

This manual covers installation, programming and utilization of DLK645 access control panel. Read this manual carefully prior to installing and programming the unit.

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ITV Ltd. provides training in installation, programming and utilization of DLK645 access control panel. For detailed information about the training and discussing of our particular requirements to the unit please contact our personnel.

It is recommended, for the staff intended for sales and installation of DLK645 access control panel, to take instruction courses conducted by ITV company.

Technical support assumes the calls of trained specialists. End-users must apply to their local dealers or installers. If you do not have a dealer in your area, you can contact us at support@itvsystems.com.ua

Complete Delivery

The following items are supplied from the factory with the primary delivery of DLK645 access control panel:

- DLK645 access control panel
- reader of ITV Ltd. manufacture
- diode 1N4007
- LED L-53 ID
- plastic dowel
- screws 4 pieces
- user manual

Limited Warranty

ITV Ltd. warrants that for a period of eighteen months from the date of purchase, the product shall be free of defect in materials and workmanship under normal use and that in fulfillment of any breach of such warranty, ITV Ltd. shall, at its option, repair or replace the defective equipment upon return of the equipment to its repair depot. This warranty applies only to defects in parts and workmanship and not damaged incurred in shipping or handing, or damaged due to causes beyond the control of ITV Ltd. such as lightning, excessive voltage, mechanical shock, water damage, or damage arising out of abuse, alteration or improper application of the equipment.

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Contents

Design Change Disclaimer	2
Reproduction Disclaimer	2
Trademarks	2
Training and technical support	2
Complete Delivery	2
Limited Warranty	3
General Description	5
General Specifications	5
General configuration	6
The Control Panel Operation	7
Installation	9
Mounting	9
Wiring	10
Quick Start	12
Programming	13
Programming the master-card/code	13
Shifting menu-items of the programming mode	13
Adding New Cards	14
Deleting Cards	14
Setting door time	15
Setting lock time	15
Setting bell time	16
Programming the attribute of Restricted Access mode switching	16
Programming the attribute of Free Pass mode switching	17
Erasing DLK645 Memory	17
Hardware reset to factory defaults	18
General Notions	19
Programming reference sheet	20

General Description

DLK645 access control panel is designed for use in stand-alone Access Control Systems. The panel provides control of access for one access point.

The unit is to be installed indoors in a secure place not far from a supervised door. For installation details, see 'Installation' chapter.

Remote reader connected to the panel performs all light and audible indication. Tricolor LED provides for the light indication with red, yellow and green colors. Built-in buzzer provides for the audible indication with long and short beeps.

DLK645 is compatible with all proximity-type cards. The unit can accommodate up to 256 ID cards or keyboard codes. Code must be from 4 up to 10 digits long.

No PC or hardware programmer is required to program the unit. All programming of DLK645 access control panel is executed using master card/master code and any other card, either registered or unregistered or keyboard. For programming details, see 'Programming' chapter.

Inputs and Outputs

Six inputs for power supply, reader, RTE button and door contact connection are provided on-board the DLK645 control panel.

Three relay contacts' outputs, normally closed, normally open and common, are supplied.

Output for bell connection [open drain] and output for Restricted Access Mode [open drain] are supplied.

Operating modes

The DLK645 access control panel can operate in one of the following operating modes: Main Mode, Restricted Access Mode and Free Pass Mode.

In Main mode the panel grants access to all enrolled cards/codes.

In Restricted Access mode access is granted to ID cards with Advanced Access level and on RTE button pressing. Advanced Access level is set during programming. For programming details, see 'Programming' chapter.

In Free Pass mode the panel unlocks the door for everybody to pass freely, e. g. during fire alarm.

General Specifications

- One relay
- Supply voltage +12 ⁺³ .1.2 V

Operational temperature 0^o ... +55^o C

- Relative humidity
 80 % (without moisture condensation)
- Physical dimensions 64,5 x 64,5 x 11
- Weight 60 gram
- Power consumption 12V@20mA
- Switchable current
- on NC, NO, COM 5A@28V direct current
- BELL and ARM outputs assume connecting of loading up to 15 V and up to 30mA

General configuration



В.

A. Configuration of DLK645 with front cover off is on Figure A. Physical configuration of DLK645 is on Figure B.

Contacts' assignment

Contact	Function
12V	For power supply wiring
GND	Ground
RXD	Reader's white wire connection
ТХД	Reader's green wire connection
RTE	RTE button connection
DC	Door contact connection
NC	Normally closed relay contact
NO	Normally open relay contact
СОМ	Common relay contact
BEL	Bell connection [open darin]
ARM	Restricted access mode [open drain]

The Control Panel Operation

To operate and program the panel you need only one reader, power supply and electric lock. It is also desirable to equip a door with door contact and RTE button. The DLK645 control panel can operate in one of several modes: Main mode, Restricted Access mode and Free Pass mode. For installation and programming details, see 'Installation' and 'Programming' chapters accordingly.

If the panel is installed and programmed successfully DLK645 receives data sent to it from the remote reader, decides whether access should be granted or not and then unlocks the door or not. All enrolled ID cards/codes are granted access in the Main mode. And in Restricted Access mode only ID cards/codes with necessary access level are granted access.

Main Mode Operation

Blinking red LED of the reader indicates that the control panel is in the Main mode. When enrolled ID card/code is passed to the reader the LED lights steady green, relay activates (for programmed lock time or till door is locked) and door opens (for the programmed door time or till door is closed). Relay stays activated for lock time or less, in case of door contact break.

Door contact is not inquired during lock time, if electromagnetic locks with built-in sensor of open door are used. This option is set in programming mode in "Lock type" programming menu-item.

A user will not forget to shut the door since reader's buzzer starts to beep five seconds before the end of door time. Buzzer will not beep if door time is less than 3 seconds. When unregistered ID card is passed or invalid code entered to the reader the panel denies access and indicates an error with short (about a second) blinking red LED and beeping buzzer.

Bell sounds for a programmed time in case, that door time is up but the door is still open, or that the door is opened without ID card presentation or RTE button pressing.

Restricted Access Mode Operation

Switching ON the Restricted Access mode

To switch the Restricted Access mode press RTE button for five seconds. Releasing of RTE button starts door time counting. Reader's buzzer beeps. Opened and then closed door (both actions within door time) switches the Restricted Access mode ON.

Restricted Access mode cannot be switched on if no user is programmed the attribute of Restricted Access mode switching.

If door remains open after the end of door time, then bell activates for the programmed time.

Blinking yellow-red LED of the reader indicates that the control panel is in the Restricted Access mode. Output of the Restricted Access mode is closed to GND. On presentation of a card with programmed attribute of Restricted Access mode switching or RTE button pressing the control panel grants access and switches the Restricted mode OFF. The unit switches the Restricted mode ON when a door is closed or door time is up.

Restricted Access mode output is broken when the door is open and closed, when the door is closed or door time expired.

If no card is programmed the necessary attribute the Restricted Access mode cannot be switched on.

Switching off the Restricted Access mode

To switch the Restricted Access mode OFF pass a card with programmed attribute of Restricted Access mode switching to the reader. The control panel switches to the Main mode and grants access to registered cards.

If door remains closed after card presentation to the reader, then control panel stays in the Restricted Access mode when door time expires. Beeping buzzer and blinking red LED of the reader indicate that error is detected during switching the Restricted Access mode ON.

Free Pass Mode Operation

Sometimes situations arise when a door should be open for free pass to everyone, e.g. in case of fire, earth quake or any other disaster. For such cases the panel has Free Pass mode.

In this mode reader LED blinks green and yellow alternately.

Access point switches into Free Pass mode when a card with programmed attribute of Free Pass mode switching is passed to the reader. At the appropriate card presentation door lock relay activates and door sensor together with RTE button are not activated.

While Access point is in Free Pass mode the locking device is locked and the panel does not respond to cards' passing, PIN entry or RTE button pressing.

Installation

'Installation' chapter contains information concerning mounting of the control panel procedure and wiring diagrams.

Mounting

DLK645 access control panel is to be mounted inside the premises. It is recommended that the panel should be mounted in a secure place close to a controlled door or behind the false ceiling.

Reader is located exterior to the room to be accessed approximately at a level of doorhandle. For reader mounting details, refer to the reader manual. Mounting of the panel proceeds as follows:

- Open the housing of the panel
- Remove carefully the main printed circuit board
- Mark out two holes on a wall using back housing as a master plate
- Drill two holes 6 mm in diameter
- Set in nailing plugs

- Secure back hosing to the wall through the two holes (as shown on figure below) with the two ITV Systems-provided screws

- Place the main printed circuit board into the control panel housing
- Connect up wires
- Replace the top cover and secure it with the two residuary screws







Wiring

Power Supply

Power supply energizes the control panel. It is recommended to use PSU 1,5 power supply with battery backup, manufactured by ITV Ltd. This power supply provides 12V power rated at 1,5A. 12V and GND terminals are supplied for supply voltage wiring.

Operating voltage range is 10,8V through 15V. Voltage capability is 16 V.

Reader

The control panel is delivered together with remote reader of ITV Ltd. manufacture, which is specially programmed to work with the unit.

Readers of other vendors cannot be used to work with the DLK645 control panel. Terminals 12V, GND, RXD and TXD are used for reader connection, as shown on Figure to the right.

Reader is to be mounted on a wall next to a door at a level of door lock. For installation and programming details refer to reader's user manual.

Door contact

The DLK 645 control panel can be wired to control the status of the door. To avoid situations of several users passing through the door at a time or door remaining open after user access, door contact, supervising the door status, is provided. After a valid access sensor of the door, connected to DL and GND terminals of the DLK645 control panel.

locks the door immediately behind the user.

It is recommended to provide a controlled door with a door closer.

RTE button

The DLK 645 control panel can be wired to monitor a remote device, which is intended to open the controlled door from the interior side of the supervised room. The RTE button can be mounted on the safe side of the door or at a receptionist's desk. The control panel responds to RTE button breaking with a contact. RTE button requires no programming, simply connect it to terminals GND and RTE of the control panel.

Bell output activates if deblocking button on the electric lock is used instead of RTE button pressing.



wiring

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Electric lock

The panel can control most types of locking devices thanks to availability of normally closed and normally open relay contacts and possibility of programming lock time within wide range of values (0.2 through 31 second).

Electric lock is to be connected to terminals NO (or NC) and COM of the control panel.

Commutation of inductive load, electric lock for instance, causes high energy electric impulse induced through relay contacts. To save contacts from damage, protect them with diode, connected in reverse to current supply of the coil. The diode must be connected to connection terminals of lock.

Note the fact, that some cheap electric door strikes are not intended for being energized for prolonged time. Program relay time as short as possible to avoid coil overheating.

Note, that when type of electric lock, opened at voltage applied, is used, door remains closed at deenergizing. To open a door at power loss, use either locks, which can be opened mechanically, or locks that are locked when voltage applied.

When power supply without backup is used, momentary unlocking of door (during 10 milliseconds) may take place at power loss.



* * * * * * *

DLK645



Bell

Bell output can be used to

connect a siren (consumption current at most 30mA) to the panel or the panel to an alarm system. The output is an open drain. Time of bell sound duration can be programmed. For programming details, see 'Programming' chapter. Bell is to be connected to GND and BEL terminals of the

control panel.

to GND **()** To install the bell refer to the manual of this bell.

Connecting "Restricted access mode" output

'Restricted access mode' output is intended for integration of DLK645 control panel with other systems, e. g. intruder alarm system. The output is an open drain. It is closed to GND, when the panel is switching to the Restricted Access mode and remains closed until the control panel switches to the main mode.



Quick Start

If Restricted Access mode is not required and default settings (see further) of the control panel agree with the requirements of your access control system follow the procedure of the quick start. The DLK645 control panel can start operating in the Main mode once the master card/master code is programmed and users' cards/codes are enrolled. Therefore all you need to operate the panel is to program the master card/ master code and enroll several users' cards/codes.

To program the master card/master code proceed as follows:

- 1. Short jumper PGM on the panel's baseplate.
- 2. Energize the control panel. The LED of the reader starts to blink yellow.

3. Pass a card/ enter a code, which will be used as the master card/ master code hereafter, to the reader. Alternately blinking red, yellow and green LED indicates that the master card/master code is successfully programmed. Code of the master card is recorded in zero memory register.

- 4. De-energize the panel.
- 5. Take off the jumper PGM
- 6. Energize the control panel
- To add a new card/code proceed as follows:

1. Pass the master card/master code to the reader. Buzzer beeps five times indicating that the panel is in the programming mode.

2. Blinking green LED indicates that the panel is in Adding New Cards/Codes menuitem of programming. Pass a card/code to the reader. Beeping buzzer indicates the user number, that is number of memory register where the card/code is added, for example, [long beep, pause, long beep, pause, one short beep] indicate the [001] user number. Confirm code entering by pressing [#] key.

One long beep means that the card is already enrolled in the unit.

Two long beeps mean that the unit memory is overloaded (all memory registers are occupied).

3. To add more cards/codes, return to step 2.

Now the panel is ready for the operation with the following factory defaults:

Door time - 10 seconds

Lock time - 5 second

Bell time - 0 seconds

Lock type - Maglock

To exit the programming mode and switch to the Main mode pass the master card/ master code to the reader seven (7) times consecutively. Otherwise switch OFF and then switch ON the power supply of the DLK645 control panel.

The control panel switches to the main mode automatically when no card is passed to the reader or no key pressed within 40 seconds.

Programming

'Programming' chapter describes how to enroll/delete users' cards and program some parameters for the DLK645 panel to work properly. Master card switches the unit to programming mode and shifts it from one menu-item of programming to another The master-card programming is described below. To set the control panel parameters, such as door time, lock time etc., any card, either enrolled or not, can be used.

Programming the master-card/code

To place the DLK645 control panel to programming mode, you must first program the master-card. The master-card is used for programming only. To program the master-card proceed as follows:

- 1. Short jumper PGM on the panel's baseplate.
- 2. Energize the control panel. The LED of the reader lights steady yellow.

3. Pass a card, which will be used as the master-card hereafter, to the reader or enter code on reader keyboard. Alternately blinking red, yellow and green LED indicates that the master-card is successfully programmed. Code of the master-card or master-code is recorded in zero memory register.

If a registered card is passed to the reader, error signal will sound.

- 4. De-energize the panel.
- 5. Take off the jumper PGM
- 6. Energize the control panel

Shifting menu-items of the programming mode

The first step in programming the DLK645 control panel is to place it into programming mode. Pass the master-card to the reader. You can verify that the unit switched to the programming mode from the main mode as buzzer beeps five times.

The master-card passed consecutively to the reader or reader keyboard [*] button pressing changes menu-items of the programming mode in the following sequence:

- Blinking green LED indicates the panel is in Adding New Cards menu-item of programming

- Blinking red-yellow LED indicates that the panel is in Deleting Cards menu-item of programming

- Alternately blinking yellow, green and red LED indicates that the panel is in Setting Door Time menu-item of programming

- Blinking yellow-green LED indicates that the panel is in Setting Lock Time menu-item of programming

- Blinking yellow LED indicates that the panel is in Setting Bell Time menu-item of programming

- Steady lighting yellow LED indicates that the panel is attribute of Restricted Access mode switching menu-item of programming

- Blinking red LED indicates that the panel is programming the attribute of Free Pass mode switching

- Steady red LED indicates "Lock type" programming menu-item.

- Steady lighting red LED and steady beeping buzzer indicate that the panel is in Erasing DLK645 Memory menu-item of programming

Obor contact must be closed before programming the access control panel.

If during programming no card is passed to the reader or no button is pressed on its keyboard within 40 seconds the DLK645 control panel switches to the main mode automatically.

Adding New Cards

The most basic programming of DLK645 is adding new cards/codes. Every card has a unique code, which is recorded in memory register of the control panel. A memory register (further called a user number) is indicated with buzzer beeps. A digit corresponds to number of beeps, zero is indicated as one long beep, and digits are separated with a pause.

Fill out a paper chart listing all enrolled cards/codes with users' names and numbers. To add a new card/code proceed as follows:

1. Pass the master-card to the reader or press [*] button of reader keyboard. Buzzer beeps five times indicating that the panel is in the programming mode.

2. Blinking green LED indicates that the panel is in Adding New Cards menu-item of programming. Pass a card to the reader or enter code on reader keyboard. Beeping buzzer indicates the user number, that is number of memory register where the card is added, for example, [long beep, pause, long beep, pause, one short beep] indicate the [001] user number.

One long beep means that the card/code is already enrolled in the unit.

Two long beeps mean that the unit memory is overloaded (all memory registers are occupied).

3. To add more cards/codes, return to step 2.

To shift to the Main mode pass the master-card to the reader or press [*] on reader keyboard consecutively nine (9) times.

To shift to the next item of programming menu, that is "Deleting cards" pass the master-card to the reader or press [*] on reader keyboard once.

The control panel switches to the main mode automatically when no card is passed to the reader and no keyboard button is pressed within 40 seconds.

Deleting Cards

To delete a card from the DLK645 control panel's memory, you must know the user number. A card may be deleted using another card preceding it in the list of enrolled cards. Therefore it is recommended to list all cards indicating users' numbers and names.

To delete a card\code, follow the steps below:

1. Pass the master-card to the reader or press [*] on reader keyboard. Buzzer beeps five times indicating that the panel is in the programming mode.

2. Shift to Deleting Cards item of programming menu. To do this pass master card to the reader or press [*] on reader keyboard once more. Blinking red-yellow LED indicates that the panel is in Deleting Cards menu-item of programming.

3. Pass a card previous to a card you wish to delete to the reader. For example, pass a card with register number [010] to delete a card with register number [011]. Buzzer beeps the user number of the deleted card.

To delete a code enter the code or its memory register and press [#].

4. To delete more cards/codes, return to step 2.

The list of registered cards is circular, that is to delete the first card in the list use the last one.

If there is only one user in the list pass this only card to the reader to delete it.

To shift to the Main mode pass the master-card to the reader or press [*] on reader keyboard consecutively eight (8) times.

To shift to the next item of programming menu, that is "Setting door time", pass the master-card to the reader or press [*] on reader keyboard one time.

Description: The control panel switches to the main mode automatically when no card is passed to the reader within 40 seconds.

Setting door time

Factory default of door time is 10 seconds. Door time can be set in one-second increments from one (1) to thirty one (31) seconds.

To set door time, proceed as follows:

1. Pass the master-card to the reader or press [*] on reader keyboard. Buzzer beeps five times indicating that the panel is in the programming mode.

2. Shift to Setting Door Time item of programming menu. To do this pass master card to the reader or press [*] on reader keyboard twice again. Alternately blinking yellow, green and red LED indicates that the panel is in Setting Door Time menu-item of programming

3. Pass any card, either enrolled or not, to the reader as many times as required. For example, to set door time to 30 seconds, pass a card successively 30 times to the reader.

Door time can be set using reader keyboard. For example, to set door time to 10 seconds, enter [1][0][#].

One second blinking red LED and beeping buzzer indicate that an error is detected during programming (you presented a card to the reader more than 31 time). To clear the error condition and set door time less than 31 second exit the programming mode and then return to Setting door time menu-item of programming.

To shift to the Main mode pass the master-card to the reader or press [*] on reader keyboard seven (7) times consecutively.

To shift to the next item of programming menu, that is "Setting lock time", pass the master-card to the reader or press [*] on reader keyboard one time.

The control panel switches to the main mode automatically when no card is passed to the reader within 40 seconds.

Setting lock time

Factory default of lock time is 1 second. Lock time can be set in one-second* increments from two tenth (0.2) to thirty one (31) seconds.

To set the lock time, proceed as follows:

1. Pass the master-card to the reader or press [*] on reader keyboard. Buzzer beeps five times indicating that the panel is in the programming mode.

2. Shift to setting Lock Time menu-item of programming. To do this pass master card to the reader or press [*] on reader keyboard three times more. Blinking yellow-green LED indicates that the panel is in Setting Lock Time menu-item of programming.

3. Pass any card, either registered or unregistered, to the reader as many times as necessary. For example, to set lock time to 5 seconds, pass a card successively 6 times to the reader; lock time will be set to 5 seconds.

Lock time can be set using reader keyboard. For example, to set lock time to 5 seconds, enter [5][#].

One second blinking red LED and beeping buzzer indicate that an error is detected during programming (you presented a card to the reader more than 31 time). To clear the error condition and set lock time less than 31 second exit the programming mode and then return to Setting lock time menu-item of programming.

To shift to the Main mode pass the master-card to the reader or press [*] on reader keyboard consecutively six (6) times.

To shift to the next item of programming menu, that is "Setting bell time", pass the master-card to the reader or press [*] on reader keyboard one time.

The control panel switches to the main mode automatically when no card is passed to the reader within 40 seconds.

*First presentation of a card while setting the lock time, sets it to 0.2 seconds. Second presentation of the card sets the lock time to 1 second. The all subsequent card presentations increase the lock time by one second.

Setting bell time

Factory default of bell time is 0 seconds. Bell time can be set in one-second increments from one (1) to thirty one (31) seconds.

To set bell time, proceed as follows:

1. Pass the master-card to the reader or press [*] on reader keyboard. Buzzer beeps five times indicating that the panel is in the programming mode.

2. Shift to Setting bell time menu-item of programming. To do this pass master card to the reader or press [*] on reader keyboard four times consecutively. Blinking yellow LED indicates that the panel is in Setting Bell Time menu-item of programming.

3. Pass any card, either registered or unregistered, to the reader as many times as necessary. For example, to set bell time to 10 seconds, pass a card successively 10 times to the reader.

Bell time can be set using reader keyboard. For example, to set bell time to 7 seconds, enter [7][#].

One second blinking red LED and beeping buzzer indicate that an error is detected during programming (you presented a card to the reader more than 31 time).

To shift to the Main mode pass the Master-card to the reader or press [*] on reader keyboard five (5) times consecutively.

To shift to the next item of programming menu, that is "Programming the attribute of restricted access mode", pass the master-card to the reader or press [*] on reader keyboard one time.

On the control panel switches to the main mode automatically when no card is passed to the reader within 40 seconds.

Programming the attribute of Restricted Access mode switching

A user can be programmed the attribute of Restricted Access mode switching, which gives that user the privilege to access through the secured door in both Main and Restricted Access mode and provides the ability to switch OFF the Restricted Access mode.

To set this attribute to a card, follow this procedure:

1. Pass the master-card to the reader or press [*] on reader keyboard. Buzzer beeps five times indicating that the panel is in the programming mode.

Shift to the necessary menu-item. To do this pass master card to the reader or press
 [*] on reader keyboard five times consecutively. Steady lighting yellow LED indicates
 that the panel is in Programming Advanced Access Level menu-item of programming.
 3. Pass an enrolled user card to the reader or enter user code. Steady red LED
 indicates that the card/code has no additional attributes. Steady green LED, in con trast, means a card/code has an attribute of Restricted Access mode switching.
 4. Pass the card to the reader or enter user code. Steady green LED indicates that the
 card to the reader or enter user code. Steady green LED indicates that the
 card is programmed the attribute of Restricted Access mode switching.

To shift to the Main mode pass the master-card to the reader or press [*] on reader keyboard consecutively four (4) times.

To shift to the next item of programming menu pass the master-card to the reader or press [*] on reader keyboard once.

The control panel switches to the main mode automatically when no card is passed to the reader within 40 seconds.

Programming the attribute of Free Pass mode switching

Any user can be programmed the attribute of Free Pass mode switching, which provides the ability to switch ON the Free Pass mode.

To set the attribute of Free Pass mode switching to a card, follow this procedure: 1. Pass the master-card to the reader or press [*] on reader keyboard. Buzzer beeps five times indicating that the panel is in the programming mode.

Shift to the necessary menu-item. To do this pass master card to the reader or press
 [*] on reader keyboard six times consecutively. Blinking red LED indicates that the panel is in Programming the attribute of Free Pass mode switching menu-item.

3. Pass an enrolled user card to the reader or enter user code. Steady red LED indicates that the card has no additional attributes. Steady green LED, in contrast, means a card/code has an attribute of Free Pass mode switching.

4. Pass the card to the reader or enter user code. Steady green LED indicates that the card is programmed the attribute of Free Pass mode switching.

To shift to the Main mode pass the master-card to the reader or press [*] on reader keyboard consecutively three (3) times.

To shift to the next item of programming menu, that is Programming Lock Type, pass the master-card to the reader or press [*] on reader keyboard once.

Description The control panel switches to the main mode automatically when no card is passed to the reader within 40 seconds.

Programming Lock Type

This menu-item of programming allows specifying any lock as ordinary door lock or electromagnetic lock with built-in sensor of open door.

To set type of lock, follow this procedure:

1. Pass the master-card to the reader or press [*] on reader keyboard. Buzzer beeps five times indicating that the panel is in the programming mode.

Shift to the necessary menu-item. To do this pass master card to the reader or press
 [*] on reader keyboard seven times consecutively. Steady red LED indicates that the
 panel is in Programming Lock Type menu-item.

3. Pass an enrolled user card to the reader or enter user code. Green LED indicates that the type of lock is set to ordinary lock. Yellow LED means electromagnetic lock type.

4. To change lock type pass the card or enter user code once more.

To shift to the Main mode pass the master-card to the reader or press [*] on reader keyboard consecutively two (2) times.

To shift to the next item of programming menu, that is Erasing the panel memory, pass the master-card to the reader or press [*] on reader keyboard once.

The control panel switches to the main mode automatically when no card is passed to the reader within 40 seconds.

Erasing DLK645 Memory

If necessary, all cards/codes can be erased from the DLK645 control panel's memory. The following procedure explains how to do this:

1. Pass the master-card to the reader or press [*] on reader keyboard. Buzzer beeps five times indicating that the panel is in the programming mode.

2. Shift to the required menu-item of programming. To do this pass master card to the reader or press [*] on reader keyboard eight times consecutively. Steady lighting red LED and beeping buzzer indicate that the panel is in Erasing DLK645 Memory menu-item of programming.

3. Pass any card or enter any user code to the reader twice. All users' cards and the master-card are deleted from the control panel's memory.

To shift to the Main mode pass the master-card to the reader or press [*] on reader keyboard one time.

O The control panel switches to the main mode automatically when no card is passed to the reader within 40 seconds.

Hardware reset to factory defaults

Hardware reset to factory defaults erases everything from the DLK645 control panel except the list of cards and the master card/code and restores the default setting. This procedure may be useful if the panel experienced programming problems, or you wish to delete earlier programming.

To reset the DLK645 panel to factory defaults proceed as follows:

- 1. Cut off the power of the access control panel
- 2. Join BEL and RTE contacts of the panel
- 3. Power on the panel

4. Wait for 15-20 seconds till buzzer beeps discretely and LED blinks red, yellow and green alternately.

5. Cut off the power and disjoin BEL and RTE contacts

Now the panel is reset to the following factory defaults:

Default door time 1	0 seconds
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- Default lock time 5 second
- Default bell time 0 seconds
- Default lock type Maglock

Users cards' codes and master-card/code are not deleted from the panel's memory during resetting to factory defaults.

General Notions

To avoid misunderstandings some general notions are clarified below.

In access control systems each user has an ID card used as a door key. Codes of cards are recorded and stored in memory cells of the panel. Proximity cards may be in shape of plastic cards, keytrinkets, etc.

Two access levels (access in the Main mode and access in Restricted Access mode) can be programmed for cards with the DLK645 control panel.

Master card/code

Master card/code is used to switch the panel to different menu items of the programming mode. Any ID card/code may be registered as master card/code. Master card/ code is used for programming only, it cannot be used to access through an access point. (Refer also to "Programming" chapter)

Reader

Readers are devices assigned for reading information from cards and transmitting it to control panel.

DLK645 can control one access point using an external reader. The control panel is compatible with readers produced by ITV Ltd., which have RS interface.

RTE (Request to Exit) button

To exit from the premises a button wired to the control panel is used. This button is called RTE (Request To Exit) button. If someone opens a door otherwise than pressing RTE button – by reenergizing locking device, opening lock with a key etc., bell activates for the programmed time. RTE button may be used for remote door opening as well.

RTE button pressing grants access both in the Main and Restricted Access modes. Door Contact (DC)

In access control systems various sensors can supervise door status (opened or closed) – magnetic door sensor, sensor of the turnstile rotor position, inductive sensor of car passing through the road barrier, etc.

Door Contact terminal of DLK645 access control panel connects these sensors. Door time

If door sensor is open, corresponding access point goes into alarm. Alarm is not invoked, if contact is opened during Door Time interval. This interval starts when access is granted and lasts for the programmed time or terminates on opening and subsequent closing of door contact.

Programming reference sheet

Use this reference sheet to facilitate memorization of programming procedures. The following notation conventions are used below:

- long beep
- 🗓 short beep
- steady red LED
- blinking red LED
- steady green LED
- 🐞 blinking green LED
- steady yellow LED
- blinking yellow LED
- master card/code
- \Box unregistered user card
- enrolled user card

Placing the control panel to the programming mode

1. Adding new cards

2. Deleting cards

3. Setting door time

4. Setting lock time

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5. Setting bell time

6. Programming the attribute of Restricted Access mode switching

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7. Programming the attribute of Free Pass mode switching

8. Programming Lock Type

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9. Erasing DLK645 memory

(All users' cards and master-card are deleted)