

VISCOSITY AND TEMPERATURE PROCESSORS



9601: Setting parameters for 1 product

9602: Setting parameters for up to 8 products

TYPICAL APPLICATION FIELDS

Chemistry: polymers, detergents, surfactants

Petroleum: oil, fuels, lubricants

Cosmetics: creams, gels, pastes

Coating: paints, lacquers, inks, varnishes

Printing & Packaging: inks, varnishes, cardboard glues, adhesives

RELIABLE AND VERSATILE PROCESSOR FOR PROCESS VISCOSITY CONTROL

Sofraser's **9600 viscosity and temperature processor** family receives signals from the MIVI sensor while accurately measuring and displaying a fluid's real-time viscosity and temperature and calculates viscosity at reference temperature. The **9602 processor** is the ideal solution for viscosity measurement and control of up to 8 distinct products with only one sensor.

- **User-friendly display:** The **9600 viscosity and temperature processors** offer instantaneous and continuous display in value, bar graphs or trend curves, as well as relevant equipment information.
- **Personalized and intuitive use:** Security codes, compensated viscosity tables, offset adjustment, density processing, viscosity value filtering, and viscosity and temperature Min/Max values and units are easily accessed and programmed on the detailed settings menu.
- **Additional 9600 functions:** A densimeter input allows instant kinematic viscosity value measurement. Viscosity at reference temperature is easily calculated with the temperature compensated viscosity table.
- **Improve process management and production:** Programmable analog outputs and alarm relays increase viscosity and temperature measurement use. Compensated viscosity and density are also possible during process controls.

Whatever your industry, we understand and develop solutions for many applications. For a personalized approach, contact us at instruments@sofraser.com



9600 VISCOSITY & TEMPERATURE PROCESSOR

STANDARD FEATURES AND SPECIFICATIONS

Versions	<ul style="list-style-type: none"> • 9601 Viscosity and Temperature Processor For 1 MIVI sensor with 1 parameters set • 9602 Viscosity and Temperature Processor For 1 MIVI sensor with up to 8 parameters sets
Inputs	<ul style="list-style-type: none"> • Viscosity (MIVI sensor) • Temperature (Pt100) • Density (Optional density meter - 4 - 20 mA)
Resolution	<ul style="list-style-type: none"> • Between 0,1% and 0,5 % of measurement from 10% to 90% of the full scale range
Outputs	<ul style="list-style-type: none"> • 4 x 4-20 mA outputs: single ended for viscosity, temperature, viscosity at reference temperature and density: $\pm 0.1\%$; $Z_{min.} = 1k\Omega$, $Z_{max.} = 500\Omega$ • 1 x RS232 (RJ-11), Modbus, Canbus protocol • 1 x RS485 (RJ-11), 2 wires, 1200 m max / 3900 ft max
Relays	<ul style="list-style-type: none"> • 9 x NO (Normally Open) relays for low and high alarms and diagnosis • Power cut-off 3A, 8A max per common, 250 VAC or 30 VDC
Screen & Display	<ul style="list-style-type: none"> • Effective screen dimensions: 128 x 64 pixels • Keyboard 24 keys • Display of instantaneous values, bar graphs, curves • Alarms, relays and output status display
Operating conditions	<ul style="list-style-type: none"> • Working temperature: 0 to 45 °C / 32 to 110°F • Front panel IP65 / NEMA 4X - Back panel IP20 • Front panel UL certified Class 1, Div. 2, groups A, B, C, D
Dimensions & characteristics	<ul style="list-style-type: none"> • Panel dimensions: 184 mm x 155 mm / 7 1/4" x 6 1/8" • Total depth: 113.2 mm / 4 7/16" • Weight: 515 g / 1.1 lb • Parameters backup: 7 years on battery
Security	<ul style="list-style-type: none"> • Configuration and parameters password-secured
Power input	<ul style="list-style-type: none"> • 24 VDC (21,6 to 26,4 VDC)
Regulatory	<ul style="list-style-type: none"> • CE marked (European conformity)
Options	<ul style="list-style-type: none"> • Insertion in an ATEX Ex-proof box, for use in hazardous areas • Insertion in a watertight box (IP65) (basic or with pre-wiring and terminal block) • 0 – 10 V outputs instead of 4 - 20 mA outputs • Power supply: din-rail type 88 to 264 VAC – 24 VDC or universal plug type 100 to 240 VAC – 24 VDC
Service options	<ul style="list-style-type: none"> • Calibration certificate with standards Newtonian products • Temperature correction: linearization of viscosity signal by mathematical model • Programming of a calibration table or curve plotted from at least 6 certified viscosity standards up to 1,000,000 cP • Calibration and calibration report at 1, 2 or 4 viscosity point(s) up to 300,000 cP • Programming of temperature compensation table or settings according to end-user "viscosity versus temperature"

In 1981, Sofraser invented & patented the world's first vibrating viscometer at resonance frequency also called tuning-type.

The vibration amplitude varies according to the viscosity of the product in which the rod is immersed.

The active part of the sensor, a vibrating rod held in oscillation at resonance frequency, is driven by constant electrical power.

Sofraser remains unsurpassed regarding process reliability and accuracy.

