

Elmes Electronic ST100H-3K receiver is designed for individual control of up to 3 devices. It features three separated relay output terminals. Applied *KEELOQ*® code-hopping system ensures that each radio transmission is encrypted allowing high level of system security. Following, are main features of ST100H-3K features:

- operation with 1, 2 or 3 remote control (further referred to as a “remote”) transmitter’s buttons,
- individual or sequential control of 2 or 3 devices,
- ON / OFF mode (bistable mode),
- ON / OFF mode with automatic set OFF of outputs after programmed time from 0.5 sec to 4 hours (monostable mode).

General Operation

The ST100H-3K receiver is compatible with all Elmes Electronic remotes operating at 433.92 MHz. In operation with Elmes Electronic made 4, 8, 32 channel remotes it offers independent control of 3 devices connected to its outputs (see pt. 2 below for details). Operating with one remote’s button (e.g. single button remote) sequential control mode is available (see pt. 3 below). The receiver also includes 3 wired logic inputs marked 1, 2, 3 and COM that allow control of its outputs by external, switches. Operation with control switches is identical as that of with remotes.

Four different operation modes can be selected with jumpers JP1 and JP3 as below:

1. Jumper **JP1** shorted, **JP3** shorted – remote 1 and 2 buttons control output channels 1 and 2 respectively.
2. Jumper **JP1** shorted, **JP3** opened – as above plus remote button 3 controls receiver output number 3.
3. Jumper **JP1** opened – sequential control mode activated for remote/s and wired switch/s – see chart below for details:

Device / output channel number :	JP3 shorted			JP3 opened		
	1	2	3	1	2	3
Stand-by mode	O	O		O	O	O
Remote button or wired switch is pressed for the first time	X	O		X	O	O
Remote button or wired switch is pressed for the second time	X	X		X	X	O
Third ...	O	X		X	X	X
Fourth...	O	O		O	X	X
Fifth...				O	O	X
Sixth...				O	O	O

X – output channel ON
O – output channel OFF

The receiver can automatically switch off its outputs (connected devices) after pre-programmed time. The function is active only if step 2 of Programming Procedures is performed. All three outputs set off after time lapse since last use of a remote or a wired switch. Performing step 3 of Programming Procedures sets the function off and monostable operation only (on/off) is restored.

Installation

Side figure shows example of three lamps (L1..L3) control wiring diagram.

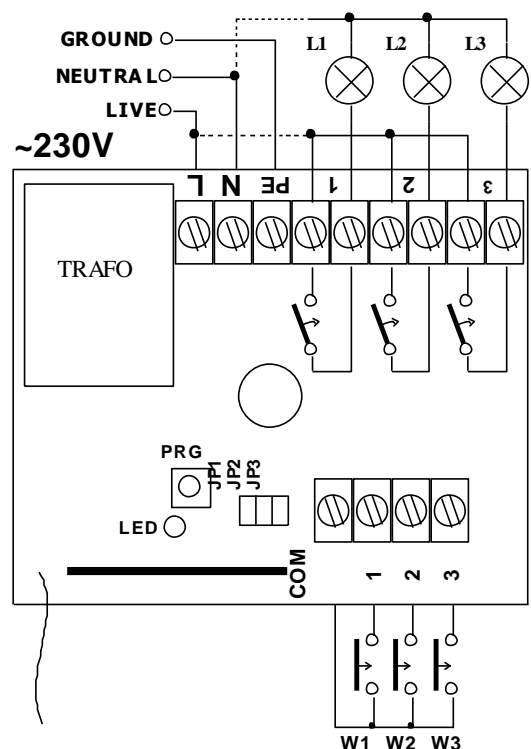
ST100H-3K control unit 230VAC wiring terminals:

- L** - 230VAC mains supply **LIVE** wire terminal
- N** - 230VAC mains supply **NEUTRAL** wire terminal
- PE** - 230VAC mains supply **GROUND** wire terminal
- 1, 2, 3** – relay outputs no 1, 2, 3.

No voltage terminals:

- COM** - common connection terminal,
- 1** - wire switch of device number 1
- 2** - wire switch of device number 2
- 3** - wire switch of device number 3

WARNING! Control unit and electric motor connection to 230VAC mains voltage require personal safety care procedures to be taken and mains voltage line be OFF at installation. 230VAC supply LIVE wire must be connected to L terminal and NEUTRAL wire must be connected to N terminal. Wire control terminals 1, 2, 3 and COM are logic inputs only and connection of any voltage potential wiring **IS NOT ALLOWED!**



Installation hints

The unit includes radio receiver therefore any metal screening or interference with other electric/radio equipment operating in close distance should be avoided as may seriously shorten operating range. In order to extend operating range a 430 MHz band dipole or single pole 50Ω antenna may be used with its coaxial cable screwed to antenna terminals on board of the receiver in place of the short antenna wire.

PROGRAMMING PROCEDURES

1. Learning transmitters (112 max.) to receiver's memory:

- press **PRG** switch for less than 2 seconds (PRG LED lights on). Releasing the switch LED continues to light indicating entering programming procedure,
- press any remote button - LED sets off,
- press the same remote button again. Blinking LED confirms end of procedure.

NOTE! Removing one remote from control unit memory requires removing all remotes and learning the remaining ones again.

2. Programming ON/OFF mode with auto set OFF:

- press control unit PRG switch (LED sets on) for more than 2 and less than 8 seconds. Release the switch - LED sets off,
- press remote button or wired switch once (LED on),
- after required time has lapsed (max. 4 hours) press the button or wired switch again (LED sets off),
- after 2 seconds LED starts blinking several times confirming end of the procedure.

3. Programming ON/OFF mode only:

- press PRG switch for more than 2 and less than 8 seconds (LED sets on). Release the switch - LED sets off,
- press remote button or wired switch 3 times in short (less than 2 seconds) intervals,
- blinking LED confirms end of the procedure.

4. Deleting all transmitters from receiver memory

– perform the procedure in the case of lost or stolen remote to be eliminated from the control system:

Press and hold down receiver's PRG switch (LED sets on) for more than 8 seconds, until LED starts blinking confirming end of the procedure. Receiver's memory is cleared of remotes. Programmed on/off functions remain unchanged.

Learn remotes to receiver according to pt. 1 above.

NOTE! Procedures 2 and 3 above can only be performed with the use of wired switch or a remote learned to receiver's memory.

Specification:

- Receiver mains supply: 230VAC (2VA).
- Relay outputs 1 and 2 rating: 16A/250VAC max.
- Relay output 3 rating: 5A/250VAC max.
- Auto OFF time: 0.5s up to 4 hours, common for all three outputs.
- Operating tem. range: - 20°C to +55°C.
- Case tightness class: IP56
- External dimensions (l/w/h) 87/87/39 mm.

DECLARATION OF CONFORMITY

Manufacturer: Elmes Electronic

declares under sole responsibility that its product:

UNIVERSAL CONTROL RECEIVER

Model/type: **ST100H-3K**



comply with essential requirements of the following directives:

1999/5/EC (R&TTE) Directive,
2004/108/EC (EMC) Directive,
2006/95/EC (LVD) Directive,

and applied harmonized standards, in particular:

EN 60950-1:2006 - electric safety,
EN 61000-6-1:2007 EMC – immunity,
EN 61000-6-3:2007 EMC - emission,
EN 301 489-1 V1.8.1 (2008-04) EMC – radio devices,
EN 301 489-3 V1.4.1 (2002-08) EMC – short range devices,
EN 300 220-1 V2.3.1 (2010-02), EMC – requirements.

Manufacturer:

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Signature:

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Data/Date: 2014-09-30

Manufacturer's Limited Warranty:

Elmes Electronic remote control sets carry one-year manufacturer's warranty as from date of purchase. The warranty is limited to the replacement of faulty original parts or repair defects of improper manufacture. Damage, faulty use or improper handling by the user or installer as well as any changes in product's hardware or software caused by the user voids the warranty and all due repair costs will be charged. Elmes Electronic shall not be responsible for any damage human or material caused by its products failure to operate correctly.

Elmes Electronic reserves the right to change product specification without prior notice.

KEELOQ® is a registered trademark of Microchip Technology Inc.



The use of the WEEE symbol indicates that this product may not be treated as household waste. By ensuring this product is disposed of correctly you will protect the environment. For more detailed information about the recycling of this product, please contact your local authority, your household waste disposal service provider or the shop where you purchased the product.