

# VT-300

Technical Datasheet



## Innovative Wireless Measurement





With its unique metrological performances and patented design, the VT-300 will help you make sure your machines can keep spinning without risk. Its wireless capabilities are going to change your relation to the vibration of your machines:

- Comfort during data collection
- Safety with cable free measurement, making it possible to step back of several meters from the machine
- High Measurement reliability without risk of cable damage
- Fast data collection (typical 8s per bearing)
- New capabilities on machines in enclosed room or behind protective casing

All of this, without compromise on the diagnostic capabilities offered via Acoem solutions. The VT-300 is compatible with all Acoem portable predictive maintenance tools:

- Bearing Defender App
- Machine Defender App
- SMC Machine Checker
- FALCON Analyzer

## Main Features Compatibility

	 Bearing Defender	 Machine Defender	 SMC	 FALCON
RMS Vibration readings (ISO10816-3, Acceleration)	✓	✓	✓	✓
Acoem Bearing Defect Factor™	✓	✓	✓	✓
Acoem Accurex™ Automatic Diagnostic		✓	✓	✓
Custom measurements for advanced Vibration Analysis				✓

*\*Smart license required*

## Sensor Specifications

Hardware Type Reference	CAC1008000
<b>Metrology</b>	
Three axial measurements	Synchronous acquisition in X, Y and Z directions
Sampling frequency	51.2 kHz on all axes ( Fmax 20 kHz ) Sensing element - Piezoelectric / Annular shear mode
Sensing element internal sensitivity, 24 °C	100 mV/g (numerically converted)
Sensitivity adjustment	Factory-calibrated and adjusted
Full scale	80 g
Signal-to-Noise ratio	> 80 dB Amplitude non-linearity - 1% max
Frequency response after triaxial mechanical assembly	± 3 dB (Z) - 0.4 Hz – 15 kHz
Full bandwidth	20 kHz on all axes Accuracy- +/- 5% @ 120 Hz, 1 g
Transverse response sensitivity (120 Hz, 1 g)	< 5% ( < -26 dB )
Electrical noise, nominal	
• Broadband 0 Hz–5 kHz	• < 5 mg
• > 1 Hz	• < 20 µg/vHz
• Peak velocity (after 1 integration)	• < 0.13 mm/s
<b>Physical</b>	
Dimensions	Ø42 x H116 mm Weight - 373 g
Mounting	M6 threaded hole Housing material - Stainless steel
<b>Environmental</b>	
Operating temperature range	-20°C to 60°C Resistance to shocks - 5,000 g peak
Resistance to continuous Vibration	500 g peak Protection - IP65
<b>Battery</b>	
Type	Li-Ion
Operating lifetime	8 hours
Rechargeable	By USB ( power supply adapter in standard delivery )
Charging time	~8 hours with the standard 500 mA charge current
Automatic stand-by	After 10 min if no connection has been established
<b>Communication</b>	
Wireless protocol	Wi-Fi Point to point
Typical wireless range	Up to 25 meters line of sight depending on the environment
Wi-Fi communication channel	User setting: 1, 6, 11 Sync protocol - Proprietary
Standard mobile systems compatibility	iOS ( 9.3 or sup. ) , Android ( 4.4.2 or sup. )
<b>Patented Technology</b>	
Patent Number	US 9,921,136
<b>Certifications</b>	
Radio certifications	EC, FCC, IC, MIC ( Japan )

## Packaging & Deliverables

Each VT-300 is delivered with the following package:

- 1 VT-300 Tri-axial wireless sensor
- 1 USB power supply module with international plugs and USB cable
- 1 High power bipolar magnet (suited for curved shafts) with orientation key for tri-axial positioning
- 1 Carry-on bag
- 1 Contact point to make single axis measurements on small surfaces
- 1 Printed safety instructions manual
- 1 Printed calibration certificate





*Freely Download the Bearing Defender and Machine Defender apps!*




Smart   
Condition

[www.smartcondition.mx](http://www.smartcondition.mx)  
[contacto@smartcondition.mx](mailto:contacto@smartcondition.mx)

 (493) 114 1974

 (493) 115 7255

 (614) 196 6239



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