



## Touch switch with brightening/dimming function WDN-01



Surface  
mounting



Indoor mounting  
only



Brightening/dimming  
function

The WDN-01 touch switch is used to switch on or switch off the light by means of a touch. Using the PWM output the brightening /dimming function of LED diodes is additionally available. WDN-01 switch can control the traditional lighting source (halogens, incandescent lighting, fluorescent) or LED diodes.

WDN-01 touch switch is designed to be mounted on surfaces such as wood and wood-based imitation materials thicker than 2 mm, and they are also designed for plasterboard mounting.

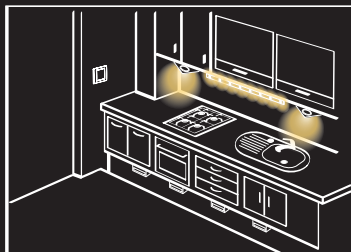
**The touch switch fulfils the requirements of harmonized standards in the scope of safety use or electromagnetic compatibility. The construction solutions allow for a safe use of WDN-01 switch even by persons with an implanted artificial pacemaker.**

### Features:

- brightening/dimming function,
- low power consumption during stand-by mode (0,25 W) - the device is suitable for a continuous operation mode,
- PWM output for a direct connection of LED diodes,
- output of NO free relay with a maximum load of 5 A,
- automatic calibration process referring to the change of a sensor's connection place or the touch surface.

### APPLICATION

The application shows the use of WDN-01 touch switch. The sensor of the touch switch is connected to the aluminium LED strip mounted under the top part of the kitchen cupboards. The LED strip is directly connected to the PWM output of the WDN-01 switch. The WDN-01 relay output switches on the halogen spotlight powered by an electronic transformer (ETZ or ETW series). Switching on/switching off the light is realised by means of touching the aluminium LED strip. Additionally the WDN-01 switch enables brightening/dimming of a lighting source connected to PWM output.



## Touch switch with brightening/dimming function WDN-01

### Switch sensor

cable length:  
1,5 m

A detailed mounting description is inside the packaging

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10 ÷ 14 V DC / 0,25 W; IP20  
weight: 55 g



The symbol means selective collecting of electrical and electronic equipment. It is forbidden to put the used equipment together with other waste.

## DESCRIPTION

The WDN-01 device is used to switch on or switch off the light by means of a touch. The switch has a sensor with 1,5 m long wire, which is connected to conductive components of lighting fittings. The WDN-01 switch is supplied with  $10 \div 14$  V DC. It has a PWM output for a direct connection of LED diodes and the output of NO free relay with a maximum load of 5 A. It is possible to switch on/switch off any receiver (conventional light bulbs, halogens) by means of the relay output. Using the PWM output the brightening/dimming function is also available, apart from switching on / switching off. The relay output operates in parallel way with the PWM output. WDN-01 has small casing dimensions and is designed for surface mounting. It is recommended to use WDN-01 to control lighting in the kitchen and bathroom furniture. The device can also be installed on flammable materials, e.g. wood, furniture boards and plasterboard.

The switch features:

- brightening / dimming function,
- low power consumption during stand-by mode (0,25 W) - the device is suitable for a continuous operation mode,
- PWM output for a direct connection of LED diodes,
- output of NO free relay with a maximum load of 5 A,
- automatic calibration process referring to the change of a sensor's connection place or the touch surface.

## TECHNICAL DATA

Nominal supply voltage:	$10 \div 14$ V DC
Nominal power consumption:	0,25 W
Number of channels:	1 x PWM 9-bit, 1 x NO relay contact
Maximum channel capacity:	PWM: 2,5 A maximum Relay contact: maximum 5 A / 250 V AC
Sensor's length:	1,5 m
Section of sensor cable:	1 mm <sup>2</sup>
Number of terminal clamps:	6
Section of connecting cables:	up to 2,5 mm <sup>2</sup>
Ambient temperature range:	$-10 \div +55$ °C
Operating position:	free
Casing mounting:	surface
Casing protection degree:	IP20
Protection level:	III
Dimensions:	44 x 108 x 33 mm
Weight:	55 g
Reference standard:	PN-EN 60669; PN-EN 61000

## MOUNTING

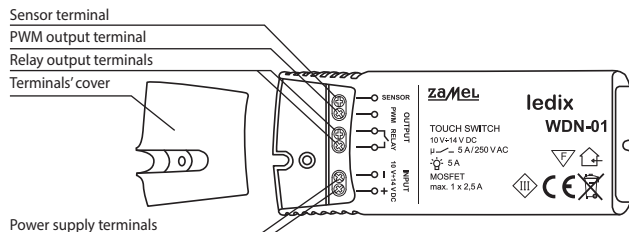
**CAUTION!** The device is designed for single-phase installation and must be installed in accordance with standards valid in a particular country. Installation, connection and control should be carried out by a qualified electrician staff, who act in accordance with the service manual and the device functions.

1. Disconnect power supply by the phase fuse, the circuit-breaker or the switch-disconnector combined to the proper circuit.
2. Check if there is no voltage on connection cables by means of a special measure equipment.
3. Connect the power supply to 230 V AC voltage.
4. Connect cables to proper terminal clamps of WDN-01 according to connection diagram.
5. Mount the switch and the sensor on their final place.
6. Switch on the power supply from the mains and check proper functioning of the device.

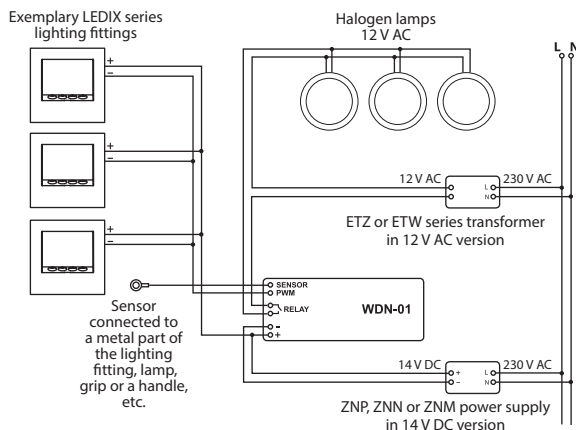
### IMPORTANT:

If during the use of WDN-01 switch there is a need to change the sensor's connection place, it can be done without disconnecting the power supply. However it should be remembered, that in each case after such an operation it is necessary to wait at least 10 seconds to perform the switch automatic calibration process.

## APPEARANCE



## DIAGRAM



Control in the **switch on/switch off** function: another short touching of the conductive part connected to the sensor.

Control in the **dimming/brightening** function: another longer pressing the conductive part connected to the sensor.

## CAUTIONS

- The sensor should be connected to the conductive elements such as metal casing of lighting fittings, grips, handles, etc. These elements must be electrically insulated.
- It is recommended that the surface to which the sensor is connected is as small as possible (it should not exceed 25 dm<sup>2</sup>). If the surface increases more than 5 dm<sup>2</sup> the difference in the touch sensitivity can be observed.
- Switching on / switching off the circuits connected to the output terminals of the WDN-01 switch is realised by a short touch of the item to which the sensor is connected. Additionally in case of LED diode lighting source (connected to the PWM output) brightening / dimming is possible and it is realised by a longer pressing the element to which the sensor is connected.
- The sensor's cable can be extended up to a maximum of 3 m with a minimum cross-section of 1 mm<sup>2</sup>.
- It is recommended to use LEDIX power supplies (ZNP, ZNN, ZNM series) to supply the WDN-01 switch and LED load connected to the PWM output.
- It is necessary that the power supply is properly adjusted (the power should be higher of about 5 to 10%) to the total power consumed by the loading. It applies to loads powered from the same power supply as the WDN-01 switch.
- The relay output operates always together with PWM output (the relay is switched on in the moment of PWM output control).
- The adjustment level of luminous flux intensity (PWM output) is remembered by the touch switch (subsequent modulation switch on / switch off is performed to the remembered level).