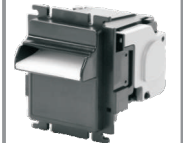




L70(#)



L77(#)

L SERIES



L83(#)



L77F



PL77

Bill Acceptor
Installation Guide

Use of Materials Limitations

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1. Introduction

1-1. Overview

The L Series bill acceptor combines improved bill-sensing technology with lightweight and durable plastic construction. It also features fast software updating, automatic self-adjusting sensor system, and easy maintenance to increase acceptance rates and reduce bill jammed.

1-2. Features

- Fixed width/multi-width bill acceptable.
- Multinational currencies acceptable.
- New generation design of verification system.
- Anti-string technology.
- Auto-calibration.
- Lightweight and durable plastic construction.
- Speedy bill transaction.
- Selective interfaces.
- Multicolor illumination bezel design.
- Easy maintenance.
- Fast program update.

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 acceptable

Transaction Time Approx. 3 seconds to stack

Interface **L70-P2/P5, L70#-P2/P5:**
Pulse, RS232, RS232 A0, ccNet (compatible), MDB.

L70(RS232 B2)-P2/P5:
Pulse, RS232, RS232 B2, RS232 A0 .

L77-P3/P6:
Pulse, RS232 A1, ccNet (compatible), RS232 A0, RS232, MDB, ccTalk, Parallel.

L70F-P2/P5, L77F-P2/P5:
ccTalk, ccNet (compatible), RS232 A0, Pulse, RS232, MDB, Special Pulse(L77F)

L83-P3/P6:
Pulse, RS232 A1, ccNet (compatible), RS232 A0, RS232, ccTalk, MDB, Parallel.

PL77-P3/P6:
Pulse, RS232 A1, ccNet (compatible), RS232 A0, RS232, ccTalk, MDB, Paralle, Special Pulse

L83#-P3/P6:
Pulse, RS232 A1, ccNet (compatible), RS232 A0, RS232, MDB, ccTalk

L77#-P3/P6:
Pulse, RS232 A1, ccNet (compatible), RS232 A0, RS232, MDB.

***Note: For ccTalk information, please refer to Appendix.**



Installation: Indoor use only!!

Electrical

Power Source	L70#/ L77#/L70F/ L77F/ L83#: 12V DC(10~16V DC) Others: 12V DC(10.8~13.2V DC)
Power Consumption	Standby : 0.3A, 3.6W Operation : 1.2A, 14.4W Maximum: 2 A, 24 W
Operation Environment	Operation Temperature: L70/ L77/ L83/ PL77: 0°C~55°C L70F/ L77F : 0°C~60°C L70#/ L77#/ L83# : 0°C~65°C Storage Temperature: -20°C~70°C Humidity: 30%~85%RH (no condensation)

Mechanical

Outline Dimension	L70-P2/P5, L70#-P2/P5, L70F-P2/P5: Refer to page. 6 L77-P3/P6, L77#-P3/P6 : Refer to page. 8 L77F-P2/P5 : Refer to page. 9 L83-P3/P6, L83#-P3/P6 : Refer to page.10 PL77-P3/P6 : Refer to page.11
Bill Box Capacity	L70-P2, L70#-P2, L70F-P2 : Approx. 200 bills L70-P5, L70#-P5, L70F-P5 : Approx. 500 bills L77-P3, L77#-P3 : Approx. 300 bills L77-P6, L77#-P6 : Approx. 600 bills L83-P3, L83#-P3, PL77-P3 : Approx. 300 bills L83-P6, L83#-P6, PL77-P6 : Approx. 600 bills L77F-P2 : Approx. 150 bills L77F-P5 : Approx. 500 bills

Weight

L70, L70#, L70F	: Approx. 0.52kg
L70-P2, L70#-P2, L70F-P2	: Approx. 1.25kg
L70-P5, L70#-P5, L70F-P5	: Approx. 1.4 kg
L77, L77#	: Approx. 0.8 kg
L77F	: Approx. 0.44kg
L77F-P2	: Approx. 1.35kg
L77F-P5	: Approx. 1.42kg
L77-P3, L77#-P3	: Approx. 1.46kg
L77-P6, L77#-P6	: Approx. 1.65kg
L83, L83#, PL77	: Approx. 0.8 kg
L83-P3, L83#-P3, PL77-P3	: Approx. 1.46kg
L83-P6, L83#-P6, PL77-P6	: Approx. 1.65kg

Bill Accepted Width

L70-P2/P5, L70#-P2/P5, L70F-P2/P5:	(67mm) 59mm~67mm (71mm) 59mm~71mm
L77F-P2/P5	: 72mm~77mm
L77-P3/P6, L77#-P3/P6	: 61mm~77mm
L83-P3/P6, L83#-P3/P6	: 61mm~83mm
PL77-P3/P6	: 61mm~77mm

3. Packing List**Main**

Bill Acceptor

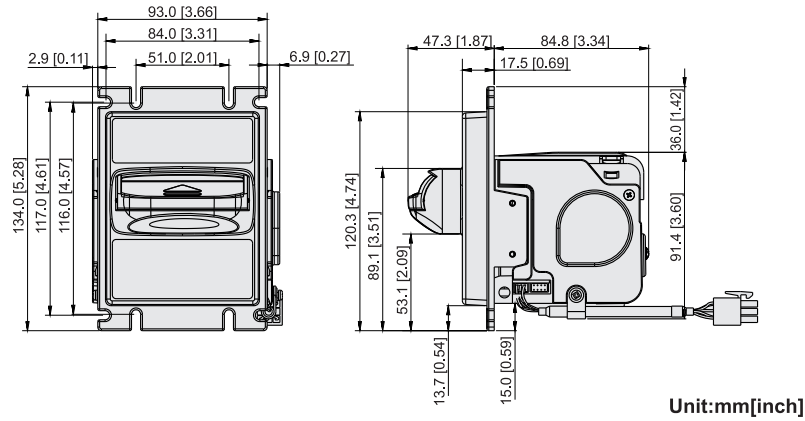
Accessory

Harness: Refer to 5-1
Bezel Sticker
Screw Pack
L Series Installation Guide
L Series DIP Switch Setting Guide

4. Dimension

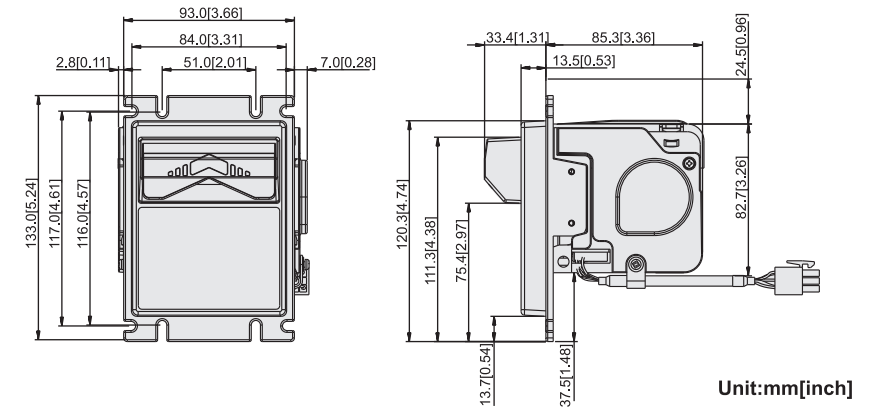
L70, L70#, L70F N Type Bezel: A Bezel(67mm) and B Bezel(71mm)

Figure 1



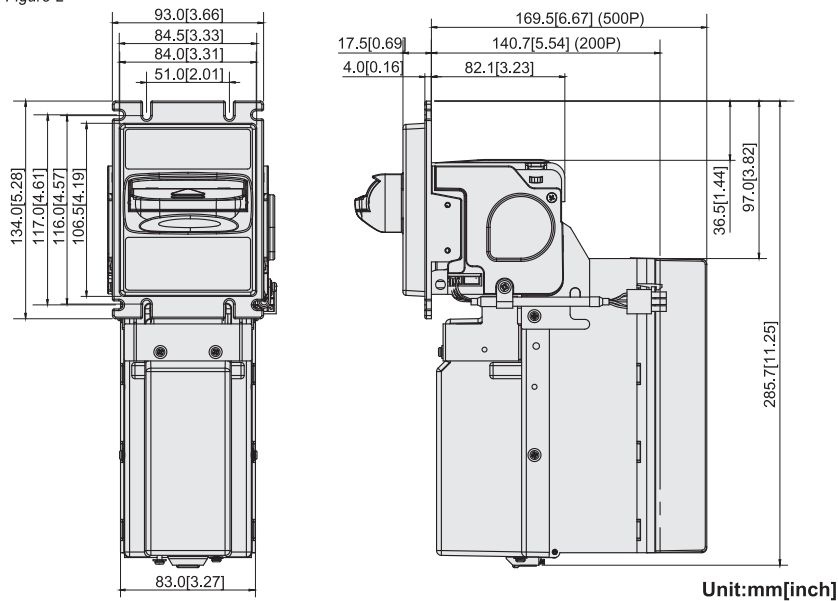
L70 O Type Bezel (71mm)

Figure 3



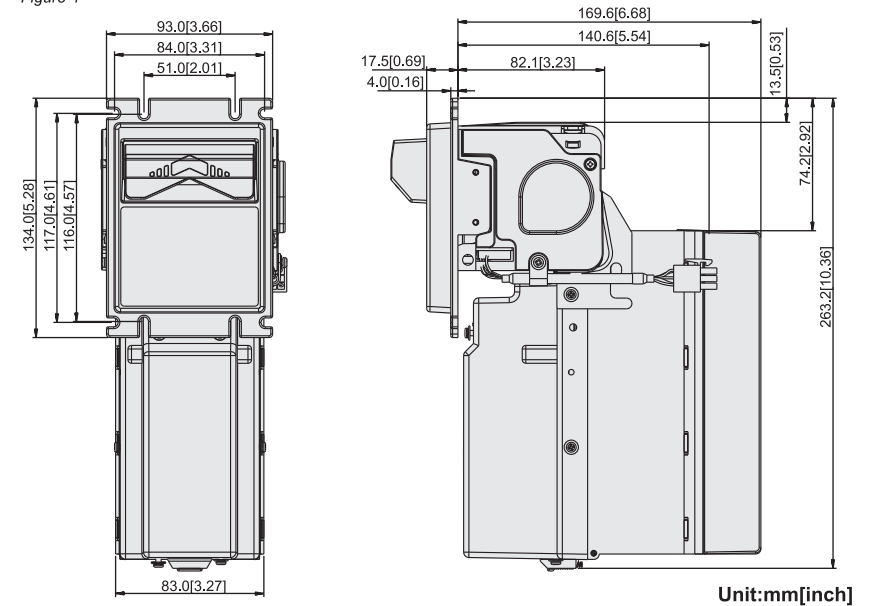
L70-P2/P5, L70#-P2/P5, L70F-P2/P5

Figure 2



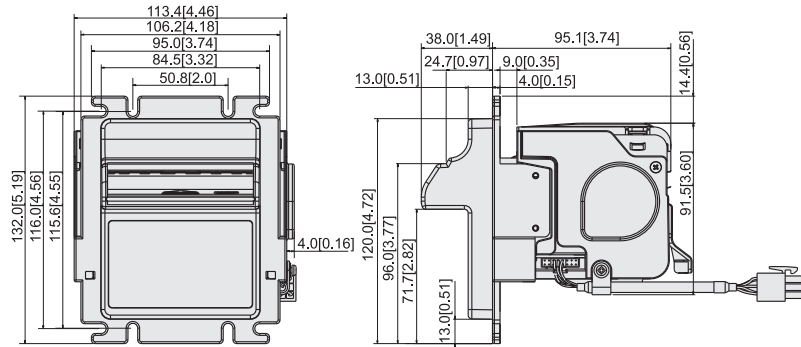
L70-P2/P5

Figure 4



L77, L77# -D Bezel (77mm)

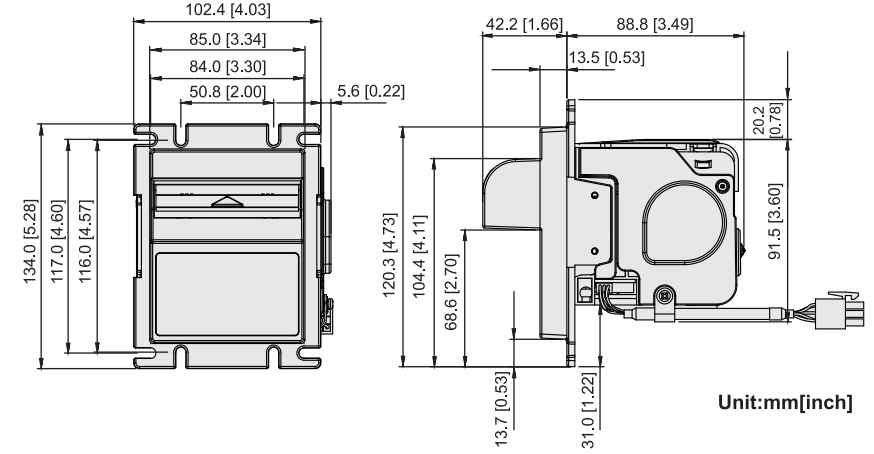
Figure 5



Unit:mm[inch]

L77F-I Bezel (78mm)

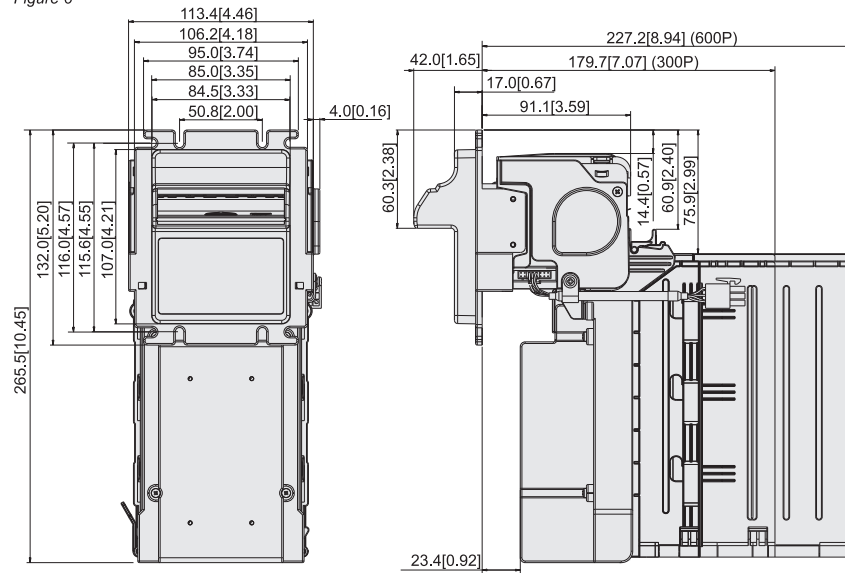
Figure 7



Unit:mm[inch]

L77-P3/P6, L77#-P3/P6

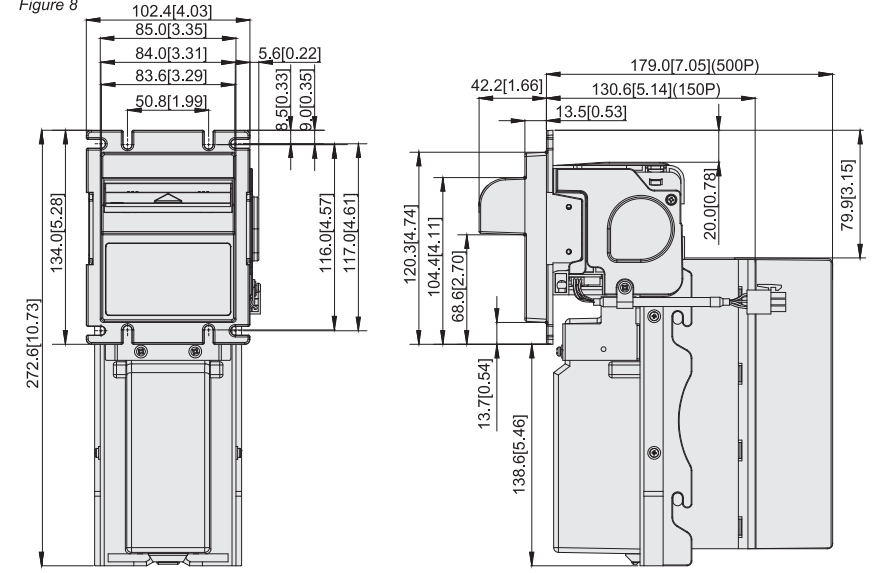
Figure 6



Unit:mm[inch]

L77F-P2/P5

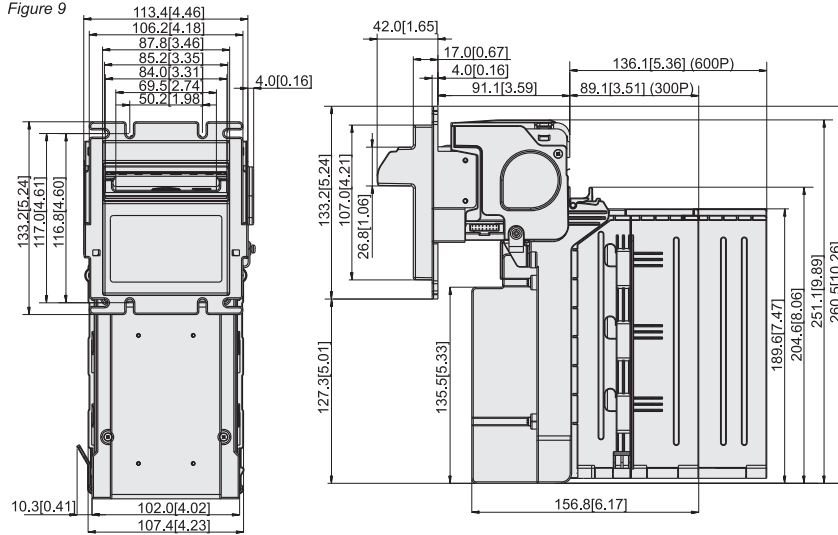
Figure 8



Unit:mm[inch]

L83-P3/P6, L83#-P3/P6 Down Stacker- E Type Bezel (83mm)

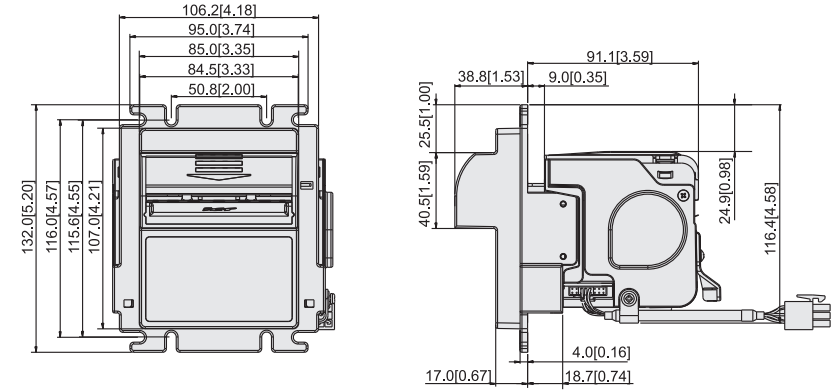
Figure 9



Unit:mm[inch]

PL77- G Bezel (77mm)

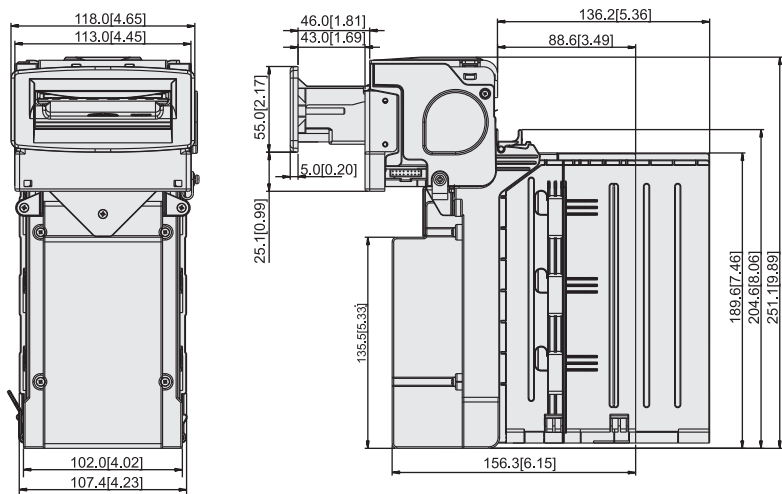
Figure 11



Unit:mm[inch]

L83-P3/P6, L83#-P3/P6 Down Stacker- F Type Bezel (83mm)

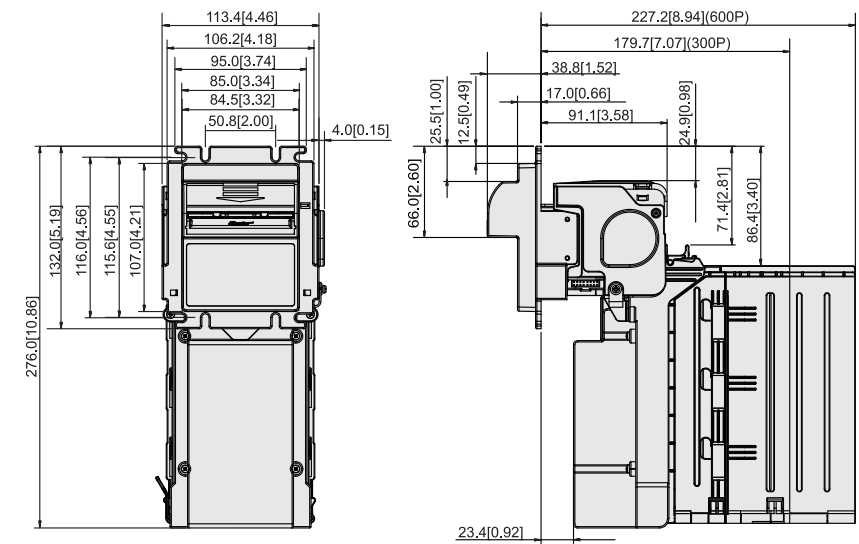
Figure 10



Unit:mm[inch]

PL77-P3/P6

Figure 12



Unit:mm[inch]



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.

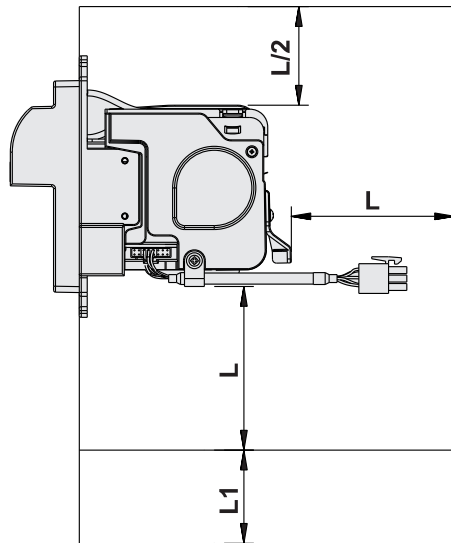


Figure 13

5. Installation

5-1. Harness Application

Table 1

Model	CPU Board	Interface	Used Voltage	Usage	Harnesses	Page
L70(RS232 B2) -P2/P5	2PCBAA318FXX ^{*6}	Pulse	12V DC	Power & *Data Comm. ^{*3}	WEL-RL702	17
				Extension Wire	CU-R961-1	15
		ICT (RS232)	12V DC	Power & *Data Comm.	WEL-RL703 ^{*1}	18
				RS232 B2	12V DC	Power & *Data Comm. Extension Wire
		RS232 A0	12V DC	Power & *Data Comm. Extension Wire	WEL-RL705 WEL-RID04	19 21
Pulse	12V DC			Power & *Data Comm. Extension Wire	WEL-R7U02 CU-R961-1	22 15
		L70-P2/P5	2PCBAA318DXX ^{*6}	ICT (RS232)	12V DC	Power Extension Wire
*Data Comm.	WEL-R7U06 ^{*2}					23
ccNet compatible	12V DC			Power Extension Wire	WEL-R7U02 CU-R961-1	22 15
L70(#)-P2/P5	2PCBAA318HXX ^{*6}	RS232 A0	12V DC	*Data Comm.	WEL-R7U06	23
				Power	WEL-R7U02	22
L70F-P2/P5	2PCBAA318LXX ^{*6}	MDB	34V DC ^{*4}	Power & *Data Comm. (BA ↔ Plug-in Board) ^{*5}	WEL-RBG01	24
				Power & *Data Comm.(35cm) (Plug-in Board ↔ VMC)	WEL-RBG08	26
L77F-P2/P5	2PCBAA318LXX ^{*6}	ccTalk	12V DC	Power & *Data Comm. (Plug-in Board ↔ VMC)	WEL-RBG07	25
				Power & *Data Comm.	WEL-RL77F01	27
		Pulse (Out of service)	12V DC	Power & *Data Comm. Extension Wire	WEL-RL826 CU-R961-1	36 15

★ 1. Maintenance use only.

★ 2. WEL-R7U06 : TTL Level to ±12VDC Level for PC.

★ 3. Data Comm. : Data Communication.

★ 4. MDB 34VDC : VMC Provides +34VDC to MDB Plug-in Board to convert into +12VDC, and provides +12VDC to L series bill acceptors.

★ 5. MDB Box : 5RBG-AA313NA0-XX for L70, L70#, L77F, L70F

(For L77, L77#, PL77, L83, L83# use WEL-RL812 with MDB Box.)

★ 6. "XX" varies from board version to version.

Table 2

Model	CPU Board	Interface	Used Voltage	Usage	Harnesses	Page
L77-P3/P6 L83-P3/P6 PL77-P3/P6	2PCBAA324AXX *6 2PCBAA357AXX (PL77) *6	Pulse	12V DC	Power & *Data Comm. *3	WEL-RL802	28
				Extension Wire	CU-R961-1	15
		ccTalk	12V DC	Power & *Data Comm.	WEL-RL803	29
		RS232 A1	12V DC	Power & *Data Comm.	WEL-RL805	31
		ICT (RS232)	12V DC	Power	WEL-RL802	28
				Extension Wire	CU-R961-1	15
				*Data Comm.	WEL-R7U06*2	23
		ccNet compatible	12V DC	Power	WEL-RL802	28
				Extension Wire	CU-R961-1	15
				*Data Comm.	WEL-R7U06	23
		MDB	34V DC	Power & *Data Comm. (BA↔Plug-in Board)	WEL-RL812	33
				Power & *Data Comm.(35cm) (Plug-in Board↔VMC)	WEL-RBG08	26
				Power & *Data Comm.(200cm) (Plug-in Board↔VMC)	WEL-RBG07	25
		RS232 A0	12V DC	Power	WEL-RL802	28
				Extension Wire	CU-R961-1	15
				*Data Comm.	WEL-R7U06	23
Parallel	12V DC	Power & *Data Comm.	WEL-RL804	30		
Parallel J	12V DC	Power & *Data Comm.	WEL-RL806	32		
Pulse(Out of service)	12V DC	Power & *Data Comm.	WEL-RL825	35		
		Extension Wire	CU-R961-1	15		
L77#-P3/P6 L83#-P3/P6	2PCBAA324HXX *6	Pulse	12V DC	Power & *Data Comm	WEL-RL802	28
				Extension Wire	CU-R961-1	15
		RS232 A1	12V DC	Power & *Data Comm	WEL-RL805	31
		ICT (RS232)	12V DC	Power	WEL-RL802	28
				Extension Wire	CU-R961-1	15
				*Data Comm.	WEL-R7U06	23
		ccNet compatible	12V DC	Power	WEL-RL802	28
				Extension Wire	CU-R961-1	15
				*Data Comm.	WEL-R7U06	23
		MDB	34V DC	Power & *Data Comm. (BA↔Plug-in Board) *5	WEL-RL812	33
				Power & *Data Comm.(35cm) (Plug-in Board↔VMC)	WEL-RBG08	26
				Power & *Data Comm.(200cm) (Plug-in Board↔VMC)	WEL-RBG07	25
RS232 A0	12V DC	Power	WEL-RL802	28		
		Extension Wire	CU-R961-1	15		
		*Data Comm.	WEL-R7U06*2	23		
ccTalk	12V DC	Power & *Data Comm.	WEL-RL824	34		

Figure 14

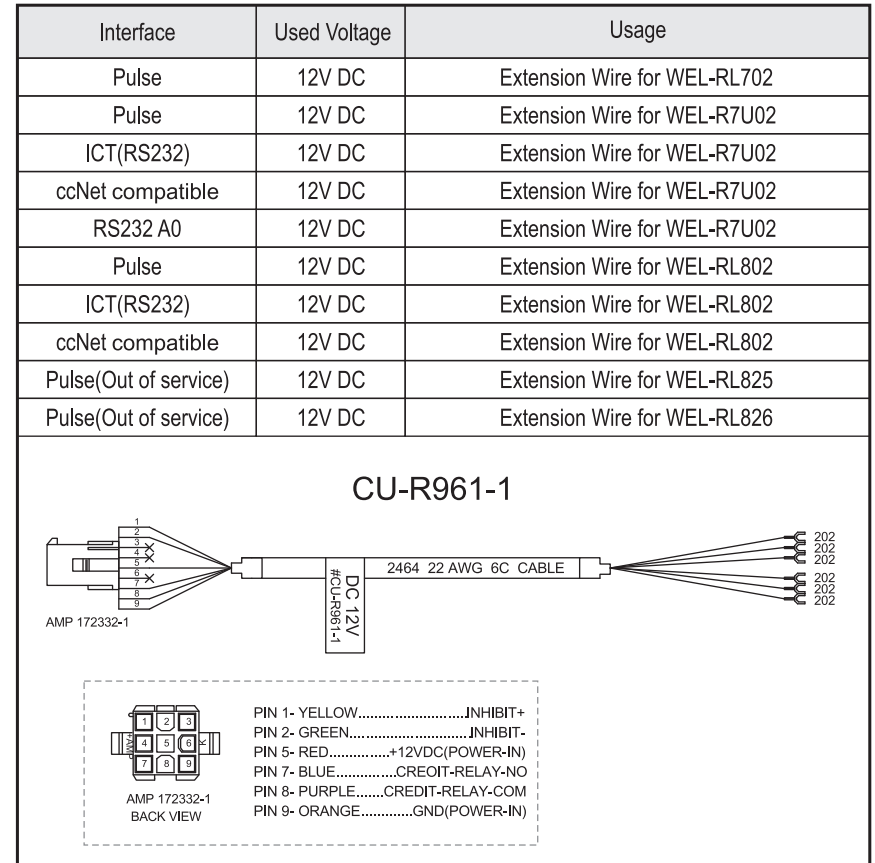


Figure 15

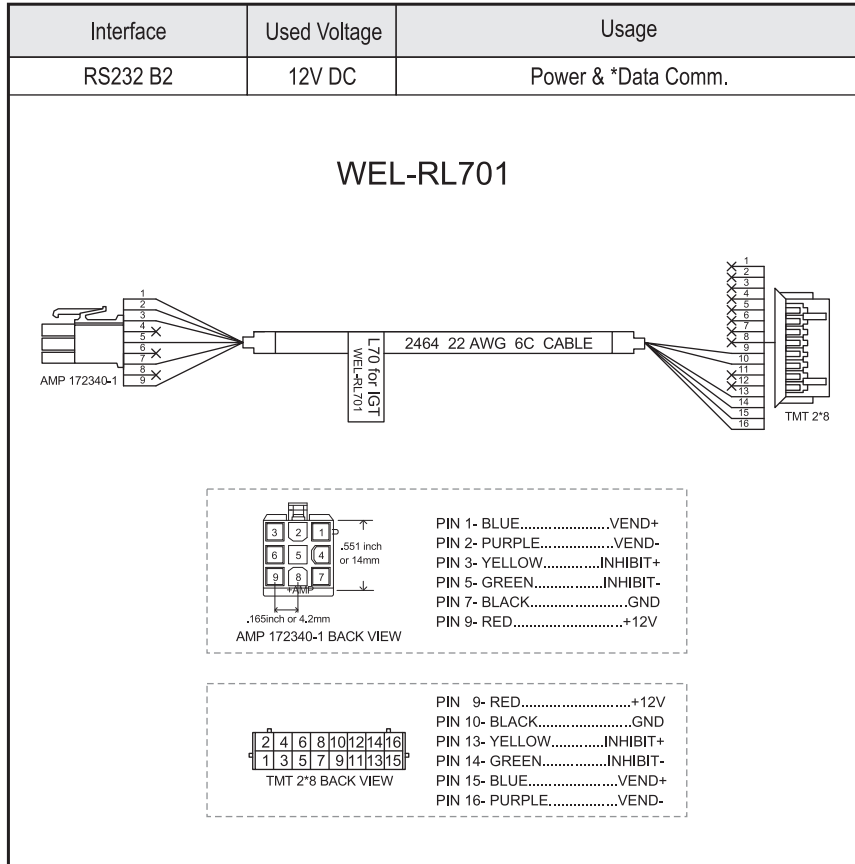


Figure 16

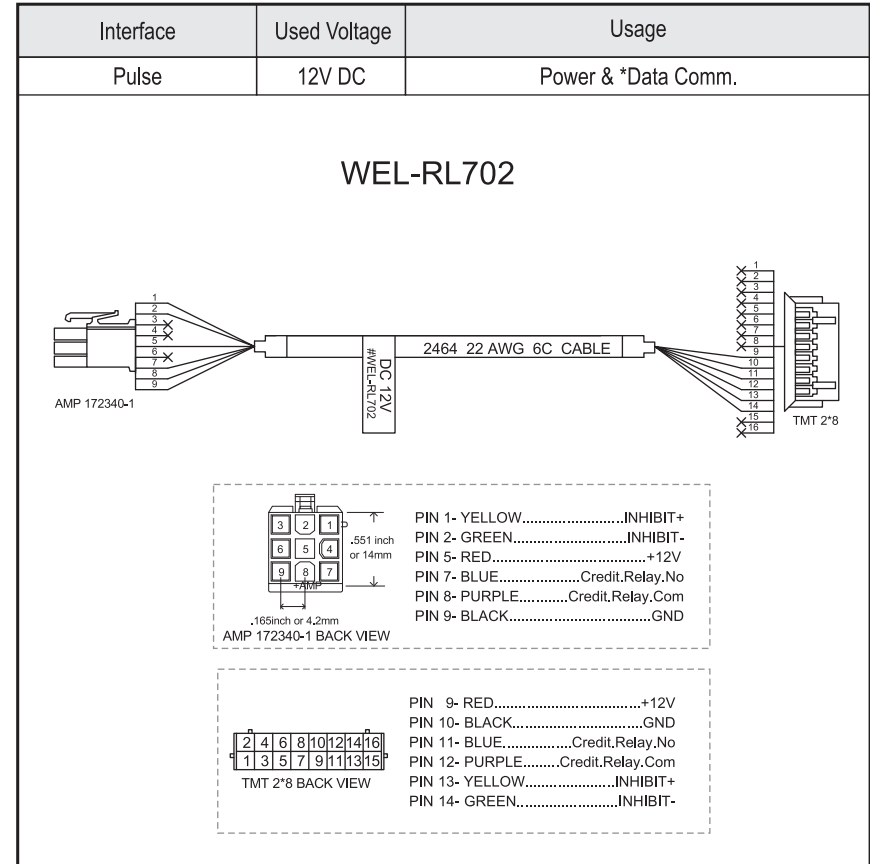


Figure 17

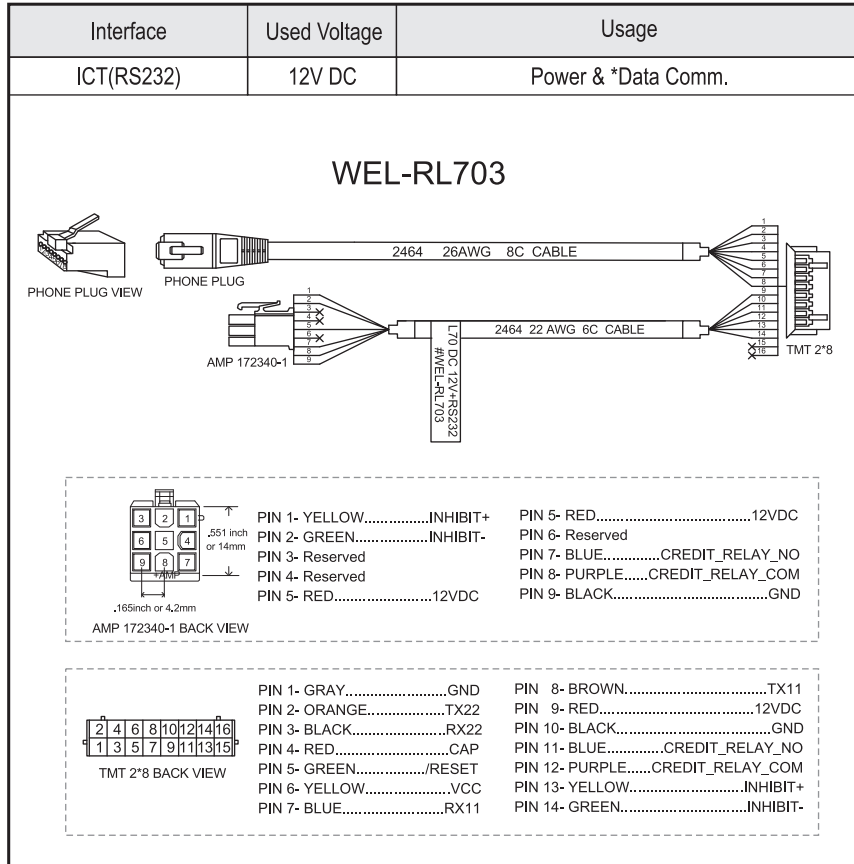


Figure 18

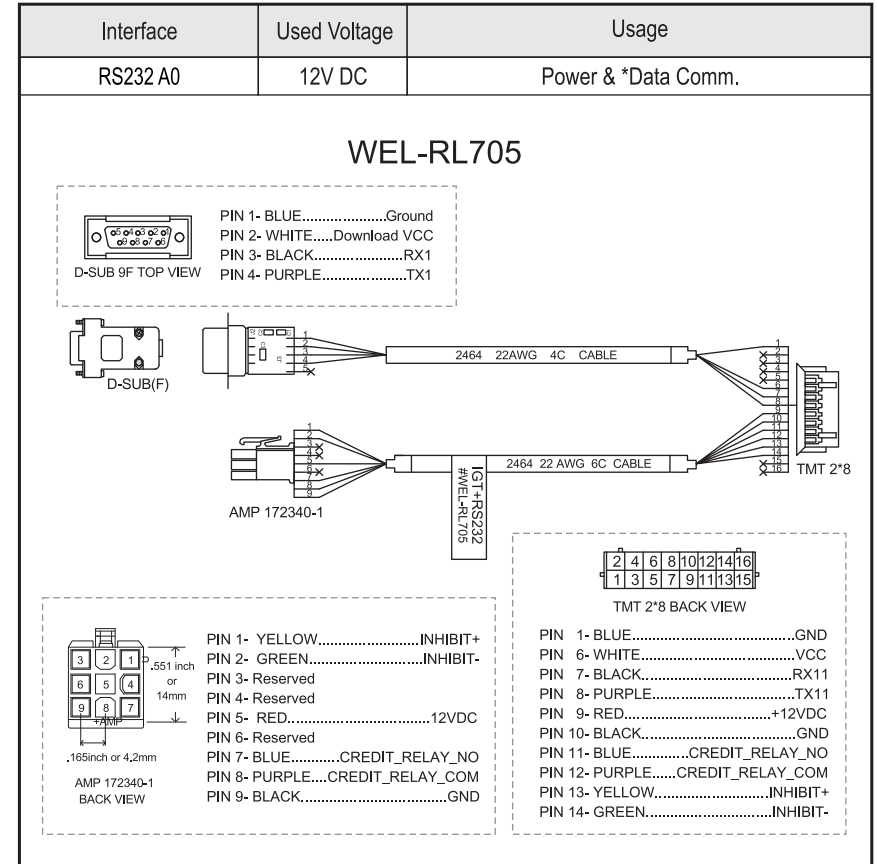


Figure 19

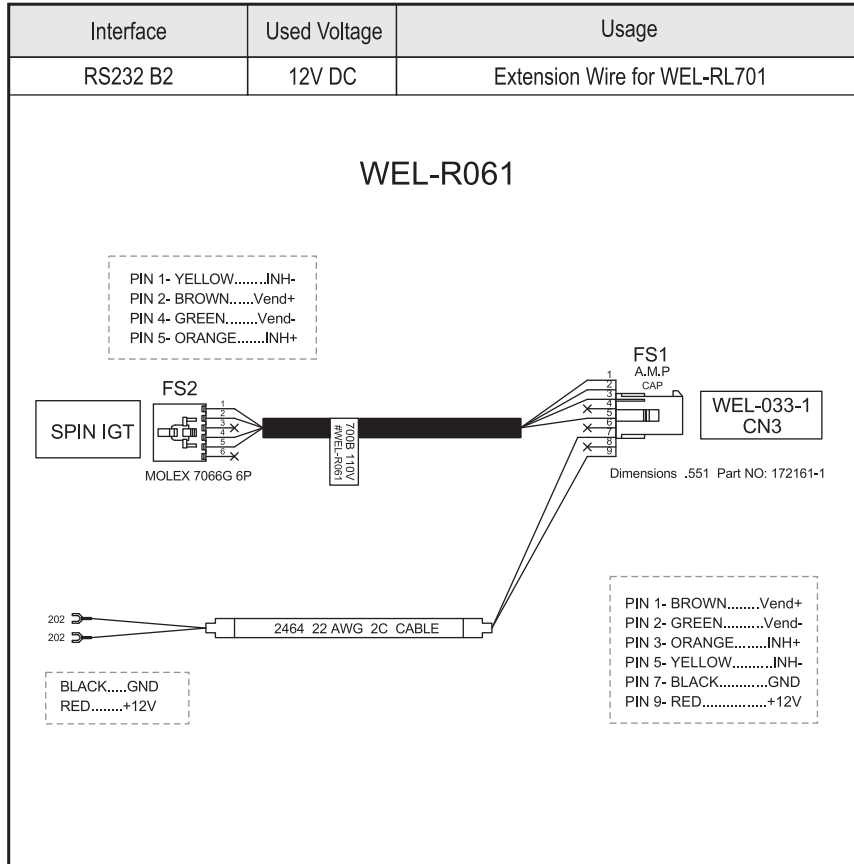


Figure 20

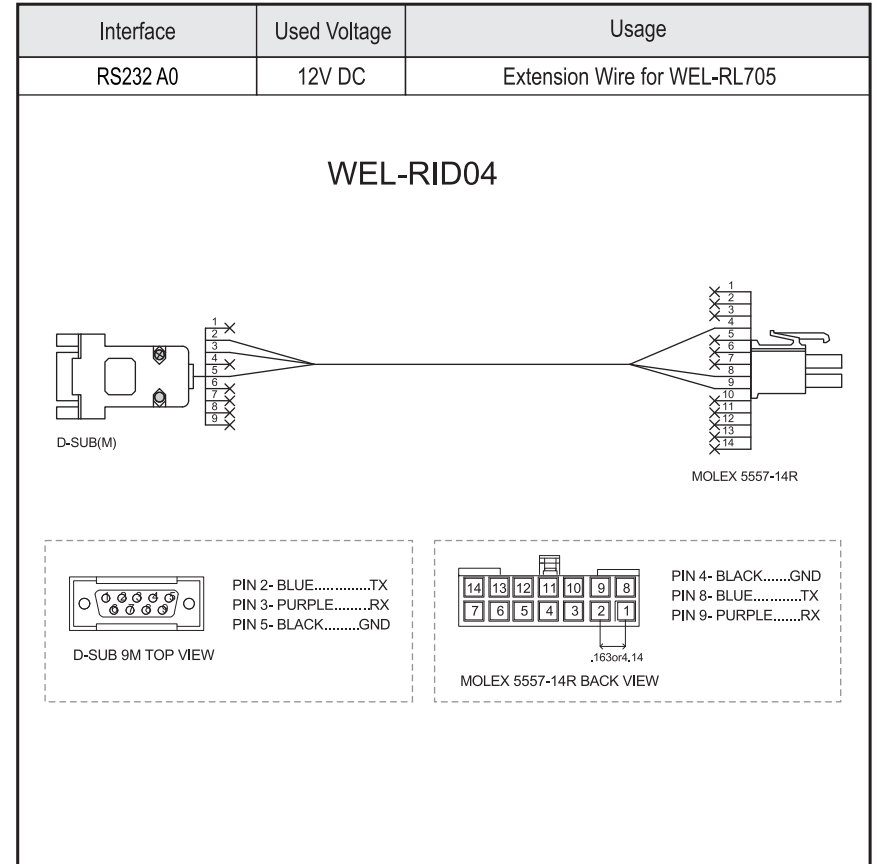


Figure 21

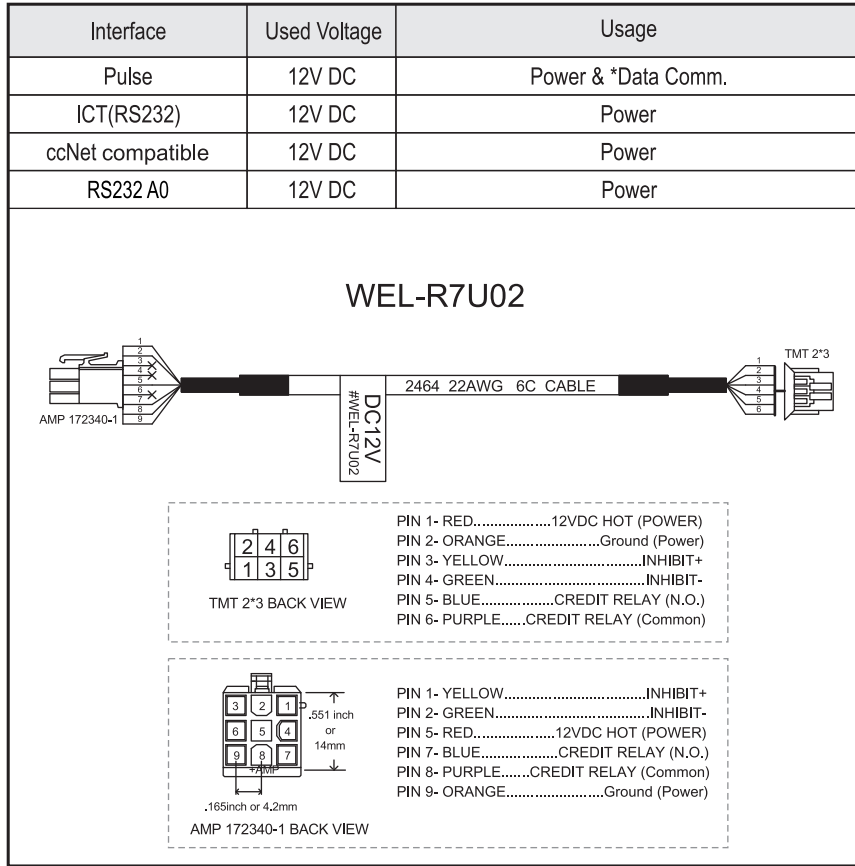


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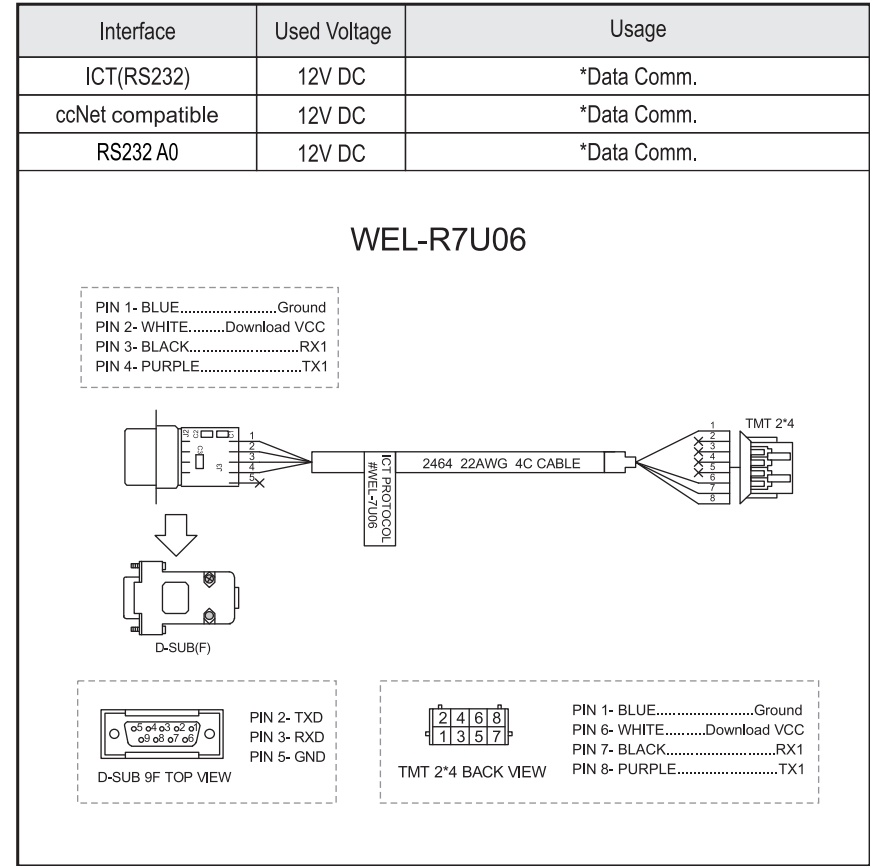


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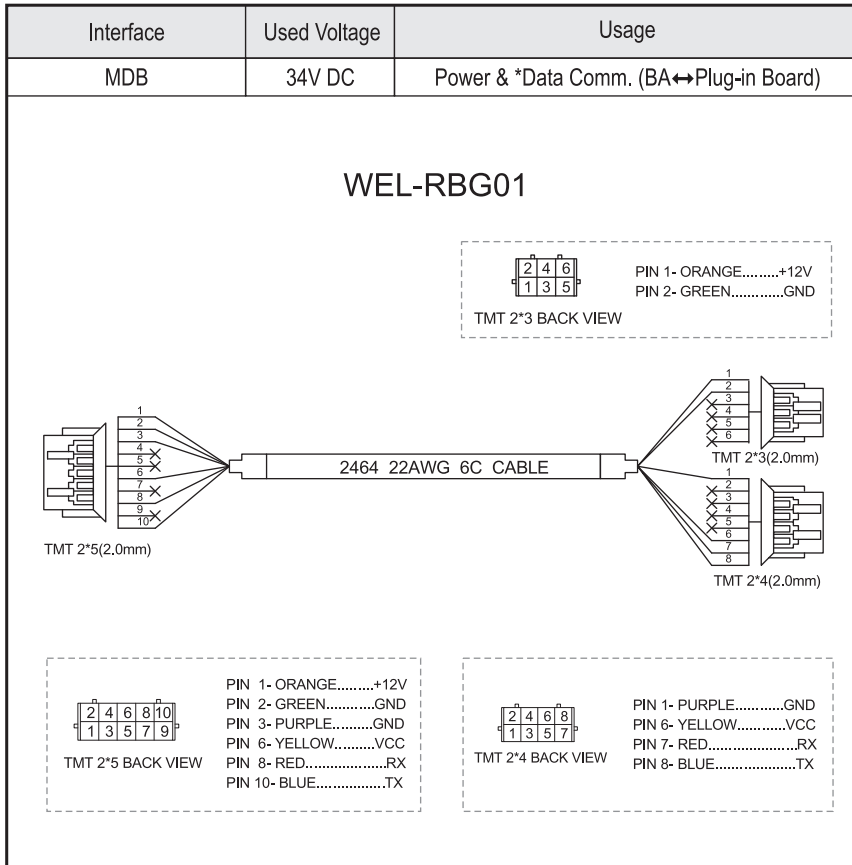


Figure 24

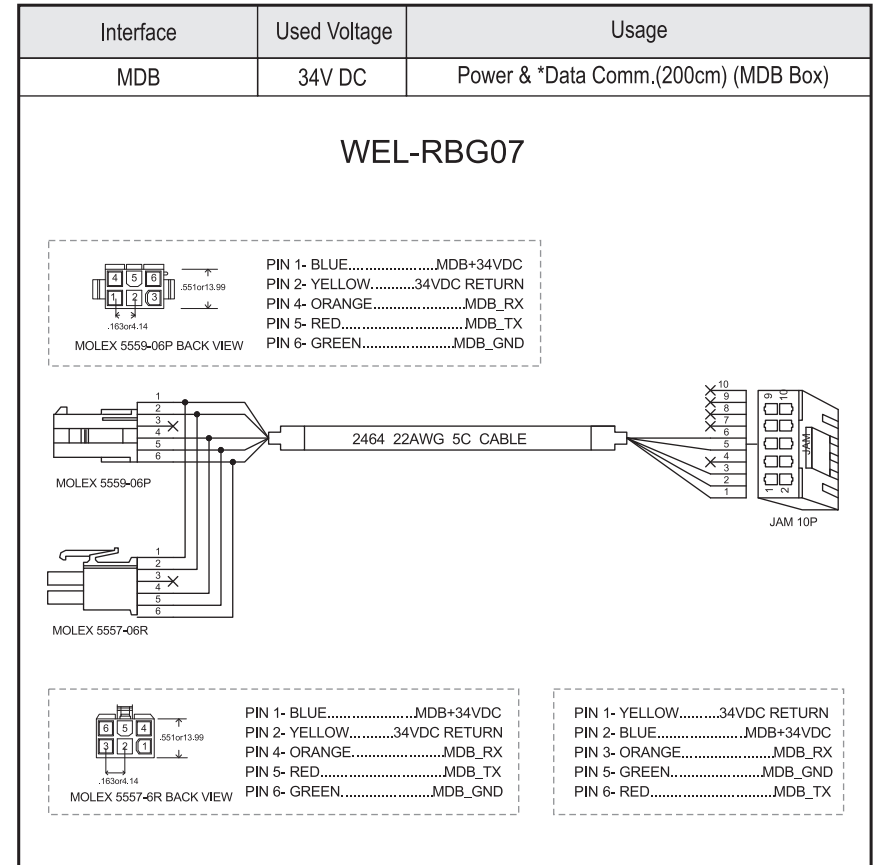


Figure 25

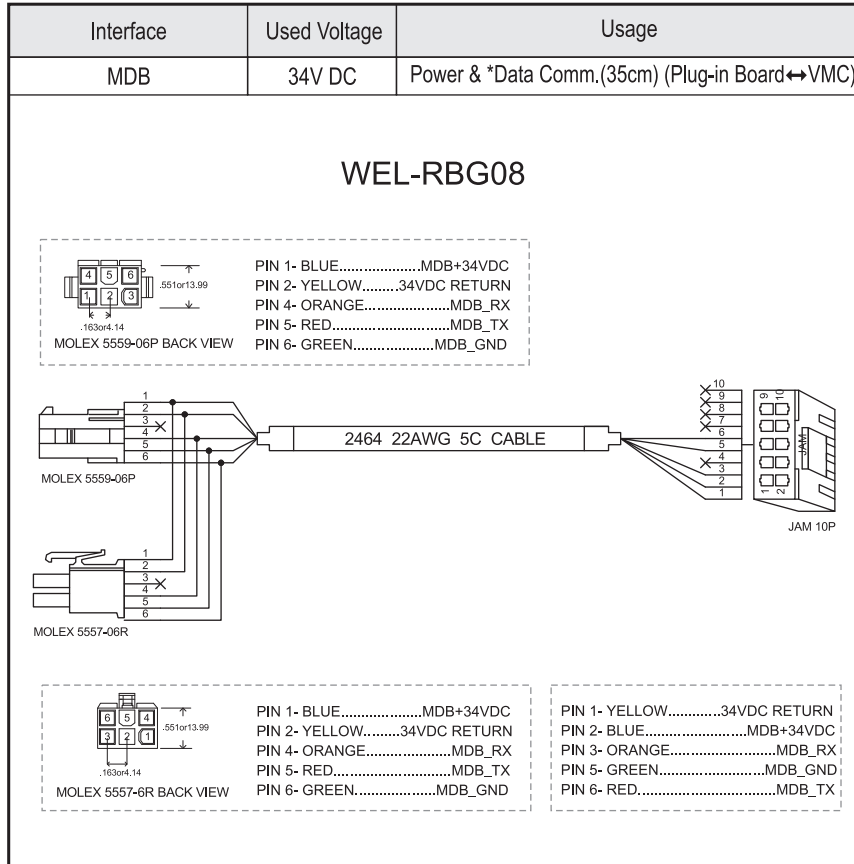


Figure 26

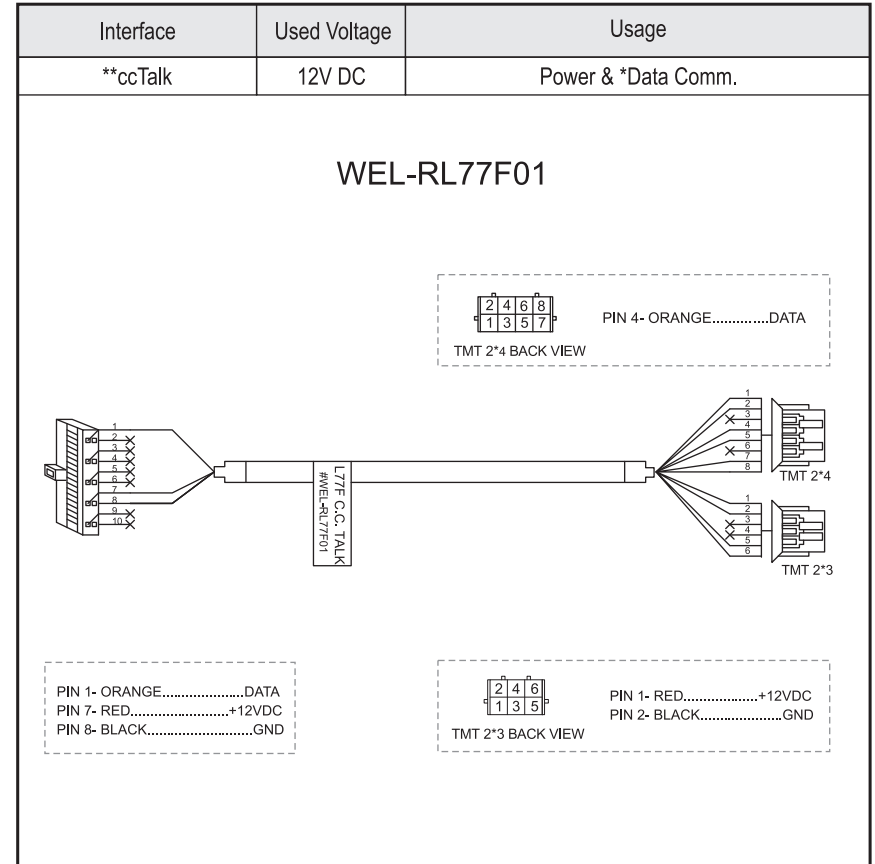


Figure 27

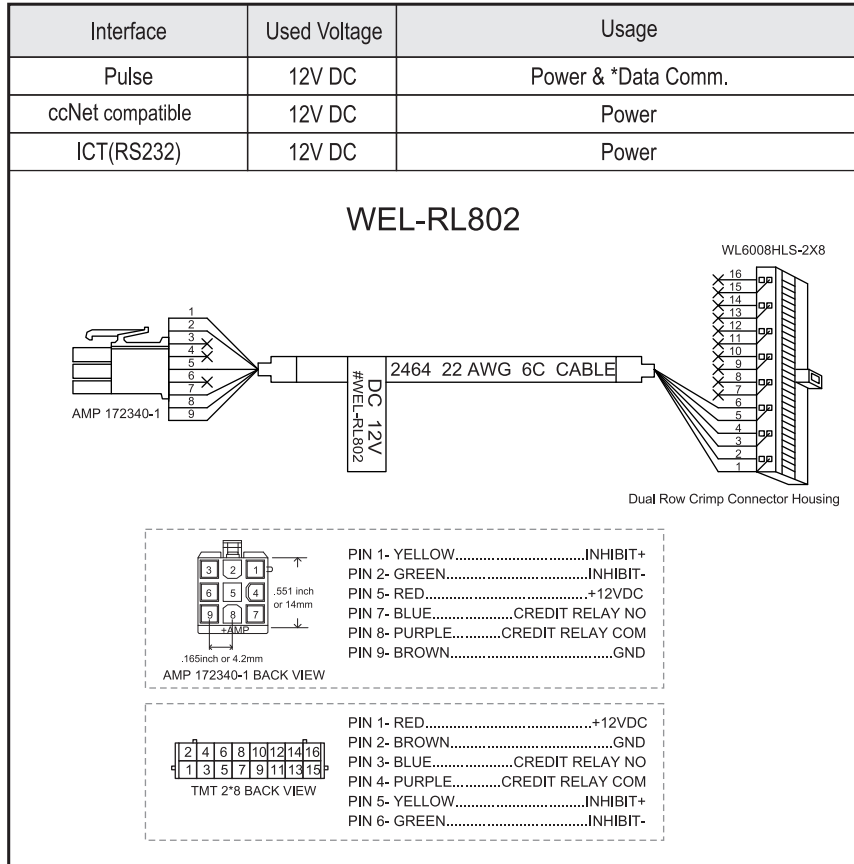


Figure 28

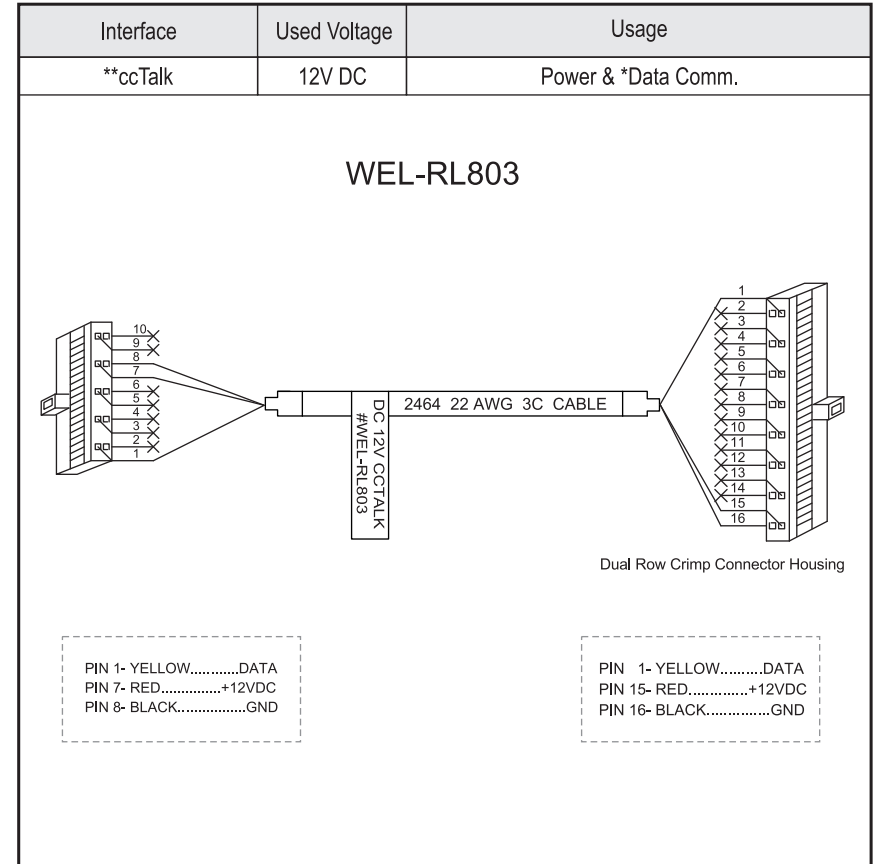


Figure 29

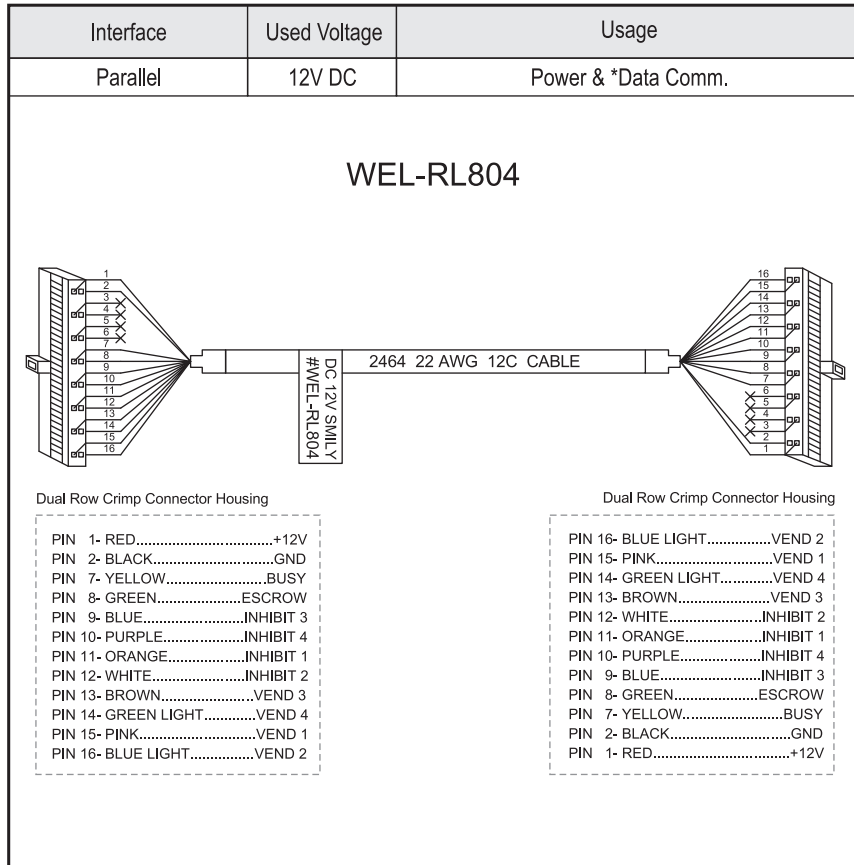


Figure 30

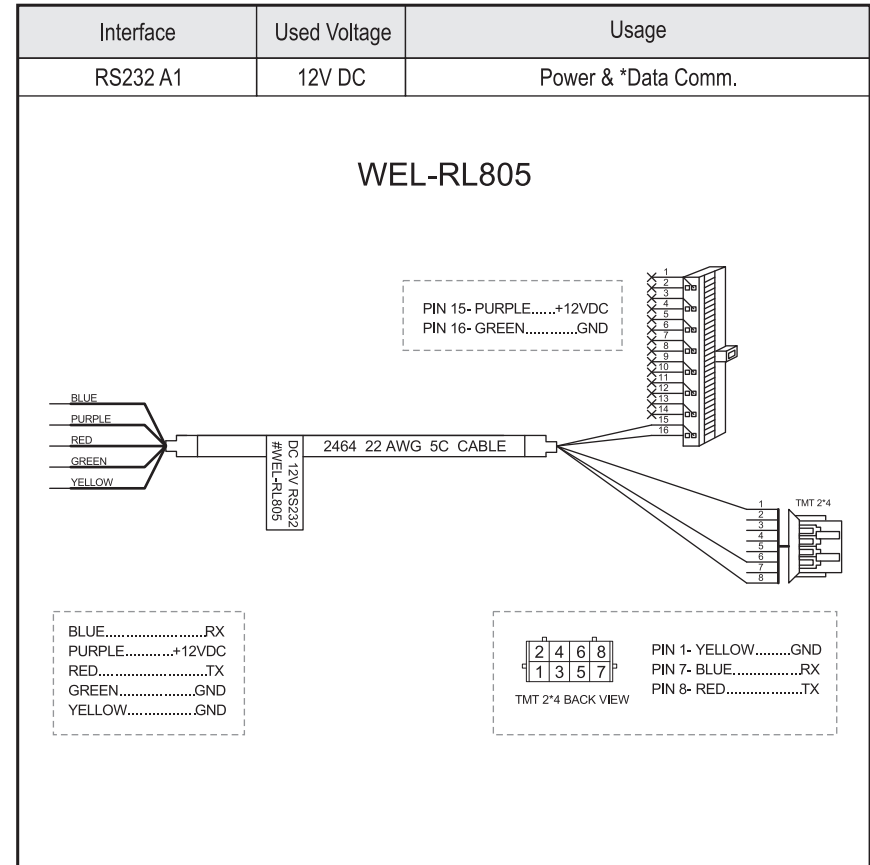


Figure 31

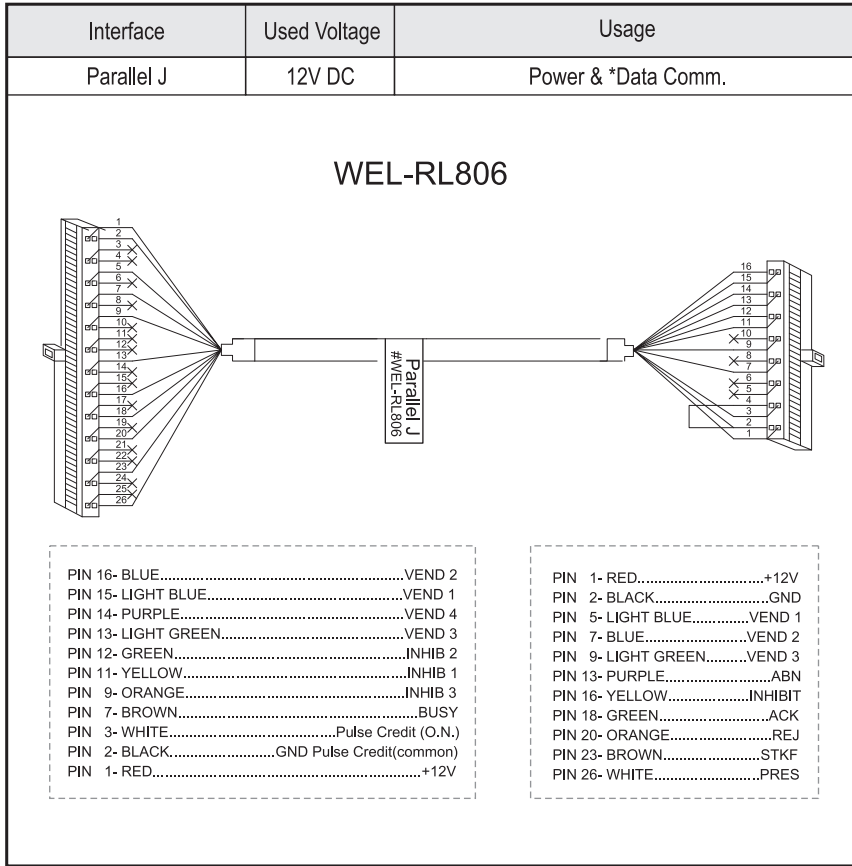


Figure 32

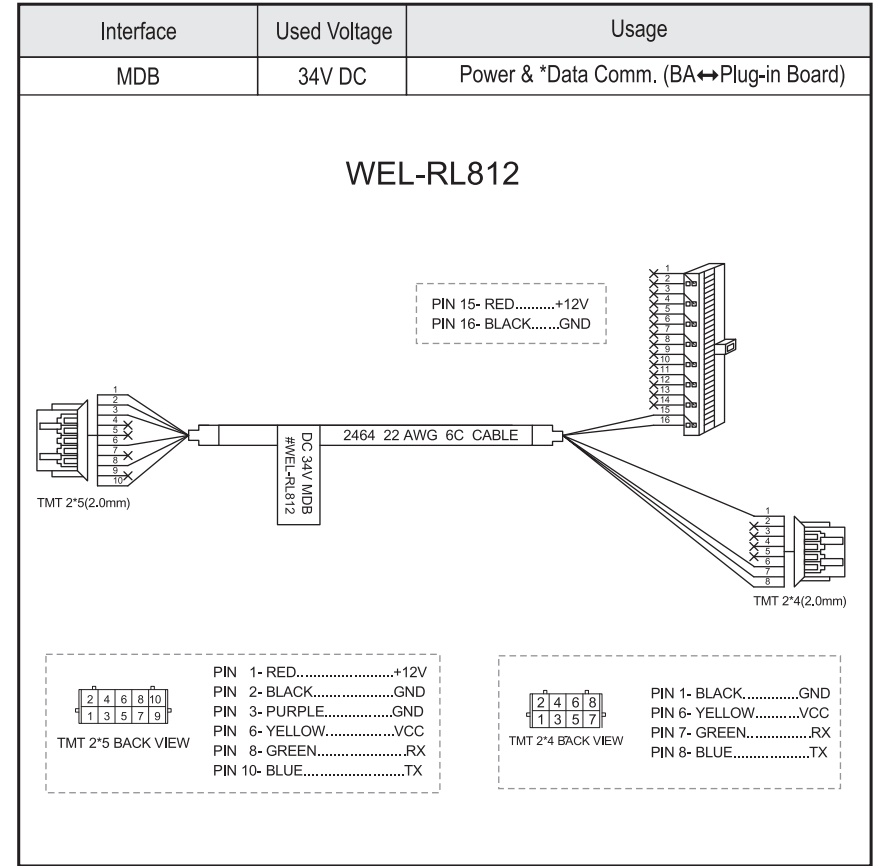


Figure 33

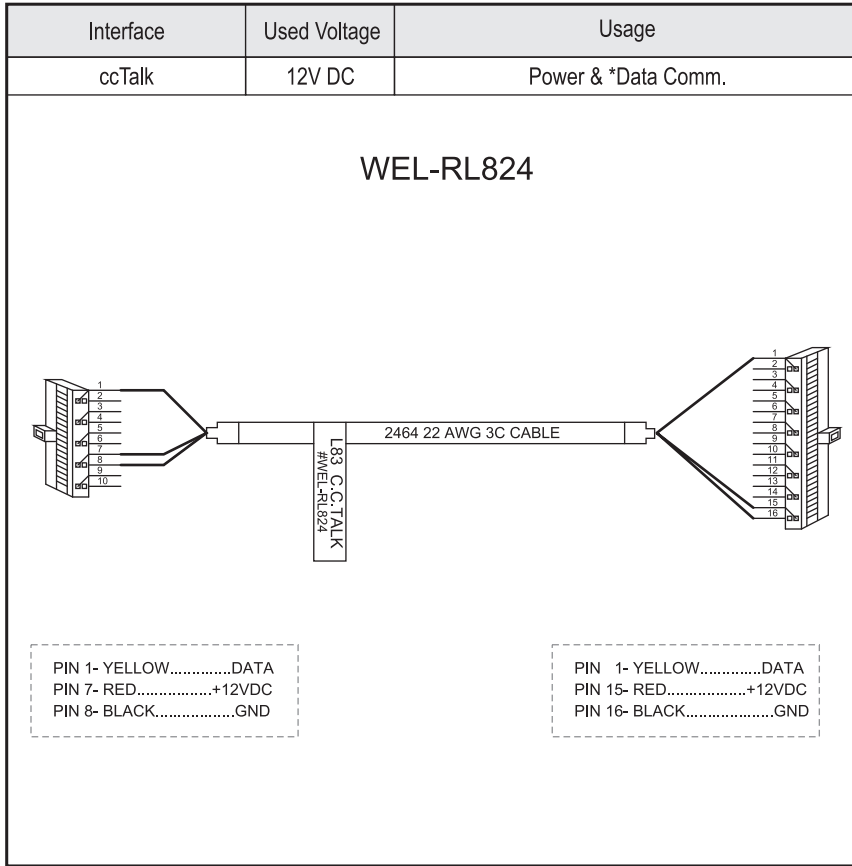


Figure 34

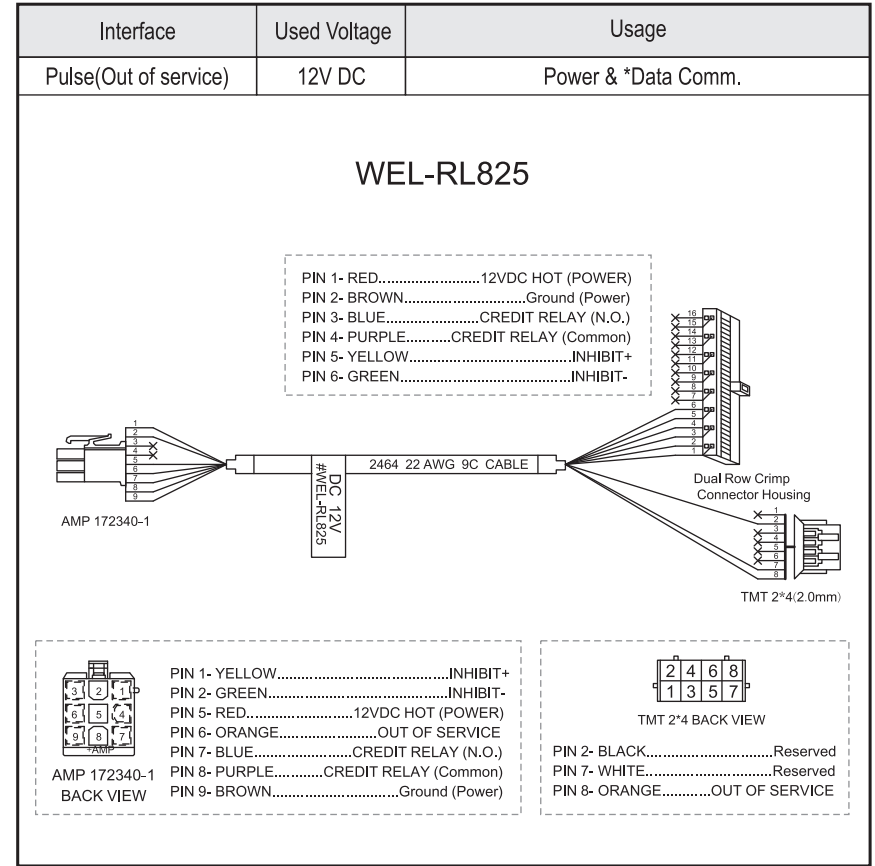
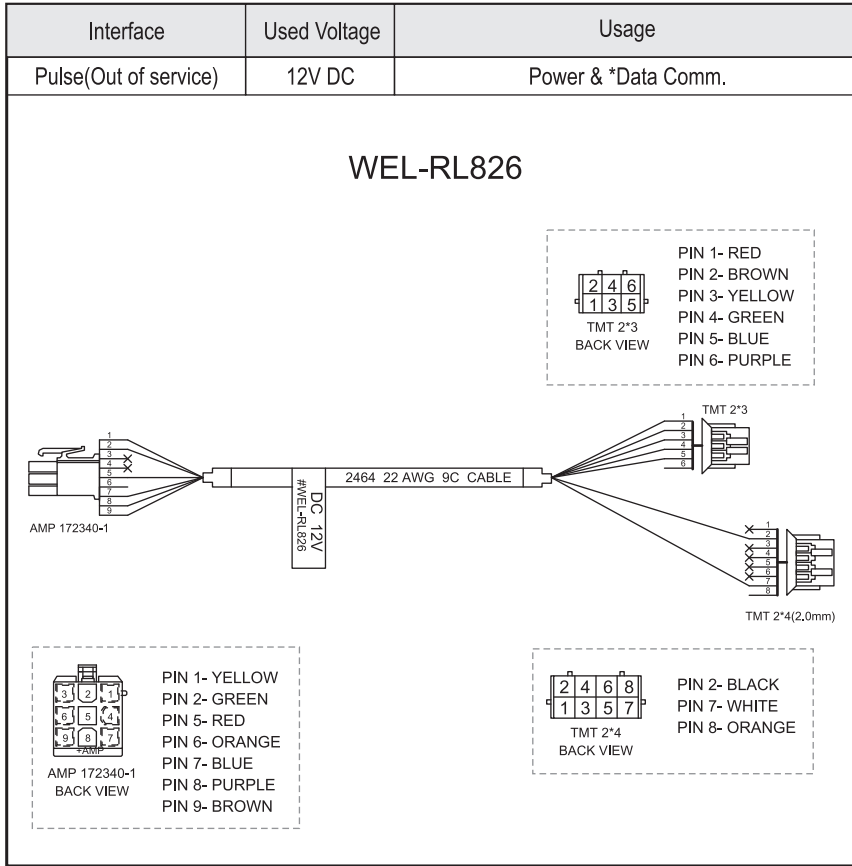


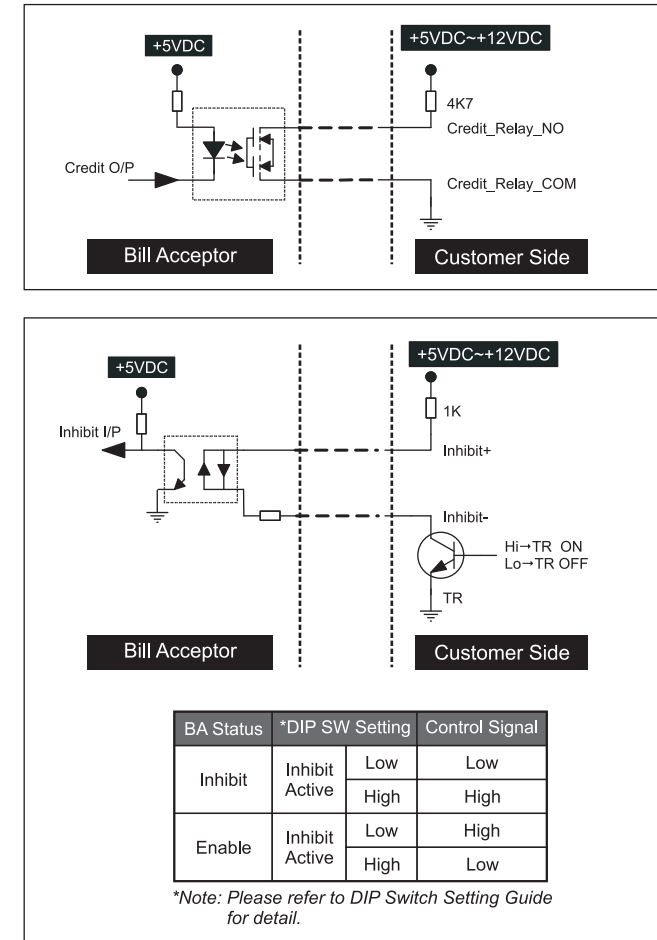
Figure 35



5-1-1. I/O Circuit

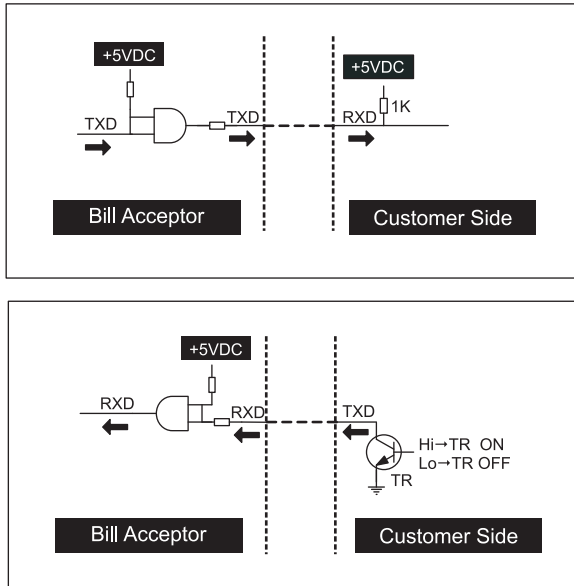
Pulse Interface.

Figure 36



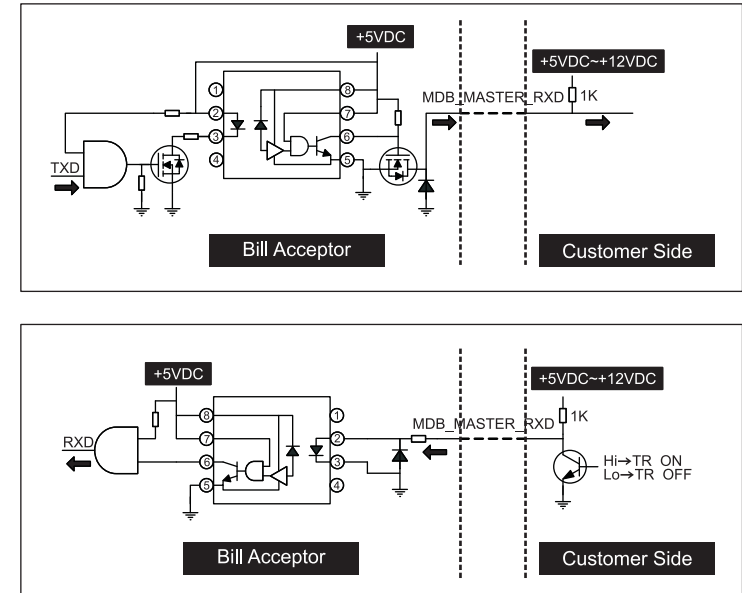
RS232, RS232 A0, RS232 A1, ccNet compatible Interface.

Figure 37



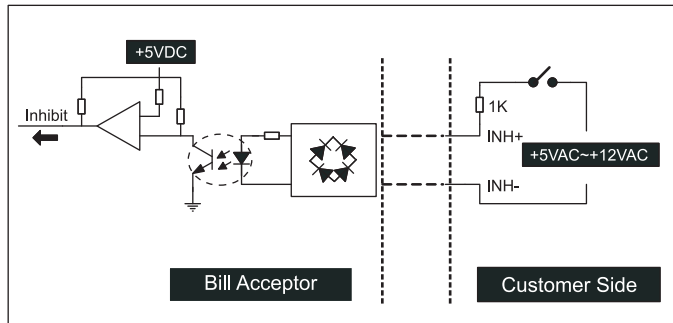
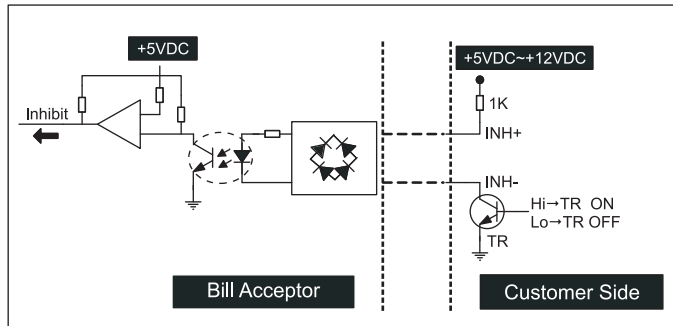
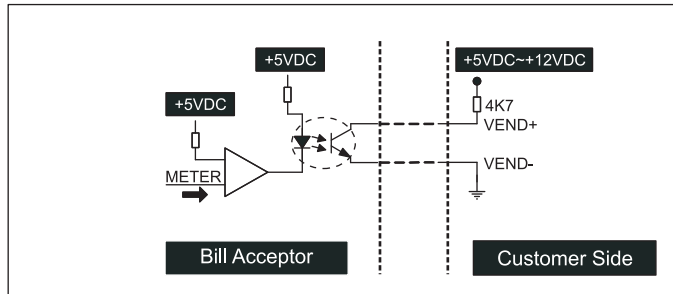
MDB Interface.

Figure 38



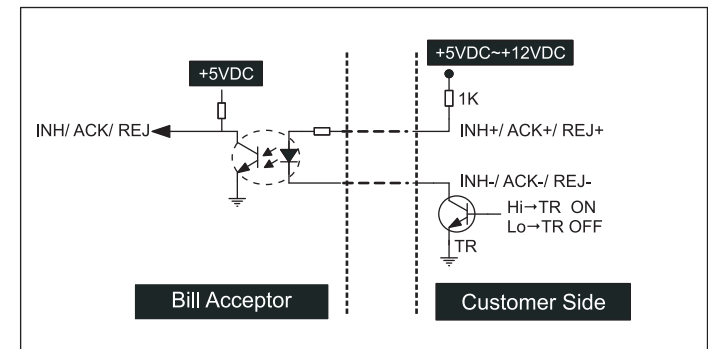
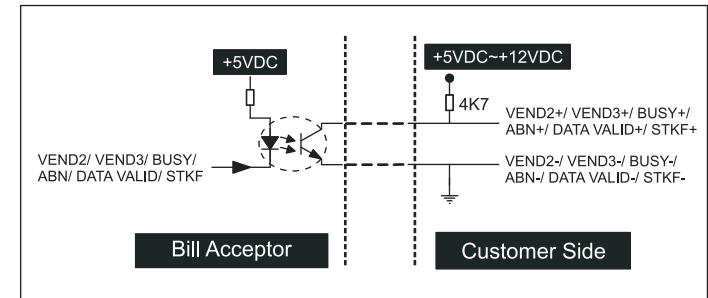
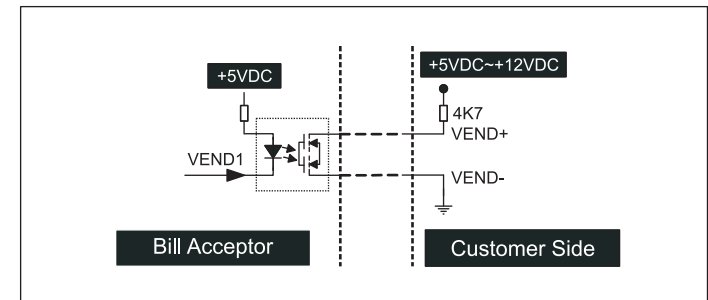
RS232 B2 Interface.

Figure 39



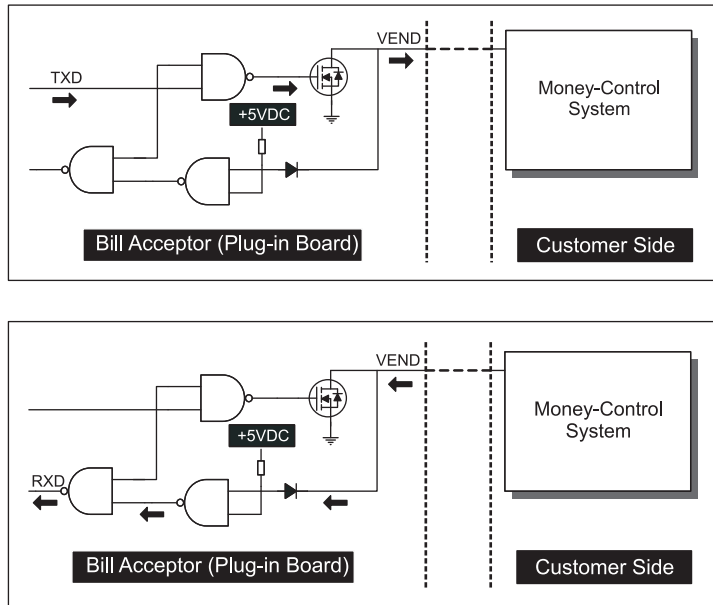
Parallel Interface.

Figure 40



ccTalk Interface.

Figure 41



5-2. DIP Switch Setting

There is one serial DIP switches which are set on the side of L Series(as figure 42). According to different currencies which are used by users, DIP switch settings could be varied to fit users' needs. Besides, there's another serial DIP switches at the bottom of L series for interface setting(as figure 43).

Please refer to “ L Series DIP Switch Setting Guide ” in the package for more details.

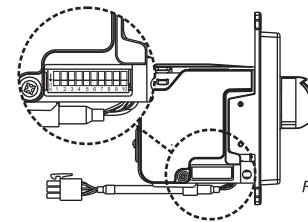


Figure 42

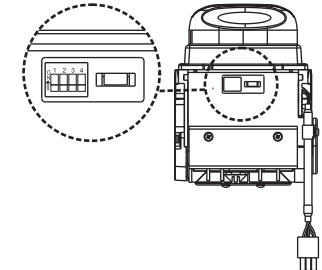


Figure 43

5-3. Software Download and Upgrade

To download and upgrade the software to L Series, the programmer (FP-003 PLUS/FP-004) is needed. Please contact ICT to purchase (FP-003 PLUS/FP-004) and refer to (FP-003 PLUS/FP-004) user guide for software download and upgrade information.

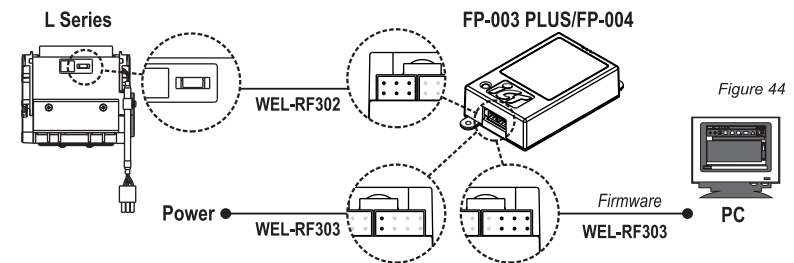


Figure 44

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. Turn bill acceptor off.
2. Press buttons to open LED assembly.
3. Use soft cloth or cotton swab to clean internal parts and bill path.

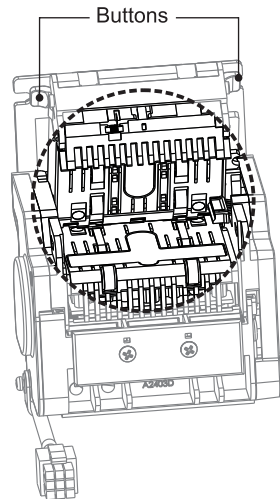



Figure 45

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

7. Troubleshooting

Bezel LED Errors

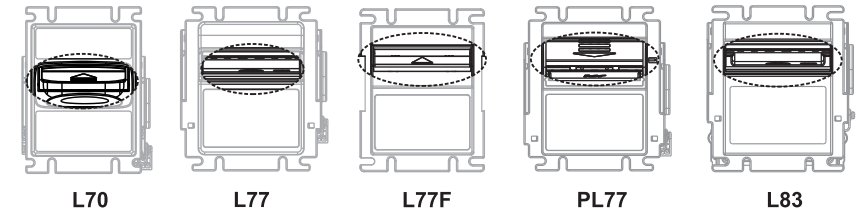


Figure 46

Table 3

LED Flashes		Status	Corrective Actions
Red	Green		
	1	White Card Calibration	Please calibrate with ICT white calibration card.
1		Bill jammed.	Open bill path unit 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.
3+4		Fish sensor error	Inspect the foreign objects on sensor or bill path and clean.
4		A stringing attempt has detected.	Inspect the foreign objects on sensor or bill path and clean.
5		Bill box has been removed. (for modules with bill box only).	Replace the bill box.
6		Stacker error or stacker full. (for modules with bill box only).	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.

◆ ccTalk Information

- Manufacturer ID: ICT
- Equipment Category ID: Bill Acceptor
- Product Code: L83/L77F/L70F
- Serial Number: According to last 8 digits of production serial number.

Default: 12345678

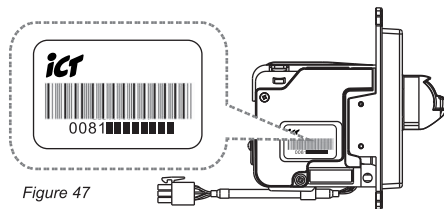


Figure 47

L83/L77F/L70F

- Software Revision: According to the software revision number.

Ex. L8DX06HAH10N241EU720

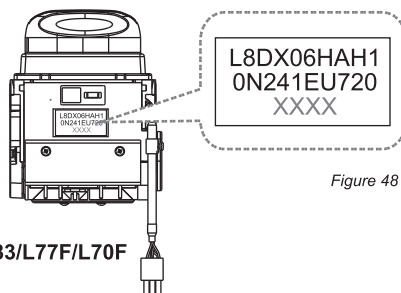


Figure 48

L83/L77F/L70F

- Encryption Mode Password: Default as 123456
(command changeable).

ict Taiwan

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Please contact ICT for more information.