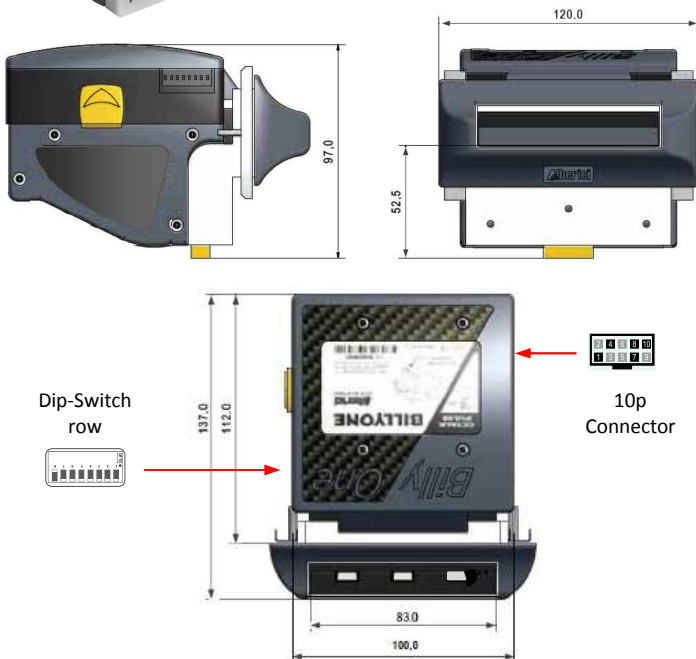# BILLYONE UN1 **Banknote validator (ARM3)**

ccTalk-Pulse+USB / MDB

Quick guide

Rev. 1.02

Alberici takes all possible measures to grant the quality of this product. Improper installation and wrong use can reduce its performance and its working life.

120.0

97.0

52.5

Dip-Switch row

137.0 112.0

10p Connector

83.0

100.0

Technical specs:

ALIMENTAZIONE / POWER SUPPLY
12V / 24V | ±5%

ASSORBIMENTO / CURRENT DRAW
200 mA (stand-by) | 400 mA (work cycle. max 1 Amp)

PROTOCOLLI / INTERFACE
ccTalk / Pulse + USB mini-B / MDB
ACCETTAZIONE / ACCEPTANCE RATE
92% = alta sicurezza (anti-falsi) / high security (anti-fake)
98% = sicurezza standard / standard security
TECNOLOGIE DI RICONOSCIMENTO / SCAN TECHNOLOGY
Trasparenza e riflessione (sensori IR e sensori cromatici) VHR
VHR transparency and reflection (IR and colour sensors)

VELOCITÀ DI VALIDAZIONE / VALIDATION SPEED
2 sec ca. (4 versi) / approx. 2 sec (any of 4 directions)

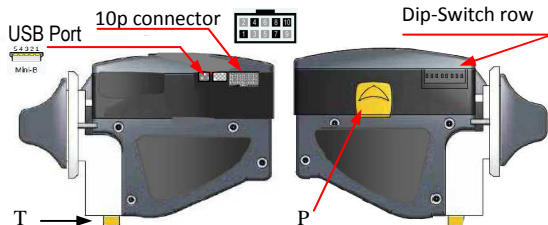BANCONOTE COMPATIBILI / BANKNOTE SIZE
62 - 82,5 mm (larghezza/width)

TEMPERATURA DI UTILIZZO / OPERATING TEMPERATURE
0°C ÷ 50°C (senza condensa/without condensation)
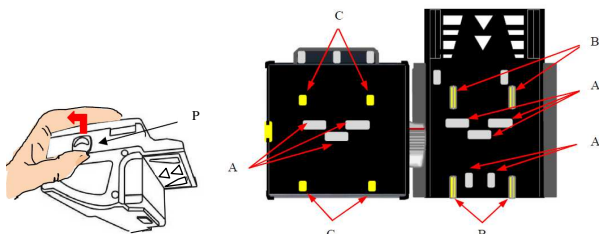
TEMPERATURA DI MAGAZZINO / STORAGE TEMPERATURE
-10°C ÷ 60°C (senza condensa/without condensation)

PESO / WEIGHT   0,565 Kg

USB Port
Mini-B
10p connector
Dip-Switch row

T

P

Press the yellow button (T) to remove the faceplate.
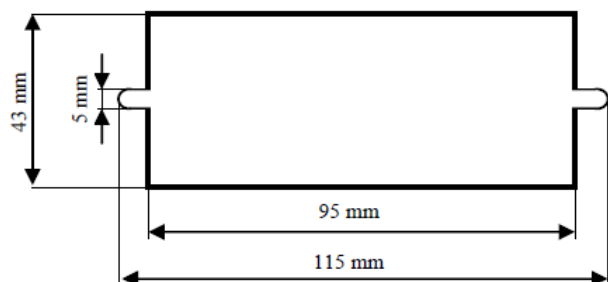
Press the slide-button (P) to open the upper cover.
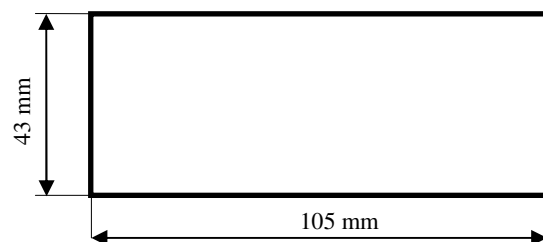

C

B

A

A

A

C

B

P

A. Sensors   B. Rollers   C. Rolls

Wipe the sensor surface off by a lint-free cloth or by a cotton-bud, eventually moisted with isopropyl alcohol to c lean parts A, B and C.

Mounting cut-out (max thickness = 7mm):

43 mm

5 mm

95 mm

115 mm

Or even a simple square cut will do:

43 mm

105 mm

The BillyOne operates by default with 16 bit CRC Checksum. To convert it to simple checksum (8bit), make use of the Alberici Update Software (available on https://www.alberici.it/eng/products/note-validators/without-stacker/billyone). Open the Options menu and set checksum as follows:
1) OPTIONS: choose and open ADVANCED OPTIONS: choose "Menu Tool: Enable all tools"
2) TOOLS: "Set device parameters" .. choose either "simple checksum" or "16-bit crc", then press OK

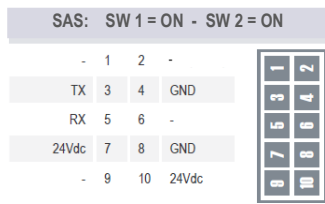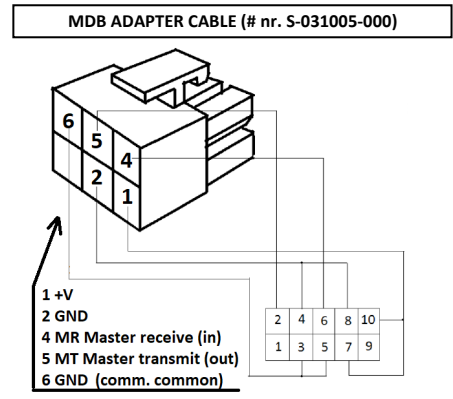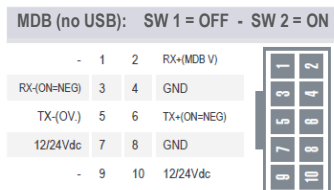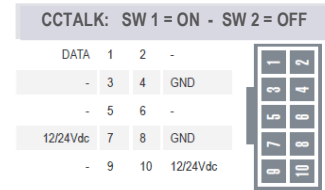| SW N°			DIP-SWITCH FUNCTIONS
SW 1 e SW 2	SW 1	SW 2	**Protocol Interface Mode**
	OFF	OFF	Pulse
	ON	OFF	ccTalk
	OFF	ON	MDB
	ON	ON	SAS
SW 3	SW 3		**Pulse communication modes**
	OFF		Pulse Parallel Outputs (Out 1 = 5€, Out 2 = 10€, Out 3 = 20€, Out 4 = 50€, Out 5 = 100€)
	ON		Pulse Accumulator Output (see SW4 / SW5)
SW 4 e SW 5	SW 4	SW 5	**Accumulator value (only for Pulse mode)**
	OFF	OFF	5 Euro = 1 Pulse
	OFF	ON	5 Euro = 5 Pulses (1 Euro = 1 Pulse)
	ON	OFF	10 Euro = 5 Pulses (5 € disabled)
	ON	ON	5 Euro = 10 Pulses (1 Euro = 2 Pulses)
SW 6	SW 6		**Acceptance rate / Anti-fake Security level**
	OFF		!!!! Acceptance 98% = Standard security level !!!!
	ON		Acceptance 92% = High security level (fake notes mode)
SW 7	SW 7		**Pulse length (only for Pulse mode)**
	OFF		100 msec. / 100 msec. (time ON / time OFF)
	ON		200 msec. / 200 msec. (time ON / time OFF) - re-programmable
SW 8	SW 8		**Activation of Anti-Fraud signals**
	OFF		Anti-fraud override enabled: first 3 attempts are signaled,+ 2 attempts cause 15' inactivity, with yellow flashes (see note ** in Table "AF Modes")
	ON		Anti-fraud override disabled: the note gets rejected with no fraud attempt signals (see note *** in Table "AF Modes")

Please pay attention: after any change in the DS settings, power must be turned off and then on again, so that the validator can detect the set operation mode

CCTALK: SW 1 = ON - SW 2 = OFF

DATA	1	2	-
-	3	4	GND
-	5	6	-
12/24Vdc	7	8	GND
	9	10	12/24Vdc

MDB (no USB): SW 1 = OFF - SW 2 = ON

-	1	2	RX+(MDB V)
RX-(ON=NEG)	3	4	GND
TX-(OV.)	5	6	TX+(ON=NEG)
12/24Vdc	7	8	GND
-	9	10	12/24Vdc

MDB ADAPTER CABLE (# nr. S-031005-000)

1 +V
2 GND
4 MR Master receive (in)
5 MT Master transmit (out)
6 GND (comm. common)

SAS: SW 1 = ON - SW 2 = ON

-	1	2	-
TX	3	4	GND
RX	5	6	-
24Vdc	7	8	GND
-	9	10	24Vdc

PULSE: SW 1 = OFF - SW 2 = OFF

(!) ENABLE [-] / OUT5	1	2	INH [+] (!!)
PARALLEL OUT3	3	4	GND
PARALLEL OUT4	5	6	PARALL. OUT1
12-24Vdc	7	8	GND
TOTAL. CREDIT / OUT2	9	10	12-24Vdc

(!) PULSE TOTALIZER: if pin1 = GND ---> validator is enabled. If pin1 = floating or +3V÷30V ---> validator is disabled.
(!!) PULSE PARALLEL: if pin2 = floating or GND ---> validator is enabled. If pin 2 = +3V÷30V ---> validator is disabled.

CCTALK COMMANDS (16-bit Cyclic Redundancy Check)

CcTalk supported specifications list
1. cctalk Generic Specification Issue 3.2
2. cctalk Expansion for Bill Validators Issue2.1

CcTalk supported commands list
1. Core Commands
Header 192 - Request build code
Header 244 - Request product code
Header 245 - Request equipment category id
Header 246 - Request manufacturer id
Header 254 - Simple poll

2. Core Plus Commands
Header 001 - Reset device
Header 004 - Request comms revision
Header 241 - Request software revision
Header 242 - Request serial number

3. Bill Validator Commands
Header 145 - Request currency revision
Header 152 - Request bill operating mode
Header 153 - Modify bill operating mode
Header 154 - Route bill

Header 156 - Request country scaling factor
Header 157 - Request bill id
Header 159 - Read buffered bill events
Header 197 - Calculate ROM checksum
Header 213 - Request Option flags
Header 216 - Request data storage availability
Header 227 - Request inhibit status
Header 228 - Modify master inhibit status
Header 230 - Request inhibit status
Header 231 - Modify inhibit status
Header 247 - Request variable set

Luminescent Signals

nr red flashes	Description
1	Validator is open
2	Jammed banknote
3	Fraud attempted
5	Adjust optics
7	-
9	Low power supply
11	Check encoder+motor efficiency
12	-
14	ROM error

AF Modes (Anti-fraud)

(*) Dip-Switch SW8 ON
After fraud attempts, the validator returns the banknote. No signal given.

(**) Dip-Switch SW8 OFF

Attempt	Validator reaction	Do as described below
1°	Remains in service	-
2°	Remains in service	-
3°	> error (3 red flashes)	Reset (switch off then on)
… 4° …	> error (3 red flashes)	Reset (switch off then on)

After the 5th fraud attempt (3 yellow flashes), it is necessary to wait for automatic restore of service. Take care not to switch the device off.

Solid yellow light | Error in ccTalk communication. Check voltage level (12 or 24Vdc). Power the device off and on.