

5. Diagnostics

If the red light on the front of the bill validator is ON insert bill and remove it after the red light goes OFF. Count the number of red flashes and compare with the diagnostic chart below.

| # | Description | # | Description |
|---|--|----|---|
| 1 | Cassette is removed from bill acceptor | 7 | Failure of magnetic sensors |
| 2 | Stacking motor does not rotate | 8 | Transport motor does not move |
| 3 | Cassette is full | 9 | Speed of transport motor is too high |
| 4 | Mechanical jam in the cassette | 10 | Transport motor electrical overload |
| 5 | Stacking motor electrical overload | 11 | Bill pathway security latch is open |
| 6 | Failure of optical sensors | 12 | Banknote is in the entry slot of the cassette and credit's not issued |

Notes:

- If the bill was inserted but the red light on the front of the bill acceptor did not go OFF there is a failure in communication.
- When diagnostics is completed the red light becomes steady again. Do not consider it as a flash and do not count it.

6. Features

DATA COLLECTION: CO5-CRP-ST33-MH(L) contains a data collecting software feature.

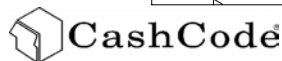
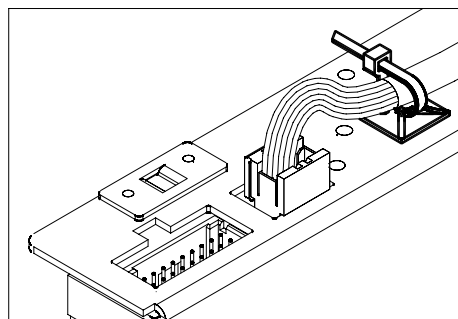
To download the data from the BV use the followings:

Data Downloading software: PT# OPT-SW-DC

Bi-Directional Interface adapter: PT# OPT-AD-BD9
or Serial Interface Test Adapter PT# OPT-AD-CS

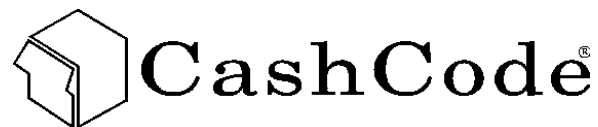
TROPICAL CASSETTE ALGORITHM: CO5-CRP-ST33-MH(L) contains an algorithm for bill stacking using the P-series (tropical) cassettes.

To eliminate occasional disconnection of the cable use self-sticking Holder and cable Flat Tie as shown on the picture.



CashCode Company Inc.
553 Basaltic Rd, Concord, Ontario Canada. L4K 4W8
TEL: (905) 303-8874 (800)-584-2633
FAX: (905) 303-8875 (800)-593-2633

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12V Bill Validator with Stacker User's Guide

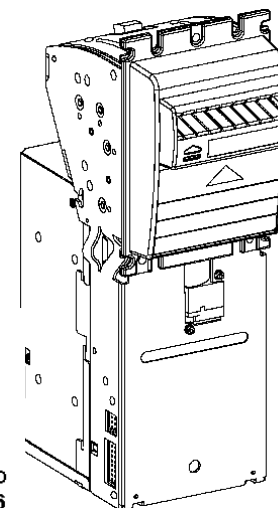
CO5-CRP-ST33-ML

Low height bezel

CO5-CRP-ST33-MH

High height bezel

Model AMZ-CLB-PLUS-UNV for CashCode® Serial and Bi-Directional Interfaces



1. General Specifications:

CURRENCY: 1000, 2000, 5000 10000, 20000 Colombian Pesos

INTERFACES: Pulse Interface
CashCode Serial Interface (MEI compatible)
Bi-Directional (RS232 MEI compatible) Interface

POWER REQUIREMENTS:

| Operating Voltage | Maximum Operating Current | Maximum Current (t< 2.0 sec) |
|-------------------|---------------------------|------------------------------|
| 12..14V DC | 0.8A | 2.2A |

Note: Use current limiting Power Supply only

OPERATING TEMPERATURE: -0 to +50 degrees Celsius

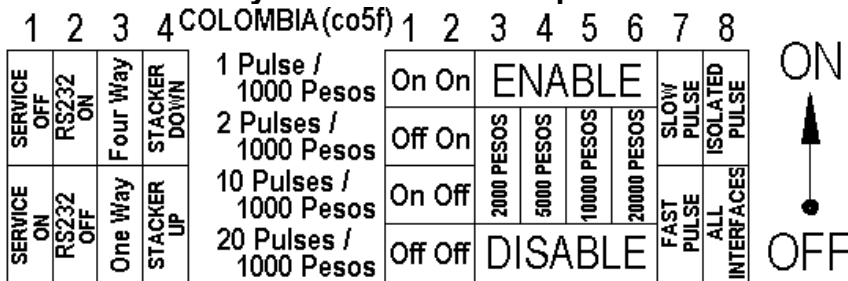
TOTAL WEIGHT WITHOUT CASSETTE < 1.2 kg

ENCLOSURE: Bill Validator, Part #: CO5-CRP-ST33-MH(L)
User's Guide, Part # UG- CO5-CRP-ST33-MH(L)
Accessories: Power Harness, Part # OPT-HS-12v-06p
Front Label, Part # OPT-LB-CO5AD
Holder with Flat Tie, Part #OPT-MKST-HFT

OPTIONAL ACCESSORIES:

Bi-Directional interface adapter, Part # OPT-AD-BD9
Serial Interface Test adapter, Part # OPT-AD-CS
Data Reading software, Part # OPT-SW-DC
Jumper Connector, Part # OPT-HS-JC18

2. DIP switches layout and connector pinout



To access switches remove the cover

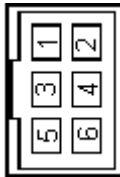
Default DIPswitch settings

| #1/4 | #2/4 | #3/4 | #4/4 | #1/8 | #2/8 | #3/8 | #4/8 | #5/8 | #6/8 | #7/8 | #8/8 |
|------|------|------|------|------|------|------|------|------|------|------|------|
| ON | OFF | ON | ON | ON | ON | ON | ON | ON | ON | OFF | OFF |

Bi-Directional Interface is selected. All the bills are enabled.

6-pin connector pinout

| Pin | DESCRIPTION | WIRE COLOUR |
|-----|-------------------|-------------|
| 1 | +12V DC | Yellow |
| 2 | GND | Black |
| 3 | Pulse Output (NO) | Green |
| 4 | Common | Blue |
| 5 | Inhibit Line (+) | White |
| 6 | Inhibit Line (-) | Brown |

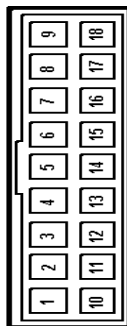


Mating connector:

MOLEX: 15-04-5064 -1pcs; 50-57-9303 -2pcs; 16-02-0096 -6pcs;

18-pin connector pinout

| Pin | DESCRIPTION | Pin | DESCRIPTION |
|-----|---------------------|-----|------------------|
| 1 | Credit Pulse | 10 | Out of service |
| 2 | Interrupt | 11 | TDX |
| 3 | Serial/Pulse Select | 12 | Accept Enable |
| 4 | Common | 13 | LED Power Source |
| 5 | Serial Data Output | 14 | Send |
| 6 | Reserved | 15 | Reserved |
| 7 | Reserved | 16 | Escrow / RDX |
| 8 | Reserved | 17 | Reserved |
| 9 | Reserved | 18 | Reserved |



Mating connector:

AMP: 102398-7 - 1pcs; 102681-4 - 1pcs; 102536-7 - 1pcs;

4. Interfaces

4.1. Pulse Interface Specifications:

Fast Pulses: Pulse 50 ms - Pause 50 ms
 Slow Pulses: Pulse 50 ms - Pause 300 ms
 Pulse modes: 1 pulse; 2 pulses; 10 pulses; 20 pulses / 1000 Peso

Features:

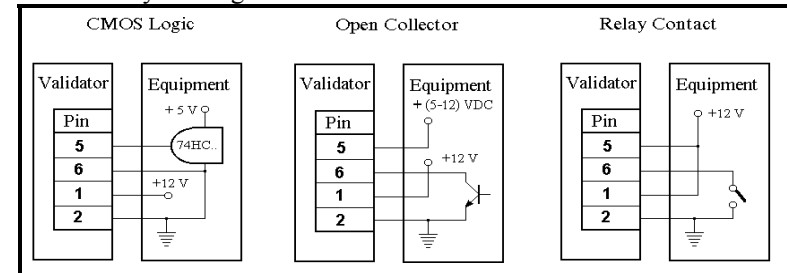
Pulse accumulation mode and Inhibit line
 Isolated and Non-isolated Pulse output

ISOLATED PULSE Interface with INHIBIT LINE feature disabled

- Set DIP Switches #8/8-ON, #1/4-ON position, #2/4 to OFF position.
- Use 6 Pin Power Harness PT# OPT-HS-12v-06p. The Pulse Output is a bounce free N/O contact and polarity of the output wiring does not matter.

ISOLATED PULSE Interface with INHIBIT LINE feature enabled

- Set DIP Switches #8/8-OFF, #1/4-ON position, #2/4 to OFF position.
- Apply Jumper Connector PT# OPT-HS-JC18 to 18 Pin connector of the bill validator.
- Connect the bill acceptor to the machine controller via 6 Pin Power Harness PT# OPT-HS-12v-06p. The Pulse Output is a bounce free N/O contact and the polarity of the output connection does not matter.
- Connection to the INHIBIT LINE depends on the machine controller lockout circuitry. See figure below:



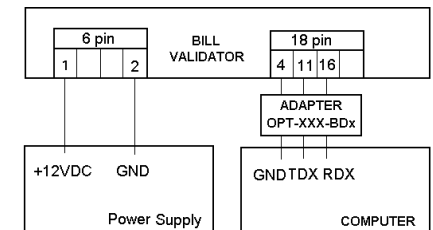
4.2. CashCode® SERIAL Interface

- Set DIP Switches #8/8-OFF, #1/4-ON position, #2/4 to OFF position.
 - Provide the power to the bill acceptor via 6 pins Power Harness.
 - Connect the bill acceptor to the machine controller via 18 Pin Serial Harness
- CashCode® Serial Interface (MEI compatible) Serial messages:

| | | | | | | |
|-------------|---------------|---------------|----------------|-----------------|--------------------|---------------------|
| 81h 1000 | 82h 2000 | 83h 5000 | 84h 10000 | 85h 20000 | 86h RESERVED | 87h RESERVED |
| 89h VEND | 8Ah RETURN | 8Bh REJECT | 8Ch FAILURE | 8Dh BOX FULL | 8Eh BOX REMOVED | 8Fh BOX ATTACHED |

4.3. Bi-Directional Interface

- Set DIP Switches #8/8-OFF, #1/4-ON position, #2/4 to ON position.
- Provide the power to the bill acceptor via 6 Pin Power Harness.
- Apply Bi-Directional interface adapter to connect the bill acceptor to the machine controller or use 18



Pin Serial Harness and schematic below: