KABA® BEYOND SECURITY

Standalone
Biometric Access Kit
AD102KIT

Version 1.8

(Firmware Version 15.006)

Contents

1 Features

1.1 Revision notification

The most important changes which this manual has undergone since the last issue are listed below:

Version number	Edition	Brief description
Version 1.8	05/2013	Added Terms & Conditions

1.2 Overview

The AD102 is a door control unit that can be used with Kaba ADS America's biometric reader AR402. There is no higher-level control unit: The AD102 is a contained system. All configuration is done via the access reader and the DIP switch on the AD102.

Up to 50 users (with two fingerprint templates each) can be enrolled in the system.

1.2.1 Inputs

The AD102 is equipped with three inputs for

1. Door frame contact

2. Request to exit switch / button

3. Alarm reset switch / button

1.2.2 Outputs

The AD102 is equipped with two relays (outputs).

1. Relay-1: Door strike relay

2. Relay-2, depending on the selected mode. The possible functions are:

   o Door strike relay for a second door

   o Output for alarm

1.2.3 DIP Switch

The DIP switch with 7 switches is used to set the operating modes of the AD102.

2 AD102 Board

Connectors	**X1**	DC-IN (12…24VDC)	2-pin
	X2	DC-OUT (Reader power)	2-pin
	X11	Reader RS-485	3-pin
	X7	Not in use	
	X8	OC-IN1 = Request to exit button	2-pin
	X9	OC-IN2 = Frame contact	2-pin
	X10	OC-IN3 = Alarm reset button	2-pin
	X3	Not in use	
	X6	Not in use	
	X4	Relay-2 = Alarm relay	3-pin
	X5	Relay-1 = Door strike relay	3-pin
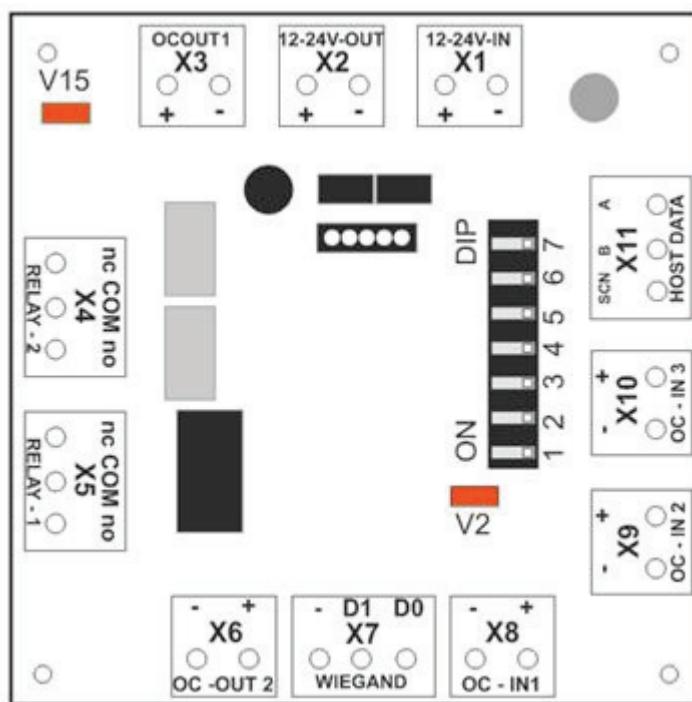
2.1 DIP Switch settings

DIP Switch   Various operating modes can be set with the DIP switch.

To change the operating mode the device needs to be disconnected from power.

SW-1   Not in use; Must be set to OFF

SW-2	**SW-7**	
ON	OFF	Operating mode "automatic pairing"
ON	ON	Operating mode "automatic pairing" and reset of administrator PIN to default "1234"
OFF	OFF	Door frame contact closed if door closed
OFF	ON	Door frame contact open if door closed

SW-3   Not in use

SW-4   Not in use; Must be set to OFF

SW-6	**SW-5**	
OFF	OFF	Standard Mode
OFF	ON	Office / Party Mode
ON	OFF	Two Door Mode
ON	ON	Emergency Exit Mode

Status LEDs   Two LEDs on the AD102 indicate:

LED V15   Indicates operating voltage

LED V2   Status LED
flashing slowly (T = 1s):   no connection to reader
flashing rapidly (T = 0.5s): Connection to reader is established

3 AD102 Operating Modes

There are four AD102 operating modes. In three of these four modes the fingerprints can be assigned to different permission levels (B1, B2 and B3). There are no permission levels with the Standard Mode.

In operation with the AR402, the different permission levels are selected when assigning the unique 5-digit user ID.

If the first digit of a user ID is '1' (user ID e.g. '12345'), the permission level that is assigned to this pair of fingers is B1.

If the first digit of a user ID is '2' (user ID e.g. '23456'), the permission level that is assigned to this pair of fingers is B2.

If the first digit of a user ID is '3' (user ID e.g. '34567'), the permission level that is assigned to this pair of fingers is B3.

"Office / Party", "Two Door Mode", and "Emergency Exit Mode": If the first digit of a user ID is not a 1, 2, or 3, the finger will be enrolled but no access rights are granted.

3.1 Standard Mode

There is only one permission level. All fingerprints have the same permission level. The first digit of the user ID can be chosen freely, and all fingerprints except for the administrator fingerprints have the same permission level.

For the detailed discussion of the Standard Mode please refer to chapter 4.

3.2 Office / Party Mode

The "Office / Party" Mode is similar to the Standard Mode, except that two permission levels can be assigned to a user. The additional permission level allows for opening the door and keeping the lock open until a user presents his fingerprint at the reader again. This is especially useful when a door has to stay open after first access (e. g. the entrance door of a shop or office).

3.2.1 Permission Level B1

If an access attempt with a fingerprint with authorization level B1 is made, the lock relay will open for the set time (door opening time).

3.2.2 Permission Level B2

If an access attempt with a fingerprint with authorization level B2 is made, the lock relay will open permanently, the door stays open.

To lock the door again, a user with permission level B1 or B2 needs to present his finger at the reader. Pressing the door release button will lock the door as well.

3.3 Two Door Mode

By activating the Two Door Mode, two doors can be controlled independently of each other. Three levels of permission can be set In the operating mode.

Individual door opening times can be set for relay-1 and relay-2.

3.3.1 Permission Level B1

If a user with authorization level B1 is granted access, relay-1 will open for the duration set under door opening time for relay 1.

3.3.2 Permission Level B2

If a user with authorization level B2 is granted access, relay-2 will open for the duration set for relay-2 and open the corresponding door.

3.3.3 Permission Level B3

If a user with authorization level B3 is granted access, relay-1 and relay-2 will open for the set duration for relay-1 and relay-2 and open both doors.

3.3.4 Request to exit inputs

In the Two Door Mode, two inputs for request-to-exit (REX) buttons are available, enabling you to open each door from the inside.

- IN-1 (X8): relay-1
- IN-2 (X9): relay-2

The default state of the two inputs for the REX buttons is "open". Pressing the REX button must "close" the contact.

The relay opens as long as the REX button is pushed. Once released the relay will close after the door opening time has elapsed.

Reader indication: Once an exit buttons is pressed, the reader LEDs will be lit green for 2 sec.

In the Two Door Mode, if a door is set to stay open, the reader's LEDs will not indicate the door status because no inputs for frame contacts are available.

3.3.5 "Door lock" switch

If the "Door lock" switch (IN-3) is closed, the system will not grant access to any user.

3.4 Emergency Exit Mode

This mode is designed to control an emergency escape door replacing the key switch of an emergency exit system. Three levels of permission can be set to control relay-1 and relay-2

3.4.1 Permission Level B1

Presenting a fingerprint at the reader with permission level B1 will cause relay-2 to trip for a period of 3 sec.
The reader will indicate that the fingerprint was accepted by lighting the green LEDs briefly.

3.4.2 Permission Level B2

Presenting a fingerprint to the reader with permission level B2 will cause relay-1 to trip for 2.5 sec.
The reader will indicate that the level B2 fingerprint was accepted by lighting the green LEDs for the 2.5 sec the relay is tripped.

During the 2.5 sec while the reader is still lit, the B2 fingerprint can be presented at the reader for a second time to trip the relay for a total of 7 seconds. The reader will indicate that the second B2 fingerprint was accepted by lighting the green LEDs briefly.

3.4.3 Permission Level B3

Presenting a fingerprint to the reader with permission level B3 will cause relay-1 to trip for a period of 12 sec.
The reader will indicate that the fingerprint was accepted by lighting the green LEDs briefly.

4   Standard Mode Features

The modes "Standard" and "Office / Party" provide comprehensive alerting and signaling of the AD102 states.

To ensure complete and proper function of the AD102, the use of the following in- and outputs is required:

Inputs:

- Request to exit button / door handle contact (IN-1)
- Door frame contact   (IN-2)
- Alarm reset button   (IN-3)

Outputs:

- Strike (Relay-1)
- Alarm output (Relay-2)

4.1 Inputs

4.1.1   Request to exit button / door handle contact (IN-1)

If a door frame contact is installed that monitors the door status, it is necessary to use IN-1 to provide a possibility to open the door from the inside without triggering an alarm.

For instance, a request-to-exit button or an electronic lock with a door handle contact can be connected to IN-1 in order to open the door from the inside.

The request-to-exit button will always open the door even if it was locked using IN-3 to make sure that the door opens in case of an emergency.

4.1.2   Door frame contact (IN-2)

With no door frame contact installed

- IN-2 needs to be fitted with a shorting connection (default as delivered)
- The alarm features are not available

With DIP SW-7, IN-2 can be adjusted to your door frame contact (see chapter 2 AD102 Board).

4.1.3   Alarm reset button / Door Lock switch (IN-3)

Dual function input.

- Input closed < 2 sec.   Alarm reset
- Input closed > 2 sec.   Door locked. All access denied.

Once an alarm was triggered by a forced door or exceeded door opening time the alarm remains active. It can be terminated by an alarm reset button connected to IN-3. Alternatively, an alarm can be cancelled by a user successfully presenting a fingerprint at the reader.

Prerequisite for using the alarm feature is an installed door frame contact.

IN-3 can also be used to lock the door and deny all access even to enrolled users once the contact is closed for more than 2 sec. The door will remain locked for the time the Door Lock switch closes the contact.

The reader indicates the locked door with red LEDs. The request-to-exit button overrides a locked door.

An installed door frame contact is not required for this feature.

4.2 Outputs

4.2.1 Door strike relay (Relay-1)

The relay will open once access was granted (by the reader, or request-to-exit button) and will remain open until the door was opened (door frame contact required) or for set door opening time.

4.2.2 Alarm relay (Relay-2)

The alarm relay trips once an alarm was detected.

An alarm is cancelled by a user successfully presenting a fingerprint to the reader or by pressing the alarm reset button.

4.3 System settings

4.3.1 Door opening time

The default door opening time is 3 sec. It can be adjusted according to your requirements.

The door open time is set

- using code with the AR402 (see 5.1 Basic settings of the AR402)

4.3.2 Max door opening time

The max door opening time is the period of time the door may stay open after a user was granted access. Once the max door opening time is exceeded, the reader's pre-alarm will remind the user to close the door.
Default = 20 sec.

Prerequisite for using the alarm feature is an installed door frame contact.

4.3.3 Pre-alarm

The pre-alarm is triggered if the door is still open after the max door opening time is exceeded. The reader indicates the pre-alarm by beeping and flashing LEDs. If the door is closed within the set pre-alarm period, the alarm will be terminated.
Default = 20 sec.

4.3.4 Alarm

If the door remains open exceeding both the max door opening time and the pre-alarm Period, the alarm relay will trip. If a forced door alarm occurs, the alarm relay will trip immediately.

The AD102 will remain in this state until the alarm is reset by the alarm reset button.
The alarm can also be terminated by a user successfully presenting a fingerprint at the reader if the door was closed before.

The request-to-exit button will open the door in an alarm situation but does not cancel the alarm.

5 Operation with Biometric Reader AR402

Valid as of the AR402 firmware release: 1.738.

AD102 and AR402 exchange data in encrypted form. In order for the encrypted data exchange to work, reader and AD102 need to be paired (see 5.2 Automatic pairing).

Connecting the AR402	AD102	AR402	Significance
	X1		12…24VDC
	X2 / -	black	Power Reader -
	X2 / +	red	Power Reader +
	X11 / 3	pink	RS-485A
	X11 / 2	gray	RS-485B
	X4		Alarm relay
	X5		Door strike relay
	X8		IN-1, Request to exit button
	X9		IN-2, Frame contact
	X10		IN-3, Alarm reset button

AR402 indication		
	LEDs Off:	Default indication (Online)
	LEDs Green:	Access granted or operation successful When request to exit button is pressed, the green LED is lit
	LEDs flashing Red + Beep:	Alarm
	LEDs Red:	All access denied at this time
	Right LED flashing Red:	No connection to the AD102 (Offline)

5.1 Basic settings of the AR402

AD102 Mode	# 99 # 1234 # 3 #
Enroll Finger	# 99 # 1234 # 12 # 5-digit user-ID. # (Must be unique)
	3 x left finger, 3 x right finger. Cancel with # # #
NOTICE	Consider the first digit of your user-ID if working with different permission levels.
Testing enrolled finger	Press ✱ and present enrolled finger to the reader
Set Door Opening Time	# 99 # 1234 # 14 # 17 # xxx #
	(Three digits "xxx" with leading zeroes, e.g.: "050" = 5 sec.)
	The new setting will be activated once you were granted access using your enrolled finger.

	Default = 3 sec.
Set 2nd **Door Opening Time**	# 99 # 1234 # 14 # 50 # # set xxx
	(Three digits "xxx" with leading zeroes, e.g.: "050" = 5 sec.)
(Two Door Mode)	The new setting will be activated once you were granted access using your enrolled finger.
	Default = 3 sec.
Set **Max door opening time**	# 99 # 1234 # 14 # 50 # # set xxx
	(Three digits "xxx" with leading zeroes, e.g.: "050" = 5 sec.)
	The new setting will be activated once you were granted access using your enrolled finger.
	Default = 20 sec.
Set pre-alarm	# 99 # 1234 # 14 # 51 # xxx #
	(Three digits "xxx" with leading zeroes, e.g.: "050" = 5 sec.)
	The new setting will be activated once you were granted access using your enrolled finger.
	Default = 20 sec.
Set Admin Code	The default admin code should be replaced by a unique code:
	# 99 # 1234 # 14 # 15 # xxx...x
	(xxx...x the new 4 to 8-digit Admin Code)
Enroll **Admin Finger 1** **and Admin1-Code**	# 99 # 1234 # 14 # 30 # xxxxxx# 3x left finger, 3x right finger, # # #
	(xxxxxx is an additional 6-digit Admin1 Code)
	If an Admin Finger was enrolled the original Admin Code (14 # 15 #...) is disabled until all Admin Fingers are deleted.
Enroll **Admin Finger 2** **and Admin2-Code**	# 99 # 1234 # 14 # 31 # # xxxxxx 3x left finger, 3x right finger, # # #
	(xxxxxx is an additional 6-digit Admin2 Code)
	If an Admin Finger was enrolled the original Admin Code (14 # 15 #...) is disabled until all Admin Fingers are deleted.
Delete **Admin Finger 1**	# 99 # 14 # 301 # 1234 #
	Deletes Admin Finger 1 and related Admin1-Code
Delete **Admin Finger 2**	# 99 # 14 # 311 # 1234 #
	Deletes Admin Finger 2 and related Admin2-Code

5.2 Automatic pairing

Steps for pairing your AD102 with your AR402:

1. Set AR402 to AD102: # 99 # 1234 # 3 #

2. Switch off the AD102

3. Set DIP switch **SW-2 ON**

4. Power up the AD102 and wait until the green status LED is lit permanently.

5. Switch off the AD102 again

6. Set DIP switch **SW-2 OFF**

7. Power up the AD102 again and wait until the status LED on the AD102 will flash quickly. The system is now operational.

5.3 Admin Code Reset

In case the admin code of your AR402 is lost, the admin code can be reset to its default "1234":

1. Switch off the AD102

2. Note the setting of **SW-7**

3. Set both DIP switches **SW-2** and **SW-7 ON**

4. Power up the AD102 and wait until the green status LED is lit permanently.

5. Switch off the AD102 again

6. Set the DIP switch **SW-2 OFF**

7. Reset DIP switch **SW-7** to the noted position

8. Power up the AD102 again and wait until the AR402 is online (all LEDs Off). The system is now operational.

5.4 Direct Access PIN

A feature allowing to grant access on the basis of a PIN code only.
Two Direct Access PINs can be used with the AR402.

Enter PIN-1	#99# 1234# 14# 40# xxxx#
	xxxx = Direct Access Pin
	Direct Access PIN: minimum 4 digits / maximum 8 digits PIN-1 and PIN-2 need to be of the same length.
	Entering the Direct Access PIN only will now open the door (✱ not required)
Enter PIN-2	#99# 1234# 14# 41# xxxx#
	Same process as for PIN-1

As a safeguard the system will disable Direct Access PINs for 3 min. after entering 5 mismatches. With another 5 mismatches after the 3 min. period the Direct Access PIN will be disabled for 10 min. 2 more mismatches will delete the Direct Access PINs altogether.

6   Hardware Specification

Dimensions (W x H x D)

AD102   Housing: 120x120x44mm / 4.7x4.7x1.7in
                                        Board only: 60x60x15mm / 2.4x2.4x0.6in

Power Supply

Ext. power supply   12...24VDC
                                        Minimum 1A and complying with Limited Power
                                        Source according to IEC/EN 60950-1
                                        CSA or UL listing is recommended

Power consumption   Intrinsic 2…5.5W
                                        With connected peripherals max 18W

Interfaces

DIP switch   For setting of different operation modes

1x RS-485 reader, galvanic isolated   For connection to subordinated reader systems

2x Relay outputs   Changeover contacts (max 30VDC/2A)

2x Digital outputs   2 open collector opto outputs
                                        (max 18VDC/15mA)

3x Digital inputs   For connection of insulated switches

Special Features

Real time clock   Battery backup for 3 days

Onboard unique ID   Internally and externally readable

Signaling

Onboard status indication   Red LED - Power
                                        Green LED - Status

Operation Environments

Protection class   IP20

Temperature   0…45°C / 32…113°F

Humidity   0…85% rH, non condensing

Climate   Not suitable for corrosive atmospheres

Installation

Cable connectors   Screw type terminal blocks, pluggable

7 Wiring Outlines

7.1 Wiring RS-485 AR402

Red (12- 24VDC +)

Black (12-24VDC -)

12-24VDC
Power supply

Relay

Pink (RS-485A)

Grey (RS-485B)

AD102

PUSH TO

EXIT
(Normally Open)

REX
(Request Exit)

Door contact

Door strike

Key switch for alarm reset
and permanent locking

Power supply
door strike
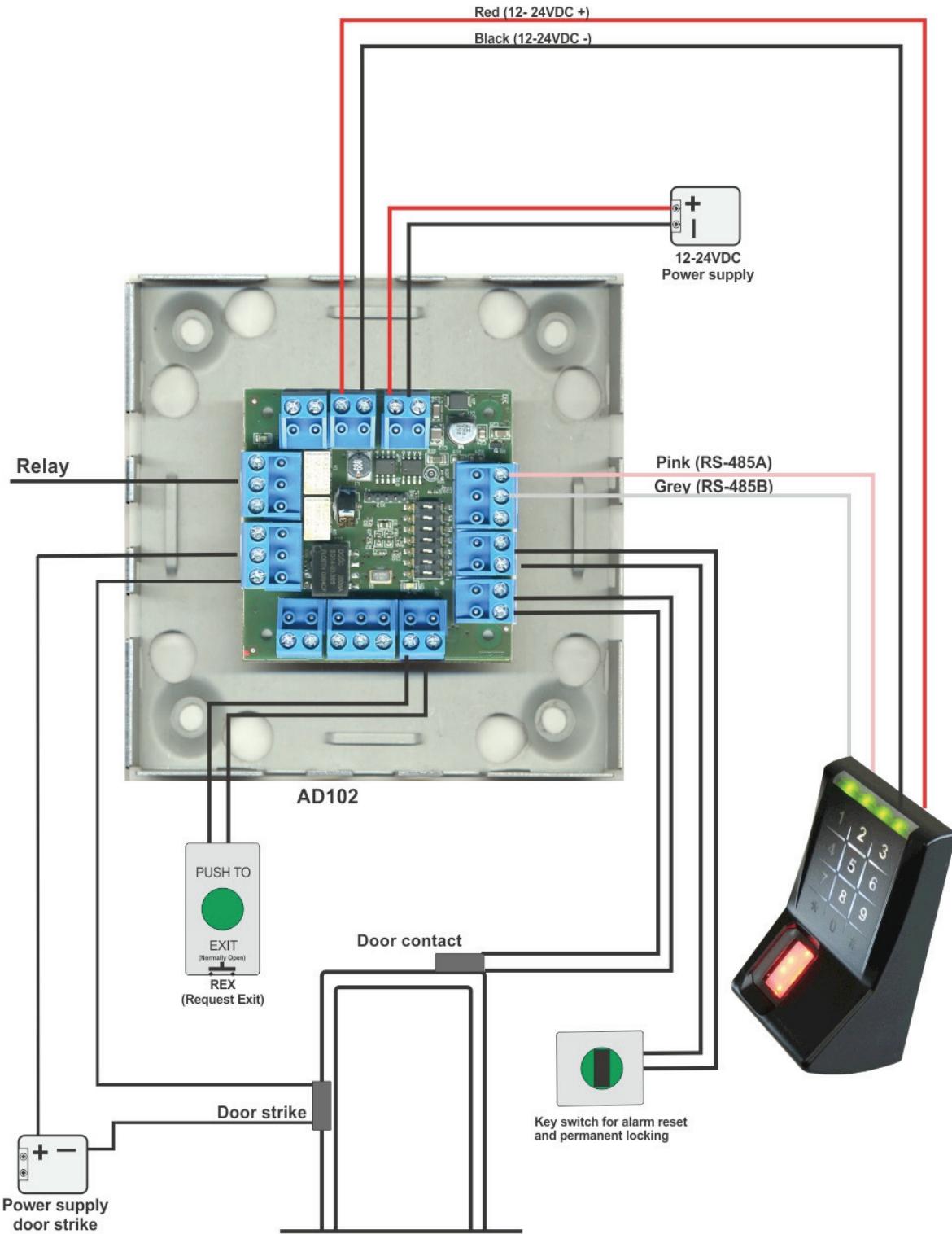
8 General Terms and Conditions of Sale

ENTIRE AGREEMENT: This Agreement constitutes the entire agreement between KABA ILCO Corp. dba Kaba Access Control ("Kaba") and the Purchaser, and contains all of the terms and conditions relating to the sale of the product(s). This agreement supersedes all prior agreements, previous catalog terms and conditions, and other documents unless expressly incorporated herein.

PAYMENT TERMS: Unless otherwise stated, terms are net 30 days from the date of invoice. Kaba reserves the right to charge interest at 1.5% per month (18% annually) on any overdue amounts. If Kaba discovers that the Purchaser's financial condition does not warrant the above payment terms, then Kaba, in its absolute discretion, may demand that the Purchaser pay in advance, pay cash upon delivery, or refuse Purchaser's order. In the latter case, Kaba cannot be held liable for any damages of any nature whatsoever for its refusal to deliver goods in whole or in part.

PRICES: The product price(s) shall be according to Kaba's price list in effect at the time of acceptance of the purchase order or according to its authorized quotation in force at the time of acceptance of the applicable purchase order.

TAXES: The price does not include any amounts for U.S. or International Federal Custom Duties, Canadian, U.S. or International, Federal, Provincial, State, Local Excise, Goods and Services, Sales or Use, or Value added taxes. However, should Kaba be obligated to pay any of the foregoing taxes, the Purchaser, upon demand, shall, within fifteen (15) days, reimburse Kaba the total amount disbursed in respect thereof.

MINIMUM ORDER REQUIREMENTS: Kaba reserves the right to set a minimum order requirement in the future.

PRODUCT INFORMATION: Unless expressly stated in this Agreement, all information contained in the product brochures, pamphlets, or information circulars, are for reference purposes only and based on information available at time of publication. Kaba reserves the right to make reasonable changes in its products or discontinue certain products from time to time and to deliver the modified products, or to offer replacement product in the event a product has been discontinued without any liability whatsoever. Purchaser shall have the option to purchase any other product in the event of a discontinued product, provided; however, Purchaser shall be responsible to pay any price difference.

INSTALLATION: Unless otherwise expressly stated, the costs and materials required for installation are not included in the prices and/or quotations.

POINT OF DELIVERY & SHIPPING: Delivery points and terms are FOB Kaba warehouses in the continental USA and Canada for Kaba products. Should Purchaser request a shipping method or carrier different than Kaba's standard, then the full amount of the shipping cost will be invoiced to the Purchaser.

DELIVERY TERMS: Kaba will notify the Purchaser if for any reason, it is unable to deliver the products as scheduled, and Kaba cannot be held liable for any damages of any nature resulting from these delays.

FORCE MAJEURE: Should a delay in delivery be caused by a Force Majeure event, the time of delivery shall be extended by a reasonable amount of time with regard to all applicable circumstances. Upon mutual agreement, the parties shall set a new date for delivery. Except as to payments due hereunder, neither party shall be liable for failure to perform hereunder for the duration of and to the extent such failure is occasioned by a Force Majeure event, which is defined as follows: war, riots, insurrections, fire, flood, explosions, strikes and other labor or industrial disturbances, inevitable accidents, Government, State, Provincial or Municipal regulations and/or ordinances, an act of God, embargoes, blockades, delay in obtaining materials, legal restrictions, currency regulations, or any cause or condition beyond the

reasonable control of the parties. Where such conditions continue for more than three (3) months, either party shall be free to terminate the Agreement. In the case of termination, Kaba shall be paid the value proportionate to the Agreement price for the finished product and/or the work-in-progress as of the date of termination and the supportable costs.

FAILURE TO ACCEPT DELIVERY: If Purchaser fails to accept delivery at the scheduled time, the purchase price shall become due and payable in accordance with the original payment schedule and all risks associated with the product or parts of the product to be delivered, shall be borne by the Purchaser. Purchaser shall be responsible for all storage and handling costs incurred and to be incurred as a result thereof.

TITLE: Unless otherwise stipulated in this Agreement, ownership of the goods shall remain with Kaba until full payment of the sale price has been received. Until complete payment has been received, Purchaser undertakes to warrant and keep the goods free and clear of all liens, other charges or encumbrances.

RETURN POLICY: Purchaser must obtain a Return Goods Authorization (RGA) number from Kaba's Customer Service by calling in North America: (800) 849-8324 or Worldwide: (336) 725-1331, before returning any products whatsoever. The Purchaser must have the product serial number and invoice number pertaining to the original purchase available to give to the Customer Service Agent. Kaba will send via Facsimile or email (as indicated by Purchaser) the Return Goods Authorization form, which includes the RGA number along with the "Ship To" address and RGA return instructions. RGAs expire after sixty (60) days from date of issuance. Returns of product by Purchaser are FOB Kaba.

WARRANTY: Subject to the limitations herein, Kaba warrants its new Embedded Access Control and Identity Access Management products from design, material or workmanship flaws for a period of two (2) years from date of shipment. Specific new product warranties may vary according to products and if different, they are listed in the respective product section of the Access Control catalog or the respective product installation manual. Third party product(s) sold by Kaba are warranted only to the extent provided by the original manufacturer's warranty and Purchaser must refer to the original manufacturer's warranty in such case. Refurbished or reconditioned Kaba products are warranted for a ninety (90) day period from date of shipment. Failure of the Purchaser to notify Kaba within the time limit set in this section shall constitute Purchaser's waiver to have the malfunction or damage remedied.

The express warranties as set out herein, are the exclusive warranties given and accepted in lieu of any and all other warranties, expressed or implied, statutory or otherwise, including but not limited to warranty of fitness for a particular purpose and merchantability. To the extent that they cannot be disclaimed, the implied warranties are limited in duration to the life of the express warranty. Incidental and consequential damages are excluded from coverage under this warranty. Some States/jurisdictions do not allow for the disclaimers, limitations and exclusions identified above; as a result, they may not apply to you. This warranty gives you specific rights, and you may also have other legal rights which may vary from State to State, or from one jurisdiction to another. No distributor, dealer, sales representative nor any other person has been authorized to make any affirmation, representation or warranty regarding the product, other than those contained in this limited warranty, and if made, shall not be enforceable against Kaba. Kaba reserves the right to modify this warranty at any time, it being understood that such modification will not alter the warranty conditions applicable to the products sold while this warranty is in effect.

- Kaba will, at their discretion and at no charge, either repair, exchange or replace the product provided it is returned complete to Kaba during the warranty period. However, Purchaser is responsible for the labor to remove and reinstall the product(s) from Purchaser's premises.

- Defective parts, which have been replaced, become the property of Kaba who may dispose of them in any manner. Replacement parts become the property of the Purchaser upon their delivery.

- Kaba is not liable for any defects in materials, designs, drawings or information provided by the Purchaser, nor for information which is missing and could not be reasonably identified as such, by Kaba.

- Kaba does not warrant the following:

  a. Normal wear and tear from use;

  b. Printer ribbons, batteries, key cards and other consumable parts used or supplied with the product;

  c. Damage of any nature to hardware finishes;

  d. Faulty or defective product operation(s) caused by unusual or unforeseeable use or conditions;

  e. Improper installation, operation or maintenance of the product;

  f. Any product or system in which Kaba's product(s) is incorporated;

  g. Force Majeure as defined by Section 10 of this Agreement;

  h. Repairs or alterations carried out by anyone other than Kaba;

VARIANCE: Any claims that the quantity and description of goods delivered and the quantity and description of goods ordered do not conform to this Agreement are waived unless the Purchaser advises Kaba's Customer Service department in writing, within fifteen (15) days from the date of receipt of the product(s).

RETURNS FOR CREDIT: In order to return new merchandise, the Purchaser must obtain a Returned Goods Authorization (RGA) number from Kaba Customer Service department. There is a twenty-five percent (25%) restocking charge applied to all returns of new product. Custom products cannot be returned for credit for any reason other than product failure. Credit will not be offered for product that is returned incomplete or damaged.

LIMITATION OF LIABILITY: The total liability of Kaba for all claims of any kind, whether in contract, liability or otherwise, arising out of, connected with or resulting from Kaba's performance or breach of this Agreement or services furnished hereunder shall in no event exceed the total purchase price expressed in this Agreement. Kaba shall not under any circumstances be held liable for loss of profits or revenues, loss of use of product or any other product software, system, or facility, loss of data or information, lack or loss of productivity, interest charges or cost of capital, cost of substitute product, software, systems or services, cost of purchases or replacement power, downtime costs. Incidental, special, consequential damages are excluded from coverage under this warranty.

ASSIGNMENT: Kaba may assign this Agreement in whole or in part, to any parent, subsidiary or affiliated corporation. Subject to the prior written approval of Kaba, Purchaser may assign the present Agreement to any parent, subsidiary or affiliated corporation.

DAMAGES: If Purchaser does not fulfill its obligations or is in default or breach of contract by the terms of this Agreement, Kaba may then terminate the Agreement by notice in writing as set out on the face of Kaba's acknowledgement. Kaba has the right to claim compensation for any loss it incurs as a result of Purchaser's default, in addition to any other rights or recourse in equity and in law.

APPLICABLE LAW: This Agreement shall be governed by and construed in accordance with the laws of the State of North Carolina, USA.

TERMINATION: If the Purchaser terminates this Agreement, in whole or in part, by written notice, Kaba will, upon receipt of the termination notice, cease the performance of the contract according to the instructions of the Purchaser. In such a case, Purchaser may be invoiced for costs incurred depending on the nature of the product and shall be responsible for payment of same.

SEVERABILITY: Any term, condition or provision of this Agreement, or any part thereof, which is or may be found to be prohibited or unenforceable in any jurisdiction shall, as regards such jurisdiction and to the extent of such prohibition or unenforceability, be deemed to be severed from this Agreement, and the remaining terms, conditions and provisions of this Agreement shall remain in full force and effect.

WAIVER: Any act or omission by Kaba will not constitute or be deemed to be a waiver of the rights granted to Kaba by the terms of this Agreement.

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