# NAMETRE TRANSMITTERS

## VISCOSCOPE 1810

## VISCOSCOPE 600

## MODEL 400


WWW.GALVANIC.COM

GALVANIC
APPLIED
SCIENCES USA INC.

# MODEL 1810

The transmitter model 1810 includes the servo board to drive the sensor and receive the measurement signal. The unit has two 4 digit LED displays where viscosity and temperature can be viewed.

The model 1810 is a multiplexed unit providing the capability to have up to four sensors connected. These sensors can be of a different type and measuring range. The 1810 has a built in exponent display, making it capabable to display up to 6 decades of viscosity with a resolution of one 1000th cP. The process temperature is displayed with a resolution of 100th of a degree below 100 degrees.

Built in temperature compensation according to ASTM D341 enables the instrument to display the viscosity at a reference temperature. An external input for density can be used to update the viscosity by the density to calculate the viscosity in cP or cSt. Further, a fixed density can be manually entered and used in the calculation.

Analog outputs for viscosity and process temperature are available to connect the model 1810 with your process control system or pen recorder. A third analog output transmits the decade information, so that a process control system can record the viscosity over the same wide dynamic range as the instrument itself. A unidirectional serial output transmits the data in an ASCII protocol. This RS232 serial port of the 1810 can be interfaced to a PC.

Alarms can be set and ouput. Either a dry relay contact or an analog alarm output are available for each sensor.

The system can be easily expanded in the field to the maximum number of sensors at any time.

With standard 19" rack dimensions the transmitter is easily mounted into standard racks. A wall mount housing providing Nema 4 rating is avalaible.


- Multiplex up to 4 sensors
- Autorange over 6 decades
- +/- 2% of reading acuracy
- Multiple configurable outputs
- Integral temperature and density conpensation

# VISCOSCOPE 600

The transmitter ViscoScope 600 includes the servo board to drive the sensor and receive the measurement signal. The transmitter operates a single sensor.

The unit has two 5 digit LED displays, where all available parameters can be viewed. Viscosity, process temperature, block temperature, resonant frequency and internal electronic temperature are available for a view into your process and diagnostics of the system. One single analog input is available to integrate another parameter. The zero setting for the sensor is easily done from the front panel.

Optically isolated analog and serial outputs are available to interface the system with your process control system, pen recorder or PC. With dimensions of 3HE by 21TE the transmitter uses a quarter width of a standard 19" rack mount. A panel mount housing of 144 by 144 mm as shown in the picture above is standard. NEMA 4X and NEMA 7 housings are optionally available.

Two optional alarm relays can be configured for the most important process parameters, and includes two configurable LED alarms on the front panel.

# VISCOSCOPE 400 AND 600

- Autorange up to 3 decades
- +/- up to 2% of reading accuracy
- Multiple configurable outputs optional
- Cost effective design

# VISCOSCOPE 400

The transmitter ViscoScope 400 includes the servo board to drive the sensor and receive the measurement signal. The transmitter operates a single sensor.

The system has a single 5 digit LED display, where viscosity, process temperature, block temperature or internal electronic temperature can be indicated. A single analog input provides for integration of a further process parameter. The zero setting for the sensor is easily done from the front panel. Optically isolated analog and serial outputs are available to interface the ViscoScope 400 system with your process control system, pen recorder or PC.

Two optional alarm relays can be configured for the most important parameters and the front panel includes two configurable LED alarms.

The ViscoScope 400 is available in a wall mount housing (NEMA 4 / IP65).

| VISCOSCOPE | 1810 | VS600 | VS400 |
|---|---|---|---|
| **Measurement Parameters** | • Viscosity<br>• Process (sensor) tempurature<br>• External density input | • Viscosity<br>• Process (sensor) temperature<br>• Block temperature<br>• Internal electronic temperature<br>• External input<br>• Resonance frequency (sensor diagnostics) | • Viscosity<br>• Process (sensor) temp<br>• Block temperature<br>• Internal electronic temperature<br>• External input |
| **Multiplex** | Up to four sensors | Not available | |
| **Display** | 1 x 4 digit LED display plus exponent for viscosity, resolution 0.001 cP<br>1 x 4 digit LED display for temperature, resolution 0.01°C to 100°C | 1 x 5 digit LED viscosity display<br>1 x 5 digit LED temperature display<br>Other parameters can be temporarily indicated via front panel | 1 x 5 digit LED viscosity display; Other parameters can be temporarily indicated via front panel |
| **Range** | Up to six decades | Up to three decades | |
| **Zero adjustment** | Manual adjustment on rear panel for each sensor | For hardware and software components via keyboard | |
| **Configurable filters** | Moving average 0-600 seconds | P1 filter 0-20 sec<br>Moving Avg. 0-200 samples | |
| **Configurable alarm system** | Two relay alarms OR<br>Two 4-20mA alarms | Two LED alarm indicators | |
| **Analog outputs** | Three per sensor 0/4-20 mA or 0/2-10 VDC for viscosity, range and temperature; configurable for any range | Two outputs, 0/4-20 mA or 0/2-10VDC, configurable for any range and measurement parameters | Maximum two 0/4-20 mA or 0/2-10VDC outputs; one of the output slots can be used for a serial or analog output |
| **Serial output** | One RS232 ASCII protocol, unidirectional | Optional | |
| **External density input** | 4-20mA input for density compensation | 0/4-20mA input for other process parameters | |
| **Temperature compensation** | +/– 20°F / 10°C according to ASTM D341 | Not available | |
| **Housing*** | 19" standard rack mount 133x430x330mm (5.25"x17"x13") | Panel mount housing 144x144x218mm (5.7"x5.7"x8.6") NEMA 1 | 240x 120x102mm (9.5"x4.7"x4") Wall mount housing, PC NEMA 4 / IP65 |
| **Ambient temp.** | 0-50°C | 0-50°C | |
| **Power supply** | 105-125 VAC, 60 Hz, 15 W | 95…260 VAC, 50…60 Hz, 15 W | |
| **Accuracy** | +/– 2% of reading | | |
| **Reproducibility** | +/– 1% of reading | | |
| **Repeatability** | +/– 0.25% of reading | | |
| **Factory Calibrated** | To NIST traceable standards | | |
| **OPTIONS** | | | |
| **Power supply** | 210-250 VAC, 50Hz, 15W | 24 V AC/DC | |
| **Housing*** | Wall mount housing NEMA 4 | Wall mount housing NEMA 4 250x240x236 mm (10x 9.5x 9.3") 19" rack in 42TE, 63TE or 84TE | Standard |
| **Analog outputs** | Standard | Third output 0/4-20mA switchable to 0/2-10 VDC | Second analog output 0/4-20mA switchable to 0/2-10VDC |
| **Alarm Relays** | Standard | Two SPDT relays, configurable for any available alarm parameter | |
| **Serial Output** | Standard | One RS232 or RS485 modbus protocol, in place of second 4-20mA output on VS400 | |

NOTE: all dimensions are HxWxD

Printed in Canada
NAMETRE TRANSMITTERS 04 - 05