



Bill Acceptor

# TK77



Installation Guide

International Currency Technologies Corp.

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## **1. Introduction**

### 1-1. Overview

TK77 features a high currency verification and recognition with new verification unit to be a outstanding bill acceptor.

### 1-2. Features

- Four way bill insertion acceptable.
- High transaction speed.
- Highlight LED bezel.

## **2. Specifications**

### ***General***

|                        |                |
|------------------------|----------------|
| <b>Acceptance Rate</b> | 96% or greater |
|------------------------|----------------|

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

|                       |                     |
|-----------------------|---------------------|
| <b>Bill Insertion</b> | Four way acceptable |
|-----------------------|---------------------|

|                          |                |
|--------------------------|----------------|
| <b>Transaction Speed</b> | Approx. 1 sec. |
|--------------------------|----------------|

|                  |                       |
|------------------|-----------------------|
| <b>Interface</b> | Pulse<br>RS232<br>MDB |
|------------------|-----------------------|

|                     |                                |
|---------------------|--------------------------------|
| <b>Installation</b> | Indoor & Outdoor<br>Horizontal |
|---------------------|--------------------------------|

**Electrical**

|                              |                                                                                                                 |
|------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>Power Source</b>          | 12V DC                                                                                                          |
| <b>Power Consumption</b>     | Standby : Approx. 200mA<br>Operation: Approx. 1.4A<br>Maximum: Approx. 2A                                       |
| <b>Operation Environment</b> | Operation Temperature: -5°C~55°C<br>Storage Temperature: -20°C~70°C<br>Humidity: 30%~85%RH<br>(no condensation) |

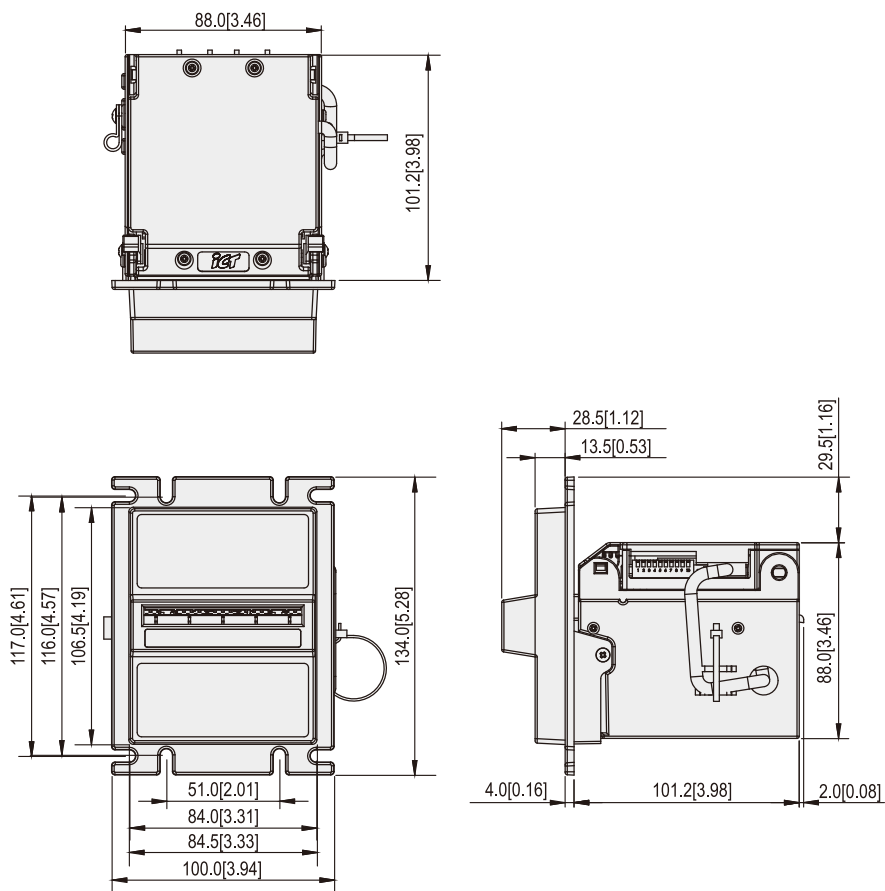
**Mechanical**

|                            |                 |
|----------------------------|-----------------|
| <b>Outline Dimension</b>   | Refer to Page.4 |
| <b>Weight</b>              | Approx. 0.75 kg |
| <b>Bill Accepted Width</b> | 63~70mm         |

### **3. Packing List**

|                  |                                                                                     |
|------------------|-------------------------------------------------------------------------------------|
| <b>Main</b>      | Bill Acceptor                                                                       |
| <b>Accessory</b> | Harnesses: Refer to 5-1<br>TK77 Installation Guide<br>TK77 DIP Switch Setting Guide |

## 4. Dimension



Unit:mm[inch]

4 FIG.01

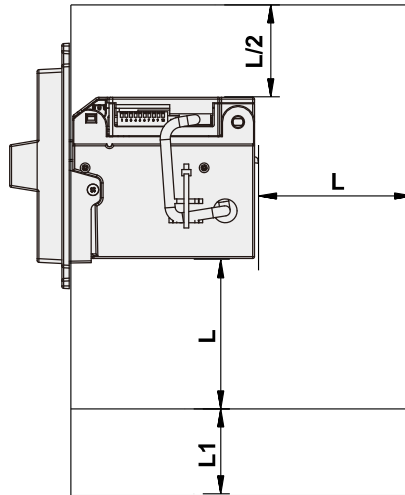


To install the bill acceptor on your VMC, please be aware of the dimension as below:

[ L ] : Longer than the maximum length of accepted bills.

[ L1 ] : Bill box capacity depth.

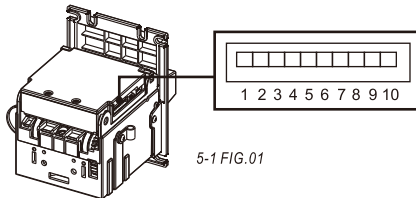
*\* [ L/2 ] has to be longer than 70mm to open upper base.*



4 FIG.02

## 5. Installation

### 5-1. PIN Assignment



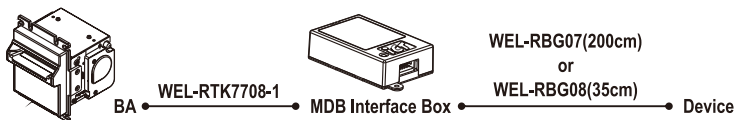
|                |               |
|----------------|---------------|
| PIN 1- BUSY    | PIN 6- ESCROW |
| PIN 2- VEND1   | PIN 7- VEND2  |
| PIN 3- ERR     | PIN 8- +12V   |
| PIN 4- NC      | PIN 9- +12V   |
| PIN 5- INHIBIT | PIN 10- GND   |

5-1 TABLE.01

| Interface       | Used Voltage | Usage                                               | Harnesses                       | Page |
|-----------------|--------------|-----------------------------------------------------|---------------------------------|------|
| Pulse           | 12V DC       | Power & *Data Comm.                                 | WEL-R0001                       | 7    |
|                 |              | Extension Wire                                      | WEL-R0002                       | 7    |
| RS232           | 12V DC       | Power                                               | WEL-R0001                       | 7    |
|                 |              | *Data Comm.                                         | WEL-RNK10-1<br>or<br>2-BA-RNK10 | 8    |
|                 |              | Extension Wire                                      | WEL-R0002                       | 7    |
| RS232<br>(UART) | 12V DC       | Power & *Data Comm.                                 | WEL-R0003                       | 9    |
|                 |              | Extension Wire                                      | WEL-R0002<br>(For UART Only)    | 9    |
| MDB<br>(Note 1) | 12V DC       | Power & *Data Comm.<br>(BA ↔ Plug-in Board)         | WEL-RTK7708-1                   | 10   |
|                 | 20V~42.5V DC | Power & *Data Comm.(200cm)<br>(Plug-in Board ↔ VMC) | WEL-RBG07                       | 10   |
|                 |              | Power & *Data Comm.(35cm)<br>(Plug-in Board ↔ VMC)  | WEL-RBG08                       | 11   |

\*Data Comm.=Data Communication

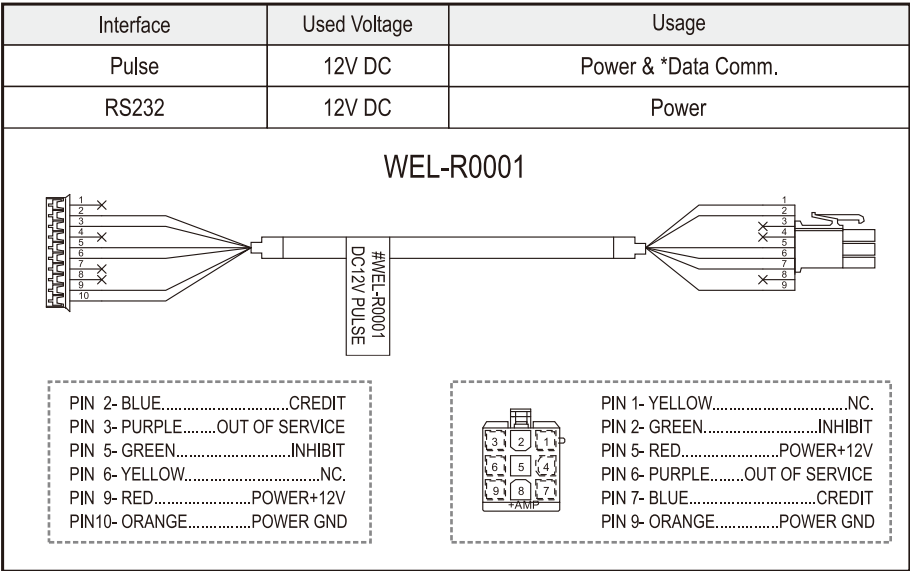
Note 1:



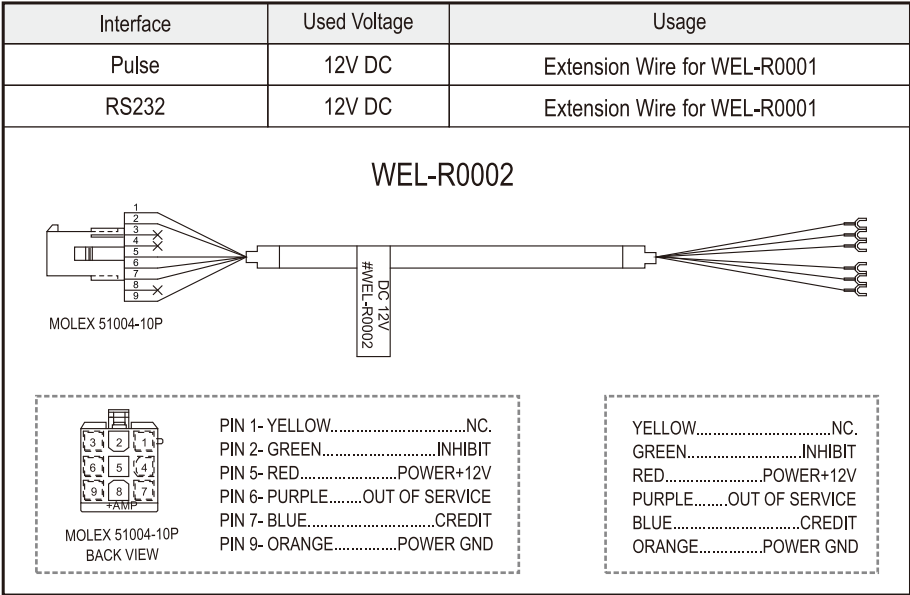
MDB 20V~42.5V DC: VMC Provides +20V~42.5V DC to MDB Plug-in Board to convert into +12VDC, and provides +12VDC to TK77 bill acceptor.

MDB Box: 5RBG-AA313NAB(200cm VMC cable)  
5RBG-AA313NAC(35cm VMC cable)

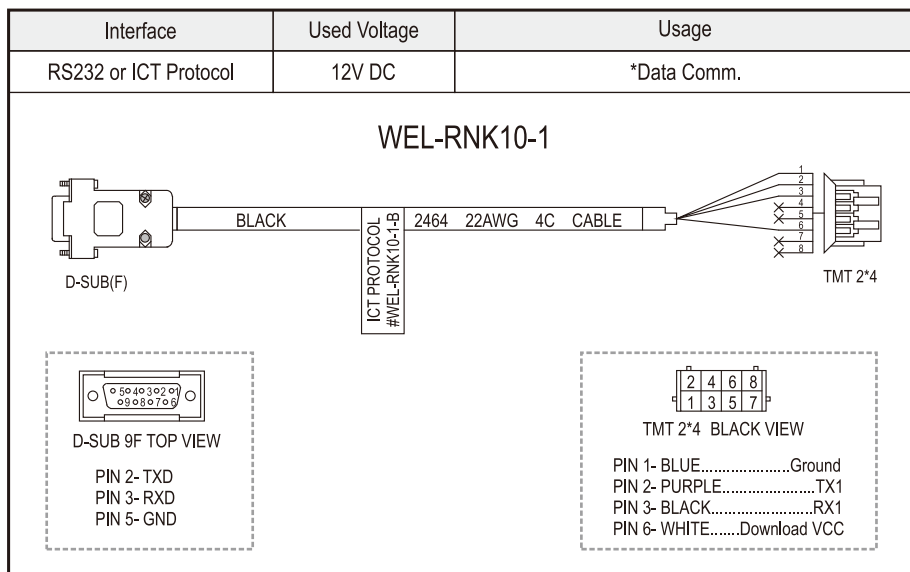
5-1 FIG.02



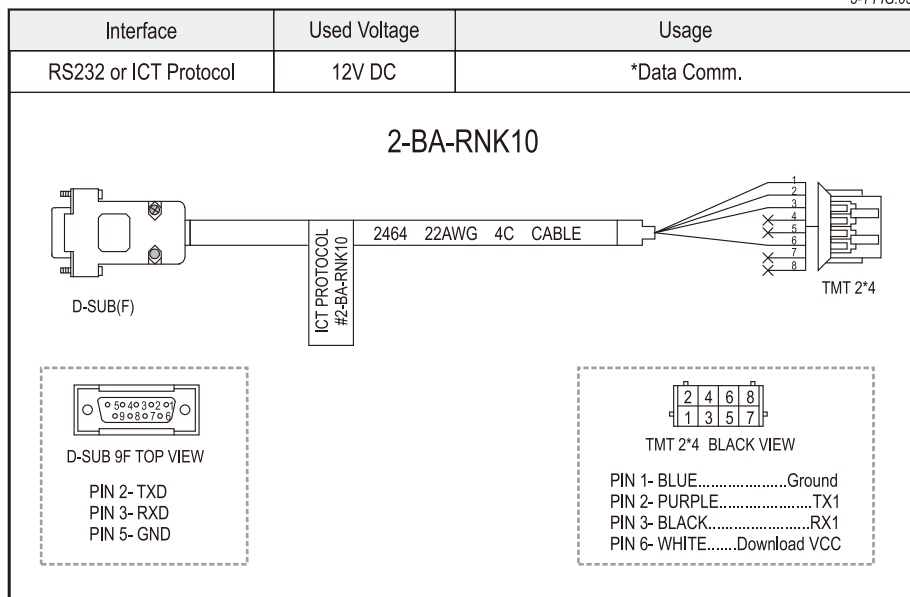
5-1 FIG.03



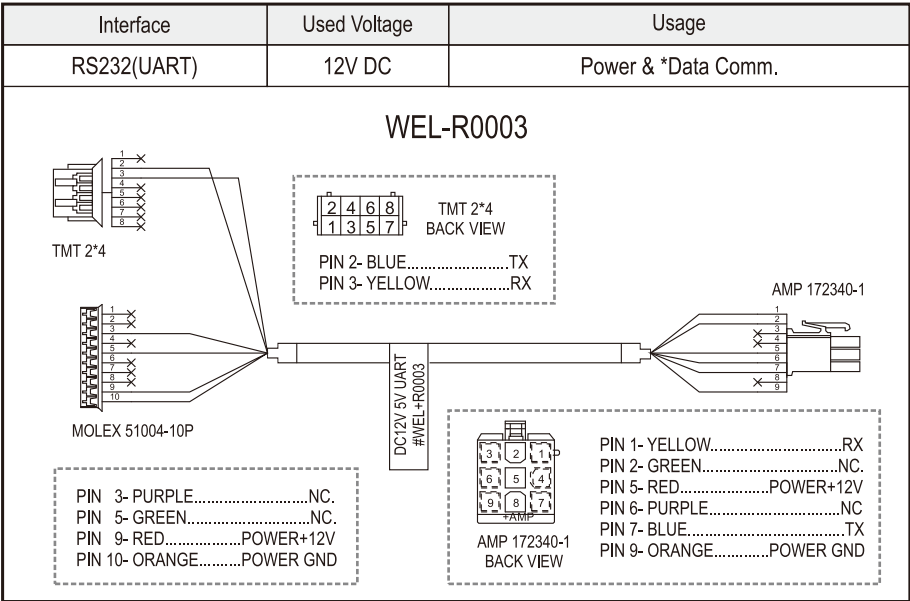
5-1 FIG.04



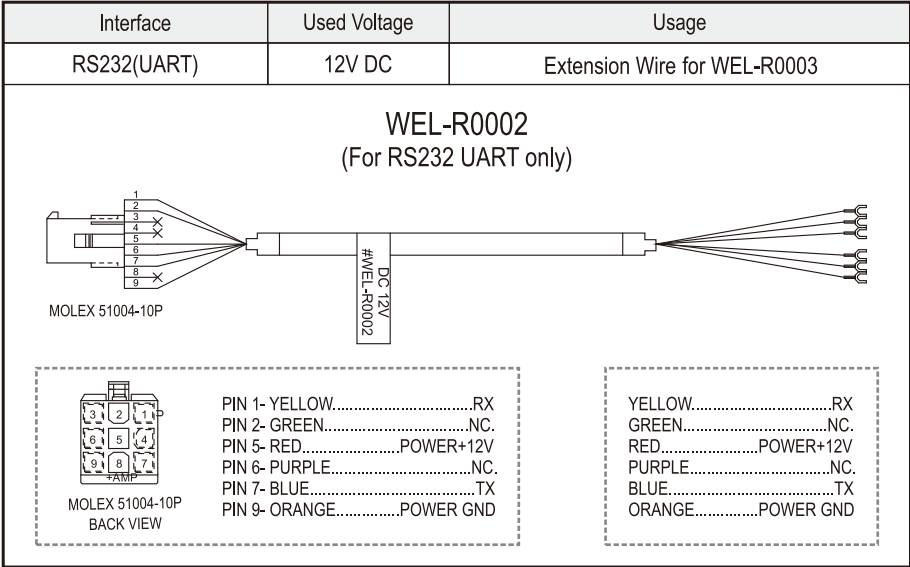
5-1 FIG.05



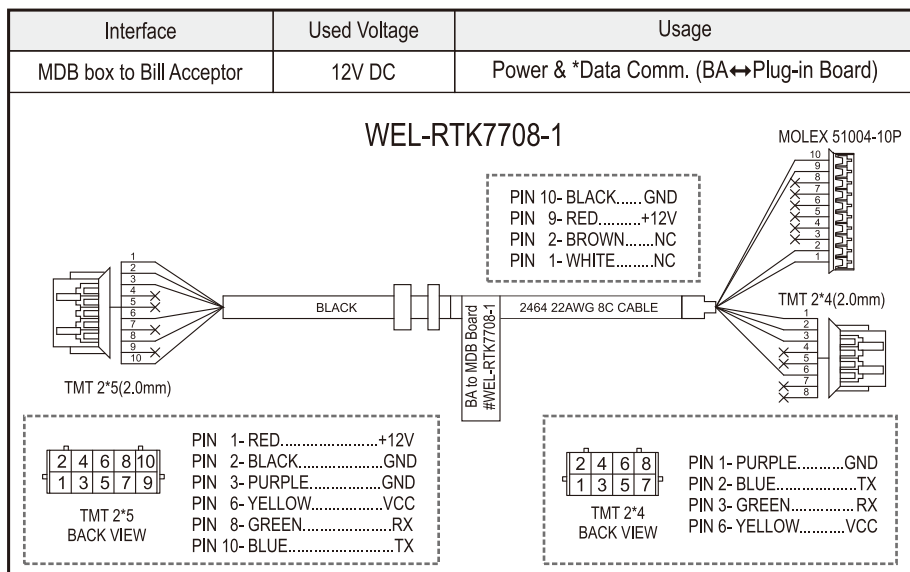
5-1 FIG.06



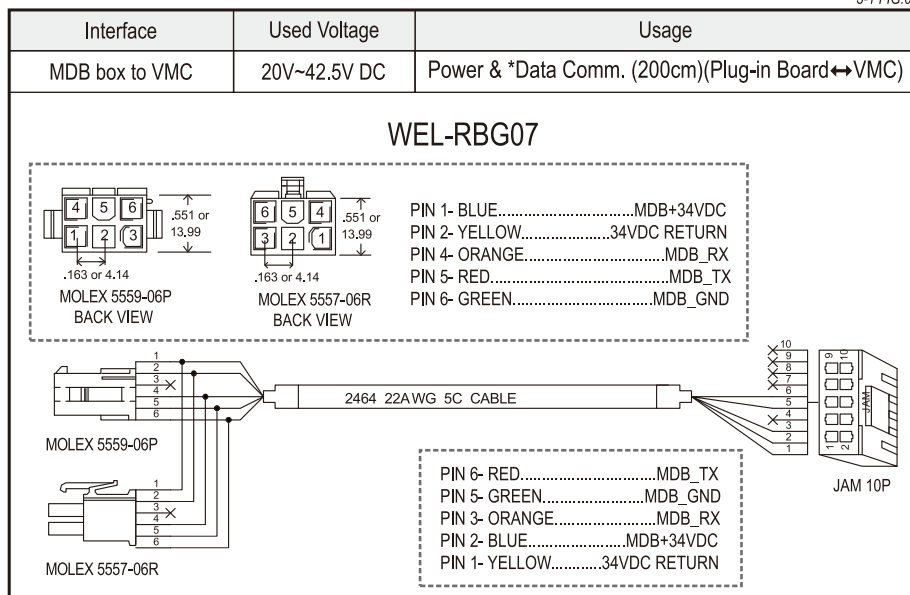
5-1 FIG.07



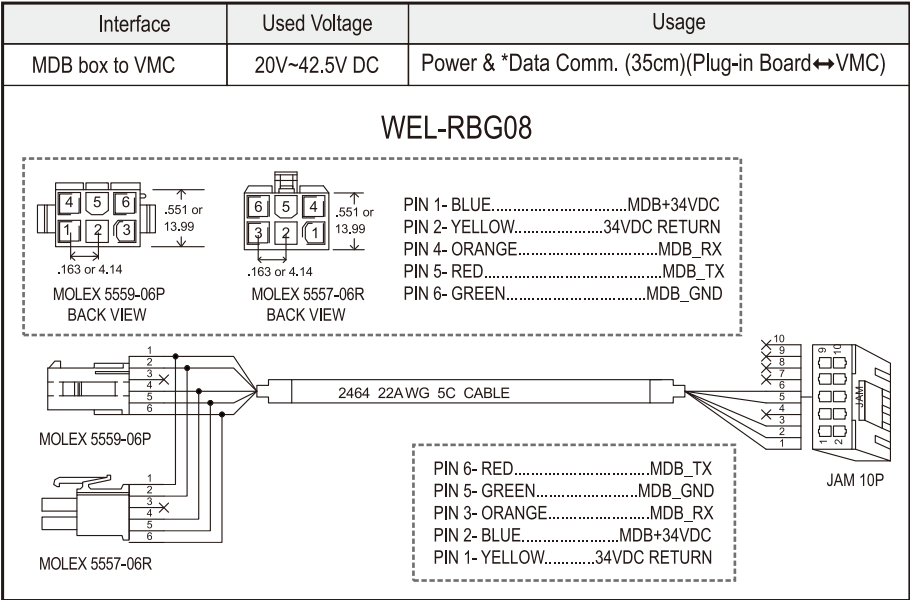
5-1 FIG.08



5-1 FIG.09

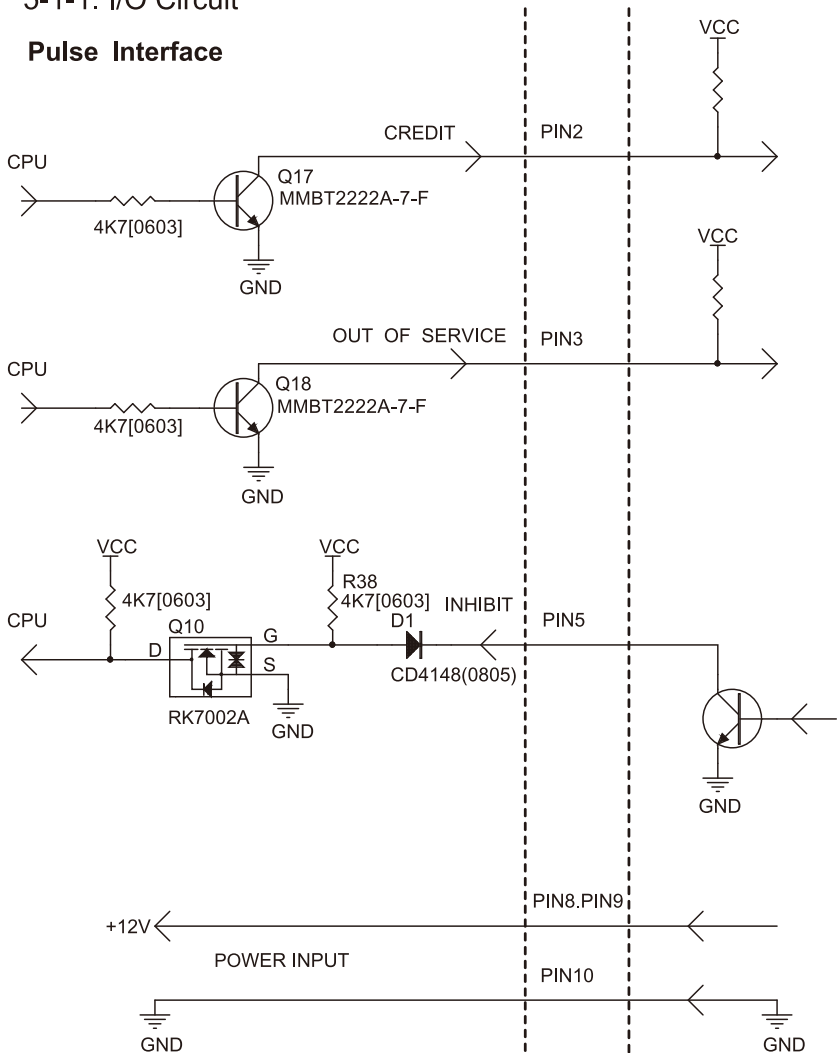


5-1 FIG.10

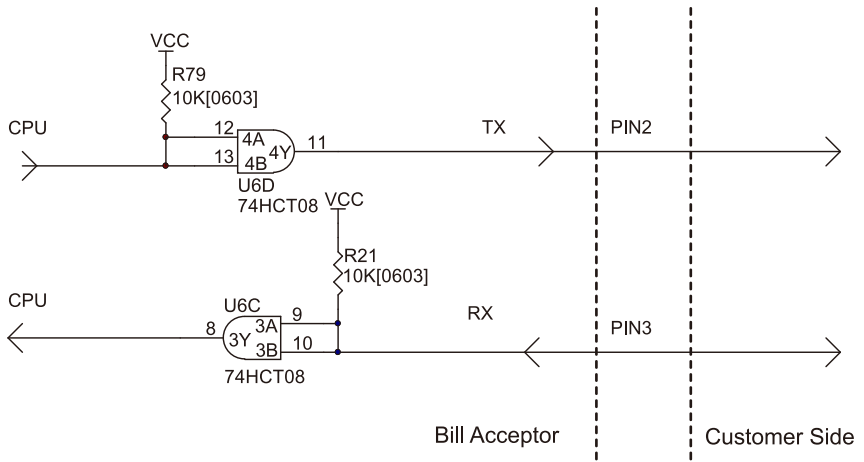


## 5-1-1. I/O Circuit

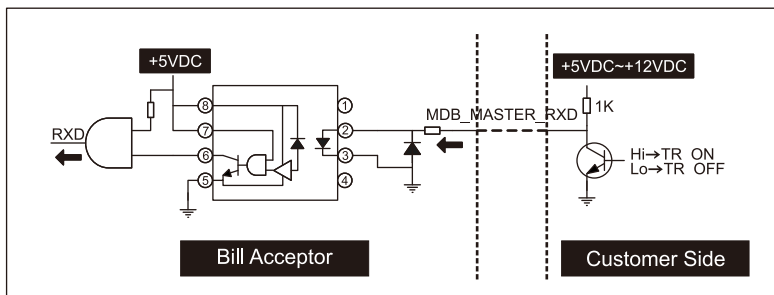
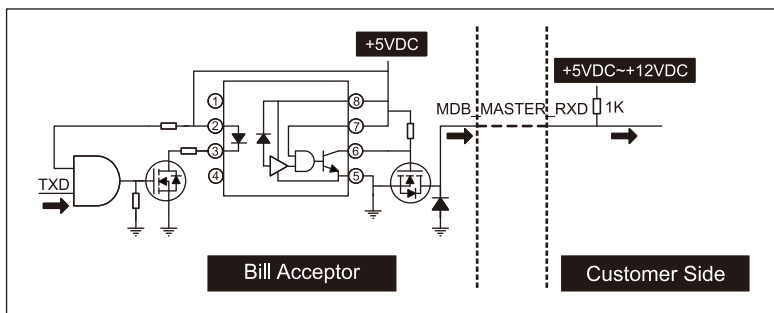
## Pulse Interface



## RS232(UART) Interface



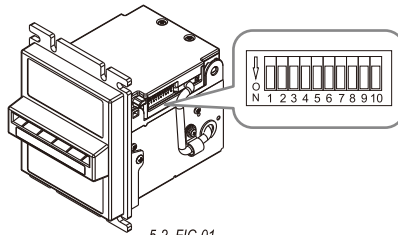
## MDB Interface



## 5-2. DIP Switch Setting

There's a serial DIP switches which is located on the side of TK77 (as FIG. 01). According to different currencies or interfaces which are used by users, DIP switch settings could be varied to fit users' needs.

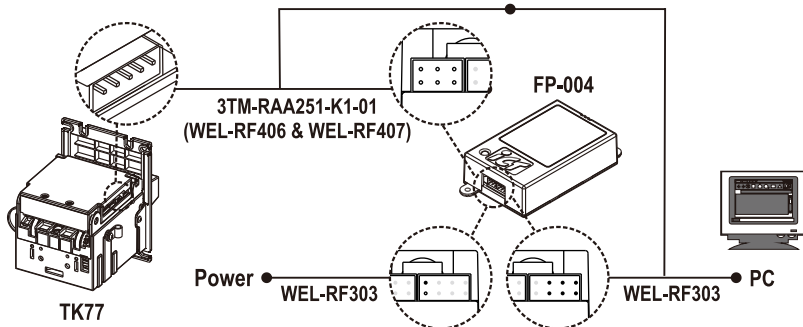
Please refer to "TK77 DIP Switch Setting" Guide in the package for more details.



5-2 FIG.01

## 5-3. Software Download and Upgrade

To download and upgrade the software to TK77, the programmer (FP-004) is needed. Please contact us to purchase FP-004 and refer to FP-004 user guide for software download and upgrade information.



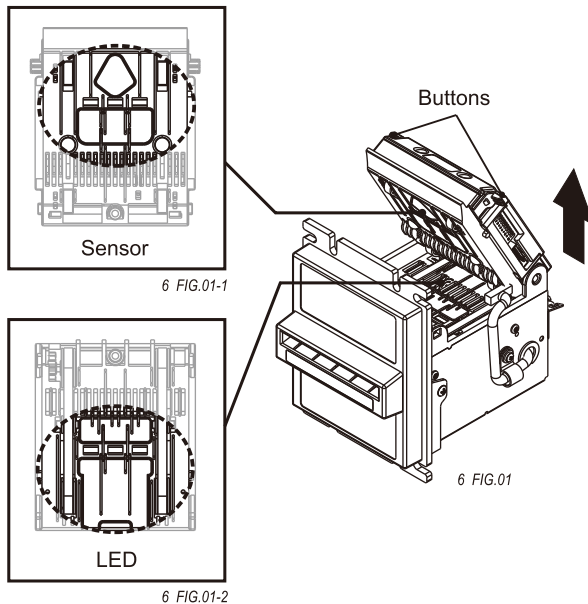
Turn on Bill Acceptor after connecting.

## 6. Maintenance

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

To clean the internal parts:

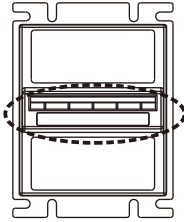
1. Press the buttons on the sides of bill path and lift the unit up.
2. Use a soft, dry cloth, or towel to clean the bill path and sensors.



|                                                                                                                                                                           |                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
|  <b>Maintenance Notice</b><br>(Any improper maintenance will result invalid warranty.) |                                               |
| <b>Recommended</b>                                                                                                                                                        | Mild, non-abrasive, soap water.               |
| <b>DO NOT USE</b>                                                                                                                                                         | Organic solvent , Alcohol, Volatility liquid. |

## 7. Troubleshooting

### 7-1. Bezel LED Errors



7-1 FIG.01

7-1 TABLE 01

| Flashes |      | Meaning                                                     | Solutions                                                                  |
|---------|------|-------------------------------------------------------------|----------------------------------------------------------------------------|
| Red     | Blue |                                                             |                                                                            |
| 1       | 1    | Indicate that something has jammed the bill path.           | Inspect for foreign object or banknote.                                    |
| 2       | 1    | Indicate that Bill acceptor is not enable.                  | Please inspect dip switch setting.                                         |
| 3       | 0    | Indicate that bill acceptor is having input sensor problem. | Please inspect or clean any foreign object on sensor or on bill path.      |
| 3       | 1    | Indicates that the unit is having recognize sensor problem. | Please inspect or clean any foreign object on sensor or on bill path.      |
| 3       | 2    | Indicates that the unit is having hook sensor problem.      | Remove LED housing: Inspect for foreign object and clean on Security hook. |
| 3       | 4    | Indicates that the unit is having output sensor problem.    | Inspect for dirt or foreign object on sensor or on bill path.              |
| 4       | 1    | Indicates that the unit has detected fishing issue.         | Inspect for dirt or foreign object on sensor or on bill path.              |
| 7       | 1    | Indicates that the unit is having motor problem.            | Inspect for dirt or foreign object on sensor or on bill path.              |



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





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