A0U571B



KelNet Lock

USER GUIDE



Copyright

This document is the sole property of Fichet Technologies, a company in the FICHET group. Reproduction is strictly prohibited. Fichet Technologies reserves the right to make any changes or corrections without notice.

The trademarks mentioned in this document are the property of their respective owners.

Copyright © Fichet Technologies 2020

KelNet Lock – User guide A0U571B – 100037847 – Ed. 05 - NEX – October 2020

PROTECTION OF THE ENVIRONMENT



In compliance with the 2012/19/UE directive pertaining to the Waste Electrical and Electronic equipment (WEEE), this product must be collected separately from the household refuse at the end of its useful life.

This action contributes to the protection of the environment.



The product's packaging is fully recyclable.

CE

RoHS The product complies with the 2011/65/UE directive (RoHS).

WARRANTY

The product is guaranteed for one-year subject to it having been installed in accordance with these instructions.

In the event of the product being returned, it must be placed in packaging similar to the original packaging.

Electronic cards must be packed in antistatic packaging for protection against electrostatic discharges.

READING THE DOCUMENT

This symbol in front of a comment indicates that you must pay particular attention.

Fichet Technologies Fichet Group 23 route de Schwobsheim B.P. 40285 Baldenheim 67606 Sélestat Cedex - France Visiting address: 7 rue Paul Dautier 78140 Vélizy-Villacoublay – France

www.fichetgroup.com



Contents

1	INTRODUCTION	5
2	PRODUCT DESCRIPTION	6
	2.1 Input Unit	6
	2.2 Digital display	6
	2.3 Sound	7
-		
3	USING THE LOCK	9
	3.1 User categories	9 0
	3.3 Opening procedure (Class B lock)	9 10
	3.4 Opening procedure (Class C or D lock)	
	3.5 Closing procedure (Class B lock)	15
	3.6 Closing procedure (Class C or D lock)	16
	3.7 Emergency blocking	17
	3.8 CIT anti-passback procedure	/117
	3.10 Messages	/۱ 18
	3.11 Mandatory changing of the opening code when using the lock for the first time	
	3.12 Changing the opening code by the user himself	20
4	INPUT UNIT CONFIGURATION	22
	4.1 Basic Input Unit configuration	
	4.2 Advanced configuration (Technician menu)	23
5	SECURE UNIT CONFIGURATION	
-	5.1 Access to configuration menu	24
	5.2 Menus list	26
	5.3 User's parameters configuration	28
	5.4 Schedules configuration	29
	5.5 Delays configuration	30 31
	5.7 Identification configuration	
	5.8 Secure Unit configuration	
	5.9 System configuration	37
	5.10 Maintenance	
	5.11 Audit	
6	CHANGING THE CONFIGURATION WITH A USB KEY	40
	6.1 Introduction	40
	6.2 Writing configuration with a USB key.	40 1 1
	6.4 Writing schedules with a USB key	41 42
	6.5 Reading schedules and saving on a USB key	
7	FINGERPRINT	44
'	7.1 Instructions for enrolling fingerprints	
	7.2 Enrolment in mode "Code + Fingerprint"	44
	7.3 Enrolling procedure	45
	7.4 Opening procedure with fingerprint	48
	7.5 Changing the fingerprint by the user himself	49
	7.0 Deleting a lingerprint by the user himself	
8		
0		JZ
9		
10	RECYCLING	
	10.1 Recycling the Secure Unit's address	5454 م
	10.3 Complete recycling of the Secure Unit	
	10.4 Recycling the Input Unit's authentication keys	
	-	

	10.5 Complete recycling of the Input Unit	55
11	MAINTENANCE	56
	11.1 Replacing an Input Unit operating in factory mode	56
	11.2 Replacing a Secure Unit operating in factory mode	57
12	GLOSSARY	58

1 INTRODUCTION

KelNet is a certified high-security electronic lock for securing access to valuable objects inside safes and vaults.

KelNet Components:

• IU (Input Unit):

The terminal used for entering codes and setting the locks.

An Input Unit manages from 1 to 16 Secure Units.

• SU (Secure Unit):

There are two types of SUs:

• Standard SU (SU):

Component used for blocking the door locking mechanism.

• Redundant SU (SU-R):

As compared with the standard SU, the SU-R provides the system with increased reliability: the electronic card, the motor and the communications bus are all duplicated.







2 PRODUCT DESCRIPTION

2.1 Input Unit



2.2 Digital display

2.2.1 Display zones



2.2.2 Status icons



2.2.3 Menu icons



Locking Device closed



Ŷ

Single access

4 eyes access

Fingerprint



Lock 1

ĨĨ

Caution – This icon is used to display system messages.



Press **EXTER** to continue the procedure in progress.



Indicates that the conveyors (or any user with CIT anti-passback procedure) have passed. The icon is displayed until another code is used.

12:21 👓 🛙

2.2.4 Contextual keys

	Left	A
	Right	Open procedure
	Up	Menu access Information
	Down	COPEN
	Return to previous screen	
	Select or validate a modification	
OPEN	Launch the opening procedure (available in all lange	uages)
CLOSE	Launch the closing procedure (available in all langu	ages)
-1	Decrease by one	
+1	Increase by one	
ON	Enable	
OFF	Disable	
YES	To validate an action (available in all languages)	
NO	To discard an action (available in all languages)	
	Without function	

2.3 Sound

The lock is equipped with a buzzer:

- with adjustable intensity,
- and with a time and a frequency that can be set in the list of messages.

1

2.4 Power supply

2.4.1 Battery and/or mains supply

The lock can be supplied with:

- Battery only.
- Battery and mains supply.
- Mains supply only.

The Input Unit's batteries can be used to power it with a maximum of 2 Secure Units.



- If the lock is supplied with external supply and battery:
- It is still necessary to check the battery regularly. Replace them as soon as a "low battery level" message is displayed.
- When the main supply is lost, the lock switches over automatically to the battery supply.

2.4.2 Battery installation





- Type of batteries: 6 x AAA (LR6) 1.5V.
- Respect the polarity.
- Install batteries in the following order: 1, 2, then 3.

3 USING THE LOCK

3.1 User categories

The users are distributed in 3 groups:

- Super managers: There are 2 super managers. The Super managers have authority over the managers. Each super manager can change the user code of another super manager with the Input Unit.
- Managers: The managers can have authority over the operators
- Operators: The "standard" users of the lock.

3.2 Identification settings

A user is identified by:

- His user ID.
- His pin code from 6 to 10 figures:
 - For B class, the minimum length is 6 figures.
 - For C class, the minimum length is 7 figures.
 - For D class, the minimum length is 8 figures.



Super Managers:

- User ID: 1 or 2
- Default code: 00000000.

Different identification modes are possible:

- Code only:
 - Enter your user ID and press the Key.
 - Enter your PIN code and press the ENTER key.

Code + Fingerprint (optional):

- Enter your user ID and press the ENTER key.
- Enter your PIN code and press the ENTER key.
- When the code is validated, the fingerprint is requested: scan your finger with the biometric reader.

See chapter 7 "FINGERPRINT" for more details.



It is possible to configure a lock with fingerprint identification on its own (without a code). This is only authorized on a lock without certification, only available on request.

3.3 Opening procedure (Class B lock)



Step	Screen	Description
6	Y Input unit menu 1 ⊕ ≜ § Lock 1 2	This main screen means that a second identification is necessary.
7	14:06 ™© Lock 1 Procedure Closing procedure OPEN	Select Open procedure or the OPEN button to continue the opening procedure or Closing procedure to abort opening.
8	12:22 ™© Lock 1 Open procedure ID : PIN:	Enter your user ID + ENTER. Enter your PIN code + ENTER. The second user shall enter their ID and PIN code.
9	12:53 wc Lock 1	The lock is unlocked.
10	Y Input unit menu 1 Image: Cock 1 2 Image: Cock 1	This main screen means the lock is unlocked.

6

When the opening procedure is started, if no entries are made on the keypad within 20 seconds, the opening procedure is aborted, and the main screen is displayed.



The opening code is confidential and must be entered exclusively in a safe environment.

3.4 Opening procedure (Class C or D lock)

If the lock is a class C or D lock, the code can only be entered in random mode.







When the opening procedure is started, if no entries are made on the keypad within 20 seconds, the opening procedure is aborted, and the main screen is displayed.

The opening code is confidential and must be entered exclusively in a safe environment.

3.5 Closing procedure (Class B lock)

- **Automatic**: if the boltwork switch is connected, the lock will automatically be secured and the boltwork is locked.
- **Manual**: follow the procedure below.

Step	Screen	Description
1	Y Input unit menu 1 ⊕ ≡ Lock 1 2	Select the lock + EXTER Note: to select another lock, use arrows and
2	12:53 ™© Lock 1 E CLOSE	Press CLOSE button to launch the closing procedure.
3	11:12 Impact Lock 1 Closing procedure ID : PIN:	If identification for closing is activated: Enter your ID + ENTER and your PIN code + ENTER, otherwise go to step 4. If a fingerprint is linked with the user, it will not be requested for the closing procedure.
4	12:21 TOCK 1 Den procedure Menu access Information OPEN	The lock is locked.

3.6 Closing procedure (Class C or D lock)

- **Automatic**: if the boltwork switch is connected, the lock will automatically be secured and the boltwork is locked.
- **Manual**: follow the procedure below.

Step	Screen	Description
1	X Input unit menu 1 ⊕ ≡ Lock 1 2	Select the lock + EXTER Note: to select another lock, use arrows and
2	12:53 MC Lock 1	Press CLOSE button to launch the closing procedure.
3	11:12 ™© Lock 1 Closing procedure ID : ■ PIN:	If identification for closing is activated: Enter your ID + ENTER, otherwise go to step 5.
4	8 4 0 9 6 7 3 1 2 ELEAR 5 ENTER	Enter your PIN code with the virtual keyboard + ETTER In this example, key 1 corresponds to figure 8, key 2 corresponds to figure 4, etc. The position of virtual figures changes for each display. If a fingerprint is linked with the user, it will not be requested for the closing procedure.
5	12:21 TOC Lock 1 Open procedure Menu access Information OPEN	The lock is locked.

3.7 Emergency blocking

In emergency, press keys 7 + 9 to secure the door and to prevent any opening procedure for 30 mins (settable from 1 to 99 mins).



It is not possible to change the emergency blocking keys.

3.8 CIT anti-passback procedure

This procedure can be used to limit the period of time within which a code may be used and the number of consecutive openings.

If the anti-passback function is activated in "CIT" mode:

- The first time the code is entered, the door is opened, and the time delay defined in the Configuration Tool is started.
- The same code may then be used several times up to the maximum number defined in the Configuration Tool.
- Once the code has been entered the maximum number of times or once the time delay has ended, the code may no longer be used.

The code can be reactivated by a user from another rights group logging on.

As soon as the CIT anti-passback time delay has started, all other opening requests and attempts to access the menu are prohibited until it has ended.

If a code is entered during this period, the message "Anti-passback active" is displayed.

Once the code has been entered the maximum number of times or once the time delay has ended, the icon is displayed to indicate that the anti-passback code may no longer be used, but that all other codes may once again be used.



The ⁽¹⁾ icon disappears once a user from another rights group has logged on.

Until the CIT anti-passback code has been rearmed (by a user code), the message "Invalid code" is displayed if the code is entered.

3.9 Wrong code blocking rules

There are 2 rules that define the blocking time after entering several wrong codes:

- Increasing blocking time:
 - After 4 wrong codes = 10' blocking •
 - Then, if the next code is wrong = 20' blocking
 - Then, for each wrong code entered = 30' blocking.
- Fixed blocking time; Blocking time value is 3 to 99 minutes for class B or C and 8 to 99 minutes for class D.

Entering the correct code will reset the wrong code counter.

3.10 Messages

Messages below can be displayed when the lock is waked-up.

Message	Cause	Action
Battery lid is open	The lib of battery access is open.	Close the battery lid.
Anti-tear switch is open	The Input Unit anti-tear switch is activated.	Check if there is no fraudulent removal of the Input Unit. Replace the Input Unit on its support.
Anti-tear switch was open!	The Input Unit anti-tear switch was activated.	Check if there was no fraudulent removal of the Input Unit.

3.11 Mandatory changing of the opening code when using the lock for the first time



The system makes it compulsory to perform this code change only for users with codes that begin with ID 4 and upwards. However, when using the device, the factory code should not be left for the users of ID 1 to 3.

Step	Screen	Description
1	X Input unit menu 1 ⊕ ≜ Lock 1 2	Select the lock + ERTER Note: to select another lock, use arrows and and
2	12:21 MC Lock 1 Open procedure Menu access Information OPEN	Use arrows and to select Open procedure or Menu access +
3	12:22 ™© Lock 1 Open procedure ID : PIN:	Enter your ID + ENTER Enter the PIN code 00000000 + ENTER
4	Expired code New code Confirm	The Expired code message appears. Enter your new PIN code + ENTER Confirm your PIN code + ENTER A safe PIN code is made with at least 6 figures for the B class, 7 for the C class and 8 for the D class.



The opening code must be kept safe and entered exclusively in a safe environment If it is suspected or known that the code is known to another person, then it is to be replaced immediately with a new code.

Do not use:

- Personal details (e.g. date of birth) or other data that can be easily linked to the user should not be used.
- Trivial codes should not be used. Trivial codes include descending and ascending series of digits (e.g. < 5-6-7-8-9-0-1-2 > or < 3-2-1-0-9-8-7-6 >) as well as digits that are all the same (e.g. < 4-4-4-4-4-4-4 >).

Security relevant parts of the KelNet should not be accessible to unauthorized persons when the door of the secure storage unit to which it is fitted is open.



After a code change, the lock must be tried several times, with the door in the open position.

3.12 Changing the opening code by the user himself





The opening code must be kept safe and entered exclusively in a safe environment. If it is suspected or known that the code is known to another person, then it is to be replaced immediately with a new code.

Do not use:

- Personal details (e.g. date of birth) or other data that can be easily linked to the user should not be used.
- Trivial codes should not be used. Trivial codes include descending and ascending series of digits (e.g. < 5-6-7-8-9-0-1-2 > or < 3-2-1-0-9-8-7-6 >) as well as digits that are all the same (e.g. < 4-4-4-4-4-4-4 >).

Security relevant parts of the KelNet should not be accessible to unauthorized persons when the door of the secure storage unit to which it is fitted is open.



After a code change, the lock must be tried several times, with the door in the open position.

4 INPUT UNIT CONFIGURATION

4.1 Basic Input Unit configuration





To return to the previous screen, press

Function	Sub-function	Description
	Language	To change the display language
	Information	To display input unit information
Input Unit	Buzzer	To manage the level of the buzzer when a key is hit.
input onit	Alert buzzer	To manage the level of the buzzer during an alert.
	Backlight display	To select the backlight level for the screen.
	Backlight keyboard	To select the backlight level for the keyboard.

4.2 Advanced configuration (Technician menu)



The Technician menu is only visible if the Input Unit anti-tear switch is open.

Step	Screen	Description
1	X Input unit Buzzer 1 Buzzer alert 3 Display backlight 3 Keypad backlight 0 Technician menu	Select the Technician menu + ENTER.
2	Technician menu IU address (17-20) 017 SU bus RS485 SU validation SU address Delete all fingerprint	Configuring the Input Unit's address from 17 to 20. Address 17 is for the 1st Input Unit.
3	Technician menu IU address (17-20) 017 SU bus MF2 SU validation SU address Delete all fingerprint	 The SU bus menu is for choosing the communications bus with the locks: Either MF2 (by default) Or RS485 The RS485 bus cannot operate by battery only.
4	SU validation SU 01 On SU 02 Off SU 03 Off SU 04 Off SU 05 Off SU 05 Off	The SU validation menu is for validating the locks which are managed by the Input Unit. Switch the "valid locks" to ON .
5	Delete fingerprint Delete all fingerprint? NO YES	The Delete Fingerprints menu is for deleting all the fingerprints in the fingerprint sensor mounted on the Input Unit.

As long as the anti-tear switch is open, the "**Anti-tear open**" message is displayed and only access to the Input Unit's menu is authorised.

Otherwise, the following message is displayed:



This message is displayed until there is a valid identification, but it does not prevent the lock from being used.

5 SECURE UNIT CONFIGURATION

5.1 Access to configuration menu



Step	Screen	Description
5	MENU User's configuration Delays Calendar System Audit	Available menus for a Manager
6	MENU User's configuration	Available menu for a User .
(To return to the previous screen, pres	s ECD .

The content of the menu is different according to the user rights. Each user only sees functions which he has the right to use.

5.2 Menus list

The main menu list, depending on the user's profile, contains part or the totality of the following functions: (SM: Super Manager; M: Manager; U: User):

Function	Sub-function	Description	SM	Μ	U
Users	My name	To change my name.	\checkmark	\checkmark	
	My code	To change my code.	\checkmark	\checkmark	\checkmark
	My fingerprint ⁽¹⁾	To enrol my fingerprint.	\checkmark	\checkmark	\checkmark
	Delete my fingerprint ⁽¹⁾	To delete my fingerprint.	\checkmark	\checkmark	\checkmark
	My users	To modify parameters of my sub-users.	\checkmark	\checkmark	
Schedules	Standard week	To modify the standard week schedule.	\checkmark		
	Extended week	To modify the extended week schedule.	\checkmark		
	Extended period	To modify the extended period schedule.	\checkmark		
Delays	Delay 1 to delay 4	After a schedule selection, enables defining the opening delay in normal mode.	~	√	
	4 eyes delay	After a schedule selection, enables defining the opening delay in 4 eyes mode.	~	✓	
Calendar	Public holiday	To enable or to disable a public holiday	\checkmark	\checkmark	
	Exceptional closing.	To define dates and hours of an exceptional closing.	~	√	
	Exceptional opening	To define dates and hours of an exceptional opening.	~	✓	
Identification	Inactive ID	After the rights group selection, enables modifying the days' number after which the user's PIN code becomes inactive.	~		
	Code expiry period	After the rights group selection, enables modifying the days' number after which the user's PIN code must be changed.	✓		
	Anti passback	After the rights group selection, enables changing the identification method of a user for a second identification.	~		
	Fixed delay	After the rights group selection, enables fixing the opening delays' value in minutes. Value = 255 if delay is defined in schedules.	~		
Secure Unit	MID	 Displays the Module Identification number. 	\checkmark		
	Parameters +	Enables defining or disabling the second	\checkmark		
	ld after delay	identification after opening delay.			
	Parameters + Closing with ID	Enables defining or disabling the closing by ID.	~		
	Parameters + Bolt inside timeout	Enables defining the delay after which the lock locks itself.	•		
	Parameters +	Enables defining the delay between a closing and	\checkmark		
	Delay after closing	a new opening.			
	Parameters +	Enables defining the delay for an access	\checkmark		
	Access autho. time (G1)	authorization (G1 procedure), value = 15 to 180 seconds.			
		If value = 0: the "Access autho. Time (G1) » function is inactive.			
	Parameters + Alarm digit	Enables defining a value added to the code to launch a duress alarm.	✓		
	Parameters + Motor speed	Enables defining the motor speed.	✓		

Function	Sub-function	Description	SM	M	U
	Parameters +	Enables defining a closing hour.	\checkmark		
	Closing hour 1	00:00 = no closing hour			
	Parameters +	Enables defining a second closing hour.			
	Closing hour 2	00:00 = no closing hour			
	Inputs +	Enables choosing a function associated to the	✓		
	IN 1 to IN 8, IL, PB	selected input.			
	Outputs +	Enables choosing a function associated to the	\checkmark		
	OUT 1 to OUT 3, IL, Red, Green	selected output.			
System	Clock adjustment	To adjust date and time.	\checkmark	\checkmark	
	Summer time	To enable or to disable time modification for summer and winter.	✓		
	Parallel mode	To enable or to disable the parallel mode.	\checkmark		
	Interlocking	To choose an interlocking rule.	\checkmark		
Maintenance	Download access	To set secure unit in download mode to send its configuration with the Configuration Tool.	~		
	Security +	To start the securing of the link Input Unit with			
	Secure the IU-SU link	Secure Unit.			
	Security + Securing by CT authorization	To authorize the Configuration Tool to secure all devices.			
	USB memory key + Write configuration (CT -> SU)	Enables downloading a configuration file made with the Configuration Tool to the lock.	✓		
	USB memory key + Read configuration (SU -> CT)	Enables saving the configuration of the lock in the USB key to read it with the Configuration Tool.	✓		
	USB memory key + Write schedules (CT -> SU)	Enables downloading schedules made with the Configuration Tool to the lock.	✓		
	USB memory key +	Enables saving schedules of the lock in the USB	✓		
	Read schedules (SU -> CT)	key to read it with the Configuration Tool.			
	OTC mode	To choose the OTC mode wanted:	\checkmark		
		None, OTC standard, OTC via IP.			
	OTC key	To configure the key of the OTC mode.	\checkmark		
	Access to menu	To select the identification type to menu access.	\checkmark		
Audit	Display audit	To display past events of the secure unit.	\checkmark	\checkmark	
	Download to USB memory	To save past events in USB key.	\checkmark	\checkmark	
	Display program download audit	To display the software update audit.	✓	✓	

⁽¹⁾ Only for users with identification mode "PIN Code + Fingerprint".

5.3 User's parameters configuration

Menu	
User's configuration	
My name	Enter the user's name with the keyboard +
My code	Enter the user's PIN code + ENTER
My fingerprint*	To modify the user's fingerprint. The fingerprint is deleted at the beginning of the procedure. If the procedure is aborted, you will do it again.
Delete my fingerprint*	Delete the user's fingerprint + ENTER.
My users	Sub-user's parameters access + EFFEP: The screen displays the list of users on which you have rights. Aviaible functions (depending on rights):
	 User name: To change the user's name Validation state (On/Off): To manually activate or deactivate the right for the user to open the lock
	Anti-passback blocking (On/Off): To activate or deactivate the anti-passback blocking
	• Activation period: To activate or deactivate the right for the user to open the lock
	 Start End Change code: To change the user's opening code

* Only for users with identification mode "PIN Code + Fingerprint"



Parameters are available in accordance with the user's rights.



User parameters are changed only for the Secure Unit selected before entering the menu. Repeat the same operations to change the user parameters on the other Secure Units.

5.4 Schedules configuration



The 8 schedules have the same parameters.

The configuration of a day can be copied to another one with the **Copy** function at the bottom of the day list:



5.5 Delays configuration



The 8 schedules have the same parameters.

Ĭ

5.6 Calendar configuration





The 8 schedules have the same parameters.

5.7 Identification configuration

Menu	
Identification Choose a rights' gro	oup and press
Manager 1	
Inactive ID	Press enter which the PIN code is disabled if not used.
Code expiry period	Press enter which a new code is requested.
Anti-pass back	Press ENTER , and set the anti-pass back mode.
	The anti-pass back mode defines the conditions which authorize an already identified user to identify himself a second time:
	• Disable : the second identification is possible.
	Manual: Manual reactivation on the Input Unit.
	• Correct ID : Reactivation with a correct identification of a user.
	• Other group : Reactivation with a correct identification of a user of another rights' group.
	• CIT procedure : Reactivation with a correct identification of a user of another rights' group.
	is displayed at the end of the CIT procedure.
Fixed delay	Press ENTER , and fix the opening delays' value in minutes for this family.
	Value = 255 if delay is defined in schedules.
Managar 2	
Wallager 2	
Manager CIT	
Operator CIT Same	e parameters as Manager 1
Operator 1	The 8 groups have the same parameters.
Super Manager	
Code + fp	
отс	When using One Time Codes, the application software used for generating one-time codes should be installed in a secure environment.

5.8 Secure Unit configuration



Inputs functions list

Ν	Function	
1	Opening command	
	Launches an opening procedure (if the lock is not certified).	
2	Boltwork switch	
	I his input is activated when the lock is locked.	
	The Input Unit will display: 國 .	
3	Alarm input signal	
	Input for an alarm signal, for example "Opening, Seismic and Thermal Detection alarm input signal".	
4	G1-Access authorisation	
	This function is only valid if time "Access authorization (G1) has a value between 15 and 180 seconds.	
	When the input is deactivated, access is blocked.	
	When the input is activated (and during 2 minutes after deactivation), access is authorized.	
	This function is used for an opening procedure or to access to menu from the input unit.	
	Be careful when using procedure G1: it can block a lock if the G1 authorization command does not work.	
5	G2-Opening without delay	
	When the input is activated (and during 2 minutes after deactivation), the opening procedure is	
	done without delay.	
6	G3-Opening cancellation	
_	When the input is activated, the current delay is cancelled and the opening is not possible.	
1	G4-Delay substitution	
	the substitution delay.	
8	Duress remote button	
	Duress alarm is activated if the remote button is not activated during the delay.	
	More precisely, the button shall be activated:	
	 After 5 seconds after the delay starts. 	
	 Before 5 seconds before the end of the delay. 	
9	Opening suspension	
	If the input is activated, at the end of delay:	
	The Input Linit displays for this door:	
	 The holt return is suspended 	
	• The second identification is suspended too	
	When the input state changes, the opening procedure can restart	
10	No dolav – No schodulo	
10	When this input is activated, the opening does not take into account schedules, and the dolow	
	before opening is null.	
11	Interlocking input	
	When this input is activated, the opening is forbidden.	



By default, all inputs are open.

Outputs functions list

Ν	Functions
1	Bolt fully retracted
	This output is activated when the bolt is fully retracted.
2	External alarm management
	This output is activated when the bolt is not locked.
	This output is used for example inhibit an OSTD alarm.
3	Good identification
	This output is activated during 3 seconds after a good identification (open procedure or menu access).
4	Delay in progress
	This output is activated during the delay before opening.
5	End of delay
	This output is activated at the end of the delay and:
	During waiting for a second code.
	Or when if there is an open suspension.
	Or during interlocking if this one is activated.
6	Duress alarm
	This output is activated after a duress alarm and for a programmable time, by default 3 seconds.
7	Blocked bolt alarm
	This output is activated when there is a bolt defect during locking or during unlocking.
8	Door open too long
	This output is activated when the door is open for too long.
	This time is defined by the parameter " Door opening time " added to time " Alert after door opening
•	time.
9	This output follows the "Alarm input signal" state except when the bolt moves and when the door is
	unlocked.
	The output is kept activated during 20 seconds after the "Alarm input signal" disappears.
10	Wrong identification blocking
	This output is activated when there are more than 3 false identifications.
	The output is deactivated when there is a good identification.
11	Schedule blocking
	This output is activated when users are blocked (by schedules or by holidays or by exceptional
	closing).
12	Unlock command
	= Remote relay function.
	This output is activated when the open procedure is done by a user who has the "Right to control remete output"
	Tenole oulput .
12	Sound alort
15	This output is activated when the door is open for too long. This time is defined by the parameter
	"Door opening time".
	The output is deactivated when the door is closed.
	The maximum time of activation is defined by the parameter "Alert after door opening time".
14	Reserved
15	Power off alarm
	This output is activated after power off.
	The output is deactivated after the next good identification.
16	Reserved

Ν	Functions
17	Reserved
18	Interlocking output
	This output is activated when the bolt is not locked.
19	Low battery level
	This output is activated if the battery level is lower than 6.3V.
20	External power OK
	This output is activated if the power level is more than 11V.
21	Access refused (G1)
	This output is activated as long as there is no access authorization by the G1 procedure.

By default, the output state is disabled.

5.9 System configuration

Menu		
	System	
	Clock adjustment	Press enter and modify the date and time in a limit of more or less 75 minutes per year.
		A user with administrator rights does not have this limit.
	Summer time	Press and select the automatic daylight-saving time: Off: Disable
		1: Last Sunday of March and last Sunday of October
		2: Second Sunday of March and first Sunday of November
		3: Second Sunday of March and last Sunday of October
		4: First Sunday of April and first Sunday of October
		5 : Third Sunday of February and third Sunday of October
	Parallel mode	Press enter and enable or disable the parallel mode with OFF and OFF
		One user can only open locks one by one. If two locks are installed on the same door, 2 different users are necessary.
		ETTER
	Interlocking	Press and choose one of below modes:
		None: no interiocking.
		• Rule 1. If an opening procedure is in progress, it is not possible to open another lock or even start another delay.
		• Rule 2 = "delay one time": The first opening is done with the normal delay. During the delay or the opening, it is not possible to open another safe
		When the lock is locked, within 2 minutes, it is possible to re-open it or another SU without delay.

5.10 Maintenance

Menu		
	Maintenance	
	Download access	Press EXTER to authorize data transfer from PC to SU (via USB or IP) during 1 hour.
	Security	 Press and choose the link to secure: Secure the IU-SU link Securing by CT authorization
	USB memory key	Press and download or save configuration or schedules. Follow the instructions displayed and wait until the transfer is complete.
	OTC mode	See Chapter 6 CHANGING THE CONFIGURATION WITH A USB KEY Press and choose one of the following modes: None OTC standard OTC via IP
	OTC key	Press EXTER , enter and confirm the 20-figure OTC key.
	Menu access	Press and chose one of the following modes: • 2 eyes • 4 eyes, lowest right
		 4 eyes, last user right OTC only USB memory key



When using One Time Codes, the application software used for generating one time codes should be installed in a secure environment.

5.11 Audit

Menu		
Di	splay audit	Press ENTER to display the last events.
Do	ownload to USB memory	Press to save past events in the USB mass storage key. Follow the instructions displayed and wait until the transfer is complete.
Di	splay program download audit	Press ENTER to display the software update audit.



One USB key can be used to save several audits of different locks.

Only use USB keys with a FAT32 file system.

6 CHANGING THE CONFIGURATION WITH A USB KEY

6.1 Introduction

It is possible to download a configuration to the KelNet lock with an USB key which contains a new configuration made with the Configuration Tool.

And it is possible to save the KelNet lock configuration on a USB key to manage it with the Configuration Tool.

6.2 Writing configuration with a USB key

To access USB menus, the user must have rights to manage the configuration with a USB key.

Menu		
	Maintenance	
	Download access Security	
	USB memory key	 This procedure allows writing the lock configuration with the contents of the USB key generated by the Configuration Tool. Open the battery lid. Insert the USB key + EXTER. Choose Write configuration + EXTER. Wait until the transfer is complete. Remove the USB key. Close the battery lid.
	OTC mode	
	OTC key	
	Menu access	

The new configuration is taken into account immediately.

6.3 Reading configuration and saving on a USB key

To access USB menus, the user must have the rights to manage the configuration with a USB key.

Menu)		
	Maintenance		
· · · · · ·	- Dov Secu	vnload access ırity	
	USB	memory key	 This procedure allows saving the lock configuration in the USB key and reading it with the Configuration Tool. Open the battery lid. Insert the USB key + ENTER Choose Read configuration + ENTER Wait until the transfer is complete.
			Remove the USB key.Close the battery lid.
	ОТС	mode	
	Mer	key nu access)

6.4 Writing schedules with a USB key

To access USB menus, the user must have the rights to manage the configuration with a USB key.

Menu			
	Maintenance		
	Down	load access	
	USB m	emory key	 This procedure allows updating schedules with the contents of the USB key generated by the Configuration Tool. Open the battery lid. Insert the USB key + EXTER. Choose Write schedules + EXTER. Wait until the transfer is complete. Remove the USB key. Close the battery lid.
	OTC m	ode	
	Menu	access	

6.5 Reading schedules and saving on a USB key

To access USB menus, the user must have the rights to manage the configuration with a USB key.

Menu		
	Maintenance	
	Download access Security	
	USB memory key	 This procedure allows saving schedules in the USB key and reading it with the Configuration Tool. Open the battery lid. Insert the USB key + ENTER.
		 Choose Read schedules + ETTER. Wait until the transfer is complete. Remove the USB key. Close the battery lid.
	OTC mode OTC key Menu access	

7 FINGERPRINT

Fingerprint identification is always linked to a PIN code.

The biometric enrolment requires two different fingers to be registered.



When installing an Input Unit, it is important to delete all fingerprints via the **Technician menu** (See §4.2). This allows initialization of biometrics.



Only 25 users can be configured in fingerprint mode.

7.1 Instructions for enrolling fingerprints

- In order to get a better enrolment and read success rate, it is better to avoid using smaller fingers (ring/little fingers).
- Do not lift your finger off the biometric sensor as you move your finger over it.
- Enrolling or reading the fingerprint may fail if you move your finger too quickly or too slowly.
- Avoid twisting or rotating your finger as you move it over the sensor.
- Positioning of the finger for optimum operation:
 - 1. Push your finger in up against the stop without touching the biometric sensor.







7.2 Enrolment in mode "Code + Fingerprint"

In this mode, the user can enrol his fingerprint himself.

This procedure is done automatically the first time the user carries out an access procedure:

- 1. Select the Secure Unit +
- 2. Enter uour ID +
- 3. Enter your PIN code +
- 4. Press key: if this code is being used for the first time, you are prompted to change it (See §3.11), then repeat the access procedure by entering your new code.
- 5. The enrolment procedure starts (see §7.3).



7.3 Enrolling procedure

The fingerprint enrolling is done in two steps:

- 1. 5 successive readings of the same fingerprint to create an image.
- 2. Check the image created with a fingerprint check.



Step	Screen	Description
7	Finger 1 Control Control of the 1st fingerprint	Scan your first finger to control the fingerprint creation.
8	Finger 1 Control Please wait	Wait during verification.
9	Enroll Finger 2 Scan your second finger	Scan your second finger for the first time
10	Enroll Finger 2 Scan it a second time	Scan your second finger for the second time
11	Enroll Finger 2 Scan it a third time	Scan your second finger for the third time
12	Enroll Finger 2 Scan it a fourth time	Scan your second finger for the fourth time
13	Enroll Finger 2 Scan it a last time	Scan your second finger for the last time

— 46



If there are several Input Units at the site, enrolment will need to be performed at each Input Unit.

7.4 Opening procedure with fingerprint

The fingerprint identification can also be used to access menus.

7.5 Changing the fingerprint by the user himself

If there are several Input Units at the site, enrolment will need to be performed at each Input Unit.

7.6 Deleting a fingerprint by the user himself

In "Code + fingerprint" mode, if the user leaves the enrolling procedure, the procedure is started automatically the first time the user carries out an opening procedure.

If there are several Input Units at the site, the fingerprint will need to be deleted from each Input Unit.

If the user does not have the right to change his PIN code, the manager (or super-manager) deletes the user fingerprint:

Menu		
U	sers	
	My name	
	My code	
	- My fingerprint	
	Delete my fingerprint)
	My users	 Press ENTER, select Delete fingerprint with ENTER. Confirm the deletion with YES or NOT to abort it.

8

The different parameters are available in accordance with the user's rights.

7.7 Deleting all fingerprints

See section 4.2.

8 REDUNDANT LOCK SPECIFICITIES

The redundant lock works in the same way as the standard lock.

In case of a malfunction of a part of the lock, access to the menu is no longer possible and therefore when selecting the lock, the following screen is displayed:

When the opening procedure is selected, the following error message appears:

The opening and closing procedures of the lock are always possible, depending on the programmed parameters.

9 FACTORY SETTINGS

The default factory settings are:

	Identification / code PIN		Rights	Opening right	Schedule
Super Manager 1	1 – 00000000	Enable	All	No	6
Manager 1	2 – 00000000	Enable	Change codes 3 to 19	Yes	1
Operator 01	3 - 00000000				
to	à	Disable	No	Yes	1
Operator 17	19 – 00000000				
Manager 2	20 – 00000000	Disable	Change codes 21 to 29	Yes	2
Operator 1 Bio	21 – 00000000				
to	à	Disable	No	Yes	2
Operator 9 Bio	29 – 00000000				
CIT Manager	30 - 00000000	Disable	Change codes 31 to 39	Yes	3
CIT Operator 1	31 - 00000000				
to	à	Disable	No	Yes	3
CIT Operator 4	39 – 00000000				
Super Manager 2	99 - 00000000	Disable	All	No	6

Schedules:

- Schedule 1: from 6:00 am to 10:00 pm all days.
- Schedule 2: from 6:00 am to 10:00 pm all days.
- Schedule 3: from 6:00 am to 10:00 pm all days.
- Schedule 6: from 0:00 am to 0:00 pm all days.

No annual schedule, no exceptional closed periods, no exceptional opening periods, and no public holidays are defined.

Delays:

- Open delay = 0 minute.
- Duress alarm procedure delay = 10 minutes.
- Emergency blocking delay = 30 minutes.
- Automatic blocking delay after closing procedure = 0.
- Time out for retracted bolt = 10 minutes.

General settings:

- Duress alarm mode = last digit + X (default value: 0, therefore disabled) .
- Wrong identification blocking rule = "Increasing blocking time".
- No Interlocking rule.
- No "4 eyes mode"
- No closing procedure by identification.
- No re-identification after delay time out.
- No input / output function. Input I1 Door boltwork switch

The Secure Unit and the Input Unit can be recycled.

There are different levels of recycling:

- 1. Recycling the authentication keys (used for security).
- 2. Recycling the device's address.
- 3. Complete recycling of the operating settings of the lock.

The lock's audit is never wiped.

10.1 Recycling the Secure Unit's authentication keys

This procedure is for reverting to the factory authentication keys.

To recycle the Secure Unit's authentication keys, perform the following procedure:

- 1. Cut the power to the Secure Unit. If the USB cable is connected to the Input Unit, disconnect it.
- 2. Press the Secure Unit button: this wakes up the Secure Unit microprocessor and so discharges the power supply's capacitors, otherwise the microprocessor remains active and there is no restart.
- 3. Reconnect the power supply: the Secure Unit green LED starts to flash (10 seconds, maximum).
- 4. While it is flashing, press the Secure Unit push-button twice: the LED will start to flash more rapidly.
- 5. Wait until it stops flashing.

10.2 Recycling the Secure Unit's address

This procedure is for:

- Reverting back to the factory authentication keys.
- Wiping the Secure Unit's address (value 127).

Perform the following procedure:

- 1. Cut the power to the Secure Unit. If the USB cable is connected to the Input Unit, disconnect it.
- 2. Press the Secure Unit button: this wakes up the Secure Unit microprocessor and so discharges the power supply's capacitors, otherwise the microprocessor remains active and there is no restart.
- 3. Reconnect the power supply: the Secure Unit green LED starts to flash (10 seconds, maximum).
- 4. While it is flashing, press the Secure Unit push-button **<u>5 times</u>**: the LED remains lit and stops flashing.
- 5. Wait until the LED goes out.

10.3 Complete recycling of the Secure Unit

To completely recycle the Secure Unit, perform the following procedure:

- 1. Cut the power to the Secure Unit. If the USB cable is connected to the Input Unit, disconnect it.
- 2. Press the Secure Unit button: this wakes up the Secure Unit microprocessor and so discharges the power supply's capacitors, otherwise the microprocessor remains active and there is no restart.
- 3. Reconnect the power supply: the Secure Unit green LED starts to flash (10 seconds, maximum).
- While it is flashing, press the Secure Unit push-button <u>10 times</u>: the LED will start to flash more rapidly, before stopping and remaining illuminated.
- 5. Wait until the LED goes out.

After recycling, all the settings are reset to their "factory" values (default value): see section 9.

10.4 Recycling the Input Unit's authentication keys

This procedure is for reverting to the factory authentication keys.

To recycle the Input Unit's authentication keys, perform the following procedure:

- 1. Cut the power to the Input Unit. If the USB cable is connected to the Input Unit, disconnect it.
- 2. Dismount the Input Unit.
- 3. Wait 5 seconds.
- 4. Reconnect the power supply: The Input Unit's red LED starts flashing (10 seconds, maximum).
- 5. While it is flashing, press the Secure Unit's push-button **twice**: the LED will start to flash more rapidly.
- 6. Wait until it stops flashing.
- 7. Put the Input Unit back together so that the anti-tear switch is activated.

10.5 Complete recycling of the Input Unit

To completely recycle the Input Unit, perform the following procedure:

- 1. Cut the power to the Input Unit. If the USB cable is connected to the Input Unit, disconnect it.
- 2. Dismount the Input Unit.
- 3. Wait 5 seconds.
- 4. Reconnect the power supply: The Input Unit's red LED starts flashing (10 seconds, maximum).
- 5. While it is flashing, press the anti-tear switch **<u>10 times</u>**: the LED remains lit and stops flashing.
- 6. Wait until the LED goes out.
- 7. Put the Input Unit back together so that the anti-tear switch is activated.

As long as the anti-tear switch is open, the "**Anti-tear open**" message is displayed and only access to the Input Unit's menu is authorised.

Otherwise, the following message is displayed:

This message is displayed until there is a valid identification, but it does not prevent the Input Unit from being used.

11 MAINTENANCE

11.1 Replacing an Input Unit operating in factory mode

Once the new Input Unit has been connected, perform the following procedure:

Step	Screen	Description		
1	X Input unit Buzzer 1 Buzzer alert 3 Display backlight 3 Keypad backlight 0 Technician menu	Select the Technician menu + ETTER Note : The Technician menu is only visible if the Input Unit's anti-tear switch is open.		
2	Technician menu IU address (17-21) 017 SU bus RS485 SU validation SU address Delete all fingerprint	Configure the Input Unit's address (17 for the 1st Input Unit) and the bus type: RS485 or MF2.		
3	SU validation SU 01 On SU 02 Off SU 03 Off SU 04 Off SU 05 Off SU 05 Off	Select the SU validation menu and switch the locks present to ON .		
4	Y Input unit menu 1 ⊕ ≜ Lock 1	Then return to the home screen. The lock is once again operational.		

If the Input Unit's class is A or B and the Secure Unit's class is C or D, it will not be possible to either open the lock or enter the Input Unit's configuration menu. The following message is displayed:

11.2 Replacing a Secure Unit operating in factory mode

If a Secure Unit has to be changed, you must first access to it.

The new Secure Unit must have the "factory" configuration. If this is not the case, the Secure Unit will need to be recycled.

Once the new Secure Unit has been connected, perform the following procedure:

The Secure Unit then needs to be reconfigured and all of the user codes entered.

12 GLOSSARY

4 eyes mode

For this mode, two different users have to identify in order to validate an opening procedure or validate access to the menus.

Angular filter

Optical filter placed on the display to limit the angular view (necessary for grade C).

Approval

Certification rate of the device. Under certain conditions, the approval can be lost (identification with fingerprint only for example).

Audit

Chronological journal of events (also: "event log").

Biometric code

Code comprising human characteristics (fingerprint).

Bolt (or blocking feature)

Part of a HSL which, after inputting the correct opening code, moves, or can be moved, to either secure a door or prevent movement of boltwork.

Boltwork

Blocking feature of a door. A boltwork switch informs if the door can be opened or not.

Centre national de prévention et de protection (CNPP)

National centre for risk prevention and protection.

CIT - Cash In Transfer

The transport, delivery and receipt of valuables.

Code

Identification information required which can be entered into a HSL and which, if correct, enables the security status of the lock to be changed.

CT - Configuration Tool

Software running on PC which is used to configure all the parameters of the HSL.

Door status

The normalized status of a HSL door are:

- Closed door: door is within its frame ready for throwing its bolt(s).
- Bolted door: bolts are thrown.
- Locked door: boltwork cannot be withdrawn because of the HSL.
- Secured door: door is closed, bolted and locked with an HSL in the secured HSL condition.

Duress code

Parallel code which initiates some additional function (delay modification, alarm).

Event log

Chronological journal of events (also: audit).

G1 – Procedure G1

When a "procedure G1" is configured for an SU, identifications are not authorized. Activating this procedure authorizes Access during an adjustable time (15 to 180')'.

G2 – Procedure G2

When a "procedure G2" is configured for an SU and activated, the opening delay is cancelled.

G3 – Procedure G3

When a "procedure G3" is configured for an SU and activated, the current procedure is cancelled.

G4 – Procedure G4

When a "procedure G4" is configured for an SU and activated, the opening delay is replaced by a "substitution" delay.

HSL - High Security Lock

Independent assembly normally fitted to doors of secure storage units, into which codes can be entered for comparison with memorized codes (processing unit). A correct match of an opening code allows movement of a blocking feature.

ID - Identification

Method to identify a user. For KelNet, the ID is a number between from 1 to 99 for a user known by the Secure Unit. For an OTC code, the ID is defined over 4 or more digits.

Interlocking rule

Rules which define the conditions to validate an opening procedure.

IOBox - Input Output Box

Interface board used to extend the number of inputs and outputs.

IPBox

Interface device which is used to convert a serial link RS485 to Ethernet.

IU - Input Unit

Part of an HSL which communicates codes to a processing unit.

MF2

Name of the bus/protocol used between the Input Units and the Secure Units of the KelNet lock.

OSTD -Opening Seismic and Thermal Detection

Opening, seismic and thermal detection alarm input signal.

OTC - One Time Code

Code which is limited in time and in number of use.

PIN - Personal Identification Number

Password used to identify a person.

Recycling

Procedure to initialize a device with factory parameters.

Remote SU button

This button is used to fix the address of the SU.

SU - Secure Unit

Part of a HSL which evaluates whether the input code is correct and enables or prevents movement of a locking device.

SW - Switch

Interrupteur permettant par exemple de détecter une attaque sur le boitier d'un périphérique.

USB – Universal Serial Bus

Standard serial bus to interface devices to a host computer.