

# *Mini Hopper*

*COIN DISPENSER INSTALLATION GUIDE*



Thank you for choosing TOP VME .



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# 1.Introduction

## 1-1. Overview

Users can adjust the coin dimension with different coin payout plates and coin adjustment points. The design of Mini Hopper is easy-operated, trouble-free, and high reliability. Mini hopper is a coin dispensing unit for one denomination.

## 1-2. Features

- Easy maintenance.
- Easy installation.
- Coin size adjustable.
- Advanced coin low level detection.
- Dual sensors, double protections.
- Compact design with enormous capacity.

## 2.Specifications

### General

Dispensing Speed	TMH-12xxx 5~6 coins/second TMH-24xxx 6~8 coins/second
Interface	Pulse / RS232 / Hopper
Installation place	Indoor
Counting Method	Dual sensors

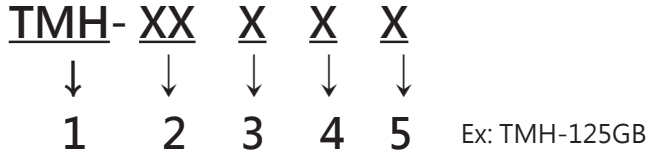
### Electrical

Power Source	TMH-12xxx 12V DC $\pm 5\%$ TMH-24xxx 24V DC $\pm 5\%$
Power Consumption	12V DC Not loaded: 0.6W Maximum: 30W
OperationEnvironment	Operation Temperature: 5°C~50°C Storage Temperature: -15°C~70°C Humidity : 30%~85%RH(no cond ensation)

### Mechanical

Weight	Approx. 0.8kg
Coin Capacity	Approx. 500 coins
Outline Dimension	Refer to page.4
Applicable Coin Size	A Type (Diameter)22.5~28 mm (Thickness)1.6~2.4mm B Type (Diameter)20~23 mm (Thickness)1.6~2.2mm C Type (Diameter)23~30 mm (Thickness)2.5~3.3mm F Type (Diamete)22.5~28 mm (Thickness)1.0~1.5mm

### 3.Coding principle



1.Product number

TMH	Mini Hopper
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2.Voltage

12	12V DC
24	24V DC

3.Coin capacity

5	500 PCS
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4.interface

G	RS232 Protocol + Pulse Mode + Hopper Mode
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5.Applicable Coin Size

A	( Diameter ) 22.5mm~28mm ( Thickness ) 1.6mm~2.4mm
B	( Diameter ) 20 mm~23mm ( Thickness ) 1.6mm~2.2mm
C	( Diameter ) 23 mm~30mm ( Thickness ) 2.5mm~3.3mm
F	( Diameter ) 22.5mm~28mm ( Thickness ) 1.0mm~1.5mm

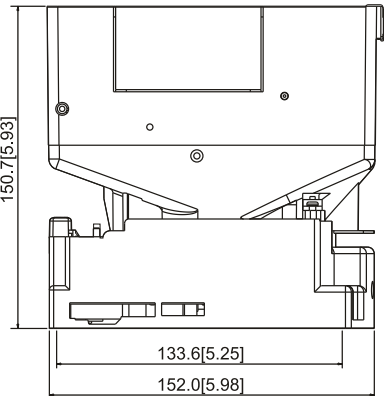
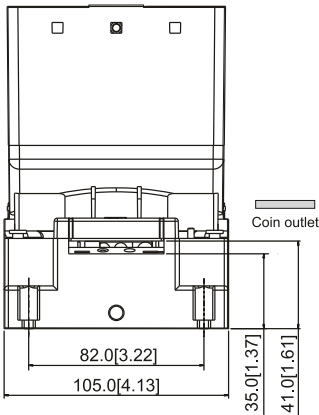
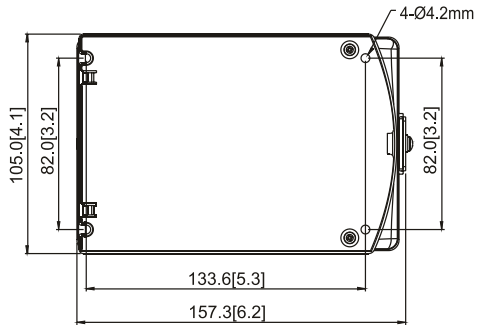
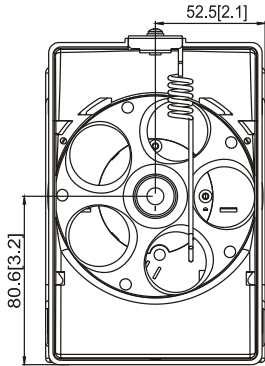
# 4.Packing List

Main Mini Hopper

Accessory Harness: Refer to P.9

Mini Hopper Coin Dispenser Installation Guide

# 5.Dimension



Unit : mm[inch]

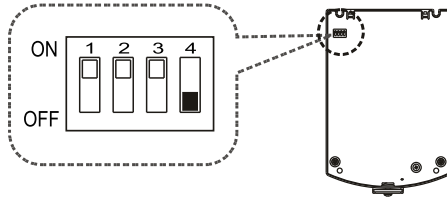
## 6.Installation

### 6-1.Coin Dispenser

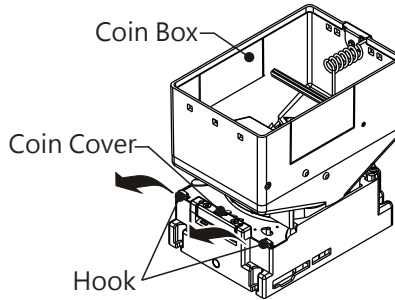
6-1-1.To setup Mini Hopper, follow the steps below:

(1).Hopper/pulse Interface :

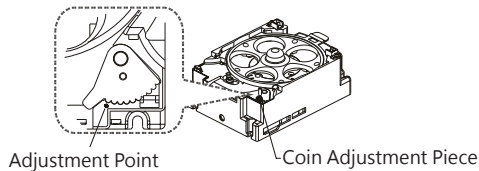
A.Set the dip switch on the bottom of the coin dispenser according to the interface used. (Refer to 6-1-2 Dialing Function Settings)



B. Squeeze the hook and remove the coin cover.

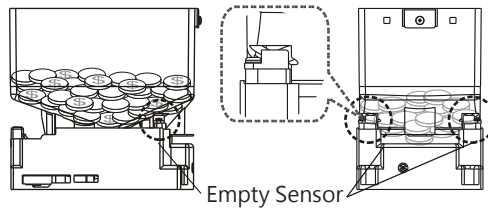


C. Adjust the size of the coin.



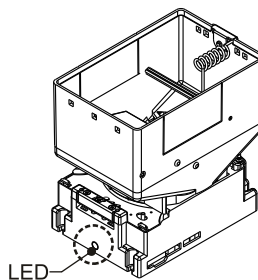


D. Put the coin into the coin box until the coin level exceeds the empty coin sensor.



E. Connect the wire to the side of the coin dispenser. (Refer to 6-1-3 Wire Connection)

F. Power supply to the coin dispensing machine. If the LED light turns from green to green, the setting is completed.



(2).RS232 Interface :

A. Set the dip switch on the bottom of the coin dispenser according to the interface used. (Please refer to 6-1-2. Dialing function setting)

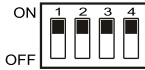
B. Connect the wire to one side of the coin dispenser. (See 6-1-3. Wire Connections)

C. Download the software from the PC via the download box (G-BOX).(Mini Hopper Tool Kit)

6-1-2. DIP Switch Setting:

For TMH-XXXGX :

RS232 Interface :



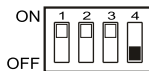
<b>SW1</b>	<b>SW2</b>	<b>SW3</b>	<b>SW4</b>
<b>ON</b>	<b>ON</b>	<b>ON</b>	<b>ON</b>

Pules Interface :



Coin/Pulse	SW1	SW2	SW3	SW4
1/1	OFF	OFF	OFF	ON
2/1	ON	OFF	OFF	ON
4/1	OFF	ON	OFF	ON
5/1	ON	ON	OFF	ON
10/1	OFF	OFF	ON	ON
20/1	ON	OFF	ON	ON
50/1	OFF	ON	ON	ON

Hopper Interface :



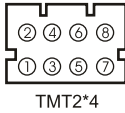
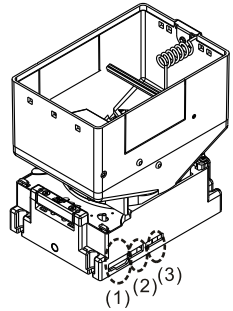
<b>SW1</b>	<b>SW2</b>	<b>SW3</b>	<b>SW4</b>
<b>X</b>	<b>X</b>	<b>X</b>	<b>OFF</b>



Please reset Mini Hopper every time after DIP switch setup.

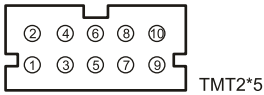
6-1-3.Harness Application

Download and RS232 interface connector:



- |             |               |
|-------------|---------------|
| PIN 1 - GND | PIN 5 - Reset |
| PIN 2 - N/C | PIN 6 - VCC   |
| PIN 3 - PGD | PIN 7 - RX1   |
| PIN 4 - PGC | PIN 8 - TX1   |

Power and input/output connectors (Hopper or Pules Interface):

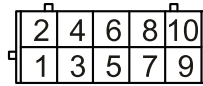
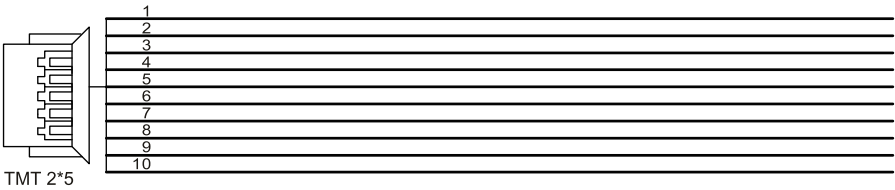


- |                              |                      |
|------------------------------|----------------------|
| PIN 1 - +12V/+24V DC (Power) | PIN 6 - COIN_EMPTY_O |
| PIN 2 - GND(Power)           | PIN 7 - METER_N.O    |
| PIN 3 - CREDIT RELAY(N.O.)   | PIN 8 - METER_COM    |
| PIN 4 - CREDIT RELAY(Common) | PIN 9 - INHIBIT_N.O  |
| PIN 5 - PAYOUT_IN            | PIN10 - INHIBIT_COM  |

Interface	Used Voltage	Harness	Page
Hopper	12V DC (TMH-12XXX) 24V DC (TMH-24XXX)	WEL-RHP17	10
Pulse	12V DC (TMH-12XXX)	WEL-RHP17	10
RS232	24V DC (TMH-24XXX)	WEL-R7U06	11

# HARNESS FORMAT

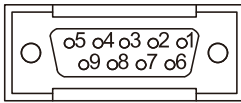
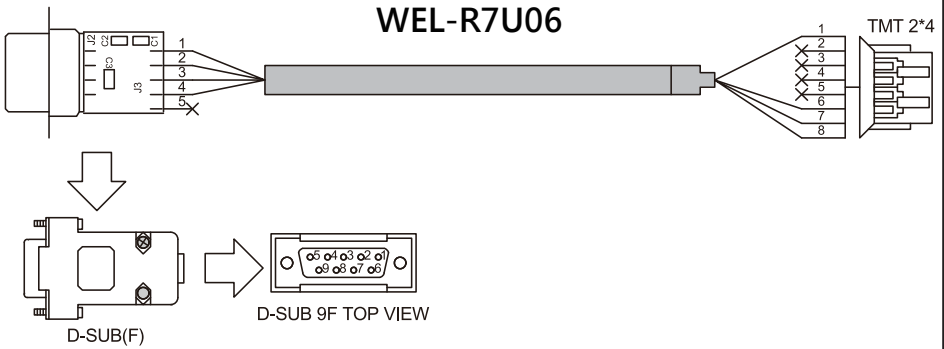
## WEL-RHP17



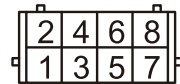
PIN NO	COLOR	PIN DEFINE
PIN1	RED	+12V/24V DC
PIN2	BLACK	GND
PIN3	YELLOW	CREDIT_RELAY <sub>(N.O)</sub>
PIN4	BLACK	CREDIT_RELAY <sub>(COM)</sub>
PIN5	BLUE	PAYOUT_IN
PIN6	PURPLE	COIN_EMPTY_O
PIN7	GRAY	METER <sub>(N.O)</sub>
PIN8	BLACK	METER <sub>(COM)</sub>
PIN9	WHITE	INHIBIT <sub>(N.O)</sub>
PIN10	BLACK	INHIBIT <sub>(COM)</sub>

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# HARNESS FORMAT



PIN NO	PIN DEFINE
PIN2	TXD
PIN3	RXD
PIN5	GND



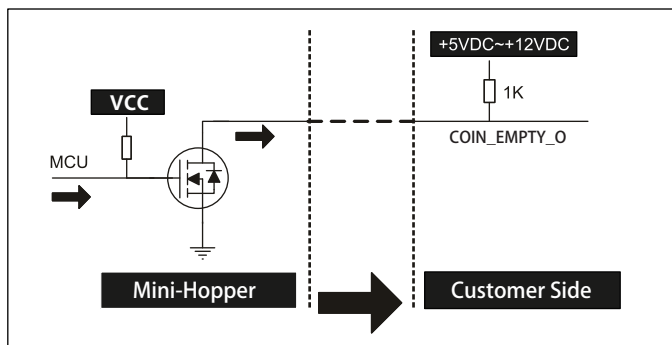
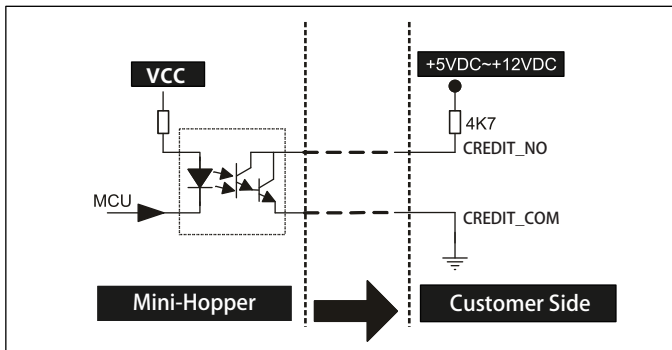
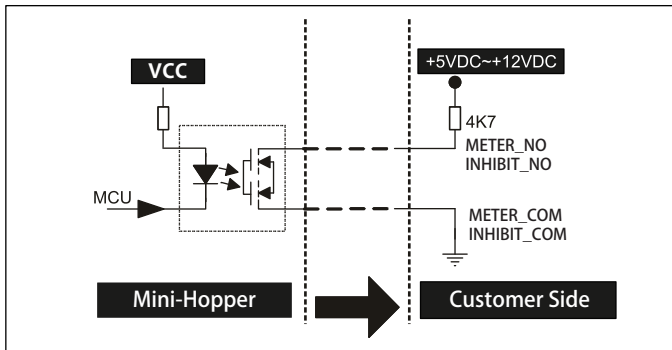
TMT 2\*4 BACK VIEW

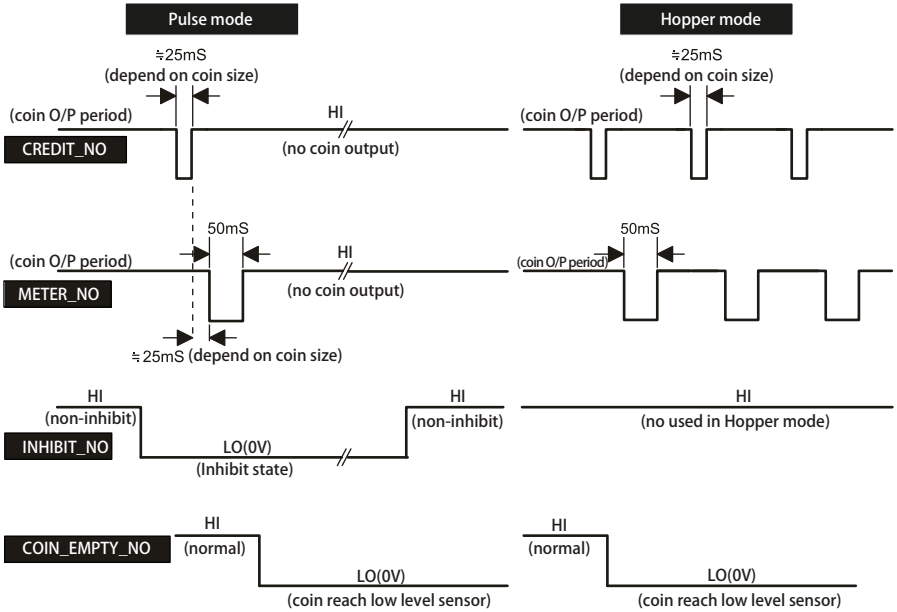
PIN NO	COLOR	PIN DEFINE
PIN1	BLUE	GND
PIN6	WHITE	VCC
PIN7	BLACK	RXD
PIN8	PURPLE	TXD

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6-3. I/O Circuit

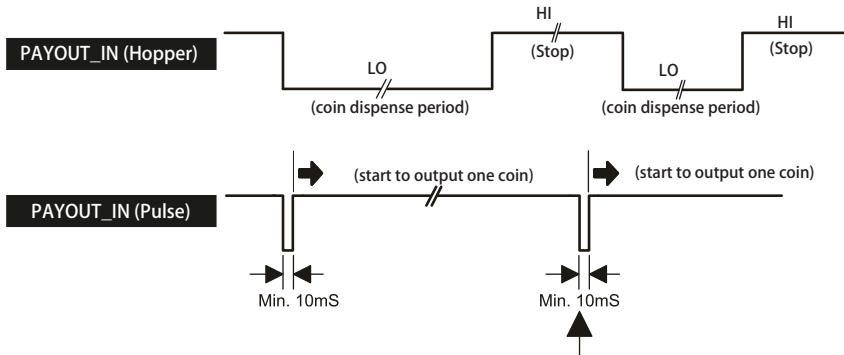
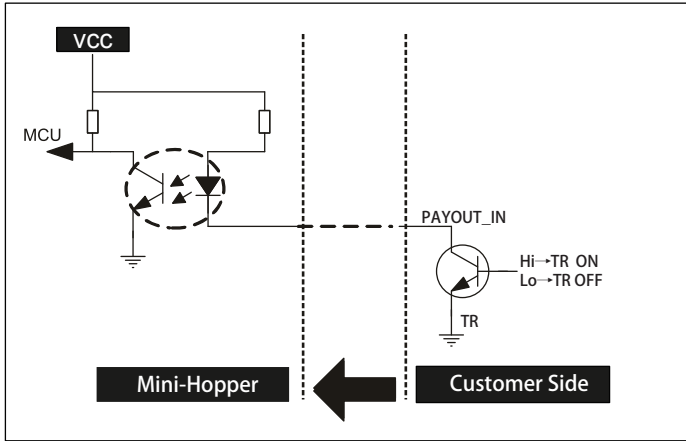
Hopper & Pulse Interface-1





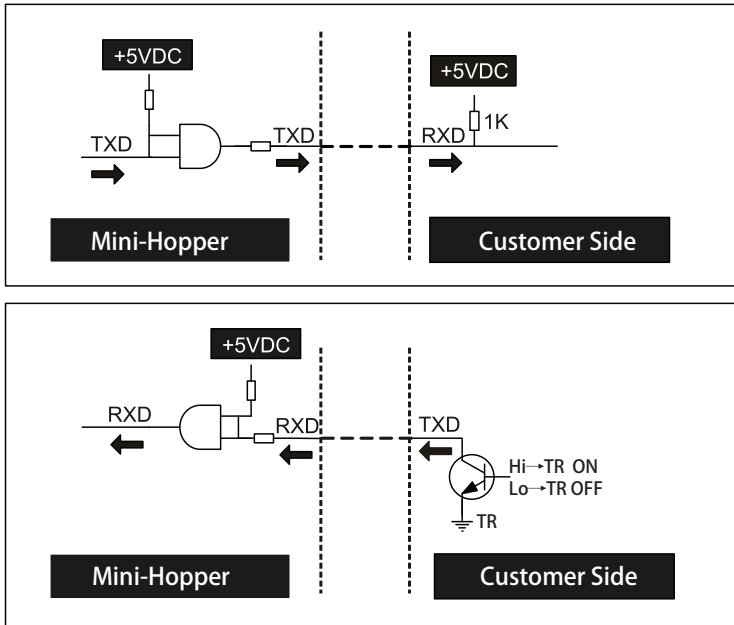


Hopper & Pulse Interface-2



- The pulse can be issued before previous coin dispense finished.
- The minimum timing between pulse and pulse Y 10mS.

RS232 Interface



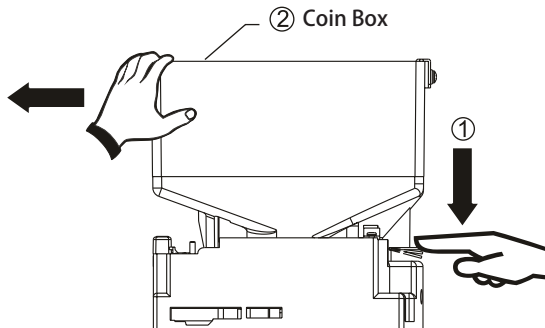
## 7.Maintenance


When using the banknote receiver, foreign matter on the sensor may affect the receiving speed. To ensure smooth operation of the coin dispenser, please clean the inside of the machine regularly according to the frequency of use. (Proposed period 4-6 months)

 Please make sure Mini Hopper turns OFF before cleaning.

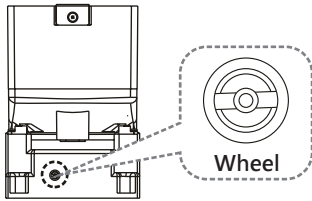
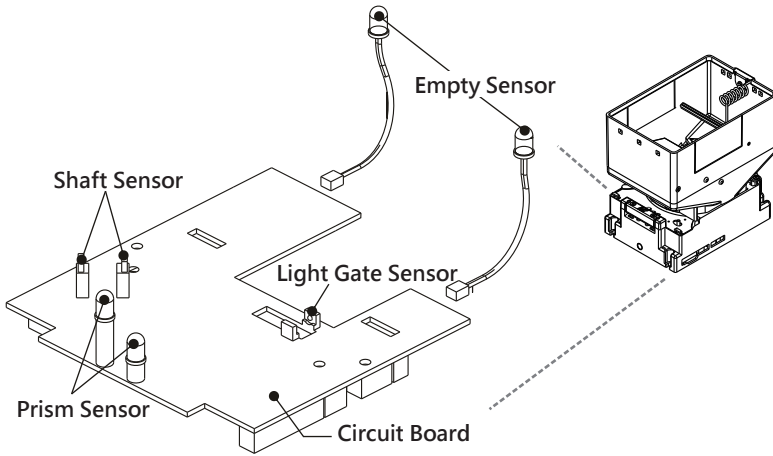
To clean the internal parts:

1. Remove the coin box.
2. Use a dry, soft cloth, or brush to clean internal parts and coin path.
3. Use a dry, soft cloth, or towel to clean the coin box.




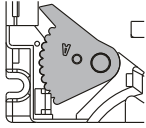
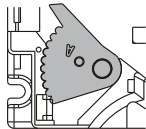
	<b>Maintenance Notice</b>	
	<i>(Any improper maintenance will result in invalid warranty.)</i>	
	<b>Recommended</b>	Mild, non-abrasive, a small amount of soapy water.
<b>DO NOT USE</b>	<b>Organic solvent, Alcohol, Volatile liquid.</b>	

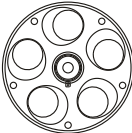
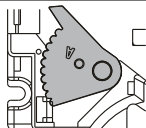
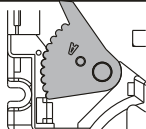
# 8.Troubleshooting.

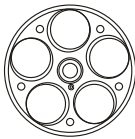
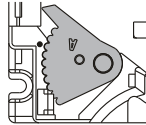
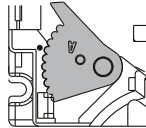
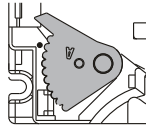



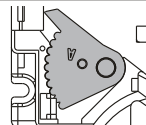
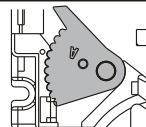
Flashes	Status	Corrective actions
1	1. Incorrect voltage 2. Coin jammed 3. Motor problem	1. Make sure the voltage is applied to Mini Hopper. 2. Clockwise turn the wheel which is in the front of Mini Hopper to remove the jammed coin (as and check the figure 25)shaft-block.
2	Insufficient coins	Refill coins.
3	Overpay logic error	Re-adjust coin size and shaft.
5	Prism sensor error	Inspect for foreign objects on prism sensor or jammed coins.
6	Shaft sensor error	

◆ Coin adjustment table

Coin Payout Plate	Coin Payout Adjustment	Diameter	22.5mm ≦ 28mm
A	C1607A	thickness	1.6mm ≦ 2.4mm
		Diameter	25.5mm ≦ 28mm
		thickness	1.6mm ≦ 2.4mm
		Diameter	22.5mm ≦ 25.5mm
		thickness	1.6mm ≦ 2.4mm

Coin Payout Plate	Coin Payout Adjustment	Diameter	20mm ≦ 23mm
B	C1607A	thickness	1.6mm ≦ 2.2mm
		Diameter	22.5mm ≦ 23mm
		thickness	1.6mm ≦ 2.2mm
		Diameter	20mm ≦ 22.5mm
		thickness	1.6mm ≦ 2.2mm

Coin Payout Plate	Coin Payout Adjustment	Diameter	23mm $\leq$ 30mm
C	C1607A	thickness	2.5mm $\leq$ 3.3mm
		Diameter	25.5mm $\leq$ 28mm
		thickness	2.5mm $\leq$ 3.3mm
		Diameter	23mm $\leq$ 25.5mm
		thickness	2.5mm $\leq$ 3.3mm
		Diameter	28mm $\leq$ 30mm
		thickness	2.5mm $\leq$ 3.3mm

Coin Payout Plate	Coin Payout Adjustment	Diameter	22.5mm $\leq$ 28mm
F	C1607A	thickness	1.0mm $\leq$ 1.5mm
		Diameter	25.5mm $\leq$ 28mm
		thickness	1.0mm $\leq$ 1.5mm
		Diameter	22.5mm $\leq$ 25.5mm
		thickness	1.0mm $\leq$ 1.5mm



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Top Vending Machine Electronics Co., Ltd.

