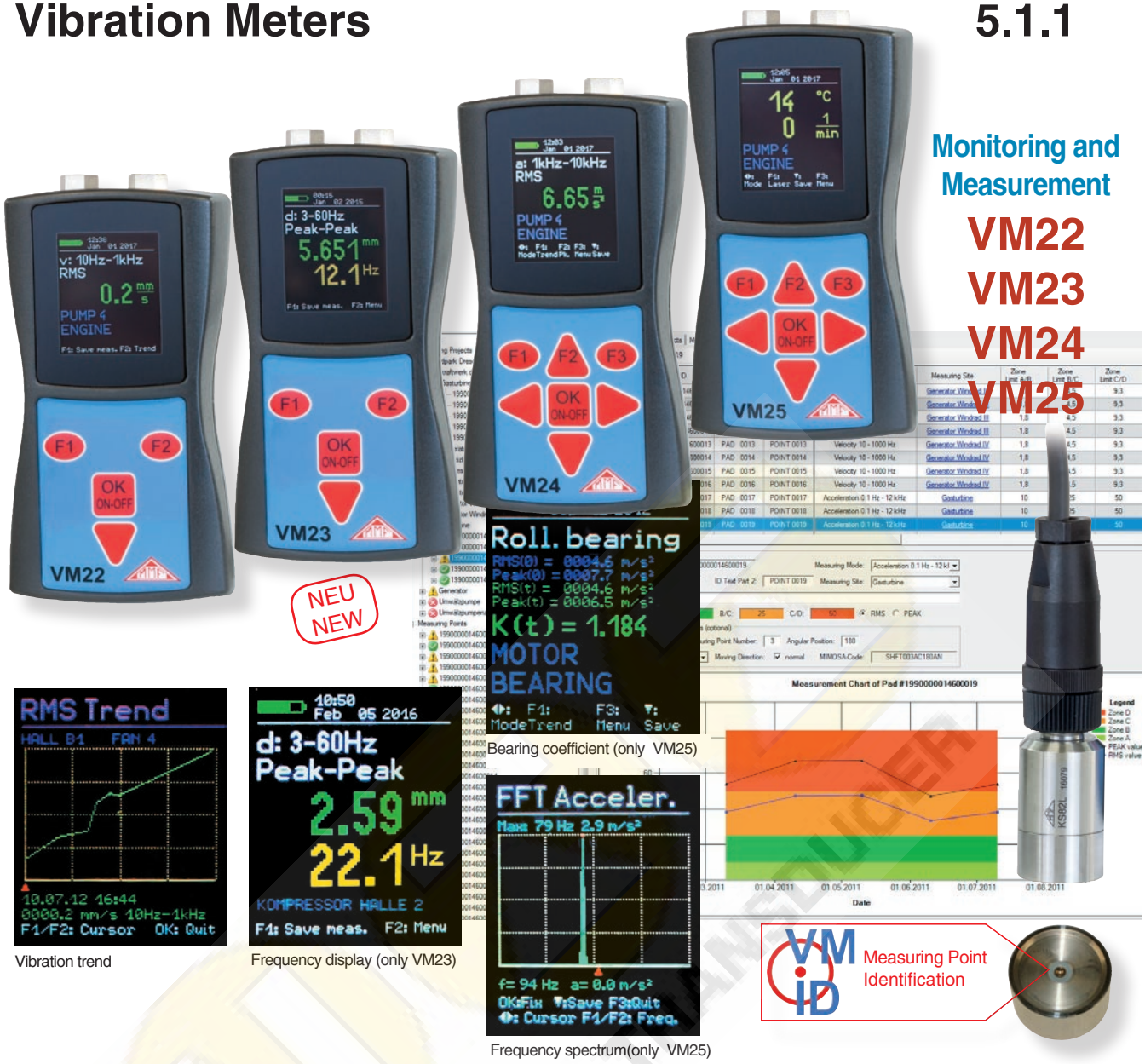
Vibration Meters

Monitoring and Measurement

VM22
VM23
VM24
VM25



Vibration trend

Frequency display (only VM23)

Bearing coefficient (only VM25)

Frequency spectrum(only VM25)

Application

- Machine condition monitoring to ISO 10816-1/-3 /-6/-7 etc.
- Roller bearing monitoring to VDI 3832 etc.
- General vibration measurement in laboratory and industry
- Measurements at oscillating conveyors, vibrating screens and separators
- Quality control
- Optical rotation speed measurement
- Non-contact temperature measurement

Properties

- Measurement of vibration acceleration, velocity and displacement
- Display of true RMS, peak value and crest factor
- External precision shear type accelerometer with magnetic base, built-in infrared thermometer and non-contact optical rpm sensor with laser pointer
- Automatic detection of measuring points via the sensor base with electronic VMID measuring points
- Graphical trend display
- Spectral analysis (FFT) for acceleration and velocity
- Memory for 16000 measurements, USB interface
- PC software for measuring point management to MIMOSA convention (ISO 13373-1) and measuring data archiving
- Headphone output
- Simple operation - no training required
- Engilsh, German, French, Spanish, Italian and Dutch language support
- Brilliant, power-saving colored OLED display
- Pocket-sized with economic AAA batteries or accumulators

Technical Data

• Instrument	VM22	VM23	VM24	VM25
Vibration acceleration	-	-	0,1 - 240 m/s²; 0,2 Hz - 10 kHz; 3 Hz - 1 kHz, 1 kHz - 10 kHz	0,1 - 240 m/s²; 0,2 Hz - 10 kHz; 3 Hz - 1 kHz, 1 kHz - 10 kHz
Vibration velocity	0,1 - 1000 mm/s; 10 - 1000 Hz	0,1 - 1000 mm/s; 2 - 100 Hz; 10 - 1000 Hz	0,1 - 1000 mm/s; 2 - 1000 Hz; 10 - 1000 Hz	0,1 - 1000 mm/s; 2 - 1000 Hz; 10 - 1000 Hz
Vibration displacement	-	0,01 - 60 mm; 3 - 60 Hz; 3 - 200 Hz	0,01 - 60 mm; 5 - 200 Hz	0,01 - 60 mm; 5 - 200 Hz
K(t) Bearing Diagnosis Coefficient	-	-	-	1 - 10 kHz; with memory for 1600 rms/ peak start values
RMS / peak measurement	yes / no	yes / yes (peak-peak)	yes / yes	yes / yes
Crest factor measurement	-	-	-	ja yes
Accuracy (vibration)	± 5 % ± 2 Digits	± 5 % ± 2 Digits	± 5 % ± 2 Digits	± 5 % ± 2 Digits
Rotation speed messurement	-	-	-	1 - 9999 rpm; optical
Temperature measurement	-	-	-	-40 - 125 °C ± 2 K; Infrarot -40 - 125 °C ± 2 K; infrared
Frequency analysis	-	512 lines FFT in background for main frequency display (no spectral view)	-	125 lines FFT spectrum; acceleration/velocity; 10 ranges 11.5 to 11712 Hz
Headphone output	-	-	-	3.5 mm via adapter VM2x-HP; volume
Vibration trend	graphical history display of the saved vibration values of a measuring point (only with VMID)			
Measuring data memory	16000 values; USB interface; optional PC software for data and measuring point management			
Display	OLED graphical display; colored; 128 x 160 pixels			
Power supply	3 x LR03 / HR03 / AAA batteries or NiMH accumulators; operating time 8 - 12 h; USB supply			
Operating temperature range	-20 .. 60 °C, < 95 % Luftfeuchte ohne Kondensation -4 .. 140 °F, < 95 % relative humidity, no condensation			
Dimensions, weight	125 mm x 65 mm x 27 mm; 140 g with batteries and without sensor			
• Accelerometer				
Type	Piezoelectric shear accelerometer with low-power IEPE output; M12 connector; integral magnet, VMID read contact in base			
Nominal sensitivity	3,5 mV/ms^{-2}			
Transverse sensitivity	< 5 %			
Dimensions, weight	Ø 21; height 34 mm (without connector); 53 g			
Operating temperature range	-20 .. 80 °C -4 .. 176 °F			
Sensor cable	Coiled cable, stretched length approximately 1.6 m, Ø 4 mm			
VMID measuring point identification	digital; unique 16 character hexadecimal number, readout by contact in sensor base; stainless steel housing Ø 25 mm, heigt 15 mm; 45 g; attachment by two-component epoxy glue			
• Accessories				
Standard accessories	Instrument, vibration sensor with spiral cable, USB cable, headphone adapter (VM25), instruction manual, plastic case			
Optional accessories	PC software VM2x Measuremet Data Base, VMID measuring points, sensor probe VM2x-T			

Specifications subject to change without prior notice.