Johnson Controls

# Object Library

## KONE Elevator Object

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# KONE ELEVATOR OBJECT

## INTRODUCTION

The KONE Elevator object represents KONE elevator in a KONE high level elevator integration. The KONE Elevator object must be a child of the KONE Controller object.

In a high level elevator integration, the access control system interfaces with the elevator control system through a communications protocol. Granting access to floors is achieved by sending telegrams to the elevator controller; reporting the pressed floor buttons is achieved by receiving telegrams from the elevator controller.

The arrows in the diagram show the message flow between the different components of the elevator interface.

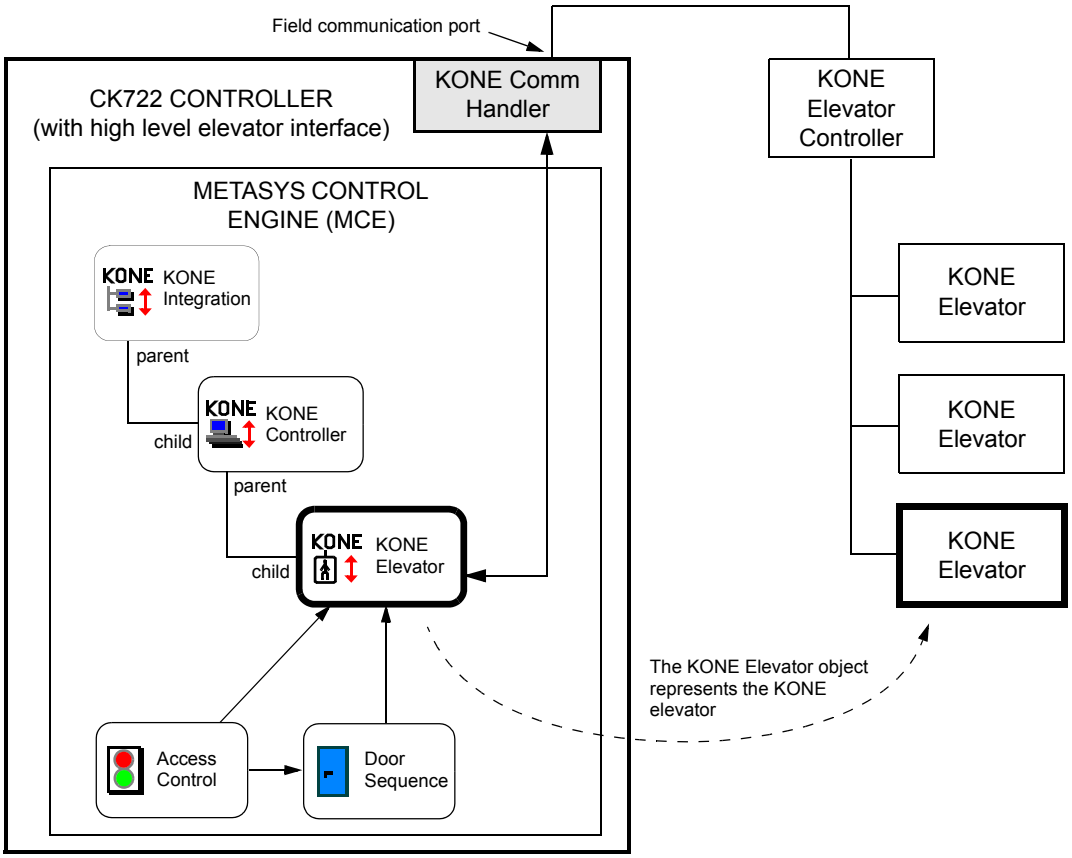


*Figure 1: KONE Elevator Object*

# ATTRIBUTES

This section describes visible attributes specific to the KONE Elevator object. This object also contains:

- Attributes common to all objects in the P2000 Security Management System. For details, see the *General Object Information* document.
- Internal attributes, which are invisible to the user and cannot be modified directly, but may be referred to throughout this document.

*Table 1: KONE Elevator Object Attributes*

| Attribute Name | Attribute Number | Data Type | Notes | Initial Value | Values/Options /Range |
|---|---|---|---|---|---|
| *Access Control Object* | 4072 | Object Reference | WCAN | - | - |
| *Access Time* | 2268 | Unsigned16 | WCA | 5 | 1 to 1000 seconds |
| *Door Sequence Object* | 3022 | Object Reference | WCAN | - | - |
| *Elevator Address* | 4077 | Unsigned8 | WCA | 1 | 1 to 8 |
| *Error Notification* | 3040 | Boolean | WCA | 1 | |
| *Floor List* | 4073 | List of Floor B | WCAN | - | Max. 64 entries |
| *Floor Tracking* | 4074 | Boolean | WCA | 1 | - |
| *Notification Class* | 17 | Unsigned32 | WCA | 1 | - |
| *Notify Priority* | 3644 | Unsigned8 | WCA | - | - |

A - Archive, C - Configurable, N - Value not required, W - Writable

**Access Control Object** – Specifies which Access Control object the Elevator object shall use to obtain input from the reader(s).

**Access Time** – Specifies how long the elevator accepts floor button presses after elevator access was granted.

**Door Sequence Object** – Specifies which Door Sequence object the Elevator object shall consult for elevator override status.

**Elevator Address** – Specifies the numerical address of the elevator cab.

**Error Notification** – Specifies whether the Elevator object sends out extra notifications every time a error is encountered, such as missing data records or objects. These error notifications are in addition to all other notifications the Elevator object may generate.

**Floor List** – Specifies the elevator's floor configuration. Only floors that are contained in the *Floor List* attribute of the object's KONE Integration grandparent object are allowed. Only floors that are actually served by the elevator need to be entered. There is no requirement to adhere to a certain order of the floor entries. See "Floor B Data Type" on page 1-3 for details.

**Floor Tracking** – Specifies whether pressed floor buttons shall be reported to the host.

**Notification Class** – Specifies which Security Notification Class object the Elevator object shall use to send its notifications.

**Notify Priority** – Specifies the Priority parameter of all notifications generated by the Elevator object.

## Floor B Data Type

The KONE Elevator object uses Floor B for its *Floor List* attribute.

*Table 2: Floor B Data Type*

| Floor | Data Type | Values/Options /Range |
|---|---|---|
| *Floor Number* | Unsigned16 | 1 - 512 |
| *Public Access Attribute* | Attribute reference | - |

**Floor Number** – Specifies the 1 based floor descriptor as defined by the P2000 host. At the SCT (System Configuration Tool) this floor descriptor is displayed as the floor name defined at the P2000 host.

**Public Access Attribute** – Specifies a numerical attribute that enables public access to this floor when equal to 1. This attribute member may be left blank if no public access is desired.

# COMMANDS

This section describes commands that can be issued to this object from SCT.

*Table 3: KONE Elevator Object Commands*

| Command Name | Description |
|---|---|
| `Change Attribute` | See the description below. |

The `Change Attribute` is a generic command available for writing the attributes of an object. It is mainly used to change an attribute value from those features which work only with commands. For the sole purpose of giving a generic example, there is no command

defined to change the *Notify Priority* attribute of an object. `Change Attribute` could, therefore, be used to change the *Notify Priority* attribute through an interlock or multiple command, both features which require commands to be entered. The `Change Attribute` command requires two parameters:

- Attribute - This parameter specifies which attribute of the object is to be written. Only writable attributes may be changed by this command.
- New value - This parameter specifies new value to be written and must be the same data type as the attribute. The only data types allowed in this command are those allowed as command parameters. A command priority can be specified if the attribute to be changed is a prioritized attribute.

# VIEWS

This section illustrates how the System Configuration Tool displays properties of the KONE Elevator object. This screen also allows you to set the values of configurable attributes. For more information refer to the *System Configuration Tool (SCT)* manual.

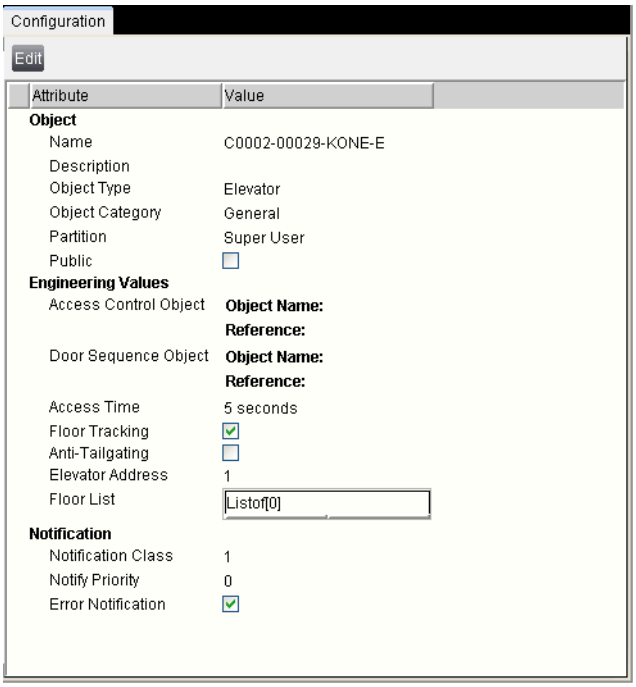


*Figure 2: Configuration View*

# DESCRIPTION OF OPERATION

## Access Output

Every change to the list of floors on public access is sent to the elevator controller task. Similarly, every change to the list of floors on elevator access is sent to the elevator controller task. That task is responsible for sending this information to the elevator controller in the appropriate format.

## Floor Button Input

In a high level elevator integration the pressed floor button is reported to the access controls system via a telegram sent from the elevator controller.

When this information reaches the KONE Elevator object, the anti-tailgating and floor tracking features are invoked.

## Anti-Tailgating

As soon as a pressed floor button is reported to the KONE Elevator object the anti-tailgating function is performed.

When the Anti-Tailgating attribute is set to “True,” a telegram is sent from the access control system to the elevator controller revoking the elevator access.

## Floor Tracking

As soon as a pressed floor button is reported to the KONE Elevator object the floor tracking function is performed. The *Floor Tracking* attribute is the master switch to turn floor tracking notifications on or off. If generated, a floor tracking notification assigns the pressed floor button's *Floor Number* member with the last entity that requested access.

When the *Floor Tracking* attribute is set to “True,” a floor tracking notification is generated that assigns the pressed floor button's *Floor Number* member with the last entity that requested access. This notification is sent independent of whether the floor is allowed for access, as the reporting of the floor may occur with a significant delay.