

Advanced data collector / FFT analyzer

# SKF Microlog Analyzer dBX

CMVA 90

The SKF Microlog dBX is the most advanced large screen vibration analyzer offered by SKF today. Its features allow you to capture a wide range of vibration data quickly. The analyzer provides the flexibility to support applications that are most important to your company's specific predictive maintenance program. Developed for use in a wide range of industries.



*SKF Microlog dBX is a full-featured, four channel, high performance portable, route data collector/FFT analyzer.*

## Key features

- **Large screen** – 10.1 in. high resolution colour display for easy viewing and analysis in any light. Displays up to 6 plots on screen
- **Simultaneous triaxial measurements** for fast data collection
- **MPA-in-a-flash** – SKF's fastest vibration analysis, saves time taking measurements
- **Easy to use** – get you started quickly with minimum training
- **Rugged** – dust and water ingress IP 65 design for reliability in industrial environments
- **Rechargeable lithium battery** supports up to eight hours of continuous data collection

## Modular offers

The modular application design of the SKF Microlog dBX offers customers the option to upgrade and expand functionality without having to buy another instrument. Sensors and cable accessories are inter-changeable between previous SKF Microlog CMXA series models. To add additional functionality, units can be upgraded to more advanced models, by simply purchasing optional accessories.

## Specifications

### Measurements

- Input channels: 4 analogue input channels with IEPE bias voltage, tacho channel with built-in power supply for laser tachometer
- Data acquisition: 24-bit A/D converter (>90 dB dynamic range)
- Max. bandwidth: 40 kHz (102.4 kHz sampling rate)
- Accuracy: +/- 2.5% of full scales range
- Measurements parameters: acceleration, velocity, displacement, SKF gE bearing condition, phase, voltage, and speed

### Environmental

- Operating temperature: -10 to +50 °C (13 to +122 °F)
- Storage temperature: -20 to +60 °C (-4 to +140 °F)
- IP rating: IP65 dust and water ingress to EN 60529 specification
- Rugged: 1.2 m (4 ft.) drop test to MIL STD 810 specification
- Approvals: CE, UKCA, FCC, KC, RCM

### Physical

- Dimensions: 300 × 195 × 50 mm (11.8 × 7.7 × 1.97 in)
- Weight: 1.9 kg (4.2 lbs), 1.7 kg using single battery
- Keypad: Backlit keys, up, down, right and left, OK, Cancel, Menu key, Right click. Cursor toggling, Zoom, Start/Stop measurement key, Power On/Off
- LCD screen: 10.1 in. multi-point colour touch screen, 1280 × 800 pixels, for indoor and outdoor use
- Camera: built-in, rear facing camera
- RF tag identification: near-field communication (NFC) reader, built-in, located on the rear
- PC interface: USB A-type connector

### Power source

- Power: 2× lithium-ion polymer rechargeable/swappable batteries
- Battery life up to 8 hours of data collection use

| Module  | Application  | CMVA 90 M | CMVA 90 F |
|---|--|-----------|-----------|
|    | SKF Data Collector is used as part of a condition-based maintenance program. It enables users to collect a sequence of pre-defined measurements along a 'route' through a plant area. Routes are downloaded on to the SKF Microlog dBX from SKF host software.   | ●         | ●         |
|    | SKF Microlog dBX Analyzer allows you to set-up user-defined measurements and immediately collect data for analysis purposes, at locations not downloaded as part of a route.   | ●         | ●         |
|    | SKF Balancing is an easy-to-follow procedure to perform precision balancing in 1,2,3,4 planes, and overhung rotor applications. Features include a heavy-spot locator, multiple points on clear display screens and graphical representations.   | ●         | ●         |
|    | SKF Bump Test is a simple and easy tool for performing an impact test, in order to identify natural frequencies of a machine or structure.   | ●         | ●         |
|    | SKF gE Enveloping is an analysis tool, using field-proven SKF algorithms, to detect rolling element bearing defects at an early stage.   | ●         | ●         |
|    | SKF ODS Analysis acquires data to determine the Operating Deflection Shape (ODS) of a machine. The data is uploaded into a host software to visualize the behavior on a wire-frame model.  | ●         | ●         |
|    | SKF Order Tracking enables experienced users to diagnose complex rotating machinery issues by means of order analysis, with the SKF Microlog dBX connected to a speed and/or phase reference signal.   |           | ●         |
|    | SKF Data Recorder enables you to record vibration signal waveforms of user-defined lengths in time. Recorded waveforms can be imported into SKF host software for post-processing, where they are typically used to analyse low-speed machinery.   |           | ●         |
|    | SKF Orbit Analysis provides shaft orbit displays, for diagnosis of issues in fluid-film bearings. The SKF Microlog dBX would typically be connected to buffered signal outputs, X-Y and phase reference, of an installed machinery protection system.  |           | ●         |
|  | SKF RunUp CoastDown is used to identify excitation of critical resonant frequencies during the start-up or shut-down phase of a machine. It is normally applied to larger variable-speed equipment and SKF Microlog dBX would typically be connected to buffered signal outputs, X-Y and phase reference, of an installed machinery protection system. |           | ●         |

### Ordering information

#### CMVA 90 M-CK-SL kit includes

- CMVA 90-M Microlog dBX, programmed with SKF Data Collector, SKF dBX Analyzer, SKF Balancing, SKF gE Enveloping, SKF Bump Test and SKF ODS Analysis applications
- CMAC 9001 Universal power supply with 4 power cords
- CMAC 9002 Power adapter cable
- CMAC 9005 Two (2) batteries
- CMAC 9010 USB A-Type to A-Type communications cable
- CMAC 9015 SKF branded carry case
- CMAC 9016 Two (2) hand straps
- CMAC 9017 Neck strap
- CMSS 2200 Industrial accelerometer, side exit
- CMAC 5209 Accelerometer coiled cable, 2 m (6.56 ft.)
- CMSS 908-MD Medium duty magnetic base
- Certificate of calibration and conformance

#### CMVA 90 M-F-UPGRADE license includes

- Upgrade from standard to extended version, license for SKF Order Tracking, SKF Data Recorder, SKF RunUp CoastDown and SKF Orbit Analysis

#### CMVA 90 F-CK-SL kit includes

- CMVA 90-F Microlog dBX, programmed with SKF Data Collector, SKF dBX Analyzer, SKF Balancing, SKF gE Enveloping, SKF Bump Test, SKF ODS Analysis, SKF Order Tracking, SKF Data Recorder, SKF RunUp CoastDown and SKF Orbit Analysis applications
- CMAC 9001 Universal power supply with 4 power cords
- CMAC 9002 Power adapter cable
- CMAC 9005 Two (2) batteries
- CMAC 9010 USB A-Type to A-Type communications cable
- CMAC 9015 SKF branded carry case
- CMAC 9016 Two (2) hand straps
- CMAC 9017 Neck strap
- CMSS 2200 Industrial accelerometer, side exit
- CMAC 5209 Accelerometer coiled cable, 2 m (6.56 ft.)
- CMSS 908-MD Medium duty magnetic base
- Certificate of calibration and conformance

#### Optional accessories for CMVA 90

A number of accessories are available to complement the SKF Microlog dBX. For technical details or information on any item, specifications and photographs are available later in the catalog.

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