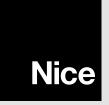


**Integration Protocol** 



## **SERIAL / ETHERNET**

The standard interfaces (Serial / Ethernet) allow Nice products to be operated and controlled on the "BusT4" channel.

## **Serial configuration**

The device can be connected to a PC running a terminal emulator. The RS232 port must be configured as follows:

Baudrate: 115200Parity: NoneData bits: 8Stop bits: 1

• Flow Control: None

ATTENTION: the strings must all end with the string terminator \$0d (CR).

#### IP connection

The serial interface is emulated via TCP/IP. The default settings are:

lp-address: 192.168.0.1Subnet-mask: 255.255.255.0Default gateway: 192.168.0.254

• Tcp-port: 23

• The IP configuration can be modified via a serial connection RS232, NICE CONFIGURATOR TOOL

### **COMMUNICATIONS PROTOCOL**

The serial interface and tcp/ip connection allow you to control the device with the following commands.

The protocol syntax is as follows:

## <COMMAND> <Flag> <Parameters>

<command/>	Identifies the command to be executed or associated information					
<flag></flag>	Identifies the action associated with the command. The protocol provides for the following values:					
	'<' command sent by the PC; indicates a request for information (GET) mation or interface, as specified in the <parameters> field</parameters>					
	<b>'&gt;'</b>	command sent by the PC; indicates a request to change a setting/ state (SET) on the automation, as specified in the <parameters> field</parameters>				
	<b>'#'</b>	command sent by the interface; indicates a response (RSP) to the simple reception of a command, not to its execution				
	6*9	command sent by the interface; indicates an event (EVT) on one of the automations connected to the "BusT4" or the interface itself (for example, for commands/ queries relating to its 4 inputs and outputs). The event may have been tripped by a request from the PC itself or any other system interacting directly with the automation, such as a photocell, remote control, programmable timer, etc, of which the interface may know/not know the details				
	command sent by the interface; indicates communications or sylthe command sent by the PC to the interface or by the interface for which the command in question is intended					
<parametri></parametri>	Composed of	one or more strings whose syntax depends on the command in question				

For more specification about this syntax, see the TTPCI user manual.

## 1. "BusT4" commands: POS

Associating the POS command with the FLAG allows you to query or change the percentage position of an automation connected to the BusT4. The protocol is as follows (caution! parameter [yy] is not required in the commands; it is sent by the interface solely when returning an error message, such as ERR):

# "pos [flag] [gg] [ee] [pppp] [qqqq] [x] [yy]"

<flag></flag>	In combination with POS, defines the type of message sent:				
	<b>'&gt;'</b>	SET command, sends a request to vary the percentage position of an automation			
	<b>'&lt;'</b>	GET command, queries the percentage position of an automation			
	response of the interface (RSP) confirming reception of the GET / SET comman response of the interface (EVT), sending the requested information				
	'!'	response of the interface (ERR) indicating a syntax error in the GET / SET command			
<gg></gg>	Address of the automation				
<ee></ee>	Endpoint of the automation				

A. FOR THE SET / GET COMMANDS A	ND FOR RSP / EVT RESPONSES:					
<pppp></pppp>	indicates the target percentage position of the motor (always present), in thousandths. The value runs from 0000 to 1000. The value FFFF indicates that the position of the motor is not to be changed. The value 0000 indicates fully closed, 1000 fully open					
<pre><pqqq></pqqq></pre>	always FFFF					
<x></x>	a parameter used to indicate a series of additional behaviours to the automation. The following configuration parameters are available:					
	<0> step-by-step mode operation of the automation. Not implemented					
	<1> locks the automation once the manoeuvre specified in parameters <pppp> and <qqqq> has terminated</qqqq></pppp>					
	<2>	releases the automation before the manoeuvre specified in parameters <pppp> and <qqqq> starts</qqqq></pppp>				
	unlock before manoeuvre and lock after manoeuvre (i.e. the manoeuvre defined by parameters <pppp> and <qqqq>)</qqqq></pppp>					
	<4> - <e></e>	reserved for future implementations				
	<f></f>	no additional information				

B. For ERR responses:	ERR responses:						
<pppp></pppp>	not applicable in case of ERR message						
<pre><pqqq></pqqq></pre>	not applicable	in case of ERR message					
<x></x>	not applicable	in case of ERR message					
<yy></yy>	tells the opera	tor which error has been detected, according to the following table:					
	<00> no error						
	<01>	command syntax error					
	<02> command timeout						
	<03> collision on "BusT4"						
	<04> device not found						
	<05> - <0f> not used; available for future developments						
	<10> command execution error						
	<11>	protocol data error					
	<12>	encoder data error					
	<13>	position data error					
	<14>	"Bluebus" error. Not implemented					
	<15> memory error						
	<16> - <ef></ef>	not used; available for future developments					
	<f0></f0>	"BusT4" not operating					
	<f1></f1>	not used; available for future developments					

C. For EVT responses:							
<x></x>	reports the sta	eports the status of the automation. May take the following values:					
	<1>	<1> automation locked					
	<2>	automation unlocked					
	<3>	automation moving					
	<f></f>	no additional information					

Example – request to single motor automation, address 3 and endpoint 5, to move to the fully open position: "POS > 03 05 1000 FFFF F"
"POS # 03 05 1000 FFFF F"
"POS \* 03 05 1000 FFFF F"

# 2. "BusT4" commands: CMD

Associating the CMD command with the FLAG allows you to send a command to an automation connected to the BusT4. The protocol is as follows (caution! parameter [yy] is not required in the commands; it is sent by the interface solely when returning an error message, such as ERR):

"cmd [flag] [gg] [ee] [xx] [yy]"

<flag></flag>	In combination with CMD, defines the type of message sent:						
	<b>'&gt;'</b>	'>' SET command, sends a request to vary the percentage position of an automatio					
	'<' GET command, queries the percentage position of an automation						
	<ul> <li>response of the interface (RSP) confirming reception of the GET / SET comment</li> <li>response of the interface (EVT), sending the requested information</li> </ul>						
	<b>'!'</b>	response of the interface (ERR) indicating a syntax error in the GET / SET command					
[99]	address of the automation						
<ee></ee>	endpoint of the automation						

The meaning of the following parameters depends on the [flag].

[xx]		a parameter used to indicate the command that has to be executed.  The following parameters are available in the following table:					
	<00> - <01>	<00> - <01> not used; available for future developments					
	<02>	stop command					
	<03>	up command					
	<04>	<04> down command					
	<05>	<05> intermediate position 1					
	<06>	intermediate position 2					
	<07>	intermediate position 3					
	<08> - <0A>	not used; available for future developments					
	<0B>	intermediate position 4					
	<0C>	intermediate position 5					
	<0D>	<0D> intermediate position 6					
	<0A> - <ff></ff>	<0A> - <ff> not used; available for future developments</ff>					

For ERR responses:							
<xx></xx>	not applicable in case of ERR message						
<yy></yy>	tells the opera	tells the operator which error has been detected, according to the following table:					
	<00>	no error					
	<01>	command syntax error					
	<02>	command timeout					
	<03>	collision on "BusT4"					
	<04> device not found <05> - <0f> not used; available for future developments <10> command execution error						
	<11>	protocol data error					
	<12>	encoder data error					
	<13>	position data error					
	<14>	"Bluebus" error Not implemented					
	<15>	memory error					
	<16> - <ef> not used; available for future developments  <f0> "BusT4" not operating</f0></ef>						
	<f1></f1>	not used; available for future developments					

C. For EVT responses:							
<x></x>	reports the sta	reports the status of the automation. May take the following values:					
	<1>	<1> automation locked					
	<2>	automation unlocked					
	<3> automation moving						
	<4> automation opening						
	<5>	automation closeing					
	<6>	no limits set					
	<7> automation malfunction/error						
	<f> no additional information</f>						

### 3. "BusT4" commands: GRP

Associating the GRP command with the FLAG allows you to send a command to a group of automation connected to the BusT4. The field **[zzzzz...]** is a 16 byte Bitmask to activate the command to the respective motor: you have to follow the following formula for each motor where EPT is the address of the motor:

# mskToSend[(EPT /8)]|= (0x01<<((EPT) & 7))

#### Example:

EPT n							m	skToSe	nd [HE	<b>X</b> ]						
EDT 0	В0	B1	B2	B3	B4	B5	B6	B7	B8	В9	B10	B11	B12	B13	B14	B15
EPT 0	01	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
EPT 1	В0	B1	B2	В3	B4	B5	В6	B7	B8	В9	B10	B11	B12	B13	B14	B15
EPII	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
EPT 2	В0	B1	B2	В3	B4	B5	В6	B7	B8	В9	B10	B11	B12	B13	B14	B15
EP12	04	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
EPT 3	В0	B1	B2	В3	B4	B5	В6	B7	B8	В9	B10	B11	B12	B13	B14	B15
EPIS	08	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
EPT 4	В0	B1	B2	B3	B4	B5	В6	B7	B8	В9	B10	B11	B12	B13	B14	B15
EP14	10	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
EPT 5	В0	B1	B2	B3	B4	B5	B6	B7	B8	В9	B10	B11	B12	B13	B14	B15
EPIS	20	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
EPT 8	В0	B1	B2	B3	B4	B5	B6	B7	B8	В9	B10	B11	B12	B13	B14	B15
EPIO	00	01	00	00	00	00	00	00	00	00	00	00	00	00	00	00
EPT 127	В0	B1	B2	ВЗ	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15
EF1 121	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	10

The [zzzzz...] field allow to make that the motors begin the maneuver all at the same time.

The protocol is as follows (caution! parameter [yy] is not required in the commands; it is sent by the interface solely when returning an error message, such as ERR):

# "grp [flag] [gg] [ee] [xx] [ff] [zzzzzzzzzzzzzzzzzzzzzzzzzzzz] [kkkk][yy]"

<flag></flag>	In combination with GRP, defines the type of message sent:					
	'>'	SET command, sends a request to vary the percentage position of an automation				
	<b>'</b> #'	response of the interface (RSP) confirming reception of the GET / SET command				
	response of the interface (EVT), sending the requested information					
	'!'	response of the interface (ERR) indicating a syntax error in the GET / SET command				
<gg></gg>	Address of the automation					
<ee></ee>	Endpoint of the automation. It has to be ff (broadcast)					

A. For the SET / GET commands and for	. For the SET / GET commands and for RSP / EVT responses:					
[xx]	a parameter used to indicate the command that has to be executed. The following parameters are available in the following table:					
	<00> - <01>	not used; available for future developments				
	<02>	stop command				
	<03>	up command				
	<04>	down command				
	<05> intermediate position 1 <06> intermediate position 2 <07> intermediate position 3 <08> - <0A> not used; available for future developments <0B> intermediate position 4					
	<0C>	intermediate position 5				
	<0D>	intermediate position 6				
	<0E> - <2A>	not used; available for future developments				
	<2B>	go to % position				
	<2C> - <ff></ff>	not used; available for future developments				
[ff]	interpreted only if only if <xx> is 0x2b, Position in from 0 to 100 where 0 is the low limit and 100 is the high limit</xx>					
[ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ	mskToSend[(EPT /8)]  = (0x01<<((EPT) & 7))					
[kkkk]	delay after which will activate the command sent in millisecons from 0000 to ffff					

B. For ERR responses:			
[xx]	not applicable	in case of ERR message	
[ff]	not applicable	not applicable in case of ERR message	
[ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ	not applicable	not applicable in case of ERR message	
[kkkk]	not applicable	in case of ERR message	
[yy]	Tells the opera	ator which error has been detected, according to the following table:	
	<00>	no error	
	<01>	command syntax error	
	<02>	command timeout	
	<03>	collision on "BusT4"	
	<04>	device not found	
	<05> - <0f>	<05> - <0f> not used; available for future developments	
	<10>	command execution error	
	<11>	protocol data error	
	<12>	encoder data error	
	<13>	position data error	
	<14>	"Bluebus" error. Not implemented	
	<15>	memory error	
	<16> - <ef></ef>	not used; available for future developments	
	<f0></f0>	"BusT4" not operating	
	<f1></f1>	not used; available for future developments	

# C. For EVT responses:

No EVT

# 4. "BusT4" commands: INP

The INP command allows you to query the interface for the status of a given DMBM device input. The protocol is as follows (parameter [yy] is not obligatory; it is sent solely by ERR responses):

# "inp [flag] [g] [v] [yy]"

[flag]	in combination	n with INP, defines the type of message sent:
	<	GET command, requests the status of a given input
	#	response of the interface (RSP) indicating that the GET command has been received
	!	response of the interface (ERR) indicating a GET command syntax error
	*	response of the interface (EVT), sending the requested information
[9]	Address of the To enable the	e input (0 - F). inputs use the Nice Screen Configuration Tool
[v]	The meaning	of the parameter depends on the [flag]
	For GET comi	mands:
	<0>	fixed parameter
	For an ERR re	esponse, the parameter has no meaning
	For an EVT re	sponse, the parameter indicates the state of the input in question
	<0>	input not active
	<1>	input active
[уу]	Tells the opera	ator which error has been detected, according to the following table:
	<00>	no error
	<01>	command syntax error
	<02>	command timeout
	<03>	collision on "BusT4"
	<04>	device not found
	<05> - <0f>	not used; available for future developments
	<10>	command execution error
	<11>	protocol data error
	<12>	encoder data error
	<13>	position data error
	<14>	"Bluebus" error. Not implemented
	<15>	memory error
	<16> - <ef></ef>	not used; available for future developments
	<f0></f0>	"BusT4" not operating
	<f1></f1>	not used; available for future developments

**Example** – a request to the automation as to whether input 1 is active, and the interface's confirmation:

<sup>&</sup>quot;INP < 0 0"

<sup>&</sup>quot;INP # 0 0"

<sup>&</sup>quot;INP \* 0 1"

# "inf [flag] [gg] [ee] [ww] [xx] [zz][yy]"

INF commands return information about the devices on the "BusT4" line. The protocol is as follows:

[flag]	in combination	n with INF, defines the type of message sent:
	<	GET command, used to request the list of devices on the "BusT4" line
	#	response of the interface (RSP) confirming reception of the GET / SET command
	!	esponse of the interface (ERR) indicating a syntax error in the GET / SET command
	*	response of the interface (EVT), sending the requested information
[gg]	address of the	e automation
	Indicates the	filter to be applied to the list of devices in the GET:
	00 ≤ gg ≤ fe	filter set to <gg>; only devices whose address is <gg> are listed</gg></gg>
	<ff></ff>	no filter; devices with any address will be listed. For the RSP, ERR and EVT
		responses, it assumes the value passed by the previous SET / GET
[ee]	Endpoint of a	utomation
	Indicates the	filter on the endpoint to apply to the list of devices in the GET:
	00 ≤ ee ≤ fe	filter set to <ee>; only devices whose endpoint is <ee> are listed</ee></ee>
	<ff></ff>	no filter; devices with any endpoint will be listed. For the RSP and EVT responses it assumes the value passed by the previous SET / GET
[ww]	The meaning	of the parameter depends on the [flag]. Its default value is <ff></ff>
	Indicates the p	orofile of the automation for the EVT response or the GET filter:
	<00>	standard
	<01>	display. Not implemented
	<02>	PC. Not implemented
	<03>	not used; available for future expansions
	<04>	motor control unit. Not implemented
	<05>	not used; available for future expansions
	<06>	screen control unit
	<07> - <09>.	not used; available for future expansions
	<0a>	OXI. Not implemented
	<0b>	not used; available for future expansions
	For the RSP a	and ERR responses, it assumes the value passed by the previous GET
[xx]	The meaning	of the parameter depends on the [flag]. Its default value is <ff></ff>
		type of automation for the RSP response or the GET filter:
	<00>	not used; available for future expansions
	<01>	sliding. Not implemented
	<02>	sectional. Not implemented
	<03>.	swing. Not implemented
	<04>	barrier. Not implemented
	<05>	up-and-over. Not implemented
	<06> - <69>	not used; available for future expansions
	<70>	shutters
	<71>	rolling blinds
	<72>	sun shades
	<73>	projection screens
	<74>	dampers
	<75>	mosquito nets
	<76>	venetian blinds
	<77>	orientable shutters
	<78>	patio/pergola
	<79>	curtains for interiors
	<79>	roman blinds
	_7Dfa:	I not ucod: available for future avacacione
	<7B> - <fe></fe>	not used; available for future expansions no filter active.

[zz]	The meaning of	of the parameter depends on the [flag]. Its default value is <ff></ff>
	Indicates the s	status of the device for the RSP response or the GET filter:
	<00>	automation closed
	<01>	automation open
	<02>	automation moving
	<03>	automation malfunction/error
	<04>	no limits set
	<05>	automation opening
	<06>	automation closeing
	<07> - <fe></fe>	reserved for future implementations
	<ff></ff>	no filter active
	For the RSP a	nd ERR responses, it takes the value passed by the previous GET
[уу]	Reports the er	rror, according to the following table:
	<00>	no error
	<01>	command syntax error
	<02>	command timeout
	<03>	collision on "BusT4"
	<04>	device not found
	<05> - <0f>	not used; available for future developments
	<10>	command execution error
	<11>	protocol data error
	<12>	encoder data error
	<13>	position data error
	<14>	"Bluebus" error. Not implemented
	<15>	memory error
	<16> - <ef></ef>	not used; available for future developments
	<f0></f0>	"BusT4" not operating
	<f1> - <ff></ff></f1>	not used; available for future developments

# 6. "BusT4" commands: LST

LST commands relate to the handling/acquiring of information in the list of automations on the "BusT4" line. The protocol is as follows:

# 

[flag]	In combination	n with LST, defines the type of message sent:
	<	GET command, used to request the list of devices on the "BusT4" line
	#	response of the interface (RSP) confirming reception o the GET / SET command
	!	response of the interface (ERR) indicating a syntax error in the GET / SET command
	*	response of the interface (EVT), sending the requested information
[99]	Address of the	e automation
	<ul> <li>Indicates the filter to be applied to the list of devices in the GET:</li> <li>00 ≤ gg ≤ fe filter set to <gg>; only devices whose address is <gg> are listed</gg></gg></li> </ul>	
	<ff></ff>	no filter; devices with any address will be listed. For the RSP, ERR and EVT responses, it assumes the value passed by the previous SET / GET
[ee]	Endpoint of au	utomation
	Indicates the f	ilter on the endpoint to apply to the list of devices in the GET:
	00 ≤ ee ≤ fe	filter set to <ee>; only devices whose endpoint is <ee> are listed</ee></ee>
	<ff></ff>	no filter; devices with any endpoint will be listed. For the RSP and EVT responses, it assumes the value passed by the previous SET / GET

[ww]	The meaning of	of the parameter depends on the [flag]. Its default value is <ff></ff>
[]		profile of the automation for the EVT response or the GET filter:
	<00>	standard
	<01>	display. Not implemented
	<02>.	PC. Not implemented
	<02>.	not used; available for future expansions
	<04>	
		motor control unit. Not implemented
	<05>	not used; available for future expansions
	<06>	screen control unit
	<07> - <09>.	not used; available for future expansions
	<0a>	OXI. Not implemented
	<0b>	not used; available for future expansions
	For the RSP a	nd ERR responses, it assumes the value passed by the previous GET
[xx]	The meaning of	of the parameter depends on the [flag]. Its default value is <ff></ff>
	Indicates the t	type of automation for the RSP response or the GET filter:
	<00>	not used; available for future expansions
	<01>	sliding. Not implemented
	<02>	sectional. Not implemented
	<03>.	swing. Not implemented
	<04>	barrier. Not implemented
	<05>	up-and-over. <b>Not implemented</b>
	<06> - <69>	not used; available for future expansions
	<70>	shutters
	<71>	rolling blinds
	<72>	sun shades
	<73>	projection screens
	<74>	dampers
	<75>	mosquito nets
	<76>	venetian blinds
	<77>	orientable shutters
	<78>	patio/pergola
	<79>	curtains for interiors
	<7A>	roman blinds
	<7B> - <fe></fe>	not used; available for future expansions
	<ff></ff>	no filter active
	For the RSP a	and ERR responses, it assumes the value passed by the previous GET
[zz]	The meaning of	of the parameter depends on the [flag]. Its default value is <ff></ff>
	Indicates the s	status of the device for the RSP response or the GET filter:
	<00>	automation closed
	<01>	automation open
	<02>	automation moving
	<03>	automation malfunction/error
	<04>	no limits set
	<05>	automation opening
	<06>	automation closeing
	<07> - <fe></fe>	reserved for future implementations
	<ff>&lt;07&gt; - &lt;1e&gt;</ff>	no filter active
	1111	and ERR responses, it takes the value passed by the previous GET
[vvvvvvvvvvvvvvvvvvvvvvv		of the parameter depends on the [flag]. Its default value is <ffffff>.</ffffff>
[xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	Indicates the	description of the scenario for the RSP response or the GET filter. 32chars
[уу]	Reports the er	rror, according to the following table:
	<00>	no error
	<01>	command syntax error
	<02>	command timeout
	<03>	collision on "BusT4"
		•

<04>	device not found
<05> - <0f>	not used; available for future developments
<10>	command execution error
<11>	protocol data error
<12>	encoder data error
<13>	position data error
<14>	"Bluebus" error. Not implemented
<15>	memory error
<16> - <ef></ef>	not used; available for future developments
<f0></f0>	"BusT4" not operating
<f1> - <ff></ff></f1>	not used; available for future developments

## 7. "BusT4" commands: SCN

Associating the SCN command with the FLAG allows you to activate a scenario of automations connected to the BusT4. To create the groups it is necessary to use the Nice Screen Configuration Tool. The protocol is as follows (caution! parameter [yy] is not required in the commands; it is sent by the interface solely when returning an error message, such as ERR):

# "scn [flag] [gg] [v] [yy]"

[flag]	In combination	n with SCN, defines the type of message sent:
	<b>'&gt;'</b>	SET command, request a scenario
	#	response of the interface (RSP) indicating that the GET command has been received
	!	response of the interface (ERR) indicating a GET command syntax error
	*	response of the interface (EVT), sending the requested information
[99]	Scenario ID (0	- FF). To enable the Scenes use the Nice Screen Configuration Tool
[v]	The meaning of	of the parameter depends on the [flag]
	For GET comr	mands:
	<0>	fixed parameter
	For an ERR re	sponse, the parameter has no meaning:
	<1>	input active
[уу]	Tells the opera	ator which error has been detected, according to the following table:
	<00>	no error
	<01>	command syntax error
	<02>	command timeout
	<03> collision on "BusT4"	
	<04>	device not found
	<05> - <0f>	not used; available for future developments
	<10>	command execution error
	<11>	protocol data error
	<12>	encoder data error
	<13>	position data error
	<14>	"Bluebus" error. Not implemented
	<15>	memory error
	<16> - <ef></ef>	not used; available for future developments
	<f0></f0>	"BusT4" not operating
	<f1></f1>	not used; available for future developments

# 8. "BusT4" commands: GRC

Associating the GRC command with the FLAG allows you to send a command to a group of automation connected to the BusT4. To create the groups it is necessary to use the Nice Screen Configuration Tool. The protocol is as follows (caution! parameter [yy] is not required in the commands; it is sent by the interface solely when returning an error message, such as ERR):

# "grc [flag] [gg] [xx] [yy]"

[flag]	In combination	In combination with GRC, defines the type of message sent:	
	<b>'&gt;'</b>	SET command, request a group command	
	#	response of the interface (RSP) indicating that the GET command has been received	
	!	response of the interface (ERR) indicating a GET command syntax error	
[99]	Group ID (0 - FF). To enable the Scenes use the Nice Screen Configuration Tool		

The meaning of the following parameters depends on the [flag].

A. For the SET / GET commands and for	or RSP / EVT r	esponses:	
[xx]		parameter used to indicate the command that has to be executed. The following parameters are available in the following table:	
	<00> - <01>	not used; available for future developments	
	<02>	stop command	
	<03>	up command	
	<04>	down command	
	<05>	intermediate position 1	
	<06>	intermediate position 2	
	<07>	intermediate position 3	
	<08> - <0A>	not used; available for future developments	
	<0B>	intermediate position 4	
	<0C>	intermediate position 5	
	<0D>	intermediate position 6	
	<0E> - <2A>	not used; available for future developments	
	<2B>	go to % position	
	<2C> - <ff></ff>	not used; available for future developments	
[ff]	interpreted on and 100 is the	ly if only if <xx> is 0x2b, Position in from 0 to 100 where 0 is the low limit high limit</xx>	

B. For ERR responses:			
<xx></xx>	not applicable	not applicable in case of ERR message	
<yy></yy>	Tells the opera	Tells the operator which error has been detected, according to the following table:	
	<00>	no error	
	<01>	command syntax error	
	<02>	command timeout	
	<03>	collision on "BusT4"	
	<04>	device not found	
	<05> - <0f>	not used; available for future developments	
	<10>	command execution error	
	<11>	protocol data error	
	<12>	encoder data error	
	<13>	position data error	
	<14>	"Bluebus" error. Not implemented	
	<15>	memory error	
	<16> - <ef></ef>	not used; available for future developments	
	<f0></f0>	"BusT4" not operating	
	<f1></f1>	not used; available for future developments	

# 9. "BusT4" commands: LSC

LSC commands relate to the handling/acquiring of information in the list of Scenes on the "BusT4" line. The protocol is as follows:

# 

[flag]	In combination	n with LSC, defines the type of message sent:
[nug]	<	GET command, used to request the list of devices on the "BusT4" line
	#	response of the interface (RSP) confirming reception o the GET / SET command
	!	response of the interface (ERR) indicating a syntax error in the GET / SET command
	*	response of the interface (EVT), sending the requested information
[99]	Scenario ID (0	
[99]		Scenes use the Nice Screen Configuration Tool
	Indicates the f	ilter to be applied to the list of devices in the GET:
	00 ≤ gg ≤ fe	filter set to <gg>; only devices whose address is <gg> are listed</gg></gg>
	<ff></ff>	no filter; devices with any address will be listed. For the RSP, ERR and EVT responses, it assumes the value passed by the previous SET / GET
[ww]	The meaning of	of the parameter depends on the [flag]. Its default value is <ff></ff>
	Indicates the p	profile of the automation for the EVT response or the GET filter:
	<00>	standard
	<01>	display. Not implemented
	<02>.	PC. Not implemented
	<03>	not used; available for future expansions
	<04>	motor control unit. Not implemented
	<05>	not used; available for future expansions
	<06>	screen control unit
	<07> - <09>.	not used; available for future expansions
	<0a>	OXI. Not implemented
	<0b>	not used; available for future expansions
	For the RSP a	nd ERR responses, it assumes the value passed by the previous GET
[xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx]	The meaning of Indicates the of	of the parameter depends on the [flag]. Its default value is <ffffff>. description of the scenario for the RSP response or the GET filter. 32chars</ffffff>
[уу]	Reports the er	ror, according to the following table:
	<00>	l an arman
		no error
	<01>	command syntax error
	<01> <02>	
		command syntax error
	<02>	command syntax error command timeout.
	<02> <03>	command syntax error command timeout. collision on "BusT4"
	<02> <03> <04>	command syntax error command timeout. collision on "BusT4" device not found
	<02> <03> <04> <05> - <0f>	command syntax error command timeout. collision on "BusT4" device not found not used; available for future developments
	<02> <03> <04> <05> - <0f> <10> <11> <12>	command syntax error command timeout. collision on "BusT4" device not found not used; available for future developments command execution error protocol data error encoder data error
	<02> <03> <04> <05> - <0f> <10> <11>	command syntax error command timeout. collision on "BusT4" device not found not used; available for future developments command execution error protocol data error encoder data error position data error
	<02> <03> <04> <05> - <0f> <10> <11> <12> <13> <14>	command syntax error command timeout. collision on "BusT4" device not found not used; available for future developments command execution error protocol data error encoder data error
	<02> <03> <04> <05> - <0f> <10> <11> <12> <13> <14> <15>	command syntax error command timeout.  collision on "BusT4"  device not found  not used; available for future developments command execution error protocol data error encoder data error position data error  "Bluebus" error. Not implemented memory error
	<02> <03> <04> <05> - <0f> <10> <11> <12> <13> <14>	command syntax error command timeout. collision on "BusT4" device not found not used; available for future developments command execution error protocol data error encoder data error position data error "Bluebus" error. Not implemented memory error not used; available for future developments
	<02> <03> <04> <05> - <0f> <10> <11> <12> <13> <14> <15>	command syntax error command timeout.  collision on "BusT4"  device not found  not used; available for future developments command execution error protocol data error encoder data error position data error  "Bluebus" error. Not implemented memory error

# 10. "BusT4" commands: LGR

LGR commands relate to the handling/acquiring of information in the list of Groups on the "BusT4" line. The protocol is as follows:

# 

[flag]	In combination with LGR, defines the type of message sent:						
[ugg]	< <	GET command, used to request the list of devices on the "BusT4" line					
	#	response of the interface (RSP) confirming reception o the GET / SET command					
	!	response of the interface (ERR) indicating a syntax error in the GET / SET command					
	*	response of the interface (EVT), sending the requested information					
[99]	Group ID (0 -						
ເສສາ	To enable the Groups use the Nice Screen Configuration Tool						
	Indicates the f	filter to be applied to the list of devices in the GET:					
	00 ≤ gg ≤ fe	filter set to <gg>; only devices whose address is <gg> are listed</gg></gg>					
	<ff></ff>	no filter; devices with any address will be listed. For the RSP, ERR and EVT responses, it assumes the value passed by the previous SET / GET					
[ww]	The meaning	of the parameter depends on the [flag]. Its default value is <ff></ff>					
	Indicates the p	profile of the automation for the EVT response or the GET filter:					
	<00>	standard					
	<01>	display. Not implemented					
	<02>.	PC. Not implemented					
	<03>	not used; available for future expansions					
	<04>	motor control unit. Not implemented					
	<05>	not used; available for future expansions					
	<06>	screen control unit					
	<07> - <09>.	not used; available for future expansions					
	<0a>	OXI. Not implemented					
	<0b>	not used; available for future expansions					
	For the RSP a	and ERR responses, it assumes the value passed by the previous GET					
[xxxxxxxxxxxxxxxxxxxxxxxxxxx]	The meaning	The meaning of the parameter depends on the [flag]. Its default value is <ffffff>. Indicates the description of the group for the RSP response or the GET filter. 32chars</ffffff>					
[^^^^^^^^^^^^^	Indicates the d	description of the group for the RSP response or the GET filter. 32chars					
[yy]		description of the group for the RSP response or the GET filter. 32chars rror, according to the following table:					
		<u> </u>					
	Reports the er	rror, according to the following table:					
	Reports the er	rror, according to the following table:					
	Reports the er	rror, according to the following table:  no error  command syntax error					
	Reports the er <00> <01> <01> <02>	rror, according to the following table:  no error  command syntax error  command timeout					
	Reports the er <00> <01> <02> <03>	rror, according to the following table:  no error  command syntax error  command timeout  collision on "BusT4"					
	Reports the er <00> <01> <01> <02> <03> <04>	rror, according to the following table:  no error  command syntax error  command timeout  collision on "BusT4"  device not found					
	Reports the er <00> <01> <02> <03> <04> <05> <06> <00> <00> <00> <00> <00> <00> <00	rror, according to the following table:  no error  command syntax error  command timeout  collision on "BusT4"  device not found  not used; available for future developments					
	Reports the er <00> <01> <02> <03> <04> <05> - <0f> <10>	rror, according to the following table:  no error  command syntax error  command timeout  collision on "BusT4"  device not found  not used; available for future developments  command execution error					
	Reports the er  <00> <01> <02> <03> <04> <05> <04> <10> <05> <10> <11> <05< <11> <05< <11> <11> <11> <11> <11> <11> <11> <1	rror, according to the following table:  no error  command syntax error  command timeout  collision on "BusT4"  device not found  not used; available for future developments  command execution error  protocol data error					
	Reports the er <00> <01> <02> <03> <04> <05> - <0f> <10> <11> <12>	rror, according to the following table:  no error  command syntax error  command timeout  collision on "BusT4"  device not found  not used; available for future developments  command execution error  protocol data error  encoder data error					
	Reports the er <00> <01> <02> <03> <04> <05> - <06> <10> <11> <12> <13>	no error command syntax error command timeout collision on "BusT4" device not found not used; available for future developments command execution error protocol data error encoder data error position data error					
	Reports the er <00> <01> <02> <03> <04> <05> - <0f> <10> <12> <13> <14> <12> <13> <14> <14> <14> <14> <14> <14> <14> <14	rror, according to the following table:  no error  command syntax error  command timeout  collision on "BusT4"  device not found  not used; available for future developments  command execution error  protocol data error  encoder data error  position data error  "Bluebus" error. Not implemented					
•	Reports the er <00> <01> <02> <03> <04> <05> - <0f> <10> <11> <12> <13> <14> <15>	rror, according to the following table:  no error  command syntax error  command timeout  collision on "BusT4"  device not found  not used; available for future developments  command execution error  protocol data error  encoder data error  position data error  "Bluebus" error. Not implemented  memory error					

### 11. "BusT4" commands: CGR

Associating the CGR command with the FLAG allows you to send a command to a "category group" of automation connected to the BusT4. To create the "category group" it is necessary to use the Nice Screen Configuration Tool. We have defined 4 "category group":

- i. Application type
- ii. Floor number
- iii. Room name
- iv. Orientation

The protocol is as follows (caution! parameter [yy] is not required in the commands; it is sent by the interface solely when returning an error message, such as ERR):

# "cgr [flag] [gg] [xx] [ff] [tt] [nn] [rr] [oo] [yy]"

Type Flor Room Orientation

[flag]	In combination	In combination with GRC, defines the type of message sent:					
	<b>'&gt;'</b>	SET command, request a group command					
	#	response of the interface (RSP) indicating that the GET command has been received					
	! response of the interface (ERR) indicating a GET command syntax error						
[99]	Group ID (0 - FF). To enable the Scenes use the Nice Screen Configuration Tool						

The meaning of the following parameters depends on the [flag].

[xx]	a parameter u	a parameter used to indicate the command that has to be executed.					
	The following	The following parameters are available in the following table:					
	<00> - <01>	not used; available for future developments					
	<02>	stop command					
	<03>	up command					
	<04>	down command					
	<05>	intermediate position 1					
	<06>	intermediate position 2					
	<07>	intermediate position 3					
	<08> - <0A>	not used; available for future developments					
	<0B>	intermediate position 4					
	<0C>	intermediate position 5					
	<0D>	intermediate position 6					
	<0E> - <2A>	not used; available for future developments					
	<2B>	go to % position					
	<2C> - <ff></ff>	not used; available for future developments					
[ff]	Interpreted on is the high limi	ly if only if $\langle xx \rangle$ is 0x2b, Position in from 0 to 100 where 0 is the low limit and 100 it					
[tt]	Type of autom	nation that has to execute the command:					
	<00>	not used; available for future expansions					
	<01>	sliding. Not implemented					
	<02>	sectional. Not implemented					
	<03>.	swing. Not implemented					
	<04>	barrier. Not implemented					
	<05>	up-and-over. Not implemented					
	<06> - <69>	not used; available for future expansions					
	<70>	shutters					
	<71>	rolling blinds					

		_		
	<72>	sun shades		
	<73>	projection screens		
	<74>	umbrella		
	<75>	mosquito nets		
	<76>	venetian blinds		
	<77>	orientable shutters		
	<78>	patio/pergola		
	<79>	curtains for interiors		
	<7A>	roman blinds		
	<7B> - <fe></fe>	not used; available for future expansions		
	<ff></ff>	no filter active		
[nn]	Flor of automation that has to execute the command:			
	<00> - <100>	flor 0 – flor 100		
	<ff></ff>	every flor (no filter active)		
[rr]	Room of autor	mation that has to execute the command:		
	<00> - <100>	room 0 – room 100		
	<ff></ff>	every room (no filter active)		
[00]	Orientation of	automation that has to execute the command:		
	<00>	North		
	<01>	North - East		
	<02>	East		
	<03>	South		
	<04>	South - East		
	<05>	South - West		
	<06>	West		
	<07>	North- West		
	<ff></ff>	no filter active		

D. For ERR responses:						
<xx></xx>	Not applicable in case of ERR message					
<yy></yy>	Tells the operator which error has been detected, according to the following table:					
	<00> no error					
	<01>	command syntax error				
	<02>	command timeout				
	<03>	collision on "BusT4"				
	<04> device not found					
	<05> - <0f> not used; available for future developments					
	<10> command execution error					
	<11> protocol data error					
	<12>	encoder data error				
	<13>	position data error				
	<14>	"Bluebus" error. Not implemented				
	<15>	memory error				
	<16> - <ef> not used; available for future developments</ef>					
	<f0></f0>	"BusT4" not operating				
	<f1></f1>	not used; available for future developments				

# 12. "BusT4" commands: VER

The VER commands reads the DMBM interface's firmware version.

The protocol is as follows:

[Flag]	In combination with VER, defines the type of message sent:					
	<b>'&lt;'</b>	SET command, sends a request to vary the percentage position of an automation				
	<b>'#'</b>	response of the interface (RSP) confirming reception of the GET / SET command				

**Example** – reading the device's firmware version:

ver <

ver # 1.00.05

### HTTP COMMANDS

### **Commands syntax**

In the following sections there are many symbols with the following meaning;

- IP\_ADDRESS: it's the IP address of the Gateway used as an interface to communicate with the motors (ex. IP\_ADDRESS = 192.168.0.1). If you want to change IP address, subnet mask and gateway use the Nice Screen Configuration tool.
- ADR: it's the address of the NICE network where is the blind that you want to control. It can be a value from 1 to 63 (from 1 to 3F). This value has to be in HEX. If the destination is an integration module on the DIN-BAR, this value is 0 (adr=0), if the destination is a Smart Motor this value is 1 (adr=1).
- EPT: it's the address of the Nice motor belonging to the network ADR. It can be a value from 1 to 127. This value has to be in HEX. To check the EPT value use the Nice Screen Configuration Tool.
- CMD: it's the command that you want to send to the destination (ADR, EPT). The value depend in what you want to do.
- PRF: profile set command.
- FNC: it's the function that you want to send to the destination (ADR, EPT).
- EVT: it's the event to be triggered to destination (ADR, EPT).
  - •All the fields has to be written in Upper Case.

#### In the following sections, there is the description of the following commands:

#### 1. Commands

To send basic commands to a specific device destination.

#### 2. Events Commands

To send commands to a specific device destination; these commands are a bit complicated than "commands" but allows you to send more elaborate commands.

### 3. Group Commands type 1

To send commands to a group of devices; this group is created directly with this command. All devices belonging to the group will receive the command at the same time. All the device belonging to the group has to have the same ADR. In this command, you can also enter a delay after which will activate the command sent.

### 4. Group Commands type 2

To send commands to a group of devices; this group is created by "Nice Screen Configuration Tool". All devices belonging to the group will receive the command at the same time.

#### 5. Scenario Activation

To activate a Scenario; the scenario is created by "Nice Screen Configuration Tool".

### 6. Set functions

To Set functions to a specific device.

#### 7. Get functions

- A. States or information: To Get the states of the functions e/o information from a specific device.
- **B. Diagnostic:** Specific get functions, which show diagnostics of a specific device.

## 8. Lists

- A. List of Device
- **B. List of Group**
- C. List of Scenarious

## 1. Commands CMD\_UP, CMD\_DOWN, CMD\_STOP, GO\_TO\_INTERMEDIATE POSITION\_x (smart motor only)

It is possible to control movements of the devices (or in general Rolling Shutter, awning, Nice tubolar motors in general...) in particular it is possible to send commands to our systems commands like UP, DOWN and STOP.

#### http://P ADDRESS/cgi/devcmd.xml?adr=ADR&ept=EPT&cmd=CMD

#### Where:

• CMD: it's the command that you want to send to the motor (ADR, EPT). It can be one of the following.

COMMAND	CMD
UP	0x03
DOWN	0x04
STOP	0x02
INTERMEDIATE POSITION 1	0x05
INTERMEDIATE POSITION 2	0x06
INTERMEDIATE POSITION 3	0x07
INTERMEDIATE POSITION 4	0x0B
INTERMEDIATE POSITION 5	0x0C
INTERMEDIATE POSITION 6	0x0D

#### Examples:

**UP COMMAND:** http://192.168.0.1/cgi/devcmd.xml?adr=1&ept=2&cmd=3 **DOWN COMMAND:** http://192.168.0.1/cgi/devcmd.xml?adr=1&ept=2&cmd=4 **STOP COMMAND:** http://192.168.0.1/cgi/devcmd.xml?adr=1&ept=3&cmd=2

GO TO INTERMEDIATE POSITION: http://192.168.0.1/cgi/devcmd.xml?adr=1&ept=2&cmd=5

#### 2. Events Commands CMD\_GO\_TO\_POSITION (smart motor only)

To send commands to a specific device destination; these commands are a bit complicated than "commands" but allows you to send more elaborate commands.

### http:// IP ADDRESS /cgi/devevt.xml?adr=ADR&ept=EPT&evt=EVT&dat= DAT

COMMAND	EVT	DAT	DESRIPTION
GO TO POSITION	CO	0 TO 64	Command a device to go to a specific position where 0 is the lower limit switch and 100 (64 in Hex) is high limit.

### Examples:

cmd\_gotoposition(50%)

http://192.168.0.1/cgi/devevt.xml?adr=01&ept=02&evt=C0&dat=32

Dat is 32 because you have to insert the HEX value.

## cmd\_gotoposition(100%)

http://192.168.0.1/cgi/devevt.xml?adr=01&ept=02&evt=C0&dat=64

Dat is 64 because you have to insert the HEX value.

### 3. Group Commands type 1

It is possible to send commands (to our systems commands like UP, DOWN and STOP) to group of actuators; each actuator will receive the same command. In this command, you can also enter a delay after which will activate the command sent.

## 

### Specifications:

- EPT: this is a broadcast command in the ADR network so this field has to be always 0xFF.
- EVT: this field for group command type 1 has to be 0xC2.
- DAT: it's the data trasmitted. It is composed of 4 subfields:
  - o WW: it's the command that you want to send
  - o YY: is data for the command
  - o ZZZZ: delay after which will activate the command sent in millisecons

mskToSend[(EPT /8)]|= (0x01<<((EPT) & 7))

COMMAND	ww	YY
UP	0x03	00
DOWN	0x04	00
STOP	0x02	00
INTERMEDIATE POSITION 1	0x05	00
INTERMEDIATE POSITION 2	0x06	00
INTERMEDIATE POSITION 3	0x07	00
INTERMEDIATE POSITION 4	0x0B	00
INTERMEDIATE POSITION 5	0x0C	00
INTERMEDIATE POSITION 6	0x0D	00
GO TO POSITION	0x2B	from 00 to 64 (0% to 100%)

### Note: cmd\_gotoposition

The engine in this case will be commanded to go from one position between 0 and 100 where 0 is the lower limit and 100 is high limit.

### o BitMask:

## mskToSend[(EPT /8)]|= (0x01<<((EPT) & 7))

If you want to address a command to a specific address the corresponding bit as to change from 0 to 1.

#### Example:

Example																
EPT n							m	skToSe	nd [HE	X]						
EPT 0	В0	B1	B2	ВЗ	B4	B5	В6	B7	B8	В9	B10	B11	B12	B13	B14	B15
EPI U	01	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
EPT 1	В0	B1	B2	ВЗ	B4	B5	В6	B7	B8	В9	B10	B11	B12	B13	B14	B15
	02	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
EPT 2	ВО	B1	B2	ВЗ	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15
EP1 2	04	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
EPT 3	ВО	B1	B2	ВЗ	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15
EPIS	08	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
EPT 4	ВО	B1	B2	ВЗ	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15
	10	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
EPT 5	В0	B1	B2	ВЗ	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15
	20	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
EPT 8	В0	B1	B2	ВЗ	B4	B5	В6	B7	B8	B9	B10	B11	B12	B13	B14	B15
	00	01	00	00	00	00	00	00	00	00	00	00	00	00	00	00
EPT 127	B0	B1	B2	ВЗ	B4	B5	В6	B7	B8	B9	B10	B11	B12	B13	B14	B15
EF1 121	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	10

### Examples 1: UP to the motor 1 using the Group Command type 1

- IP\_ADDRESS: 192.168.0.1
- **ADR**: 01
- EPT: FF
- EVT: C2 (group command type 1)
- o WW: 03, UP CMD
- o YY: 00, NO DATA
- o ZZZZ: 0000, NO DELAY

#### Examples 2: GO TO POSITION to the motors1 & 2 using the Group Command type 1

• IP\_ADDRESS: 192.168.0.1

• **ADR**: 01

• EPT: FF • EVT: C2

• DAT:

o WW: 2B, GO TO POSITION CMD

o YY: 32, (50%)

o ZZZZ: 0000

#### 4. Group Commands type 2

# http:// IP\_ADDRESS /cgi/grpcmd.xml?req=R&num=1&dat=WWYY

# Where:

- R: has to be R.
- NUM: id of the group defined on Nice Screen Configuration Tool.
- WWYY: has the following meaning:

COMMAND	ww	YY
UP	0x03	00
DOWN	0x04	00
STOP	0x02	00
INTERMEDIATE POSITION 1	0x05	00
INTERMEDIATE POSITION 2	0x06	00
INTERMEDIATE POSITION 3	0x07	00
INTERMEDIATE POSITION 4	0x0B	00
INTERMEDIATE POSITION 5	0x0C	00
INTERMEDIATE POSITION 6	0x0D	00
GO TO POSITION	0x2B	from 00 to 64 (0% to 100%)

#### Examples:

**UP COMMAND:** http:// 192.168.0.1/cgi/grpcmd.xml?req=R&num=1&dat=0300

## cmd\_goto(50%)

 $http://\ 192.168.0.1/cgi/grpcmd.xml?req=R\&num=1\&dat=2B32$ 

#### 5. Scenario Activation

Messages to activate a Scenario:

# http:// IP\_ADDRESS /cgi/scncmd.xml?req=R&num=NUM

### Where:

- R: has to be R.
- NUM: id of the scenario defined on Nice Screen Configuration Tool.

#### Examples: Activate Scenario number 1

http:// 192.168.0.1/cgi/scncmd.xml?req=R&num=1

#### 6. Sets functions

Messages to set in the engine special features:

# http:// IP\_ADDRESS /cgi/devset.xml?adr=ADR&ept=EPT&prf=PRF&fnc=FNC&dat=DAT

### Where:

- PRF: for this application has to be 6.
- FNC, DAT: It can be one of the following:

COMMAND	FNC	DESCRIPTION (DAT)
"wink"	0x35	If DAT is 1 the command is to ENABLE the WINK If DAT is 0 the command is to DISABLE the WINK
"motor lock"	0x2a	If DAT is 1 the command is to Lock the motor If DAT is 0 the command is to UnLock the motor

#### Examples:

Enable wink feature: http://192.168.0.1/cgi/devset.xml?adr=01&ept=02&prf=06&fnc=35&dat=01

Disable wink feature: http://192.168.0.1/cgi/devset.xml?adr=01&ept=02&prf=06&fnc=35&dat=00

Lock the Motor: http://192.168.0.1/cgi/devset.xml?adr=01&ept=02&prf=06&fnc=2A&dat=01

UnLock the Motor: http://192.168.0.1/cgi/devset.xml?adr=01&ept=02&prf=06&fnc=2A&dat=00

#### 7. Get functions

Request messages:

# http:// IP\_ADDRESS /cgi/devget.xml?adr=ADR&ept=EPT&prf=PRF&fnc=FNC&dat=

### Answer of the system:

<nice version="1.0">

<adr/>

<ept/>
/>

<fnc/>

<val>XXXXXXXXXXXXXXX</val>

• PRF: for this application has to be 06.

• FNC: the function to get.

COMMAND / REQUEST	FNC	ANSWER DESCRIPTION	
"Read State & position"	0x01	After the request message, you receive two bytes, the first containing the status of the motors and the second position in percentage.  • First byte:	
		Motor in opening	0x02
		Motor stopped	0x01
		Unknown state	0x00
		100 corresponds to the high	n particular, 0 corresponds to the low limit switch and limit switch.  Padr=00&ept=03&prf=06&fnc=1&dat=
Wink state	0x35	After the request message, you receive one byte.  If the byte received is 1 the Wink is enabled, if the byte received is 0 the Wink is disabled.	
Lock state	0x2a	After the request message, you receive one byte. If the byte received is 1 the "lock motor" function, if the byte received is 0 the "lock motor" function is disabled.	

DIAGNOSTIC	FNC	ANSWER DESCRIPTION	
"NUMBER OF MOVEMENTS" (smart motor only)	D4	Number of movements (6 digit in hex).	
"TOTAL MOVEMENTS TIME" (smart motor only)	D5	Total time of movements in seconds (6 digit in hex).	
"ERRORS MEX" (smart motor only)	DD	BITMASK of the errors (4 digit in hex).	

Meaning	MSK
Internal problem 1	0b00000000000001
Voltage to low for the electronic	0b00000000000010
Voltage to low for the motor	0b00000000000100
Voltage to low at start up	0b00000000001000
Higth temp 1	0b00000000010000
Higth temp 2	0b000000000100000
Higth temp 3	0b000000001000000
Internal problem 3	0b000000010000000
Higth temp 4	0b000000100000000
Last move impatc	0b00000100000000
Internal problem 4	0b000001000000000
Internal problem 5	0b000010000000000
Internal problem 6	0b000100000000000
Internal problem 7	0b001000000000000
Internal problem 8	0b01000000000000

#### Examples 1: number of movements:

Request: http://192.168.0.1/cgi/devget.xml?adr=01&ept=02&prf=06&fnc=D4&dat=

Answer: <val>003892</val>

The Number of movements is 14482 (003892 in HEX is 14482 in DEC)

#### Examples 2: total movements time:

Answer: <val>00BB83</val>

The movements time is 48003 seconds (00BB83 in HEX is 48003 in DEC)  $\,$ 

# Examples 3: errors mex:

Request: http://192.168.0.1/cgi/devget.xml?adr=01&ept=02&prf=06&fnc=DD&dat=

Answer: <val>0000</val>

The interpretation is: 0000 in Hex is 00000000000000 in binary, so there is none error.

Answer2: <val>0006</val>

The interpretation is: 0006 in Hex is 000000000000110 in binary, so there are two errors: Voltage to low for the electronic and Voltage to low for the motor.

# 8. Lists

These features display the list of installed devices, the list of groups and scenarios configured with the Nice Screen Configuration Tool.

#### A. List of Device

Request messages: http:// IP\_ADDRESS /cgi/devlst.xml

# **B. List of Groups**

Request messages: http:// IP\_ADDRESS /cgi/grplst.xml

# C. List of Scenarious

Request messages: http://IP\_ADDRESS/cgi/scnlst.xml

