5. General Specifications:

5.1. Electrical Specifications:

Operating Voltage	Operating Mode	Peak	Sleep / Wake up
12 V DC	1.0 A	3.0 A	N/A
24 V DC	1.0 A	1.5 A	N/A
12 V DC Sleep	1.0 A	3.0 A	60 uA / 0.2A

Use only current limiting CSA or UL recognized CLASS 2 Power Supply.

5.2. Operating Temperature: -18° ~ 50 ° C (-0.4° ~ 122 °F)

5.3. Total Weight: Less than 2.4 Kg (5.3 lb)

5.4. Features: Multi Width 62~85 mm Validator Head
Short Slide Housing
Multi I/O
Dual Operating Voltage

5.5. Enclosed:

Housing Assembly (Part # FLSH-0005)
Validating Head MDB (Part # FLSV-0012)
Mounting Kit (Part# OPT-MKFLS-HS)
Cassette 1000 Flex Handle (Part # FLSC-0102)
Bezel Variant A Blue/Red Lights
(Part #FLSB-5301B)
User's Guide
Software Description (if Pre-programmed)

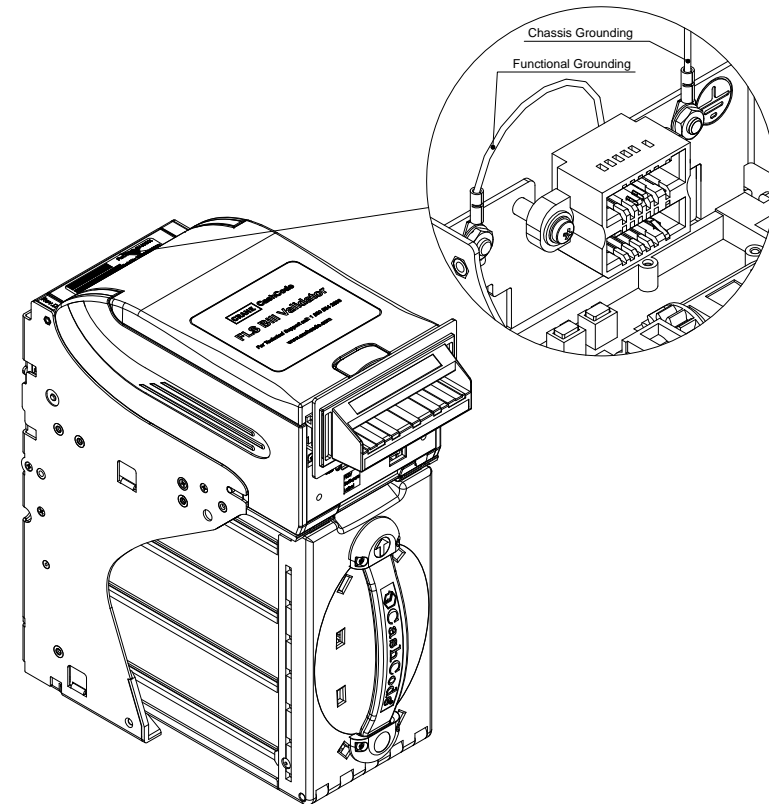**5.6.** Applicable Patents:
6229317, 6163034, 7104383, 6057683

Note: Please make sure to order applicable cable or
24 pin Mounting Kit (Part# OPT-MKFLS-24) separately.

CashCode
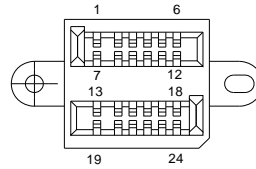
one™

FrontLoad Bill Validator
FLS-7021
User's Guide

Chassis Grounding
Functional Grounding

CRANE PAYMENT SOLUTIONS

1. Interface Connector Pin out:

View from the back of the validator

```
        1        6
     [connector diagram]
        7       12
       13       18

       19       24
```

Mating connector CashCode P/N:
- 24 Pin socket: 0100455
- Terminal M1189-2 (JAE P/N DR-SC24-1-7000)

TERMINAL	SIGNAL	FUNCTION
1	GROUND	GROUND BUS
2	RxD-EXT	RECEIVE DATA (RS232)
3	TxD-EXT	TRANSMIT DATA (RS232)
4	VCC	POWER
5	GND	GROUND
6	RXD-EXT1	RECEIVE DATA
7	GND-EXT/EXT1	INTERFACE GROUND (RS232)
8	TXD-EXT1	TRANSMIT DATA
9	RS485-A	RS485 BUS
10	RS485-B	RS485 BUS
11	INP-RXD	INPUT SIGNAL
12	INP-TTL1	INPUT SIGNAL
13	POWER-	POWER 0V
14	INP-TTL2	INPUT SIGNAL
15	OC-TXD	OUTPUT SIGNAL (OPEN-COLLECTOR)
16	OC-OUT1	OUTPUT SIGNAL (OPEN-COLLECTOR)
17	C-LED-BDP / OC-OUT2	LED CATHODE/ OUTPUT SIGNAL (OPEN-COLLECTOR)
18	A-LED-BDP	LED ANODE
19	POWER+	POWER 12V/24V
20	TXD-BDP	TRANSMIT DATA (OPTO)
21	RXD-BDP	RECEIVE DATA (OPTO)
22	RST-BDP	MASTER RESET (OPTO)
23	GND-BDP	INTERFACE GND (OPTO)
24	+12V BDP	INTERFACE POWER (OPTO)

☞ We recommend to ground line 1 on the main frame. Also, Interface ground line must be separate from Power (0 V) ground

2. Typical DIP Switches Setting: Please refer to Software Description.

3. Diagnostics: This diagnostics chart is for reference only. Please refer to Software Description for details.

NO OF STATUS LIGHT FLASHES		ERROR DESCRIPTION
HARDWARE	1 RED ON BLACK	CASSETTE IS REMOVED FROM BILL VALIDATOR
	2 RED ON BLACK	AN ERROR OCCURRED DURING CPU EXCHANGE WITH MAGNETIC BOARD
	3 RED ON BLACK	CASSETTE IS FULL
	4 RED ON BLACK	MECHANICAL JAM IN THE CASSETTE OR STACKER MOTOR FAILURE
	5 RED ON BLACK	FAILURE OF DIELECTRIC SENSORS
	6 RED ON BLACK	FAILURE OF OPTICAL SENSORS
	7 RED ON BLACK	FAILURE OF INDUCTIVE SENSORS
	8 RED ON BLACK	FAILURE OF TRANSPORTING MOTOR
	9 RED ON BLACK	SPEED OF TRANSPORTING MOTOR IS TOO FAST
	10 RED ON BLACK	FAILURE IN ALIGNMENT MECHANISM
	11 RED ON BLACK	BILL PATHWAY IS NOT EMPTY
	12 RED ON BLACK	BILL JAMMED IN ENTRY SLOT OF THE CASSETTE. NO CREDIT GIVEN
	13 RED ON BLACK	OVERLOAD OF TRANSPORT MOTOR
	14 RED ON BLACK	SYSTEM ERROR
SOFTWARE	1 GREEN ON RED	UNABLE TO WRITE PROGRAM MEMORY
	2 GREEN ON RED	FIRMWARE INTEGRITY ERROR
	3 GREEN ON RED	WRONG MEMORY CARD
	4 GREEN ON RED	SECURITY ERROR
Onetrack	FLICKER X 1	CASH BOX IS HOT OR MACHINE# IS MISMATCH
	FLICKER X 2	ONETRACK CASH BOX / ANTENNA BOARD MODULE ERROR

4. Currency and Protocol Information: Please refer to Software Description.