

1 – WARNINGS

- **Caution!** It is important to observe these instructions to guarantee the safety of persons.
- **Caution!** Important safety instructions: store these instructions in a safe place.
- **Caution!** All product installation, connection, programming and maintenance operations must be performed exclusively by a qualified and skilled technician!
- **Do not effect modifications to any part of the product other than those specified in this manual. Unauthorised operations can lead to hazards and cause malfunctions.** The manufacturer declines all liability for damages caused by makeshift modifications to the product.
- **Important!** - Do not use substances containing alcohol, benzene, diluents or other flammable substances. Use of such substances could damage the product.
- Store this manual with care in a safe place to facilitate any future product maintenance and programming operations.
- The product packaging material must be disposed of in full observance of current local regulations governing waste disposal.
- Use a soft and slightly damp (**not wet!**) cloth for cleaning the product's surfaces.

2 – PRODUCT DESCRIPTION AND INTENDED USE

The TT6 control unit is designed for use in automation systems applied to awnings, shutters, skylights, vertical curtains, blinds and for controlling video projection screens. **Any other use is to be considered improper and is strictly prohibited! The manufacturer declines all liability for damage resulting from improper use of the product and other than as specified in this manual.**

The product comprises the following:

- Output for controlling a wire technology motors (for example, One-Max, To-max or NeoM); the output can be activated directly through the two buttons: **Pup** (▲) and **Pdown** (▼);
- TTBUS interface for controlling Nice motors with bus system.
- RS232 interface for connection to PC.
- Activation input (Trigger) for activating or deactivating a sequence of motors (near the up or down trigger).

The radio interface expands the product's remote control range through the Nice radio technology.

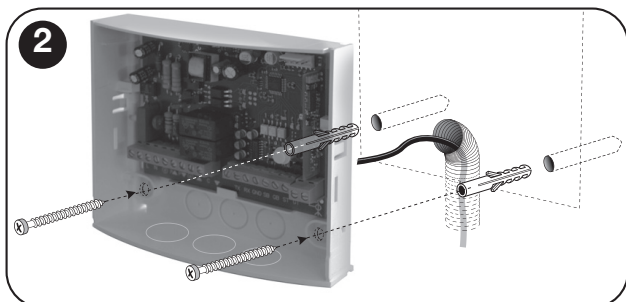
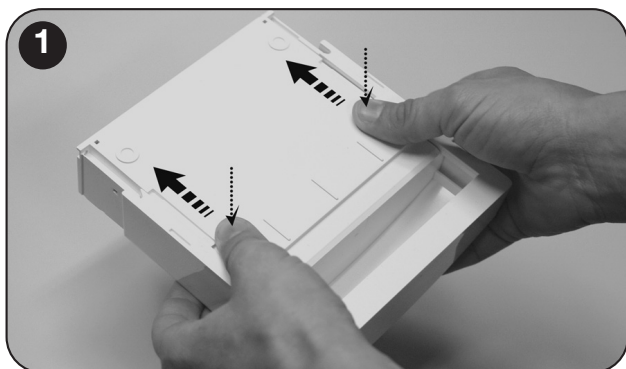
3 – INSTALLATION

- 01.** Remove the top cover of the control unit (**Fig. 1**).
- 02.** In the zones marked accordingly, drill the holes for routing the cables and for fixing the control unit to the wall. **Caution! – Take suitable precautions to guarantee the IP protection rating required for the type of installation. In particular, apply cable clamps (not supplied) to protect the power**

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cables and control cables against possible traction or torsion.

- 03.** Fix the control unit housing to the wall (**Fig. 2**). **Caution! – The receiver must be positioned so that the cables enter the housing exclusively from the bottom.**

**4 – ELECTRICAL CONNECTIONS****Warnings**

- When connecting the aerial provided, leave the wire at the supplied length and lay it straight so as to avoid excessive bending.
- If the control unit is not in an optimal position and the radio signal is weak, improve reception by replacing the aerial supplied with an external version (model ABF or ABFKIT). The new aerial must be positioned as high as possible and above any metal or reinforced concrete structures present in the area.

4.1 – Inputs (Fig. 3 and Table 1)

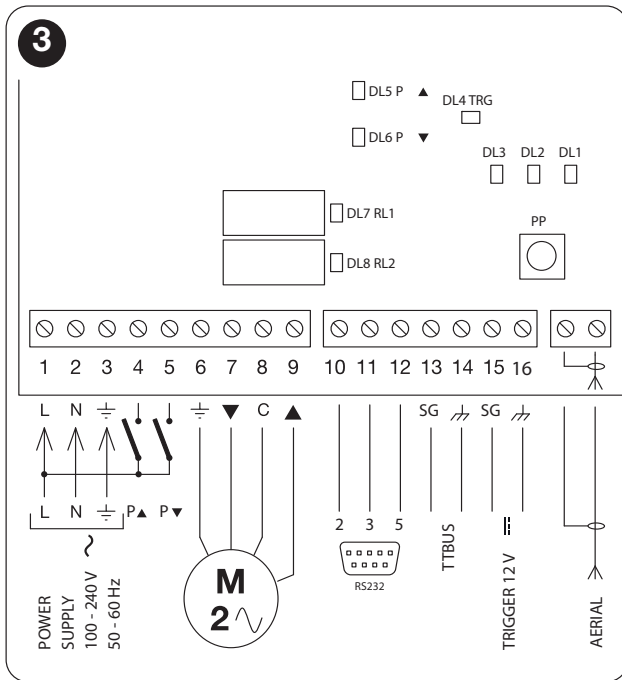
- **L** Electrical phase
- **N** Neutral
- **TTBUS:** (TTBUS, GND)
- **RS232** with dedicated protocol
- **5-24 VDC trigger** with programmable On and Off events
 - 30+30 programmable events
 - Event: address, command
- **Two inputs** for open-close commands for 85-265 VAC 50/60 Hz mechanical motor
 - Open-STOP, Close-STOP operation
 - "ON-PRESS" activation

4.2 – Outputs

- Power relay output for controlling a mechanical/electronic motor with programmable manoeuvres (up and down), activated through two button inputs Pup (▲) and Pdown (▼) of the 12 V Trigger or via Transmitter.

- The activation timer can be adjusted to between 1 sec. and 240 sec. through the serial port with an internal command.
- The default address of the motor connected to the control unit is 1.

Refer to **Table 2** to check the LEDs present.



1	Electrical phase
2	Neutral
3	Ground
4	Up button linked to the connectable mechanical motor
5	Down button linked to the connectable mechanical motor
6	Mechanical motor ground
7	Mechanical motor down phase
8	Mechanical motor common contact
9	Mechanical motor up phase
10	TX signal of the RS232 interface
11	RX signal of the RS232 interface
12	Common contact (GND) of the RS 232 serial signal
13	Signal of the motor with TTBUS (White wire)
14	Common contact of the motor with TTBUS (White/Black wire)
15	External activation trigger signal (positive pole input)
16	External activation trigger common contact (negative pole input)
ANT	Aerial input

TABLE 2 - Signalling LEDs

Led	Description
DL1	Red LED Power supply indicator.
DL2	Yellow LED If on, transmitter memorisation is active.
DL3	Green LED Signals.
DL4	12 V signal trigger indicator.
DL5, DL6	Red LED External buttons open-close indicator for mechanical motor.
DL7, DL8	Red LED Open-close relays activation.

5 – PROGRAMMING

The control unit can memorise transmitters in two modes, namely **Mode I** and **Mode II**:

Mode I

- Button **1** controls the Opening for the pre-set manoeuvre duration (Tm) (maximum 240 sec.).
- Button **2** controls the Stop.
- Button **3** controls the Closing for the pre-set manoeuvre duration (Tm) (maximum 240 sec.).
- Button **4** controls the Stop, once again.

Mode II

The transmitter button can be linked to one of the following functions:

- 1** - Step-by-step
- 2** - Open

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- 3** - Close
- 4** - Stop
- 5** - Close after 10 sec.
- 6** - Open after 10 sec.
- 7** - Close after 20 sec.
- 8** - Open after 20 sec.
- 9** - Hold-to-run close
- 10** - Hold-to-run open
- 11** - Activate the list of programmed command linked to the 12v trigger Up scenario
- 12** - Activate the list of programmed command linked to the 12v trigger DOWN scenario
- 13** - Forward radio transmission on RS232 serial

5.1 – Memorising a transmitter in “Mode I”

01. Press and hold **P1** on the control unit until the green LED **DL1** lights up (after approx. 4 seconds) then release; the yellow LED **DL2** will also turn on.
02. Within 10 seconds, press and hold any key of the transmitter to be memorised, until the green LED **DL1** on the control unit emits the first of 3 flashes to confirm memorisation. Following these flashes, to memorise another transmitter in “**Mode I**”, press any key on the new transmitter within 10 seconds. Lastly, wait until yellow LED **DL2** turns off.

Caution! – When attempting to memorise a transmitter that is already stored, the green LED **DL1** will signal this by flashing once.

5.2 – Memorising a transmitter in “Mode II”

01. From the “**Mode II**” list, select the function to be programmed (e.g. “Function 8”).

- 02.** On the receiver, press **P1** the same number of times as the number identifying the selected function (in our example, 8 times). On completion, the green LED **DL1** emits a number of short flashes corresponding to the number of times the key was pressed (in our example, 8 short flashes);
- 03.** Within 10 seconds, press and hold the transmitter key to be memorised, until the green LED **DL1** on the receiver emits the first of 3 flashes to confirm memorisation. After these flashes, to store a new key (even on another transmitter) with the same function, press this new key within 10 seconds (yellow LED **DL2** on).
- 04.** When attempting to memorise a transmitter that is already stored, the green LED DL1 will signal this by flashing once.

5.3 – Deleting all memorised transmitters

- 01.** Press and hold **P1** for long on the control unit and check the sequence of statuses of the green LED **DL1**.
- 02.** After approximately 4 seconds, it turns on...
- 03.** After approximately 4 seconds, it turns off...
- 04.** After approximately 4 seconds, it starts flashing...
At this stage:
- 05.** To delete all memorised transmitters, release the receiver key on precisely the third flash of the green LED DL1.
- 06.** To delete the entire memory (including transmitter configurations and encoding family), release the key on precisely the fifth flash of the green LED DL1.
- 07.** To delete a single transmitter, release the key on precisely the seventh flash then press a key (*) on the trans-

mitter to be deleted from the memory within ten seconds (yellow LED DL2 on); the green LED DL1 will emit 5 rapid flashes upon deletion.

- 08.** Repeat the operation within ten seconds (yellow LED **DL2** on) to delete another transmitter.

(*) **Note** – If the transmitter is memorised in “**Mode I**”, press any key; if the transmitter is memorised in “**Mode II**”, press the memorised key; if multiple keys are memorised, repeat the procedure for each memorised key.

5.4 – Communication protocol

CMD [XX] [YY] [AA] [Optional data field] [Carriage Return]

Note – The fields are one space apart.

[CMD]	This is a 3-character field. Conventionally, commands sent to the T4/TTBUS bus will always be in “CMD” form.
[XX] [YY]	These are 2-character fields indicating the device Address and Node, respectively. These two fields are mandatory and must be entered in hexadecimal form.
[AA]	Field indicating the command to be sent. It is 2-characters long and is mandatory. It represents the ID of the command to be sent according to the previously-listed commands list (for example: 04 open; 05 close; etc.).
[Data field]	Variable-length optional field. Its size depends on the type of command

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sent to the device: some commands do not require data (for example, the Open command), while others do (for example, the Open percentage command).

[Carriage Return] Decimal code 13, hexadecimal code 0D; it must always be present and each string sent must end with this character.

For each command sent, the interface must provide a response that simply indicates the command reception (this, however, does not imply that the command has been executed by the automation). It is a notification that will currently have a very simple construction, such as the following:

RSP [XX] [YY] [ZZ] [Optional data field] [Carriage Return]

5.5 – Commands list

CMD	Description
45	READ PERCENTAGE POSITION 0 - 255 Low limit switch 255 = High limit switch
04	Down
40	OPEN percentage command percentage 0 - 255 0 = Low limit switch 255 = High limit switch
50	Read memorised transmitters
51	Memorise transmitter

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60	Delete transmitter
65	Delete all memorised transmitters
66	Delete motor parameters
20	Memorise the motor upper limit switch in current position
21	Memorise the motor lower limit switch in current position
22	Memorise partial position 1 in current position
23	Memorise partial position 2 in current position
24	Memorise partial position 3 in current position
25	Memorise partial position 4 in current position
26	Memorise partial position 5 in current position
27	Memorise partial position 6 in current position
30	Delete upper limit switch setting
31	Delete lower limit switch setting
32	Delete partial position 1
33	Delete partial position 2
34	Delete partial position 3
35	Delete partial position 4
36	Delete partial position 5
37	Delete partial position 6
05	Up
12	Move a little step up
03	STOP

13	Move a little step down
06	Move to partial position 1
07	Move to partial position 2
08	Move to partial position 3
09	Move to partial position 4
10	Move to partial position 5
11	Move to partial position 6

Note – The available commands must also be available for the motor.

5.5.1 – Move to partial position 1, 2, 3, 4, 5, 6 command

Moves the motor to the set position after the partial position has been assigned.

Structure

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	IND	04	06	–	–

The data field is empty.

Example

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	01	04	06	–	–

Response

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
RISP	01	04	06	–	–

5.5.2 – STOP command

Stops the motor.

Structure

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	IND	04	03	–	–

The data field is empty.

Example

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	01	04	06	–	–

Response

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
RISP	01	04	06	–	–

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5.5.3 – UP command

Commands the motor's "up" movement until the set limit switch.

Structure

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	IND	04	05	–	–

The data field is empty.

Example

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	01	04	05	–	–

Response

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
RISP	01	04	05	–	–

5.5.4 – DOWN command

Commands the motor's "down" movement until the set limit switch.

Structure

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	IND	04	04	–	–

The data field is empty.

Example

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	01	04	04	–	–

Response

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
RISP	01	04	04	–	–

5.5.5 – Move a little step down

Sends a "down" command that it make the smallest movement that the motor can do. Use to set the right position before setting the limits switch or the partial positions.

Caution: the up and down directions are correctly assigned after setting the relevant limit switches.

Structure

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	IND	04	13	–	–

The data field is empty.

Example

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	01	04	13	–	–

Response

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
RISP	01	04	13	-	-

5.5.6 – Move a little step up

Sends an “up” command that it make the smallest movement that the motor can do. Use to set the right position before setting the limits switch or the partial positions.

Caution: the up and down directions are correctly assigned after setting the relevant limit switches.

Structure

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	IND	04	12	-	-

The data field is empty.

Example

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	01	04	12	-	-

Response

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
RISP	01	04	12	-	-

5.5.7 – Memorise partial position 1, 2, 3, 4, 5, 6 and limit switch 0 and 1 positions

Assigns the current position to a variable position.

Structure

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	IND	04	-	-	-

The data field is empty.

Example

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	01	04	20	-	-

Response

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
RISP	01	04	20	-	-

5.5.8 – Delete partial position 1, 2, 3, 4, 5, 6 and limit switch 0 and 1 positions

Deletes the entered position.

Structure

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	IND	04	-	-	-

The data field is empty.

Example

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	01	04	30	-	-

Response

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
RISP	01	04	30	-	-

5.5.9 – Read percentage position 0 - 255; 0 = Low limit switch, 255 = High limit switch

Reads the current position of the motor in percentage terms. The PP data field is the percentage position.

Structure

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	IND	04	45	-	-

The data field is empty.

Example

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	01	04	45	-	-

Response

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
RISP	01	04	45	128	-

5.5.10 – Move to percentage position 0 - 255; 0 = Low limit switch, 255 = High limit switch

Moves the motor to position X.

The PP data field is the percentage position.

Structure

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	IND	04	40	PP	-

The data field is empty.

Example

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	01	04	40	25	-

Response

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
RISP	01	04	40	25	-

5.5.11 – Delete all memorised transmitters command

Deletes all the transmitters from the motor.

Structure

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	IND	04	65	-	-

The data field is empty.

Example

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	01	04	65	-	-

Response

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
RISP	01	04	65	-	-

5.5.12 – Delete motor parameters command

Deletes all the limit switch data from the motor.

Structure

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	IND	04	66	-	-

The data field is empty.

Example

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
CMD	01	04	66	-	-

Response

Start	TT ADR [XX]	TT ENDPOINT [YY]	Command [AA]	Data	CR
RISP	01	04	66	-	-

5.6 – Commands for memorising and viewing lists

Two commands lists (max. 30 commands) can be stored. The commands are then executed sequentially in the event of a transition of the 12 V input trigger, or when the up or down trigger event is set from the transmitter.

The serial port command to store commands that will be executed when the signal moves from low to high is:

MEM_ON [XX] [YY] [XX1] [YY1] [...] [...] [Carriage Return]

Note – The fields are one space apart and the string ends with Carriage Return.

Important! - Address 1 is used for sending commands to the mechanical motor.

The fields are:

MEM_ON It is the string that stores the commands in the first list.

[XX] Address of the device to which the command must be sent, it is mandatorily composed of two digits in hexadecimal form.

[YY] Command to be sent to the device, it is mandatorily composed of two digits based on the above-mentioned commands table.

The subsequent couples **[XX]** and **[YY]** represent the other N commands that can be sent to the motors (max. 30 commands).

For example, for sending the “up” command to device 2, the “close” command to device 3 and the step-by-step up command to device 5, the relevant command will be:

MEM_ON 02 05 03 04 05 12 [Carriage Return]

The response will be of the following type:

**MEM_ON 02 05 03 04 05 12
LIST TRIGGER ON:
CMD 1--> addr: 2, cmd: 5
CMD 2--> addr: 3, cmd: 4
CMD 3--> addr: 5, cmd: 12**

The list that manages the event of the down run of the trigger operates in a similar way, except for the command which in this case is:

MEM_OFF [XX] [YY] [XX1] [YY1] [...] [...] [Carriage Return]

Using the previous example, we obtain:

MEM_OFF 02 05 03 04 05 12 [Carriage Return]

The response will be of the following type:

**MEM_OFF 02 05 03 04 05 12
LIST TRIGGER OFF:
CMD 1--> addr: 2, cmd: 5
CMD 2--> addr: 3, cmd: 4
CMD 3--> addr: 5, cmd: 12**

5.7 – Viewing the commands lists

It is possible to view the two stored lists on the video screen. It is sufficient to enter the **LIST** command followed by “enter” to obtain the complete content of the two lists. The command is:

LIST [Carriage Return]

For example, by typing “List” after having entered the two previous commands, we obtain:

**LIST
LIST TRIGGER ON:
CMD 1--> addr: 2, cmd: 5
CMD 2--> addr: 3, cmd: 4
CMD 3--> addr: 5, cmd: 12
LIST TRIGGER OFF:
CMD 1--> addr: 2, cmd: 5**

CMD 2--> addr: 3, cmd: 4
CMD 3--> addr: 5, cmd: 12

5.8 – Command for setting the duration of the mechanical motor movements

The duration of the mechanical motor movements can be set. The relevant command is:

SET_TIME [XXX] [Carriage Return]

The fields are one space apart and the string ends with Carriage Return.

The fields are:

SET_TIME Command for setting the duration.

[XXX] Value in seconds (max. 240 sec.).

The default value at initial start-up is 10 seconds and any modification of this value is stored in the memory. At the next re-start, the last value stored will be used.

5.9 – Changing a device's address

The address of a motor can be set using the following command:

ADR [XX] [YY] [Carriage Return]

The fields are one space apart and the string ends with Carriage Return.

The fields are:

[XX] Current address of the motor; the address must mandatorily contain two digits and must be in hexadecimal form.

[YY] New address of the motor; the address must mandatorily contain two digits and must be in hexadecimal form.

For example, for modifying the motor address from 03 to 07, use the following command.

ADR 03 07 [Carriage Return]

5.10 – Viewing information on memorised transmitters

Information on memorised transmitters can be viewed using the following command:

TLC_STATUS [Carriage Return]

The information regards the number of memorised transmitters and their operating mode.

The typical response will be:

tlc_status

Number of remote control in mem: 3

Number of free position in mem: 29

TLC 1 : Mode 2 - Function number 1 - Key UP

TLC 2 : Mode 1

TLC 3 : Mode 2 - Function number 2 - Key DOWN

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5.11 – Commands which can be activated through domotic interfaces

In the unit, the command activates the bidirectional transmission of information, the display of radio codes on the serial and the transmission of the position of the automation mechanism during the movement.

Type:

WEB_ON [Carriage Return]

In this way the display of the radio codes via the serial, if saved in the unit, is activated and it is possible to use the pos command to move the motors by a percentage and monitor the movement event.

To deactivate use the command:

WEB_OFF [Carriage Return]

In this way the display of the codes is activated.

5.11.1 – Displaying radio codes on serial

If the TT6 receives a radio signal from one of the saved remote controls, the following info is sent, related to the transmitter, via the serial.

RAD * 0003E965 0000 0100000000

The first 8 digits represent the code of the remote control, the next 4 represent the variable part of the code of the remote control (masked at 0). The last 10 digits represent: the pressed button in the first 4 numbers, the next 6 are for future uses.

5.11.2 – Motor movement by percentage command

To move the motors by a percentage of their total stroke (therefore after having set the limit switches) use the command:

POS > [XX] [YY] [PPPP] [ZZZZ] [TT] [Carriage Return]

Where:

[XX] Is the address of the motor.

[YY] Is the node (04 is the default for the screen motors).

[PPPP] The percentage value you want to reach, expressed in thousandths.

[ZZZZ] [TT] The last two parameters in the screen motors are set at FFFF and FF for future developments.

For example, to take motor number 02 to the intermediate value (0500) of its stroke, the command must be composed in the following way:

POS # 02 04 0500 FFFF FF

During the movement the strings are sent with the current position of the motor until reaching the requested position in the form of async messages, the format is:

POS * 02 04 xxxx FFFF FF

Where **xxxx** is the instantaneous position of the motor. In case of errors of syntax in the command, the error field will be added to the response with the value 01, the fields will be filled up to the first incorrect field and the subsequent ones will be filled with 0xF, e.g.:

```
POS ! 02 04 FFFF FFFF FF 01
```

In case of timeout, the error message will have the value 00 as error code, e.g.:

```
POS ! 02 04 0800 FFFF FF 00
```

Where **xxxx** is the instantaneous position of the motor. The automation mechanism did not respond to the sent command.

5.11.3 – Motor current position read command

To read the current position of the automation mechanism, use the command:

```
POS < [XX] [YY] [AAAA] [ZZZZ] [TT] [Carriage Return]
```

Where:

[XX] Is the address of the motor.

[YY] Is the node (04 is the default for the screen motors).

[PPPP] [ZZZZ] [TT] All filled with 0xF in the case of reading.

The response is of the type below:

```
POS * 02 04 0500 FFFF FF
```

Where the current position of the motor is indicated.

5.11 – Help commands

The two help commands are:

HELP	Command for viewing a description of the commands available through serial port.
HELP_TTBUS	Command for viewing the commands table for the TTBUS.
HELP_TLC	Command for viewing the list of functions in mode 2.

6 – DISPOSAL OF THE PRODUCT

This product constitutes an integral part of the automation system, therefore it must be disposed of jointly with the latter.

Likewise for installation operations, when the product reaches its end-of-life decommissioning operations must be performed by qualified personnel. This product is made up of different types of material, some of which can be recycled while others must be disposed of. Seek information on the recycling and disposal systems available in your area for this product category.

Beware! – Some parts of the product may contain pollutants or hazardous substances that – if released into the environment – may cause serious damage to the environment or human health.

As indicated by the adjacent symbol, it is strictly forbidden to dispose of this product together with domestic waste. Therefore, implement separate waste collection criteria for disposal according to the regulations in force in your area, or return the product to the dealer when purchasing a new equivalent version.

Beware! – Local legislation may include the application of serious fines in the event of improper disposal of this product.



7 – TECHNICAL SPECIFICATIONS

- **Power supply:** 110 - 240 VAC 50/60 Hz
- **Maximum absorbed current:** 80 mA in stand-by mode, 3 A at full load
- **Encoding:** FloR (rolling code)
- **Frequency:** 433.92 MHz
- **Antenna impedance:** 52 ohm
- **Sensitivity:** more than 0,5µV for successful signal
- **Range:** estimated at 200 m in open space or 35 m inside buildings
- **No. of storable transmitters:** 30
- **Output:** 1 output for controlling a two-phase motor
- **Contact capacity:** 3 A - 250 V
- **Protection rating:** IP44 (with container intact)
- **Operating temperature:** -20° C ÷ +55° C
- **Dimensions / weight:** 128 x 112 x 43 mm / 260 g

Notes:

- The operating distance between transmitters and receivers (range) is strongly influenced by other devices operating in the area and at the same frequency (for example: alarm systems, radio earphones, etc.). In these cases, Nice cannot provide any guarantee with regard to the actual range of its devices.
- All technical specifications stated herein refer to an ambient temperature of 20° C (± 5° C).
- Nice reserves the right to effect modifications to the product whenever it deems necessary, while preserving the product's intended use and functionality.