




SRP-94




SRP-946

# SRP-94 / SRP-946

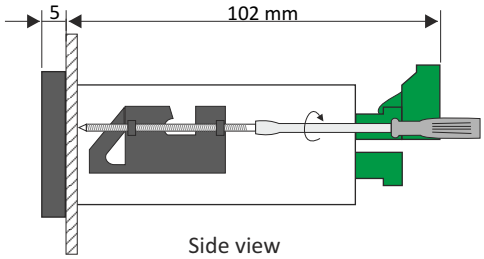
- process meter **with a large LED display**
- **extended displayed values range untill 6 digits: -99999 ÷ 999999**
- **inputs: 0/4-20 mA, 0/1-5V, 0/2-10V, 0-60/75/100/150 mV**
- **0, 2 or 4 REL / OC outputs**
- **analogue output: active or passive, power supply output: 24V DC**
- **RS-485 / Modbus RTU**
- **signal peak value detection**
- **free configuration software S-Config**

The **SRP-94(6)** meter is designed for measuring of typical current or voltage signals. The readouts are presented on well-readable display with standard range of four digits or five/six digits for more demanding applications (e.g. measurement range: 4 - 20 mA, indications range: 0 - 20 000 kg). Thanks to wide range of characteristic curves (linear, square root, quadratic, user-defined and volume characteristic for cylindrical tanks) the meters may be used in various process control systems. The 24V DC / 100 mA output is designed to supply measuring transducers, and the RS-485 port enables data transmission in production process monitoring systems. The REL / OC control outputs can adjust the level of measured signal and are controlled according to one or two threshold values. Moreover, the meter can be equipped with analogue outputs, according to the customer selection: active current output, passive isolated current output or active voltage output. The meter can be configured with the local keyboard or free S-Config software via the RS-485 communication port.

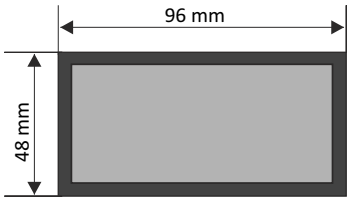
## TECHNICAL DATA

| | |
|---|---|
| **Power supply**<br>**Power consumption** | 19V ÷ 50V DC; 16V ÷ 35V AC or 85 ÷ 260V AC/DC, all separated<br>for 85 ÷ 260V AC/DC and 16V ÷ 35V AC power supply: max. 4,5 VA; for 19V ÷ 50V DC power supply: max. 4,5 W |
| **Display** | LED, 4 x 20 mm or 6 x 13 mm high, red (green - on request), brightness adjustable in 8 steps |
| **Displayed values** | -999 ÷ 9999 or -99999 ÷ 999999 + decimal point |
| **Input** | current: 0-20 mA or 4-20 mA, programmable, input resistance < 65 Ω (typ. 55 Ω), overload-protected, input current limited to 40 mA;<br>voltage: 0-5V, 1-5V, 0-10V or 2-10V, programmable, input resistance > 50 kΩ<br>milivoltage: 0-60 mV, 0-75 mV, 0-100 mV, 0-150 mV; programmable; input resistance > 100 kΩ<br>accepted prolonged input overload: 20% |
| **Accuracy** | 0.1% @25°C ± one digit (for 0-20 mA range) |
| **Stability** | 50 ppm/°C |
| **Binary outputs** | 0, 2 or 4 x REL $I_{max}$=1A, $U_{max}$=30VDC/250VAC (cosø=1) or OC $I_{max}$=30mA, $U_{max}$=30VDC, $P_{max}$=100mW |
| **Analogue output**<br>(available with 2 x REL or OC, see ordering) | active current: operating range 0/4-20 mA (max. 0-24 mA), load resistance 700 Ω max., resolution 13 bit<br>passive current: isolated, operating range 4-20 mA (max. 2,8-24 mA), load resistance 600 Ω@24VDC, resolution 13 bit<br>active voltage: operating range 0/1-5V, 0/2-10V (max. 0-11V), load resistance min. 2000 Ω, resolution 13 bit |
| **Power supply output** | 24V DC +5%, -10% / max. 100 mA, stabilized |
| **Communication interface** | RS-485, 8N1 and 8N2, 1200 bit/s ÷ 115200 bit/s, Modbus RTU (not galvanically isolated) |
| **Operating temp.** | 0°C ÷ +50°C (standard), -20°C ÷ +50°C (option) |
| **Storage temp.** | -10°C ÷ +70°C (standard), -20°C ÷ +70°C (depending on option) |
| **Protection class** | IP 65 (front side when an optional seal is installed); IP 40 (front side); IP 20 (case and connection clips) |
| **Case** | panel mounting; material: NORYL - GFN2S E1 |
| **Dimensions** | case (WxHxD): 96 x 48 x 100 mm<br>panel cut-out dimensions: 90,5 x 43 mm<br>installation depth: min. 102 mm<br>board thickness: standard 7 mm or other depending on used board thickness brackets (see Accessories) |
| **Weight** | 230 g max. |

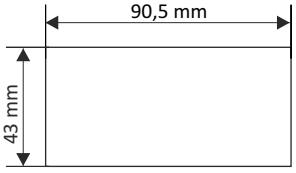
## DIMENSIONS




Side view

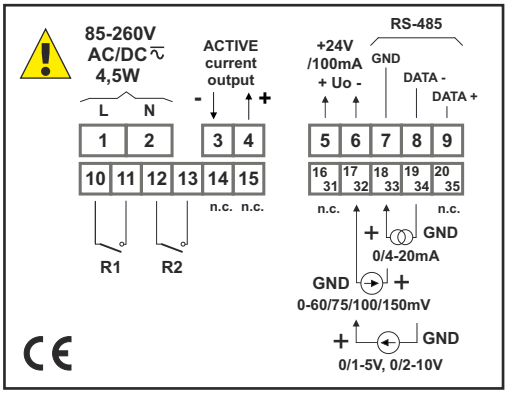



Case dimensions

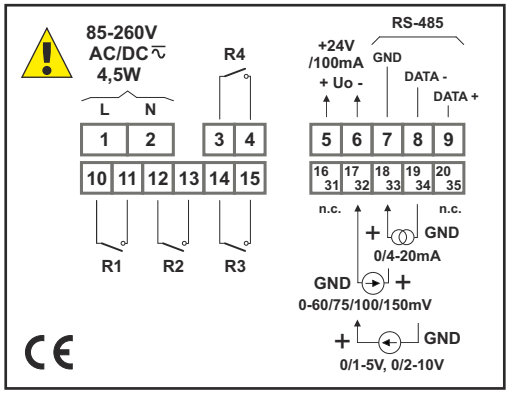



Panel cut-out dimensions

## EXAMPLARY PIN ASSIGNMENTS




version with 2 x REL and 1 x AO 0/4-20 mA, active




version with 4 x REL

## ORDERING

**SRP-X-1XXX-1-X-XX1**

**display:**
**94** : 4-digits
**946** : 6-digits

**type of input:**
**8** : 0-20 mA, 4-20 mA, 0/1-5V, 0/2-10V
**C** : 0-60/75/100/150 mV

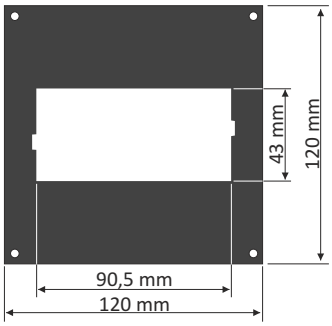
**number of outputs:**
**0**
**2**
**3**
**4**

**type of outputs:**
**0** : no output
**1** : REL *(for 2 and 4 outputs)*
**2** : OC *(for 2 and 4 outputs)*
**3** : 2 x REL + 1 x AO *(0/4-20 mA, active, non-isolated)*
**4** : 2 x OC + 1 x AO *(0/4-20 mA, active, non-isolated)*
**9** : 2 x REL + 1 x AO *(4-20 mA, passive, isolated)*
**A** : 2 x OC + 1 x AO *(4-20 mA, passive, isolated)*
**B** : 2 x REL + 1 x AO *(0/1-5V, 0/2-10V, active, non-isolated)*
**C** : 2 x OC + 1 x AO *(0/1-5V, 0/2-10V, active, non-isolated)*

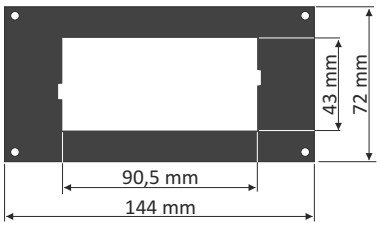
**options:**
**00** : no options
**01** : IP 65 frame
**03** : green colour LED display
**04** : IP 65 frame + green colour LED display
**08** : operating temp. -20°C ÷ +50°C
**0P** : IP 65 frame + operating temp. -20°C ÷ +50°C
**0L** : green colour LED display + operating temp. -20°C ÷ +50°C
**0T** : IP 65 frame + green colour LED display
+ operating temp. -20°C ÷ +50°C

**power supply:**
**3** : 24V AC/DC
**4** : 85V - 260V AC/DC

## MOUNTING PLATES




**SMP-99/94**
to mount 96 x 48 mm
size unit in place
of 96 x 96 mm cut-out




**SMP-147/94**
to mount 96 x 48 mm
size unit in place
of 144 x 72 mm cut-out

## BOARD THICKNESS BRACKETS / ADAPTORS



**SPH-07**
1 ÷ 7 mm board thickness
brackets (2 pcs)
**standard included with device**



**SPH-45**
1 ÷ 45 mm board thickness
brackets (2 pcs)

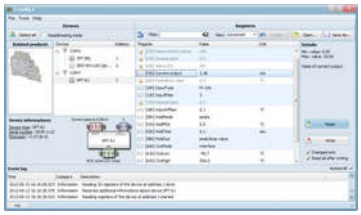


**SPH-05**
1 ÷ 5 mm board thickness
brackets (2 pcs)

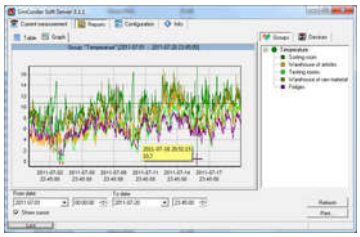


**SRH-94**
brackets for mounting devices
on DIN 35/7.5 or 15 rail (2 pcs)

## SOFTWARE



**S-Config 2** is used for the simultaneous detection of devices in multiple Modbus RTU networks and allows user to change the configuration of most of them. For each detected device a list of its registers, which the user can modify, is displayed and also additional informations about device parameters (type, address in the network, etc.).
**S-Config** software can be downloaded from SIMEX website at **www.simex.pl**



**SimCorder Soft** is a visualisation application created to facilitate work with advanced networks of the SIMEX devices, for acquisition, visualisation, reporting, archiving, exporting and printing of measurement data from all network devices. You can download measurements from the devices automatically or on demand. There is a possibility of immediate notification about emergency states via SMS or e-mail, which will often allow to quickly resolve an arising problem while avoiding long and expensive stoppages. You can view the measurement data, emergency states and configuration via the internet at every time.

## CONVERTERS



The **SRS-U4** module is designed to connect a USB host to slave devices equipped with RS-485 interface. The PC with special software can be used as a host. The **SRS-U4** unit guarantees full galvanic isolation between USB and RS-485 circuits. The converter can work with any devices equipped with RS-485 interface and contains integrated circuit which supports USB 1.1 and USB 2.0 standards. The main purpose is connection of PC host computer with industrial data acquisition and visualisation systems based on RS-485 interface.
The **SRS-U4** can be also manufactured with DIN mounting adaptor.