

Driver Control4 – Ksenia lares 4.0  
Installation and configuration manual

# lares™ & Control4™

Better. Together.™



Ksenia

For the correct operation of the driver it is recommended to follow step by step this manual.

For a better functioning of the system, it is recommended to install an uninterruptible power supply (UPS), able to supply power to the Control4 controller and to the network devices (routers, switches, ...) even in the absence of mains power supply. The lares 4.0 control panel have back-up batteries and therefore do not require external UPS

### Requirements:

- **2.8.0 Control4 version or next**
- **Correct Composer version to the Control4 controller**
- **Ksenia lares 4.0 firmware version 1.22.3 or next**
- **Driver Ksenia lares 4.0**

## GENERAL INFORMATION

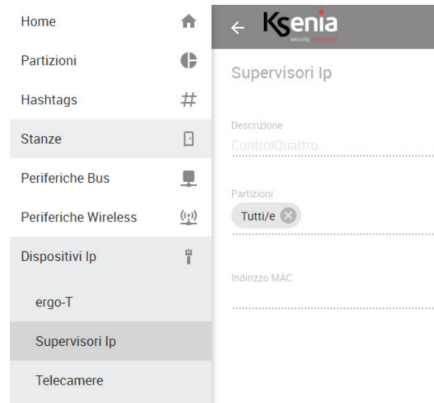
1. The driver uses websocket connections to communicate with the central lares 4.0. In particular, through the connection named **IP\_SUPERVISOR** the different objects are read (zone names, scenarios, outputs, partitions, ...) and their status is kept synchronized (**REALTIME**). The commands sent by the Control4 interfaces are sent through a **USER** connection created using the PIN entered by the user himself (which therefore will have the privileges assigned in the configuration of the lares 4.0).
2. Ksenia provides for the configuration of arming/disarming **scenarios**. The security interface of Control4 uses "partition" logic and does not allow you to customize the number and names of the interface functions. In order to optimize the integration and allow the system integrator to make the best use of the potentials of Ksenia's scenarios, the following calls have been created in the Control4 interface which, through the driver's **properties**, must be associated with input scenarios created in the lares 4:
  - Home Mode
  - Away Mode
  - Stay Mode
  - Disarming
  - Panic
3. The initial driver configuration (reading objects from the lares 4.0 control panel) is a complex operation that may take several minutes before the integration is operational and usable by the **Composer**. For this reason we recommend:
  - terminate the configuration of the lares 4.0 control panel before making the connection with the driver and the resulting **Read From Panel**
  - disable polling (property **Polling Period** set to **OFF**) if you are changing the configuration of the lares 4.0 control panel (polling is in any case restored within 60 minutes after deactivation and is only used to check the existence of communication between drivers and central).
4. Scenarios created on Ksenia lares 4.0 that do not include partitions are not displayed in the Control4 scenario list, but can still be recalled from programming using the **device specific command** (see appendix 1).

Il presente manuale si riferisce alle azioni necessarie per integrare la centrale Ksenia lares con il sistema Control4. Si assume che le configurazioni di lares (zone, output, partizioni, scenari, codici,...) siano già state correttamente effettuate.

## Step 1 – lares 4.0

In the lares 4.0 configuration installer interface, proceed to:

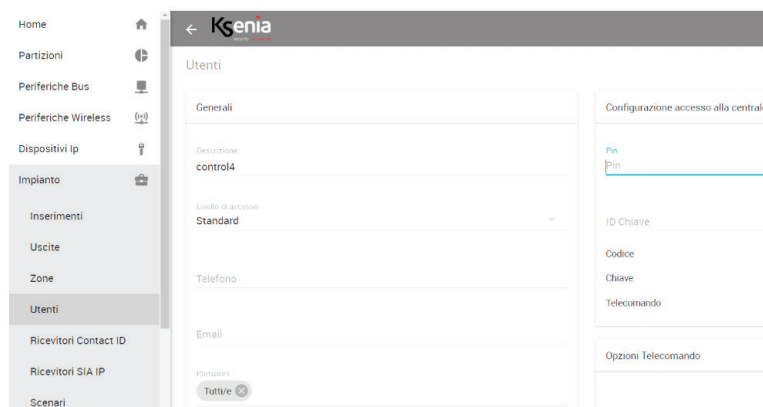
1. Associate the IP Supervisor connection to all partitions (none excluded). Enter the MAC address of the Control4 controller. Without these settings the driver can not work.



2. Create a lares 4.0 user with dedicated PIN enabled to control scenarios, zones and outputs that can be controlled by Control4 programming and connections (Output). The driver allows you to recall scenarios and check the zone exclusion status from the composer's programming menu. It also allows you to connect the outputs from the connection menu. These functions are performed through the dedicated PIN, and indicated in the property as **Ksenia user password** (see step 2).
3. Create the arming/disarming scenarios that you plan to associate with the following features of the driver interface:
  - Home Mode
  - Away Mode
  - Stay Mode
  - Disarming
  - Panic

Properties	Actions	Documentation	Lua
Ksenia websocket IP address			
Ksenia installer password			123456
Ksenia user password			098765
Polling Period (minutes)			5
License Provider			Houselogix
Automatic Updates			Off
Houselogix License Code			--
Houselogix License Status			Activated (last checked on: 11/23/2018 12:47:15)
Ks Last Config			lares4 Ksenia Updated on 21/11/2018 19:51:07 - DONE
Ksenia's Panic Scenario button			read Ksenia Conf for list...
Ksenia's Away Scenario button			read Ksenia Conf for list...
Ksenia's Home Scenario button			read Ksenia Conf for list...
Ksenia's Stay Scenario button			read Ksenia Conf for list...
Ksenia's Disarming Scenario function			read Ksenia Conf for list...
Log Level			6 - Tags
Log Mode			Print
Log hashTags			
Driver Version			2018-10-02

1. Install the “Ksenia lares 4.0” driver. Note: Control4 accepts only one security system, so no other security drivers must already be installed.
2. In the driver properties (accessible from the “System Design” menu) set:
  - a. **Ksenia websocket IP address:** the IP address of the lares 4.0 control panel
  - b. **Ksenia installer password:** the installer PIN used in the system
  - c. **Ksenia user password:** dedicated user PIN, required for the activation of scenarios, bypass and automatic output from Control4 logic (programming and connections) to the Ksenia power plant. The user associated with the dedicated PIN must be associated with all the partitions, zones and outputs that are to be controlled by Control4’s programming and connections. Note: we recommend creating a specific user to use for the purpose of integration.



3. Perform the **Read From Panel** and wait for the configuration reading to finish. **Note 1:** the lares 4.0 control panel supports a limited number of websockets, so this operation must be carried out with at most 2 connections already open to the same central (pay particular attention to not having multiple browsers connected to the programming installer interface of the lares 4.0 , and smartphone apps). **Note 2:** this operation may take several minutes depending on the complexity of the configuration of the lares 4.0 control panel. The good result is evident from the property named **Ks Last Config** that will report date and time of reading, when the reading starts, and will add, at the date and time, the word “- **DONE**” at the end of the configuration.

Properties

Partitions Zones

#	Partition Name	Partition State	Arm Type	Enabled
1	Ksenia Partition 1	Unknown		True
2	Ksenia Partition 2	Unknown		True
3	Ksenia Partition 3	Unknown		True
4	Ksenia Partition 4	Unknown		True

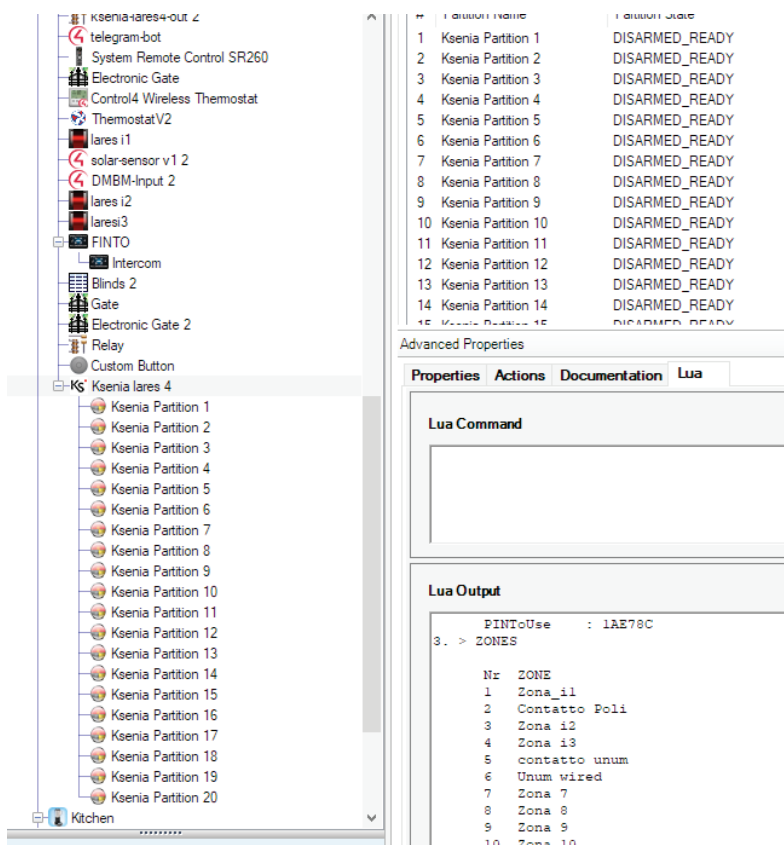
4. Check that the reading has been performed using the **Action “Display Status”** which prints the list of all the objects read updated in real time in the “Lua Output” console.

5. After reading, set the other driver properties:

- **Polling Period (minutes):** time, in minutes, to verify the existence of the lares 4.0 / Control4 connection. If, for example, due to LAN malfunctions, the connection is not detected, the driver continues the periodic check until the connection is restored. When restored, the **Read From Panel** function is automatically executed by restoring all lares 4.0 objects to the driver. The polling function can be deactivated by setting the property **OFF** value, but after a period of 60 minutes the function will be reactivated automatically, reporting the period to 5 minutes.
- **Ksenia's Panic Scenario button:** associated with the Emergency function of the Control4 interface.
- **Ksenia's Away Mode button**
- **Ksenia's Home Mode button**
- **Ksenia's Stay Mode button**
- **Ksenia's Disarming function**

If no **scenario** has been associated with these properties / functions, an error message (trouble) is displayed if the Control4 interface is called up.

NOTE: unfortunately, the security proxy of Control4 does not allow you to write / update the names of the partitions after having read them from Lares. Using the **Actions "Display Status"** you can view and rename the partitions in use manually.



The screenshot displays the Ksenia lares 4.0 interface. On the left, a tree view shows the system hierarchy, including 'Ksenia lares 4' and its sub-items like 'Ksenia Partition 1' through 'Ksenia Partition 20'. The right pane shows a table of partitions and their status.

Partition	Status
1 Ksenia Partition 1	DISARMED_READY
2 Ksenia Partition 2	DISARMED_READY
3 Ksenia Partition 3	DISARMED_READY
4 Ksenia Partition 4	DISARMED_READY
5 Ksenia Partition 5	DISARMED_READY
6 Ksenia Partition 6	DISARMED_READY
7 Ksenia Partition 7	DISARMED_READY
8 Ksenia Partition 8	DISARMED_READY
9 Ksenia Partition 9	DISARMED_READY
10 Ksenia Partition 10	DISARMED_READY
11 Ksenia Partition 11	DISARMED_READY
12 Ksenia Partition 12	DISARMED_READY
13 Ksenia Partition 13	DISARMED_READY
14 Ksenia Partition 14	DISARMED_READY
15 Ksenia Partition 15	DISARMED_READY

Below the table, the 'Advanced Properties' section is visible, showing the 'Lua Command' field and the 'Lua Output' field. The 'Lua Output' field displays the following text:

```

PINToUse : 1AE78C
3. > ZONES

Nr  ZONE
1   Zona_11
2   Contatto Poli
3   Zona i2
4   Zona i3
5   contatto unum
6   Unum wired
7   Zona 7
8   Zona 8
9   Zona 9
10  Zona 10

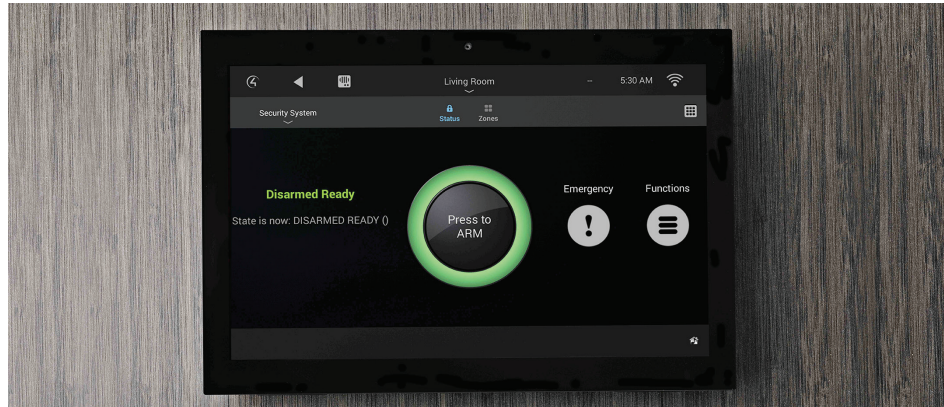
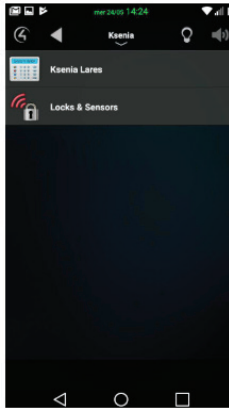
```

6. Perform a **navigator refresh** to update the Control4 interfaces

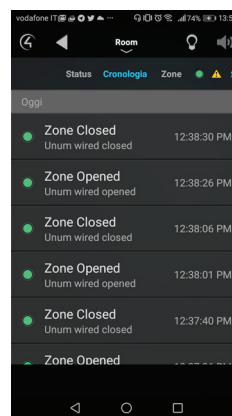
## Interface and functionality in Composer

The driver allows following operation:

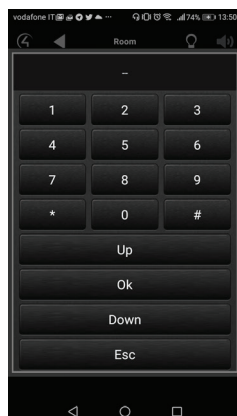
- Use the "new" Control4 security proxy interface released with version 2.8.0



- Use events, states, and functions provided by that proxy



- Recall Ksenia scenarios using the custom keyboard of the interface, from which you can scroll through the **scenarios** with **Up** and **Down** keys, or quickly recall a scenario by typing the "PIN" + "scenario number"





- See the status of the zones of the lares control panel:
  - In the driver **connections** as CONTACT\_SENSOR
  - in **programming** as variables for both state management and **ByPass** status control (see Appendix 1)
  - In the Control4 UI as provided by the security interface
- See the status of the output of the lares control panel:
  - In the driver **connection** as **RELAY**
  - in **programming** as variables (see appendix 1)
- disporre dello stato delle Partizioni della centrale lares 4.0
  - in **programming** come variabili (si veda l'appendice 1)
- recall the scenarios of the lares 4.0 control panel from **programming**

NOTE: The Control4 for Mac interface has several problems with the operation of the new security proxy, especially the custom keyboard. While waiting for Control4 to make a specific bug fix, it is not recommended to use it.

## Actions

### Data and Licence

It allows to print the date and re-appear in the "License Code" **property**, to be used in case of license and / or licenserelated changes (for example incorrectly typed value).

### Print Log Tags

It allows to view all of the TAGs used to characterize debugged message consoles. Such messages and such TAGs are decided by the developers at the time of creating the driver. Choosing to characterize messages is intended to speed up possible debugging and erroneous settings of the two systems.

### Display Status

It Allows to view the status of the lares control panel read from the Driver in the console, this provides an overview of **zones, partitions, outputs and scenarios**, and lares control panel information such as internal and external temperature and SIM status.

It is useful to verify the status of Control4 / Ksenia communication and to check names and states of all lares system components.

### Display C4 Variable

It allows to view in the console all the variables offered by the driver, their properties, and their status

### Remove old Variable and Output

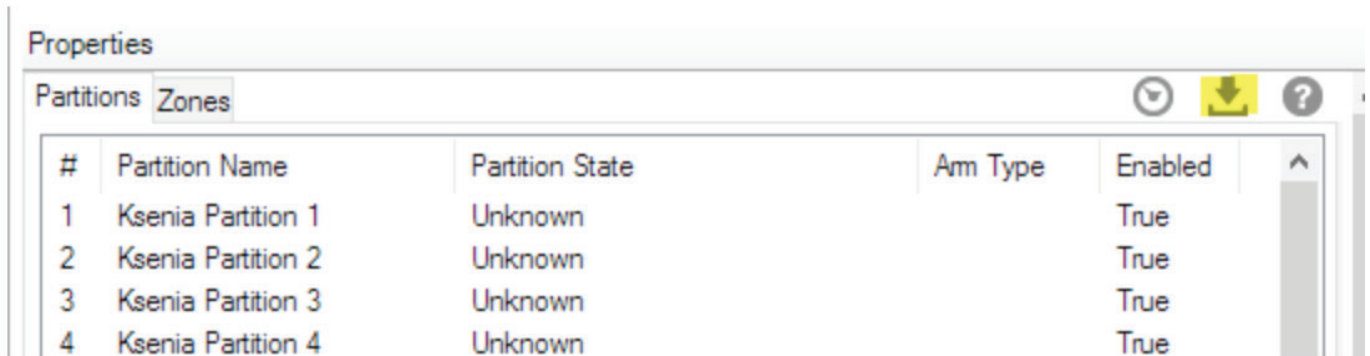
If you change the configuration of the lares control panel, you can use this action to remove all the variables and outputs that are no longer used.

NOTE: We recommend to use this feature at a time when other settings or readings are not being performed, in order to avoid misalignments and complete malfunctions.

## Configuration

In case of updates of the configuration of lares 4.0 from the installer interface such as insertion or removal of **zones**, **partitions**, **outputs**, it is necessary to re-read the configuration.

NOTE: it is important to set the property **Polling Period (minutes)** to "OFF" before updating the lares 4.0 control panel. The same is automatically restored after 60 minutes (returning the value to 5 minutes).



Properties				
Partitions Zones				
#	Partition Name	Partition State	Arm Type	Enabled
1	Ksenia Partition 1	Unknown		True
2	Ksenia Partition 2	Unknown		True
3	Ksenia Partition 3	Unknown		True
4	Ksenia Partition 4	Unknown		True

When an item is deleted, it is advisable, but not indispensable, to select the action "Remove old Variable and Output" after re-reading the configuration.

### Driver

If you update the driver, you must reset the "Default User Code" for the partitions that are not stored.

## TROUBLESHOOTING

### Configuration mismatching lares/Control4

It is not expected that configuration mismatching will occur in normal use. This situation can only be created during configuration by re-reading the Composer because the Control4 security proxy in some cases has problems during interfaces updating.

If the **"Display Status" action** correctly displays all the elements configured on lares, but some of them are not displayed on Control4 interfaces, it is suggested that you try to fix it by performing a driver update. In any case, it is strongly advised to do the following:

1. Configure all lares parameters in the most definitive way possible.
2. Install the driver on Control4.
3. Read the configuration of the lares control panel

### Practice for testing and putting into production

If communication tests are carried out in a "test" configuration, it is good practice to switch from test to production by following the procedure below:

1. Delete the driver,
2. Refresh the interfaces,
3. Re-install the driver
4. Read the configuration of the lares control panel

WARNING: Deleting the driver always generate the loss of all connections and programming already done.



## Events or Action (triggering in programming)

Proxy	Events or Action	When it happens
<b>Security Panel</b>	<b>Trouble Start</b>	A "trouble" message is sent.
	<b>Trouble Clear</b>	The trouble message is cleared. It is automatic for messages managed by the driver, it is to be handled for messages sent with the variable "KS_TROUBLE_TEXT" described below.
<b>Security Panel Action</b>	<b>In Trouble</b>	True (1) when the partition is displaying a trouble message, False (0) when the problem is cleared.
<b>Partition Panel</b>	<b>Alarm</b>	When partition alarm occurs.
	<b>Alarm Clear</b>	When the partition is disarmed, but it also activates when it restarts the alarm after a first Alarm event.
	<b>Disarmed</b>	When partition is disarmed
	<b>Armed</b>	When partition is armed.
	<b>Partition State Changed</b>	When partition status changes
	<b>Arm Failed</b>	When a partition is not ready to arm.
	<b>Disarm Failed</b>	Not supported.
	<b>Emergency Triggered</b>	When panic button is pressed
<b>Partition Panel Action</b>	<b>Arm</b>	Set the partition default user code.
	<b>Disarm</b>	Set the partition default user code.
	<b>Emergency</b>	A function must be set from the Ksenia's scenario for Panic button property drop-down menu.
	<b>Execute Function</b>	Select one of the features available on the interface, SIM Data, Temperatures, DisarmAll. (Set the partition default user code).
	<b>Arm All</b>	Set the partition default user code.
	<b>Disarm All</b>	Set the partition default user code.
<b>Device Specific Command</b>	<b>Call scenario</b>	It allows to recall a Ksenia scenario using its numeric ID (obtainable from Display Status).
	<b>ByPass_Zone</b>	It allows to bypass a zone through its numeric ID (obtainable from Display Status).
	<b>UnByPass_Zone</b>	It allows to remove the bypass of a zone through its numeric ID (obtainable from Display Status).

## Variables

### Security Panel - Device Variables

Variables	Type	Description	Readonly/ Writeable
<b>TROUBLE_TYPE</b>	String	Trouble message	<b>R</b>
<b>KS_TROUBLE_TEXT</b>	String	It sends a trouble message that remains in the UI until the variable is overwritten. To clean the display, set it to an empty string.	<b>W</b>
<b>KS_LastZoneAlarmed</b>	String	It contains the name of the last alarmed zone.	<b>R</b>
<b>KS_LastAlarmMessage</b>	String	Contains the text of the last alarm message displayed on the Control4 interfaces (in the format "[Partition_Name] is [Partition Status]: [KS_LastZoneAlarmed]").	
<b>KS_PartitionsChanged</b>	String	It contains the name of the last partition that has changed status and its status in format: "[Partition Name]> [Status]".	<b>R</b>
<b>KS_PartitionsMask</b>	String	List of ordered numbers representing the state of the partitions (updated at each variation). The states are so encoded: 0 = DISARMED_READY 1 = ARMED 2 = ALARM 3 = EXIT_DELAY 4= ENTRY_DELAY For example: 012 means that the first partition is DISARMED, the second is ARMED, the third is ALARMED.	<b>R</b>
<b>P_[partition_name]</b>	String	Status of the single partition can assume the values: DISARMED_READY ARMED EXIT_DELAY ENTRY_DELAY DELAY states occur even if time is zero. They do not show if they use the "no delays" or "immediate alarm" options	<b>R</b>
<b>P-N_[partition_name]</b>	String	It contains the name of the partition to be used for any "communications" to the UI.	<b>R</b>
<b>Z_[zone_name]</b>	String	Status of a single zone: NORMAL ALARM MASK TAMPER	<b>R</b>

Variables	Type	Description	Readonly/ Writeable
<b>Z-BP_[zone_name]</b>	<b>Bool</b>	Set the bypass status of a zone: true = BYPASS false = UN_BYPASS Warning: The status of the bypassed zones is always NORMAL	<b>W</b>
<b>Z-N_[zone_name]</b>	<b>String</b>	It contains the name of the zone to be used for any "communications" to the UI	<b>R</b>
<b>O_[Output_name]</b>	<b>Bool</b>	Sets the status of an Output: true = Closed/On false = Opened/Off	<b>W</b>
<b>GSM_operator</b>	<b>String</b>	Contains GSM carrier name	<b>R</b>
<b>Sim1_Credit</b>	<b>Number</b>	It contains the SIM 1 credit (integer)	<b>R</b>
<b>Temp_Indoor</b>	<b>Number</b>	Indoor temperature	<b>R</b>
<b>Temp_Outdoor</b>	<b>Number</b>	Outdoor temperature	<b>R</b>

## Partitions

Variables	Type	Description	Readonly/ Writeable
<b>DISARMED_STATE</b>	<b>Bool</b>	True (1) if disarmed otherwise it is False (0).	<b>R</b>
<b>AWAY_STATE</b>	<b>Bool</b>	True (1) if in alarm state, otherwise it is False (0).	<b>R</b>
<b>DISPLAY_TEST</b>	<b>String</b>	It contains the message displayed on the single partition.	<b>R</b>
<b>TROUBLE_TEST</b>	<b>String</b>	Trouble message	<b>R</b>
<b>IS_ACTIVE</b>	<b>Bool</b>	True (1) if the partition is active and it can be used otherwise it is False (0)	<b>R</b>
<b>PARTITION_STATE</b>	<b>String</b>	Text representing the current state of the partition	<b>R</b>
<b>DELAY_TIME_TOTAL</b>	<b>intero</b>	It works on both Entry and Exit, it contains the total duration of the current delay. If I do not have a delay, it is 0	<b>R</b>
<b>DELAY_TIME_REMAINING</b>	<b>intero</b>	It contains the remaining time after the delay expires, if I do not have a delay it is 0	<b>R</b>
<b>OPEN_ZONE_COUNT</b>	<b>intero</b>	It is the number of open zones in the partition, usually it is useful when the arm status is DISARMED_NOT_READY.	<b>R</b>
<b>ALARM_TYPE</b>	<b>string</b>	It contains a description of the alarm condition if they are in alarm state, the possible alarm states are: Burglary and Panic. If it is not in Alarm it is empty	<b>R</b>
<b>ARMED_TYPE</b>	<b>string</b>	Last Date Fail To Close. Attention is never cleaned.	<b>R</b>
<b>LAST_EMERGENCY</b>	<b>string</b>	If Panic function is used this variable contains PANIC	<b>R</b>
<b>LAST_ARM_FAILED</b>	<b>string</b>	It contains Date of last Fail To Close. Attention is never cleaned.	<b>R</b>

