



STI-638

- pulse rate / period meter in wall mounted IP 67 housing
- rotational / linear speed control
- revolution / movement period control
- binary outputs REL / OC
- analogue output: active or passive, power supply output: 24V DC
- RS-485 / Modbus RTU
- "over" signalling when the measuring range is exceeded
- ultra bright red, green and blue display
- free configuration software S-Config

The **STI-638** tachometers encased in a tight, wall-mounted housing (IP 67) with 6-digit, large LED display are designed to control rotational or linear speed of moving objects. The device is also able to measure frequency. As an additional advantage the device can convert the rotational / linear speed into inverse values, and to display the single revolution period or process duration. 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 be programmed depending on the instantaneous value of rotational speed. Additionally the counter may be equipped with analogue outputs, according to the customer selection: active current output, passive isolated current output or active voltage output. The counter may be configured with no need to open the case, by using the remote controller, the local keyboard or with free S-Config software via the RS-485 communication port.

TECHNICAL DATA

Power supply	19V ÷ 50V DC; 16V ÷ 35V AC or 85 ÷ 260V AC/DC, all separated
Power consumption	for 19V ÷ 50V DC: max. 8,7 W; for 16V ÷ 35V AC max. 13 VA; for 85 ÷ 260V AC/DC max. 29 VA
Display	LED, 6 x 38 mm high, red, green or blue (according to order), ultra bright
Inputs	pulse, fully isolated, with debouncing filter and pulse width control, max. input frequency 50.0 kHz
Input levels	<u>low level</u> : 0 V ÷ 1 V; <u>high level</u> : 10 V ÷ 30 V (about 12 mA @ 24V)
Input frequency range	1,5 ÷ 50 000 Hz
Displayed values range	0 ÷ 999999 + decimal point
Rotational speed precision	selected in the range 0 ÷ 0.00000 of unit
Rotational speed unit	revolutions per second (rps), per minute (rpm), per hour (rph)
Pulse waiting time	settable from 0.1 to 39.9 seconds
Accuracy	± 0.02% ± one digit (full temperature range)
Outputs (option)	1, 2 or 4 x REL $I_{max}=1A$, $U_{max}=30VDC/250VAC$ ($\cos\phi=1$) or OC $I_{max}=30mA$, $U_{max}=30VDC$, $P_{max}=100mW$
Analogue output (available with 2 x REL or OC, see ordering)	<u>active current</u> : operating range 0/4-20 mA (max. 0-24 mA), load resistance 700 Ω max., resolution 13 bit <u>passive current</u> : isolated, operating range 4-20 mA (max. 2,8-24 mA), load resistance 600 Ω @24VDC, resolution 13 bit <u>active voltage</u> : 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 temperature	0°C ÷ +50°C (standard), -20°C ÷ +50°C (option)
Storage temperature	-10°C ÷ +70°C (standard), -20°C ÷ +70°C (depending on option)
Protection class	IP 67
Housing	wall mounting; material: ABS + fibreglass
Dimensions (WxHxD)	230 x 140 x 96,5 mm
Weight	max. 1200 g

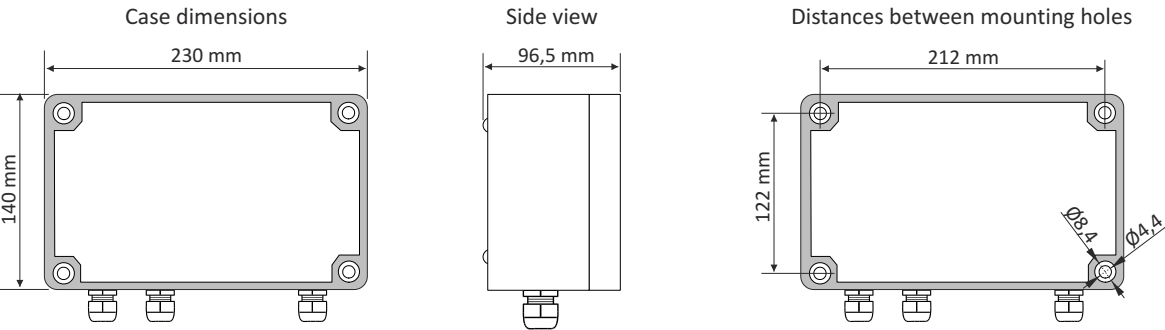
LED DISPLAY VERSIONS

Ultra bright display (according to order):

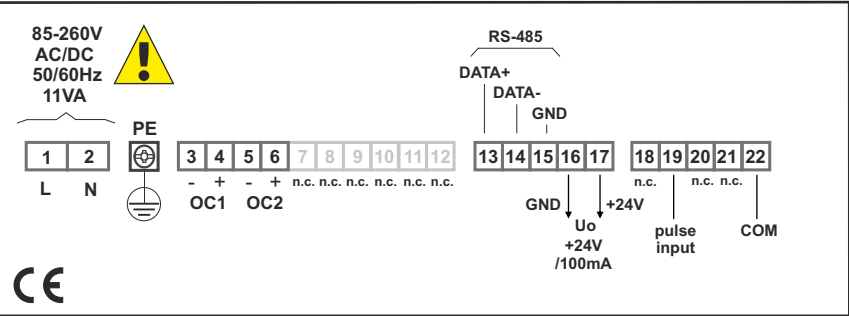
- red,
- green,
- blue.



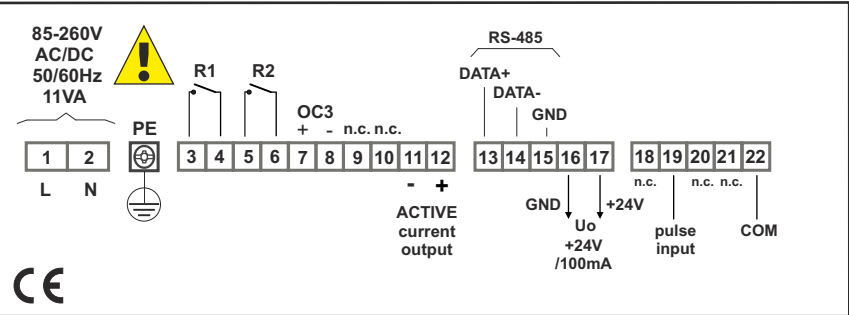
DIMENSIONS



EXAMPLARY PIN ASSIGNMENTS



version with 2 x OC



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



ORDERING

STI-638-X-40-XXXX0-10-X-XX1

display:

R : red, ultra bright
G : green, ultra bright
B : blue, ultra bright

options:

00 : no options
08 : operating temp. -20°C ÷ +50°C

type of outputs:

1100 : 2 x REL
1200 : 1 x REL + 1 x OC
2200 : 2 x OC
1111 : 4 x REL
2222 : 4 x OC
1125 : 2 x REL + 1 x OC + 1 x AO (4-20 mA, passive, isolated)
112D : 2 x REL + 1 x OC + 1 x AO (0/4-20 mA, active, non-isolated)
112E : 2 x REL + 1 x OC + 1 x AO (0/1-5V, 0/2-10V, active, non-isolated)

power supply:

3 : 24V AC/DC
4 : 85V - 260V AC/DC

REMOTE CONTROLLER

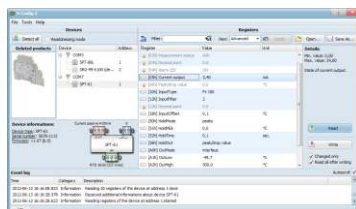
SIR-15

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.



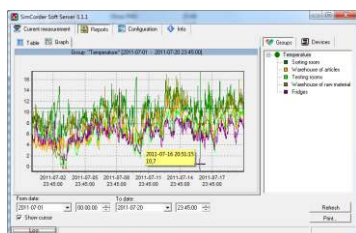
Power supply voltage: 6V DC - 4 alkaline batteries type LR44
Operation range: from 0,5 to 5 m (depend on programmed device features)

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.