SWE-94-U

- low-cost meter **with a large, 20 mm high display**
- universal input: 0/4-20 mA, 0-10V, 0-150 mV, RTD or TC
- RS-485 / Modbus RTU
- brightness adjustable in 8 steps
- signal peak value detection
- all parameters are freely programmable with remote controller or free configuration software S-Config
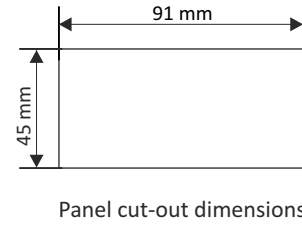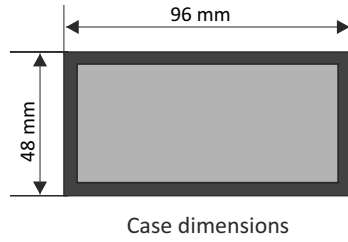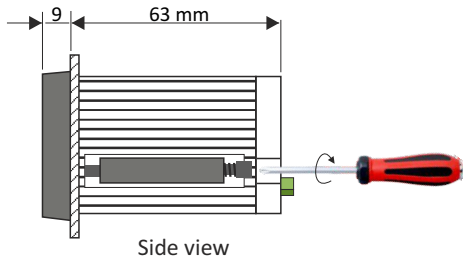
IR remote controller
SIR-15

The **SWE-94-U** meter is equipped with one universal input: 0/4-20 mA, 0-10V, 0-150 mV, RTD (Pt 100/500/1000) or thermocouple (K, S, J, T, N, R, B, E). Temperature of cold ends is compensated automatically. RTD and TC inputs are fully linearised. It is allowed to use only one input at the same time. SWE-94-U enables user to select a characteristic conversion of several kinds: linear, square, square root, user defined. The device is equipped with RS-485 / Modbus RTU communication interface. Over more communication interface RS-485 enables data transmission in any monitoring system equipped with Modbus RTU protocol. The meter can be ordered in 3 power supply versions. The meter can be configured with IR remote controller or free S-Config software via the RS-485 communication port.
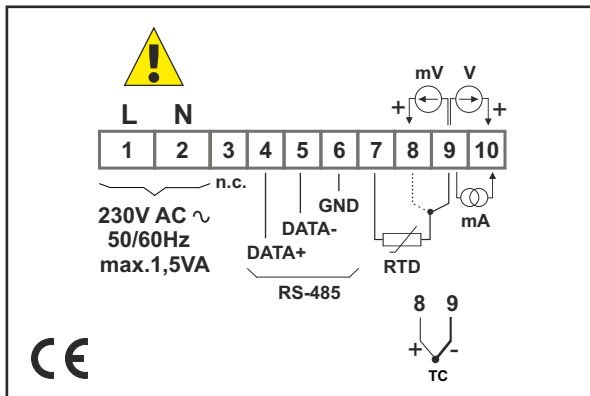
TECHNICAL DATA

Power supply	110V AC ± 10% separated, 230V AC ± 10% separated or 10 ÷ 30V DC not separated from measurement input
Power consumption	for 110V AC and 230V AC: max. 1,5 VA; for 24V DC: max. 1 W
Display	LED, red, 4 x 20 mm high, brightness adjustable in 8 steps
Input	<u>current</u>: 0-20 mA or 4-20 mA, input resistance < 65 Ω (typ. 30 Ω), overload protected, input current is limited to 50 mA; <u>voltage</u>: 0-5 V, 1-5V, 0-10V or 2-10V, input resistance > 100 kΩ; <u>milivoltage</u>: 0-60 mV, 0-75 mV, 0-100 mV or 0-150 mV, res. inp. > 1,5 MΩ <u>RTD</u>: Pt100, Pt500, Pt1000, measurement wires resistance: max. 20 Ω (every wire), measuring range -100°C ÷ 600°C; <u>thermocouple</u>: K, S, J, T, N, R, B, E type; measuring range: -200°C ÷ +1370°C (**K**); -50°C ÷ +1768°C (**S**); -210°C ÷ +1200°C (**J**); -200°C ÷ +400°C (**T**); -200°C ÷ +1300°C (**N**); -50°C ÷ +1768°C (**R**); +250°C ÷ +1820°C (**B**); -200°C ÷ +1000°C (**E**)
Display range	-999 ÷ 9999 plus decimal point
Accuracy	0.1% @25°C ± one digit (current, voltage, milivoltage, RTD, TC: K, J, E); 0,2% @25°C (TC N); 0,5% @25°C (TC: S, T, R, B)
Stability	50 ppm/°C
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), available additional frame IP 65 for panel cut-out sealing; IP 20 (case and connection clips)
Case	panel mounting; material: NORYL UL94V-0
Dimensions	<u>case (WxHxD)</u>: 96 x 48 x 72 mm <u>panel cut-out dimensions</u>: 91 x 45 mm <u>installation depth</u>: min. 88 mm <u>board thickness</u>: max. 6 mm
Weight	205 g max.

SIMEX Ltd., Wielopole 11, 80-556 Gdańsk, Poland, tel. (+48) 58 762-07-77, fax 58 762-07-70, www.simex.pl

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SWE-94-U.1

DIMENSIONS

Side view

Case dimensions

Panel cut-out dimensions

PIN ASSIGNMENTS

ORDERING

SWE-94-U-X-XX1-X

power supply:
1 : 10 ÷ 30V DC
2 : 230V AC
8 : 110V AC

units:
0 : no unit on display
°C
%
bar
m
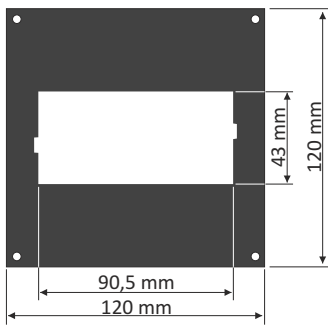**l/min**
A
V
MPa

options:
00 : no options
01 : IP 65 sealing gasket
08 : operating temp. -20°C ÷ +50°C
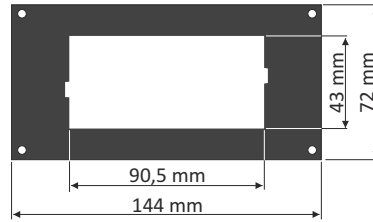**0P** : IP 65 sealing gasket + operating temp. -20°C ÷ +50°C

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

REMOTE CONTROLLER

SIR-15

InfraRed remote controllers may be used as external programming keyboard for all SIMEX devices equipped with IR receivers and remote programming functions. Pressing of any local IR controller key, causes transmission of it's code to the device. Functions of particular keys depend on devices features.

Power supply voltage: 6V DC - 4 alkaline batteries type LR44
Operation range: from 0,5 to 5 m (depend on programmed device features)

SOFTWARE
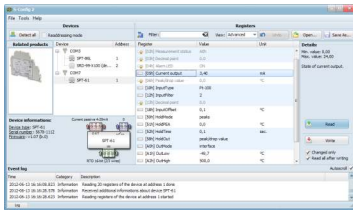
S-Config 2 is used for the simultaneous detection of devices in multiple Modbus RTU networks and allows user to change the configuration of most of them. For each detected device a list of its registers, which the user can modify, is displayed and also additional informations about device parameters (type, address in the network, etc.).
S-Config software can be downloaded from SIMEX website at **www.simex.pl**
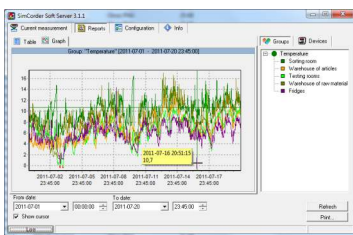
SimCorder Soft is a visualisation application created to facilitate work with advanced networks of the SIMEX devices, for acquisition, visualisation, reporting, archiving, exporting and printing of measurement data from all network devices. You can download measurements from the devices automatically 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.

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SWE-94-U.3