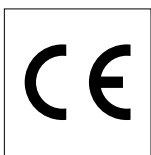
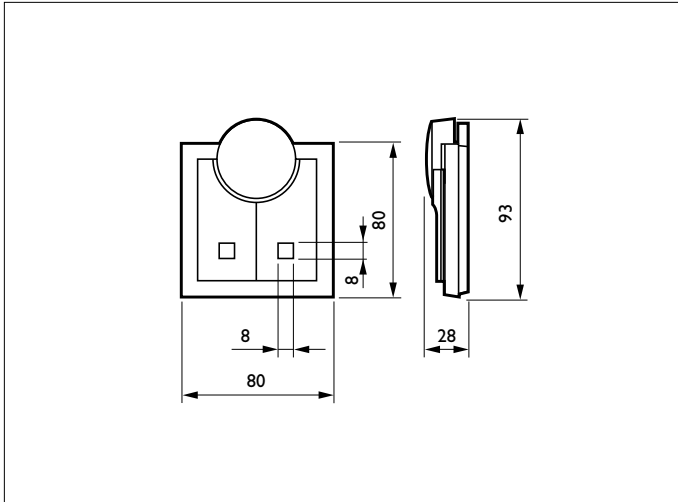


IRT 8050/00

Two-key wall transmitter



Dimensions in mm



Product details

- The IRT 8050 is a multi-purpose two-key transmitter suitable for the infrared remote control of lighting installations and other building related equipment.
- The IRT 8050 can be used to switch and/or regulate lighting in individual control circuits, to select lighting presets, to operate sun blinds and to switch HVAC (heating, ventilation air-conditioning) systems to comfort or standby.
- The two large keys can have 27 different sets (combinations) of control functions and 5 programming functions (for operational modes).
- The unit is suitable for wall mounting and for table top operation. The Infrared radiation pattern, however, has been optimised for wall-mounted operation.
- As a special feature it offers the possibility to operate two different control circuits using the "toggle key" principle. Toggle keys alternately send two different codes, i.e. the code changes each time the key is pressed. Thus two functions can be controlled with one key, e.g. "Circuit 1 ON - Circuit 1 OFF" or "Blinds UP - Blinds STOP".
- The transmitter has an integrated "teach mode" and can thus be used as programming tool for group and channel addresses.
- The actual function is selected by 5 dip switches in the battery compartment. Table 3, in the section "Miscellaneous", shows the setting of the dip switch for the 27+ 5 possible sets of key functions.
- The group address of the transmitter can be selected with 3 dip switches in the battery compartment. Table 2, in the section "miscellaneous", shows the exact settings.
- The key function can be selected and batteries can be exchanged without removing the unit from the wall.
- Transmission of infrared signals and the teach mode / normal mode is indicated by a red LED on the front of the unit.
- Battery life-time (with Philips Power Life batteries - 1050 mAh) has been calculated at over 5 years for an average of 50 normal key-operations per day.

Let's make things better.

IRT 8050/00

Two-key wall transmitter

Applications

- The IRT 8050 is primarily intended for the infrared remote control of individual lighting control circuits and for control of sun blinds in systems with combined lighting and non-lighting building functions.
- Selection of presets is possible using "multiple-touch" operation, i.e. a sequence of 1, 2, 3 or 4 short key presses.
- It offers an easy to find, fixed point control to switch on basic lighting.
- The IRT 8050 can be used in combination with, HELIO, TRIOS and SCENIO. It may serve as the replacement of the IRC 2310 and the IRT 8060.
- The IRT 8050 can replace the IRC 1310 and IRT 8060 in IFS applications with the following restrictions:
 - IFS channels a and b in IFS groups 0, 2, 4, 6 and 8 can be controlled using Helio channel 4 and 5 in Helio groups A, B, C, D and E respectively.
 - IFS channels a, b and c in IFS groups 1, 3, 5, 7 and 9 can be controlled using Helio channel 1, 2 and 3 in Helio groups A, B, C, D and E respectively.
 - IFS channels a, b and c in IFS group "general" can be controlled using Helio channel 1, 2 and 3 respectively in Helio group "general". For details see table 1.

IFS group							channel		
	0	2	4	6	8	-	a	b	c
Helio group	A	B	C	D	E	-	4	5	-

IFS group							channel		
	1	3	5	7	9	*	a	b	c
Helio group	A	B	C	D	E	*	1	2	3

Table 1: The IRT 8050 in IFS applications

- The IRT 8050 can be used as programming tool, thus offering the same functionality as the TRIOS programming tool IRT 1090. For programming of group and channel addresses of a controller, the transmitter must be set in the "teach mode" by pressing both keys simultaneously for more than 2 seconds. A flashing LED indicates the teach mode.
 - When the left key is pressed, the transmitter sends the codes that set the group address of the controller to the same group address as the transmitter. If the transmitter is set to the "general" address, no group addressing codes are generated.
 - When the right key is pressed, the transmitter sends the codes that set the controller to the channel address that corresponds to the actual function of the transmitter.
 - Channel addressing is only possible in case the actual functionality of the transmitter includes channel commands. If the transmitter is set for instance to call a preset or to operate sun blinds, no channel programming codes can be generated. If the transmitter is set to operate two channels (with toggle keys), the channel addressing codes in teach mode correspond to the left key (i.e. the lowest channel address, except for the ch5/ch1 combination). After programming has been completed, the transmitter can be reset to normal operation by pressing both keys again, until the LED lights steadily.
 - The operational mode of a controller can be changed by setting the dip-switches in the transmitter to the required operational mode and pressing one of the keys.

Related equipment

Lighting management systems

Helio	light controller	LRC 5040
		LRC 5048
	multi-sensor	LRI 5133

Stand-alone controls

Trios, installer	light controller	LRC 1010, LRC 1020, LRC 1030
		LRC 1015, LRC 1025, LRC 1035
Trios Infrasense	light controller	LLC 1120
Trios Multisense	light controller	LLC 1130
	multi-sensor	LRI 1110
Scenio	light controller	LRC 1555

General Purpose Components

IR transmitters	Hand-wall transmitters	IRT 8070
	Wall transmitters	IRT 8065
Sensors	Infrared receivers	IRR 1224, IRR 8124, IRR 8125
	Multi-sensors	LRI 8133

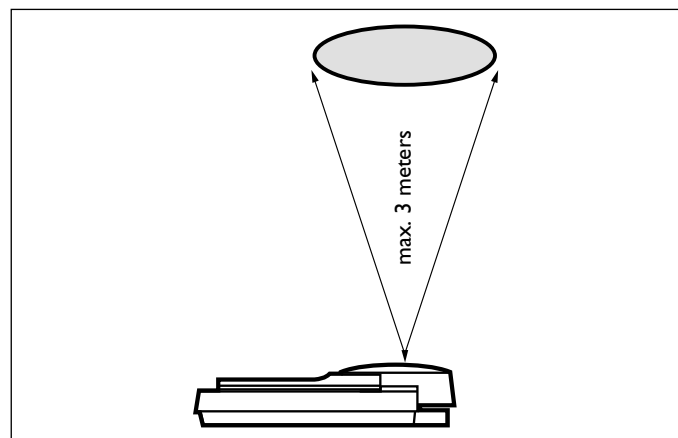


Figure 1: IR radiation in teach mode

NOTE: when transmitting of addressing codes and operational mode commands, the infrared radiation pattern of the IRT 8050 is reduced to a narrow beam, in order to facilitate selective programming of luminaires or controllers. Therefore the transmitter must be pointed at the receiver. The maximum distance is 3 meters. The beam of radiation is perpendicular to the front of the transmitter (see also figure 1). The red LED can be used as reference for directing the transmitter to the receiver.



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Technical data

Number of keys	: 2
Number of indicator LED's	: 1
Number of IR-LED's	: 5
Carrier frequency	: 36 KHz. (RC5 standard)
Supply voltage	: 6.0 V nominal
Number of batteries	: 4 each 1.5 V nominal
Battery type	: LR03, AAA Power Life (1050mAh)

Environmental conditions

operating conditions	
temperature	: 5...50°C
relative humidity	: 20...85 %
condensation	: not allowed
storage conditions	
temperature	: -25...85°C
relative humidity	: 5...95 %

The IRT 8050 should not be exposed to direct sunlight or to high temperatures and should not be used in damp rooms such as bathrooms

Dimensions : 93 x 80 x 28 mm (max. height x width x depth)

Weight : 0,070 Kg (without batteries)
0,115 Kg (with batteries)

Housing

Material : ABS
Colour : White (Bayer 0177 - close to RAL 9010)

Mounting : screws 3.5 to 4.0 mm. diameter, through mounting holes in battery compartment

EMC

immunity : in accordance with EN 50082-1
radiated interference : in accordance with EN 50081-1

Reliability

call rate : 1% per year (estimated)
life time : 10 years (estimated)

Installation

Opening the unit

In order to reach the mounting holes, to set the function and address dip-switches and to insert the batteries, the unit can be opened using the keys as "doors". This can be done without any tool by lifting first the left key and then the right key from the bottom centre part (see figure 2).

Positioning

The transmitter IRT 8050 is suitable for wall mounted operation and for table top operation. When mounted on the wall, the unit must be located between 1 and 2 meters under the ceiling.

The corresponding receiver must be located in the ceiling, within a circle around the transmitter, with a maximum radius of between 3 and 6 meters respectively (see figure 3).

Mounting

The transmitter can be fixed to the wall using round headed screws of 3.5 to 4.0 mm diameter or with two pieces of double sided sticking tape. (60 x 19 mm). See figure 4.

Battery handling

Batteries must be replaced simultaneously. Always use a set of 4 batteries from the same brand with the same production date. Please make sure that batteries are inserted with the correct polarity. Inverted batteries may cause damage to the transmitter (See installation instructions). Disposal of batteries must be in accordance to local regulations.

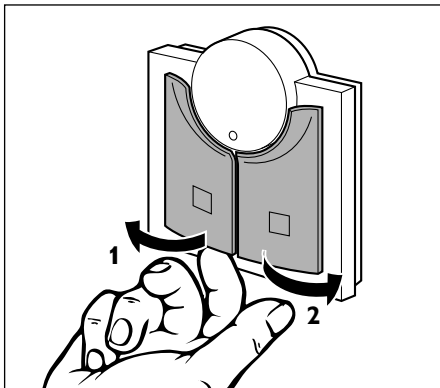


Figure 2: Opening the unit

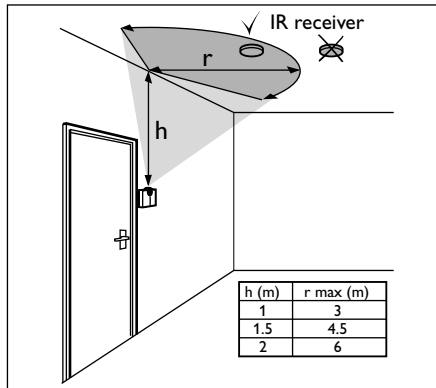


Figure 3: Positioning

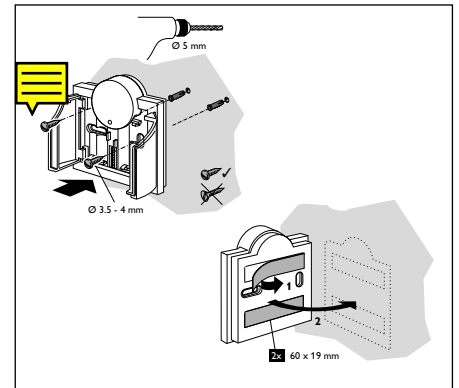


Figure 4: Fixation



IRT 8050/00

Two-key wall transmitter

Miscellaneous

Table 2: Group address selection

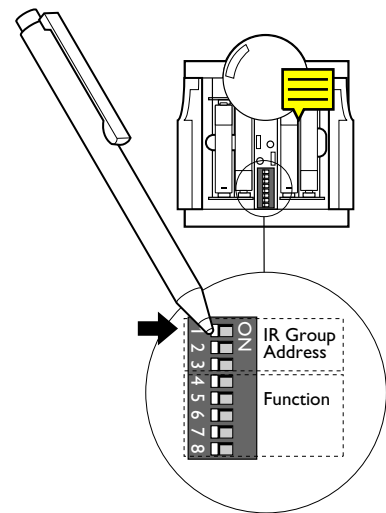
Dip switch position			Helio - Trios groups address	Scenio group address
1	2	3		
			A	1
•			B	
	•		C	
•	•		D	2
		•	E	
•		•	F	
	•	•	G	
•	•	•	General	



Table 3: Functions of the keys

DIP Switch Position					LEFT KEY Function	RIGHT KEY Function	
4	5	6	7	8			
					Ch 1 Off / Down	Ch 1 On / Up	
•					Ch 2 Off / Down	Ch 2 On / Up	
	•				Ch 3 Off / Down	Ch 3 On / Up	
•	•				Ch 4 Off / Down	Ch 4 On / Up	
		•			Ch 5 Off / Down	Ch 5 On / Up	
•		•			All Off	Preset 1	
	•	•			All Off	Preset 2	
•	•	•			All Off	Preset 3	
			•		All Off	Preset 4	
•		•			Blinds Down	Blinds Up	
	•		•		Ch 1 On ⇔ Ch 1 Off	Ch 2 On ⇔ Ch 2 Off	
•	•		•		Ch 2 On ⇔ Ch 2 Off	Ch 3 On ⇔ Ch 3 Off	
		•	•		Ch 3 On ⇔ Ch 3 Off	Ch 4 On ⇔ Ch 4 Off	
•		•	•		Ch 4 On ⇔ Ch 4 Off	Ch 5 On ⇔ Ch 5 Off	
	•	•	•		Ch 5 On ⇔ Ch 5 Off	Ch 1 On ⇔ Ch 1 Off	
①	•	•	•	•	All Off	Preset 1 ⇔ Preset 2	
①				•	All Off	Preset 1 ⇔ Preset 3	
①	•			•	All Off	Preset 1 ⇔ Preset 4	
①		•		•	All Off	Preset 4 ⇔ Preset 3	
①	•	•		•	All Off	Preset 4 ⇔ Preset 2	
①			•	•	All Off	Preset 4 ⇔ Preset 1	
④	•		•	•	All Off	P1, P2, P3, P4	
④		•	•	•	All Off	P4, P3, P2, P1	
	•	•	•	•	Absent + All Off	Setpoint 0 + Preset 1	
②			•	•	Blinds Down ⇔ Stop	Blinds Up ⇔ Stop	
③	•		•	•	Light Level Down ⇔ Stop	Light Level Up ⇔ Stop	SCENIO ONLY
		•	•	•	All Off (1+2)	Preset 1	SCENIO ONLY
	•	•		•	Operational Mode 1	Operational Mode 1	
			•	•	Operational Mode 2	Operational Mode 2	
	•	•	•	•	Operational Mode 3	Operational Mode 3	
		•	•	•	Operational Mode 4	Operational Mode 4	
	•	•	•	•	Operational Mode 5	Operational Mode 5	
teach mode					group addressing codes	channel addressing codes	

• = ON



Remarks:

In order to avoid unexpected and inconsistent system reactions, the lighting "toggle functions" can be used for switching only!

Do not use toggle keys;

- with more transmitters in one room
- in combination with a movement detector
- in centrally controlled systems

Channel commands are not applicable for Scenio.

- 1 In all code sets of the type Px ⇔ Py ("toggle key") and all off, the all off key resets the other key to the Px command. Thus the lighting will always be switched on at Px, regardless the status before switch off.
- 2 For the window blinds "toggle functions" up ⇔ stop and down ⇔ stop, both keys reset the other to the first command. (i.e. only the last operated key will generate a stop command). Additionally, both keys are automatically reset to the first command, 1 minute after the last key press. Thus a consistent operation is maintained, even with centrally controlled window blinds.
- 3 For the SCENIO "toggle functions" up ⇔ stop and down ⇔ stop, both keys reset the other to the first command. (i.e. only the last operated key will generate a stop command). Additionally, both keys are automatically reset to the first command, 1 minute after the last key press. Thus the correct operation of the up and down keys is maintained when for some reason the stop command was not given (e.g. after dim up to maximum or dim down to minimum).
- 4 Multiple touch keys:
A sequence of 1, 2, 3, or 4 short key presses will call different presets. Time between two subsequent presses must be less than approx. 0.5 seconds.



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Two-key wall transmitter

Memo card

Memo cards (see figure 5) are printed at the rear side of the keys. These cards show the address setting (left key) and the 12 most common key functions (right key). Space has been reserved to mark the settings used.

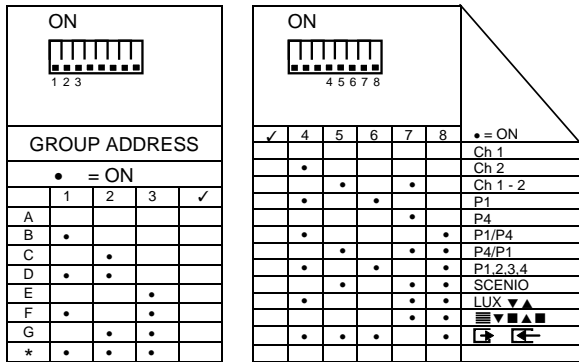


Figure 5: Memo cards at rear side of keys

Indications and Diagnostics

- "teach mode"
A flashing LED indicates that the teach mode has been selected.
- normal mode
a constant LED when the two keys are pressed indicates that the transmitter reverted to normal mode. After key release the LED is switched off.
- transmission indication
A fast flashing LED during key press indicates that infrared radiation takes place.

Packing data



Type	Box dimensions (mm)	Qty	Material	Weight (Kg)	
				net	gross
Unit box	124 × 92 × 50	1	card board	0.115	0.160
Outer box	205 × 192 × 133	8	card board	0.92	1.380

Ordering Data

Type	MOQ	Ordering number	EAN code level 1	EAN code level 3
IRT 8050/00	8	9137 003 10703	87 11559 517070	87 11559 517087

Related documentation

Installation Instructions		3222 636 40010
HELIO Handbook	(English)	3222 636 49000
UNILON Handbook	(English)	3222 636 49010
SCENIO system handbook	(English)	3222 636 49020
TRIOS system handbook	(English)	3222 636 49030
TRIOS luminaires handbook	(English)	3222 636 49040

IRT 8050/00
Two-key wall transmitter

3222 636 30060
10/98
Printed in the Netherlands
Data subject to change
<http://www.lighting.philips.com>



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