ACFA Intellect

KeyKing Integration Module Configuration and Operation Manual

1. List of terms used in KeyKing Integration Module Configuration and Operation Manual 3
2. Introduction into KeyKing Integration Module Configuration and Operation Manual 3
3. Configuration of the KeyKing integration module 3
3.1 How to Configure the KeyKing integration module 3
3.2 Activation of the KeyKing ACS integration module 4
3.3 Configuration of KeyKing connection lines 4
3.4 Automatic search for KeyKing controllers 5
3.5 Configuration of a KeyKing controller 6
3.6 Configuration of a KeyKing door 8
3.6.1 Basic door configuration 9
3.6.2 Advanced door configuration 10
3.6.3 Configuration of KeyKing Door Sensors and Locks 11
3.6.4 Configuration of a KeyKing door reader 12
3.6.5 Configuration of a KeyKing door exit button 13
3.7 Configuration of additional inputs and outputs on a KeyKing controller 14
3.8 Reading a KeyKing controller's configuration 15
3.9 Saving a configuration to KeyKing controllers 16
3.10 Setting the dynamic configuration forwarding to a KeyKing controller 18
4. Working with the KeyKing Module 18

List of terms used in KeyKing Integration Module Configuration and Operation Manual

Access – the movement of people, vehicles, and other objects into (out of) facilities, buildings, zones, and areas.

Actuating devices – turnstiles, gates, boom barriers, or doors, which are equipped with electromagnetic or electromechanical locks.

KeyKing Controller – a device designed to monitor entrances/exits in places with restricted access and to decrypt codes on access cards, in order to automatically record security passes in the system and monitor their operability.

Access control system (ACS) – a system of hardware and software designed to monitor and control access.

Readers – electronic devices designed for entering a memorized code using a keypad or reading encoded data from system keys (identifiers).

Access point – a place where access is controlled. An access point can be a door, turnstile, gate, or boom barrier, which has been equipped with a reader, electromechanical lock, or other means of access control.

Introduction into KeyKing Integration Module Configuration and Operation Manual

On the page:

- Purpose of the document
- General information about the KeyKing integration module

Purpose of the document

This *KeyKing Module Settings Guide* is a reference manual designed for *KeyKing* Module configuration technicians. This module is part of an access control system (ACS) built on the *ACFA Intellect* Software System.
This Guide presents the following materials:

1. general information about the *KeyKing ACS* module;
2. configuration of the *KeyKing ACS* module;
3. working with the *KeyKing ACS* module.

General information about the KeyKing integration module

The *KeyKing* Module is a component of an ACS built on the *ACFA Intellect* Software System. It was designed to perform the following functions:

1. Configuration of the *KeyKing* ACS (manufactured by KeyKing Group Ltd.);
2. Interaction between the *KeyKing* ACS and the *ACFA Intellect* Software System (monitoring, control).

> **Note.**
> Detailed information about the KeyKing ACS is presented in the official documentation for that system.

The following controllers have been integrated into the *ACFA Intellect* Software System:

1. TC312;
2. TC322;
3. TC344;
4. TC348;
5. TC388.

Before configuring the *KeyKing* Module, the following actions must be performed:

1. install the *KeyKing* ACS hardware on the object to be protected (see the *KeyKing* ACS documentation);
2. connect the *KeyKing* ACS to the *Intellect* Server (see the *KeyKing* ACS documentation).

Configuration of the KeyKing integration module

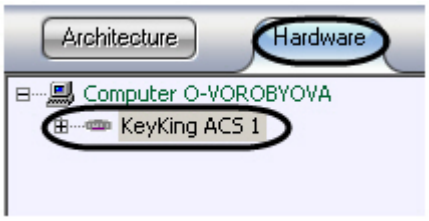
How to Configure the KeyKing integration module

The *KeyKing* Module is configured in the following order:

1. Activate the *KeyKing ACS* integration module.
2. Configure the *KeyKing ACS* connection line.
3. Construct the *KeyKing* hardware tree.
4. Configure the *KeyKing ACS* hardware in the *ACFA Intellect* Software System.

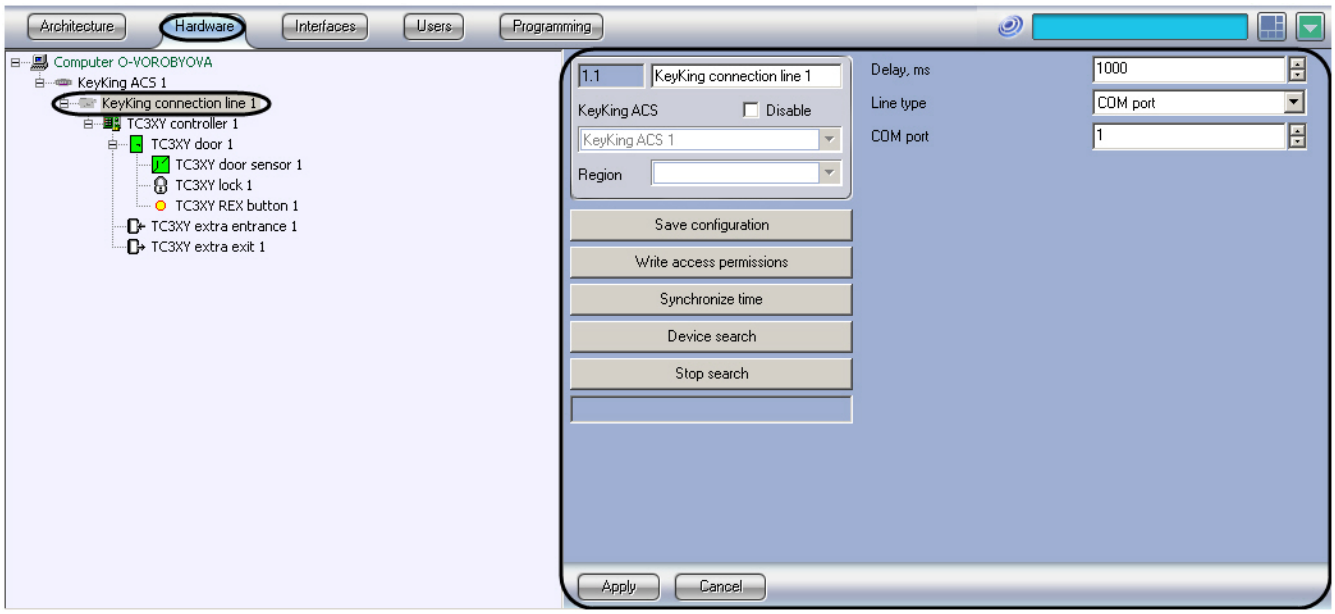
Activation of the KeyKing ACS integration module

To activate the *KeyKing ACS* integration module, a **KeyKing ACS** object must be created based on a **Computer** object on the **Hardware** tab of the System Settings dialog.



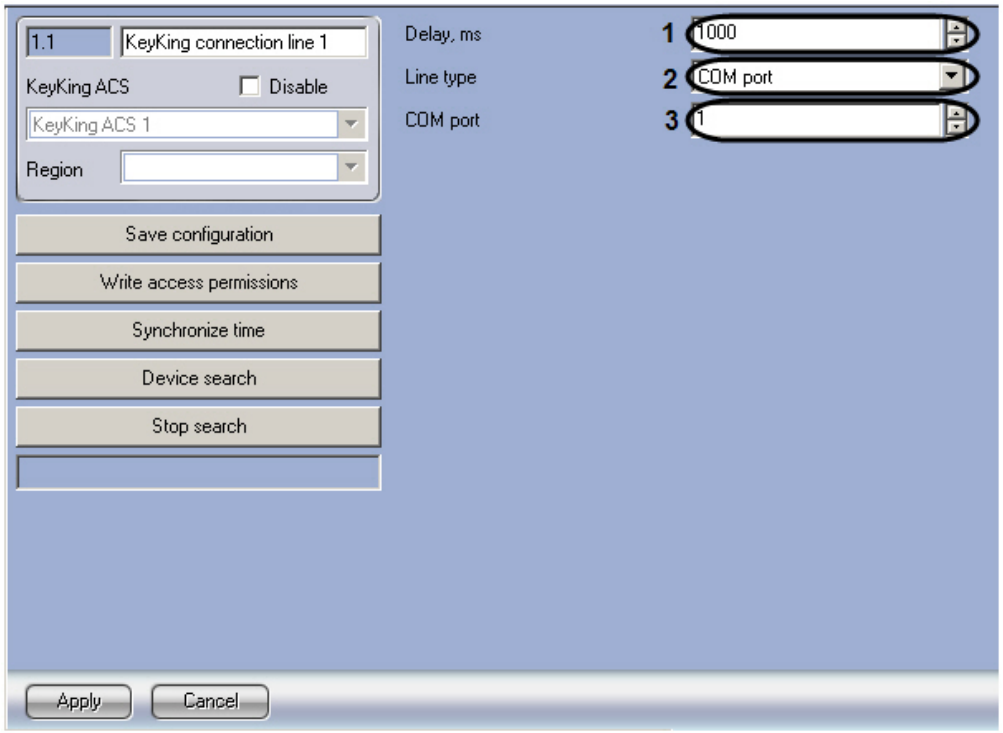
Configuration of KeyKing connection lines

The *KeyKing* connection line is configured in the *ACFA Intellect* Software System on the **KeyKing Connection Line** object's settings pane. This object is created based on a **KeyKing ACS** object on the **Hardware** tab of the **System Settings** dialog.

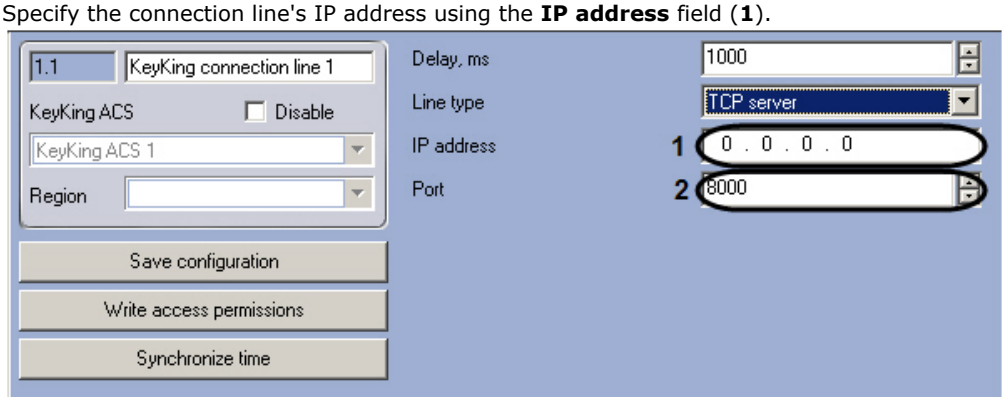


To configure a *KeyKing* connection line, do the following:

1. Go to the **KeyKing Connection Line** object's settings pane.



2. Use the **up/down** buttons to enter the COM-port polling interval in seconds in the **Delay, ms** field (**1**).
3. Select the connection method for the *KeyKing* connection line from the **Line type** dropdown list: **COM port**, **TCP server**, or **TCP client** (**2**).
4. If **COM port** is selected, use the **up/down** buttons to enter the *KeyKing* connection line's port number in the **Port** field (**3**).
5. If either **TCP server** or **TCP client** is selected, then do the following:
   a. Specify the connection line's IP address using the **IP address** field (**1**).



   b. Use the **up/down** buttons to enter the connection line's TCP-connection port in the **Port** field (**2**).

> **Note.**
> A controller connected as a TCP server uses the connection line to listen for messages from devices. A controller connected as a TCP client uses the connection line to send messages about its presence

6. Click the **Apply** button.

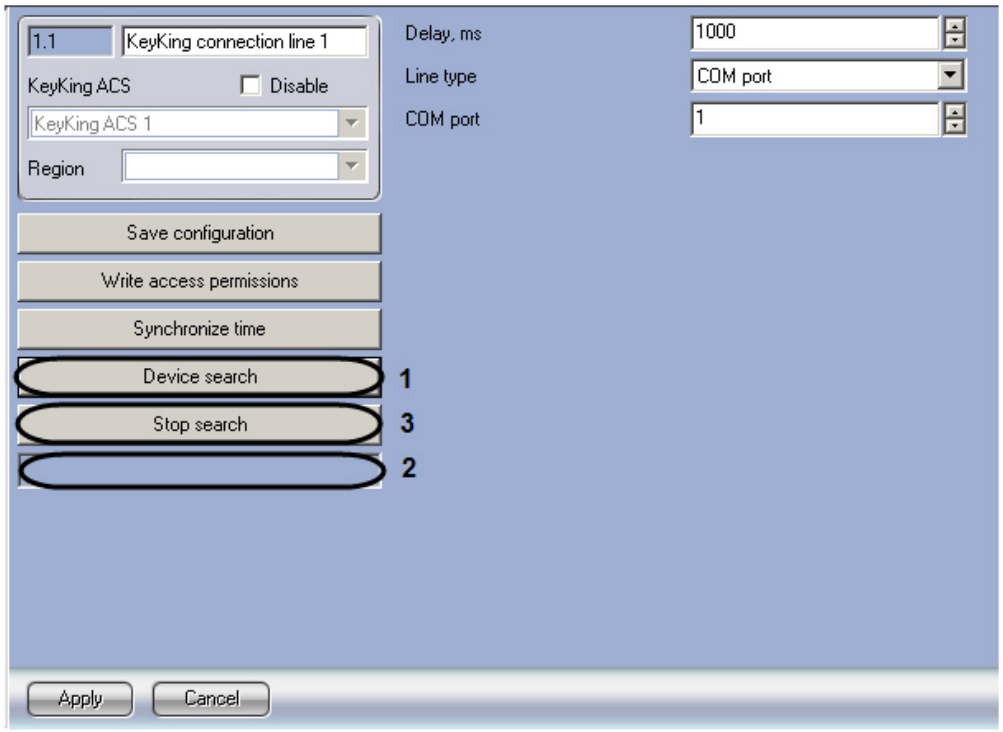
This completes the configuration of the *KeyKing* connection line.

Automatic search for KeyKing controllers

Automatic search for *KeyKing* controllers is only possible if the connection line is made over a COM port. If the connection is via Ethernet (the **TCP server** or **TCP client** methods), then a **TC3XY Controller** object must be created manually based on the **KeyKing Connection Line** object.

To automatically search for *KeyKing* controllers, do the following:

1. Go to the **KeyKing Connection Line** object's settings pane.



2. Click the **Device search** button (**1**). A progress bar will indicate the progress of the search for devices (**2**).

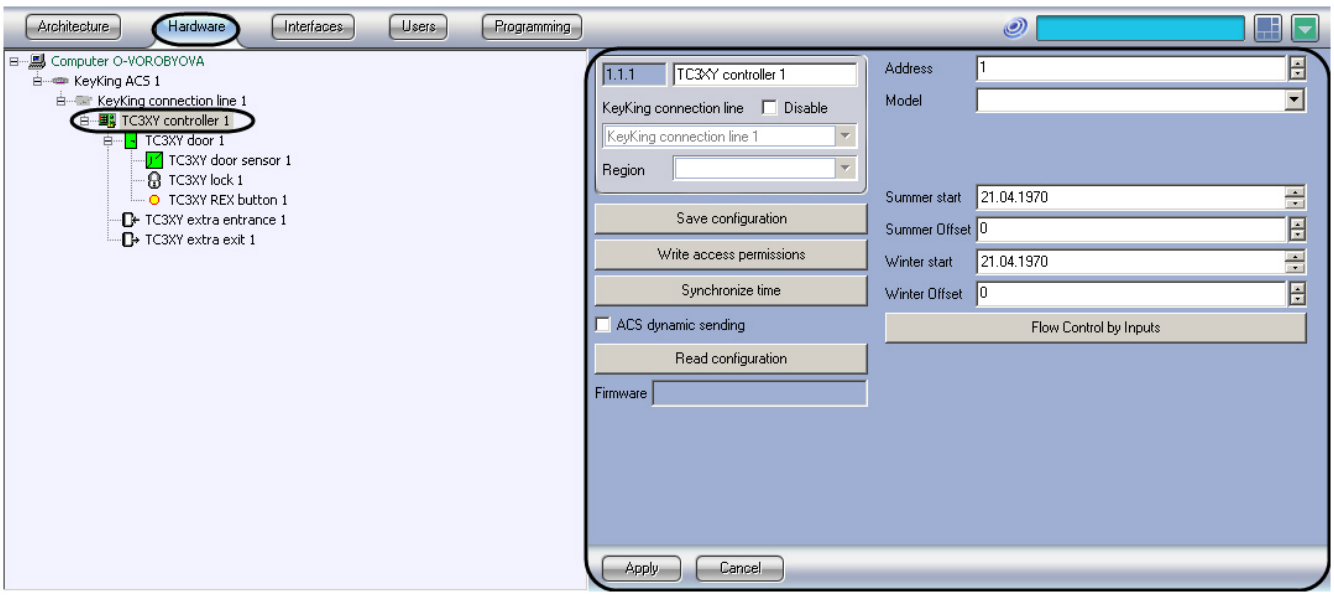
> **Note.**
> To cancel the search, click the **Stop search** button (**3**).

Any controllers that are found will be added to the *ACFA Intellect* Software System's hardware tree, based on the **KeyKing Connection Line** object. Moreover, the configuration of these controllers will be read and added to the object tree.

This completes the automatic search for *KeyKing* controllers.

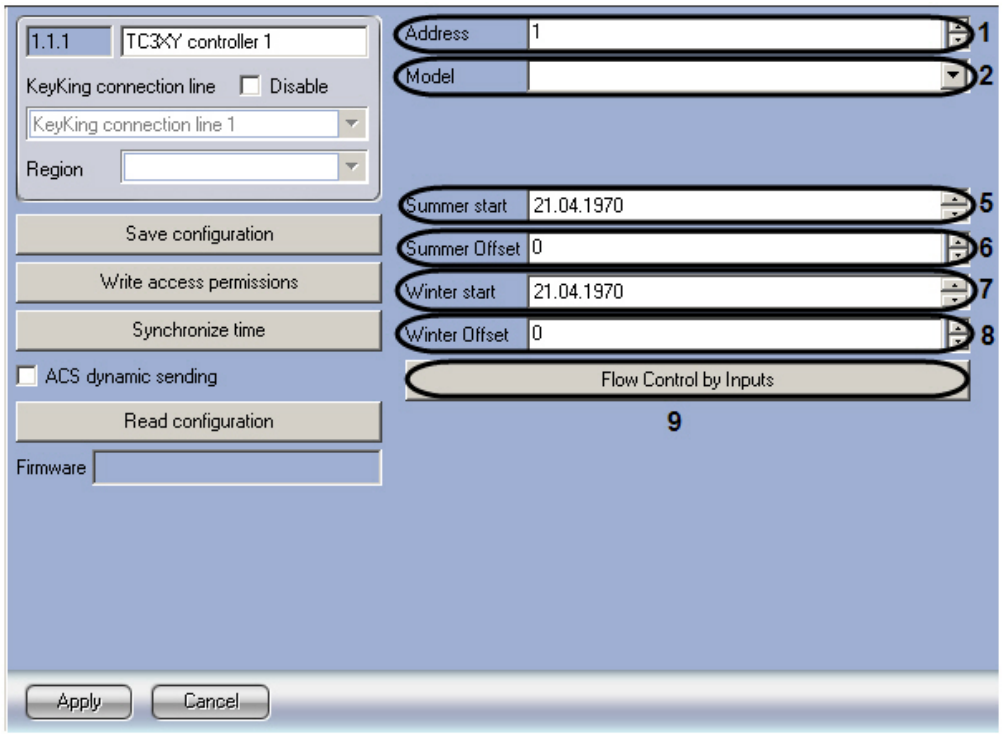
Configuration of a KeyKing controller

A *KeyKing* controller is configured in the *ACFA Intellect* Software System on the **TC3XY Controller** object's settings pane. This object is created based on a **KeyKing ACS** object on the **Hardware** tab of the **System Settings** dialog.



To configure a *KeyKing* controller, do the following:

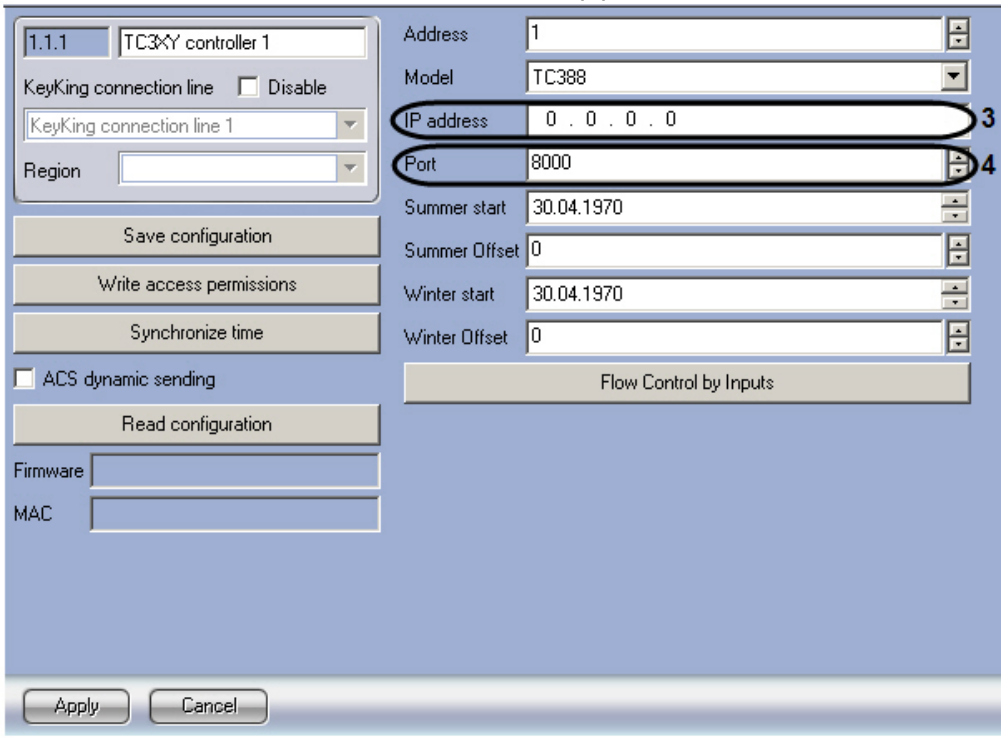
1. Go to the **TC3XY Controller** object's settings pane.



2. Use the **up/down** buttons to enter the hardware address of a connected controller in the **Address** field (**1**). A search for controllers may have set the address automatically. In the case, changing the field value is not recommended.
3. Select the name of the connected controller's hardware model from the **Model** dropdown list (**2**). A search for controllers may have set the value of the **Model** parameter automatically. In the case, changing the field value is not recommended.

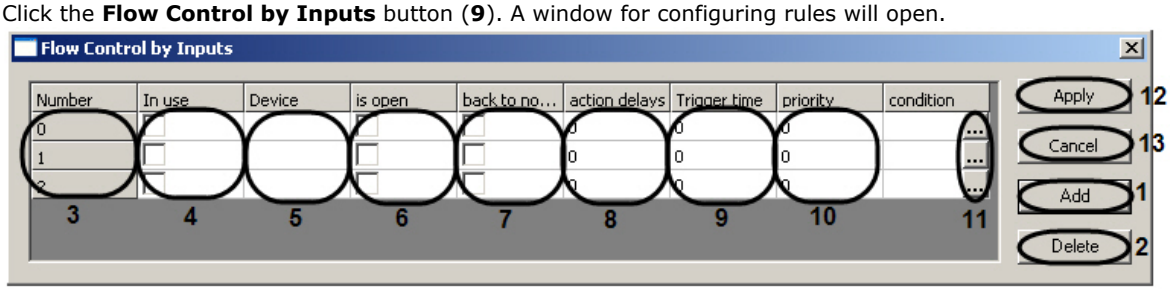
> ⚠ **Attention!**
> If the controller model in not correctly specified, the device will not work with the *ACFA Intellect* Software System.

4. If the connection line has been made via Ethernet, then the controller's connection parameters must be set:
   a. Enter the controller's IP address in the **Address** field (**3**).



   b. Enter the controller's connection port in the **Port** field (**4**).
5. Using the mask and the **up/down** buttons, enter the date to switch to summer hours in the **Summer start** field (**5**).
6. Using the **up/down** buttons to enter in the **Summer Offset** field the time shift (in hours) to be applied when switching to summer hours (**6**).
7. Using the mask and the **up/down** buttons, enter the date to switch to winter hours in the **Winter start** field (**7**).

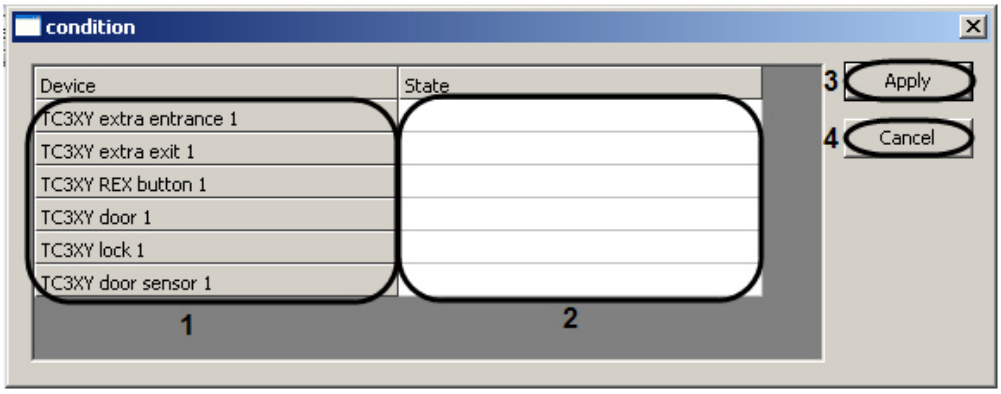
8. Using the **up/down** buttons to enter in the **Winter Offset** field the time shift (in hours) to be applied when switching to winter hours (**8**).
9. The controller's internal rules make it possible to send specific commands to devices when certain conditions occur. The controller's internal rules are configured as follows:
   a. Click the **Flow Control by Inputs** button (**9**). A window for configuring rules will open.



   b. To add a rule, click the **Add** button (**1**).

> **Note.**
> To delete a rule from the list, select a cell in the corresponding row and click the **Delete** button (**2**) .

   c. The **Number** column displays a serial number for each rule (**3**).
   d. To enable a rule, check the box in the **In use** column (**4**).
   e. From the **Device** dropdown list, select the device that will be activated by the rule when the condition occurs (**5**).
   f. If the device must be opened when the condition occurs, check the box in the **is open** column (**6**).
   g. If the device needs to be returned to its normal state after the action has been performed, check the box in the **back to normal** column (**7**).
   h. In the **action delays** field enter the period of time (in seconds) that should pass from the moment the condition occurs before the action is performed (**8**).
   i. In the **Trigger time** field enter the period of time (in seconds) in which the action must be performed (**9**).
   j. In the **priority** field enter the priority of the action (**10**).
   k. Click on the ... button in the **conditions** column (**11**). A window for configuring conditions will open.



   l. The **Device** column presents a list of devices registered with the controller being configured (**1**).
   m. Select the required condition for each device from the dropdown list in the **State** column (**2**). When the specified combination of device-condition is detected in the system, the action condition will be deemed to have been satisfied.
   n. Click the **Apply** button (**3**).

> **Note.**
> To close the **conditions** window without saving the changes made, click the **Cancel** button (**4**).

   o. Click the **Apply** button (**12**).

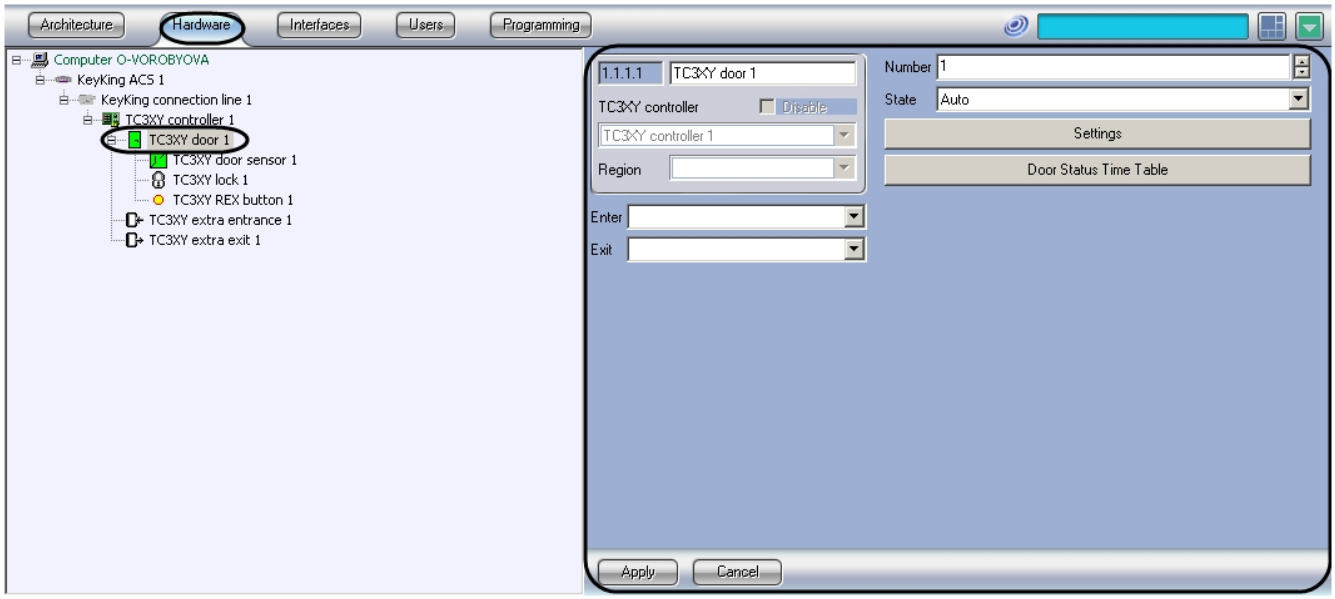
> **Note.**
> To close the **conditions** window without saving the changes made, click the **Cancel** button (**13**).

10. Click the **Apply** button.

This completes the configuration of the *KeyKing* controller.

Configuration of a KeyKing door

A *KeyKing* door is configured in the *ACFA Intellect* Software System on the **TC3XY Door** object's settings pane. This object is created based on a **TC3XY Controller** object on the **Hardware** tab of the **System Settings** dialog.



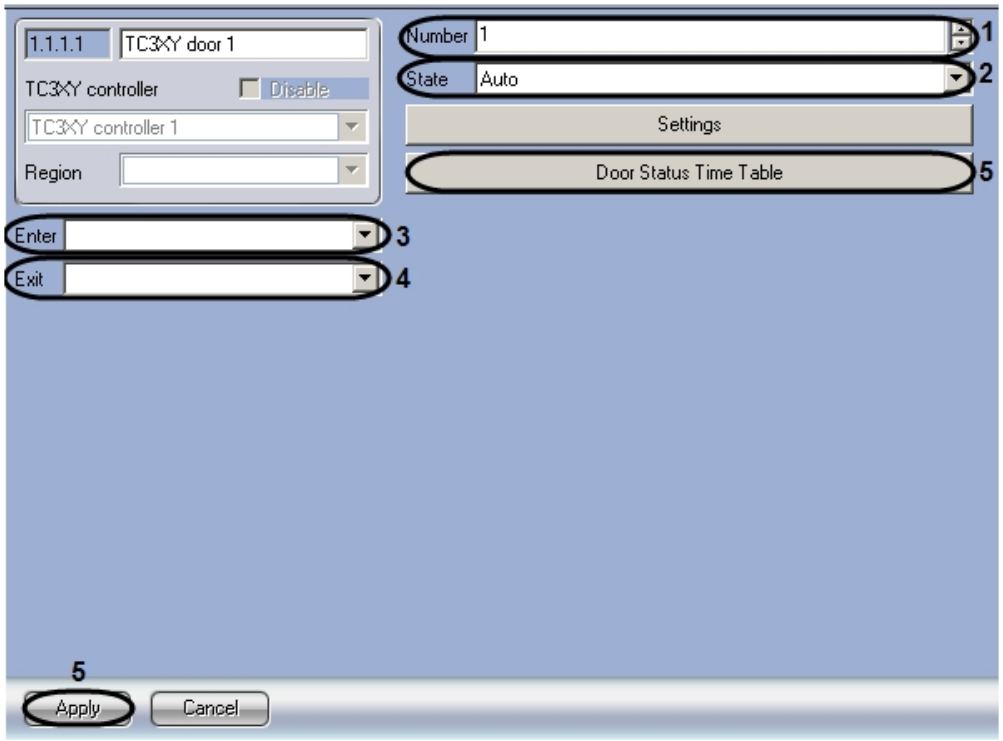
A *KeyKing* door is configured in the following order:

1. Basic door configuration.
2. Advanced door configuration.

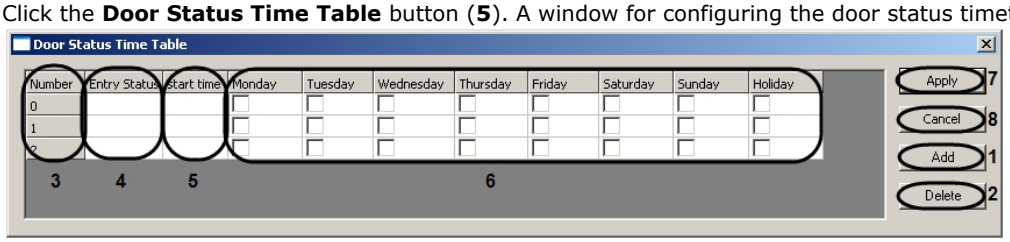
Basic door configuration

To configure a *KeyKing* door, do the following:

1. Go to the **TC3XY Door** object's settings pane.



2. Use the **up/down** buttons to enter the hardware address of the door connection in the **Number** field (**1**).
3. Select the door's normal state from the **State** dropdown list (**2**).
4. From the **Enter** dropdown list, select the **Section** object that corresponds to the area to which this door exits (**3**).
5. From the **Exit** dropdown list, select the **Section** object that corresponds to the area to which this door enters (**4**).
6. Set the door status timetable as follows:
   a. Click the **Door Status Time Table** button (**5**). A window for configuring the door status timetable will open.



b. To add a new status, click the **Add** button (**1**).

> **Note:**
> To delete a status from the list, select a cell in the corresponding row and click the **Delete** button (**2**).

c. The **Number** column displays a serial number for each status (**3**).
d. From the **Entry Status** dropdown list, select the status that should be assigned to the door during the specified time (**4**).
e. In the **start time** field, use the mask and the **up/down** buttons to enter the time the status should take effect (**5**).
f. Check the boxes corresponding to the days of the week on which the specified status should be applied to the door being configured (**6**).
g. To save the changes, click the **Apply** button (**7**).

> **Note:**
> To close the window for configuring the door status timetable, click the **Cancel** button (**8**).

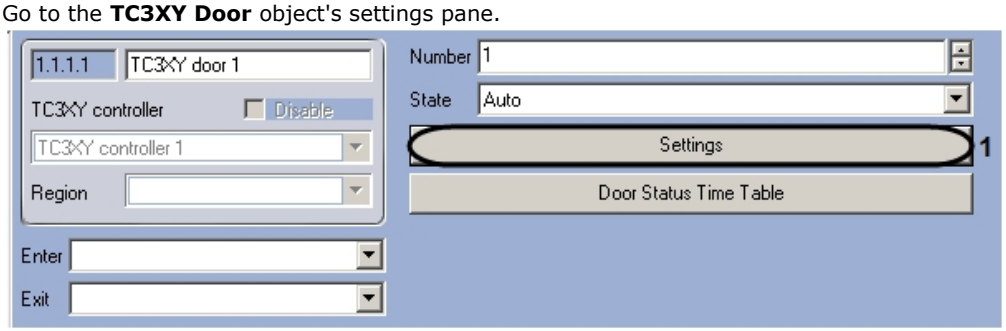
7. Click the **Apply** button (**6**).

This completes the configuration of the *KeyKing* door.

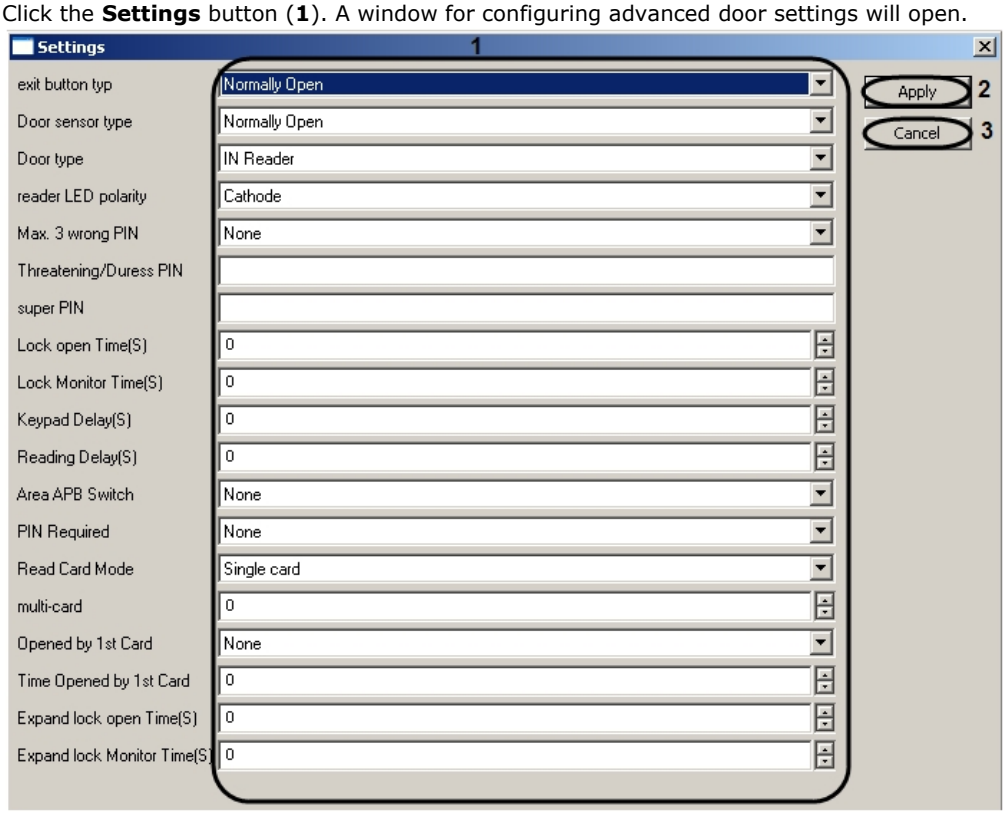
Advanced door configuration

To perform advanced configuration of a door, do the following:

1. Go to the **TC3XY Door** object's settings pane.



2. Click the **Settings** button (**1**). A window for configuring advanced door settings will open.



3. Configure the door (**1**).
   Descriptions of advanced door settings:

Setting	How assigned	Description	Possible values

exit button type	Selected from dropdown list	The type of the exit button	Normally Open Normally Close
Door sensor type	Selected from dropdown list	The type of the door sensor	Normally Open Normally Close
Door sensor type	Selected from dropdown list	The type of reader installed on the door	IN Reader IN/OUT Reader
Reader LED polarity	Selected from dropdown list	The polarity of the reader's LED	Cathode Anode
Max. 3 wrong PIN	Selected from dropdown list	Indicates whether or not to lock the reader after the third invalid entry of a PIN code	None Use
Threatening/Duress PIN	Typed into the field	PIN code for entry under duress	0..9999
super PIN	Typed into the field	A universal PIN code	0..99999999
Lock open Time(S)	Entered into the field using the **up/down** buttons	The period of time (in seconds) for which the lock will remain unlocked	0..255
Lock Monitor Time (S)	Entered into the field using the **up/down** buttons	The period of time (in seconds) in which the lock will be checked	0..255
Keypad Delay	Entered into the field using the **up/down** buttons	The delay (in seconds) for using the keypad	0..255
Reading Delay	Entered into the field using the **up/down** buttons	The delay (in seconds) for reading a card	0..255
Area APB Switch	Selected from dropdown list	Indicates whether or not to use area-switching	None Use
PIN required	Selected from dropdown list	Indicates whether or not a PIN code is required	None Use
Read Card Mode	Selected from dropdown list	The mode to use for reading access cards	Single card multi cards
multi-card	Entered into the field using the **up/down** buttons	The number of cards required for access through the door	0..8
Open by 1st Card	Selected from dropdown list	Indicates whether or not the door will open based on the first card	None Use
Time Opened by 1st card	Entered into the field using the **up/down** buttons	The period of time (in seconds) in which the door will open based on the first card	0..255
Expand lock open Time (S)	Entered into the field using the **up/down** buttons	The extended period of time (in seconds) in which a lock is unlocked	0..255
Expand lock monitor Time (S)	Entered into the field using the **up/down** buttons	The extended period of time (in seconds) in which a lock is checked	0..255

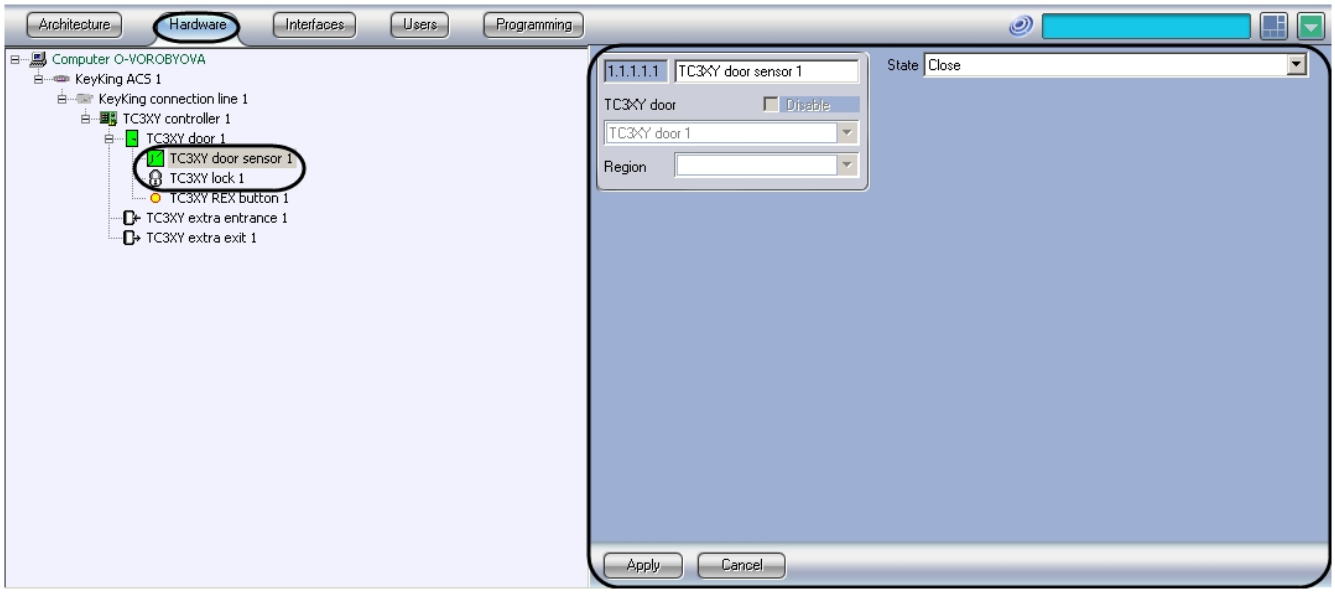
4. Click the **Apply** button (**20**).

> **Note:**
> To close the **Settings** window without saving the changes made, click the **Cancel** button (**21**).

This completes the advanced door configuration.

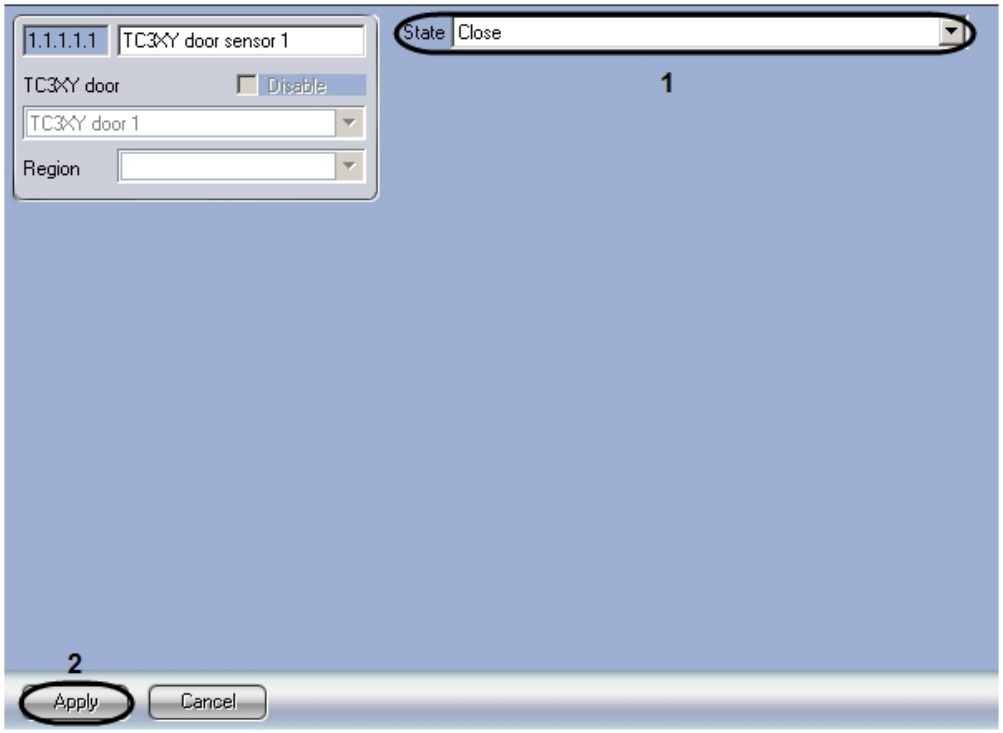
Configuration of KeyKing Door Sensors and Locks

KeyKing door sensors and locks are configured in the *ACFA Intellect* Software System on the **TC3XY door sensor** and **TC3 XY lock** objects' settings panes. These objects are created based on a **TC3XY Door** object on the **Hardware** tab of the **Sy stem Settings** dialog.



To configure a *KeyKing* door sensor or lock, do the following:

1. Go to the **TC3XY door sensor-** or **TC3XY lock** object's settings pane.

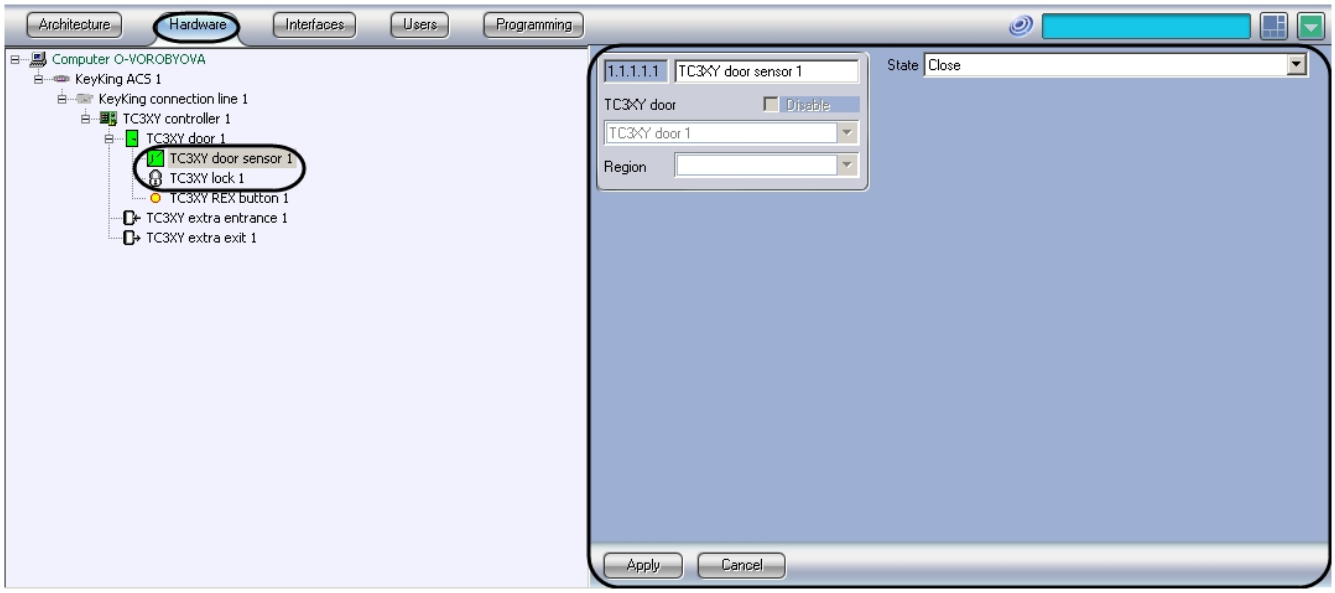


2. Select the device's normal state from the **State** dropdown list (**1**).
3. Click the **Apply** button (**2**).

This completes the configuration of the *KeyKing* sensor (lock).

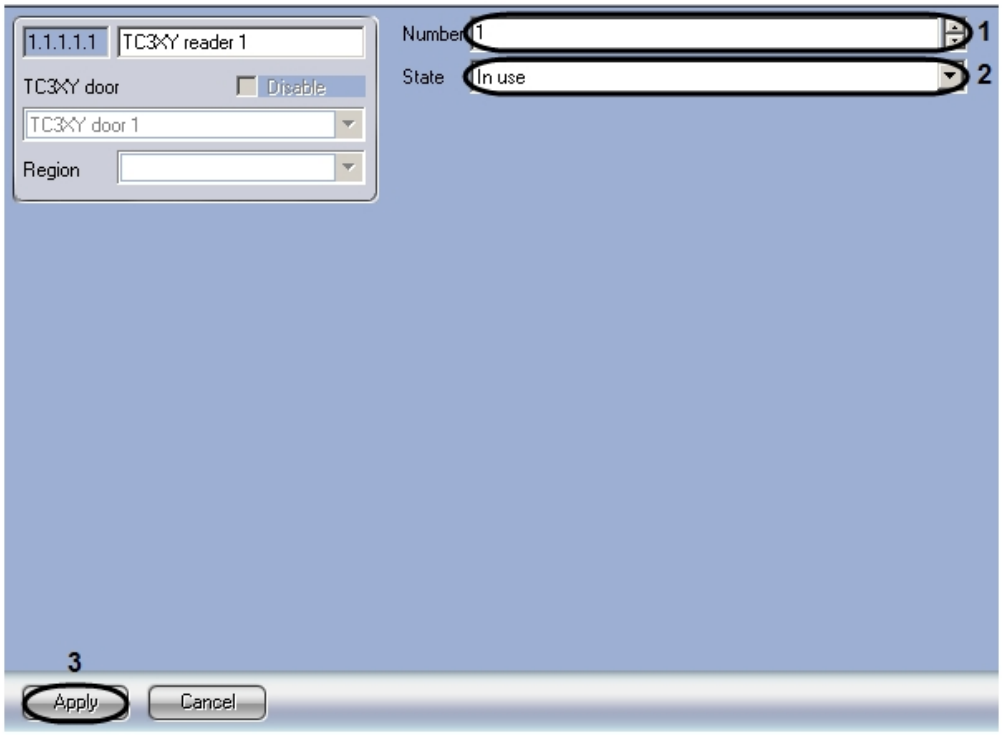
Configuration of a KeyKing door reader

A *KeyKing* door reader is configured in the *ACFA Intellect* Software System on the **TC3XY Reader** object's settings pane. This object is created based on a **TC3XY Door** object on the **Hardware** tab of the **System Settings** dialog.



To configure a *KeyKing* door reader, do the following:

1. Go to the **TC3XY Reader** object's settings pane.

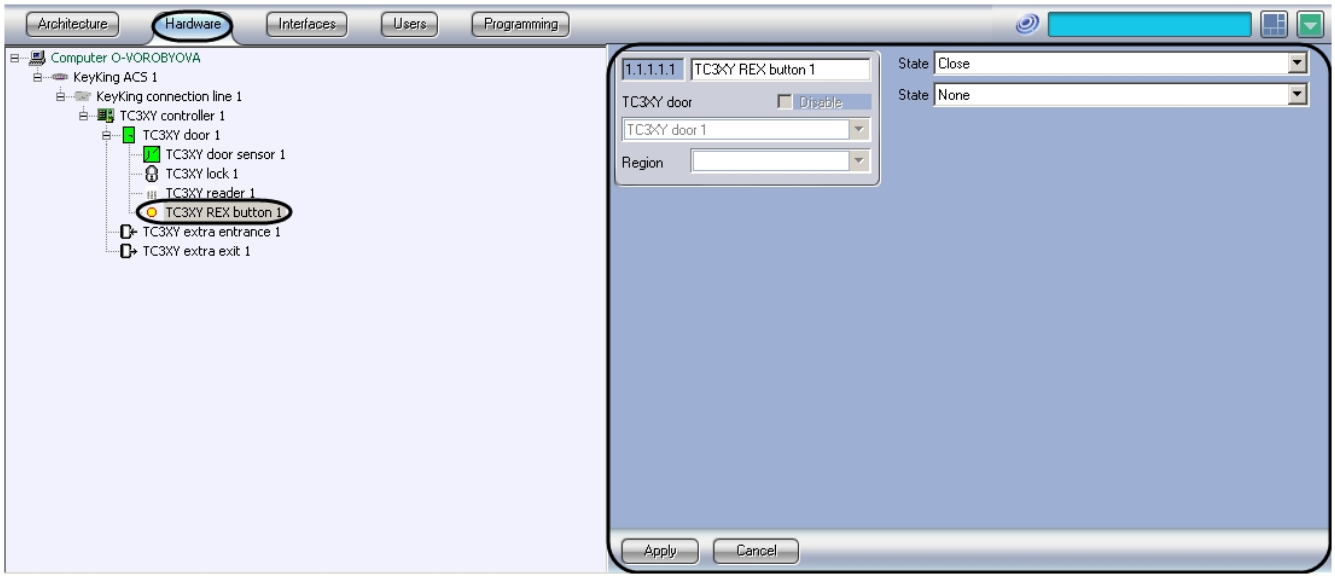


2. Use the **up/down** buttons to enter the hardware address of the connected reader in the **Number** field (**1**).
3. Select the reader mode from the **State** dropdown list: In use or None (**2**).
4. Click the **Apply** button (**3**).

This completes the configuration of the *KeyKing* door reader.

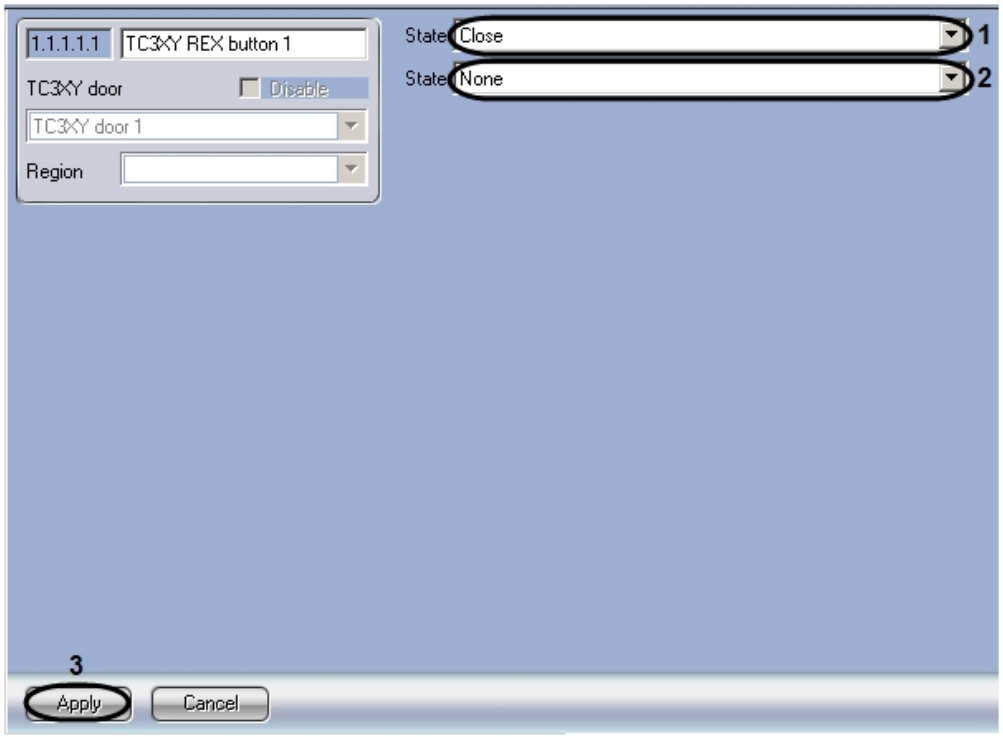
Configuration of a KeyKing door exit button

A *KeyKing* door exit button is configured in the *ACFA Intellect* Software System on the **TC3XY Reader** object's settings pane. This object is created based on a **TC3XY Door** object on the **Hardware** tab of the **System Settings** dialog.



To configure a *KeyKing* door exit button, do the following:

1. Go to the **TC3XY REX Button** object's settings pane.

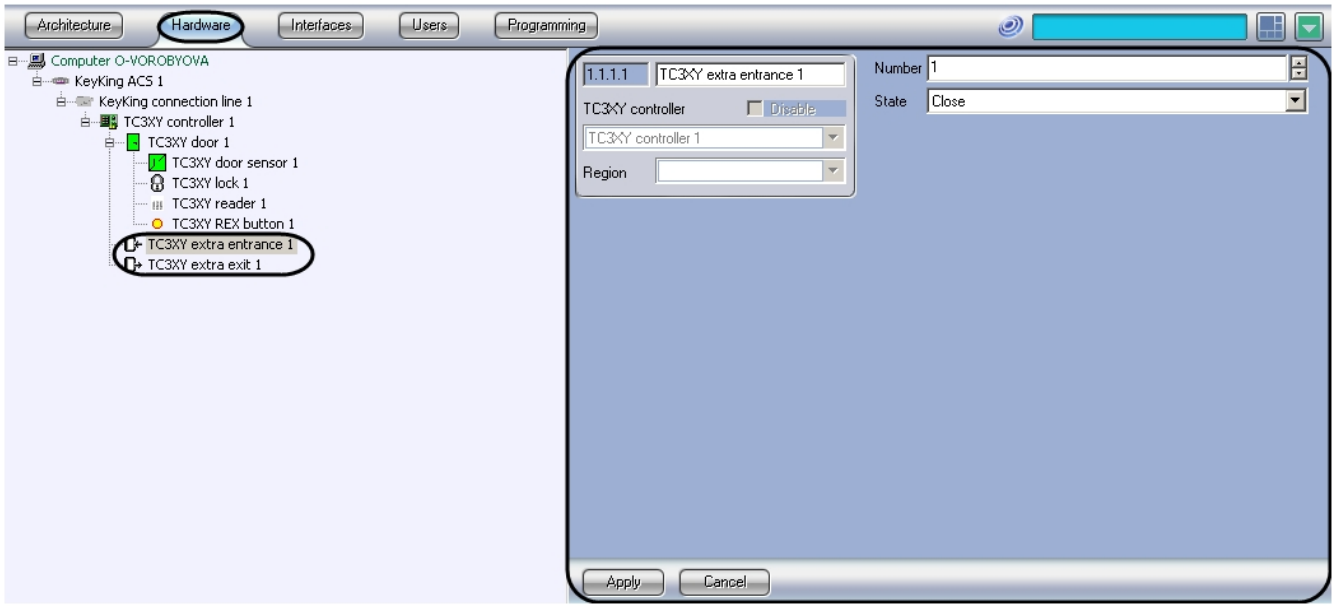


2. Select the exit button's normal state from the **State** dropdown list (**1**).
3. Select the exit button mode from the **State** dropdown list: In use or None (**2**).
4. Click the **Apply** button (**3**).

This completes the configuration of the *KeyKing* door exit button.

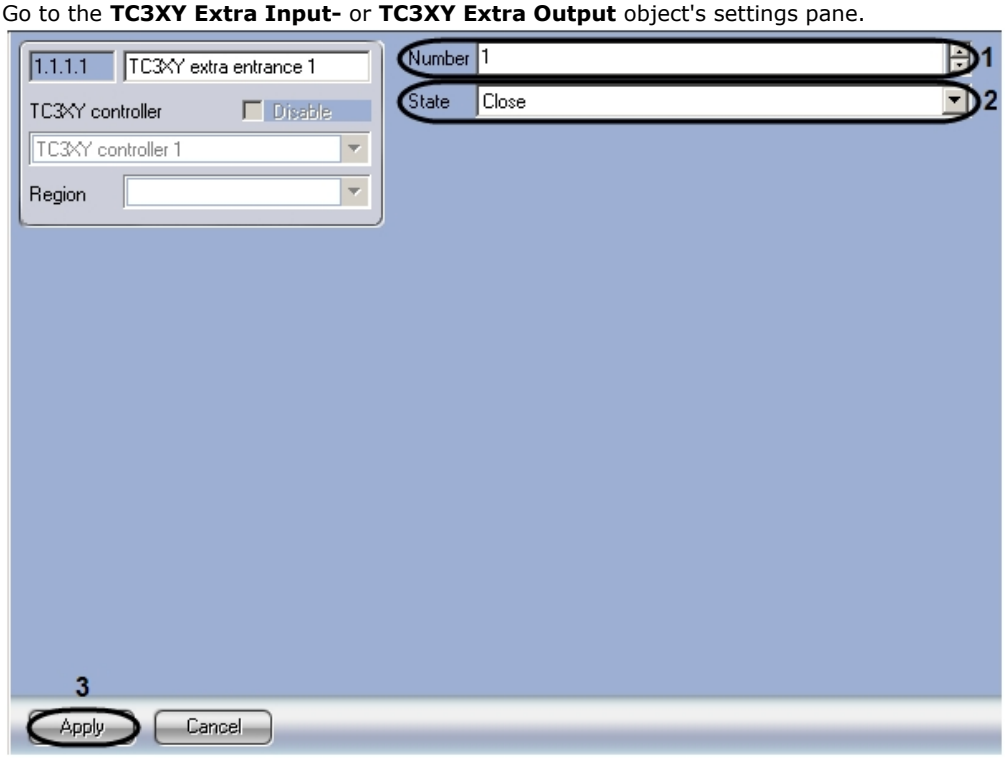
Configuration of additional inputs and outputs on a KeyKing controller

A *KeyKing* controller's additional inputs and outputs are configured in the *ACFA Intellect* Software System on the **TC3XY Extra Input** and **TC3XY Extra Output** objects' settings panes. These objects are created based on a **TC3XY Controller** o bject on the **Hardware** tab of the **System Settings** dialog.



To configure an additional input (additional output) on a *KeyKing* controller, do the following:

1. Go to the **TC3XY Extra Input-** or **TC3XY Extra Output** object's settings pane.



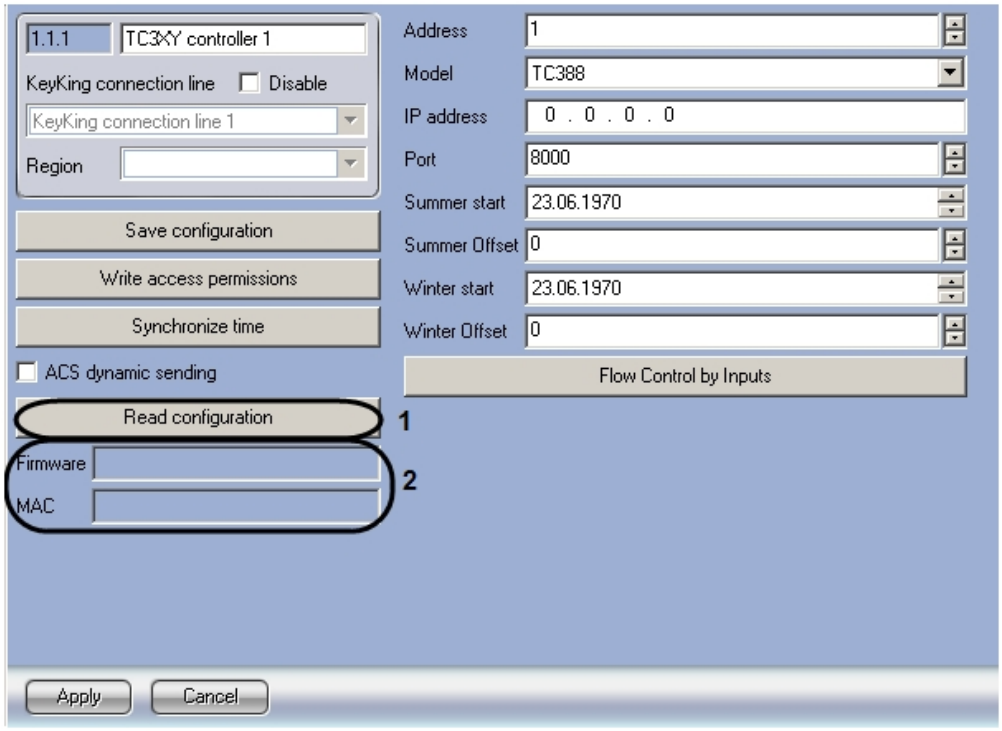
2. Enter the input (output) number of the *KeyKing* controller in the **Number** field (**1**).
3. Select the normal state of the *KeyKing* controller's input (output) from the **State** dropdown list (**2**).
4. Click the **Apply** button (**3**).

This completes the configuration of the *KeyKing* controller's additional input (output).

Reading a KeyKing controller's configuration

To read the configuration of a *KeyKing* controller, do the following:

1. Go to the **TC3XY Controller** object's settings pane.



2. Click the **Read configuration** button (**1**).

After the configuration has been successfully read, the **Firmware** and **MAC** fields will be filled out (**2**).

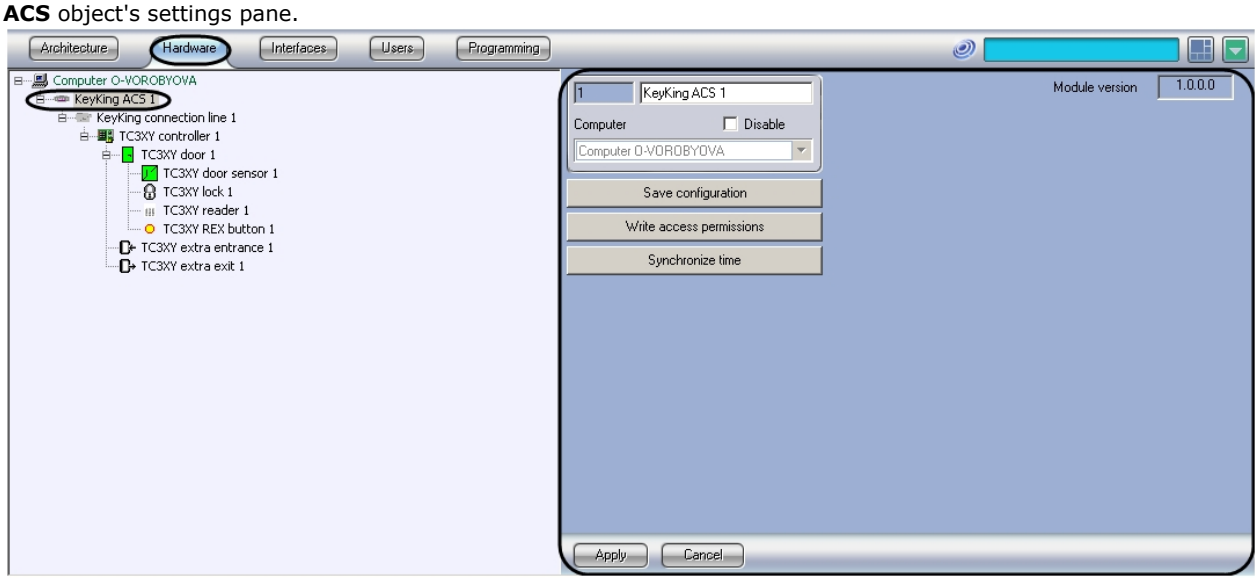
> **Note:**
> The **MAC** field is only present for controllers with a TCP connection.

This completes the reading of the *KeyKing* controller's configuration.

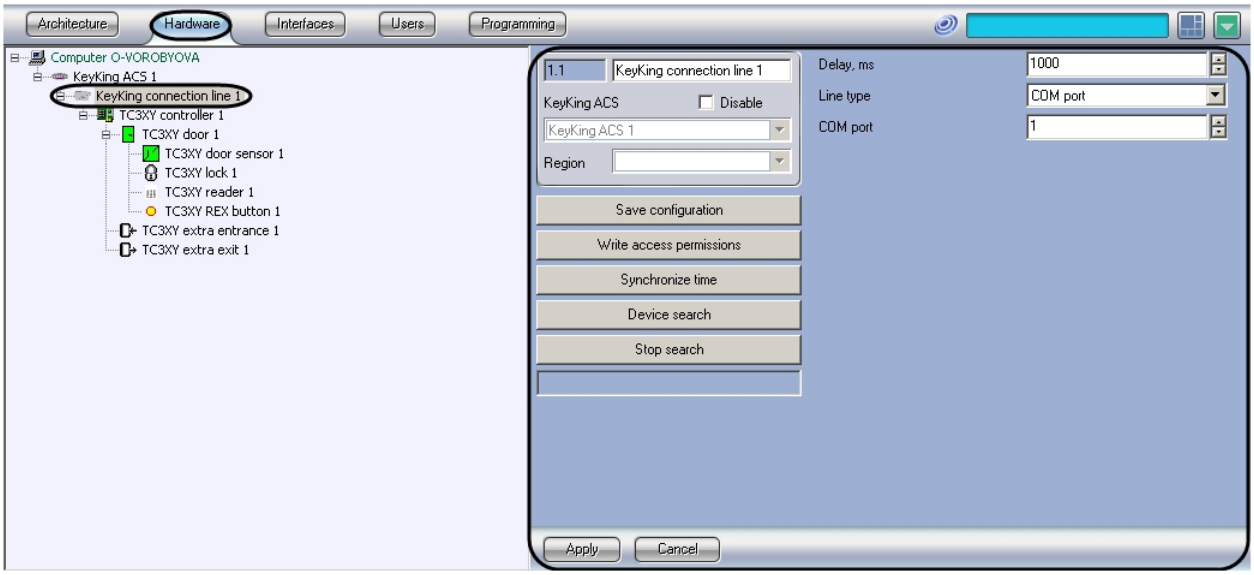
Saving a configuration to KeyKing controllers

A configuration may be saved to *KeyKing* controllers using one of the following methods:

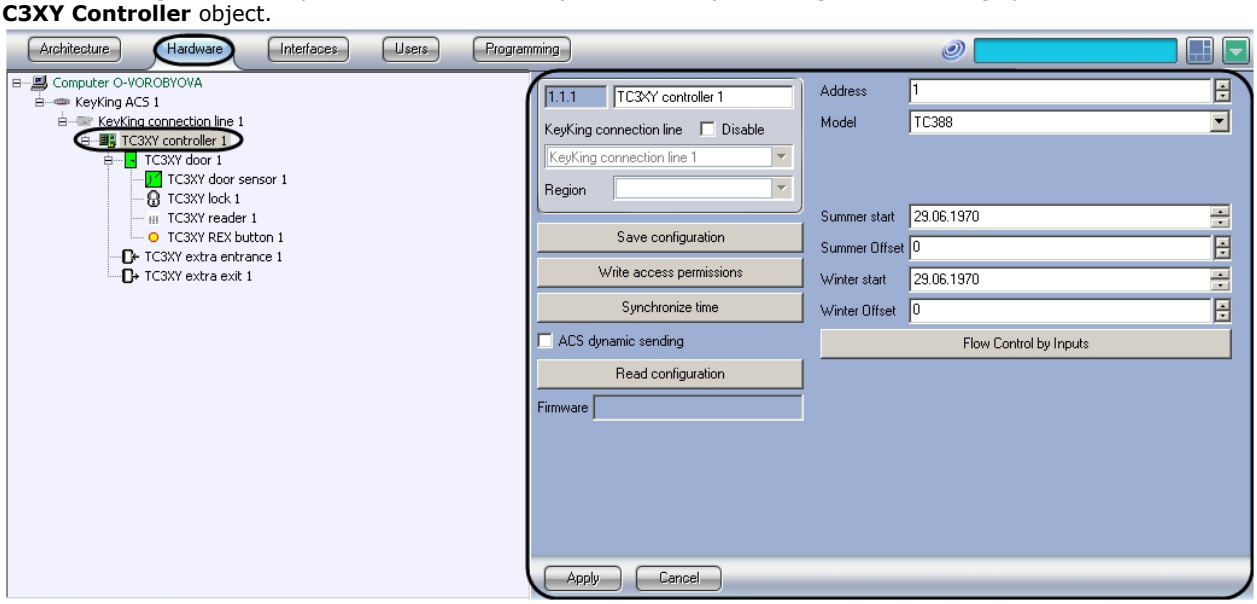
1. Save the configuration to every controller registered in the system. To perform this operation, go to the **KeyKing ACS** object's settings pane.



2. Save the configuration to the controllers on a single line. To perform this operation, go to the **KeyKing Connection Line** object's settings pane.



3. Save the configuration to a particular controller. To perform this operation, go to the settings pane of the desired **T C3XY Controller** object.

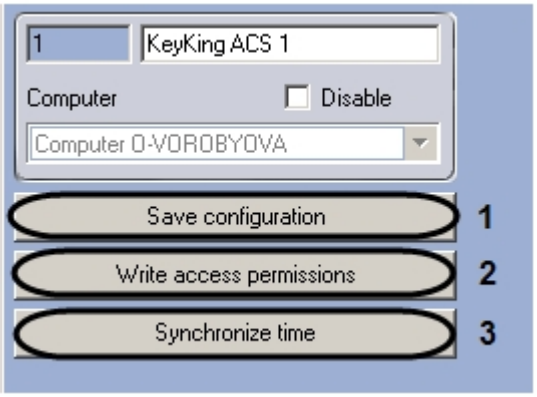


> **Note:**
> Before saving a configuration, reading the configuration of the *KeyKing* controllers is recommended (see section R eading a KeyKing controller's configuration).

The hardware configuration and user access rights are saved to *KeyKing* controllers separately.

A configuration is saved to controllers in the following manner:

1. To save the hardware configuration to a controller (controllers), click the **Save configuration** button (**1**).



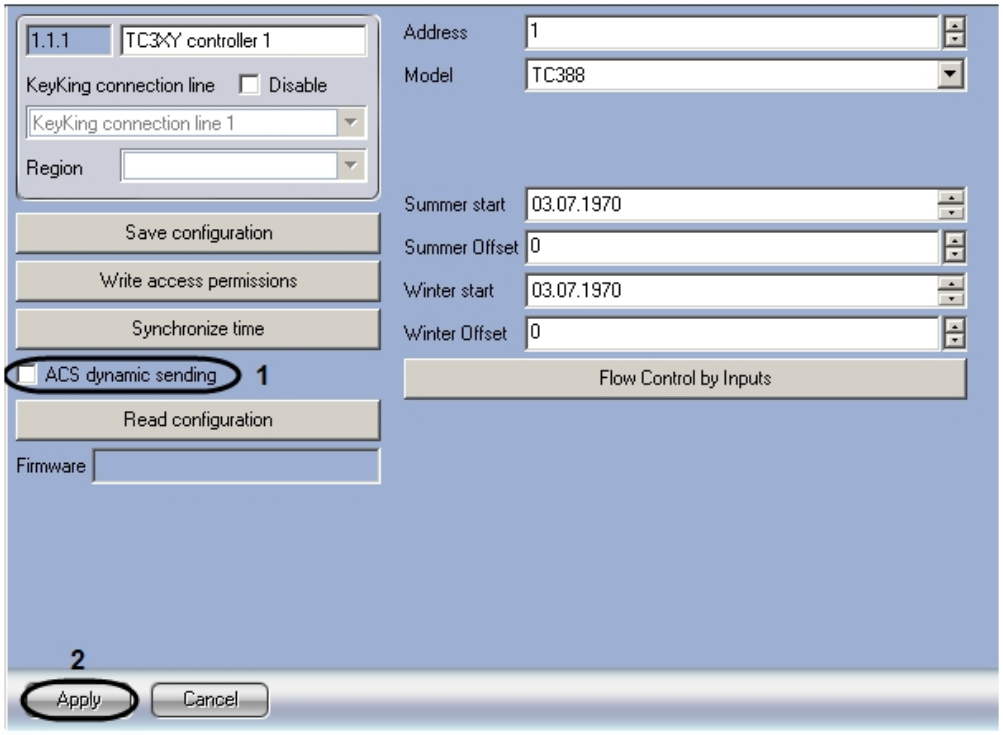
2. To save user access rights to a controller (controllers), click the **Write access permissions** button (**2**).
3. To save Server times to a controller (controllers), click the **Synchronize time** button (**3**).

This completes the process of saving a configuration to *KeyKing* controllers.

Setting the dynamic configuration forwarding to a KeyKing controller

To configure dynamic configuration forwarding to a *KeyKing* controller, do the following:

1. Go to the **TC3XY Controller** object's settings pane.



2. To enable dynamic configuration forwarding to a *KeyKing* controller, check the **ACS dynamic sending** checkbox (**1**). When changes are made to the *ACFA Intellect* Software System configuration through the Visitor Management System module, they will be automatically forwarded to the controller. If changes do not need to be forwarded automatically, this option should be disabled.
3. Click the **Apply** button (**2**).

This completes the setting of dynamic configuration forwarding to a *KeyKing* controller.

Working with the KeyKing Module

The following interface objects are used to work with the *KeyKing* Module.

1. **Map**;
2. **Event Log**.

Information about configuring these interface objects is presented in the Intellect™ Software Package Administrator's Guide.

How to work with interface objects is described in detail in Intellect™ Software Package Operator's Guide.

> **Note:**
> It is possible to track the state of objects added to the interactive map. Managing objects from the map is not supported.