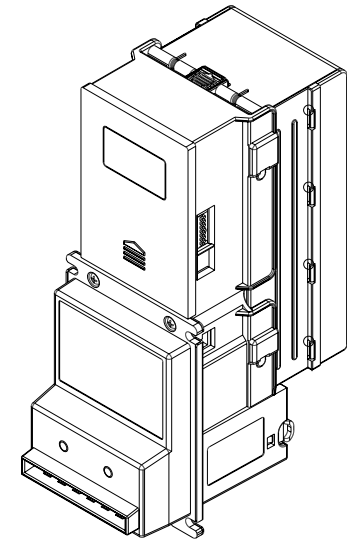


Bill Acceptor

A7 & V7 Plus Series Installation Guide

- **4 - Way Acceptance**
- **Low Maintenance**
- **Easy Installation**
- **Re - Programmable
Flash ROM**
- **Auto Self -Adjusting
Sensor System**



Use of Materials Limitations

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Contents

(1) A7 / V7 Plus Bill Acceptor Specifications	1
(2) Bill Acceptor Dimensions	2
(3) LED Display	3
(4) LED Status	3
(5) Stacker Cap Reset Button	3
(6) Download and upgrade	3
(7) A7 Plus Pin-out Assignments :	
7-1 Pulse for 12 V DC	4
7-2 Pulse for 117 V AC	5
7-3 NISR for 117 V AC	6
NISR CONNECTOR	7
NISR PIN LOCATIONS	7
(8) V7 Plus Pin-out Assignments :	
8-1 System for 12V DC	8
8-2 M.D.B System for 34 V DC.....	9
(9) A7 Plus Pin-out Assignments (I.C.T. Protocol)	10
(10) Cable	11
Switch Settings	(Appendix)

(1) A7/V7 Plus Bill Acceptor Specifications

Acceptance Rate

96% or greater

Bill insertion

4-way Acceptance

Acceptance Speed

Approx. 3 seconds, Pulse Interface
(including bill stacking)

Interfaces

Pulse
M.D.B. (Multi-Drop Bus)
NISR
ICT Protocol

Bill box Capacity

400 bills (300~400)

Weight

<1.2kg

Power Sources

12V DC, 3Amp
34V DC (24V~45V), 1.5Amp
117V AC, 0.2Amp

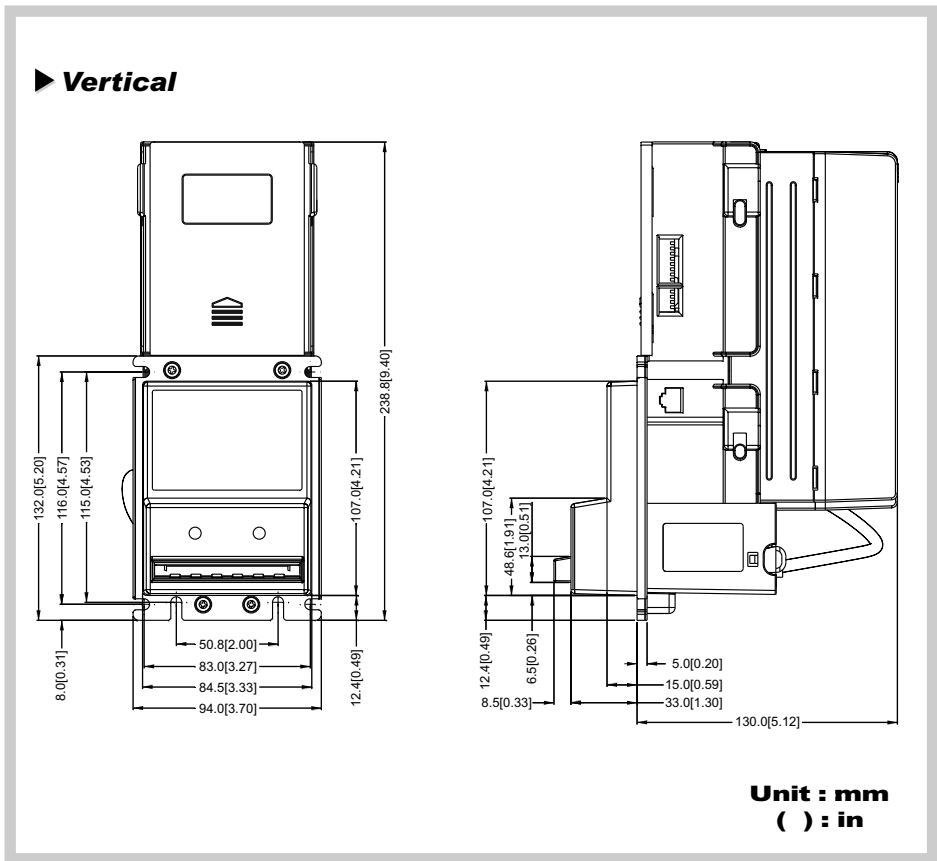
Power Consumption

Max 50 watts

Environment Range

Operating Temperature : 0°C~55°C
Storage Temperature : -30°C~70°C
Humidity : 30%~85% RH (no condensation)

(2) Bill Acceptor Dimensions



(3) LED Display

The two LED lights located at the front of the unit will show the operational status of the bill acceptor. The LED lights will flash ON and OFF (in 500ms intervals) when the unit is ready to accept bills.

The bill acceptor can only accept one bill at a time. The LED lights will be OFF and will not accept another bill while a bill is being validated in the unit.

The LED lights will start to flash normally when the bill acceptor is ready to accept the next bill.

(4) LED Status

DIAGNOSTICS	STATUS
Blink on red	
1	Bill jammed
2	Disabled from system
3	Sensor problem
4	Fishing detected
5	Stacker removed
6	Stacker full
7	Motor problem
8	Stacking problem
Blink on Green	Standby

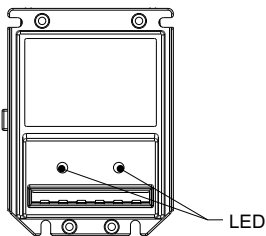
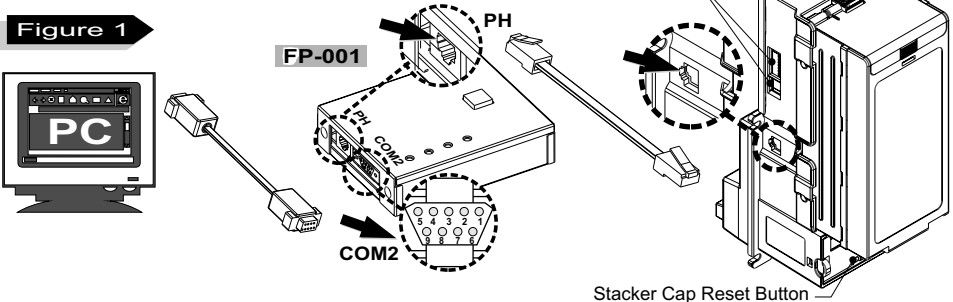


Figure 1



(5) Stacker Cap Reset Button

If the stacker is blocked due to the position of the stacker cap, you may push the stacker cap reset button to reset the stacker cap's position when the bill acceptor is turned on.

(6) Download and Upgrade

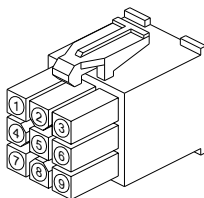
In addition to the 30-pin connector, there is also an 8-pin RJ-45 connector on the side of the bill acceptor designed for the purpose of downloading programs and updating validation software. The connector will be kept open under normal operation of the bill acceptor. It will only be used when a new software or program need to be downloaded into the flash ROM. (Figure 1)

(7) 7-1 A7 Plus Pin-out Assignments (Pulse for 12V DC)

For the **12V DC** version of the A7 bill acceptor, the harness(*part no. WEL-M007*, see page.15 for pin-out information) has a dual-in-line 30-pin peripheral connector at one end and a 9-pin mating connector at the other end. Connect the 30-pin connector to the side of the bill acceptor and the 9-pin mating connector to the 12V DC power harness (*part no.CU-961-1*, see page.11 for pin-out information).

◆ 9-pin mating connector pin-out assignments:

Pin 1 INHIBIT +	Pin 6 Reserved
Pin 2 INHIBIT -	Pin 7 CREDIT_RELAY(N.O.)
Pin 3 Reserved	Pin 8 CREDIT_RELAY(Common)
Pin 4 Reserved	Pin 9 GND (Power)
Pin 5 12V DC (Power)	



◆ Dual-in-line 30-pin peripheral connector (A7, 12V DC) pin-out assignments:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Pin 1 - CREDIT_RELAY(Common)	Pin 16 - CREDIT_RELAY(N.O.)
Pin 2 - 12VDC (Power)	Pin 17 - Reserved
Pin 3 - ENABLE -	Pin 18 - ENABLE +
Pin 4 - Reserved	Pin 19 - KEY
Pin 5 - INHIBIT +	Pin 20 - INHIBIT -
Pin 6 - KEY	Pin 21 - Reserved
Pin 7 - Reserved	Pin 22 - Reserved
Pin 8 - Reserved	Pin 23 - Reserved
Pin 9 - Reserved	Pin 24 - Reserved
Pin 10 - GND (Power)	Pin 25 - Reserved
Pin 11 - Reserved	Pin 26 - Reserved
Pin 12 - Reserved	Pin 27 - Reserved
Pin 13 - Reserved	Pin 28 - Reserved
Pin 14 - Reserved	Pin 29 - Reserved
Pin 15 - Reserved	Pin 30 - Reserved

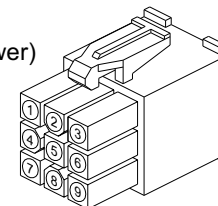
◆ **CAUTION:** Turn off the power before connecting or disconnecting the bill acceptor.

(7) 7-2 A7 Plus Pin-out Assignments (Pulse for 117V AC)

For the 117V AC version of the A7 bill acceptor, connect the 30-pin peripheral connector on one end of the harness (*part no. WEL-M008*, see page.16 for pin-out information) to the side of the unit and the 9-pin mating connector to the 117V AC power harness (*part no. WEL-M010 and WEL-M012*, see page.17,18 for pin-out information).

◆ 9-pin mating connector pin-out assignments:

Pin 1 NEUTRAL INHIBIT	Pin 6 117VAC NEUTRAL(Power)
Pin 2 NEUTRAL ENABLE	Pin 7 CREDIT_RELAY(N.O.)
Pin 3 HOT ENABLE	Pin 8 CREDIT_RELAY (Common)
Pin 4 117VAC HOT (Power)	
Pin 5 Earth - Ground	Pin 9 Reserved



IMPORTANT: On 117V AC units, the Earth Ground must be located inside the machine.

◆ Dual-in-line 30-pin peripheral connector (A7, 117V AC) pin-out assignments:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Pin 1 - CREDIT_RELAY(Common)	Pin 16 - CREDIT_RELAY(N.O.)
Pin 2 - Reserved	Pin 17 - Reserved
Pin 3 - NEUTRAL ENABLE	Pin 18 - HOT ENABLE
Pin 4 - 117VAC NEUTRAL(Power)	Pin 19 - KEY
Pin 5 - NEUTRAL INHIBIT	Pin 20 - 117VAC HOT(Power)
Pin 6 - KEY	Pin 21 - EARTH GROUND
Pin 7 - Reserved	Pin 22 - Reserved
Pin 8 - Reserved	Pin 23 - Reserved
Pin 9 - Reserved	Pin 24 - Reserved
Pin 10 - Reserved	Pin 25 - Reserved
Pin 11 - Reserved	Pin 26 - Reserved
Pin 12 - Reserved	Pin 27 - Reserved
Pin 13 - Reserved	Pin 28 - Reserved
Pin 14 - Reserved	Pin 29 - Reserved
Pin 15 - Reserved	Pin 30 - Reserved

◆ **CAUTION:** Turn off the power before connecting or disconnecting the bill acceptor.

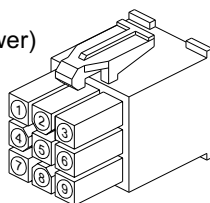
(7) 7-3

A7 Plus Pin-out Assignments (NISR for 117V AC)

For the 117V AC version of the A7 bill acceptor with NISR interface, the harness (**part no. WEL-M013**, see page.19 for pin-out information) has a dual-in-line 30-pin peripheral connector that connects to the side of the B.A , a 9-pin mating connector for connecting to the 117V AC power harness , and a 18-pin interface connector see next page for pin-out information to connect to the controller.

◆ 9-pin mating connector pin-out assignments:

Pin 1 Reserved	Pin 6 117VAC NEUTRAL(Power)
Pin 2 Reserved	Pin 7 CREDIT_RELAY (N.O.)
Pin 3 Reserved	Pin 8 CREDIT_RELAY
Pin 4 117VAC HOT (Power)	(Common)
Pin 5 Reserved	Pin 9 Reserved



◆ Dual-in-line 30-pin peripheral connector (A7, 117V AC) pin-out assignments:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Pin 1 - CREDIT_RELAY (Common)	Pin 16 - CREDIT_RELAY (N.O.)
Pin 2 - Reserved	Pin 17 - Reserved
Pin 3 - Reserved	Pin 18 - Reserved
Pin 4 - 117V AC NEUTRAL (Power)	Pin 19 - Reserved
Pin 5 - Reserved	Pin 20 - 117V AC HOT (Power)
Pin 6 - Reserved	Pin 21 - Reserved
Pin 7 - Reserved	Pin 22 - /OUT_OF_SERVICE
Pin 8 - /INTERRUPT	Pin 23 - Reserved
Pin 9 - Reserved	Pin 24 - /ACCEPT_ENABLE
Pin 10 - GND	Pin 25 - Reserved
Pin 11 - /DATA	Pin 26 - /SEND
Pin 12 - Reserved	Pin 27 - Reserved
Pin 13 - Reserved	Pin 28 - Reserved
Pin 14 - Reserved	Pin 29 - Reserved
Pin 15 - Reserved	Pin 30 - Reserved

◆ **CAUTION:** Turn off the power before connecting or disconnecting the bill acceptor.

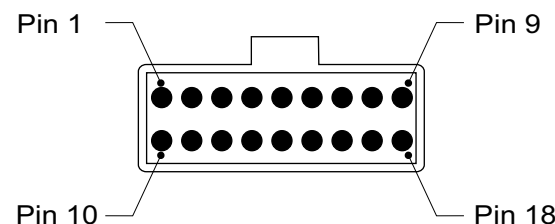
NISR CONNECTOR

INTERFACE CONNECTOR :

◆ 18-pin mating connector pin-out assignments:

Pin 1 / \$ 1 CRETID	Pin 10 /OUT-OF-SERVICE
Pin 2 INTERRUPT	Pin 11 /DEBUG DATA
Pin 3 / \$ 5 CRETID	Pin 12 /ACCEPT ENABLE
Pin 4 GROUND	Pin 13 /\$ 2 CRETID
Pin 5 /DATA	Pin 14 /SEND
Pin 6 ESCROW . High .	Pin 15 \$ 1 ENABLE , Low
Pin 7 \$ 5 ENABLE , High	Pin 16 \$ 2 ENABLE , Low
Pin 8 \$ 2 ENABLE , High	Pin 17 \$ 5 ENABLE , Low
Pin 9 \$ 1 ENABLE , High	Pin 18 ESCROW , Low

NISR PIN LOCATIONS

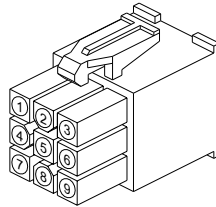


(8) 8-1 V7 Plus Pin-out Assignments (Pulse for 12V DC)

For the **12V DC** version of the V7 bill acceptor, the harness (**part no. WEL-V701**, see page.12 for pin-out information) has a dual-in-line 30-pin peripheral connector at one end and a 9-pin mating connector at the other end. Connect the 30-pin connector to the side of the bill acceptor and the 9-pin mating connector to the 12V DC power harness (**part no. CU-961-1**, see page.11 for pin-out information).

◆ 9-pin mating connector pin-out assignments:

Pin 1 INHIBIT +	Pin 6 Reserved
Pin 2 INHIBIT -	Pin 7 CREDIT_RELAY(N.O.)
Pin 3 Reserved	Pin 8 CREDIT_RELAY (Common)
Pin 4 Reserved	
Pin 5 12V DC (Power)	Pin 9 GND (Power)



◆ Dual-in-line 30-pin peripheral connector (V7, 12V DC) pin-out assignments:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Pin 1 - CREDIT_RELAY(Common)	Pin 16 - Reserved
Pin 2 - CREDIT_RELAY(N.O.)	Pin 17 - Reserved
Pin 3 - 12VDC (Power)	Pin 18 - INHIBIT -
Pin 4 - INHIBIT +	Pin 19 - Reserved
Pin 5 - KEY	Pin 20 - GND (Power)
Pin 6 - Reserved	Pin 21 - KEY
Pin 7 - Reserved	Pin 22 - Reserved
Pin 8 - Reserved	Pin 23 - Reserved
Pin 9 - Reserved	Pin 24 - Reserved
Pin 10 - Reserved	Pin 25 - Reserved
Pin 11 - Reserved	Pin 26 - Reserved
Pin 12 - Reserved	Pin 27 - Reserved
Pin 13 - Reserved	Pin 28 - Reserved
Pin 14 - Reserved	Pin 29 - Reserved
Pin 15 - Reserved	Pin 30 - Reserved

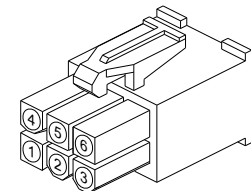
◆ **CAUTION:** Turn off the power before connecting or disconnecting the bill acceptor.

(8) 8-2 V7 Plus Pin-out Assignments (M.D.B. System for 34V DC)

For the MDB interface V7 bill acceptor, connect the 30-pin peripheral connector on one end of the harness (**part no. WEL-M006**, see page.14 for pin-out information) to the side of the unit and the standard 6-pin MDB connector to the power/interface connector.

◆ The standard 6-pin MDB connector pin-out assignments:

Pin 1 - 34 VDC
Pin 2 - 34 VDC Power Return
Pin 3 - N/C
Pin 4 - Master Receive
Pin 5 - Master Transmit
Pin 6 - Communications Common



◆ Dual-in-line 30-pin peripheral connector (V7, MDB) pin-out assignments:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

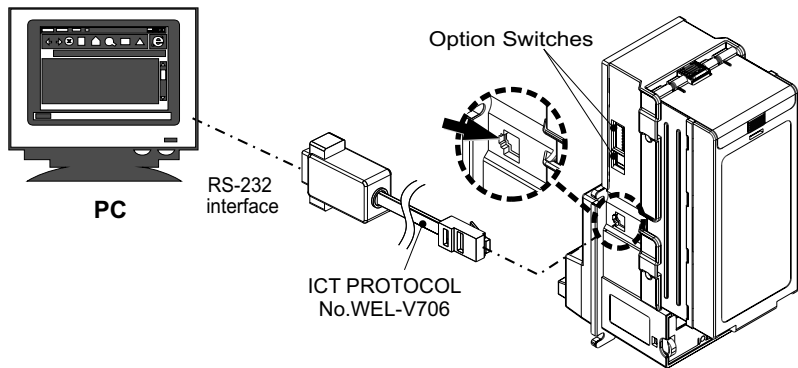
Pin 1 - Reserved	Pin 16 - 34VDC_RETURN
Pin 2 - Reserved.	Pin 17 - Reserved
Pin 3 - Reserved	Pin 18 - Reserved
Pin 4 - Reserved	Pin 19 - Reserved
Pin 5 - KEY	Pin 20 - Reserved
Pin 6 - MDB_MASTER_RXD	Pin 21 - KEY
Pin 7 - Reserved	Pin 22 - Reserved
Pin 8 - Reserved	Pin 23 - +34VDC
Pin 9 - Reserved	Pin 24 - Reserved
Pin 10 - Reserved	Pin 25 - Reserved
Pin 11 - Reserved	Pin 26 - Reserved
Pin 12 - Reserved	Pin 27 - Reserved
Pin 13 - Reserved	Pin 28 - MDB_GND
Pin 14 - MDB_MASTER_TXD	Pin 29 - Reserved
Pin 15 - Reserved	Pin 30 - Reserved

◆ **CAUTION:** Turn off the power before connecting or disconnecting the bill acceptor.

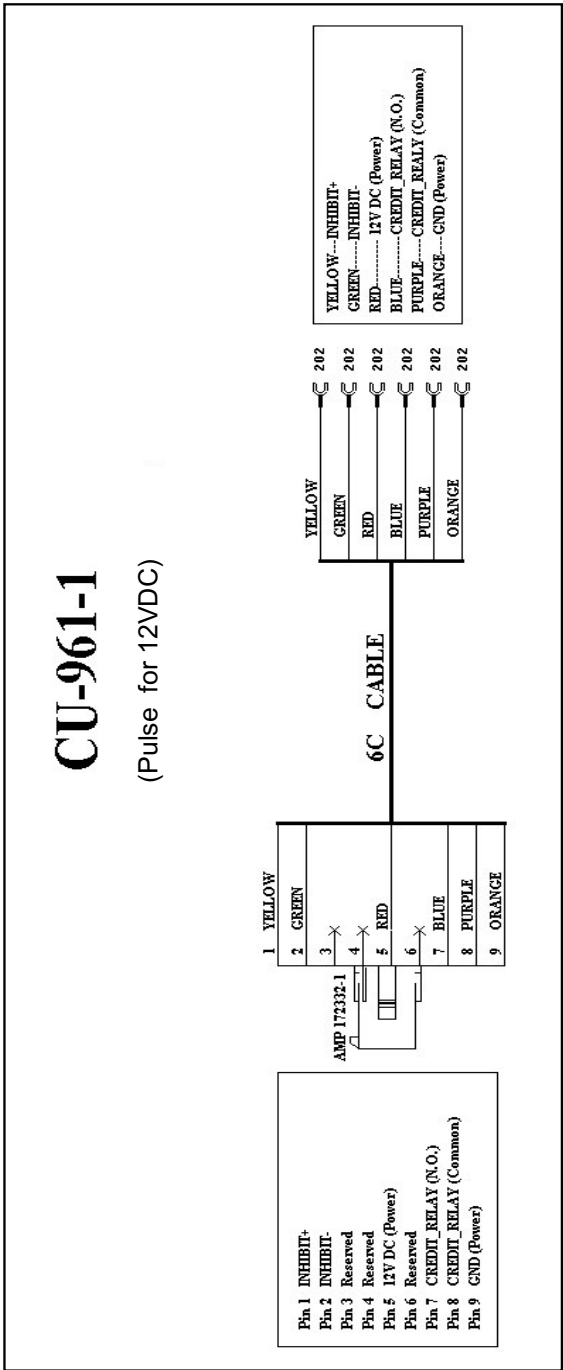
(9) A7 Plus Pin-out Assignments (I.C.T. Protocol)

The cable for ICT Protocol (*part no. WEL-V706*, see page. 22 for pin-out information) connector on one end and a 9-pin PC connector on the other end. To connect, plug the RJ-45 connector into the RJ-45 socket on the side of the BA and connect the 9-pin PC connector to the COM port of a PC (Figure 2).

Figure 2

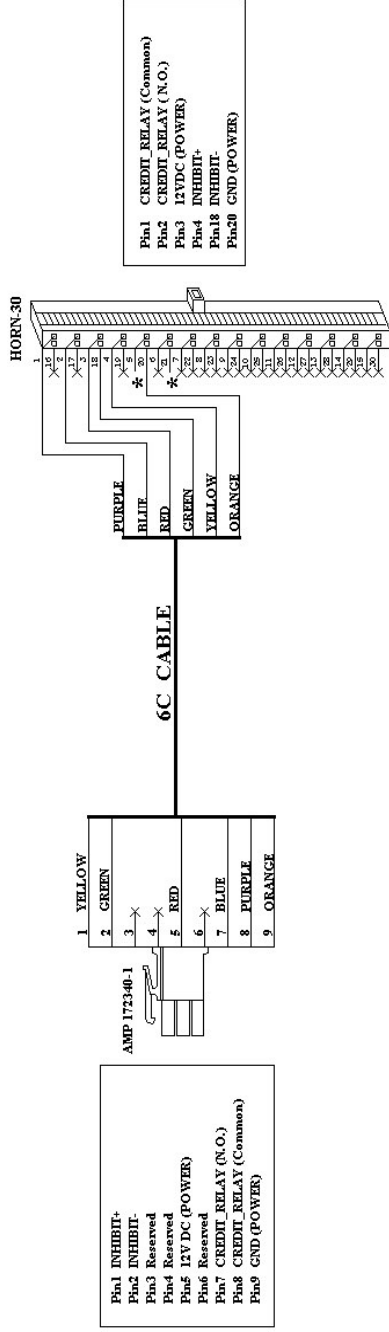


(10) Cable



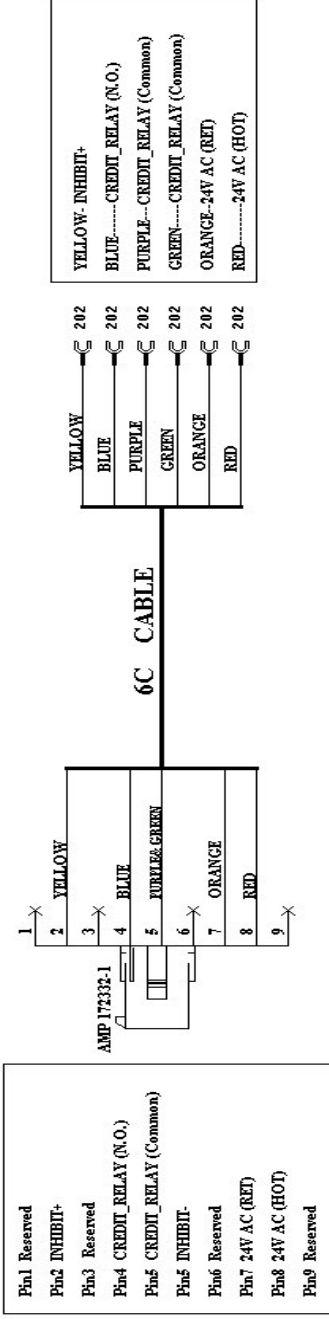
WEL-V701

(Pulse for 12VDC)

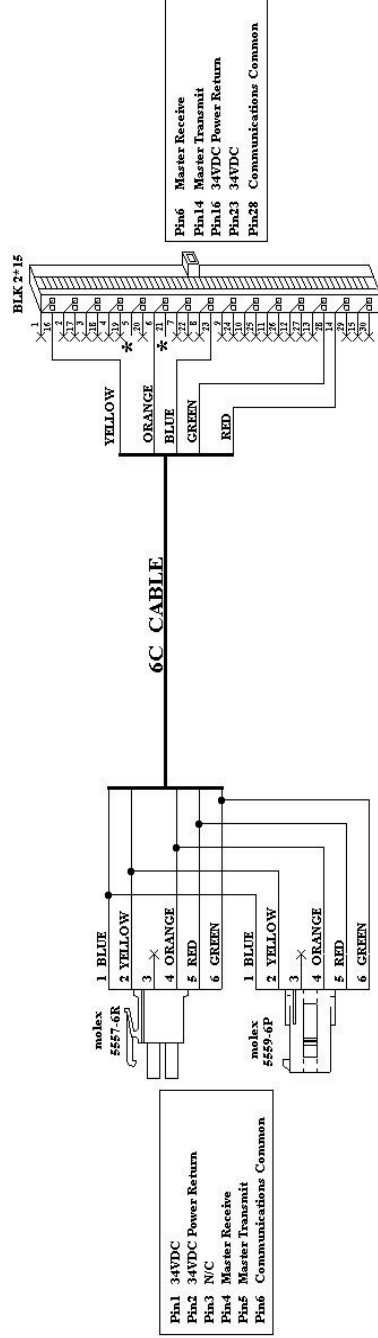


WEL-V702

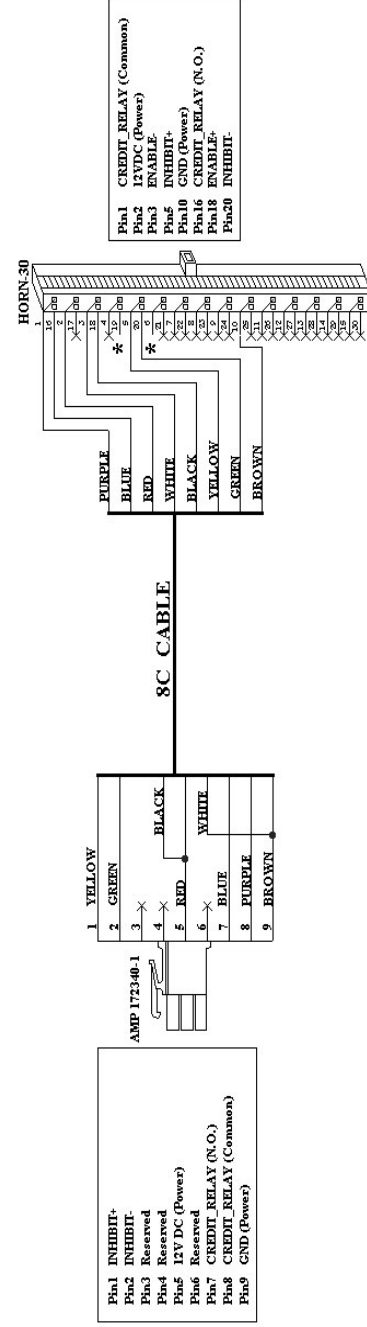
(Pulse for 24VAC)



WEL-M006 (M.D.B. System for 34V DC)

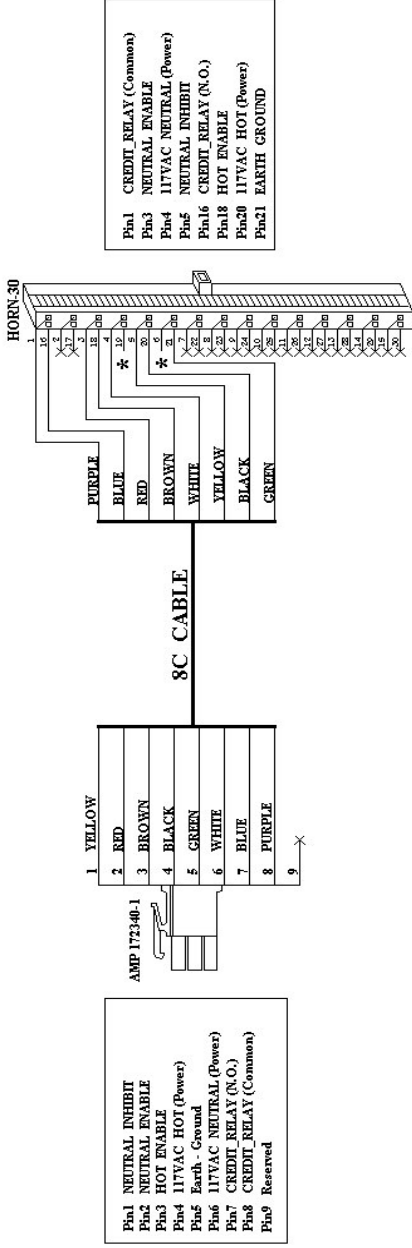


WEL-M007 (Pulse for +12VDC)



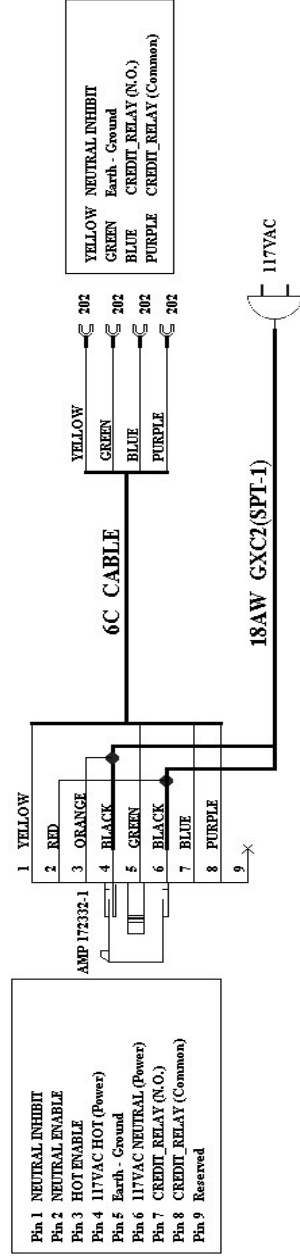
WEL-M008

(Pulse for 117VAC)

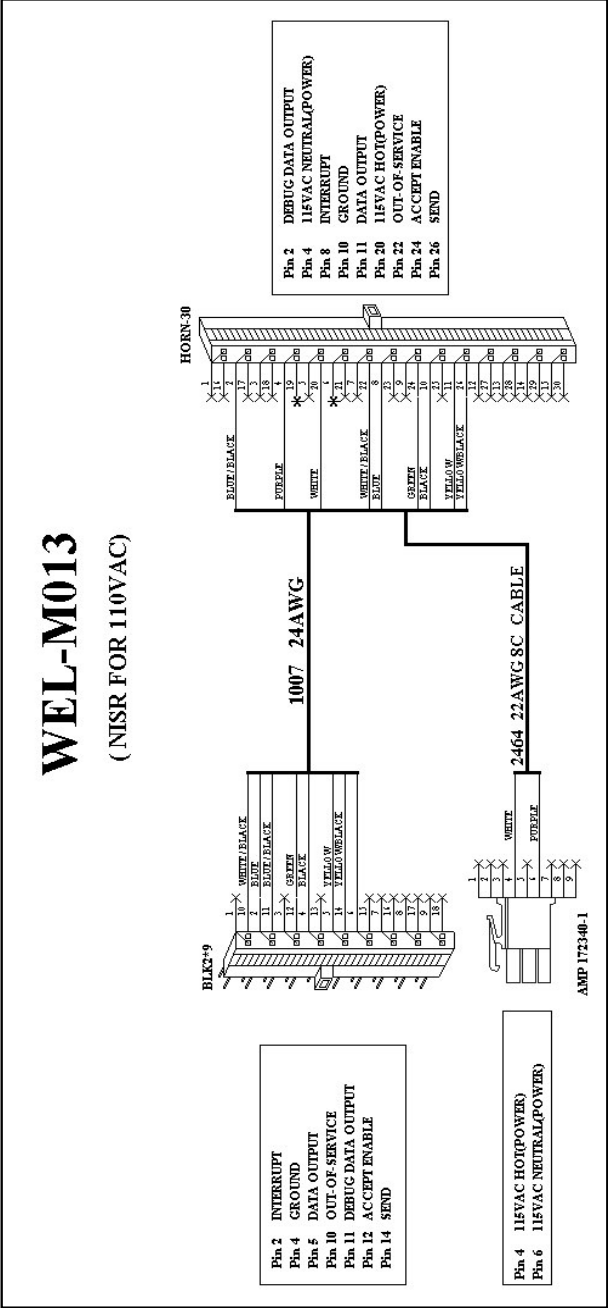
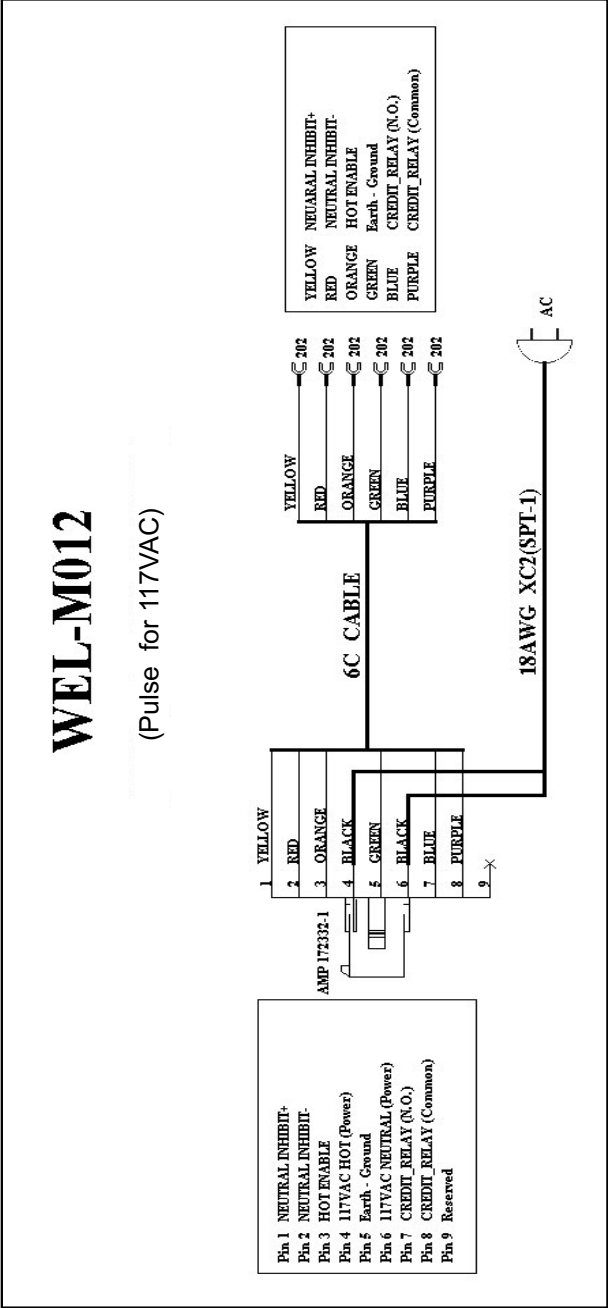


WEL-M010

(Pulse for 117VAC)

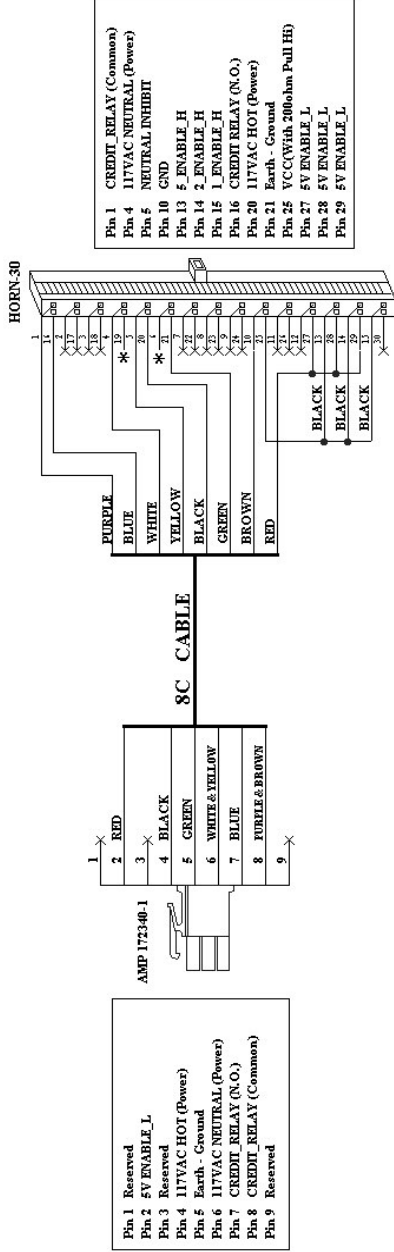


(Option)



WEL-M017

(Pulse +5V ENABLE for 117VAC)

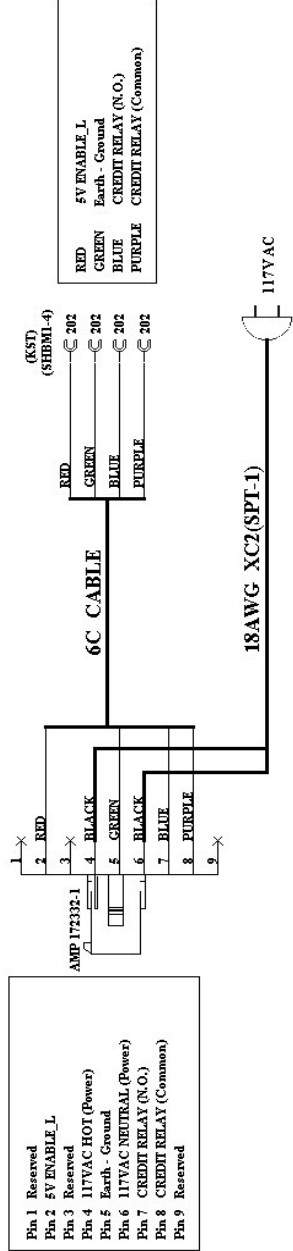


(Must use WEL-M018)

(Option)

WEL-M018

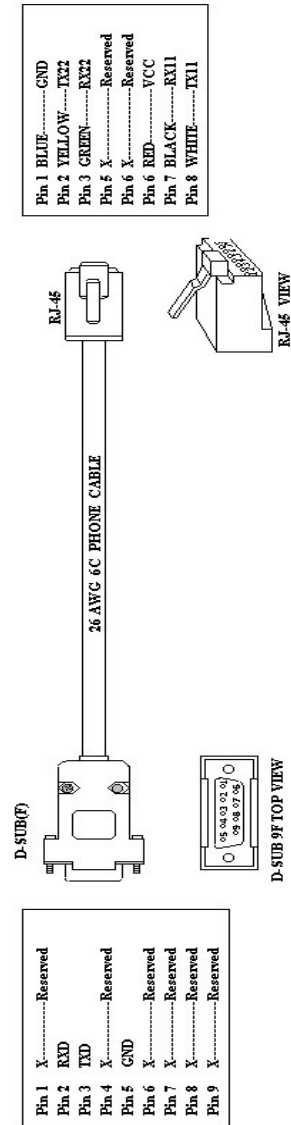
(Pulse +5V ENABLE for 117VAC)



(Option)

WEL-V706

(I.C.T. Protocol)



Taiwan

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