

# IRR8125/10

## “Invisible” infrared receiver



### Product details

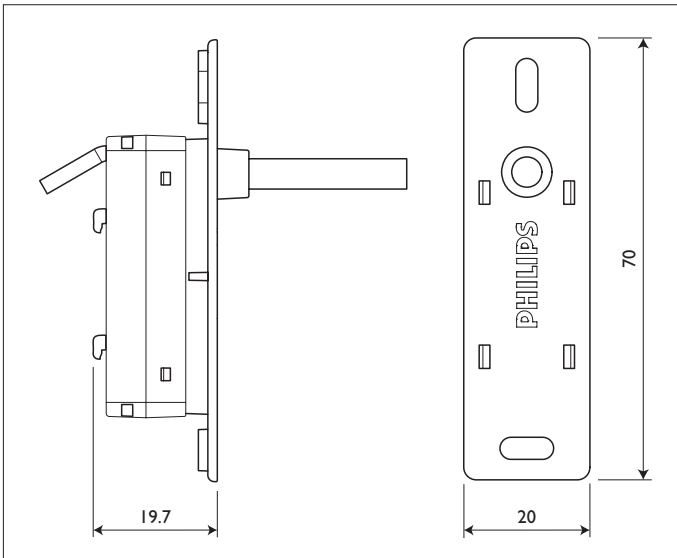
- The IRR 8125/10 is an infrared receiver for remote control in lighting and other building related applications.
- Its main characteristic is its special design that allows for “invisible” mounting behind false ceilings. Only a small and transparent optic device protrudes from the ceiling.
- Fixation can be done by screws or with double sided sticking tape.
- Electrical connections are made with a flying lead of 1000 mm length, provided with a standard modular plug (“telejack”).
- The receiver is primarily intended for indoor use in an office environment.
- The receiver is powered from the corresponding controller and does not require an external power supply unit.

### Applications

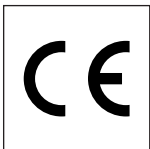
- All remote control applications for lighting systems, HVAC (heating, ventilation and air-conditioning) and sun blind systems.
- Especially intended for applications where the “invisible” mounting of the receiver is an absolute requirement. This can be in view of aesthetics, i.e. on specification of the architect or consultant, or in cases where there is no sufficient space to use flush mounted sensors, e.g. when cooling/heating ceilings are used.
- The IRR 8125 can be used in combination with all current lighting control equipment, such as LMM and Trios. It is also suitable for application in older systems like HELIO, IFS, MCS and DFS, except for 455 KHz applications.
- Rules for parallel connection and maximum number of sensors per interface are listed in the datasheets of the controllers. The IRR8125/10 does not differ in that respect from other IR receivers in the current portfolio
- The IRR8125/10 can be used to replace the MCS9010, MCS9020, IRR8124 and the IRR8125/00

### Restrictions

Ballast for fluorescent lighting can operate at the same frequency (36 kHz) as the carrier frequency used by Philips remote controls. The IRR8125/10 is released for use with Philips ballasts only. The receiver can only be used in combination with ballasts from other manufacturers if they operate at a frequency of 42 kHz or higher. Please contact a Philips representative for more details.



Dimensions in mm



**Technical data**

Sensitivity Level	optimised for use in office (or industrial) applications and sufficient to cover, in combination with the non-directional transmitters, an area of 30 square meters when surrounded by at least three walls and 20 square meters when not surrounded by walls .
Irradiance	typical 0.5 mWatt per square meter (on-axis)
Pattern	see diagram “relative transmission distance” in section “miscellaneous”
Carrier frequency	36 KHz. (RC5 standard)
Output Coding	bi-phase RC5 codes
Output low voltage	< +1.0 V
Output high voltage	> + 3.5 V
Maximum output Current sourced	10 mA
Maximum output Current sink	0.1 mA
Short circuit current	50 mA (pin 5 of modular plug connected to ground) Outputs can be “wired OR” up to a total of 4 receivers. One receiver can drive the inputs of up to at least 5 controllers
Power supply	5 V ± 10% , typical 1 mA derived from connected controller
Electrical connections	Modular plug standard pinning: 1. 12 V dc supply voltage (n.a.) 2. ground 3. 5 V dc supply voltage 4. light sensor output signal (n.a.) 5. infrared receiver output signal (RC5) 6. movement detector output signal (n.a.)
Environmental conditions	
Operating conditions	
Temperature	+5...+50°C
Relative humidity	20...85 %
Condensation	not allowed
Storage conditions	
Temperature	-25...+85°C
Relative humidity	10...95 %
	The IRR 8125 should not be exposed to direct sunlight or to high temperatures and should not be used in damp rooms such as bathrooms

Dimensions	19.7 × 70 × 20 mm (max. height x width x depth)
Weight	0,029 Kg
Recess clearance	minimum 2.5 mm
Housing Material	ASA
Colour	light grey (similar to RAL 7035)
EMC	
Immunity	in accordance with EN 50082-1
Radiated interference	in accordance with EN 50081-1
Reliability	
Call rate	0.2 - 0.5 % per year during a lifetime of 5 years

**Installation**

**Positioning**

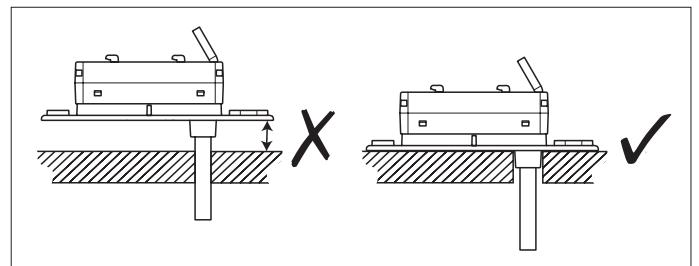
The receiver must be mounted, preferably behind a false ceiling, in the centre of the area to be covered by the transmitter. Obstruction of the infrared reception by objects such as plants, furniture etc. must be avoided. For additional information see the installation instructions for the corresponding transmitter.

**Mounting**

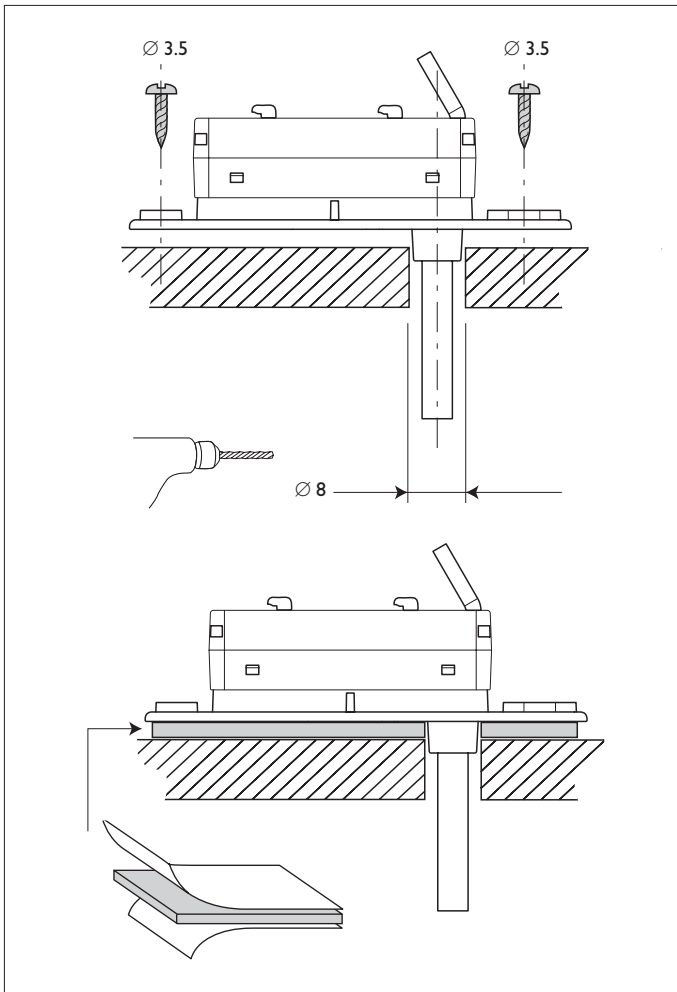
The unit can be fixed either with two round headed screws of 3.5 mm. diameter, through mounting holes or with two pieces of double sided sticking tape (19 × 19 mm, see figure). It is essential that the transparent optic does not touch the inside of the mounting hole. Therefore a hole of at least 9 millimetres diameter must be used. (See figure)

**Electrical connections**

The electrical connections are made with a flying lead of 1 meter long, provided with the standard modular plug (“telejack”). Thus installation errors are eliminated.



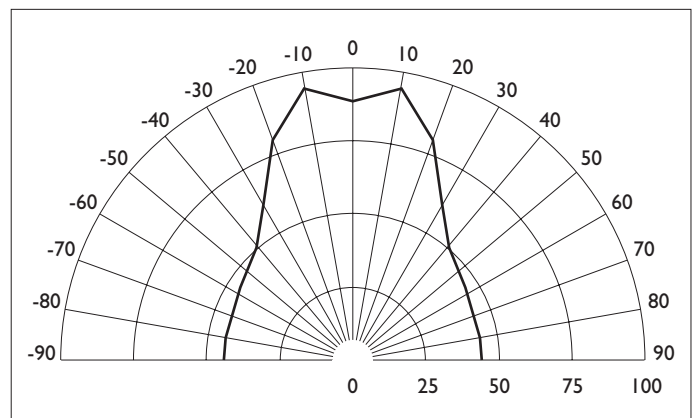
Optic must not touch inside of mounting hole



Fixation

**Miscellaneous**

- Parallel connection of sensors.  
 The total number of sensors that can be connected in parallel to one controller may be limited by the maximum current the controller can source (for the supply of sensors).
- Interference signals that may be picked-up by the various receivers connected in parallel, accumulate. This may reduce the distance for reliable transmission. Therefore it is recommended to keep the number of receivers connected in parallel to a minimum.
- Operating frequency of HF ballasts.  
 In order to prevent interference from unwanted infrared radiation, the operating frequency of HF ballasts used in the same area as the mentioned infrared receiver, must be lower than 30 KHz, or higher than 42 KHz.



Relative transmission distance

**Packing data**

Type	Box dimensions (mm)	Qty	Material	Weight (Kg)	
				net	gross
Unit box	165 x 120 x 27	1	paper bag	0.029	0.030
Outer box	370 x 260 x 130	20	cardboard	5	5.95

**Ordering Data**

Type	MOQ	Ordering number	EAN code level I	EOC
IRR8125/10	20	9137 003 27603	87 11559 731315	731315 99

3222 636 35071  
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 Data subject to change  
[www.philips.com/lightingcontrols](http://www.philips.com/lightingcontrols)

