

USER MANUAL - DECO SMART - DEL-2

2-KEY 4-CHANNEL RADIO TRANSMITTER WITH TEMPERATURE SENSOR

DESCRIPTION

The DECO Smart DEL-2 wall-mounted radio transmitter is used to send control signals and information about temperature in the Exta Life system. It is applied for such operations as activation / deactivation, brightening / darkening, controlling window roller blinds. The implemented encoding algorithm of frames increase the security of transmission. When the Exta Life controller is used, the temperature information is displayed in the mobile apps. The transmitter's appearance and dimensions are similar to those of an installation connector. Battery operation and lack of any wiring offer broad application possibilities. The transmitter can be set on any surface (except metal) and in any place of the room. Programming several transmitters for one receiver allows independent control of a device from several places. The green LED indicates transmission during regular operation. It is also used to indicate the condition of the battery.

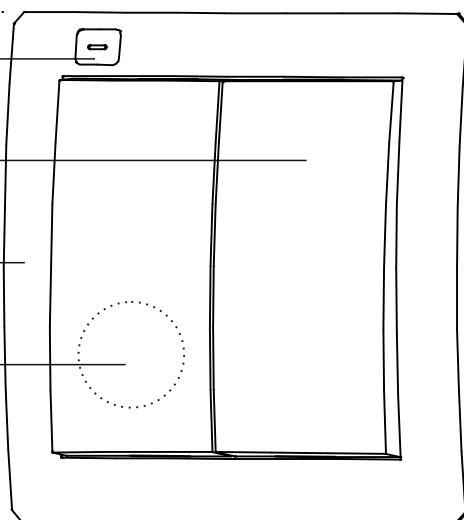
APPEARANCE

Visual indication of operation of the transmitter

Keys

Mounting frame

Temperature sensor



FEATURES

- > 2-key 4-channel radio transmitter,
- > remote control of receivers of the Exta Life system,
- > possibility of independent control of four receivers,
- > encoded radio transmission,
- > integrated internal temperature sensor,
- > temperature measurement by the sensor: from -40 to +125 °C,
- > battery power supply,
- > visual indication of sending information and battery condition,
- > easy installation with double-sided tape or two screw anchors,
- > large range of operation (up to 300 m. in open space).

WARRANTY CONDITIONS

Warranty is granted for a period of 24 months of the date of purchase. The defective 2-key 4-channel with temperature sensor transmitter along with the proof of purchase should be sent to the manufacturer or to the seller. Warranty does not include battery, mechanical damages, defects resulting from unauthorised repairs and improper use of the product.

Warranty period will be extended for the duration of the repair.

SPECIFICATION

Nominal supply voltage	3 V DC
Type of battery	CR 2032
Battery life	2–3 years with temperature sensor activated 3–5 years with temperature sensor deactivated
Number of channels	4
Transmission	radio - ISM 868.32 MHz band
Method of transmission	one-way 9600 bps
Encoding	algorithm based on 128-bit key
Compatibility	only with Exta Life system components
Range	up to 300 m in open space
Temperature measurement range	-40 ÷ +125 °C - the total measurement range of the used temperature sensor. The recommended temperature operation of the DEL-2 transmitter should be strictly complied with during the use.
Measurement resolution	0,1 °C
Measurement accuracy	± 1 °C (type) 0 °C ÷ +85 °C / ± 2 °C (type) -40 °C ÷ +125 °C
Temp. measurement frequency	every 15 minutes
Visual indication of transmission / battery condition	LED diode green
Operation temperature	-10 ÷ + 55 °C
Operation position	any
Method of installation	anchors, double-sided tape
Ingress protection of enclosure	IP 20 (PN-EN 60529)
Appliance class	III
Contamination level	2
Dimensions	67x67x17 mm
Weight	0,032 kg
Compliance with standards	PN-ETSI EN 300 220-1, PN ETSI EN 300 220-2

OPERATION

After pressing, the transmitter will send out the radio signal to the Exta Life system components. It is indicated with the green LED diode flashing in the transmitter. For the proper operation of the transmitter with receivers, it must be properly paired with them. The method of pairing (saving the specific buttons of the transmitter in the memory of the receiver) is described thoroughly in the operation manuals of the specific Exta Life receivers. The transmitter will send radio signal only during pressing/releasing of the button. When the button is pressed down, radio signal is not sent. This protects the battery against quick discharging. Information about temperature is sent out every fifth pressing of any button of the transmitter or automatically in specific time intervals, depending on the current conditions in the installation place.

INSTALLATION INSTRUCTIONS

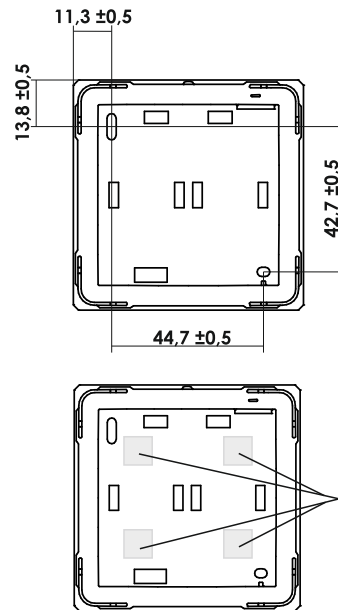
The DEL-2 transmitter is intended for installation with double-sided tape or screw anchors. During the installation one should remember not to expose the transmitter the direct effect of water or operate it in the environment of increased humidity. Temperature in the place of installation should be from -10 to +55°C.

INSTALLATION WITH SCREW ANCHORS:

1. Disconnect the key(s).
2. Find a place for installation of the transmitter on the wall, prepare two openings matching the installation openings in the installation frame of the DEL-2 transmitter.
3. Set screw anchors in the holes.
4. Fix the installation frame with screws
5. Connect the key(s).

NOTES:

- > for installation use 4 x 20 anchors with 2,5 x 20 screws or use double-sided tape,
- > the optimum thickness of double-sided tape is 0,55 mm,
- > anchors and double-sided tape are provided with the transmitter.



BATTERY REPLACEMENT

During regular use, battery condition is indicated with LED diode flashing during transmission. If the transmitter is paired with the controller, battery condition is indicated in the mobile app with a relevant message. The transmitter indicates the necessity of replacement of the battery when its voltage drops to < 2.1 V. The indication is cancelled when the battery is replaced.

1. Disconnect the key(s) (fig. 1).
2. Use a screwdriver to push up the electronics board while releasing the latch of the battery to allow its removal (fig. 2).
3. Remove the battery from the clamp (fig. 3).
4. Press any key of the transmitter several times (to discharge capacity).
5. Insert a new battery, properly polarised. Polarisation is marked on the clamp ("+" potential). NOTE: Inserting a battery incorrectly may result in damaging the transmitter!
6. Insert and snap the electronics board back in the installation frame.
7. Connect the key(s)
8. Check the operation: the diode should turn on as if during transmission.

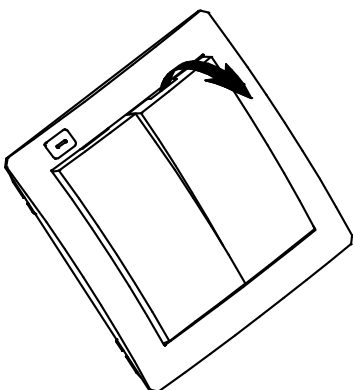


fig. 1

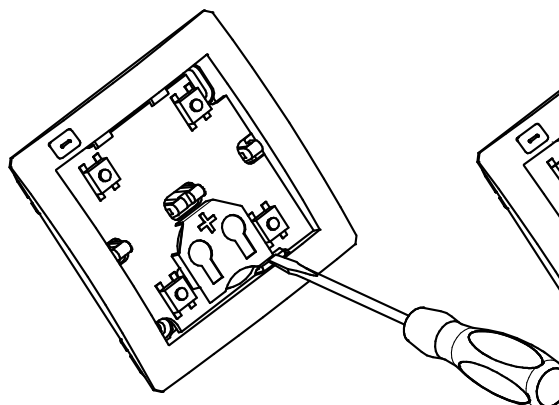


fig. 2

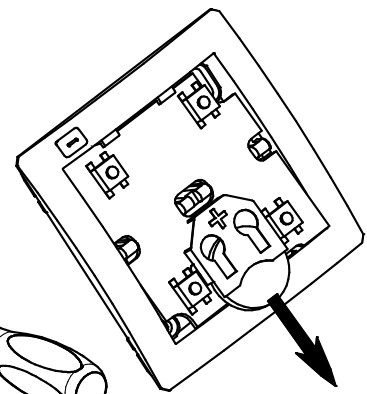


fig. 3

USAGE NOTES

STANDARD FUNCTIONALITY

- > the standard functionality allows direct control of receivers in the Exta Life system,
- > the functionality of the individual buttons of the transmitter depends on the type of the receiver in which buttons were paired (e.g. after pairing of the ROP-22 receiver, buttons may be used to activate/deactivate lighting, and after pairing with the SRP-22 roller blinds controller to roll the roller blinds up/down),
- > the individual buttons may be simultaneously assigned to a larger number of receivers of the Exta Life system,
- > if one transmitter is to control more than one receiver of the system, the "activate/deactivate" mode of operation is recommended (one button used to activate, another to deactivate),
- > the buttons of the transmitter may be assigned to receivers in various modes of operation, which depend on the type of the receiver (see details in the individual Exta Life receivers),
- > if the buttons of the transmitter are assigned to the receiver in the time mode, each button may be assigned customised time in the range of from 1 s to 18 hours,
- > buttons may be selectively removed from the memory of the receivers.

FUNCTIONALITY WITH THE CONTROLLER AND THE EXTA LIFE APPLICATION

The Exta Life controller and the mobile application may be used to:

- > remotely (without access to the receiver) add specific buttons of the transmitter to the selected receivers,
- > use the buttons of the transmitter to play scenes - or as the condition of execution of a logical function,
- > control battery condition,
- > read temperature from the sensor of the transmitter..

NOTE!

These functionalities are available after pairing the transmitter with the controller and registering the temperature sensor in the system.

TEMPERATURE SENSOR FUNCTIONALITY

The temperature sensor used in the DEL-2 transmitter is digital. It allows measurement of temperature from -40 to +125 °C.

NOTES:

- > **The temperature range operation of the DEL-2 transmitter is from -10 to +55 °C., so the transmitter should not be used for measuring temperatures outside of this range.**
- > **Characteristics of the measurement excludes the use of the sensor in the rooms with temperature changing dynamically (the sensor does not register quick changes of temperature)**

By default, the temperature sensor in the transmitter is deactivated. The sensor can be activated if it is not used by the user (see Temperature sensor activation/deactivation). Deactivation of the sensor extends battery life.

CHARACTERISTICS OF MEASUREMENT

Measurement hysteresis in the sensor is set at $\pm 0.30\text{C}$ and cannot be changed. Temperature reading is sent to the control always after the fifth pressing of any key of the transmitter with 5 s delay (temperature is measured and sent only after 5 seconds from detection of the fifth pressing).

During regular operation, temperatures measured approximately every 15 minutes. The measured temperature (T2) is compared against the previous reading (T1) and, depending on the difference of these two values, the current reading is sent to the controller or not.

$T2 - T1 > 0,30\text{C}$ - the reading is sent to the controller to update the value

$T2 - T1 \leq 0,30\text{C}$ - the reading is not sent to the controller

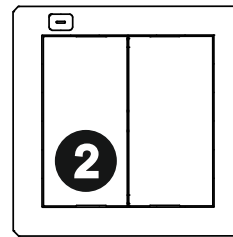
If temperature in the room is stable and the value is changed over the next 19 measurements $\leq 0.30\text{C}$ ($T2 - T1 \leq 0.30\text{C}$), after the 20th measurement (approximately every 300 minutes), the reading is obligatorily sent to the controller for updating. Sending the reading after the obligatory time is indicated with the LED diode in the transmitter flashing.

TEMPERATURE SENSOR ACTIVATION/DEACTIVATION

Temperature sensor deactivation

By default, the temperature sensor in the DEL-2 transmitter is deactivated. To activate it:

1. Remove the battery from the transmitter.
2. Press button "2" of the transmitter.
3. With the button "2" pressed down, insert the battery to the transmitter.
4. Release button "2" of the transmitter.
5. The temperature sensor is deactivated now.



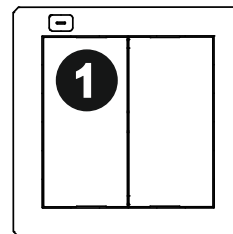
Temperature sensor activation

To activate the temperature sensor:

1. Remove the battery from the transmitter.
2. Press button "1" of the transmitter.
3. With the button "1" pressed down,

insert the battery to the transmitter.

4. Release button "1" of the transmitter.
5. The temperature sensor is activated



ADDING TEMPERATURE SENSOR TO THE EXTA LIFE SYSTEM

To add the sensor to the Exta Life system, connect the Exta Life controller and install the Exta Life app in the mobile device.

To pair the sensor with the controller :

1. Run the Exta Life application.
2. Enter the "Devices" screen.
3. Select the "Sensors" tab.
4. Enter the searching screen by pressing the button "+".
5. Within the time shorter than 60 seconds, press 5-times any button on the transmitter. After five pressings, wait for about 5 seconds.
6. The temperature sensor will be registered in the list of sensors to be paired with the controller.
7. Before 60 seconds, further temperature sensors may be registered or the search process may be terminated by pressing the button "Stop".
8. When the search is ended, select the sensors to be added to the controller and press the button "Pair"
9. The sensor is now visible in the system and indicates the temperature read during the pairing process. The sensor can be named, labelled with a special icon and used in the mobile app.

NOTE!

Temperature in the application is updated with each opening of the screen with the sensor or after manual refreshing of the screen (passing the screen downwards).

COMPATIBILITY AND RANGE OF OPERATION

DECO SMART TRANSMITTERS	DEL-2
EXTA FREE RECEIVERS	
ROP-21	280 m
ROP-22	300 m
RDP-21	280 m
SRP-22	300 m
EFC-01	350 m

NOTE!

The stated range of operation applies to open space, that is perfect conditions, without any obstacles. If there are any obstacles between the transmitter and the receiver, the range of operation may be reduced: for brickwork from 10 to 40%, for wood and gypsum from 5 to 20%, for reinforced concrete from 40 to 80%, for metal from 90 to 100%, for glass from 10 to 20%. Overhead and underground high-capacity power lines and mobile telephony transmitters close to the devices also negatively affect the range of operation.