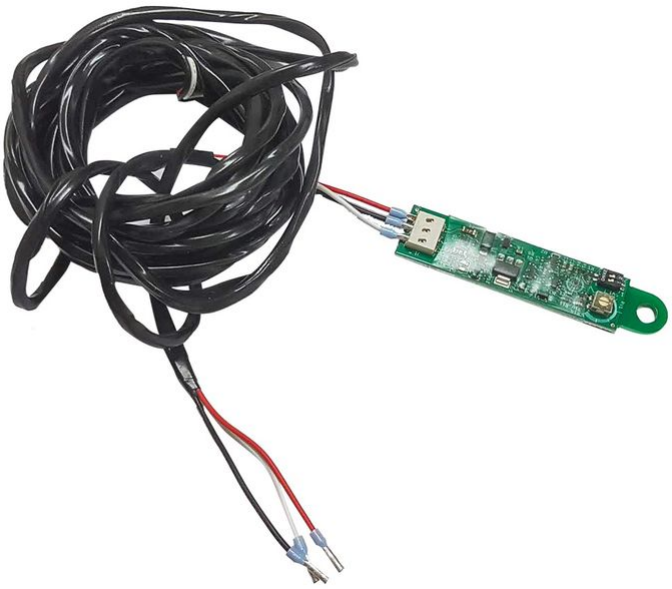
[ENG] NetPing Light Sensor 813S2, User guide

Содержание



[ENG] [813S2] 1. Introduction

This user guide helps to become familiar with an operation of a **NetPing Light Sensor 813S2** device and get an idea about its functionality and technical specifications as well as prepare a device for an operation.

A User Guide is designed for network administrators and users, who set up or operate a device. To work with a device properly, a user must have an idea about the principles of building and functioning of local networks as well as possess the next knowledge and skills:

- Basic knowledge in the area of local and global networks;
- Basic knowledge in the area of architecture and principles of work of TCP/IP networks;
- Basic knowledge in the area of architecture and principles of work of Ethernet networks.

[ENG] [813S2] 2. Copyright and Disclaimer

Developer and manufacturer:

NetPing east Co Ltd.

www.netpingdevice.com

sales@netpingdevice.com

[ENG] [813S2] 3. Shipping Kit

- NetPing Light Sensor 813S2 — 1 pc.;
- Connecting cable;
- Packing
- zip package.


netping
www.netpingdevice.com
NetPing Light Sensor 813S2
Power DC 5V, 50mA
Output npn open drain 200mA up to 12V
Light sensivity
SW1 SW2
x x 10-70 LUX
ON x 100-700 LUX
x ON 1000-7000 LUX
SN

[ENG] [813S2] 4. Sensor overview and main features

Sensor purpose

NetPing light sensor 813S2 is a compact sensor for sharing with NetPing host devices presented on the website www.netpingdevice.com

The device can be used to ensure the security of remote border infrastructure (analogous to the operation of the reed switch, only by light), monitor access to the room, to the cabinet, to the protected object, and also use it to reserve the door sensor when the reed switch inside the door opening sensor does not work for some reason. These security features can be applied to the following objects:

- Server rooms;
- Data center;
- Base transmitting stations (cell towers);
- Rooms with equipment;
- Warehouses;
- Secured premises.

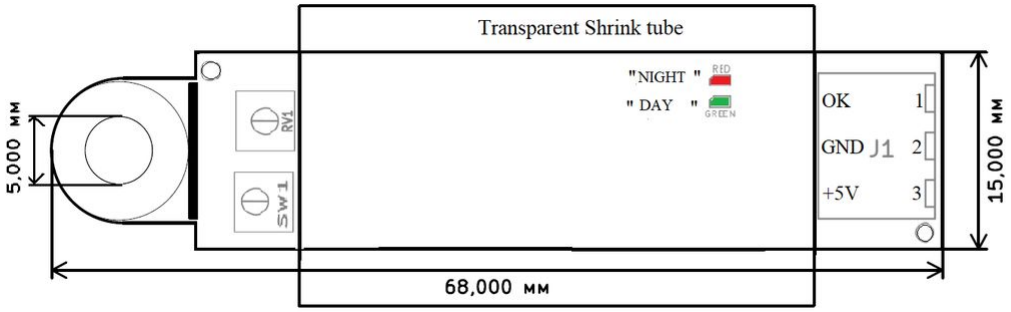
The device also allows you to remotely monitor the presence of a luminous flux and automatically control light sources, depending on the level of illumination of the surrounding space of the following objects:

- Residential buildings;
- Premises of administrative buildings;
- Banking and insurance institutions;
- Educational institutions, preschool institutions;
- Leisure facilities;
- General catering enterprises;
- The shops;
- Consumer service enterprises;
- Hotels;
- Medical institutions, pharmacies;
- Road transport tunnels;

Appearance

General view of the sensor:

Dimensions of the sensor:



- The device is made on an electronic board in a compact design with a width of 15 mm and a length of 68 mm;
- In order to increase reliability, the electronic components of the sensor are covered with a polymer film;
- For ease of installation, a hole with a diameter of 5 mm is made in the sensor housing, and a self-adhesive surface is applied.;
- On the board of the device there are two LEDs indicating the operating mode, green - "day", red - "night";
- The design of the device includes a **SW** level switch that switches the measuring sensor to different response ranges, as well as a tuning potentiometer **RV1** to adjust the sensor response;
- To ensure the reliability of the electrical contact connection, when connecting the signal line to the device, there is a self-locking terminal block **J1** on the device board, which provides a constant pressure contact throughout the entire service life.

Operating status indication

When the light falls on the sensor, the green LED "Day" is triggered, signaling the presence of a luminous flux, in the absence of a luminous flux, the red LED "nIght" works, signaling the sensor's standby mode.

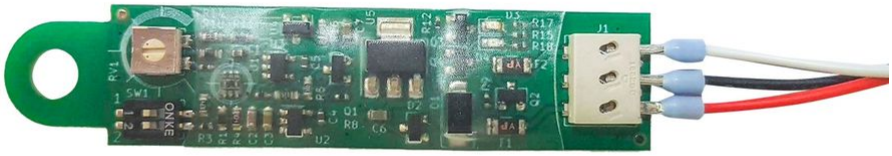
General characteristics

Parameter	Value
Illumination measurement range	1-10000 LUX
3 measuring ranges	10-70 LUX, 100-700 LUX, 1000-7000 LUX
Minimum measured threshold	3-5 LUX
Adjustment step	10-300 LUX
Viewing angle	25-30 degrees
Measurement accuracy	25 %
Hysteresis	20 %
Signal filtering time constant	4,4 c
Sensor response/release time	From 1 to 20 seconds depending on the light level
Output type	NPN open drain/dry contact connected to the IO line of the NetPing device
Power supply	5V from the IO terminals of the NetPing device
Rated current consumption	no more than 10 mA
Protections	Protection against reverse polarity. Protection against connection to 12V - the sensor may not work, but it should not be damaged.
Working temperature	--30..+50 C without condensation
Cable length	3 m

[ENG] [813S2] 5. Connection to actuators and initial setup.

Description of terminals

For the convenience of connecting sensors to the device, a terminal block is used. To fix the wires in the pad, use a slotted screwdriver with a slot width of 2.5 mm. Pinout of the contacts on the terminal block is as follows:



Sensor terminal	Sensor Loop (coloured)	Device terminal
1	White - Open collector	One of the IO or INPUT lines
2	Black - GND	GND

Sensor terminal	Sensor Loop (coloured)	Device terminal
3	Red - +5 V	+5V

- White — normally open N.O. (open) contact;
- Black wire - common;
- Red — sensor power + 5V.

Installation and connection

The light sensor can be mounted on a horizontal or vertical surface.

The device has outputs of the "dry contact" type with a normally open contact and is connected to NetPing devices like all sensors of this type.

When installing the sensor, the following restrictions must be taken into account:

- Do not install the device near heat sources.
- Do not open the device case.
- Avoid getting liquid on the sensor, in particular in the connectors.

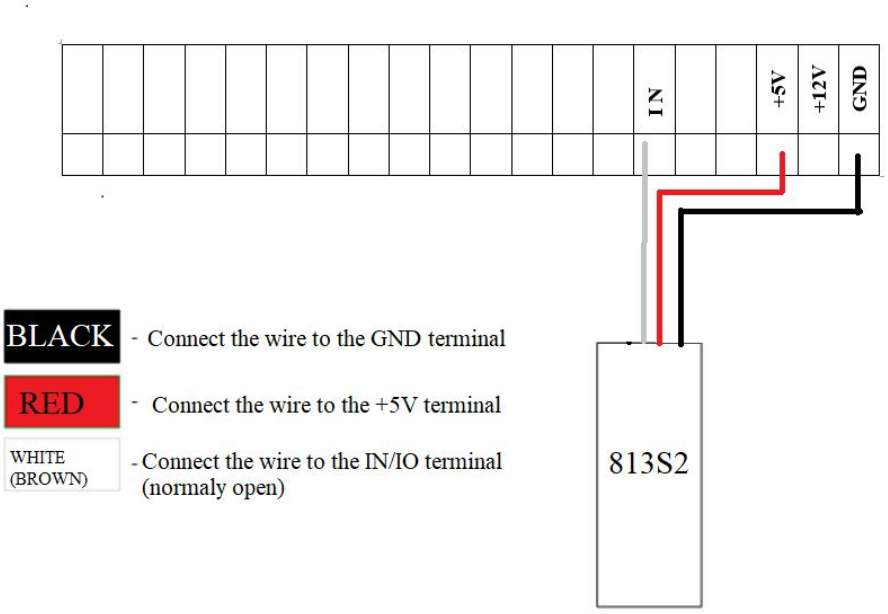
The length of the loop from the sensor to the caste device should not exceed 100 m. If necessary, the length of the native loop can be increased by an extension cable of the Cable 4 extender, 4m Or independently using any wire with a cross section of at least 0.4 mm2.

Important! When used in conjunction with devices with combined I/O contacts, the corresponding IO line to which the signal wire from the sensor is connected must be switched to the "input" mode in the device settings.

Connection steps

Step 1.

Connect the sensor to the device.



For detailed information on connecting this sensor to the connected device, see the manual of the tail device in the section "Connecting devices of the "Dry contact" type.

Step 2.

Go to the web interface of the monitoring device to start configuration. The sensor configuration in the device's web interface is specified in the description of the firmware, the section "Working with discrete I/O channels" for the corresponding model
here: www.netpingdevice.com

Setting

Step 1.

With a 2.5 mm slotted screwdriver, adjust the position of the SW group switches and select one of the three ranges according to the table:

SW1	SW2	Range
X	X	10-70 LUX
ON	X	100-700 LUX
X	ON	1000-7000 LUX

Step 2.

To adjust the sensor response to a certain level of light output, it is necessary to adjust the RV1 potentiometer with a 2.5 mm slotted screwdriver to the desired result.

> ***To fine-tune the sensitivity of the light sensor, it is recommended to make settings near an adjustable light source in conjunction with a trusted luxmeter.***

[ENG] [813S2] 6. Warranty

The manufacturer guarantees normal operation of the product within 24 months from the date specified on the warranty sticker if a buyer follows operating and storage conditions. Manufacturer warranty applies only to failure of a device which occurred because of defects in manufacturing process of products and components used. If during a warranty period the manufacturer receives a notice of such defects, it will repair or exchange the product (by its own discretion). If the manufacturer is unable to repair or replace a flawed item during a period of time determined by the current legislation, the manufacturer according to a customer's wish can return the amount paid for the product at the time of purchase. The manufacturer provides a limited warranty on firmware and device configuration software. In case of detecting any errors in the software which became known to the manufacturer on its own or from a customer, the manufacturer will fix these errors within a reasonable time and provide an update for the customer. Only the errors that block normal use of the device at conditions and for performing functions described in this User Guide are a subject to mandatory fix. This warranty does not apply to cases when defects appear because of: a misuse of a device, any modifications of a device without a written permission of the manufacturer, opening up a device (a warranty sticker on the case of a device is damaged) except cases foreseen by this description; repairing by unauthorized personnel, using or storing a device out of the range of allowable temperature and humidity, pressure, a software modification, and the reasons, listed below:

- A device failed because of the problems in a public electric network, plugging a device into power supply networks with invalid parameters, absence of grounding, etc. (power fluctuations and surges, overloading, etc.);
- A device failed because of having liquid inside;
- A device failed as a result of extreme temperatures;
- A device failed because of mechanical damage;
- A device failed because of connecting a power supply unit with invalid output voltage or a defective power supply unit;
- There are foreign objects, insects, etc inside the enclosure;
- During operation a voltage bigger than an allowable voltage range by the Ethernet standard has been supplied to the ports of a device.

[ENG] [813S2] 7. Precautions

The next information will allow users to avoid both injuries and damaging a device as well as connected equipment.

- A device must be used only in a power supply network, indicated by a manufacturer. Using any other power supply types may lead to damaging a device;
- Do not use damaged power cords as well as insecurely fixed wall sockets;
- Do not drop a device and avoid impact of force on it.
- Protect a device from high humidity levels. It is prohibited to touch a device and a connected equipment with wet hands;
- Use devices only indoors;
- Do not place a device at a surface or inside heating devices, such as microwaves, stoves and heaters;
- Do not use a device in locations marked as potentially explosive, with a possibility of an explosion and a ban on the use of wireless devices (works for devices with a built-in GSM modem);
- Protect a device against fire and extreme temperatures;
- Do not allow children to use a device.

Attention! Failure to comply with these conditions is a violation of the operating conditions of a device.

[ENG] [813S2] 8. Operating and storage conditions

The sensor is designed for continuous round-the-clock operation in enclosed spaces. In the operating conditions of application, the sensor is resistant to air temperatures from -30 ° C to +50 ° C (without condensation of moisture, at normal humidity). It should protect the sensor from direct moisture and sunlight.

The sensor design provides reliable uninterrupted operation for a long time without the need for special maintenance.

Storage is carried out at temperatures from -40 ° C to +70 ° C.

In storage rooms, the content of dust, acid and alkali vapors, aggressive gases and other harmful impurities that cause corrosion should not exceed the content of corrosive agents for type 1 atmosphere.

[ENG] [813S2] 9. Additional Documents and Links

Pages of devices on a manufacturer's website:

Manufacturer's website: http://www.netpingdevice.com/

Technical support contacts: http://www.netpingdevice.com/support

Telephone: +886-2-23121582

E-mail: support@netpingdevice.com