

# Differential Pressure Transmitter EL-PSa-xxx

## 1. Technical data

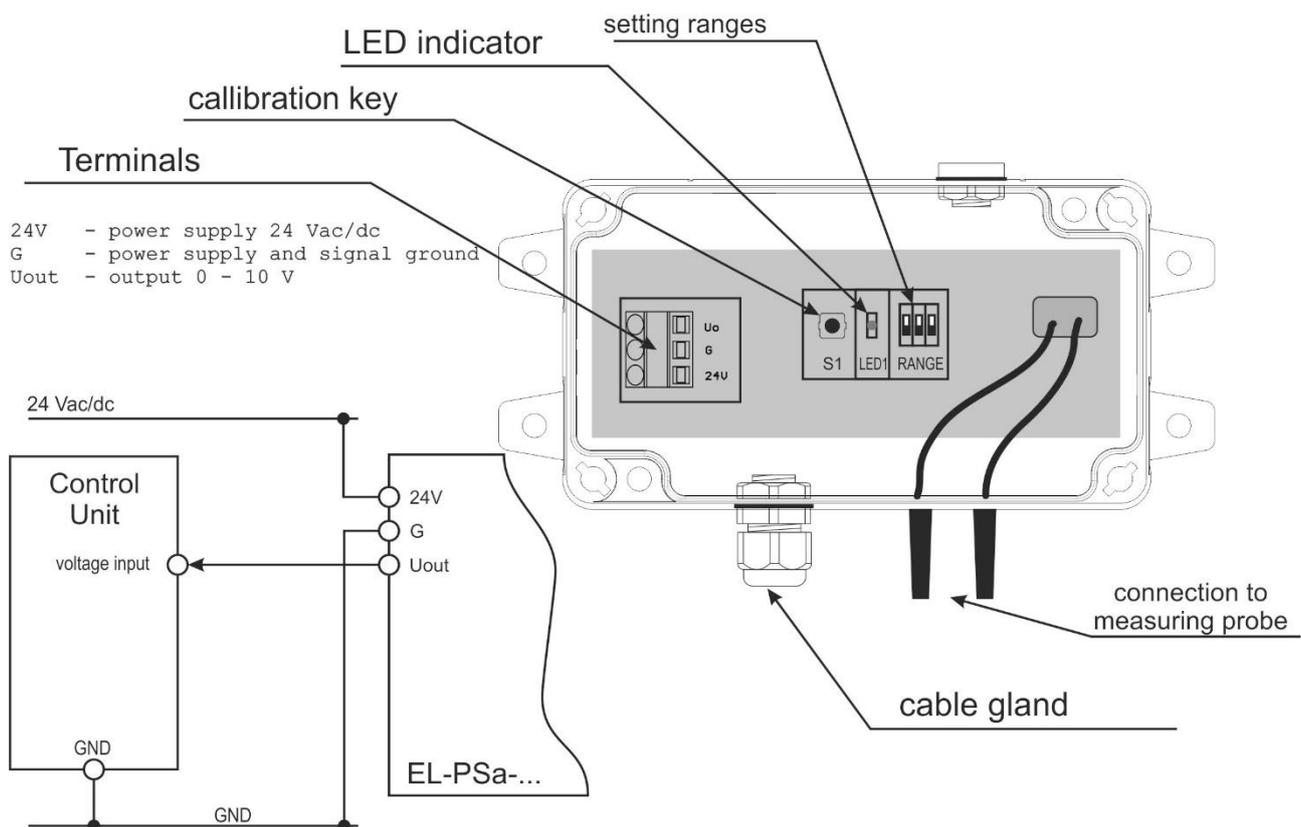


- Long-term stability, estimated operating time of the pressure sensor up to 18 years without exceeding the nominal parameters.
- Zero drift: <math><0,1\%</math> change (60 deg. C for 168 hrs.)
- Accuracy of measurement  $\pm 1,5\%$  full scale
- Power supply 24 V AC / DC
- Outputs:
  - voltage 0-10V
- Operating temperature  $-20\dots50\text{ }^{\circ}\text{C}$
- LED indicator and calibration key build-in
- Protection IP55
- Differential pressure measurement range:
  - EL-PSa-2.5: 0...2.5 kPa
  - EL-PSa-7: 0...7 kPa
  - EL-PSa-35: 0...35 kPa
  - EL-PSa-100: 0...100 kPa
  - EL-PSa-200: 0...200 kPa
- Measurement resolution:
  - EL-PSa-2.5: 0,38 Pa
  - EL-PSa-7: 1,14 Pa
  - EL-PSa-35: 5,34 Pa
  - EL-PSa-100: 15,26 Pa
  - EL-PSa-200: 30,52 Pa
- Dimensions: 140 x 100 x 43mm

## 2. Description

Differential Pressure Transmitter EL-PSa-xxx measures the differential pressure and on its basis generates a proportional analog signal at the voltage output in the range 0-10V. The signal level at the analog outputs is scaled according to the appropriate settings. User can choose one of the 8 ranges which narrow maximum range. If the pressure is measured in the range of negative, the sign of measurement will be changed. For example, the pressure -1300 Pa is regarded as a measurement of 1300 Pa and according to him, is determined the appropriate level of analog signal output. Additionally, the device has a built-in LED indicator that indicates the current status of the unit. It is possible to manually calibrate the device.

## 3. Scheme



## 4. Operation and configuration

The EL-PSa-xxx transmitter has LED indicator, calibration key and three track switch for setting the parameters of the transmitter. You can set one of the 8 ranges which narrow maximum range.

## 4.1 Calibration

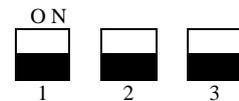
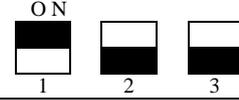
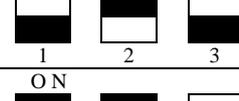
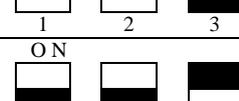
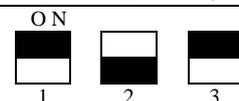
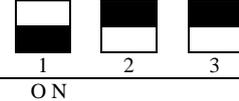
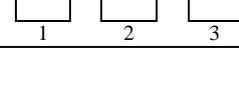
### **ATTENTION!**

*Calibration should be carried out only when it is sure that the transmitter does not work under any pressure difference. To do this, unplug the tubes inlet pressure to the transmitter.*

To calibrate, please hold the calibration button for at least 3 seconds. The LED indicator should go out for another 3 seconds, and then re-ignite. This completes the calibration process.

## 4.2 Selection of pressure measurement range

Range selection is made by a group of three track switches on the circuit board inside the casing of the pressure transmitter. The analog output provides 0-10V voltage range that includes the selected range. The value of 0V corresponds to a pressure of 0 Pa, while the 10V is maximum pressure within a selected range. The following table shows the possible ranges:

Range No	Status of switches	Range for EL-PSa-2.5	Range for EL-PSa-7	Range for EL-PSa-35	Range for EL-PSa-100	Range for EL-PSa-200
0		100Pa	1000Pa	1kPa	2kPa	4kPa
1		250Pa	1500Pa	2kPa	5kPa	10kPa
2		500Pa	2000Pa	5kPa	10kPa	20kPa
3		750Pa	2500Pa	10kPa	15kPa	30kPa
4		1000Pa	3000Pa	15kPa	30kPa	50kPa
5		1500Pa	4000Pa	20kPa	50kPa	100kPa
6		2000Pa	5000Pa	30kPa	70kPa	150kPa
7		2500Pa	7000Pa	35kPa	100kPa	200kPa

### 4.3 LED indicator

LED diode indicates operation. Its light indicates that the device is powered up and running. Continuous lighting indicates that the transmitter does not record any changes in pressure. If there is a significant change in pressure (minor changes are ignored by the LED indicator) LED flashes. Depending on the size of the pressure changes LED blink rate is changing. The larger the change in pressure, the faster the LED flashes.

## 5. Norms

This device complies with standards and directives:

Directive 2004/108 / EC - Electromagnetic Compatibility (EMC) Directive.

Directive 2001/95 / EC – The General Product Safety Directive

Standard EN 60730-1: 2002 - Automatic electrical controls for household and similar use - Part 1: General requirements.

## 6. Mounting

The pressure transmitter is designed for wall mounting. To keep the declared degree of IP protection, device has to be installed with cable glands facing down and proper arrange the connection of electrical cables and air pipes. The cables and pipes must be laid with the "overhang" that no water flow over the cables and pipes to the device.

