

3-KANAL-EMPFÄNGER HT3E

Art.-Nr. 16 18 255

Passend für die H-TRONIC-Sender
HT55 5-Kanal, Art.-Nr. 16 18 160
HT85 8-Kanal, Art.-Nr. 16 18 180



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INHALT

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3-CHANNEL RECEIVER HT3E



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THE 3-CHANNEL RECEIVER FOR 868MHZ ISM RANGE has been designed as a tap-proof and tamper free remote control. The connection between the transmitter and the receiver is encrypted by AES128 and contains a "rolling code". This makes each data package sent to the receiver unique and non-repeatable. The learnable receiver allows the operation of up to 32 different transmitters that can be programmed into the receiver by pressing a key. The 3 relay outputs with high switching capacity have a changeover contact that may be freely connected. Due to the characteristics of the device, this remote control system is ideal for general installation purposes and alarm technology. It can be used as a wireless connection for almost all electronic systems at home, in the garden, in the office or in the workshop. You can control your garage door, your window blinds, your home lighting, your alarm system wireless and from the comfort of your chair.

HIGHLIGHTS

- Control of doors, gates, barrier systems and electrically controlled windows.
- Control of lighting circuits and systems; of pumps, air conditioning and water systems; of electrical, hydraulic and pneumatic systems.
- More safety through the rolling code encryption (AES128 security principle).
- Operation with up to 32 transmitters which can be programmed in the receiver through keypress
- A free range of approximately 200 m under normal operating conditions.
- Settings will be saved in case of power failure.

TECHNICAL DATA

- Operating voltage: 12V DC
- Power consumption: 200mA max.
- Operating frequency: 868.35 MHz
- Mode: Tip or switch function
- Follow up time relay: 200ms
- Outputs: 3x relay (potential free)
- Max. load: 230VAC/5A (3000W)
or 24VDC/10A

Dear customer,

thank you for purchasing this product and for the confidence you have placed in us. To ensure a correct operation of this device, please read these instructions completely and carefully before use. Please take into consideration that this manual contains important information on the operation and use of this device. This instruction manual is part of the device. Please keep this manual in a safe place for future reference. If you pass the device on to a third person, please make sure that you also pass on the manual. Damages caused by failure of following the instructions in the manual will void the warranty.

All persons using, handling, installing, servicing and maintaining this device must be trained and qualified for handling, installing and repairing this device and follow this user guide. This device may only be opened or repaired by a person authorized and qualified to do so and/or who has the knowledge of electrical safety regulations. Do not leave the packaging material lying around. Children might play with the plastic bags and risk suffocation.

- This product is not a toy and not suitable for infants and children. Infants and children cannot assess the risks involved, when dealing with electrical devices.
- Transmitters may only be operated by persons instructed in operating the device

Your H-TRONIC team

1. DESIGNATED USE

The designated use of this device is the remote switching of electrical loads without safety related applications in conjunction with the H-TRONIC 5-channel transmitter, order number 1618160 or 8-channel transmitter, order number 1618180. The transmitters must be trained to function with the receiver. Any other use than the specified is not allowed.

This device has been manufactured and checked according to the general safety standards. The user is obligated to follow the instruction manual and safety instructions carefully.

NOTES ON OPERATION

The frequency range of 868 MHz is a frequency used for industrial, scientific, medical, domestic or similar radio devices (SRD band). When operating in this frequency range interference from other radio equipment may occur. The user is responsible for installing the device according to the rules and regulations of the country in which the transmitter is operated and maintained. This also relates to the application for which the device is being used. This receiver may only be operated in areas where you can see the device to be controlled. Never switch devices where you have no visual contact.

SECURITY NOTES ACCORDING TO R&TTE:

These wireless remote controls are only permitted for equipment and installations where radio interference to the transmitter or receiver does not result in danger to persons, animals or property other than if the risk of malfunction is covered by other safety devices. The control of mobile radio controlled devices with a risk of accident may only be performed with the direct visual contact of the controlled device and if the area is clear of people, animals and objects. To secure the device from unintended use, make sure that the remote control is kept in a safe place inaccessible to children or animals.

WARNING: The use of this remote control is only permitted in combination with equipment in which radio interference to the transmitter or receiver does not result in danger to persons or property. Furthermore manual overriding emergency stop should be integrated in the setup. The remote control of devices and systems with an increased risk of accidents is not allowed. Crane and lifting equipment of any kind may not be used in connection with this remote control. The directives ZH 1/547 are not met.

This remote control may only be operated if the operated device is clearly visible. For damages of any kind caused by external influences, for faulty connections or negligent operation, no liability will be taken.

FOR YOUR SAFETY: Be extremely cautious when you are switching 230V devices! There is the danger of an electric shock! All installation and maintenance on the power supply and the device must be performed by a qualified electrician only. A qualified person is defined by education, training and experience. Qualifications for a reliable installation are also required in the field of wireless transmission, of control commands, relevant health and safety regulations, accident prevention regulations, directives and generally accepted engineering standards. (E.g. DIN standards and VDE regulations), technical rules and regulations to such an extent, that installation can guarantee a safe working condition of the equipment for the wireless transmission control commands.

- Disconnect power
- Make sure that the device cannot be switched on again during maintenance or installation.
- Check the device for the absence electrical current before starting maintenance or installation.
- Before switching on the device, make sure that the housing is securely closed and that no life wires can be touched.

2. SAFETY INSTRUCTIONS

- The installation of the device may only be performed by a qualified electrician.
- This device is not intended for the control of electrical equipment performing safety-related functions. In normal operation there is a risk of malfunction due to a general failure or a malfunction of the output stage or signal transmission. The user needs to ensure that there are no consequential damages possible due to malfunction or an undefined switching state.
- Due to incorrect tightening of the screws on the terminals or by use of inappropriate tools, the terminals may be damaged causing the insulation to fail or the contact to become loose. Badly connected cables can become loose during operation and become a hazard, as the increased contact resistance at the terminal connection will cause heat which could result in a fire. Incorrectly wired connections can destroy electrical components and cause other damage.
- This product is not approved for the use in connection with safety critical applications! If this device is used in conjunction with safety critical applications, additional security requirements are to be installed, if need be in conjunction with other licensed products.

WARNINGS AND SAFETY

Please follow the additional safety instructions in order to avoid malfunction, damage and health problems.

- The operation of the device in adverse environmental conditions must be avoided under all circumstances. Functional temperatures range from 10°C – 40°. Keep the device away from flammable gases, solvents, vapors, dust, a humidity above 80% as well as spray water.
- The receiver may be operated in a dry room only.
- Connecting devices with an operating voltage $\geq 35V$ DC or $\geq 25V$ AC must be performed by a qualified electrician who is familiar with the relevant safety regulations.
- This device may not be used in connection with safety relevant systems or machines
- Before opening the receiver, make sure that it is disconnected from all power sources.

If it can be assumed that safe operation is no longer possible, that device must immediately be deactivated and secured against inadvertent operation. Safe operation is given if the device is not functioning, is visibly damaged, has become wet or stored under damp conditions.

If you are at any time in doubt about the application or the wiring or the installation, immediately seek the advice of a professional or the manufacturer.

- Service and repair should only be performed by authorized persons.
- When installing the device, adequate cables with sufficient cross section are to be used.
- The protection of the relay circuits is not preassembled within the device. The protection of the relays must be assembled externally in the connecting cables. (12 A)
- The relay contacts do not separate the electrical circuit in their open state completely. Therefore the only functional switching of the operator devices is possible. The relay contacts are electrically isolated from the control electronics. If it is not clear which characteristics apply for a component or a module, how to components install an external circuit or what external components or additional devices may be connected, or which values of the external components are allowed, please consult an expert and specialist. Make sure that all connected devices and modules are suitable for the device and application. Please note that operating and connection errors are beyond our control. No liability will be taken from damages resulting from connection and operating errors.
- The accident prevention regulations of the professional associations for electrical systems and equipment should be strictly followed when installing this device in commercial buildings.
- In schools, training centers, clubs and workshops, the operation of modules and devices must be monitored by trained personnel.
- If the device should be serviced repaired, only original spare parts may be used. The use of incorrect spare parts can cause serious damage and personal injury!
- Dispose of the packaging material carefully and keep it out of reach of children. There is a danger of suffocation.

3. INSTALLATION

3.1 LED DISPLAY

The function display consists of 3 LEDs which have the following meaning:

- 1. LED "POWER":** the device is connected and under power.
- 2. LED "LEARN":** the device is in learning mode.
- 3. LED "ERROR":** the LED is displayed in the following cases:
 - the station list is full
 - an error has occurred whilst reading/writing the EEPROM memory

3.2 LEARNING PROCESS

The receiver is capable of learning how to connect with 32 suitable transmitters (e.g. H B641 or H B643). First take off the housing cover by removing the screws. The learning process consists of the following steps:

- 1.** Press BTN 1 **"LEARN"** to activate the learning sequence.
The LED "Learn" lights up to show that the programming mode is active.
- 2.** Within 10 seconds, press any control key of the transmitter*.
The LED "Learn" will start flashing if the signal is recognized.
- 3.** Press BTN1 **"LEARN"** again to finalize the learning sequence.
The LED will go out.

3.3 SETTING THE OPERATION MODE

Setting the operation mode consists of the following steps:

- 1.** Press BTN 1 "Learn" to activate the learning sequence.
The LED "Learn" lights up to show that the programming mode is active.
- 2.** Within 10 seconds, press the **"1, 2, 3 or 4"** control key of the transmitter*.
(see the following chart)
- 3.** The LED "Learn" will blink for a short time and finalize the learning sequence.
The device will restart.

„T“ = TIPPED MODE: when the transmitter buttons 1, 2 or 3 are pressed the relay energizes and switches electrical equipment such as a lamp.

„R“ = SWITCHED MODE: every time you press a button the relay is switched on or off.

*The transmitter needs to be preprogrammed.

The following modes are possible:

| Transmitter button | REL1 | REL2 | REL3 |
|--------------------|------|------|------|
| „1“ | T | T | T |
| „2“ | R | T | T |
| „3“ | R | R | T |
| „4“ | R | R | R |

NOTE: “T” – tipped mode; “R” – switched mode

EXAMPLE: When you press transmitter button „2“, you switch relay 1 to switched mode and relay 2 and 3 to tipped mode. When pressing transmitter button 4 you switch all those 3 relays to switched mode.

3.4 DELETING THE STATION MEMORY LIST

A maximum of 32 transmitters can be programmed. If 32 stations have already been programmed into the receiver, no additional transmitters can be programmed. Previously learnt codes are not lost. After deleting all transmitters, new transmitters can be programmed again.

If the transmitter list needs to be cleared and reset, the deletion can be made with the following steps:

1. Separate the receiver from the power supply.
2. Press and hold the button 1 “Learn”.
3. Reconnect the device to the power supply.
4. The LED “Learn” will light up.
5. Wait till the LED starts blinking rapidly.
6. Release the button “Learn”. All programmed transmitters are now deleted. The receiver can now be programmed with new transmitters.

4. CONNECTION

Connect the device to a suitable power supply (12 VDC/500mA). Make sure that the correct polarity of the +12 V DC is connected to the relay output. The maximum load per relay is 230 VAC/5 A or 24 V DC/10 A. The power output per relay must not exceed 1000 W while the total power output may not exceed 3000 V.

External consumers should be directly connected to the relay terminals according to the printed circuit symbols.

As electrical loads, DC or AC can be connected, make sure that you establish a secure connection of the cables to the terminals, particularly when connecting mains voltage. All consumers should be protected by their individual fuse.

Keep the device away from sources of strong radio frequencies or magnetic fields, as the device may start switching the relays due to the interference.

If the relay is switching a touchable low voltage, then the neighbouring relay may not be connected to or switch a dangerous voltage. (Voltage over 35 V).

5. GUARANTEE/WARRANTY

This device has a guarantee of two years. The warranty includes the repair of faults that can be detected due to the use of faulty materials or bad workmanship. The installer of the device must ensure that all legal and regulatory requirements for the installation are met. Ignoring the details of this instruction manual will void the warranty. For consequential or incidental damages in connection with this product, no liabilities will be taken. We reserve our right to repair, replace or refund the purchase price in the case of warranty.

The following cases will void the warranty:

- Changing, reworking or repairing the device.
- Changing the functionality or layout of the device.
- Using other components than original parts or components approved by the manufacturer.
- Damages caused by not following the instructions and wiring diagram.
- Damages caused by overloading the device.
- Damages caused by third parties.

- If the device is connected to an incorrect voltage current.
 - Damages caused by incorrect or negligent operation.
 - Damages caused by incorrect installation. E.g. missing/bridged fuses.
- If warranty is not given, all costs and the returning of the device is at the user's expense.

6. ENVIRONMENT



Consumers are legally obligated and responsible for the proper disposal of electronic and electrical devices by returning them to collecting sites designated for the recycling of electrical and electronic equipment waste. This device and/or components within the device can be recycled. For more information concerning disposal sites, please contact your local authority or waste management company.

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