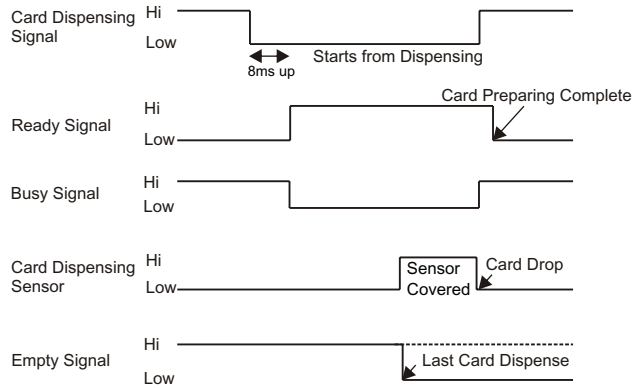
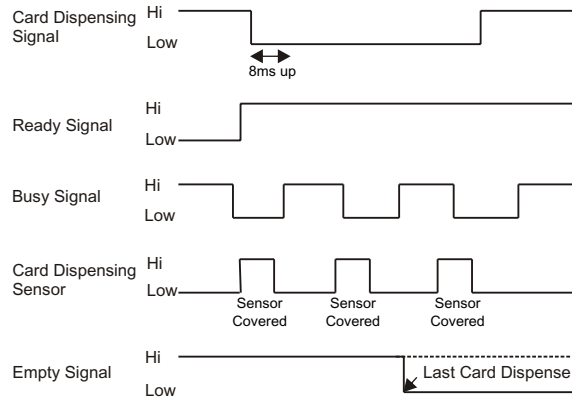
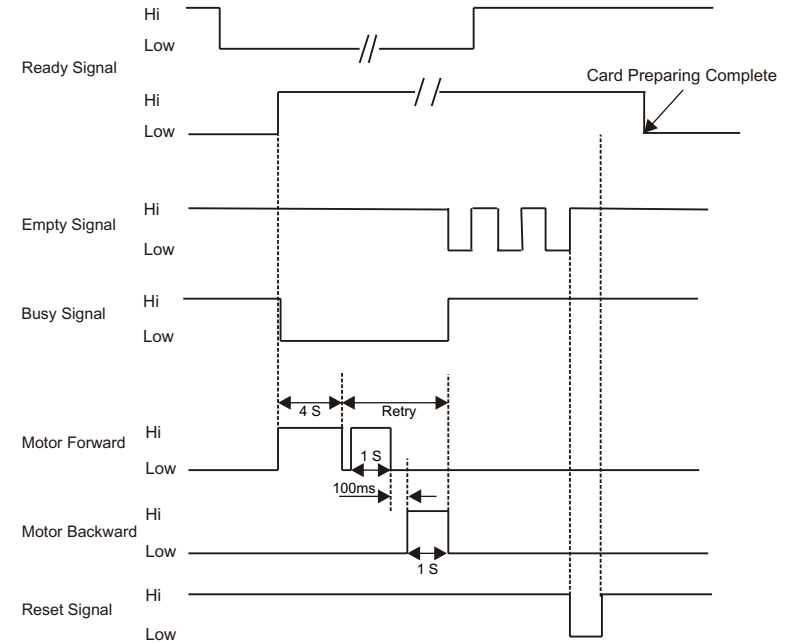
Card Taking Forgotten:



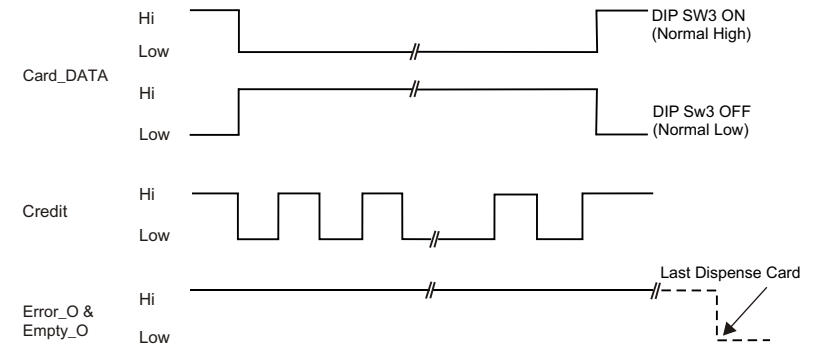
<For EH Models only>



❖ Hopper <For DE Models only>

Normal Card Dispensing :Serial Card Dispensing :Card Dispensing Disable :

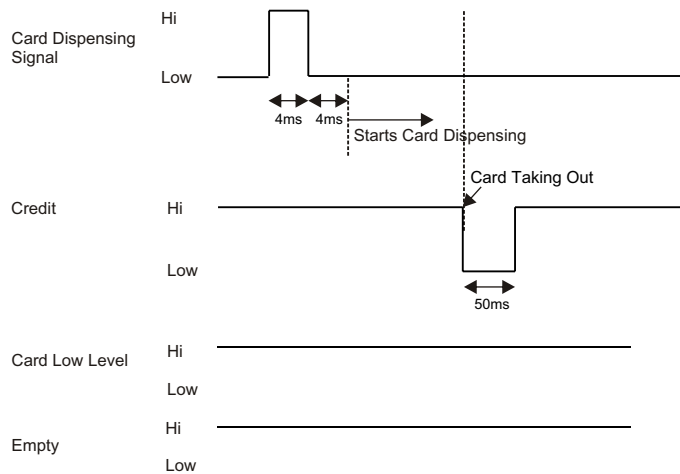
<For EH Models only>



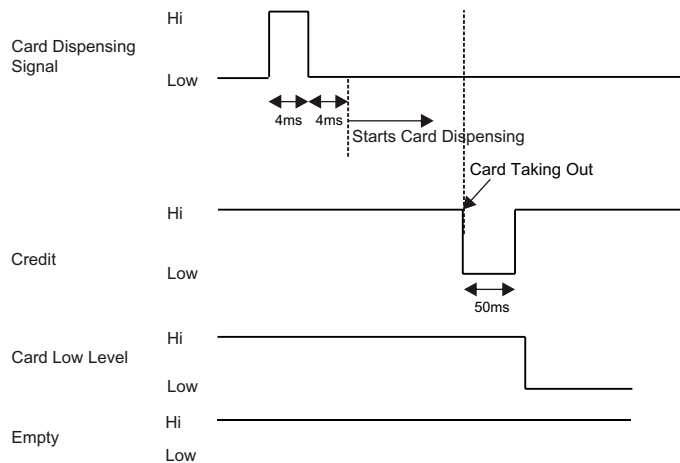


❖ Low Level <For EL/DEL Models only>

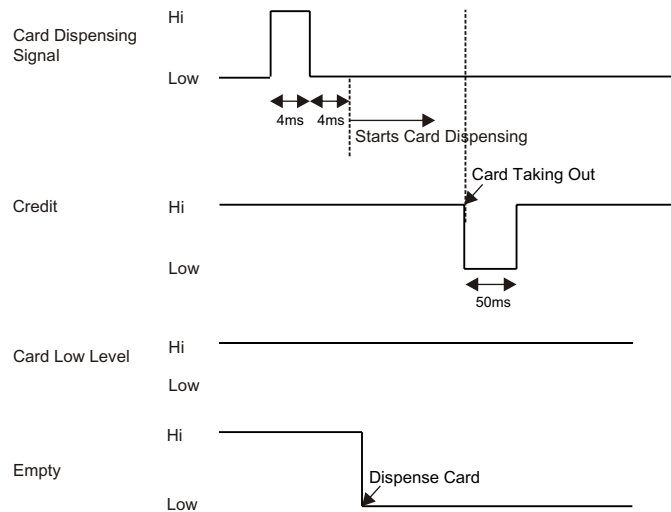
Normal Card Dispensing :



Card Low Level Detected after Dispensing :



Last Card Dispensing :



5-4. Communication Protocol

❖ For RS232 Interface only

Byte1 : ID Number 1 ~ 4

Byte2 : CVD Request Status / CVD Command

Byte2		
Controller	Direction	CVD
Request CVD Status(37H)	→	Empty(22H) Ready(23H) Busy(24H) Error(25H) Card Low Level(26H)
	←	
CVD Reset command(40H)	→	
	←	ACK(50H) NAK(4BH)
CVD Card Out(42H)	→	
	←	ACK(50H) NAK(4BH)

Note : 1. Reset command only accepted by CVD in Error status.

2. During CVD status inquiry, status "Card Low Level" (26H) shall be sent to controller instead of status "Ready" (23H) when low level sensor is triggered.

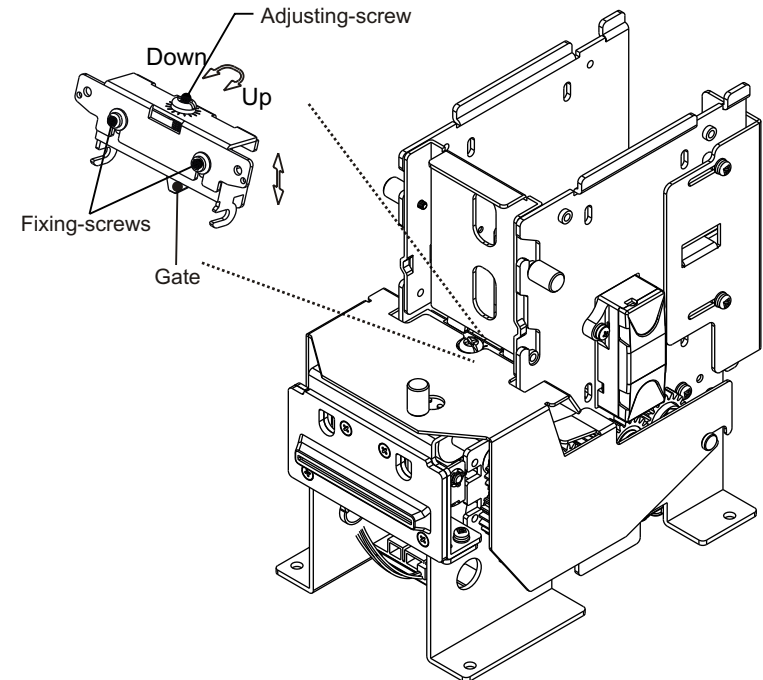
6. Operation

6-1. How to adjust thickness of cards

1. Loose two fixing-screws clockwise to move gate up/down.
2. Turn adjusting-screw clockwise to move the gate upward.
3. Put one sample card into gate and turn adjusting-screw simultaneously until the card can pass the gate smoothly.
4. Turn adjusting-screw clockwise (gate upward) few scales.

Thickness of a Card	Turning Scale
0.2 ~ 0.3mm	1 grid
0.4 ~ 0.5mm	2 grids
0.6 ~ 0.8mm	3 grids
0.9 ~ 1.0mm	4 grids

5. Fasten the fixing-screws.



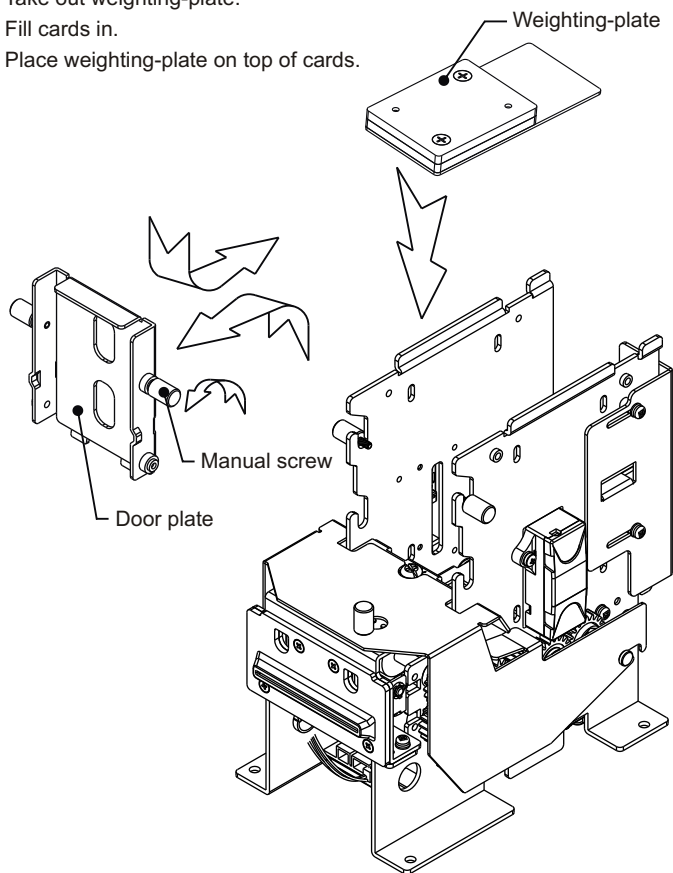
6-2. How to fill cards

A. Fill cards from the front:

1. Loose manual screw, and take out door plate.
2. Take out weighting-plate.
3. Fill cards in.
4. Place weighting-plate on top of cards.
5. Put door plate back and tighten manual screw.

B. Fill cards from the rear:

1. Take out weighting-plate.
2. Fill cards in.
3. Place weighting-plate on top of cards.



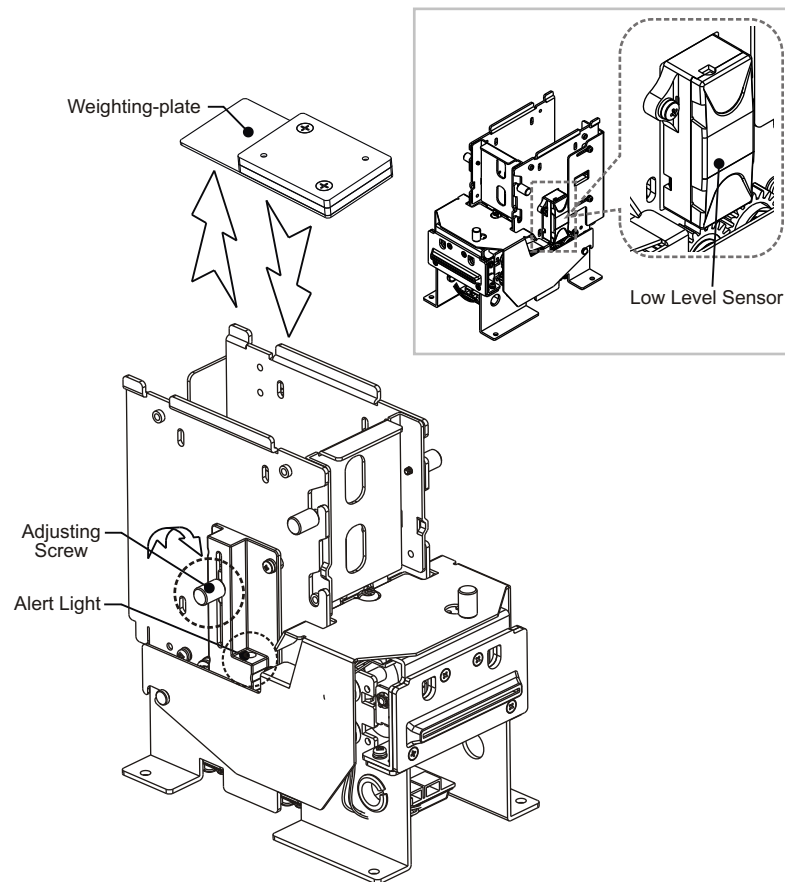
6-3 Low Level Sensor Function

(For CVD-300/1000 EL(DEL) only)

The low level sensor is designed for CVD-300/1000 EL(DEL) to show low level status of cards. When the amount of cards in CVD-300/1000 EL(DEL) is less than low level, the alert light will be on to remind users re-filling cards up before card dispenser running out of cards.



Low level should be set within five minutes after power is applied to CVD-300/ 1000 EL(DEL).



Low Level Adjustment:

To adjust low level of cards:

1. Set up the amount of cards for low level to fit your need.
The acceptance thickness of low level is approx. 10~60 cards.
(According to a card thickness of 0.2mm.)
2. Take weighting-plate out of the unit.
3. Put the amount of cards that you set up for low level in the unit.
Then put weighting-plate back in the unit.
4. Clockwise tighten adjusting screw until alert light lights up to adjust the position of sensor.
Note: For a flexible low level setup, ICT suggest you to save some space between weighting-plate and cards (± 2 cards).
5. Put one more card in unit to turn alert light off. If the alert light is not off right now, please return to step.4 and do it again.
6. Low level sensor adjusting complete.



To keep sensor be always in position on the frames, do not loosen adjusting screw fiercely during adjusting.

7. Trouble Shooting

Status	Corrective Actions
Card Dispensing Error	1. Check if there is any Error signal or Empty Signal. 2. Check if there is any foreign object blocking dispensing slot.
Continue Dispensing Cards after Power Applied (Hopper Mode)	1. Make sure DIP Switch settings are correct. 2. Check if dispensing signal is normal.
Card Preparing Error	Re-adjust thickness of card. (Refer to 6-1)



If the error can not be solved after corrective actions or happen again, please contact ICT for technical support.



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