iCT

Card Vending Dispenser

CSD series

Installation Guide

International Currency Technologies Corp.

Use of Materials Limitations

Contents

1. Introduction

1-1. Overview

CSD is a card vending dispenser with Standard type or Drop type as reliable card dispenser which is able to work steadily and fast approx 1 second per card.

1-2. Features

- Easy card filling
- Multi-inteface: Pulse, Hopper, RS232
- 12V and 24V DC power acceptable
- Card capacity of 300 to 600 cards
- Standard type and drop type card dispenser available

2. Specifications

General

Card Dispensing Time	Approx. 1 second
Interface	Hopper Pulse RS232
Installation	Indoor

Electrical

Power Source	12V DC (11.4~12.6V DC) 24V DC (22.8~25.2V DC)
Power Consumption	12V DC- Standby : 0.25A, 3W Operation: 1.25A, 15W Maximum: 2.5A, 30W 24V DC- Standby : 0.13A, 3.2W Operation: 0.83A, 20W Maximum: 1.66A, 40W
Operation Environment	Operation Temperature: 0°C~50°C Storage Temperature: -30°C~70°C Humidity: 30%~90%RH (no condensation)

Mechanical

Dispensing Way	Standard Type: Card will be held in slot when dispensing. Drop Type: Card will be dropped out from slot when dispensing.

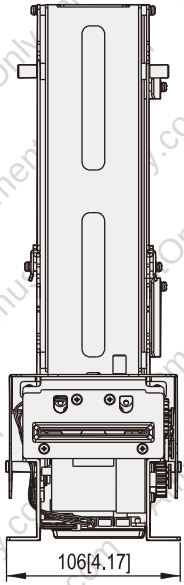
Applicable Cards	Material: Plastic, Paper Cards Size- Thickness: 0.4~1.0(max.) Width : 58~63 ±0.5mm Length: 76~90 ±0.5mm
Outline Dimension	Standard Type: Refer to page.5 Drop Type : Refer to page.6
Card Capacity	CSD2300: Approx. 300 Cards CSD2600: Approx. 600 Cards (a card thickness of 0.4mm)
Weight	CSD2300: Approx. 2.2 kg CSD2600: Approx. 2.9 kg
Install Angle	Vertical

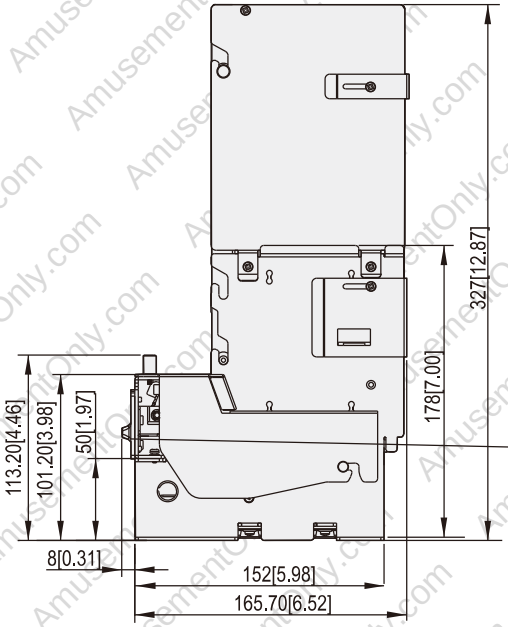
3. Packing List

Main	Card Vending Dispenser
Accessory	CSD series Installation Guide Harness: Refer to 5-2

4. Dimensions

Standard Type

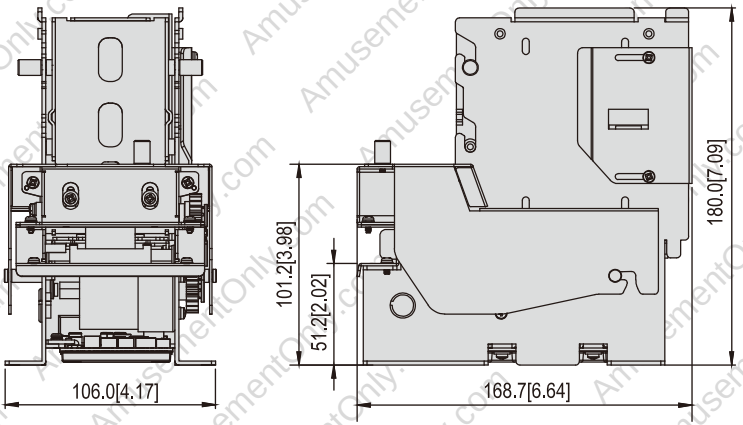




Unit : mm [inch]

4 FIG.01

Drop Type



Unit : mm [inch]

4 FIG.02

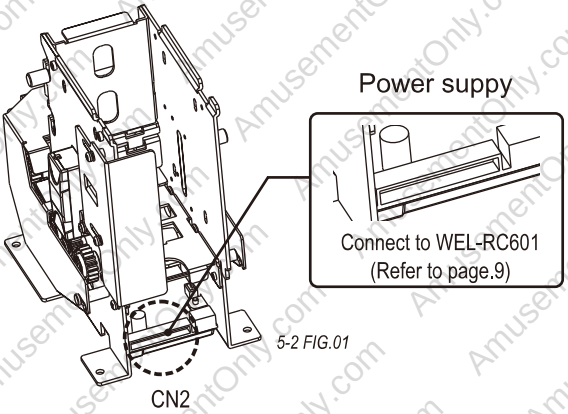
5. Installation

5-1. Main Board

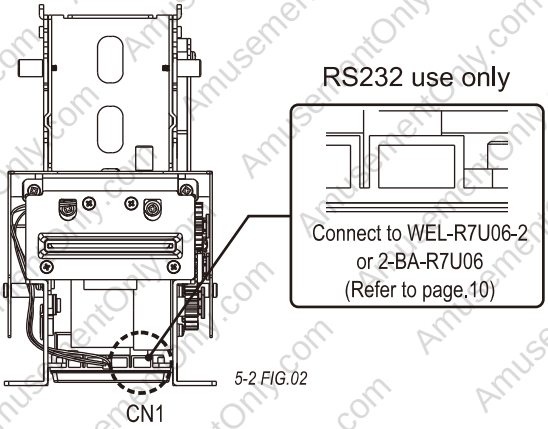
RUN: Operation mode (Manufacture setting)

LOAD: Firmware Upgrade mode

5-2. Harness Application



5-2 FIG.01



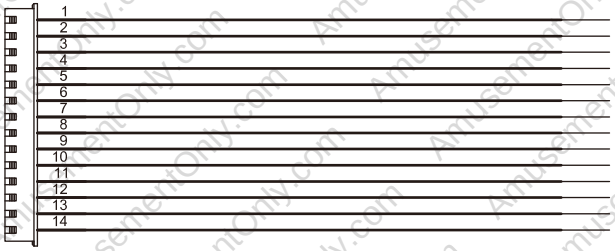
5-2 FIG.02

5-2 FIG.03

Interface	Used Voltage	Usage
Pulse	12V DC	Power & Data Communication

WEL-RC601

XH-14P(2.5mm)

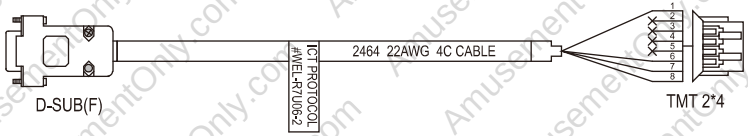


PIN 1- GND.....BLACK
PIN 2- +24V.....ORANGE
PIN 3- GND.....BLACK
PIN 4- CARD_DATA.....BROWN
PIN 5- CARD_RESET.....YELLOW
PIN 6- GND.....BLACK
PIN 7- VCC.....GREEN
PIN 8- OUTPUT SIGNAL.....BLUE
PIN 9- VCC.....PURPLE
PIN 10- OUTPUT SIGNAL.....GRAY
PIN 11- VCC.....WHITE
PIN 12- EMPTY_O.....PINK
PIN 13-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

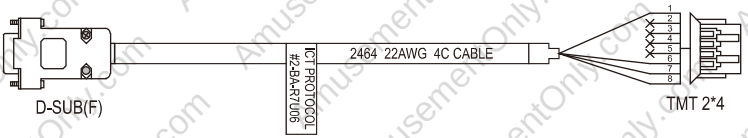
5-2 FIG.04

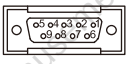
Interface	Used Voltage	Usage
RS232	12V DC	Data Communication

WEL-R7U06-2

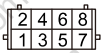


2-BA-R7U06





PIN 2- TXD
PIN 3- RXD
PIN 5- GND



PIN 1- BLUE.....Ground
PIN 6- WHITE.....Download VCC
PIN 7- BLACK.....RX1
PIN 8- PURPLE.....TX1

5-2-1. Pin Assignment

Pulse Signal Mode

5-2-1 TABLE 01

Pin	Assign	Function		Harness Color **(WEL-RC601)**
1	CN_ 1	POWER SUPPLY	GND	BLACK
2	CN_ 2	POWER SUPPLY (option)	+24V DC	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 +5V DC	GREEN
8	CN_ 8	WORK_OK	Ouput signal controller	BLUE
9	CN_ 9	VCC	Ouput +5V DC	PURPLE
10	CN_10	ERROR	Ouput signal controller	GRAY
11	CN_11	VCC	Ouput +5V DC	WHITE
12	CN_12	EMPTY	Ouput signal controller	PINK
13	CN_13	POWER SUPPLY	GND	BLACK
14	CN_14	POWER SUPPLY (option)	+12V DC	RED

Operation Voltage can be +12V DC or +24V DC.

RS232 Signal Mode

5-2-1 TABLE 02

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

Operation Voltage can be +12V DC or +24V DC.

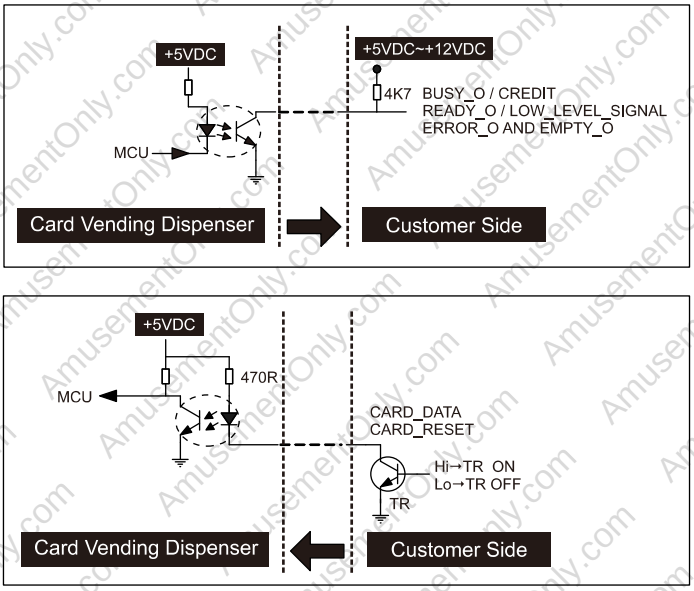
PIN	Function	I/O	Harness Color **(WEL-R7U06-2)**
1	GND	N/A	BLUE
2	N/A	N/A	N/A
3	N/A	N/A	N/A
4	N/A	N/A	N/A
5	N/A	N/A	N/A
6	+5V	O	WHITE
7	RXD	I	BLACK
8	TXD	O	PURPLE

5-2-1 TABLE 03

5-2-2. I/O Circuits

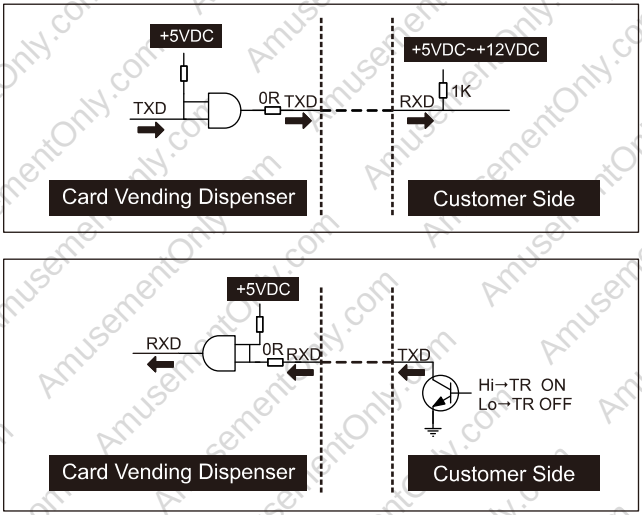
Hopper & Pulse Interface.

5-2-2 FIG.01



RS232 Interface.

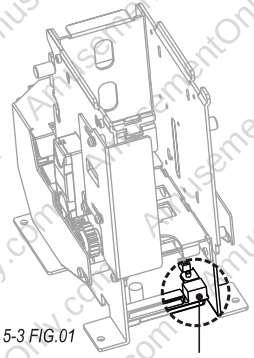
5-2-2 FIG.02



5-3. DIP Switch Setting

A serial DIP switches are located on rare CSD series *(as FIG.01)*. According to different functions, DIP switch settings could be varied to fit users' need.

Please visit ICT web site ***http://www.ictgroup.com.tw/tw/download.php*** to download the DIP switch setting or scan QR code for further information.



5-3 FIG.01

5-4. Communication Protocol

<For RS232 Interface only>

Standard Type

Boud Rate: 9600, E, 8,1:

Byte1: ID Number(Dip6, Dip7)

Byte2: CSD Request Status & Command:

5-4 TABLE 01

Byte2		
Controller	Direction	CSD
Request CSD Status(0x37)	➡	
	⬅	Empty(0x22) Ready(0x23) Busy(0x24) Error(0x25)
CSD Reset Command(0x40)	➡	
	⬅	ACK(0x50) NAK(0x4B)
CSD Card Out Single(0x42)	➡	
	⬅	ACK(0x50) NAK(0x4B)

Drop Type

(1) Boud Rate: 9600, E, 8,1:

Byte1: ID Number(Dip6, Dip7)

Byte2: CSD Request Status & Command:

5-4 TABLE 02

Byte2		
Controller	Direction	CSD
Request CSD Status(0x37)	➡	
	⬅	Empty(0x22) Ready(0x23) Busy(0x24) Error(0x25)
CSD Reset Command(0x40)	➡	
	⬅	ACK(0x50) NAK(0x4B)
CSD Card Out Single(0x42)	➡	
	⬅	ACK(0x50) NAK(0x4B)

(2) Boud Rate: 9600, N, 8,1:
Byte1: ID Number(Dip3, Dip4)
Byte2: CSD Request Status & Command:

5-4 TABLE 03

Byte2		
Controller	Direction	CSD
Request CSD Status(0x37)	➡	
	⬅	Empty(0x22) Ready(0x23) Busy(0x24) Error(0x25) Check Card Out(0x20)
Request CSD Version(0x39)	➡	
	⬅	CSD Version (Response 20 Bytes)
CSD Reset Command(0x40)	➡	
	⬅	ACK(0x50) NAK(0x4B)
CSD Card Out Single(0x42)	➡	
	⬅	ACK(0x50) NAK(0x4B)
Request CSD Error Status(0x80)	➡	
	⬅	Ready(0x23) Output Sensor Error(0x91) Card Ready Sensor Error(0x92) Output & Card Ready Sensor Error(0x93) Card is Jammed(0x94)

5-4 TABLE 04

Byte2		
Controller	Direction	CSD
Request CSD Sensor Status(0x81)	➡	
	⬅	CSD Response Data Format(Byte) MSB LSB 0 0 0 0 0 Z3 Z2 Z1 Z1 : Empty Sensor Status Z2 : Card Ready Sensor Status Z3 : Output Sensor Status 0 : Empty 1 : Cover
Request Output & Card Ready Sensor Error Status (0x82)	➡	
	⬅	Power On Error (0xA0) Working Status Error (0xA1)
Recall CSD the status before power off (0x91) or (0x92)	➡	
	⬅	ACK(0x50)

Note: 1. Reset Command is only accepted by CSD in error status.
2. Card Out Command is used by CSD in ready status.
3. Output Sensor Error(0x91) & Card Ready Sensor Error(0x92) is broken (either one), the unit is still able to work continuing.
4. Power On Error(0xA0): CSD detects both sensors are failures when power on.
Working Status Error(0xA1): Both sensors are failures when CSD tried to get card ready.

6. Operation

6-1. How to adjust thickness of cards

Step 1. Loose two fixing-screws clockwise to move gate up/down.

Step 2. Turn adjusting-screw clockwise to move the gate upward.

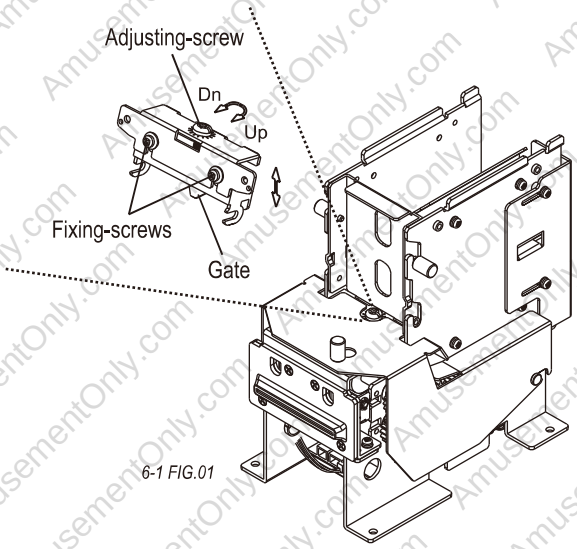
Step 3. Put one sample card into gate and turn adjusting-screw simultaneously until the card can pass the gate smoothly.

Step 4. Turn adjusting-screw clockwise (gate upward) few scales.

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

6-1 TABLE 01

Step 5. Fasten the fixing-screws.



6-1 FIG.01

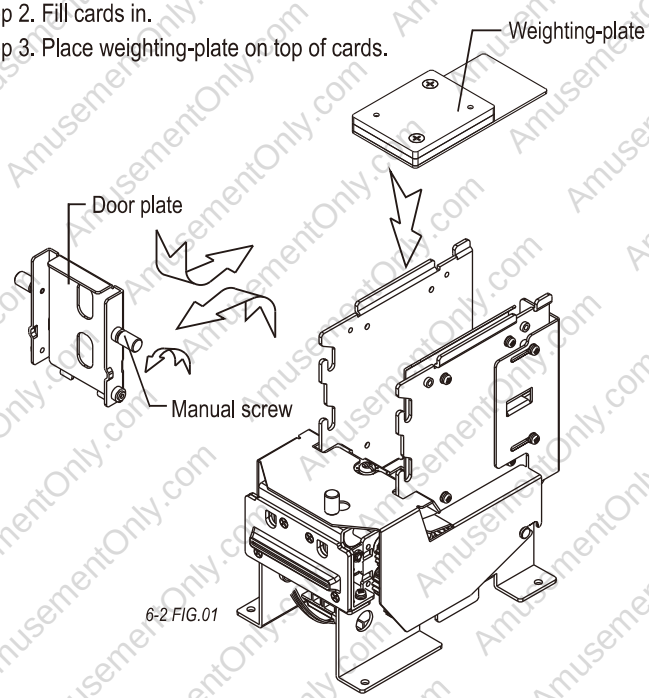
6-2. How to fill cards

A. Fill cards from the front:

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

B. Fill cards from the rear:

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



6-2 FIG.01

7. Maintenance

Please follow the notice as below for routine maintenance:

Maintenance Notice (Any improper maintenance will result invalid warranty.)	
Recommended	Mild, non-abrasive, soap water.
DO NOT USE	Organic solvent , Alcohol, Volatile liquid.

8. Troubleshooting

Status	Corrective Actions
Card Dispensing Error	1. Check if there is any error signals or empty signal. 2. Check if there is any foreign objects block 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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