



# A7/V7 *Series*

Bill Acceptor **Installation Guide**

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## 1. Introduction

### 1-1. Overview

A7/V7 Series is a bill acceptor which features not only high-security module with bill box but also outstanding recognition, acceptance rate up to 96% or even greater.

### 1-2. Features

- Four way bill insertion acceptance.
- Numerous interfaces available.
- Easily Install & Maintain.
- High Acceptance Rate up to 96%.
- Auto-calibrating.

## 2. Specifications

### **General**

**Acceptance Rate** 96% or greater

*Note: The incomplete bills such as extremely dirty, wet, broken or wrinkled ones are excluded.*

**Bill Insertion** Four-way acceptance

**Transaction Speed** Approx. 3 seconds to stack

**Interface** Standard Pulse, 5V Enable, MDB, ICT Protocol, Parallel A3

**Electrical**

Power Consumption	<b>A7-</b> 12V DC	Standby : 0.3A, 4W Operation: 0.9A, 11W Maximum: 2.6A, 32W
	117V AC	Standby : 0.06A, 7W Operation: 0.12A, 15W Maximum: 0.4A, 47W
	<b>V7-</b> 12V DC	Standby : 0.3A, 4W Operation: 0.8A, 10W Maximum: 2.5A, 30W
	24V AC	Standby : 0.2A, 5W Operation: 0.5A, 12W Maximum: 1.5A, 36W
	24V/34V DC	Standby : 0.15A, 6W Operation: 0.4A, 14W Maximum: 1.35A, 46W
	Power Source	<b>A7-</b> 12V DC(11.4~12.6V DC) 117V AC(105.3~128.7V AC) <b>V7-</b> 12V DC(11.4~12.6V DC) 24V AC(21.6~26.4V AC) 24V/34V DC(20V~42.5V DC)

Operation Environment	Operation Temperature: 0°C~55°C Storage Temperature: -30°C~70°C Humidity: 30%~85RH (no condensation)
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**Mechanical**

Outline Dimension	Refer to Page.5
Bill Width	62~72 mm

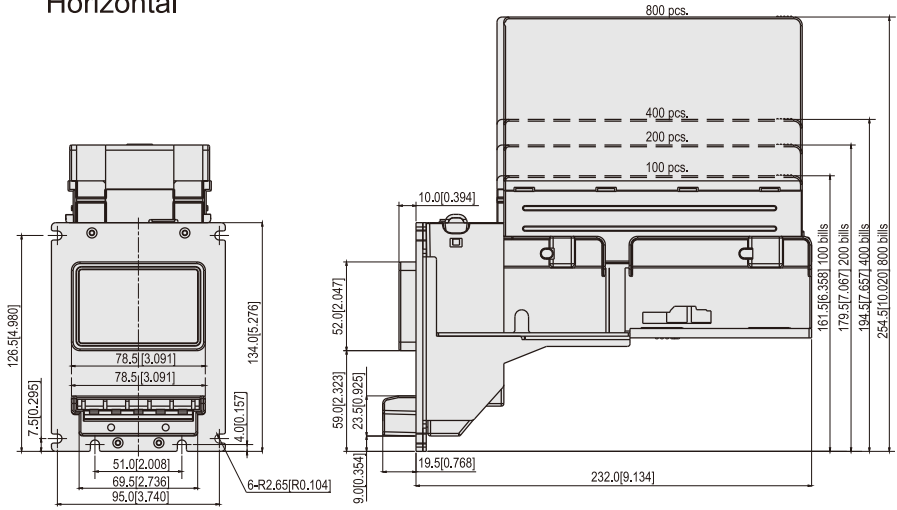
<b>Bill Capacity</b>	Approx. 100 bills ( 80~120) 200 bills (200~300) 400 bills (350~450) 800 bills (750~850)
<b>Weight</b>	Approx. 1.25kg
<b>Installation</b>	Indoor

### 3. Packing List

<b>Main</b>	Bill Acceptor
<b>Accessory</b>	Harnesses: see 5-1 A7/V7 Installation Guide A7/V7 DIP Switch Setting Guide

## 4. Dimension

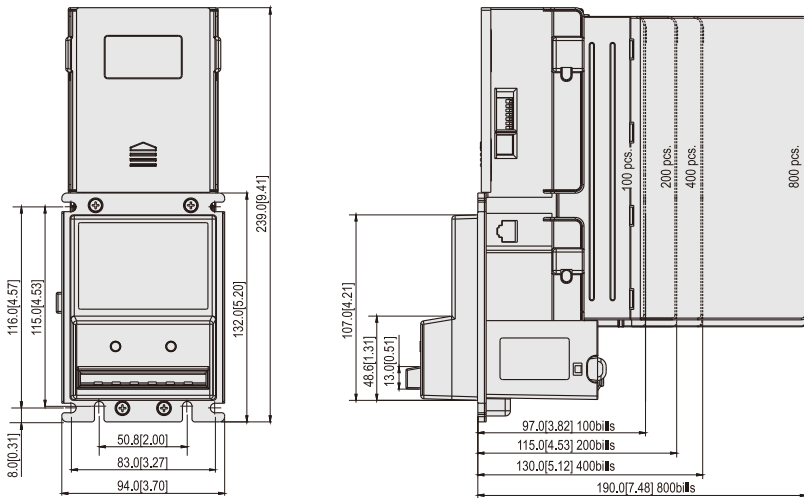
### Horizontal



Unit : mm [inch]

4 FIG.01

### Vertical



Unit : mm [inch]

4 FIG.02

## 5. Installation

### 5-1. Harness Application

5-1 TABLE 01

Model	Interface	Used Voltage	Usage	Harness	Page
A7	Standard Pulse	117V AC	Power & *Data Comm.	WEL-RM008	7
			Extension Wire	WEL-RM012	8
		12V DC	Power & *Data Comm.	WEL-RM007	9
			Extension Wire	CU-R961-1	10
	5V Enable	117V AC	Power & *Data Comm.	WEL-RM017	11
			Extension Wire	WEL-RM018	12
	ICT Protocol (RS232)	12V DC	Power	WEL-RM007	9
			**Power Ext.	CU-R961-1	10
			*Data Comm.	WEL-RV706-1 or 2-BA-RV706	13
		117V AC	Power	WEL-RM008	7
			**Power Ext.	WEL-RM012	8
			*Data Comm.	WEL-RV706-1 or 2-BA-RV706	13
	V7	Standard Pulse	12V DC	Power & *Data Comm.	WEL-RV701
Extension Wire				CU-R961-1	10
24V AC			Power & *Data Comm.	WEL-RV703	16
			Extension Wire	WEL-RV702	15
MDB		24V/34V DC	Power & *Data Comm.	WEL-RM006	17
ICT Protocol (RS232)		12V DC	Power	WEL-RV701	14
			Extension Wire	CU-R961-1	10
			*Data Comm.	WEL-RV706-1 or 2-BA-RV706	13
			Parallel A3	24V AC	Power & *Data Comm.

\*Data Comm. : Data Communication.

\*\*Power Ext. : Power Extension Wire

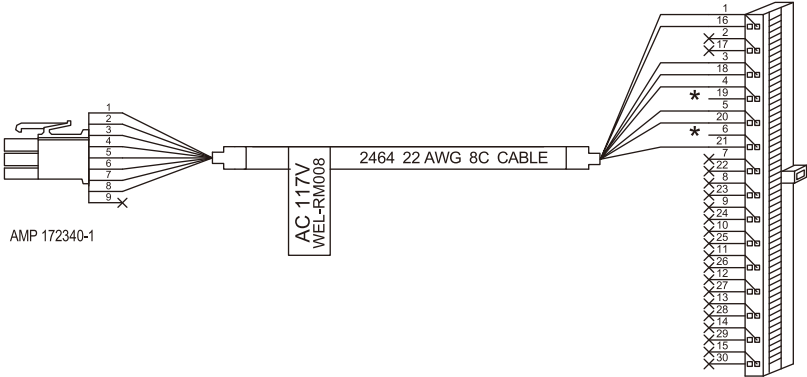
\*\*\*5RBG-AA203L1-xx : Plug-in Box & Cables, "xx" varies from version to version.



5-1 FIG. 01

Interface	Used Voltage	Usage
STD Pulse	117V AC	Power & *Data Comm.
ICT Protocol (RS232 )	117V AC	Power

WEL-RM008



AMP 172340-1

AC 117V  
WEL-RM008

2464 22 AWG 8C CABLE

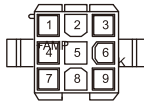
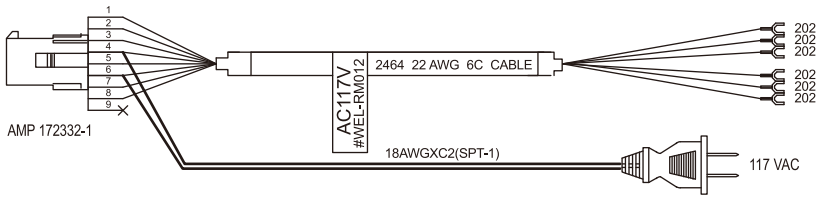
AMP 172340-1 BACK VIEW

PIN 1- YELLOW.....NEUTRAL INHIBIT  
 PIN 2- RED.....NEUTRAL ENABLE  
 PIN 3- BROWN.....HOT ENABLE  
 PIN 4- BLACK.....117VAC HOT(Power)  
 PIN 5- GREEN.....Earth-Ground  
 PIN 6- WHITE.....117VAC NEUTRAL(Power)  
 PIN 7- BLUE.....CREDIT\_RELAY(N.O.)  
 PIN 8- PURPLE.....CREDIT\_RELAY(Common)

PIN 1- PURPLE.....CREDIT\_RELAY(Common)  
 PIN 3- RED.....NEUTRAL ENABLE  
 PIN 4- WHITE.....117VAC NEUTRAL(Power)  
 PIN 5- YELLOW.....NEUTRAL INHIBIT  
 PIN 16- BLUE.....CREDIT\_RELAY(N.O.)  
 PIN 18- BROWN.....HOT ENABLE  
 PIN 20- BLACK.....117VAC HOT (Power)  
 PIN 21- GREEN.....EARTH GROUND

Interface	Used Voltage	Usage
STD Pulse	117V AC	Extension Wire for WEL-RM008
ICT Protocol (RS232 )	117V AC	Extension Wire for WEL-RM008

### WEL-RM012



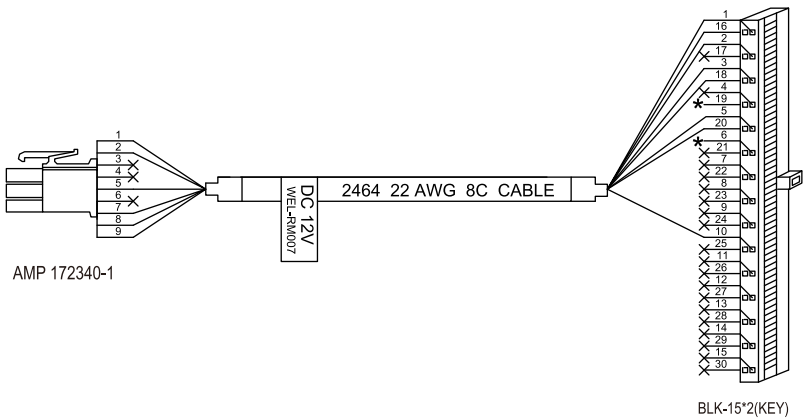
AMP 172332-1 BACK VIEW

- PIN 1- YELLOW.....NEUTRAL INHIBIT
- PIN 2- RED.....NEUTRAL ENABLE
- PIN 3- ORANGE.....HOT ENABLE
- PIN 4- BLACK.....17VAC HOT (Power)
- PIN 5- GREEN.....Earth - Ground
- PIN 6- BLACK.....117VAC NEUTRAL (Power)
- PIN 7- BLUE.....CREDIT\_RELAY (N.O.)
- PIN 8- PURPLE.....CREDIT\_RELAY (Common)
- PIN 9- Reserved

- YELLOW.....NEUARAL INHIBIT
  - RED.....NEUTRAL ENABLE
  - ORANGE.....HOT ENABLE
  - GREEN.....Earth - Ground
  - BLUE.....CREDIT\_RELAY (N.O.)
  - PURPLE.....CREDIT\_RELAY (Common)

Interface	Used Voltage	Usage
STD Pulse	12V DC	Power & *Data Comm.
ICT Protocol (RS232)	12V DC	Power

WEL-RM007

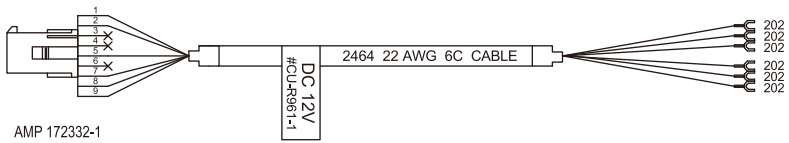


- PIN 1- YELLOW.....INHIBIT+
- PIN 2- GREEN.....INHIBIT-
- PIN 3- RESERVED
- PIN 4- RESERVED
- PIN 5- RED.....12V DC (POWER)
- PIN 5 DOTTED- BLACK.....12V DC (POWER)
- PIN 6- RESERVED
- PIN 7- BLUE.....CREDIT\_RELAY (N.O.)
- PIN 8- PURPLE.....CREDIT\_RELAY (COMMON)
- PIN 9- BROWN.....GND (POWER)
- PIN 9 DOTTED- WHITE.....GND (POWER)

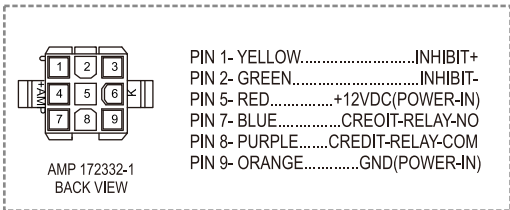
- PIN 1- PURPLE.....CREDIT\_RELAY (COMMON)
- PIN 2- RED.....12VDC (POWER)
- PIN 3- WHITE.....ENABLE-
- PIN 5- YELLOW.....INHIBIT+
- PIN 10- BROWN.....GND (POWER)
- PIN 16- BLUE.....CREDIT\_RELAY (N.O.)
- PIN 18- BLACK.....ENABLE+
- PIN 20- GREEN.....INHIBIT-

Interface	Used Voltage	Usage
STD Pulse	12V DC	Extension Wire for WEL-RM007
ICT Protocol (RS232 )	12V DC	Extension Wire for WEL-RM007
STD Pulse	12V DC	Extension Wire for WEL-RV701
ICT Protocol (RS232 )	12V DC	Extension Wire for WEL-RV701

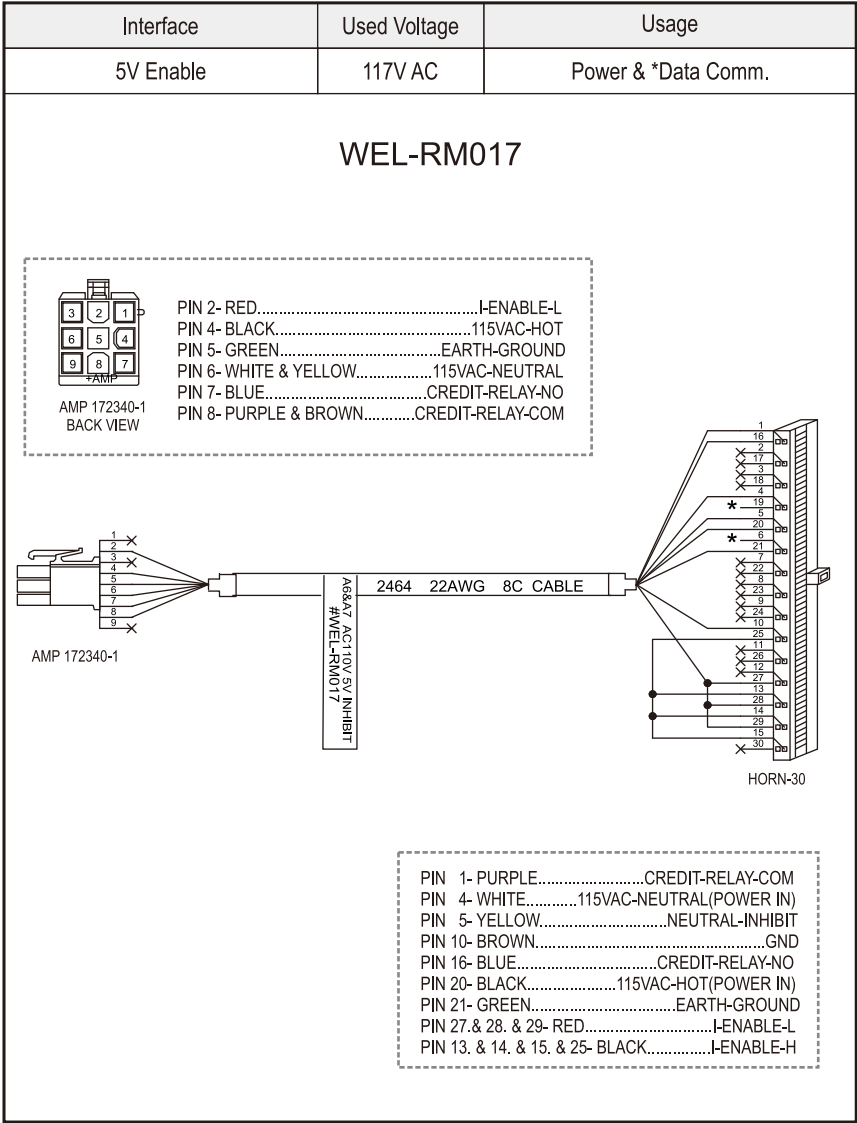
CU-R961-1

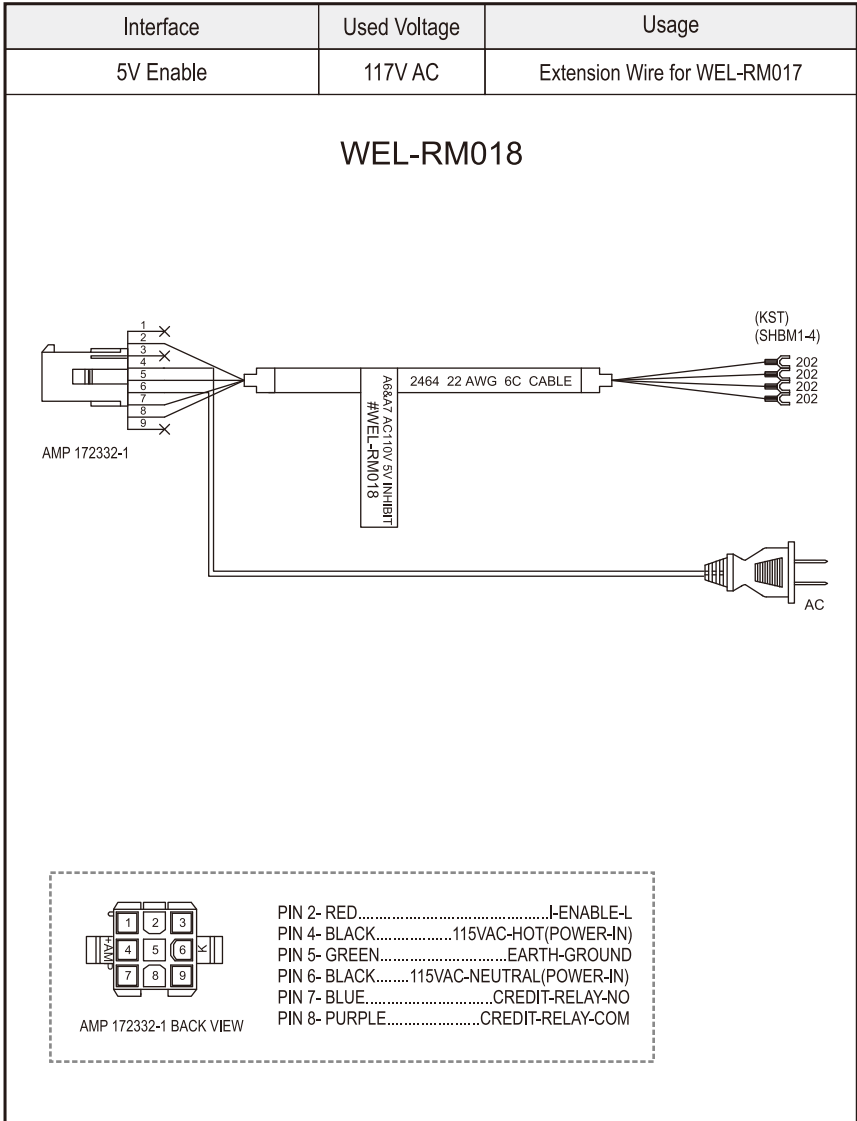


AMP 172332-1



5-1 FIG. 05

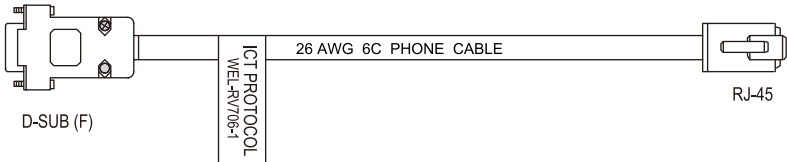




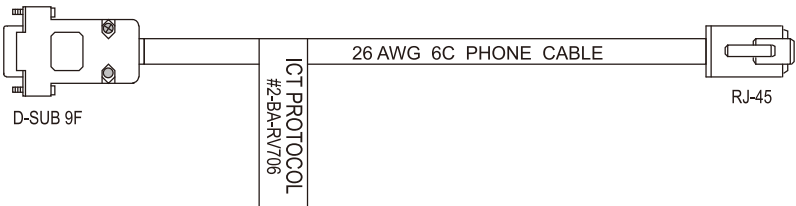
5-1 FIG. 07

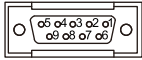
Interface	Used Voltage	Usage
ICT Protocol (RS232)	12V DC	*Data Comm.
	117V AC	*Data Comm.

**WEL-RV706-1**



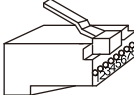
**2-BA-RV706**





D-SUB 9F TOP VIEW

- PIN 1- RESERVED
- PIN 2- RXD
- PIN 3- TXD
- PIN 4- RESERVED
- PIN 5- GND
- PIN 6- RESERVED
- PIN 7- RESERVED
- PIN 8- RESERVED
- PIN 9- RESERVED



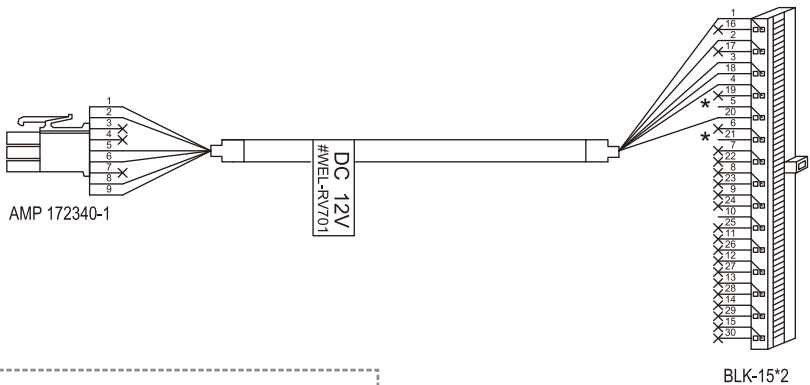
RJ-45 VIEW

- PIN 1- BLUE.....GND
- PIN 2- YELLOW.....TX22
- PIN 3- GREEN.....RX22
- PIN 4- X.....RESERVED
- PIN 5- X.....RESERVED
- PIN 6- RED.....VCC
- PIN 7- BLACK.....RX11
- PIN 8- WHITE.....TX11

5-1 FIG. 08

Interface	Used Voltage	Usage
STD Pulse	12V DC	Power & *Data Comm.
ICT Protocol (RS232 )	12V DC	Power

## WEL-RV701



AMP 172340-1 BACK VIEW

PIN 1- YELLOW.....INHIBIT+

PIN 2- GREEN.....INHIBIT-

PIN 3- Reserved

PIN 4- Reserved

PIN 5- RED.....12V DC (POWER)

PIN 6- Reserved

PIN 7- BLUE.....CREDIT\_RELAY (N.O.)

PIN 8- PURPLE.....CREDIT\_RELAY (Common)

PIN 9- ORANGE.....GND (POWER)

PIN 1- PURPLE.....CREDIT\_RELAY (Common)

PIN 2- BLUE.....CREDIT\_RELAY ( N.O.)

PIN 3- RED.....12VDC (POWER)

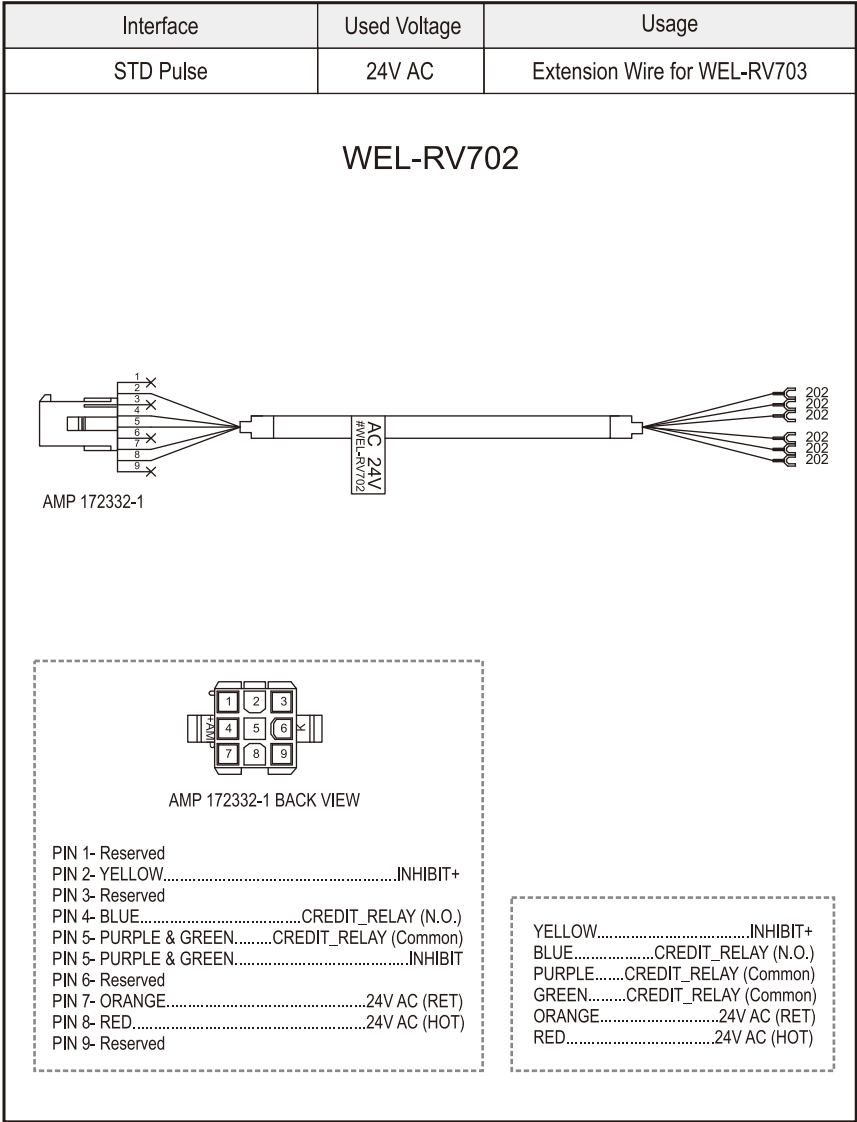
PIN 4- YELLOW.....INHIBIT+

PIN 18- GREEN.....INHIBIT-

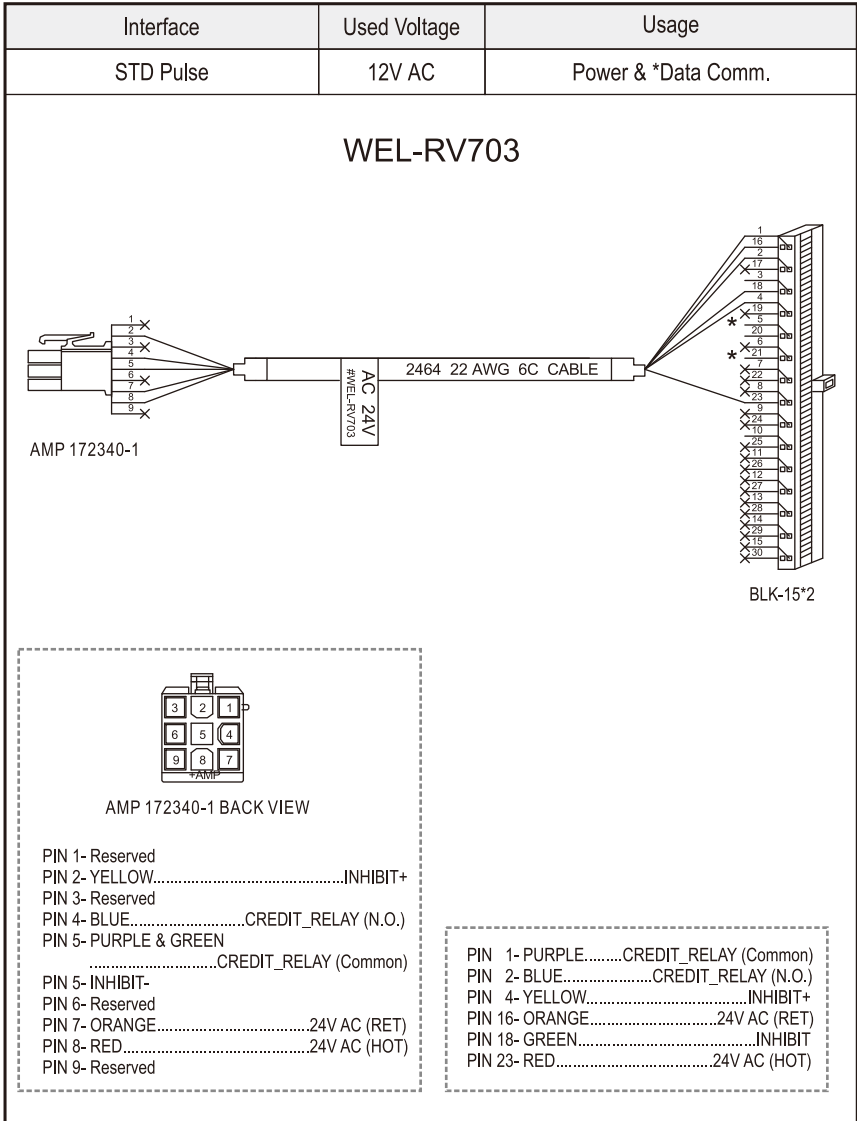
PIN 20- ORANGE .....GND (POWER)



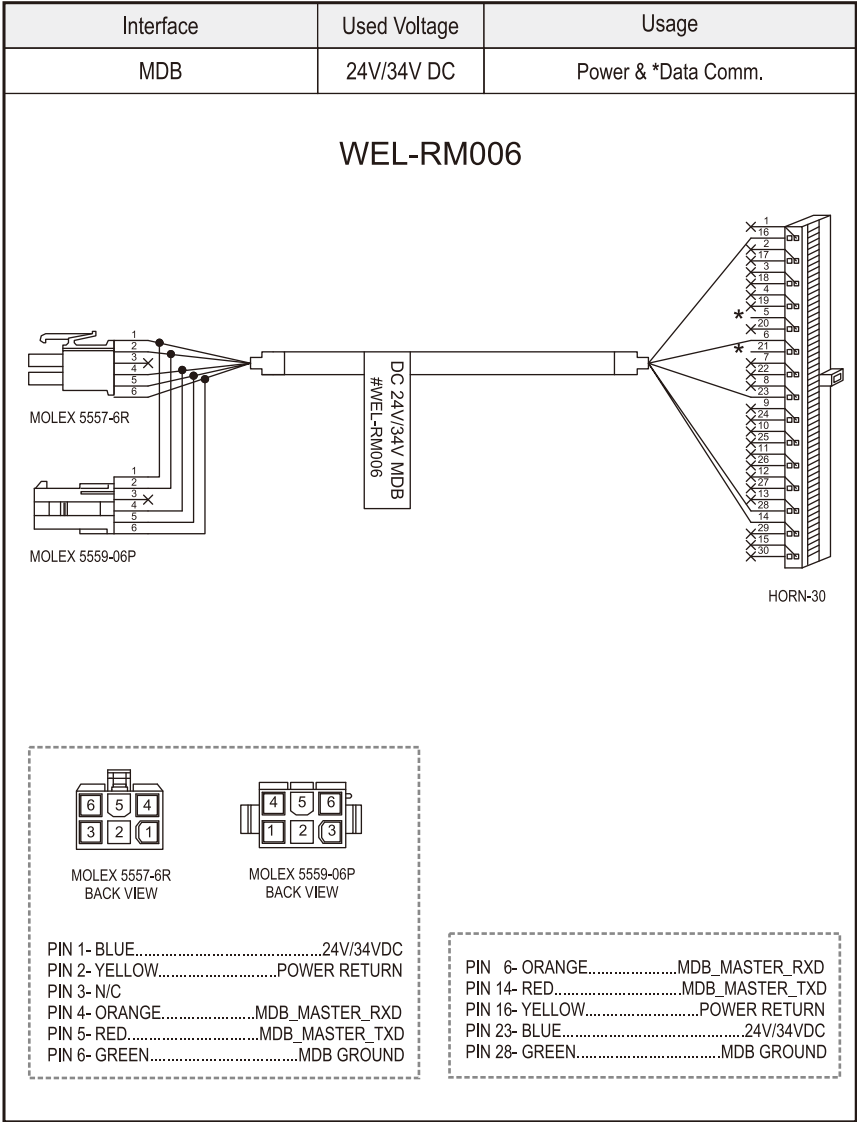
5-1 FIG. 09

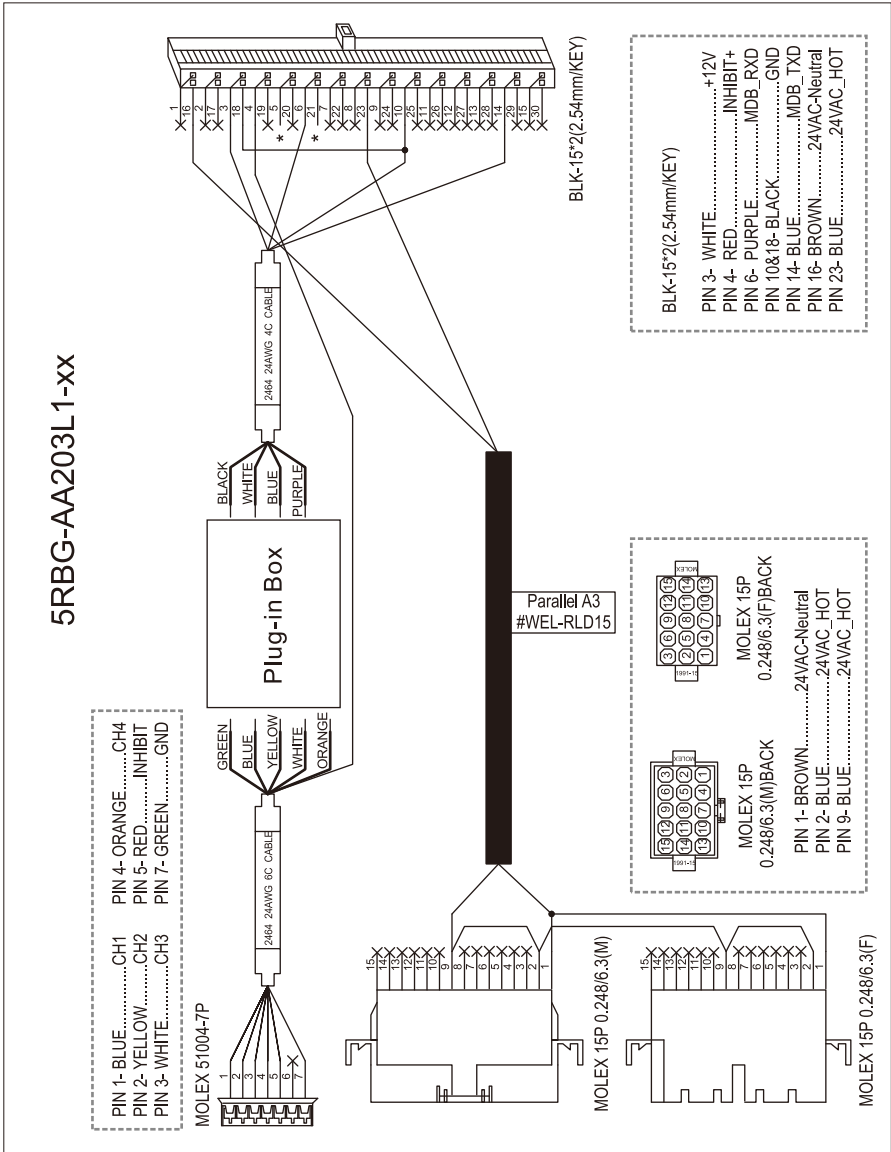


5-1 FIG. 10



5-1 FIG. 11

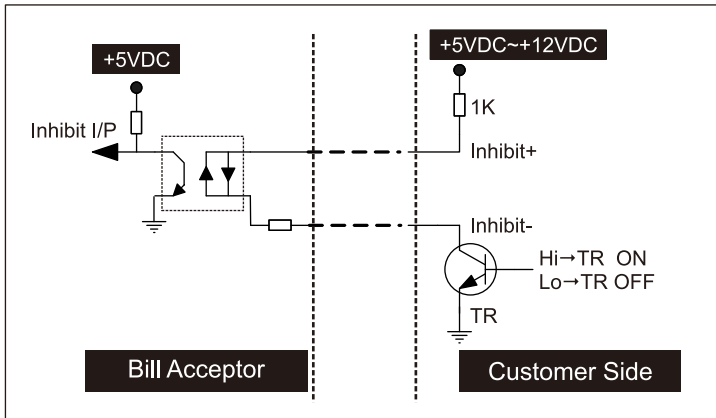
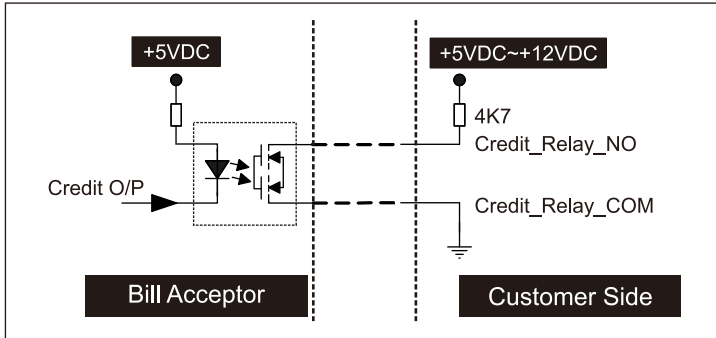




5-1-1. I/O Circuit

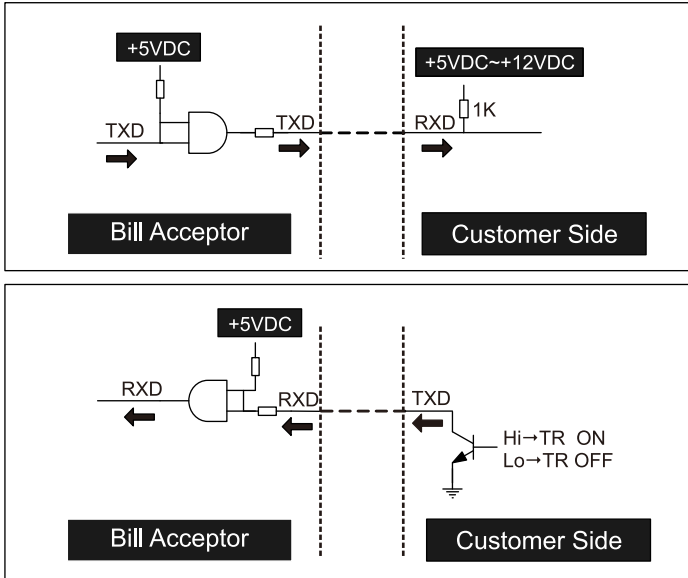
Pulse Interface

5-1-1 FIG. 01



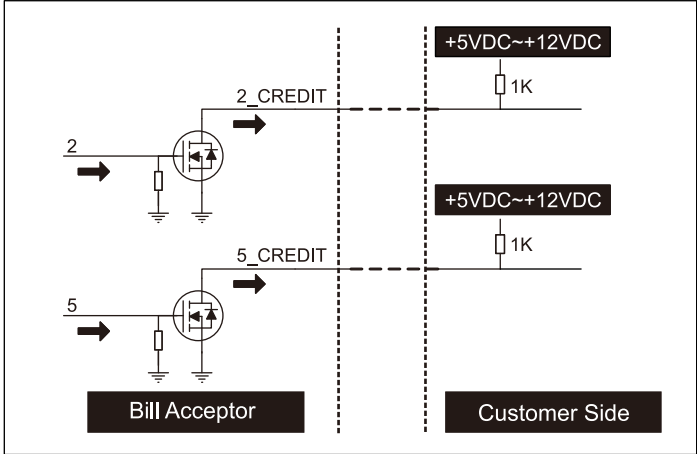
ICT-Protocol Interface

5-1-1 FIG. 02

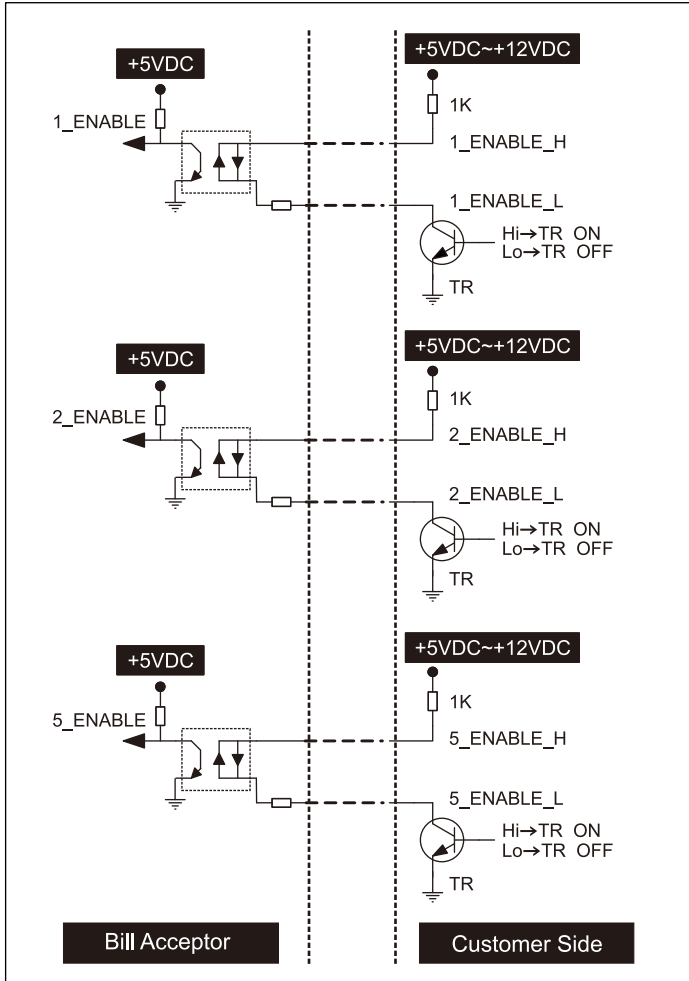


5V Enable Interface

5-1-1 FIG. 03



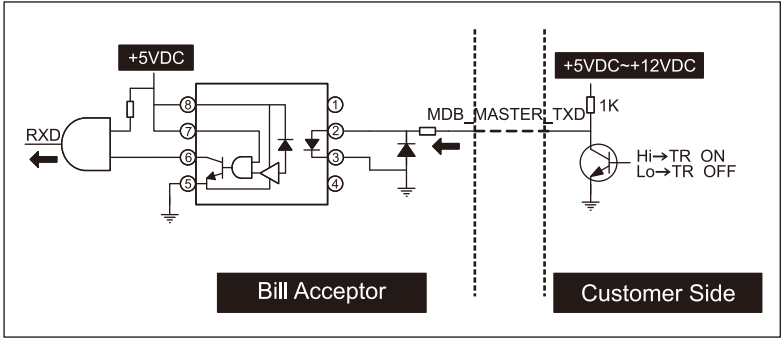
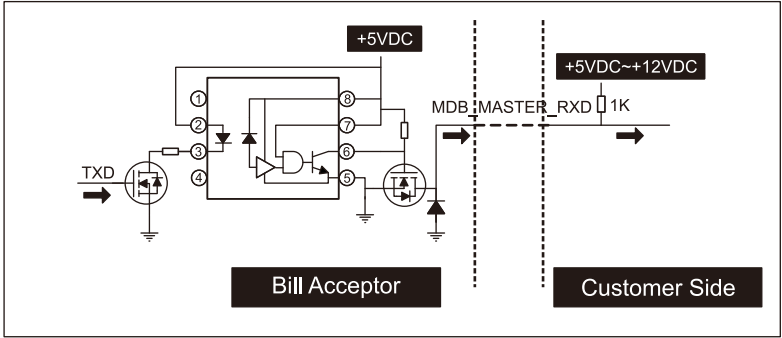
5-1-1 FIG. 03-1





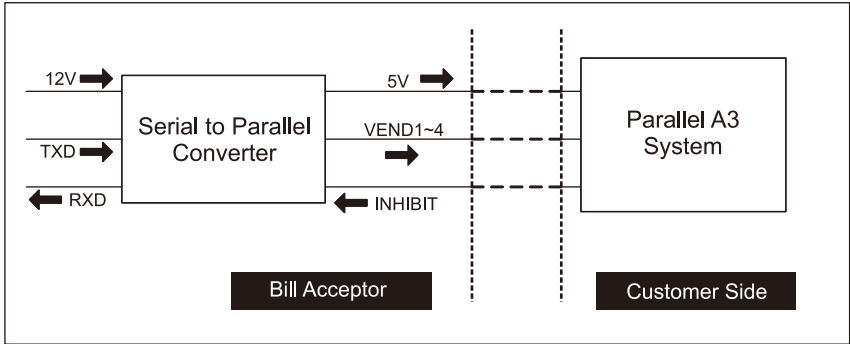
MDB Interface

5-1-1 FIG. 04



Parallel A3 Interface

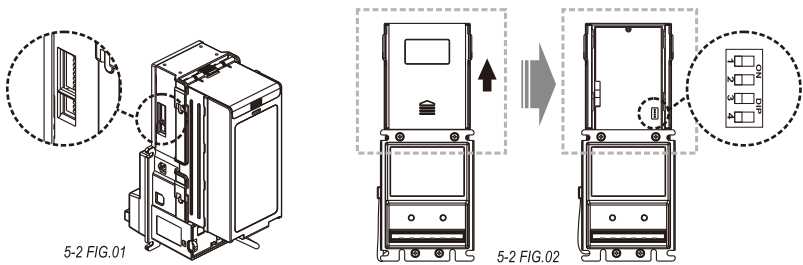
5-1-1 FIG. 05



## 5-2. DIP Switch Setting

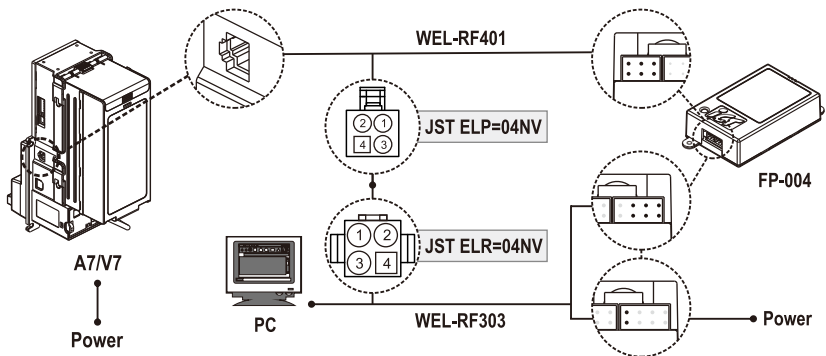
There are two serial DIP switches which are located on the side of A7/V7 series(as 5-2 FIG.01). According to different currencies which are used by users, DIP switch settings could be varied to fit users' need. Besides, there's also a serial DIP switches on CPU board inside of A7/V7 series for interface settings.(as 5-2 FIG.02)

Please refer to "A7/V7 series DIP switch setting" guide in the package for more detail.



## 5-3. Software Download and Upgrade

To download and upgrade the software to A7/V7 series, the programmer (FP-004) is needed. Please contact ICT to purchase FP-004 and refer to FP-004 user guide for software download and upgrade information.



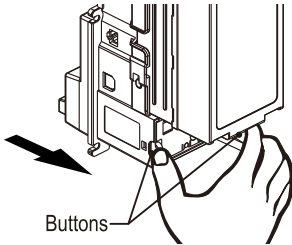
**Power must be applied to Bill Acceptor after connecting.**

## 6. Maintenance

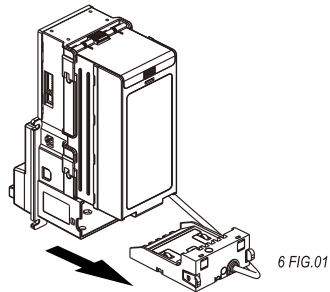
To make sure the bill acceptor always works smoothly, please clean the internal parts regularly.

To clean the internal parts:

1. Press the buttons on the sides of bill path unit and pull the unit out.

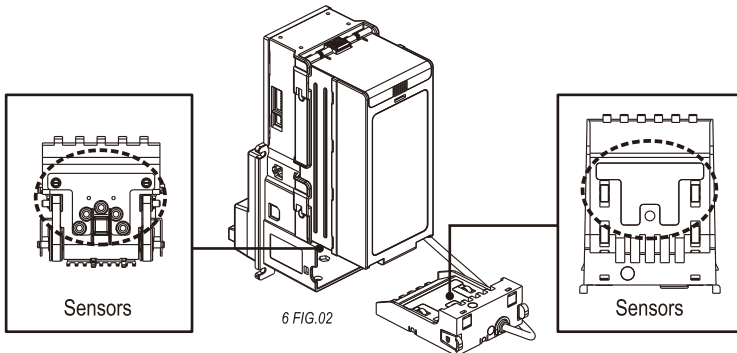


6 FIG.01-1



6 FIG.01

2. Use a soft, dry cloth or towel to clean the bill path and sensors.

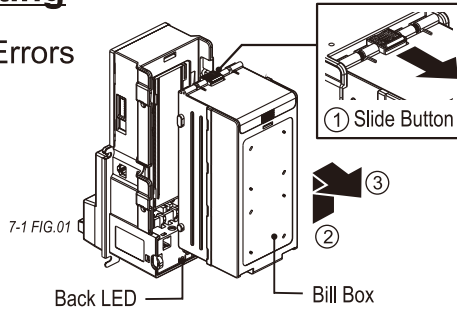


6 FIG.02

	<b>Maintenance Notice</b>	
	<i>(Any improper maintenance will invalidate the warranty.)</i>	
	<b>Recommended</b>	<b>Mild, non-abrasive, soap water.</b>
<b>DO NOT USE</b>	<b>Organic solvent , Alcohol, Volatile liquid.</b>	

## 7. Troubleshooting

### 7-1. Back LED Errors



7-1 TABLE 01

LED	Status	Correct Actions
<b>GREEN</b>		
1	White Card Calibration.	Please calibrate with ICT white calibration card.

7-1 TABLE 01-1

LED Flashes	Status	Corrective Actions
<b>GREEN</b>		
1	Bill jammed.	Remove the bill box by sliding the top button and the bill path(as 7-1 FIG.01), and then remove the jammed bill.
2	Disable.	Inspect the right DIP switch setting.
3	Recognition sensor module error.	Inspect the foreign objects on sensor or bill path and clean.
3+2	Hook sensor error.	Inspect the foreign objects on security hook and clean.
4	Anti-string sensor error or a stringing attempt has detected.	Inspect the foreign objects on sensor or bill path and clean.
5	Bill box has been removed.	Replace the bill box.
6	Stacker error or stacker full.	Empty the bill box.
7	Motor error.	Inspect the foreign objects on bill path and clean.



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

**ict** Taiwan

**International Currency Technologies Corporation**

No.28, Ln. 15, Sec. 6, Minguan E. Rd., Neihu Dist., Taipei City 114, Taiwan

[sales@ictgroup.com.tw](mailto:sales@ictgroup.com.tw) (For Sales)

[fae@ictgroup.com.tw](mailto:fae@ictgroup.com.tw) (For Customer Service)

Website: [www.ictgroup.com.tw](http://www.ictgroup.com.tw)

