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# Basic handheld vibration sensor



## Machine monitoring, made simple

Now both novice users and experts can easily, quickly, and accurately check the condition of rotating equipment throughout your facility. Equipping your maintenance and operations personnel with this rugged, ergonomic and easy-to-use instrument can provide early warning of potential machine problems before a costly failure occurs.

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### FEATURES

- Quick and easy to set up and use, measurements are shown on a bright display viewable in low light to direct sunlight. Free on-line training is also available.
- Lightweight, compact, and ergonomically designed, the SKF Machine Condition Advisor fits neatly at the belt line, in a pocket or a tool kit. Exceptionally durable, the unit is rated IP 54 for use in industrial environments.
- Alert and Danger prompts provide increased diagnostic confidence.
- Measuring velocity, enveloped acceleration and temperature simultaneously saves time.
- Efficient, economical and environmentally friendly, the rechargeable SKF Machine Condition Advisor operates 10 hours on a single charge.
- Flexible enough to work with standard 100 mV/g constant current accelerometers, an optional external sensor can be used for hard to reach locations and for more repeatable and accurate measurement results.
- Features English, French, German, Portuguese, Spanish and Swedish for user convenience.

Multiple measurements with a single device

The SKF Machine Condition Advisor provides an overall “velocity” vibration reading that measures vibration signals from the machine and automatically compares them to pre-programmed International Organization for Standardization (ISO) guidelines. An “Alert” or “Danger” alarm displays when measurements exceed those guidelines. Simultaneously an “enveloped acceleration” measurement is taken and compared to established bearing vibration guidelines to verify conformity or indicate potential bearing damage. The SKF Machine Condition Advisor also measures temperature using an infrared sensor to indicate uncharacteristic heat.

Accuracy, flexibility and confidence

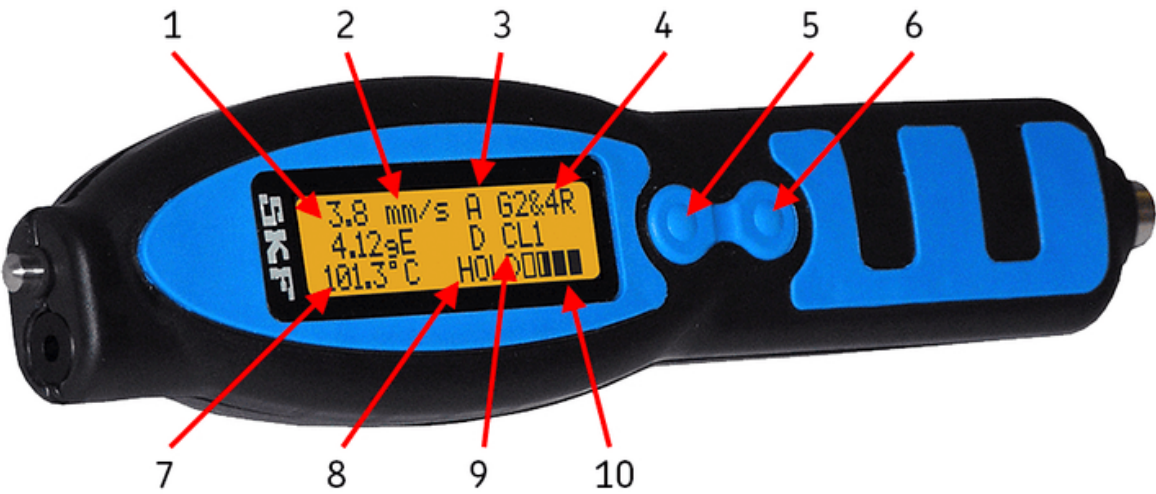
When performing measurements, the SKF Machine Condition Advisor’s acceleration sensor input signal is processed to produce two different measurements for each POINT on the machinery – overall velocity and enveloped acceleration. At the same time, the SKF Machine Condition Advisor’s non-contact infrared sensor measures the surface temperature of the measurement location and simultaneously displays all three measurement values. Depending on the SKF Machine Condition Advisor’s System setting, the front-panel LCD simultaneously displays:

- Metric or Imperial units
- Velocity in mm/s RMS or in./s derived Peak
- Temperature in Celsius or Fahrenheit
- Acceleration enveloping readings in gE

PARTS SPECIFICATION

ORDERING INFORMATION

TECHNICAL DATA



- 1. Enveloped acceleration
- 2. Velocity
- 3. Alarm display:  
    (A) Alert or  
    (D) Danger
- 4. ISO machine group
- 5. Select button
- 6. Browse button
- 7. Temperature
- 8. Measurement status
- 9. Enveloped acceleration class
- 10. Battery indicator (60% full)

ORDERING INFORMATION

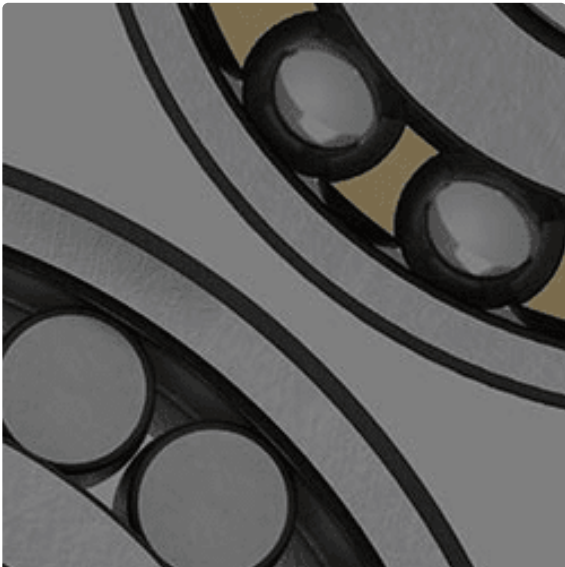
Designation	CMAS 100-SL
includes:	
SKF Machine Condition Advisor unit	
Belt holster	
Charger, international DC power supply	
User manual	
CD containing:	
– User manual available in PDF files in English, French, German, Portuguese, Spanish and Swedish	
– Link to training on SKF Knowledge Center	
– SKF Machine Condition Advisor trend worksheet (Excel file)	
– SKF Condition Monitoring Essentials catalogue available in PDF file in English	

TECHNICAL DATA

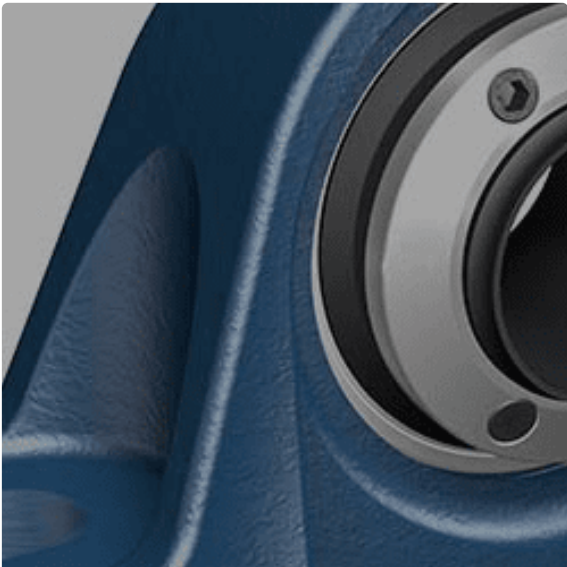
Vibration pickup:	
– Internal:	Integrated piezoelectric acceleration
– External:	Accepts a standard 100 mV/g constant current accelerometer
Temperature sensor:	Internal infrared temperature sensor
Measurements:	
– Velocity:	Range: 0,7 to 65,0 mm/s (RMS) (0.04 to 3.60 in./s (equivalent Peak)), meets ISO 10816-3
	Frequency: 10 to 1 000 Hz, meets ISO 2954
– Enveloped acceleration:	Range: 0,2 to 50,0 gE
	• Frequency: Similar to Band 3 (500 to 10 000 Hz)
– Temperature:	Range: –20 to +200 °C (–5 to +390 °F)
	Infrared temperature accuracy: 2 °C (4 °F)
	Distance: Short range, maximum 10 cm (4 in.) from target
Operating temperature range:	In use: –10 to +60 °C (15 to 140 °F)
	While charging: 0 to 40 °C (30 to 105 °F)
Storage temperature:	
– Less than one month:	–20 to +45 °C (–5 to +115 °F)

– More than one month, but less than six months:	–20 to +35 °C (–5 to +95 °F)
Humidity:	95% relative humidity, non-condensing
Enclosure:	IP 54
Approvals:	CE
Drop test:	2 m (6.6 ft.)
Weight:	125 g (4.4 oz.)
Dimensions:	
– Length:	200,0 mm (7.90 in.)
– Width:	47,0 mm (1.85 in.)
– Height:	25,4 mm (1.00 in.)
Battery life:	10 hours before charging again ( 1 000 measurements)
– With external sensor:	Up to 55% less battery life
Supported external sensor:	Any standard accelerometer with 100 mV/g sensitivity constant current
External sensor power:	24 V DC at 3,5 mA
Charger specifications:	Universal AC/DC wall plug-in
	Input: 90 to 264 V AC, 47 to 60 Hz
	Output: 5 V DC regulated
	3 to 4 hours for a full charge

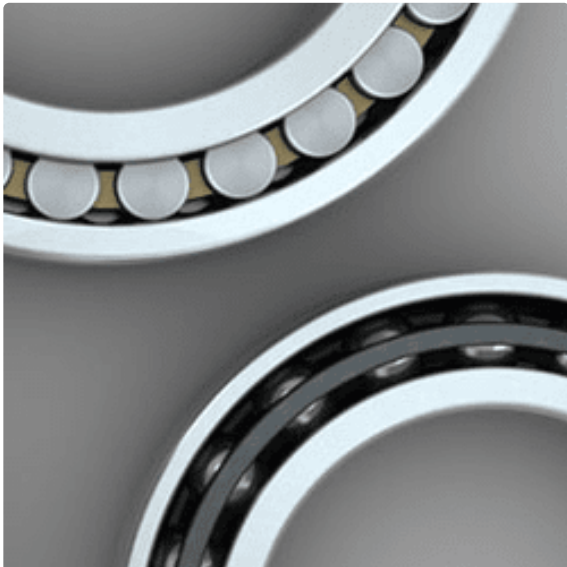
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