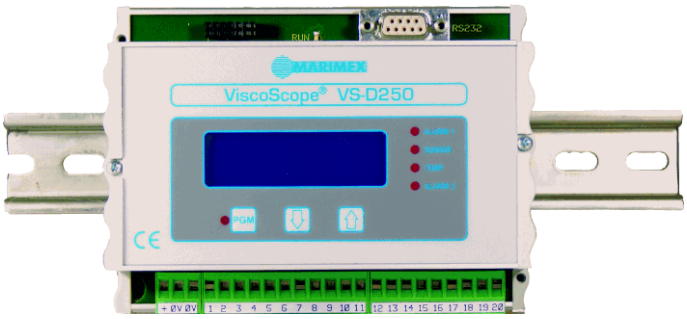
The transmitters:
The power behind the sensors

VS-4450 with display, build into panel mount housing



VS-D250 with display on DIN-rail

ViscoScope transmitters in the **VS-x450** and **VS-x250** ranges are compatible with all ViscoScope sensors of the types **VA-300** and **VA-100**. This ensures maximum flexibility and cost savings when selecting instruments.

The **VS-4450** (with display) and **VS-B450** (without display) models are configured in the 19" standard and can therefore be mounted in practically any suitable housing. The transmitter is usually supplied in the 144 x 144 mm control panel mounting.

The **VS-D250** model, also featuring a display, is intended for mounting on a DIN-rail. Wall mounting is also possible using an adapter.

The transmitter stimulates the sensor and uses a fast loop PID control system to keep the amplitude of the resonance frequency of the sensor constant, i.e. the higher the viscosity, the greater the voltage – which is a measure for the dynamic viscosity in mPa·s x gr/cm^3 (η x ρ).

The system is factory-calibrated and ready for immediate use. The measurements are transferred via standard analog or serial outputs.

Technical information about the transmitters can be found on the reverse side of this leaflet. We will be happy to help you select the correct instrument.

Overview of the various transmitters

Transmitter type	**VS-4450**	**VS-B450**	**VS-D250**
Measured parameters	Viscosity Temperatures External input Resonance frequency	Viscosity Temperatures External input Resonance frequency	Viscosity Temperatures External input option: Resonance frequency
Calculated parameters	Temp.- compensation Dynamic viscosity Kinematic viscosity User viscosity	Temp.- compensation Dynamic viscosity Kinematic viscosity User viscosity	Temp.- compensation Dynamic viscosity Kinematic viscosity User viscosity
Display	4-line alphanumeric 2 pages	without display	4-line alphanumeric 2 pages
Outputs	front panel RS232 output, MODBUS RTU (Standard)		
option	0/4..20 mA or 0/2..10 VDC RS232 or RS485 2 SPDT-Relays	0/4..20 mA or 0/2..10 VDC RS232 or RS485 2 SPDT-Relays	0/4..20 mA or 0/2..10 VDC RS232 or RS485
Slots for outputs	4	4	2
External input	0/4..20 mA or 0/2..10 VDC, i.e. for density or pressure		
Transmitter configuration	via a PC or via push buttons on front panel	via a PC	via a PC or via push buttons on front panel
Filter	Moving average (up to 200 measurements)		
Alarm system	System function Sensor diagnostics Coil temperature 2 configurable LED's	System function	System function Sensor diagnostics (option) Coil temperature 2 configurable LED's
Power supply option	95..260 VAC, 50..60 Hz, 15 W 24 VAC / VDC	95..260 VAC, 50..60 Hz, 15 W 24 VAC / VDC	24 VDC, 12 W
Dimensions	19“-Standard 3HE 21TE x 180 mm / 7.1“		L x W x H 142 x 106 x 73 mm 5.6 x 4.2 x 2.9“
Enclosure	Panel mount IP42 144 x 144 x 218 mm / 5.7 x 5.7 x 8.6“ Wall mount, IP65 19“ rack, 3HE 84TE		DIN-rail IP42
Ambient temperature	0°C to 50°C / 0°F to 122°F		

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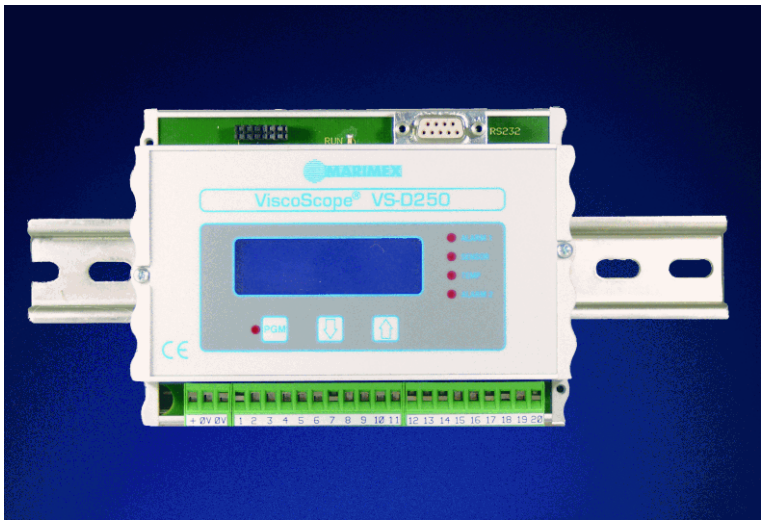
ViscoScope VS-D250 transmitter for DIN-rail mounting



VS-D250 on DIN-rail NS35

The ViscoScope **VS-D250** (with display) transmitter is compatible with all ViscoScope sensors of the types **VA-300** and **VA-100**.

The **VS-D250** model is the lower cost version of the **VS-4450** model. Available only in a DIN-rail housing, the transmitter can be mounted in almost any control panel. Wall mounting is also possible using an optional adapter.

The transmitter stimulates the sensor and uses a fast loop PID control system to keep the amplitude of the resonance frequency of the sensor constant, i.e. the higher the viscosity, the greater the voltage – which is a measure for the dynamic viscosity in mPa·s x gr/cm^3 (η x ρ).

The system is factory-calibrated and ready for immediate use. The measurements are transferred via standard analog or serial ports.

The **ViscoView®** (for data recording) and **VisConfig** (for the transmitter configuration) software packages are also available as an option.

Transmitter – Specification

Transmitter type	**VS-D250**
Measured parameters	Viscosity Temperatures External input option: Resonance frequency
Calculated parameters	Temperature compensation Dynamic viscosity Kinematic viscosity User viscosity
Display	4-line alphanumeric 2 pages
Outputs 2 slots for optional analog or serial outputs	front panel RS232 output, MODBUS RTU (Standard)
	0/4..20 mA or 0/2..10 VDC RS232 or RS485
External input	0/4..20 mA or 0/2..10 VDC, i.e. density or pressure
Transmitter configuration	via PC or via push buttons on front panel
Filter	Moving average (up to 200 measurements)
Alarm system	System function Sensor diagnostics (option) Coil temperature 2 configurable LED's
Power supply	24 VDC, 12 W
Dimensions	L x W x H 142 x 106 x 73 mm / 5.6 x 4.2 x 2.9“
Enclosure	DIN-rail housing, IP42
Ambient temperature	0°C to 50°C / 0°F to 122°C

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ViscoScope VS-x450 transmitter
The allrounder with and without display

2 transmitters **VS-4450** (with display) and **VS-B450** (without display) each mounted into 19“ rack, 84TE

ViscoScope transmitters in the **VS-4450** (with display) and **VS-B450** (without display) ranges are compatible with all ViscoScope sensors of the types **VA-300** and **VA-100**.

Designed according to the 19" standard, the transmitters can be mounted in all suitable housings. 19" racks with space for up to four transmitters are suitable for mounting the units in control panels. An IP65 wall-mounted housing is recommended if the display has to be mounted on-site. Explosion-proof housings are also available (pressure-capsulated or flushed with protective gas). The transmitters are usually supplied in a 144 x 144 mm control panel mounting.

The transmitter stimulates the sensor and uses a fast loop PID control system to keep the amplitude of the resonance frequency of the sensor constant, i.e. the higher the viscosity, the greater the voltage – which is a measure for the dynamic viscosity in mPa·s x gr/cm^3 (η x ρ).

The system is factory-calibrated and ready for immediate use. The measurements are transferred via standard analog or serial outputs.

The **ViscoView®** (for data recording) and **VisConfig** (for the transmitter configuration) software packages are also available as an option.

Transmitter - Specification

Transmitter type	**VS-4450**	**VS-B450**
Measured parameters	Viscosity Temperatures External input Resonance frequency	
Calculated parameters	Temperature compensation Dynamic viscosity Kinematic viscosity User viscosity	
Display	4-line alphanumeric 2 pages	withour display
Outputs	front panel RS232 output, MODBUS RTU (Standard)	
4 slots for optional analog or serial outputs	0/4..20 mA or 0/2..10 VDC RS232 or RS485 2 SPDT-Relays	
External input	0/4..20 mA or 0/2..10 VDC, i.e. for density or pressure	
Transmitter configuration	with a PC or via push buttons on front panel	with a PC
Filter	Moving average (up to 200 measurements)	
Alarm system	System function Sensor diagnostics Coil temperature 2 configurable LED's	System function
Power supply	95..260 VAC, 50..60 Hz, 15 W option: 24 VAC / VDC	
Dimensions	19“-Standard 3HE 21TE x 180 mm	
Enclosures	Panel mount 144 x 144 x 218 mm, IP42 Wall mount, IP65 19“-rack mount, 3HE 84TE	
Ambient temperature	0°C to 50°C / 0°F to 122°F	

VS-4450 with display, build into panel mount housing

VS-4450 with display, build into wall mount enclosure, IP65

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