

Enviromental Control Systems

Documentation for IRS IR sensor for IR-receivers

Revisionlist

Contains information about changes done in different versions of document

Revisionlist:

Date	Name	Short description of change
01.02.2011	Bent-Håvard Sollid.	First version, based on Norwegian version 01.02.2011.

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1 Preface

Picomeds IRS IR-sensor is a part of Picomed as' products for enviromental control systems. It receives infrared (IR) signals from IR-transmitters. It converts it to electrical signal which is sent via wires to an IR-receiver.

1.1 *The product in general*

IRS is designed to be mounted on a wall. It receives most of the common IR-signals on the market and has a wider range than the IR-receivers which it shall transmit IR-signals to. The enclosure which it is placed inside has an IR-transparent frontfoil.

2 User manual

IRS is ment to be mounted on a wall. It is designed for both indoor and outdoor use. There is a light-indicator in front of the IRS which is illuminated when the receiver receives IR-signals from the IRS.

3 Maintenance

The IRS can be cleaned with a dry or humid cloth. It shall not be exposed to much water/fluid. Except of this it does not need any maintenance. There is no battery to be changed.

4 Installation instructions

There is no settings to be programmed, no IR to be programmed, factory settings etc. It is ment for indoor or outdoor (protected for hard weather conditions). If a power outage is present there will not be any data which need to be reentered.

- If mounted outdoor it has to be shielded for direct rain and snowing conditions.
- Avoid direct sunlight or other unwanted IR-sources since this will "jam" IR-signals from IR-transmitters.
- Avoid any obstacles in front of it since this will stop IR-signals from IR-transmitters.
- The light indicator is activated by the IR-receiver when the receiver has got IR-signals from the sensor.

IRS shall be mounted by a technician which connect it to a receiver. Sensor is now ready to be used.

4.1 *Electrical connections*

It shall be powered by 10-30 VDC/10-24 VAC. Electrical connections to IR-receiver:

Connections & colours	Function
Yellow	LED.
Blue	IR.
Black	0 V.
Red	PWR+.

5 Technical information

5.1 Troubleshooting

Symptom	Possible fault	Correction
Sensor does not respond at all.	<ul style="list-style-type: none"> Power not connected. "LED" or "IR" is not connected to receiver. 	<ul style="list-style-type: none"> Check power supply Check wires
Sensor does not work well, or it works only when transmitter is pointed directly to it or only when transmitter is placed very near sensor.	<ul style="list-style-type: none"> Covered. IR-noise. Sensor placed in a not useable place. 	<ul style="list-style-type: none"> Remove curtains etc which is in the front of the sensor. Check if there is a lot of sun-light directly to the IRS or other IR-sources. Check if IR-signals really can be seen by IRS.
Sensor works now and then, only in short intervals or only on some of the expected channels.	<ul style="list-style-type: none"> Receiver or transmitter not programmed correctly. IR-noise. 	<ul style="list-style-type: none"> Program receiver once again. Program relayfunctions in receiver once again. Check if there is a lot of sun-light or other IR-sources beaming directly to the IRS.
Sensor works only on some of the expected channels.	<ul style="list-style-type: none"> Receiver or transmitter not programmed correctly. 	<ul style="list-style-type: none"> Program receiver once again. Check if the light-indicator is illuminated when IR-transmitter is operated.

5.1.1 If it does not work

If there are difficulties with the equipment, please contact the technician. Below is a field to note name and phone number to technician.

Name	Phone number

5.2 Reuse

If the IRS shall be disconnected and installed some other place the following shall be done:

- ❑ Visual check, any damages on box?
- ❑ Check functionality.
 - ❑ For a function test there has to be a transmitter and a receiver available. Both of them has to be programmed to each other.
 - ❑ Check that IRS receives IR and that it transmit it to the receiver.
 - ❑ Check that the light indicator is illuminated when it receives an IR-signal.
- ❑ Clean it.

5.3 CE approval

The product is designed with reference to the current EØS/EU directives including their standards. The EC Declaration of Conformity is stored by the manufacturer.



5.4 Technical data

Type	IRS IR-sensor for infrared light.
Operation	Via IR-transmitter. Lightindicator in front.
Power supply	10-30 VDC / 10-24 VAC.
Power consumption	• < 1 mA @12,0 V.
Energy transmission	None.
Temperature to be used within	-25 to +40° C.
Measurements	LxBxH: 21 x 43 x 48 mm.
Weight	20 g.
Box is made of	Polystyren and polycarbonat.
Recycling	To be threatened as electronic waste (RoHS).
Developed and manufactured in	Norway by Picomed as, N4993 SUNDEBRU.