



LEVTECH

User manual



LIMIT VALUE SWITCH LSP-LVS



Limit Value Switch

LSP-LVS



Brief description

The LSP-LVS is a limit switch with a 0-10V or 0-20mA analog input. Depending on the settings, the 2 output relays can turn on and off separately when the input signal reaches a certain setpoint.

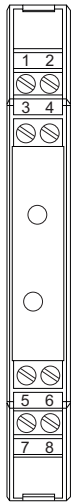
Functioning

This is a limit switch that can convert analog signals, such as the standard 0-10V or 0-20mA, into digital values using relays. We can set the input type, output type and the limit values using the WiFi communication and the web interface of the device. Both outputs can be Normally Open and Normally Closed, independently of each other. The output relays can switch up to 2 Amps, thus offering a simple solution for both industrial and home use. It can switch both DC and AC voltage up to 220VDC and 250VAC. The device has a web user interface, so it does not require application installation. It can be accessed from any phone or laptop with WiFi. The module is supplied from 18-30VDC.

Features

- Web interface
- Standard 0-10V or 0-20mA inputs
- Wide range of switchable voltage
- Selectable output types
- Overvoltage protection
- Reverse polarity protection
- Status LED
- DIN TS-35 rail mountable

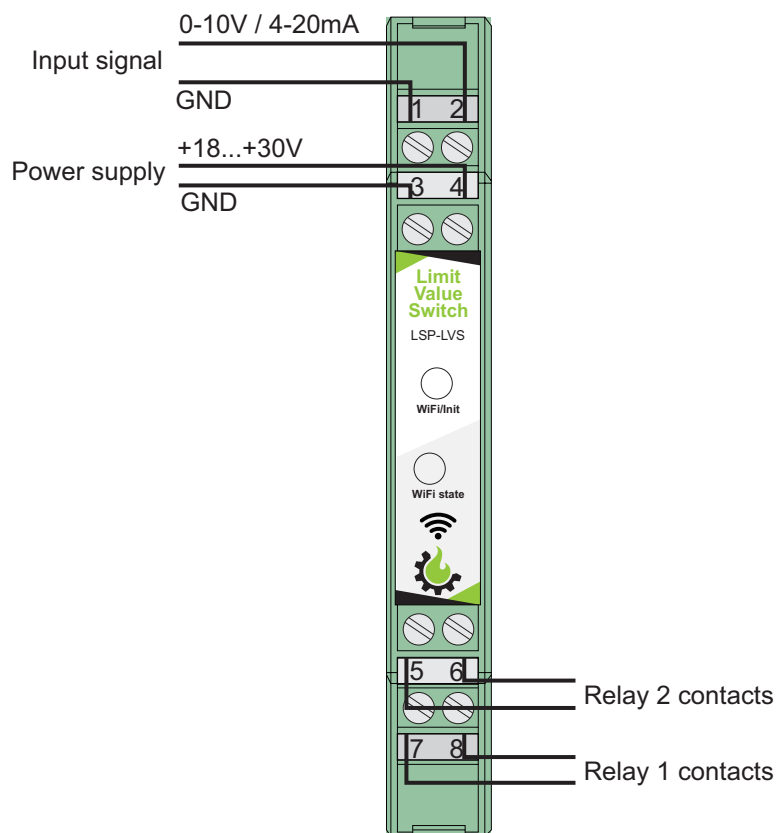
Connector description



Pin nr.	Signal
1	GND
2	Signal input (0-10V / 0-20mA)
3	Power supply GND
4	18 - 30VDC
5	Relay contact (Output 2)
6	Relay contact (Output 2)
7	Relay contact (Output 1)
8	Relay contact (Output 1)

Connector description

Wiring diagram



Configuration via web interface

After wiring the limit switch and powering it up, we can setup it by accessing the user interface. The settings easily can be modified by following the steps below.

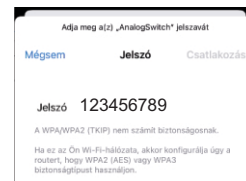
Step 1

Turn on the WiFi access on the transmitter by pushing the **WiFi/Init** button.



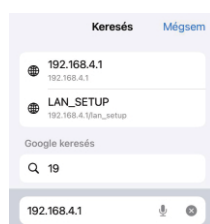
Step 2

After the **WiFi state** LED turns from red to blue, we can find the device in our connection list. Connect to the **Analog Switch** network. The password is: **123456789**. In the case of 2 minutes of inactivity, the WiFi turns off automatically.



Step 3

If the connection was successful, let's open a browser and type in your searching line the **192.168.4.1** IP address. There will appear the first page.



Analog switch

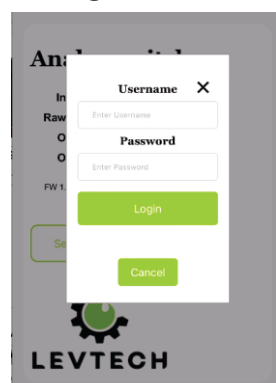
Input	0.01	V
Raw input	36	
Out1	OFF	
Out2	OFF	
FW 1.02		

Setup



Step 4

In order to access the setup page, we need to log in. After clicking on the **Setup** button, we need to give the username and the password.



Username: **admin**
Password: **password**

Configuration via web interface

As we logged in the setup page, we can modify on **Measuring parameters**, **Out 1** and **Out 2 parameters**.



The screenshot shows a web interface titled "SETUP PAGE". Under the heading "Measuring parameters:", there are three rows of configuration options, each with a label, a dropdown menu, and an information icon (i).

Parameter	Value	Info
Input Type	0-10 V	Information icon
Filter	50Hz	Information icon
Limits in	Unit	Information icon

Input Type: we can choose between 0-10V or 0-20mA, depending on how we want to use it.

Filter: here, select the frequency of the network used to filter out interference

- 50Hz
- 60Hz

Limits in: means how we would like to specify the limits where the relays should switch

- Unit (0-10V type: 0-10 or 0-20mA type: 0-20)
- Percentage (0-100% of the 0-10V or 0-20mA ranges)



Configuration via web interface

Out 1 parameters:

Switching point

6,000

i

Histeresis

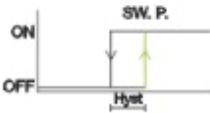
1,500

i

Switching mode

NO

i



Out 2 parameters:

Switching point

5,000

i

Histeresis

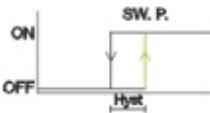
0,500

i

Switching mode

NO

i



Load

Save

Logout

Out 1 and Out 2 parameters

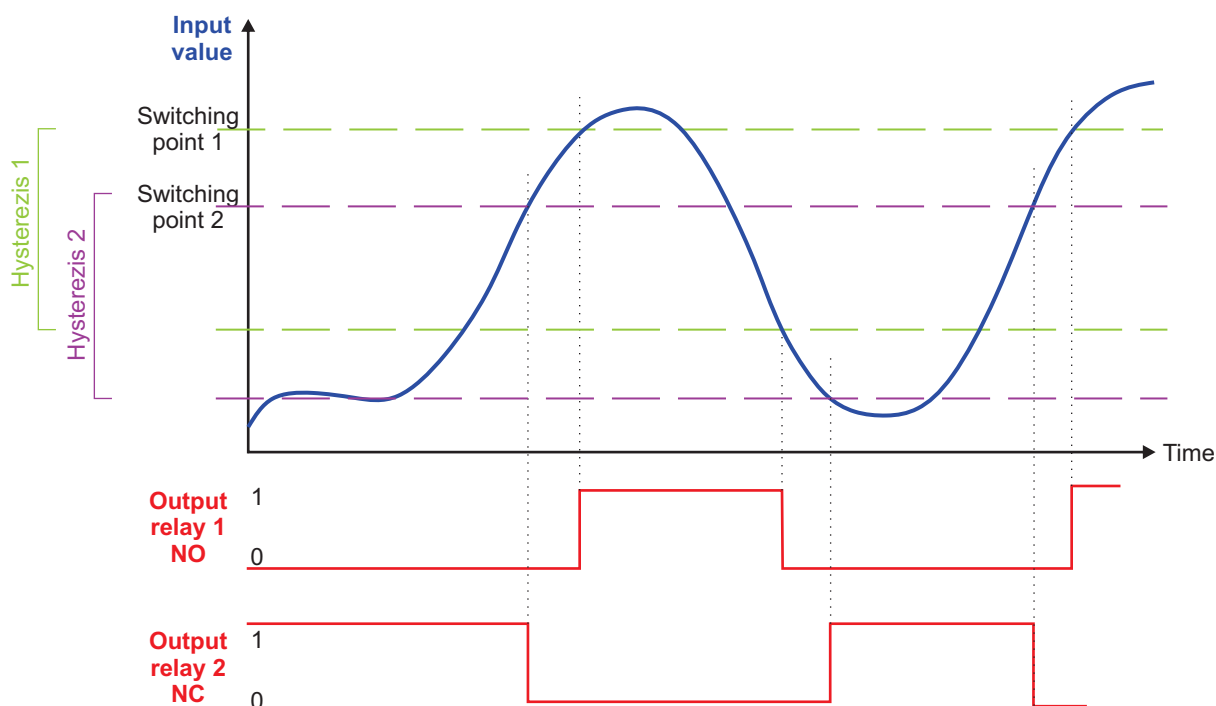
Switching point: the output will switch at the value set here

Hysteresis: at this value will reactivate the output again

Switching mode: it refers to the initial state of the relays



Operational diagram

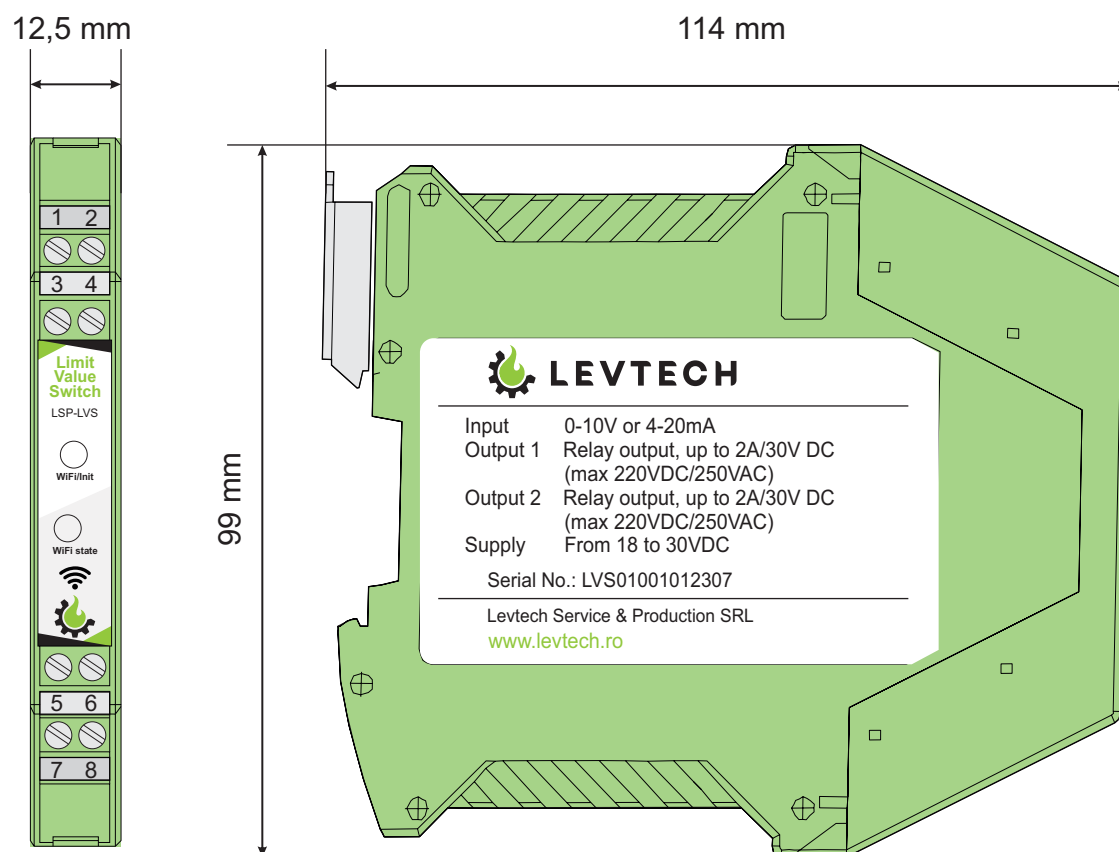


Technical data

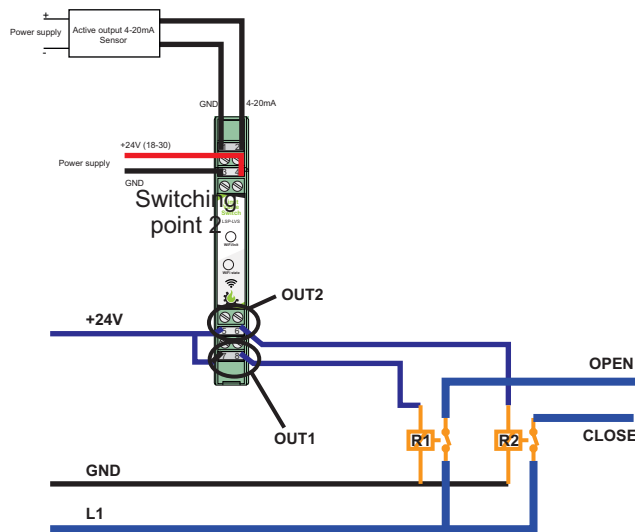
Power supply voltage	18-30VDC
Power loss	<1W
Current consumption	max 27mA@24,2V
Number of inputs	1
Input voltage	0-10VDC
Voltage input impedance	10 kΩ
Input current	0-20mA
Current input impedance	500 Ω
Number of outputs	2
Output types	Relay contacts (NO and/or NC)
Max output loads	2A / 30V DC
Dimensions	99 × 114 × 12,5 mm
Weight	100 g



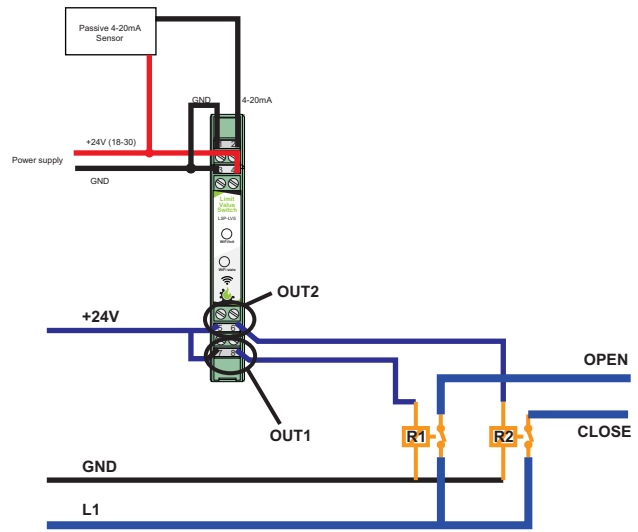
Dimensions



Wiring and application example



Application wiring example with active output 4-20mA control signal



Application wiring example with a passive 4-20mA sensor

This application is designed to keep the pressure of a tank within certain limits. Relay 1 and Relay 2 are used to close or open the valve of the tank. In addition, the relays have a load-relieving function.

Out 1 parameters:

Switching point	7,00	i
Histeresis	1,0	i
Switching mode	NO	i

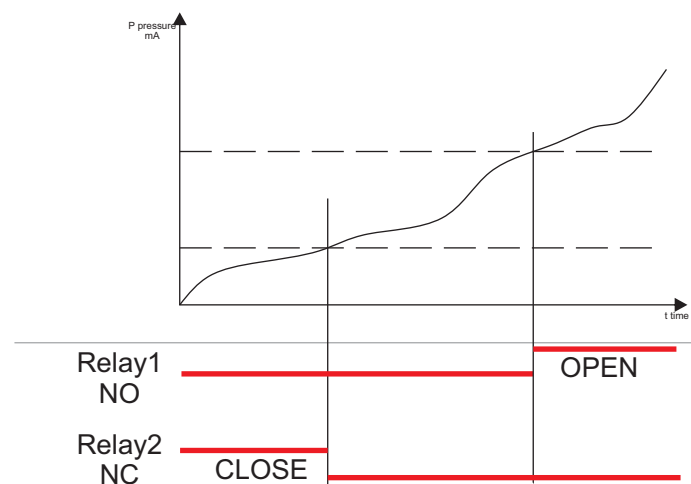
ON: [diagram] OFF: [diagram]

Out 2 parameters:

Switching point	4,50	i
Histeresis	0,5	i
Switching mode	NC	i

ON: [diagram] OFF: [diagram]

The web interface settings to get the switching sequence from below



Relays' switching sequence