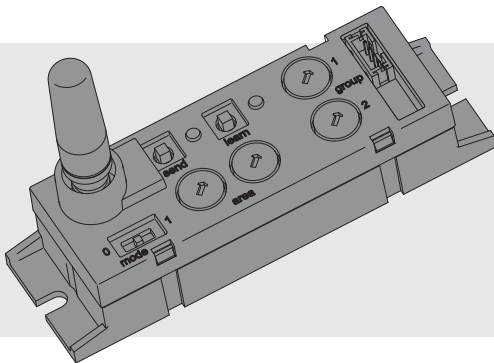# Waldmann W

ENGINEER OF LIGHT.

Operating Manual   ENG

PULSE TALK

Wireless module

`ENG` Welcome to Waldmann

Thank you for having purchased a product of the Waldmann brand. Highest product quality and a customer-friendly service are the basis for the successful distribution of Waldmann products throughout the world.

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Service Hotline: **+49 (0) 77 20 / 6 01 - 170**

Service E-Mail: **service@waldmann.com**

Your Waldmann team

Table of Contents

1. For your safety

This operating manual describes the installation of the PULSE TALK wireless module and the operation of the PULSE TALK wireless module with a Waldmann luminaire.

This operating manual does not replace the instructions for use of the luminaire.

▶ Read and observe the instructions for use and the safety instructions and warnings contained therein.

1.1 Designated use

The PULSE TALK wireless module is designed for connecting Waldmann luminaires to one another by wireless using PULSE control units. This allows the luminaires to communicate with one another and avoids light islands.

The PULSE TALK wireless module is also designed for wireless operation of Waldmann luminaires using PULSE control units and transmitting switching states to suitable external receivers.

1.2 Safety instructions

Danger due to electric current

Improper use and faulty work on the luminaire may result in injuries and material damage.

▶ Before performing work on the luminaire, disconnect the luminaire from the power supply.

▶ Mounting and connecting the luminaire may only be carried out by a skilled electrician.

▶ Disconnect a damaged connecting cable immediately from the power supply and replace it with a cable which can only be obtained from the manufacturer.

Hazard caused by unsuitable spare parts

Unsuitable spare parts can result in injuries and material damage.

▶ Only spare parts released by the manufacturer may be used as spare parts.

1.3 Warning levels in the document

⚠ **DANGER**

Warnings against hazards that result **directly in serious injuries or death** in case of non-observance.

⚠ **WARNING**

Warnings against hazards that may result in **serious injuries or death** in case of non-observance.
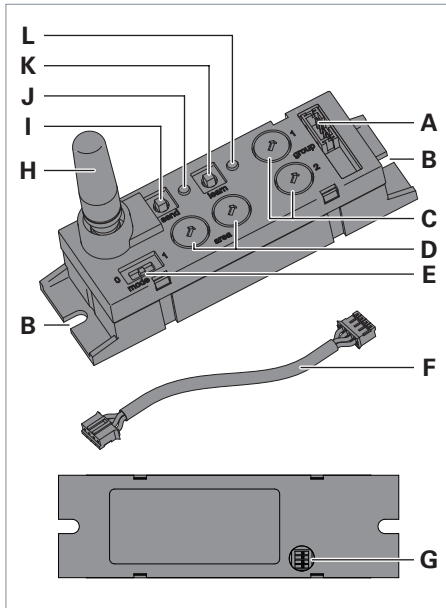
⚠ **CAUTION**

Warning against hazards that may result in **injuries** in case of non-observance.

NOTICE

Warning against hazards that may result in **material damage** in case of non-observance.

2.   Product overview

No.	Designation
A	"Wireless module control" interface
B	Mounting eyelet
C	"group" rotary coding switch
T	"area" rotary coding switch
E	"mode" slide switch
F	Connecting line **NOTE:** The delivery includes several connecting lines in different lengths.
G	DIP switch
H	Antenna
I	"send" key
J	"send" LED
K	"learn" key
L	"learn" LED

Tab. 1: PULSE TALK product overview.

3.   Functions

This chapter provides an overview of the PULSE TALK functions.

If you want to learn more about PULSE TALK, simply scan this QR code or visit us at: www.pulse-talk.com.

3.1   Luminaire communication

Dawn and dusk, bad weather, winter months - situations in which with workstation-oriented lighting "light islands" may be formed: You are sitting in the office all by yourself and, apart from your own desk, the remaining room is dark.

The PULSE TALK wireless module allows the luminaires of a group to communicate with one another and react to the presence or absence of persons: This forms a lighting scenario without unpleasant darkness and without irritating light islands.
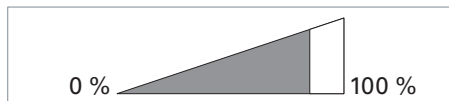
Thus, the PULSE TALK wireless module provides a feeling of security, a pleasant working atmosphere and higher performance.

Luminaire communication starts automatically as soon as the wireless module is connected. If required, you can adjust the luminaire communication to your needs and divide the luminaires into areas and there in turn into groups.
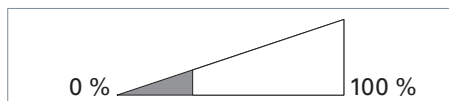
3.2 Lighting levels

The lighting levels are already preset to optimum values as-delivered and are transmitted to the control of the luminaire when the wireless module is connected. If required, you can adjust the work lighting and the background lighting to your needs.

Work lighting

0 %   100 %

Individually adjustable lighting level, in which a luminaire emits a quantity of light that allows pleasant working in the area of the luminaire.
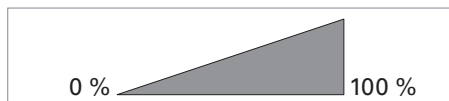
Background lighting

0 %   100 %

Reduced lighting level, in which a luminaire emits a smaller light quantity.

As-delivered, the luminaire has a maximum power consumption in background lighting of approx. 20%, relative to the maximum power consumption of the luminaire.

Service lighting

0 %   100 %

Lighting level, in which all connected luminaires are operated at full power. The sensors of the luminaires are off.

The service lighting is enabled via external transmitters and disabled automatically after approximately one hour.

3.3 External transmitters

This function can be used for teach-in of external EnOcean transmitters, such as wall transmitters. This enables external transmitters to operate the wireless module and the luminaires connected to it.

3.4 External receivers

This function can be used for teach-in of external EnOcean receivers, such as switching receivers or gateways for building automation. This enables external receivers to receive switching information of the luminaire via the wireless module.

3.5 Repeater function

This function allows the wireless module to be used as repeater.

4.   Installing PULSE TALK

In this chapter, you will learn in which sequence the installation of PULSE TALK should ideally be carried out.

1st step: Setting the luminaire communication

▶ If you want to adjust the presettings of the wireless module to your needs: First set the area and group assignments on your wireless module, see chapter 7.1 "Setting the area and group", page 11.

▶ Enable the luminaire communication, see chapter 7.2 "Enabling and disabling luminaire communication", page 13.

2nd step: Checking the setting for external receivers

▶ If you want to connect external EnOcean receivers to the wireless module at a later stage: Check whether you want to change the DIP switch setting on the back of the wireless module prior to mounting, see chapter 10.4 "Setting the external function", page 18.

3rd step: Mounting the wireless module

▶ Mount the wireless module, see chapter 5 "Mounting", page 9.

4th step: Connecting the wireless module

▶ Connect the wireless module, see chapter 6 "Connection", page 10.

5. Mounting

> ⚠️ **WARNING**
>
> **Risk of injury caused by electric shock**
>
> ▶ Disconnect the luminaire from the power supply.

Mounting the wireless module of an ATARO luminaire

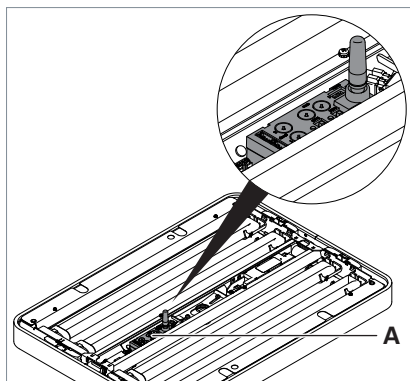▶ Remove the cover in the middle of the luminaire head top.

Fig. 1: Wireless module in an ATARO luminaire head.

NOTE: When mounting the wireless module, ensure correct position of the antenna, as otherwise the cover can no longer be mounted correctly.

▶ For luminaires with **HFMD sensor**: Disconnect the functional earth in the central support of the luminaire head.

▶ Insert the wireless module **A** into the unused area in the central support of the luminaire head, see Fig. 1.

▶ Fasten the wireless module using the delivered short screws. For luminaires with **HFMD sensor**: Use the delivered long screw on one side of the wireless module to tighten the wireless module and the line of the functional earth.

▶ Mount the cover on the luminaire head. In doing so, pass the antenna of the wireless module through the hole in the cover.

Mounting the wireless module of a TYCOON luminaire

▶ Remove the cover in the middle of the luminaire head top.
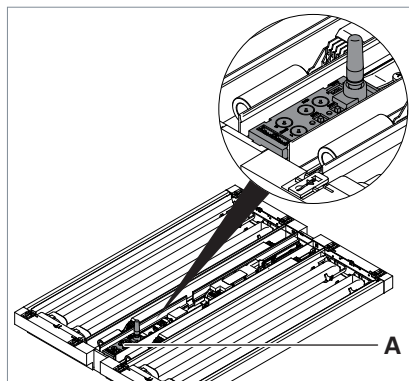

Fig. 2: Wireless module in TYCOON luminaire head.

NOTE: When mounting the wireless module, ensure correct position of the antenna, as otherwise the cover can no longer be mounted correctly.

▶ Insert the wireless module **A** into the unused area in the central support of the luminaire head, see Fig. 2.

▶ Fasten the wireless module using the delivered short screws.

▶ Mount the cover on the luminaire head. In doing so, pass the antenna of the wireless module through the hole in the cover.

6.   Connection

When the wireless module is connected to the luminaire, various presettings are automatically transmitted from the wireless module to the luminaire, such as the lighting levels. In addition, all luminaires to which a wireless module has been connected start communicating.

NOTES:

- The presettings are only transmitted during the first connection of the wireless module. If you want to connect the same wireless module to another luminaire, a reset must be performed, see chapter 12 "Performing a reset", page 21.

- The delivery includes several connecting lines in different lengths. Use the shortest connecting line possible for your luminaire model.
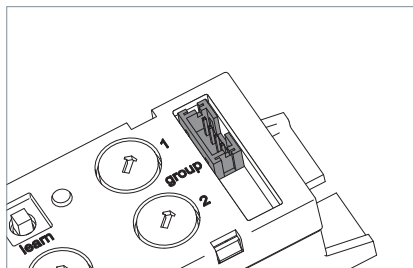
Fig. 3: Wireless module control interface.

▶ Connect one end of the connecting line to the "wireless module control" interface on the wireless module, see Fig. 3

  NOTE: Depending on the luminaire equipment, the connecting line must be connected to a different interface in the luminaire head. During the following work, make sure that you are using the interface provided for your luminaire model.
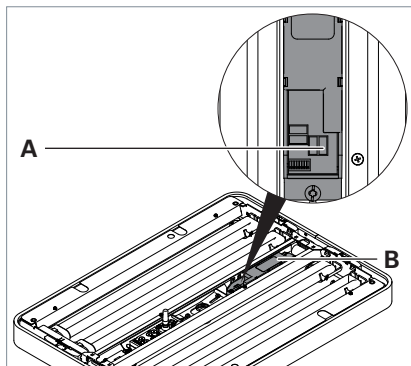
Fig. 4: Interface for dimmable luminaires and luminaires with HFMD sensor

▶ For luminaires with **HFMD sensor**: Connect the other end of the connecting line to the interface **A** "PULSE/EIB" at the luminaire control **B** in the luminaire head, see Fig. 4.

▶ For **dimmable** luminaires: Connect the other end of the connecting line to the interface **A** "R/Tx" at the luminaire control **B** in the luminaire head, see Fig. 4.
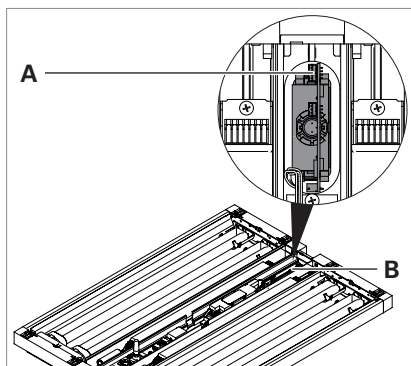
Fig. 5: Interface for luminaires with PIR sensor

▶ For luminaires with **PIR sensor**: Connect the other end of the connecting line to the interface **A** at the PIR sensor **B** in the luminaire head, see Fig. 5.

7. Setting the luminaire communication

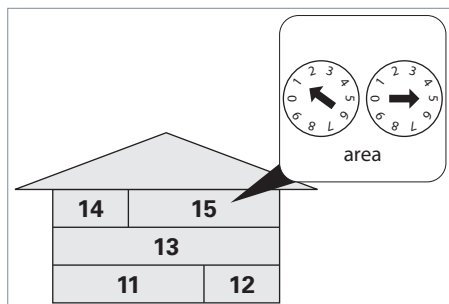## 7.1 Setting the area and group

Setting the area

Fig. 6: Example: Areas.

A luminaire can be assigned exactly to an area. An area is a fixed delimitation and can be, for example, a floor or a large office. Links between areas are not possible.

The area is set via the two "area" rotary coding switches. The left switch is for the ten digit and the right switch for the one digit of the area address. 100 different area addresses (0-99) can be set.
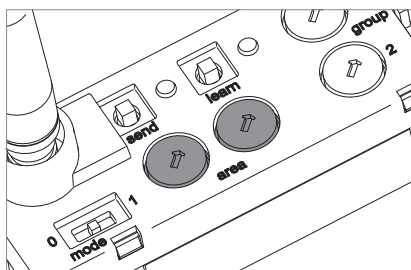

Fig. 7: "area" rotary coding switch.

▶ Set both "area" rotary coding switches to the desired area address, see Fig. 7.

When luminaire communication is active, all luminaires to which a wireless module has been connected communicate with one another and update themselves automatically.

After about one hour, assignment of the luminaire to the new area is complete.
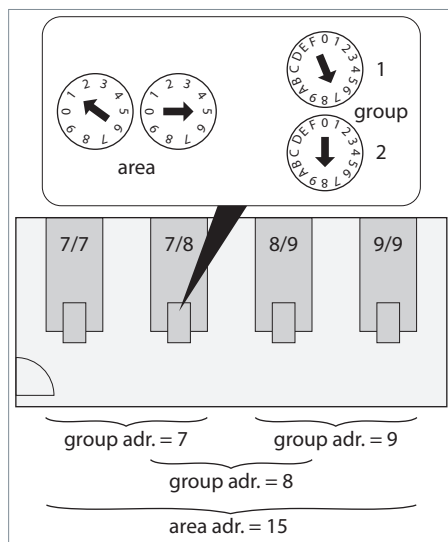
Setting the group

Fig. 8: Example: Groups.

Within an area, each luminaire can be assigned exactly to one or two groups.

The groups are set via the two "group 1" and "group 2" rotary coding switches. Each rotary coding switch is for a group. 16 group addresses (0-F) can be set per group. Up to 30 luminaires can be assigned to each group.
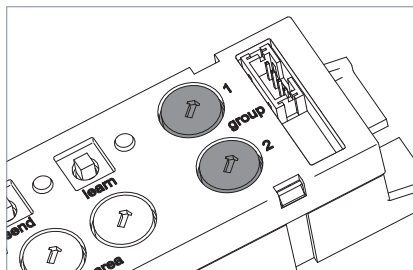
Fig. 9: "group 1" and "group 2" rotary cod-ing switches.

▶ If you want to assign the luminaire exactly to one group, both rotary coding switches "group 1" and "group 2" should be set to the same group address, see Fig. 9.

▶ If you want to assign the luminaire to two different groups, the "group 1" and "group 2" rotary coding switches must be set to the relevant group addresses.

When luminaire communication is active, all luminaires to which a wire-less module has been connected com-municate with one another and update themselves automatically.

After about one hour, assignment of the luminaire to the new group or group is complete.

Luminaire communication examples

Fig. 10: Example: luminaires do not detect pres-ence.

If no luminaire of an area or of an group detects presence, all luminaires will remain switched off, see Fig. 10.

Fig. 11: Example: Group 7 luminaire detects presence.

When a person enters the detection area of a luminaire that belongs to a group, this luminaire is switched to work lighting.

The luminaire that is present in the same group but does not detect presence is switched to background lighting, see Fig. 11.
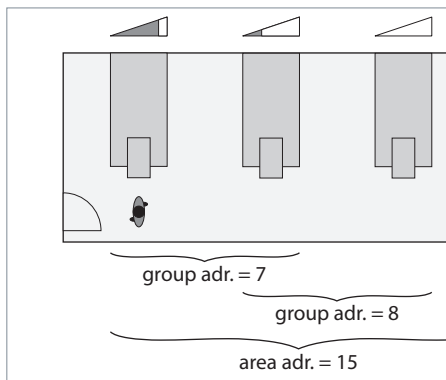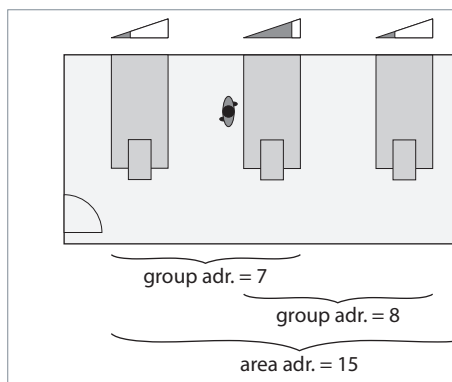
Fig. 12: Example: Groups 7 and 8 luminaire detects presence.

When a luminaire that is present in two groups detects presence, this luminaire is switched to work lighting.

The other luminaires that are present in both groups but do not detect presence are switched to background lighting, see Fig. 12.

7.2 Enabling and disabling luminaire communication

Enabling the luminaire communication

Fig. 13: Luminaire communication activated.

▶ Slide the "mode" slide switch to position **1**, see Fig. 13.

Once the wireless module has been connected, all luminaires to which a wireless module has been connected will communicate with each other.

After no later than 15 minutes, the automatic teach-in process will be complete, updating taking place at regular intervals.
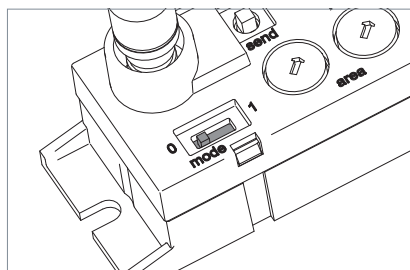
Disabling the luminaire communication

Fig. 14: Luminaire communication disabled.

▶ Slide the "mode" slide switch to position **0**, see Fig. 14.

Disabling the luminaire communication is complete. All other functions such as communication with external transmitters and receivers remain active.

8. Setting the lighting levels

8.1 Setting the work lighting

Setting the work lighting of a ATARO luminaire

▶ Dim the luminaire until the work area is illuminated with the desired brightness. For more details on this, please read the instructions for use of the luminaire.

 The set brightness is saved as work lighting.

Setting the work lighting of a TYCOON luminaire

▶ Dim the luminaire by pressing the upper key of the operating element of the luminaire until the work area is illuminated with the desired brightness. For more details on this, please read the instructions for use of the luminaire.

 The set brightness is saved as work lighting.

8.2 Setting the background lighting

Setting the background lighting of an ATARO luminaire

▶ Dim the luminaire until the work area is illuminated with the desired brightness. For more details on this, please read the instructions for use of the luminaire.

Fig. 15: "learn" key.

▶ Press the "learn" key and keep it depressed for 10 to 15 seconds until the "learn" LED starts flashing slowly, see Fig. 15.

 The set brightness is saved as background lighting.

 The luminaire switches again to work lighting, which can again be set as desired.

Setting the background lighting of a TYCOON luminaire

▶ Dim the luminaire by pressing the lower key of the operating element of the luminaire until the work area is illuminated with the desired brightness. For more details on this, please read the instructions for use of the luminaire.
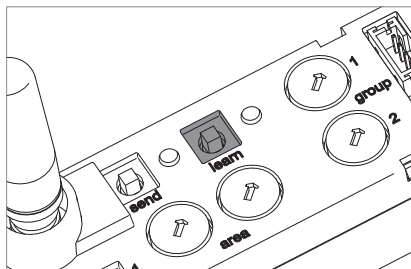
 The set brightness is saved as background lighting.

▶ To return to work lighting, press the upper key of the operating element of the luminaire.

9.　Connecting external transmitters

9.1　Teaching in and unteaching wireless transmitters

A luminaire can communicate with a maximum of ten wireless transmitters.

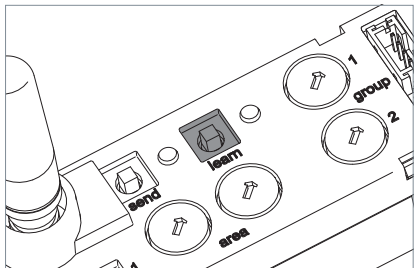**Teaching in and unteaching a wireless transmitter**

Fig. 16: "learn" key.

▶ Press the "learn" key and keep it depressed for two seconds, see Fig. 16.

The "learn" LED is flashing.

▶ Press the desired wireless transmitter.

The "learn" LED goes out.

Teach-in of the wireless transmitter is complete. If the wireless transmitter was already taught in, the wireless transmitter is now untaught.

▶ If you want to teach in further wireless transmitters, repeat the process.

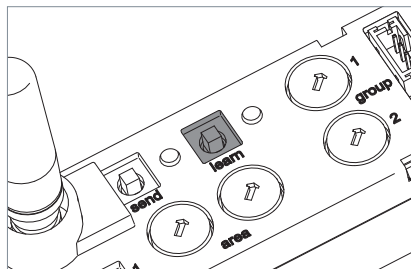**Deleting all wireless transmitters**

Fig. 17: "learn" key.

▶ Press the "learn" key and keep it depressed for five to ten seconds until the "learn" LED starts flashing quickly, see Fig. 16.

All wireless transmitters that had been saved to the wireless module have now been deleted.

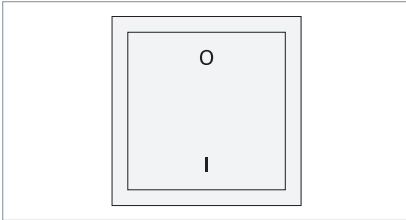## 9.2 Operating the luminaire using a 2-channel wireless transmitter

Fig. 18: Example: PEHA 2-channel wireless transmitter.

Switching on

▶ Press the key of the wireless transmitter at the bottom.

Dimming

▶ To dim the luminaire brighter, press the key of the wireless transmitter at the bottom and keep the key depressed.

▶ To dim the luminaire darker, press the key of the wireless transmitter at the top and keep the key depressed.

Switching off

▶ Press the key of the wireless transmitter at the top.

Enabling the service lighting

▶ Rotate the cover of the wireless transmitter once by 180°C.

▶ Press the key of the wireless transmitter at the bottom.

All connected luminaires will be operated at the maximum power. The luminaire sensors are off.

The service lighting is disabled automatically after approximately one hour.

▶ To deactivate the service lighting prematurely, press the key of the wireless transmitter at the top.

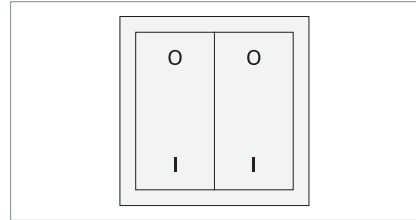## 9.3 Operating the luminaire using a 4-channel wireless transmitter

Fig. 19: Example: PEHA 4-channel wireless transmitter.

Switching on

▶ Press the right-hand key of the wireless transmitter at the bottom.

Dimming

▶ To dim the luminaire brighter, press the right-hand key of the wireless transmitter at the bottom and keep the key depressed.

▶ To dim the luminaire darker, press the right-hand key of the wireless transmitter at the top and keep the key depressed.

Switching off

▶ Press the right-hand key of the wireless transmitter at the top.

Enabling the service lighting

▶ Press the left-hand key of the wireless transmitter at the bottom.

All connected luminaires will be operated at the maximum power. The luminaire sensors are off.

The service lighting is disabled automatically after approximately one hour.

▶ To disable the service lighting prematurely, press the left-hand key of the wireless transmitter at the top.

10. Connecting external receivers

10.1 Teach-in of external receivers

NOTE: Read in the operating instructions of the external receiver how to teach in external transmitters at the receiver.
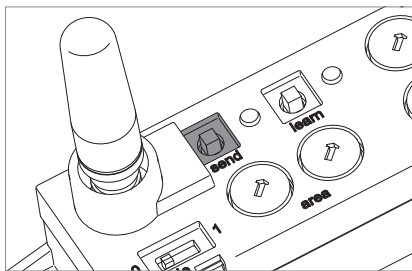

Fig. 20: "send" key.

▶ Press the "send" key, see Fig. 20.

A switch telegram will be sent (similarly to the use of wall transmitters), which can be used for the teach-in of external receivers.

10.2 Displaying the operating state of the external function

NOTE: As-delivered, the external function is inactive.

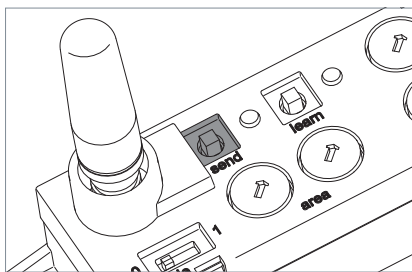**Displaying the operating state of the external function**

Fig. 21: "send" key.

NOTE: Each time the "send" key is pressed, a switch telegram will be sent additionally. It can be used for the teach-in of external receivers.

▶ Press the "send" key, see Fig. 21.

When the "send" LED is lit, the operating state of the external function is active.

If the "send" LED is not lit, the operating state of the external function is inactive.

10.3 Enabling and disabling the external function
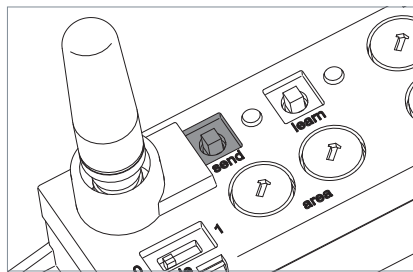

Fig. 22: "send" key.

▶ Press the "send" key and keep it depressed for at least five seconds, see Fig. 22.

If the operating state of the external function was disabled before, the operating state is now enabled, and the "send" LED starts lighting.

If the operating state of the external function was enabled before, the operating state is now disabled, and the "send" LED is no longer lit.

10.4 Setting the external function

PULSE TALK is capable of generating an EnOcean-compatible switch telegram and transmitting it to external receivers. The switch telegram is generated, for example, from sensor information of the luminaire or when the luminaire is switched on manually.

This telegram can be used to implement, for example, the following functions in the building:

- Background lighting for passage zones, such as switching wall luminaires on and off

- Control information, for example, for the provision of heating, air-conditioning, ventilation, sun protection

PULSE TALK can be set such that it will send the switch telegram when the "Presence detection" condition is fulfilled or when the "Presence detection and daylight regulation" condition is fulfilled.

Moreover, you can decide whether PULSE TALK will send the telegram if only a **certain luminaire** fulfils one of the two conditions or if **any luminaire in a group** fulfils one of the two conditions.

PULSE TALK will always send a switch telegram when the luminaire is switched on manually, for example with dimmable luminaires.

Functions for a certain luminaire

- Simple Single Control

  External receivers are switched on when the sensors of a certain luminaire detect presence, and the brightness of daylight is insufficient. This is the case when the luminaire is in the work lighting mode or the service lighting mode is active.

- Advanced Single Control

  External receivers are switched on when the sensor of a certain luminaire detects presence, even if the luminaire is not lit.

Functions for any luminaire in a group

- Simple Group Control

  External receivers are switched on when the sensors of any luminaire in a group detect presence, and the brightness of daylight is insufficient. This is the case when the luminaire is in the work lighting mode or the service lighting mode is active.

- Advanced Group Control

  External receivers are switched on when the sensor of any luminaire in a group detects presence, even if the luminaire is not lit.

Setting the Simple Single Control

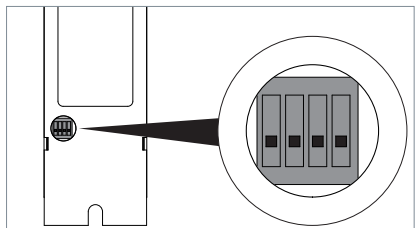**NOTE:** In the wireless module as delivered, this function is preset.

Fig. 23: DIP switch position for the Simple Single Control function.

▶ Disconnect the luminaire from the power supply.

▶ Set the DIP switches no. 1, no. 2 and no. 3 to the "OFF" position, see Fig. 23.

　NOTE: The position of the DIP switch no. 4 is irrelevant for this function.

▶ Reconnect the light to the power supply.

▶ Perform a teach-in for external receivers, see chapter 10.1 "Teach-in of external receivers", page 17.

▶ If the external function is not yet enabled, enable the external function, see chapter 10.3 "Enabling and disabling the external function", page 17.
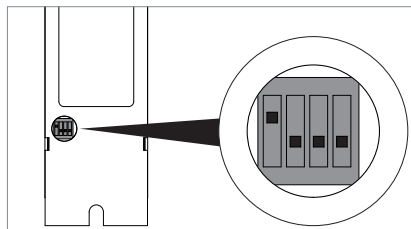
Setting the Advanced Single Control

Fig. 24: DIP switch position for the Advanced Single Control function.

▶ Disconnect the luminaire from the power supply.

▶ Set the DIP switch no. 1 to the "ON" position, see Fig. 24.

▶ Set the DIP switches no. 2 and no. 3 to the "OFF" position.

　NOTE: The position of the DIP switch no. 4 is irrelevant for this function.

▶ Reconnect the light to the power supply.

▶ Perform a teach-in for external receivers, see chapter 10.1 "Teach-in of external receivers", page 17.

▶ If the external function is not yet enabled, enable the external function, see chapter 10.3 "Enabling and disabling the external function", page 17.

Setting the Simple Group Control

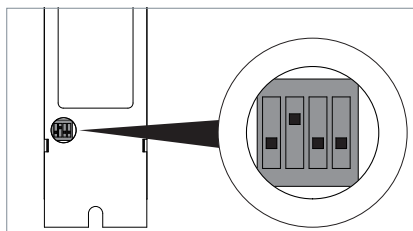**NOTE:** The luminaire communication must be enabled for all luminaires of the desired group.

Fig. 25: DIP switch position for the Simple Group Control function.

▶ Disconnect the luminaire from the power supply.

▶ Set the DIP switch no. 2 to the "ON" position, see Fig. 25.

▶ Set the DIP switches no. 1 and no. 3 to the "OFF" position.

   NOTE: The position of the DIP switch no. 4 is irrelevant for this function.

▶ Reconnect the light to the power supply.

▶ Perform a teach-in for external receivers, see chapter 10.1 "Teach-in of external receivers", page 17.

▶ If the external function is not yet enabled, enable the external function for the luminaire for which the external receiver was taught in, see chapter 10.3 "Enabling and disabling the external function", page 17.

Setting the Advanced Group Control

NOTES:

▪ This function must be enabled for all luminaires of the desired group.

▪ The luminaire communication must be enabled for all luminaires of the desired group.
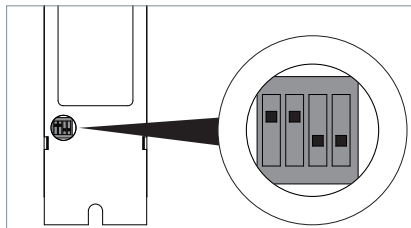

Fig. 26: DIP switch position for the Advanced Group Control function.

▶ Disconnect the luminaire from the power supply.

▶ Set the DIP switches no. 1 and no. 2 to the "ON" position, see Fig. 26.

▶ Set the DIP switch no. 3 to the "OFF" position.

   NOTE: The position of the DIP switch no. 4 is irrelevant for this function.

▶ Reconnect the light to the power supply.

▶ Perform a teach-in for external receivers, see chapter 10.1 "Teach-in of external receivers", page 17.

▶ If the external function is not yet enabled, enable the external function for the luminaire for which the external receiver was taught in, see chapter 10.3 "Enabling and disabling the external function", page 17.

11. Enabling the repeater function

If the range of one wireless module is no longer sufficient, another wireless module can be used as repeater.

All telegrams, including those from external products, will be received and forwarded.

NOTE: Use the repeater function only if the range of a wireless module is in the limiting range. Keep the number of repeaters low, as the performance may drop due to increased traffic.
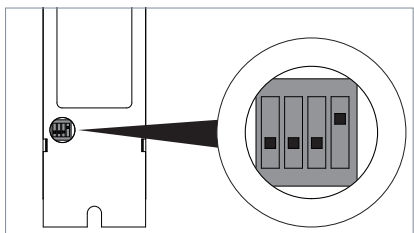

Fig. 27: DIP switch position for the repeater function.

▶ Disconnect the luminaire from the power supply.

▶ Set the DIP switch no. 4 to the "ON" position.

   NOTE: The position of the other DIP switches is irrelevant for this function.

▶ Reconnect the light to the power supply.

12. Performing a reset

A reset resets the wireless module to the factory defaults. All saved luminaires and transmitters will be deleted, the background lighting level reset, and the external function disabled.
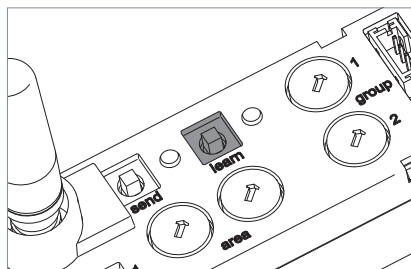

Fig. 28: "learn" key.

▶ Press the "learn" key and keep the key depressed for at least 15 seconds until the "learn" and "send" LEDs are permanently lit, see Fig. 28.

13. What to do if?

Problem	Possible causes	Corrective action
"learn" LED and "send" LED are flashing.	Maximum number of saved devices has been reached.	▶ Unteach saved devices and teach in the desired device, see chapter 9.1 "Teaching in and unteaching wireless transmitters", page 15
"learn" LED and "send" LED are permanently lit.	Software function is defective.	▶ Disconnect the wireless module from the power supply for a few seconds.
Wireless module does not react to inputs.	Software function is defective.	▶ Disconnect the wireless module from the power supply for a few seconds.
Faulty communication of the wireless module over a prolonged period.	Software function is defective.	▶ Perform a reset, see chapter 12 "Performing a reset", page 21.
The presettings are not transmitted automatically when connecting the wireless module to the luminaire.	The wireless module has already been connected to another luminaire and the transmission of the presettings has already been carried out during the first connection.	▶ Perform a reset, see chapter 12 "Performing a reset", page 21.
Luminaire reacts differently from what is expected after operation on the wireless transmitter.	For 2-channel wireless transmitters: Cover of the wireless transmitter was mounted the wrong way around.	▶ Rotate the cover of the wireless transmitter by 180°C.
Luminaire is switched on with a group or area different from the one set on the wireless module.	Luminaire is still in the memory of "old" groups or "old" areas.	▶ Wait for about one hour until the memory has "forgotten" the luminaire.
Luminaire is lit too brightly in background lighting.	Dimming value of background lighting was set too high.	▶ Reset the desired background lighting at the lowest possible brightness in the room, see chapter 8.2 "Setting the background lighting", page 14.

Problem	Possible causes	Corrective action
The connecting cable is damaged.	Mechanical impact on the connecting cable.	▶ Disconnect a damaged connecting cable immediately from the power supply and replace it with a cable which can only be obtained from the manufacturer.

If you want to make use of our service, our service team can be reached at:

Service Hotline: +49 (0) 77 20 / 6 01 - 170

Service E-Mail: service@waldmann.com

Tab. 2: What to do if?

14. Disposal

The product is subject to European Directive 2002/96/EC.

▶ Dispose of the product separately from domestic waste using the agencies responsible for disposal and designated by the authorities.

  Proper disposal avoids adverse effects on man and the environment.

15. Technical Data

NOTE: The data given on the rating plate of the wireless module attached to the underside of the wireless module apply.

15.1 Compatibility

PULSE TALK is compatible with all Waldmann luminaires equipped with the following controls and firmware versions:

PULSE dimmable

- Version VFP 4.4 D (and higher)

PULSE PIR

- Version VFS 4.3 E (and higher)
- Version VFS 4.4 F (and higher)

PULSE HFMD

- Version VFP 4.5 H (and higher)

15.2 Admissible temperatures

Designation	Value
Ambient temperature in operation	0°C...55°C
Storage temperature	-25°C...75°C

Tab. 3: Admissible temperatures.

15.3 Electrical values

Designation	Value
Input voltage range	5-6 V DC
Power consumption	250 mW (max. 280 mW)
Power supply	Via light control

Tab. 4: System requirements.

15.4 Wireless data

Designation	Value
Wireless technology	Bidirectional EnOcean wireless communication
Radio Transceiver	868,3 MHz for use in EU countries and Switzerland
	902,875 MHz for use in USA
Range	30 m in buildings

Tab. 5: Wireless specification.

15.5 Classification

Designation	Value
Protection class	III
Degree of protection	IP 20
Operating mode	Continuous operation

Tab. 6: Classification.

15.6 Symbols

Symbol	Designation
	Protection class III Operation with safety extra low voltage (SELV)
	CE conformity mark
	FCC label
enocean®	EnOcean wireless technology
	Disposal in accordance with European Directive 2002/96/EC

Tab. 7: Symbols.

15.7 Conformity and certifications

CE conformity

PULSE TALK wireless modules with a CE conformity mark may only be operated together with luminaires identified as Waldmann luminaires and only in EU countries and in Switzerland.

FCC conformity

PULSE TALK wireless modules with a FCC label are approved for the USA.

Model: PULSE TALK
FCC ID: 2AARB PULSE
Frequency: 902,875 MHz

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTICE: Changes or modifications made to this equipment not expressly approved by Waldmann may void the FCC authorization to operate this equipment.

16. Personal notes

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