MARIMEX® ViscoScope® D250/4450

Transmitter

Display Unit

Condition monitoring

Transmitter for process viscometer

- ✓ Compatible with all ViscoScope® sensors
- ✓ Panel or field mounting
- ✓ Process documentation via 4-20 mA / fieldbus
- ✓ Local display (4-line display)
- ✓ Div. calculable parameters

Technical data

Properties

Display	4-line alphanumeric - 2 pages
Outputs	RS232 output on the front, MODBUS RTU (standard)
Outputs optional	0/4...20 mA or 0/2...10 VDC (active) RS232 or RS485 / 2 SPDT relays RS232 or RS485 (note type code)
Output card socket	4450: 4 D250: 2
External input	0/4…20 mA or 0/2…10 V DC
Transmitter operation	3 buttons on the front
Filter	Moving average (up to 200 measured values)
Alarms	System function, sensor diagnosis, coil temperature, 2 adjustable LEDs
Power supply	4450: 95…250 VAC 50…60 Hz, 15 W ,| 24 V AC / VDC D250: 24V DC, 12 W
Dimensions	4450: 19"-Standard 3HE 21TE x 180 mm D250: 142 x 106 x 73 mm (L x B x H)

Operating conditions

Measurement parameters	Viscosity, Process Temperature, Coil Temperature, External Input, Resonance Frequency
Calculable parameters	Temperature compensation, Dynamic viscosity, Kinematic viscosity, User viscosity
Ambient temperature	0…50 °C

General description

The ViscoScope® transmitters of the VS-4450 and VS-D250 series are compatible with all ViscoScope® sensors of the types VA-300 and VA-100 and their predecessor models.
The transmitter excites the sensor and keeps the amplitude of the sensor's resonance frequency constant with fast PID control. The internal resolution is 16 bits, so that viscosity ranges over 4 decades are also excellently covered.
Both transmitters are equipped with a configurable display. The transmission of the measurement data is done via analogue or serial interfaces in industry standard. The model VS-4450 is also available with 2 SPDT relays, which allow time-proportional control or alarms.

Installation and assembly

The transmitter VS-4450 is designed in 19" standard and can therefore be installed in all suitable housings. The model VS-D250 is designed for mounting on a DIN rail. With an adapter, wall mounting as well as installation in a wall or Ex-d enclosure is possible.

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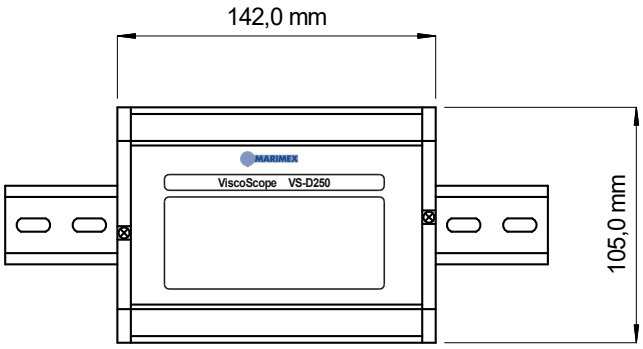
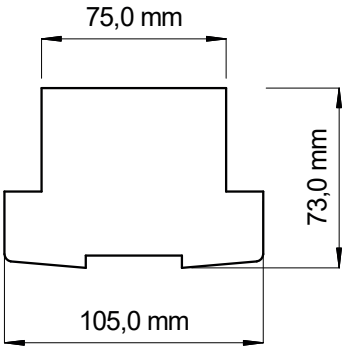
ViscoScope® D250/4450

Dimensional Drawing

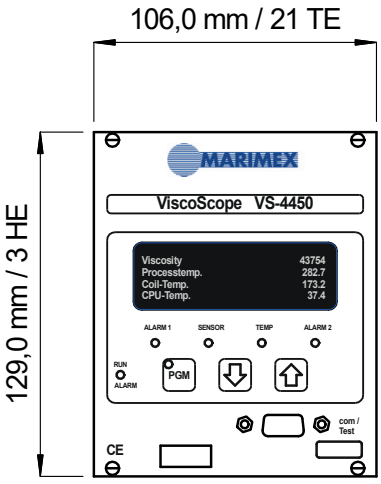
Dimensioning in mm

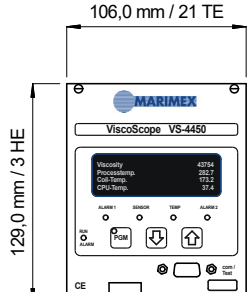
VS-D250





VS-4450





model code

Basic designation

Outputs (2 output card sockets)
- **1** = 1x 0/4...20 mA or 1x 0/2...10V DC (active)
- **2** = 2x 0/4...20 mA or 1x 0/2...10V DC (active)
- **RTU** = 1x RS485 (Modbus RTU)
- **1RTU** = 1x 0/2...10V DC (active) or 1x 0/4...20 mA and 1x RS485 (Modbus RTU)

Power supply
- **24D:** = 24V DC

Housing
- **DG** = DIN rail housing, IP42
- **ExG:** = Ex d enclosure

VS-D250 ☐☐☐

Basic designation

Outputs (4 output card sockets)
- **1** = 1x 0/4...20 mA or 1x 0/2...10V DC (active)
- **2** = 2x 0/4...20 mA or 1x 0/2...10V DC (active)
- **3** = 3x 0/4...20 mA or 1x 0/2...10V DC (active)
- **RTU** = 1x RS485 (Modbus RTU)
- **1RTU** = 1x 0/2...10V DC (active) or 1x 0/4...20 mA and 1x RS485 (Modbus RTU)
- **2RTU** = 2x 0/2...10V DC (active) or 2x 0/4...20 mA and 1x RS485 (Modbus RTU)
- **3RTU** = 3x 0/2...10V DC (active) or 3x 0/4...20 mA and 1x RS485 (Modbus RTU)
- **REL** = relay board with 2 SPDT-relays

Power supply
- **24A:** = 24V AC
- **24D:** = 24V DC
- **250:** = 95…250 V AC

Housing
- **SG** = Control panel housing (255 x 170 x 300 mm)
- **ExG** = Ex d enclosure
- **WG** = Wall-mounted enclosure, IP65
- **19** = 19" Rack, 3U 84HP

VS-4450 ☐☐☐

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