

Installation Guide

EVOLUTION SYSTEM

CT-EVOLUTION 12110801 EN

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DESCRIPTION OF SYSTEM

Access control EVOLUTION systems series are constructed on the basis of a fieldbus ELA type RS485. The access control systems of the EVOLUTION series are developed on the basis of a RS485 type ELA field bus.

Each of the CPUs of the EVOLUTION series have the capacity to manage up to 30 door controller interfaces and 30 IP video cameras.

16 CPUs of the EVOLUTION series can be networked by means of USB or TCP / IP to move to a management capacity of 480 doors and 480 IP video cameras.

The CPUs of the EVOLUTION series have their own GUI, making optional the use of a remote software in the case of a mere management of entrances.

The door controller interfaces are 100% operational in the case of a degraded mode, that is after more than 10 seconds of lost communication with the central unit.

The door controller interfaces collect door supervision data as follows:

- A Data&Clock or 26 to 40-bit Wiegand input, to manage the reader.
- A request-to-exit input for the management of a pushbutton.
- An inhibition input to put the reader in the sleep mode or for SAS management.
- A programmable input that can be assigned to the supervision of the door.
- A relay output for locking / unlocking the door.
- A programmable changeover relay output is available.

The CPUs of the EVOLUTION series have a capacity to manage 3000 users and 4500 events stored in offline mode.

The principle of operation and the advanced capabilities of the system are developed in the following.

Compatible elements



Compatible elements in the TCP / IP of the EVOLUTION installation

CT-EVOLUTION POWER-EVOLUTION (See connection and programming following)	UC : Central processing unit from which the fieldbus is built. Up to 16 central units can be networked to constitute an installation of 480 readers.	(123 < 456 > 789 &0P
LOG-EV1 (See related product guide)	SOFT : Operating software single workstation of EVOLUTION system. Up to 100 control sites Access and Video	Ba+.Net Pichier Donnés Utilisateurs A Horaires Profils Groupes Visites Ubre accès Antipassback Statistiques Supervision Communications Supervision Communications Paramètres d'installation Mots de passe accès Centrales Mise à l'heure de la centrale Configuration A Mise à l'heure de la centrale Configuration Pichiériques A Configuration Pichiériques Compteurs de zone Pilans d'évacuation Relations d'entrée Relation de sortie Enregistreur vidéo Utilitaires Reset
NVR-série 7000 (See related product guide)	NVR : IP video recorder for IP cameras. Models 4 - 8 - 16 - 32 channels. Up to 50 networked recorders EVOLUTION	

Compatible elements on RS485 bus of EVOLUTION central unit

CT-EVOLUTION POWER-EVOLUTION (See connection and programming following)	UC : Central processing unit from which the fieldbus is built. There can be only one central unit on a fieldbus	
CP-ELA (See connection and programming following)	LPU : Local processing unit for a door. Management of a Wiegand or DataClockreader, door contact, push button, electrolock relay.	0 0 0 0
LP245-AT LP245 LP868 (Voir manuel produit associé)	LPU+READER : Local processing unit for a door. Included a long range reader. Door contact management, push button, electrolock relay.	
RT245-AT RT245 RT868 (See related product guide)	LPU+READER : Local processing unit for a door. Included a radio receiver. Door contact management, push button, the electrolock relay.	
BIOMAT-EM BIOMAT-MIFARE (See related product guide)	UTL+ READER : Local processing unit for a door. Included a proximity reader, a keypad, a fingerprint sensor. Door contact management, push button, electrolock relay.	• • • • • • • • • •
RX-MIFARE (See related product guide)	UTL+ READER : Local processing unit for a door. Included a proximity reader and keypad. Door contact management, push button, electrolock relay.	
IO8-ELA (See related product guide)	Extension interface 8 inputs and 8 programmable outputs.	0 0 0 0
LE-EM (See connection and programming following)	125KHz proximity reader enroller. Internal connection to the central unit.	
LE-MI (See connection and programming following)	13.56MHz proximity reader enroller. Internal connection to the central unit.	
PROBUS (See connection and programming following)	Bus extension interface + 1000m. 2 interfaces maximum per bus.	





Compatible readers with the local processing unit CP-ELA

SUN-S-WDT (See related product guide)	Vandal resistant keypad, resinate electronics, terminal connector, metal housing. Code management site. Programmable Wiegand or DataClock	
LEC-MI-WDT (See related product guide)	13.56MHz proximity, resinate electronics, terminal connector, ABS housing. Programmable Wiegand or DataClock	
RX-MIFARE-WDT (See related product guide)	13.56MHz proximity and keypad, resinate electronics, terminal connector, ABS housing. Programmable Wiegand or DataClock	
PPROX-WDT (See related product guide)	125KHz proximity, resinate electronics, output cable, ABS housing. Switchable Wiegand or DataClock	
TPROX-WDT (See related product guide)	125KHz proximity, resinate electronics, output cable, metal housing. Switchable Wiegand or DataClock	
BIOMAT EM and MIFARE series (See related product guide)	Code or tag and 125KHz proximity, tag and 13.56MHz proximity terminal connector, ZAMAC housing Switchable Wiegand or DataClock	
RT-WDT 868MHz and 2.45GHz series (See related product guide)	A receiver via radio, ABS housing Management of code site. Switchable Wiegand or DataClock	
LP- WDT 868MHz and 2.45GHz series (See related product guide)	VL a long range way, ABS housing Management of code site. Switchable Wiegand or DataClock	
SEPRO (See connection and programming following)	Protection serial interface for RS485, WIEGAND and DATACLOK connection.	
Other technologies	Dataclock 10 or 13 digits Wiegand 26 bits	

Configuration and wiring



Main features -

- · Segments controller up to 30 interfaces or doors
- Up to 30 IP video cameras per access control interface
- 4 integrated communication interfaces:
 - RS232 printer connection (25 meters max.)
 - USB type 2 for communication with the PC
 - RS485 connection of interfaces and door terminals in 1200 m
 - RJ45 connection to the TCP / IP LAN or WAN integrated
- Memorization of 4500 events
- Mounting inside in dry conditions only
- Operating temperature : 0° to +50°C.
- Support equipped with a tamper alarm switch
- Dimensions : H175 x L225 x P40 mm
- Power supply : 12/24V DC
- Consumption: 200 mA
- Management of 32 access groups
- Management of 128 access profiles
- Management of 30 time slots, days with holidays, Winter / Summer
- Antipassback flexible or reinforced with path
- · Integrated reader for enrollment of users tags

Overview of connections





CT-EVOLUTION Installation Guide



Detailed view of the connection

Communication bus	The communication bus with the central unit and other interfaces constituting the installation is a bus right polarized, whose length can not exceed 1000m without using boosters bus. The connection is made between terminals A and B of different interfaces.	
Power supply	The interface must be powered by a 12 / 24v continuous and backed up by a battery. The supply terminals are not polarized.	Power supply
Self protection	Terminals A and B follow the status of the microswitch positioned on the motherboard.Under pressure contact is normally closed. Pressure off the contact is normally open.This information can be sent to an alarm.	A/P
Connector for enroller reader	A reader enroller can be inserted on CT4000CB circuit for recruitment of tags with the 125KHz reader LE-EM and the 13.56MHz reader LE-MI	AC DC B A
Serial connector	DB9 male connector using to the serial link to a printer or a computer in HyperTerminal. (See wiring and printer setup on page 31)	
USB connector	Female USB dedicated for local communication with a computer. The operating software of the central unit is necessary.	
RJ45 connector	RJ45 female connector dedicated to communication with a local or remote computer. The operating software of the central unit is necessary.	

Additional option available

Activating the emergency mode	If you lose or forget the master code of programming, it is possible to open the programming mode by forcing. - Cut power to the central unit - Place J1of the central unit on P - Restore power supply - Replace J1 of the central unit on N - beep, beep, The central unit is now in programming mode, it only	J1 N o P
	remains to set a new master code.	

No addressing is required.

The central unit is configured by default with address 32 (this address is not visible and can not be changed)

The addressing of the accessory reader enroller for central unit ABS version.

All must be switched. The interface must be inserted on the internal connector to the central unit

- In Chapter IDENTIFY PERIPHERAL of the central unit, then indicate the unique address of the peripheral and its type. (See Table: Values to be programmed)
 - Then validate with A, peripheral is operating

Values to be programmed

PER (peripheral)	TYP (type)	P (protection)	S (output)	E (input)
Key in 31	Activation : Key in 2 Deleting : key in 0	Not applicable	Not applicable	Not applicable



Main features -

- · Door central unit for a reader access point size Dataclock and Wiegand format from 26 to 44 bit.
- · 2 relays outputs potential free, programmable.
- Maximum load on the relay contacts: 1A and 5A ,30V DC
- · Opening time: from1 to 240 seconds or keeps with state
- · 1 input for remote opening for pushbutton.
- · An inhibition input reader or SAS Management
- · A contact input monitoring of door status.
- · A removal output contact of self protection.
- · Mounting in dry environment only.
- · Support equipped with a tamper alarm switch
- \cdot operating temperature : -30° to +50 °C.
- · Dimensions housing : 110 x 110 x 48 mm IP67
- Power supply : 12 /24 V DC.
- · Consumption : 75 mA in standby mode, 130 mA with all relays activated



Overview of connections



Installation Guide

Detailed view of the connection -

	-			
Communication bus	The communication bus with the central unit and other interfaces constituting the installation is a bus right polarized, whose length can not exceed 1000m without using boosters bus. The connection is made between terminals A and B of different interfaces.			
The different inputs for sensors	The input PB - C is dedicated to the control door (relay 1) by Pushbutton normally open at rest. The input GT - C is dedicated to the supervision of door by magnetic contact configurable normally open or closed (<i>see parameter P values of the table to programme</i>) Input I - C is dedicated to the validation of reading sensor normally open at rest. When the sensor switches to normal closed then reading is no longer possible.	I GT C PB		
Reader wiring	The interface can be assigned any reader technology with Wiegand 26 bit o Clock & Data format. <u>See table</u> : <i>Dialog reader / interface</i>	- LED vert - LED rouge Ov Alim. Clock/Data 0 +12v Alim. Data/Data1		
Power supply	The interface must be powered by a 12 / 24v continuous and backed up by a battery. The supply terminals are not polarized.	Alimentation		
Pilots indicators readers	Inputs of the reader indicators are polarized under 12v DC. Input GL drive terminal 6 of the reader, and input RL drive terminal 5 of the reader.			
The optional relay	Relay N° 2 is a programmable relay 5A under 30Vdc. It can be operated by time range, by relation input, by tag. It can work in astable Mode from 001 to 240 seconds and bistable mode 000. The tamper function can only be programmed from central unit keypad.	Relay 2 NO C2 NC		
The relay of door unlocking	Relay N° 1 is a programmable relay 5A under 30Vdc, dedicated to the door control. It can be operated by time range, by relation input, by tag, by pushbutton input BP-C. Il peut fonctionner en mode astable de 001 à 240 secondes et en mode bistable 000. It can work in astable Mode from 001 to 240 seconds and bistable mode 000. The tamper function can only be programmed from central unit keypad.	Relay 1 NO C1 NC		

LOCAL PROCESSING UNIT CP-ELA

Detailed view of the connection -

Degraded mode	The degraded mode guarantee the maintenance of access, after communication failure between A and B of more than 10 seconds, to a category of selected users.	
Activate degraded mode	Short-circuit the pins J3 using a screwdriver or bridge and maintain the short circuit. The yellow ligths of interface comes on fixed.Then present a tag or enter the code belonging to the category selected before the reader. Now remove the short circuit, the yellow light goes off. Degraded mode is activated. All tags or codes having the first 2 digits identical to that which had be presented, will be accepted in degraded mode.	$ \begin{array}{c c} \circ & \circ \\ & J3 $
Deactivate degraded mode	Short-circuit the pins J3 using a screwdriver or bridge and maintain the short circuit. The yellow ligths of interface comes on fixed. Place the pins J1 to P for 5 seconds. The yellow light goes off. After 5 seconds put the pins in J1 position N. The yellow light flashes. Remove then the short-circuit of the pins J3. the yellow light goes off.	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Blocking of security and relation of output	The interface will switch to a blocking for 30 seconds after presentation of 8 consecutive incorrect tag or code. This information can be recovered in order to create a relation of output towards a relay. This relation of input is carried out in IN5.	Relay x NO C Cx NC C X
Door supervision and relation of output	The entrance GT - C allowing the supervision of door, it can also be recovered to create a relation of output to a relay. This input relation runs in IN1. The function door open too long runs in IN2.	I GT C PB SSSS 7 F(N 2) Relay x NO Cx NO Cx NC NC Y
Reading Inhibition	Input I-C enables to ignore the reading.If the contact is opened it enables the reading and if its is short- circuited ,it will ignore the reading.	I GT C PB Rele X NO CX NF
Selection of reading Wiegand format	If the reader connected to the interface and Wiegand format, place the bridge J2 in W. Supported formats are W26.W34. W40.W44	D W o J2
Selection of reading DataClock format	If the reader connected to the interface and DataClock format ,place the bridge in J2 in D. Supported formats are 10 and 13 digits.	D W J2

Addressing in the RS485 bus -

All must be switched on.

The interface must be wired in A and B on the RS485 bus of the central unit.

- Move bridge J1 N / P from N position to the P position during 5 seconds.
- Replace bridge J1 N/P in IN position, the yellow light comes on,
- In Chapter IDENTIFY PERIPHERAL of the central unit, ndicate the unique address of the device and its type and options. (See Table: Values to be programmed)
- Then validate with A, the yellow light goes off, the device is functional.

You have 4 minutes to complete this operation before the interface leaves the standby mode.

Values to be programmed

PER (peripheral)	TYP (type)	P (protection)	S (output)	E (input)
Adress RS485 unique	0 to delete 2 for reader interface 3 for IO8 interface	0 = inputs NO 1 = inputs NC *Only applicable to the GT input	1 = reader output if E = 0	1 = reader input if S=0
Value from 01 to 31	Value 2	Value 0 or 1	Value 0 or 1	Value 0 or 1

Address 30 is often reserved for addressing of peripherals of type RECEIVER radio and is associated with creating users of type REMOTE CONTROL.

A programmed peripheral with address 30 can be used for enrollment of users, but also to manage access to a door.

Address 31 is often reserved for addressing of peripherals of type OTHER READER and is associated with creating users of type TAG or CODE.

A programmed peripheral address 31 can be used only for the enrollment of users.

The declaration of the interface in position S or position E is not obligatory except in the following cases where it must be declared of dimensioned or other:

- The interface belongs to an area of antipassback.

- The interface belongs to an area of presence.

- The interface belongs to a counter area.

- interface is part of an access profile assigned to a user type visitorfor whitch an authorized access number has been defined.

Main features -

- \cdot Relay central for management of lifts, or other.
- \cdot 8 potential free relay outputs, programmable on time slot, access profiles, on relations inputs.
- \cdot Maximum load on the relay contacts: 5A. 30V
- · 8 inputs with contact NO or detection of door protected by opto-couplers.
- . In applications for lifts, it is possible to manage up to 30 stairs groups.
- · Mounting in dry environment only.
- \cdot Support equipped with a tamper alarm switch.
- \cdot Operating temperature : -35° to +50° C.
- · Dimensions housing : H110 x L65 x P75 mm. I67
- · Power supply : 12/24V CC.
- · Consumption : 10 mA in stanby mode 350 mA with all relays activated.



Overview of connections



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Installation Guide

Detailed view of the connection

Communication bus	The communication bus with the central unit and other interfaces constituting the installation is a bus right polarized, whose length can not exceed 1000m without using boosters bus. The connection is made between terminals A and B of different interfaces.	
Power supply	The interface must be powered by a 12 / 24v continuous and backed up by a battery. The supply terminals are not polarized.	Power supply
Inputs	Inputs 1 to 8 are configurable either NO or NC. The programming of the one applies to the others. NO= reaction to the rising edge NC= response to falling edge IN values for inputs 1 to 8 are respectively IN1, IN2, IN3, IN4, IN5, IN6, IN7, IN8.	
Relays	Relays 1 to 8 are programmable 5A 30VDC. They can be controlled by time range, by relation input, by tag, by access profile. They can work in astable mode from 001 to 240 seconds and bistable mode 000. The tamper function can only be programmed from central unit keypad.	Relay 1 NO C1 NC

Addressing in the RS485 bus

All must be switched on.

The interface must be wired in A and B on the RS485 bus of the central unit.

- Move bridge J1 N / P from N position to the P position during 5 seconds.
- Replace bridge J1 N/P in IN position, the yellow light comes on,
- In Chapter IDENTIFY PERIPHERAL of the central unit, ndicate the unique address of the device and its type and options. (*See Table: Values to be programmed*)
- Then validate with A, the yellow light goes off, the device is functional.

You have 4 minutes to complete this operation before the interface leaves the standby mode.

Values to be programmed

PER (peripheral)	TYP (type)	P (protection)	S (output)	E (input)
Adress RS485 unique	0 to delete 3 for IO8 interface	0 = inputs NO 1 = inputs NC * Only applicable to all inputs		
Value from 01 to 29	Value 3	Value 0 or 1	Not applicable	Not applicable

Wiring rules





Type and length of cables recommended

Destination	Туре	Recommended maximum distance
Local or distant dialogue with the software.	IP network: Cable category 5 or 6, 10/100Mbit/s.	100m.
Local dialogue with the software.	USB network: Cable and connector specifically engineered	5m.
Local dialogue with serial printer or HyperTerminal	R5232 : Untwisted shielded cable 5 conductors 9/10 ^{eme} +1 shield.	5m.
Field bus data exchange between central unit and peripherals.	RS485 : Local loop connecting thecentral unit to the door controllers. Shielded twisted pair 1 pair 9/10 ^{eme} + 1 shield.	1200m.
Power supply of the central unit and its devices.	12V/24Vcc : untwisted cable 2 conductors from 0.75mm ² to 1,5mm ²	Distance with respect to losses line
Local dialogue between the door controller and the associated reader.	WIEGAND READER: Untwisted shielded cable 6 conductors from 6/10eme to 9/10 ^{eme} + 1 shield.	50m.
Local dialogue between the door controller and the associated reader.	DATACLOCK READER: Untwisted shielded cable 6 conductors from 6/10eme to 9/10 ^{eme} + 1 shield.	15m.
Cable pushbutton of output.	Untwisted shielded cable 2 conductors from 6/10eme to 9/10 ^{eme} + 1 shield.	50m
Switch cable of door supervision.	Untwisted shielded cable 2 conductors from 6/10eme to 9/10 ^{eme} + 1 shield.	50m
Cable locking elements.	Untwisted cable 2 conductors from 0.6mm ² to 1.5mm ²	50m

Organization of data exchange RS485 bus



The bus is built in cascade.

Each interface has two terminals marked A and B from which the dialogue takes place on the RS485 bus. These 2 points receive the wires A and B from the previous interface, and redistribute information towards the following interface. Thus the terminals A and B can only have two incoming wires and two outgoing wires. The interfaces being in situation of ends will not have outgoing wires, but resistant of specific value to the place. It is the end of line resistors RFL. Specific values provided with the central unit are as follows: $1.2K\Omega$ for a distance from 10 to 400m. 500Ω for a distance from 400 to 800m. 120Ω for a distance distance from 800 to 1200m.

The bus can only have 32 addresses or interfaces. The address 00 is not visible and is dedicated to the central unit. The address 31 is programmable and dedicated to an enroller tag reader, internal or external to the central unit. The address 30 is programmable and is dedicated priority to the radio receiver external enroller at the central unit. Addresses 01 to 30 are available for any other type of interface. These characteristics are valid for the principal bus but also for the secondary buses generated by the PROBUS (*See page 57*).





For the implementation of different topology, see the accessory extension PROBUS bus on page 57 of this manual.



Description of functions



0	Status or condition, of peripheral, of clock, Inactive
1	Status or condition, of peripheral, of clock, Active
AA	Year from 00 to 99
DEBUT	Beginning date
DHCP	Dynamic Host Computer Protocol (Automatic configuration of IP)
E	Input (position of the reader in the direction of the input)
F1 à F4	Group of holidays. From DD/MM to DD/MM
FIN	Ending date
GROUPE	Access group from 01 to 32
HEURE1	1st time slot
HEURE2	2nd time slot
hh	Hour from 01 to 23
HOR	Schedule planning
HORO	Schedule planning from 01 to 10
HOR1	Schedule planning from 11 to 21
HOR2	Schedule planning from 21 to 30
l	Status or condition, of peripheral, of clock, active
IN	Programmable input
IP	Internet Protocol
וו	Day from 01 to 31
МАС	Media Access Control (Id physical stored in a network interface hardware)
ММ	Month from 01 to 12
mm	Minute from 00 to 59
N	No
NIVEAU	Path to be observed between 2 areas
0	Yes
Р	Detection mode of an input 1 = NC 0 = NO
PER	Peripheral address from 01 to 31
PERO	Peripherals from 01 to 10
PER1	Peripherals from 11 to 20
PER2	Peripherals from 21 to 31
REL	Relays
S	Output (position of the reader in the direction of the ouput)
ST	Status 1 = active 0 = inactive
SUPPR	Delete
TAG	Tag
TEL	Remote control
ТЕМР	Time delay 000 = I/O 001 to 240 seconds
ТҮР	Type of peripheral 0= to cancel. 1 = ACIE reader. 2 = other reader. 3 = IO8
UTIL	User. Position of memory from 0001 to 3000
ZONE	Set of peripherals attached to a function

TIME DATE	Time and date display as DD/MM/YY HH/MM and capital letter of day M : Monday T: Tuesday W: Wednesday T : Thursday X F: Friday S : Saturday S : Sunday. The system of clock is backed up by internal battery, over one 10 years period.
USER	Programming menu of users in possession of an ID, code, tag, remote control. They are identified by the system in their position 0001 to 3000. The learning of secret code is on the central unit keypad, the badge by a reader integrated into central unit or remoted on the bus. This reader enroller must be positioned in address PER 31. For remote controls, the radio receiver must be positioned on the bus address PER 30. Then, user is associated with an access group which proffers different access rights. USERS are part of menu items RELATION.
PRINTING	Menu of activation or deactivation of the impression in continuous of the events system, towards serial printer or a computer equipped with the HyperTerminal software. The criteria of edition are carried out in the form: starting from the date, until the date, for a user, on a peripheral. The central unit has an internal memory of silo type of 4500 events.
EDITING MOVEMENTS	Menu screen display of the central unit of the different movements in memory in this one. The criteria of edition are carried out in the form: starting from the date, until the date, for a user, on a peripheral. The central unit has an internal memory of silo type of 4500 events.
PERIPHERAL	Menu addressing and control of different interfaces connecting to the RS485 bus of the central unit. Each interface is sent by a specific address and only 01 to 31, identified by its type, reader or expansion interface of inputs and outputs. The state of the programmable inputs of the interface is defined in this menu as normally closed or normally open at rest, then the position of the interface compared to a sense of access, incoming or outgoing. 31 devices per central unit. Beyond provide for a 2nd central unit . PERIPHERALS are part of menu items ACCESS PROFILE.
RELAYS	Menu of assignment of an operating mode to a relay. The form is as follows: for a peripheral, for a relay, operating type. Continued value to 000, time delay from 1 to 240" value from 001 to 240. RELAYS are part of menu items ACCESS PROFILE and OUTPUT RELATION.
MASTER CODES	 Menu to define the secrets codes for programming input and the various codes of communication with the software 1: Installer, all menus. 2: Administrator, all but the hardware part. 3: Consultant, consulting only events. 7: USB identifier code of the PBX. If the software does not match, no USB communication. 8: Safety Code. If you do not match the software does not communicate via IP. 9: Communication code. If you do not match the software does not communicate via USB or IP

OPTION	LANGUAGE selection menu editing, French, English or Spanish. Activation or not of the recognition of IDs UNKNOWN. Forcing of ACCESS TYPE Normal, controlled according to schedule, forbidden, Universal, controlled without planning, ETHERNET Settings, network mask, DHCP activated or not, the allocation port number. IP address, DNS1, DNS2, GATEWAY, MAC address.
EVACUATION PLAN	Menu allowing to assign an input IN peripheral to the releasing and another input IN peripheral the Re-blocking of a set of readers, time plannings, relay, functions of output, gathered in PROFILE Of ACCESS. 4 evacuation plans can be created.
RELATIONS	Menu allowing the creation of switching functions between inputs IN and outputs OUT positioned anywhere on the bus of the power station. A switching function is bound and uses the place memory of a user, that the user is virtual or not. RELATIONS (out) are part of menu items ACCESS PROFILE.
FREE ACCESS	Menu to assign for an access group a feature unlocking of exits. The function executes on access profiles, doors, schedules, timetables, relays output relations, integrated in access group.
ANTIPASSBACK (PDB)	Menu to create a PDB area. It is constituted by declared PERIPHERALS for the ones in the outgoing direction and others in the incoming direction. A level (1st with 3rd) or position compared to other zones APB, is allotted to him as well as a degree or level of tolerance of the PDB. 0: Inactive PDB, 1: Always possible output, 2: Active PDB. Mode of rebootstrapping of the PDB. The activation of a relation IN for rebootstrapping by contact and an relation OUT for an indicator of blocking PDB in progress.
COUNTER AREA	Menu to activate or deactivate counting of 0001-3000 on an area of ANTIPASSBACK, activation of a relay when the counter is 0, and when another area is occupied by at least one user. Above the limit set, users can not access until the meter drops below this limit. Consultation of this menu allows at any time to control the number of persons present in the area. 4 COUNTER AREAS can be created.
VISIT	Menu allowing to create users with temporary profile. Access for these users is conditioned by a beginning date and ending date of validity. It can also be conditioned by a number of request for access not to exceed. These two criteria are cumulative.Users type visitors must be programmed to positions 2000 to 2599. The user VISITOR is then associated with an access group which proffers different access rights.
SCHEDULES	Menu allowing to program various time plannings. The form is the following one: Choice of the days of the week, then of the 2 daily crenels included in planning. 30 time plannings are available.

ACCESS PROFILE	Menu to define an access profile. An access profile include one or PERIPHERASL, or SCHEDULES, one or two relays actuators, a relation of output for the management of lift. 1 to 4 access profiles are attributed to an ACCESS GROUP. ACCESS PROFILES are one of the menu items ACCESS GROUP. 128 access profiles are available.
ACCESS GROUP	Menu to define an access group. An access groupe include up to 4 ACCESS PROFILE, activation or not of ANTIPASSBACK function, the attribution of 1 to 24 HOLIDAYS and 4 periods of HOLIDAYS. ACCESS GROUP is one of the menu items USER and FREE ACCESS. 32 access groups are available.
DATE TIME	Menu for setting the internal clock time and disabled or enabled automatic change sum- mer time and winter time. As DD / MM / YY HH / MM The system clock is saved by internal battery, over a period of 10 years.
DELETE	Menu allowing the suppression of one or several position of users from 0001 to 3000, or position 9999 for all, the suppression of movements per date or automatically per number of days exceeding the administrative obligation(CNIL) the return to the programming factory of the central unit with or without backup of the movements. This action must be confirmed by the code 50568314. Activate or not an opportunity to retake the relay controlled forced through the menu Supervision software, to their original state.



VIDEO	The video features are only accessible through software LOG-EV1 and a TCP / IP communication.At least one digital storekeeper must be declared by its network address in the software menu of the Central Evolution. Up to 50 digital storers may be declared. Then, IP cameras are associated with the peripherals of the central unit. Up to 30 cameras can be managed by central unit or 480 for a full installation of 16 central units Evolution. Each camera could be consulted in real time through the module of Supervision, and each event access control will allow by simple click in the general listing of the movements of going to read the video index.
SUPERVISION	Monitoring functions are accessible only through software LOG-EV1. They are integrated to the module of the software and allow supervision by a simple click be able to change the relay outputs, activation temporary, permanent activation, with return to baseline, but also to supervise the different inputs IN programmable of interfaces. The control of the status of inputs is indicated by an icon whose color changes from green to red instantly change of status of this input. The module also enables supervision of view cameras in real time.



Programming







In its initial state, the central unit proposes the following configuration:

USERS are pre-positioned in the **ACCESS GROUP 01** in which the **ANTIPASSBACK** option is not enabled, none **HOLIDAY** or vacation period is programmed, and integrating the **PROFILE 001** in which all peripherals are included with the **RELAY 1** activated with a **DELAY** of 3 seconds, and integrating the planning of **SCHEDULE 01** which all **DAYS** are active 24/24H.



Access to the programming menu of the Central unit EVOLUTION is secured by password. 3 levels of secret codes are available

Level 1 : Fitter. It provides access to all menus.

Level 2 : Administrator. All except PERIPHERAL and RELAY.

Level 3 : Consultant. Only with the menus EDIT MOVEMENT and PRINT.

PAY ATTENTION ! The factory code is 0 0 0 for 3 levels. For security reasons it is recommended to change them.

The length of the secret codes can comprise from 1 to 8 digits. These codes are different from that which is necessary when the central unit is exploited by a software. The secret code followed by the key P gives access to the programming. The key P can only exit the programming mode and return to clock mode.





Starting from the PRINT menu, go to the presentation of the TAG to enlist in front of the enroller reader, and not validate the programming and thus return to the USERS menu.







Required Level: 🔀 💼

Menu [PROGRAM USER] and submenu [CODE]

This menu allows the creation of users from 0001 to 3000 positioned to reach the end controlled by the tab of a secret code on the reader keypad technology. By default the first position proposed is the 0001 or the first if available. You can force the position to program by pressing the 4 digits of the position you want to use.

Positions 2000 to 2599 Visitors enjoy rights and can be assigned limited access conditions in time by a start date and end date of validity, as well as a number of uses programmable from 0001 to 9998 uses.

The code is learned directly on the keypad of the central unit.

However if your reader of technology keypad, is not mark ACIE, it will have to be regarded as reader of the type 2 in the Peripheral Identification menu and the interface of this reader will have to be programmed in address from 01 to 30, address 31 being reserved specifically for enrollment codes or tags.

The user is then created and assigned to an access group. By default the first position of access group proposed is the 01. You can force the position by pressing two digits of the position you want to use, from 01 to 32.



Programming a 0001 user position assigned to access group 01 and with a secret code 12345. (F values are null values)



Example 2



ADMINISTRATOR

INSTALLER

CT-EVOLUTION Installation Guide

CONSULTANT



Required Level: 👗 💼

Menu [PROGRAM USER] and submenu [TAG]

This menu allows the creation of users from 0001 to 3000 positioned to access the following controlled by presentation of a tag on reader of biometric or proximity technology. By default the first position proposed is the 0001 or the first if available. You can force the position to program by pressing the 4 digits of the position you want to use. Positions 2000 to 2599 Visitors enjoy rights and can be assigned limited access conditions in time by a start date and end date of validity, as well as a number of uses programmable from 0001 to 9998 uses.

Tag is learned by presentation in front of the enrollment reader of the central unit if it is equipped, when you are requested to present the TAG.

If your central unit does not have a enroller reader, it will set to the address 31 a proximity reader near your installation, time to enlist the tags and reconfigure it in an address range from 01 to 30, the address 31 is reserved specifically for enrollment codes or badges.

The user is then created and assigned to an access group. By default the first position of access group proposed is the 01.. You can force the position by pressing two digits of the position you want to use, from 01 to 32.



Programming a user on position 0017 assigned to the access group 32 and with ID tag decimal 12345678 = hexadecimal BC614E. (The Central unit manages the IDs in HEX) and also in sequential mode for other tags.





Required Level: 🔀 💼

Menu [PROGRAM USER] and submenu [TEL]

This menu allows the creation of users from 0001 to 3000 positioned to access the following controlled by radio on a radio receiver. By default the first position proposed is the 0001 or the first if available. You can force the position to program by pressing the 4 digits of the position you want to use.utiliser. Positions 2000 to 2599 Visitors enjoy rights and can be assigned limited access conditions in time by a start date and end date of validity, as well as a number of uses programmable from 0001 to 9998 uses.

The identifier of the remote control is learned by emission of it in the field of radio receiver must be configured to address 30. This receiver dedicated for enrollment is as functional in access management, it is not necessary to assign it a different address.

The user is then created and assigned to an access group. By default the first position of access group proposed is the 01.. You can force the position by pressing two digits of the position you want to use, from 01 to 32.



Programming a user on position 0017 assigned to the access group 32 and with ID tag decimal 12345678 = hexadecimal BC614E. (The Central unit manages the IDs in HEX) and also in sequential mode for other tags.









Required Level: X

Menu [PRINT MODE] and submenu [CONTINUOUS]

Menu allowing to activate or not the continuous impression towards serial printer. The central unit has a memory-type silo with a capacity of 4500 events. A print filter is available by start date and end date but also by user and peripheral.

If no filter is set, all system events are then edited on time as and when appeared in CONTINUOUS YES mode.

	Table of abbreviations or codes of events
AUT	Access authorised
RHO	Access refused, schedule time off
RAS	Access refused, door not authorised
RAN	Access refused, violation of antipassaback
RFE	Access refused, reason of public holiday
RVI	Access refused, reason of period in excess of visit
RCA	Access refused, access number exceeded
MC1	Input installer programming
MC2	Input administrator programming
MC3	Input consultant programming
PN	Input programming by forcing programming bridge PN
EXP	Exit programming
RCN	Access refused, full zone
REN	Access refused, level incorrect path.

Configuration of printer	
Speed	9600 Bauds
Datas bits	8
Parity	NO
Stop bits	1
Characters per line	40
End of line	CR



Traditional wiring between UTC and serial printer



Menu [EDIT MOVEMENTS]

Menu allowing the display of events recorded in the central unit through a display of 2 lines of 16 characters. The events are time stamped and abbreviated published to reflect the capacity of the screen.

The central unit has a memory-type silo with a capacity of 4500 events.

A print filter is available by start date and end date but also by user and peripheral.



time off
authorised
of antipassaback
public holiday
period in excess of visit
mber exceeded
ng
amming
iming
rcing programming bridge PN
rrect path.







Required Level: 👗

Menu [PERIPHERALS] and submenu [PERIPHERALS IDENTIFICATION]

This function is accessible only by the menu of the central unit

All must be switched on.

Interface must be wired in A and B on the RS485 bus of the central unit.

- Move programming bridge J1 N / P from N position to the P position during 5 seconds.
- Replace the programming bridge J1 N / P to N position, the yellow lights fixed.
- In Section PERIPHERAL IDENTIFICATION of the central unit, so indicate the unique address of the peripheral and its type and options. (See Table 1)
- Then validate with A, the yellow light goes off, the peripheral is operational.

You have 4 minutes to complete this operation before the interface leaves the standby mode.



Adressing a peripheral with adresse **02** type **READER** with supervision of inputs IN of interface **NC** at rest, positioned in the direction of **INCOMING** of access controlled, with limited output.



Table 1 : Values available to address a peripheral

PER	Unique address of the peripheral 01 to 31
ТҮР	0 to make the PER address available
	1 for keyboard interface
	2 for reader interface
	3 for IO8 interface
Р	0 0 to make the address available PER
	1 for a reaction of the programmable input on downward face
S	0 to indicate the reader position in the incoming direction
	1 to indicate the reader position in the outgoing direction
E	0 to indicate the reader position in the incoming direction
	1 to indicate the reader position in the outgoing direction
LIMIT EXIT	Impossible output if the schedule time is exceeded
EXIT ALWAYS	Possible output even in case of exceeding the planning schedule


Menu [PERIPHERAL] and submenu [PERIPHERAL DIAGNOSTIC]

This function is accessible only by the menu of the central unit

This submenu allows to control both the quality of communication by the stability or instability of indicator provided, that the present or absent status of a peripheral.

In case of permanent instability or request of the device, you should check the quality of wiring of the communication bus and especially its ending by terminating resistors of the line. (See section Organization of the bus exchange datas RS485, page 18).

Reading of communication quality of peripherals 1, 2,3 as correct, of the peripheral 12 as unstable, 31 as having disappeared.

Example 6



Table1 : Indicative values for peripherals status		
NOTHING	The address has not been programmed	
0	The address is programmed, but the interface does not communicate	
1	The address is programmed, and the interface communicates	
Alternates from 1≈0	Communication quality is poor	

The status of communication interface alternates from 0 to 1:

- The bus is not completed by the terminals resistors supplied with the central unit (see Organization of the data bus RS485 on page 18)
- The bus is terminated with terminals resistors of poor value (see Organization of the data bus RS485 on page 18)
- The supply voltage measured at the terminal interface is not of a good level. 12 volts or more are required.
- The quality of the different connections and interconnections is to take over. (see type and length of cables recommended on page 18)
- Unaddressed interface is connected to the bus.

The status of communication of an interface is at 0:

- The interface has been disconnected from the bus

- The quality of the different connections and interconnections is to take over. (see type and length of cables recommended on page 18)
- Unaddressed interface is connected to the bus.

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Menu [RELAY]

This function is accessible only by the menu of the central unit

Menu allowing to define the operating mode of the relays interfaces.

Maintained mode is defined by a time delay value 000, while the pulse mode is defined around timer values from 001 to 240 for 001-240 seconds.













Required Level: X

Menu [MASTER CODE]

To access the programming menu of the Central unit EVOLUTION, 3 levels of secret codes are available.

Master 1 : Fitter. It allows access to all menus. Factory code 000

Master 2 : Administrator. All except PERIPHERAL and RELAYS. Factory code 000

Master 3 : Consultant. Only for menus EDIT MOVEMENTS and PRINT MODE. Factory code 000

The length of the secret codes Master 1, 2, 3, can be from 1 to 8 characters.

For security reasons it is recommended to change them.

Furthermore the communication parameters with the computer are secured by three levels of security codes available.

Master 7: USB Identifier Code of the central unit. Factory code 00

Master 8 : Software security code. Factory code 00000000

Master 9 : Communication code Factory code 0000 Master code length 7, 8, 9, must be respected. They must correspond to the codes entered in the UTC module

of the software LOG-EV1.



S.

The programming inputs and outputs actions are plotted on the movements history ,associated with the virtual number 000

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Required Level: 👗

Menu [OPTIONS] and submenu [LANGUAGE]

The display language is by default French. English and Spanish are also available.



Menu [OPTIONS] and submenu [UNKNOWN REGISTER]

This option has effect only when it is associated with software LOG-EV1.

If it is activated, the users presenting themselves in front of a reader with a tag, secret code, remote control, or fingerprint, not enlisted in the database of the users, will have their identification number which will be displayed in the general listing of the movements. They could then be enlisted by simple click on the line recalling the event and the operator will have only to assign a name and an access group. This option is useful if the identifier engraved on the tag is not readable or that the central unit does not have a reader enroller.







Required Level: 🔀 💼

Menu [OPTIONS] and submenu [TYPE OF ACCESS]

This option makes it possible to force the level of access of all the exits controlled by a reader. 3 states are possible: By default the type of access is NORMAL.

NORMAL : Accesses (doors controlled by a reader) are controlled by the planning schedule assigned to them, independently of each other.

PROHIBITED : The controlled accesses do not authorize any more any access, even with an authorized identifier.

UNIVERSAL : The controlled accesses permanently authorize the access to an authorized identifier, without taking account of time plannings.



Required Level: 🔀

Menu [OPTIONS] and submenu [ETHERNET]

Menu allowing the configuration of the parameters of communication of the local area network.

The IP address must be the same class family as that of the various elements of the customer network.

It is possible to enable DHCP, network protocol whose role is to ensure the automatic configuration of IP parameters of your equipment, by assigning an IP address and subnet mask.

The port number can be changed and must be identified to the computer to communicate with the central unit, modem router and firewall if Internet connection.

It is recommended to approach the network manager to equip the site.





Required Level: 🕺

Menu [OPTIONS] and submenu [ETHERNET]

The physical identifier or MAC Addresses, internal with the central unit, can be consulted.











Required Level: 🔀

Menu [EVACUATION PLAN]

4 plans of evacuation or unlocking can be create.

A plan of evacuation is associated with a profile of access. An access profile must have already been defined. A programmable input will be assigned to the ordering of activation of the unlocking of the doors controlled in the profile chosen, and a second with the return at the controlled state.

EXAMPLE 8 Input 1 of peripheral 10 activates the relays of the doors included in profile 1, and input 5 of peripheral 5 deactivate them, the doors thus passing by again in controlled access.



Example 8

The activation and deactivation of an evacuation plan is an event tracked in history, associated with a virtual user's number.

USERS	AFFECTED EVENTS
3001	Activation of the evacuation plan 1
3002	Activation of the evacuation plan 2
3003	Activation of the evacuation plan 3
3004	Activation of the evacuation plan 4
3005	Disabling of the evacuation plan 1
3006	Disabling of the evacuation plan 2
3007	Disabling of the evacuation plan 3
3008	Disabling of the evacuation plan 4









Required Level: 🔀 💼

Menu [RELATIONS] and submenu [RELATION OUT] [RELATION IN]

Menu allowing the creation of logical functions between inputs IN and outputs REL positioned anywhere on the bus of central unit.

A logical function is linked and uses the memory space of a user, the user to be virtual or not.

In the example following, if the memory location user 0001 is really assigned to a user, that is to say a tag given to him and that he uses it, each authorized access for this tag, activate the door control but also t the associated relay by this relation output. It will be the same when the input IN is requested.

If that should not be, there is enough to create a number of tag or code not being, therefore virtual.

The input of the peripheral 1 is associated with the position of the user memory 001. The position of the user memory 001 is associated with a relay output of the peripheral 5.



(See table INTERNAL FUNCTIONS AND INPUT-OUTPUT RELATIONS page 81)







Menu [FREE ACCESS]

Required Level: 🕺 💼

Menu allowing to assign to an access group a function of releasing of the exits on time planning. The function runs on access profiles, doors, time schedules, relays, relation of output, integrated into access Group









Menu [ANTIPASSBACK] and submenu [ANTIPASSBACK USERS] and [ANTIPASSBACK GROUPS]

<u>Antipassback</u>: Option system prohibiting the access request from a user two times on the same reader, if this reader is part of a zone whose degree of Antipassback is not 0. The user presenting 2 times of continuation on the same reader, then sees himself refusing the access, and must solicit the administrator of the system to be again authorized to reach.

Menu allowing the unblocking by the administrator of the system, a specific user or a complete user group, in the event of violation of Antipassback of this one. The user or user group is reactivated in the zones to which it is normally affected.





Menu [ANTIPASSBACK] et sous menu [DEFINITION ZONES] et [ANTIPASS TYPE]

<u>Antipassback</u>: Option system prohibiting the access request from a user two times on the same reader, if this reader is part of a zone whose degree of Antipassback is not 0. The user presenting 2 times of continuation on the same reader, then sees himself refusing the access, and must solicit the administrator of the system to be again authorized to reach.

Menu allowing the creation of a zone. 4 zones can thus be created. A zone included either the peripherals specified in INPUT or OUTPUT defined. The definition of a peripheral is made in menu PERIPHERAL IDENTIFICATION.

An access level or logical progression may be attributed to readers inputs. 3 different levels can be assigned to different zones:

- Level 1: First Zone in which you must enter
- Level 2: It must first be entered a zone of level 1
- Level 3: It must first be entered a zone of level 2

The logic of output is identical and solicits readers of outputs

If no access level is required, leave the zones created in the lowest level: 1

The option antipassback can be assigned.

- **Degree 0:** The antipassback is not activated, the zone is a simple zone ;
- **Degree 1:** The antipassback is activated only on the reader input.
- **Degree 2:** The antipassback is activated, on the reader input and on the reader output.

A zone whose option antipassback is activated (degree 1 or 2) must include at least a peripheral defined in INPUT and at least a peripheral defined at OUTPUT.



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Example 10



Required Level: 🕺 💼

Menu [ANTIPASSBACK] and submenu [SUBZONE ABCD]

A zone must have been previously created.

Menu allowing the creation of a subzone.

4 sub-zones can be created so. They are labeled A, B, C and D.

The sub should be aimed at one or several geographic areas, integrating at least one reader declared as input and another declared out.

They can all the 4 be affected with only one access group or if not distributed in several.

A subzone exists only for creating counter zone, often used to counting the remaining parking spaces .





Required Level: 📈 🚔

Menu [ANTIPASSBACK] and submenu [ANTIPASSBACK RESET]

<u>Antipassback</u>: Option system prohibiting the access request from a user two times on the same reader, if this reader is part of a zone whose degree of Antipassback is not 0. The user presenting 2 times of continuation on the same reader, then sees himself refusing the access, and must solicit the administrator of the system to be again authorized to reach.

Menu allowing the automatic unlocking, of a specific user or a complete user group, in the event of violation of Antipassback of this one.

Rebootstrapping can be weekly at one hour and days specific of the week or monthly to one hour and date given.

An Input-output relation can be created to serve as an indicator reset.

An input-output relation being linked to the memory location of a user, ensure that the position is that virtual, that is to say that no tag corresponding to the position memory, or there is circulated.

A user can be dedicated to total reset of the antipassback.

A relay can be assigned to the indication of the blocking of antipassback.









Menu [COUNTERS ZONE]

Menu allowing the creation of a counter zone. 4 counters can be created. A counter zone can only run if the zone created in the menu creation of zone or sub zone includes at least one peripheral defined at least in NPUT and OUTPUT.

3000.

The definition of a peripheral is made in menu PERIPHERAL IDENTIFICATION.

The limit of users may be present in the zone must be defined.

0000	= No counting
0001 à 3000	= Define the limit between 1 user and
9999	= Unlimited

A relation of output to a relay can be created as an indicator of empty zone. When the user limit is reached, no more new user can enter and the relay is activated. When users leave the zone in sufficient number to below the limit selected, then the relay will deactivate. At least a user must leave the counter zone so that new can re-enter there.

A relation of output to a relay can be created as an indicator of the empty zone. When the number of users to interior of the zone east at least to 1 the relay is activated. When no more user is in the zone, the relay will deactivate.









Menu [VISITORS] and sub menu [VISITORS BY TIME] and [VISITORS BY Nb ACCESS]

Menu allowing to create users with temporary profile. The access of these users is conditioned by a start date and an end date of validity. It can also be conditioned by a number of requests for access not to be exceeded. These two requirements can be accumulated. Users type visitors must be programmed to positions 2000 to 2599. The user VISITOR is then associated with an ACCESS GROUP which utters various rights of access to him.

Decrementing the number of limited access for the user VISITOR, is performed on the interfaces declared in input position.











Menu [HOUR TABLE]

Menu allowing to program various plannings time. A planning time is then assigned to one or access profiles The form is: Choice of the days of the week, then of the 2 daily crenels included in planning. 30 time Plannings are available.

A time planning 24:00 on 24 is written: 00 :00 - 23 :59



Creating a planning time No. 1 from 06:00 to 12:00 and 2:00 p.m. to 6:00 p.m. including Monday, Tuesday, Wednesday, Thursday, during which access is controlled. Beyond this planning, the access is prohibited.











Menu [ACCESS PROFILE]

Menu permettant de définir ou et quand les utilisateurs auront ou non le droit d'accéder. 120 profils d'accès peuvent êtres crées. Par défaut la première position proposée est la 001. Vous pouvez forcer la position à programmer en tapant les 3 chiffres de la position que vous souhaitez utiliser de 001 à 120. Il faut inclure la ou les portes auxquelles le ou les utilisateurs pourront se présenter, le ou les plannings horaires durant lesquels ils pourront le faire, le relais ou les relais de commande d'ouverture de porte, la relation de sortie affectée à ce profil, pour l'information de groupe telle la gestion d'étages d'ascenseur.



Activating access profile 001 in which the interfaces 1, 2, 3, 4, 17, 18, 19,20 are included in times 2 hours, 3.30. Relays 1 and 2 are functional and a relation of output is carried out on the output relay 5 of interface 20.





To pass a Statute to 1, it is enough to press on the key corresponding to the position of the object to activate or deactivate. Ex : to activate peripherals 1, 2, it is enough to press on the keys corresponding 1, 2. First press = statute 1, secon press= statute 0









Menu [ACCESS GROUP]

This menu allows several access profiles to one or several users.

They are grouped in this menu. 4 access profiles can be included, and 32 access groups can be created.

By default the first position proposed is 01. You can force the position to program by pressing the two digits of the position you want to use from 01 to 32. It is necessary to include one or several doors in which one or several users speeded up function Antipassback will forbid the users appointed to this group to be able to apply for access 2 times in succession either on a reader positioned in the incoming sense, or positioned in outgoing sense. They will then be blocked and will have to expect time initialization or the intervention of the administrator of the system to again be able to reach. Until 24 holidays days be able to be defined as well as 4 holidays fringes. During a holidays day or holidays fringe, the time plannings assigned to the access profiles do not have priority any more. Access is therefore forbidden.



Construction of an access group in which 01 are included only two access profiles, 120 and 098, with or without Antipassback, and a holiday fringe from 1 to August 31.













Menu [DATE/TIME]

Menu to setting the internal clock time and whether to enable automatic change summer time and winter time. As **JJ/MM/AA HH/MM**

System clock is saved by internal battery, over a period of 10 years.

It is possible to compensate for a possible drift of the clock, in seconds of compensation.

After validation of activation or not of the change hour summer/ winter, the running out display of the seconds makes it possible to control that the clock works well.



Except programming mode the display indicates:

Display of hour and date as JJ/MM/AA HH/MM

and digit of the day 1: Monday, 2: Tuesday, 3: Wednesday, 4: Thursday, 5: Friday, 6: Saturday, 7: Sunday





Menu [DELETE] and sub menu [DELETE USERS]

Menu allowing the suppression of one or several positions of users from 0001 to 3000, or position 9999 for all.



Menu [DELETE] and sub menu [DELETE MOVEMENTS]

Menu allowing the suppression of movements per date, or automatically per number of days exceeding the administrative obligation (CNIL).





DELETING USER

Required Level:

Required Level:

1

Menu [DELETE] and sub menu [DELETE TOTAL RESET] [DELETE PARAMETERS] [DELETE PERM. ACTIVATION]

Menu allowing the return to the programming factory of the central unit with or without backup of the movements.

This action must be confirmed by code 50568314. Activate or not the possibility of passing by again the controlled relays forced through small the Supervision of their initial state.





Accessories


reader enroller 125KHz accessorie of the central unit CT-EVOLUTION

Main features –

Type of material	Reader
Designation	Enroller proximity reader 125KHz for central unit CT-EVOLUTION
Communication with central unit	Serial bus RS485 - by internal connector Male / Female
Dimensions of the circuit	60x84mm
Installation environment	Indoor 0° to 50° C
Weight	0.1 kg



Connect the reader LE-EM -



Connect the reader LE-EM

The reader enroller connector	A reader Enroller can be inserted on the card CT4000CB for enlistment of tags with the 125KHz reader LE-EM and with the 13.56MHz reader LE-MI	AC DC B A
-------------------------------	--	-----------

Addressing the reader Enroller internal CPU _____

All must be switched. The interface must be inserted on the internal connector of the central unit.

- In Section PERIPHERAL IDENTIFICATION of the central unit, then indicate the unique address of the device and its type. (See Table: Values to be programmed)
- Then validate with A, the peripheral is functional.

Values to be programmed

PER (peripheral)	TYP (type)	P (protection)	S (output)	E (input)
Key in 31	Activation : key in 2 Deleting : key in 0	Not applicable	Not applicable	Not applicable



reader enroller 13.56MHz accessorie of the central unit CT-EVOLUTION

Main features –

Type of material	Reader
Designation	Enroller proximity reader 13.56MHz for central unit CT-EVOLUTION
Communication with central unit	Serial bus RS485 - by internal connector Male / Female
Dimensions of the circuit	75x95mm
Installation environment	Indoor 0° to 50° C
Weight	0.1 kg



Connect the reader LE-MI



Connect the reader LE-EM _____

Connector for enroller reader	A reader Enroller can be inserted on the card CT4000CB for enlistment of tags with the 125KHz reader LE-EM and with the 13.56MHz reader LE-MI	AC DC B A I I I I
-------------------------------	--	----------------------

Additional options available

Choice of communication format output	Establish a short circuit between two pins of J1 to select the output format of the reader. By default it is W44. Remove the short circuit in number of beeps correspon- ding to the chosen output format. 1 = WIEGAND 44 2 = WIEGAND 44 2 = WIEGAND 44 REVERSE 3 = WIEGAND 26 REVERSE 5 = WIEGAND 26 REVERSE 5 = WIEGAND 34 REVERSE 5 = WIEGAND 34 REVERSE 7 = DATACLOCK 10 DIGITS REVERSE 9 = DATACLOCK 10 DIGITS WIEGAND 10 = DATACLOCK 10 DIGITS WIEGAND REVERSE	• • J1
	Establish a short circuit between two pins of J2 to select the output format of the tag. Remove the short circuit in number of beeps correspon- ding to the chosen tag format. 1 = MIFARE STANDARD 2 = MIFARE OWNER	• • J2

Addressing the reader Enroller internal CPU -

All must be switched. The interface must be inserted on the internal connector of the central unit.

- In Section PERIPHERAL IDENTIFICATION of the central unit, then indicate the unique address of the device and its type. (See Table: Values to be programmed)
- Then validate with A, the peripheral is functional.

Values to be programmed

PER (peripheral)	TYP (type)	P (protection)	S (output)	E (input)
Key in 31	Activation : key in2 Deleting : key in 0	Not applicable	Not applicable	Not applicable

extension bus interface RS485 ELA

Wiring and configuration of the interface PROBUS

Type of material	ELA interface bus
Designation	ELA interface bus extension + 1000M. Max. 2 interfaces per bus central unit
Communication with central unit	Serial bus RS485 between A1 B1
New line of bus	Serial bus RS485 between A2 B2
Alimentation	12/24V ac-dc 40mA
Dimensions of housing BODER	110x110x48mm
Installation environment	Indoor 0° to 50°C
Weight	0.1 kg



Connect PROBUS



Addressing in ELA bus

No addressing is required. The bus keeps its original capacity of 31 interfaces. ELA bus can only receive maximum of 2 interfaces.

Connect PROBUS

Power supply	The interface must be powered by a 12 / 24v continuous and rescued by a battery. The supply terminals are not polarized.	Power supply
Principal bus	Principal bus data from the central unit. The interface is positioned in the principal bus of central unit as peripherals.	A1 - B1
Secondary bus	Secondary bus data for the creation of a new section of 1000M. If necessary, termination resistors (RFL) must be positioned at the ends of this new bus section.	A2 - B2

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Tree structure type of bus interfaces including PROBUS



protection circuit for ELA bus and reader bus

Wiring and configuration of the interface SEPRO

Type of material	Protection circuit	
Designation	Protection circuit for ELA bus and reader bus	
Serial intercalation of buses:	RS485 - WIEGAND - DATACLOCK	
Power supply	None	
Dimensions of circuit	40x15mm	
Installation environment	Indoor 0° to 50°c	
Weight	0.05Kg	

Connect SEPRO



Adressing in ELA bus

If the circuit is mounted in the ELA bus, no addressing is required. The bus keeps its original capacity of 31 interfaces.

Connect SEPRO _

Bus UPSTREAM	Connector receiving the signal or RS485 or Wiegand or DATACLOCK original to be protected. The electric ground must be connected to GND either on the bus upstream, or on the bus downstream.	GND B/W1 A/W0 LINE
bus DOWNSTREAM	Connector turning over signal RS485 or WIEGAND or protected DATACLOCK. The electric ground must be connected to GND either on the bus upstream, or on the bus downstream.	A/W0 B/W1 GND DEVICE

Useful





The factory configuration of the CT-EVOLUTION is:

The ACCESS GROUP 01 includes ACCESS PROFILE 001 which includes all the ADRESSES, PLANNING TIME 01 7/7J.24/24H, and RELAY 1 active with DELAY TIME of 003 seconds.

The addressing plan is :

Address	Designation	Туре	Protection	Output	input
00	Central unit (no modifiable)				
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

STEP 1: Enter programming mode

Enter the **master code** + **P** (factory code is $\emptyset \emptyset \emptyset$) If you forget the master code, apply the emergency procedure follows:

- Disconnect power supply of the central unit.
- Move the programming bridge N/P from position N to position P.
- Reconnect power supply (beep)
- Replace the programming bridge N/P in position N
- The central unit is now in programming mode

STEP 2 : Put the central unit on time

In the menu DATE/TIME, enter date and time then validate with Yes/No automatic change of summer/winter time.

STEP 3 : Enlist the door controllers CP-ELA

In the PERIPHERAL menu enter the values to the configuration of the modules controllers of door.

PER : Address of peripheral

Enter the value from 01 to 30 of the peripheral address

TYP : Technology of the reader

Key in **0** to uninstall a peripheral Key in **1** if the reader connected over is an ACIE keypad Key in **2** if the reader connected over is other than a keypad Key in **3** if the module is an interface 8 relays

P: State NC or NO of input GT

Key in **0** for normally open Key in **1** for normally closed

S : The reader is defined at output of access zone Key in **0** for do not define it as output of access zone

Key in **1** for define it as output of access zone

E : The reader is defined at input of access zone

Key in **0** for do not define it as input of access zone Taper **1** for define it as input of access zone

STEP 4 : Enlist the users IDs

In the USERS menu enter the access identifiers of various users of tags or codes. The identifiers can be of 3 types:

CODE : for the users of a PIN number TAG : for owners of a tag REMOTE CONTROL : for owners of a remote control

For a code :

- Choose a secret code of 1 to 8 digits
- Assign it an access group 01

For a TAG or a REMOTE CONTROL :

Choose the sequential mode or not

• At the invitation PRESENT TAG, present the badge in front of the reader Enroller (address 31) or press the remote control (radio receiver being in address 30)

Assign it an access group 01

LAST WINDOW OF THE MENU OF ENLISTMENT OF THE TAGS



Once these four steps, just run the test installation, readers, push buttons, locking elements. Once the functional tests performed, then set the installation according to customer requirements.

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ELA interfaces integrate various functions and possibilities of creating logic functions between contact inputs and relay outputs. Internal functions are not accessible and can not be changed. They can only be solicited.

- The function **BLOCKING OF READING** is active as long as input I is brought back to 0V
- The function ORDERS RELAY 1 is active according to the parameters of delay time validated with the menu relais1 of the central unit
- The function **DOOR FORCED** is active if an input-output relation has been created.
- The function **TEMPO. EXCEEDED** is active if an input-output relation has been created.
- The function 30" BLOCKING is activated after presentation of eight consecutive bad identifiers.

• Function **REQUEST ACCESS ON PRESENTATION OF AN IDENTIFIER** is active if an input-output relationship has been created, but in all cases will activate, according to the planning time, the relay associated with the access group profile assigned to the user if it is already active in the system.

• The function LOW BATTERY ACTIVE TAG is active if an input-output relation has been created.

• The function ACCESS REQUEST on INITIAL STATE CHANGE INPUT is active if an input-output relation has been created...

A input-output relation can be built only through a link USER POSITION : IN > USER > OUT

Output relation can be built only in reference to a POSITION USER : USER > OUT

WARNING: If the POSITION USER is assigned to an active user in the system, the OUT output will be controlled as well with the presentation of the user, as with the request of the input IN in relation!

Start Event	Event resulting	Electrical input	Relation IN	Relation USER	Relation OUT	Event system
UTL CP ELA						
Contact between I and C	Blocking of the reading	I-C	-	-	-	-
Impulse between BP and C	Control relay 1	BP-C	-	-	-	-
Change of state between GT and C	Door forced	GT-C	IN1	USER. N° x	To Relay Nº.x	Access USER x
Change of state between GT and C	Tempo. exceeded	GT-C	IN2	USER. N° x	To Relay №.x	Access USER x
8 false codes (tags) consecutive	30" blocking	-	IN5	USER. N° x	To Relay Nº.x	Access USER x
Presentation of a code or a tag	Access request	-	-	USER. N° x	To Relay Nº.x	Access USER x
UTL RX-MIFARE						
Impulse between BP and C	Control relay 1	BP-C	-	-	-	-
Change of state between G and C		G-C	IN1	USER. N° x	To Relay Nº.x	Access USER x
Change of state between G and C		G-C	IN2	USER. N° x	To Relay Nº.x	Access USER x
8 false codes (tags) consecutive	30" blocking	-	IN5	USER. N° x	To Relay Nº.x	Access USER x
Presentation of a code or a tag	Access request	-	-	USER. N° x	To Relay №.x	Access USER x
UTL serial RT						
Contact between I and C	Blocking of the reading	1	-	-	-	-
Impulse between BP and C	Control relay 1	BP-C	-	-	-	-
Change of state between GT and C	Door forced	GT-C	IN1	USER. N° x	Vers Relais N° x	Access USER x
Change of state between GT and C	Tempo. exceeded	GT-C	IN2	USER. N° x	Vers Relais N° x	Access USER x
Presentation of a remote control	Access request	-	-	USER. N° x	Vers Relais N° x	Access USER x
UTL serial LP						
Contact between I and C	Blocking of the reading	I-C	-	-	-	-
Impulse between BP and C	Control relay 1	BP-C	-	-	-	-
Change of state between GT and C	Door forced	GT-C	IN1	USER. N° x	To Relay Nº.x	Access USER x
Change of state between GT and C	Tempo. exceeded	GT-C	IN2	USER. N° x	To Relay Nº.x	Access USER x
Low batterry active tag		-	IN4	USER. N° x	To Relay Nº.x	Access USER x
Presentation of a tag	Access request	-	-	USER. N° x	To Relay N°.x	Access USER x
UTL serial BIOMAT						
Impulse between BP and C	Commande relais 1	BP-C	-	-	-	-
Change of state between GT and C	Control relay 1	GT-C	IN1	USER. N° x	To Relay Nº.x	Access USER x
Change of state between GT and C	Tempo. exceeded	GT-C	IN2	USER. N° x	To Relay Nº.x	Access USER x
8 false codes (tags) consecutive	30" blocking	-	IN5	USER. N° x	To Relay Nº.x	Access USER x
Presentation of a code or a tag	Access request	-	-	USER. N° x	To Relay Nº.x	Access USER x
INTERFACE lift IO8-ELA						
Initial state change input	Access request	E1-E1	IN1	USER. N° x	To Relay Nº.x	Access USER x
Initial state change input	Access request	E2-E2	IN2	USER. N° x	To Relay Nº.x	Access USER x
Initial state change input	Access request	E3-E3	IN3	USER. N° x	To Relay Nº.x	Access USER x
Initial state change input	Access request	E4-E4	IN4	USER. N° x	To Relay Nº.x	Access USER x
Initial state change input	Access request	E5-E5	IN5	USER. N° x	To Relay Nº.x	Access USER x
Initial state change input	Access request	E6-E6	IN6	USER. N° x	To Relay Nº.x	Access USER x
Initial state change input	Access request	E7-E7	IN7	USER. N° x	To Relay Nº.x	Access USER x
Initial state change input	Access request	E8-E8	IN8	USER. N° x	To Relay Nº.x	Access USER x



CT-EVOLUTION

Installation Guide

Functioning of a yellow light peripheral

*	The yellow light does not turn on activa- tion of programming bridge P / N	The programming bridge P / N does not make contact.	Tighten the pins male on the circuit to establish a clean contact.
		The interface is powered on or off under	Power the interface in voltage ranges from 11 to 13 volts
		The interface is in default	Substitute the interface
	The yellow light does not turn on presen- tation of an identifier to the reader	The reader datas are D & C while the programming bridge W / D interface is on W	Restore the good format of communication
		The reader datas are W while the programming bridge W /D interface is on D	Restore the good format of communication
		The wires of data from the reader are cut or reversed	Restore the continuity of C.D0 and D.D1 data of the reader
		The reader does not recognize the format of the ID presented	Check the reader's manual associated with the interface
		Reader is under powered	Power the reader in the voltage ranges recommended by the manufacturer
		Input I of the interface CP ELA is brought back to input C or a OV	Remove connection I - C unless this one is necessary for a function SAS or a secured access for vehicle
	1		
*	The light indicator comes on once presentation of an identifier in front of the reader	The data coming from the reader are read, but the central unit cannot answer because wires A and B of the bus are cut.	Restore continuity of the RS485 bus between A and B
	The indicator light comes on once on request of input IN1	The request is detected, but the central unit does not respond because wires A and B of the bus are cut, while the relation of output should be running on the same CP-ELA	Restore continuity of the RS485 bus between A and B
		La relation de sortie s'exécute sur une autre interface CP-ELA	
		-	
**	The LED flashes twice on presentation of an ID in front of the reader	The data from the reader is read the control unit allows access	
	The LED flashes twice on solicitation of BP	The request is agreed, the central unit allows access	
	The LED flashes twice on soliciting input GT (IN1)	The request is agreed, the unit allows for access and the relation of output is running on the same CP-ELA	
**	The LED flashes twice slowly on presentation of an identifier front of the reader	The data from the reader are read, the central unit allows access, but one of wires 2 A or B is cut	Restore continuity of the RS485 bus between A and B
* ******	The indicator lights once then 8 times on presentation of an identifier front of the reader	The data from the reader is read, but the central unit refuses access.	Interpret historical events in order to analyze the cause of rejection

OS : CPU and software versions compatible

Windows software	Central units		Comments
	CT-EVOLUTION	POWER -EVOLUTION	
XP-32			Multi Site - Mono post
XP-64			Multi Site - Mono post
VISTA-32			Multi Site - Mono post
VISTA-64			Multi Site - Mono post
SEVEN-32			Multi Site - Mono post
SEVEN-64			Multi Site - Mono post

COM : compatible applications –

Communication interfaces	Central units		Comments
	CT-EVOLUTION	POWER - EVOLUTION	
USB			Access control only- Local communication only
RJ45			Access control and video - Local or remote communication
RS232			Serial connection towards printer or hyper terminal

TCP/IP : CPU and interfaces versions compatible _____

Interfaces	Central units		Comments
	CT-EVOLUTION	POWER - EVOLUTION	
NVR-AC7040-EV			From the version 1.5.0.30023607.tar compatibility is 100%
NVR-AC7080-EV			From the version 1.5.0.30023607.tar compatibility is 100%
NVR-AC7016-EV			From the version 1.5.0.30023607.tar compatibility is 100%
NVR-AC7032-EV			From the version 1.5.0.30023607.tar compatibility is 100%

RS485 : CPU and LPU versions compatibles _____

Local processing units	Central units		Comments
	CT-EVOLUTION	POWER - EVOLUTION	
PROTEC-ELA			Supervision mode not working
CP-ELA			From the version INELA50D* compatibility is 100%
PROTEC-POWER			From the version INELA50D* compatibility is 100%
BIOMAT-EM			From the version BIOMAT08B* compatibility is 100%
BIOMAT-MIFARE			From the version BIOMIF27DX1* compatibility is 100%
RT485 ELA			No compatibility
RT245			From the version RT245-6H3X* compatibility is 100%
RT868			Ok
LP245			From the version LP245-9-5X* compatibility is 100%
LP868			Ok
RX-MIFARE			From the version RXMIFARE-F8 *compatibility is 100%
SU485 ELA			From the version CKELA-7P * compatibility is 100%
SUN-ELA			From the version TEL48520EBX * compatibility is 100%
PM485 ELA			From the version PR485ZJ12 *compatibility is 100%
IO8 ELA			From the version TARIO8B * compatibility is 100%
PROBUS			100% compatible
SEPRO			100% compatible

* For earlier versions, the supervision mode is not functional.

