

SKF Pulse™

Your entry point to predictive maintenance.

SKF Pulse combines the easy-to-use, portable SKF QuickCollect sensor with the SKF Pulse free mobile app for iOS and Android to monitor machine health and quickly identify machinery issues before operations are impacted. Acting as a smart vibration tool, the sensor transmits wirelessly to the SKF Pulse app, instantly providing intuitive machine diagnostics.

Machine monitoring made easy.

- **Easy-to-use, portable** QuickCollect sensor and a free mobile app
- **Easy start-up** with no prior training or experience needed
- **Quickly monitors machine health** and helps identify machinery issues before operations are impacted
- **Instant feedback** from vibration and temperature measurement
- **In-app SKF Pulse™ Checks** provide expert analysis, advice and diagnostic reports from SKF
- All at a **cost-effective price point** – no need to make the case for capital expenditure
- Access to **SKF Engineering support** and **SKF E-Learning**

SKF QuickCollect Sensor features:

- Velocity, acceleration and temperature measurements
- Bluetooth® communication with iOS and Android devices
- Rugged, industrial design: drop test at 6 ft (1.8 m), water- and dust-resistant (IP65)
- Rechargeable lithium battery (8 hours with normal usage)
- One year warranty covering manufacturing defects
- Two year calibration certificate
- Available for use in hazardous areas with the CMDT391-EX model



Sensor controls and indicators:

- 1 Power button** – Powers the sensor on and off
- 2 Battery LED (green, red)** – Indicates status of battery charge
- 3 Communication LED (green, red)** – Indicates sensor connection status to app and when firmware updates are in progress
- 4 All-purpose check LED** – For future use

Four SKF QuickCollect models now available!

CMDT 391-K-SL:

Standard Sensor

CMDT 391-PRO-K-SL:

Standard Sensor with carrying case and accessories

CMDT 391-EX-K-SL:

Hazardous Area Sensor

CMDT 391-EX-PRO-K-SL:

Hazardous Area Sensor with carrying case and accessories



For more information, contact your SKF Representative or visit skfusa.com/skfpulse.



Technical specifications for SKF QuickCollect sensor

Regulatory specifications

IP rating	IP 65, dust and water ingress protection testing standard
Radio approvals	Europe (CE), USA (FCC), Canada (IC)
CE mark	CE approved

Measurement range

Overalls	
Velocity	10 Hz to 1 kHz up to 2.17 in/s (55mm/s) Recommended speed range: 600 rpm - 3600 rpm
Bearing condition	SKF patented envelope acceleration up to 20 gE

FFT

Maximum frequency	Velocity 1 kHz, enveloped acceleration 2 kHz
Lines of resolution	Velocity 400, enveloped acceleration 800

Detection type

Temperature	Velocity RMS, enveloped acceleration true peak to peak Standard operating temperature range is -5 to +140°F (-20 to +60°C). Sensor is capable of measuring beyond the standard SKF Pulse operating temperature range up to 212°F (100°C) for short periods.
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Power

Main power	Rechargeable lithium battery, 3.7V DC, 0.14 A
Battery lifetime	Eight hours with normal usage Manual power off: Press and hold power button for 3+ seconds Auto power off: After 15 minutes of no activity
MAINS supply voltage, charger	Varies up to ±10% of the nominal voltage, TRANSIENT OVERVOLTAGE CATEGORY II; POLLUTION DEGREE 2
Charger AC adapter	Input 5V DC ±10%, 1 A Input 100 to 240 VAC, 0.4 A, 47 to 63 Hz Output 5V DC, 1.6 A

Environmental

Storage temperature	-5 to +115 °F (-20 to +45 °C) for less than one month -5 to +95 °F (-20 to +35 °C) for less than six months -5 to +140°F (-20 to +60°C)
Operating temperature, built in infrared (IR) sensor	
Operating temperature, battery	32 to +105 °F (0 to +40 °C) for charging -5 to +140 °F (-20 to +60 °C) for discharging
Operating temperature, charger	32 to +105 °F (0 to +40 °C)
Altitude	Up to 6,560 ft (2,000 m)
Humidity	95% non-condensing
Physical	
Case	Water and dust resistant (IP65)
Drop test	6 ft (1.8 m) in accordance with MIL-STD-810G
Dimensions	1.8 x 1.8 x 5.3 in (45 x 45 x 135 mm)
Weight	7 oz (200 g)
External sensor support	
External sensor types	2-wire, constant current, 100 mV/g accelerometers. Supports ICP accelerometers. Provides 3 mA minimum.
Connection cable	SKF CMAC 8010 (IEPE).

Ordering information

Standard kits

CMDT 391-K-SL
CMDT 391 sensor
CMAC 109 magnet
CMAC 8004 power supply

CMDT 391-PRO-K-SL
CMDT 391-K-SL kit plus:
CMAC 8010 accelerometer cable
CMSS 2100 accelerometer
CMAC 3715 BNC adaptor
CMAC 8011 carry case

Hazardous area kits

CMDT 391-EX-K-SL
CMDT 391 Ex sensor
CMAC 109 magnet
CMAC 8007 power supply

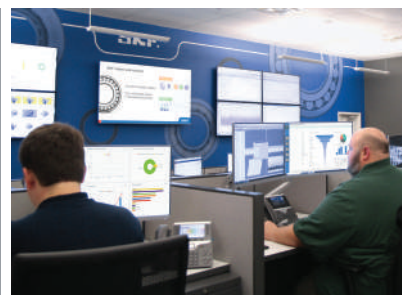
CMDT 391-EX-PRO-K-SL
CMDT 391-EX-K-SL kit plus:
CMAC 8010-EX accelerometer cable
CMSS 786A-IS accelerometer
CMAC 3715 BNC adaptor
CMAC 8011 carry case



Measure vibration and temperature



Monitor asset health



On-the-spot access to SKF analysis experts



SKF Pulse Check reports

For more information, contact your SKF Representative, email skf.connected@skf.com or visit skfusa.com/skfpulse.

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Agency approvals for hazardous area

CMDT 391-Ex with CMAC 8010-Ex cable



Ex ib IIC T4 Gb -20 °C ≤ Ta ≤ +60 °C
Class I, Zone 1, AEx ib IIC T4 Gb -20 °C ≤ Ta ≤ +60 °C
IS Class I, Div. 2, Group A, B, C, D, T4



Ex ib IIC T4 Gb -20 °C ≤ Ta ≤ +60 °C

SKF Pulse™

Frequently Asked Questions

- **How do I get started with SKF Pulse?**

First, you purchase an SKF QuickCollect sensor from your Authorized SKF Distributor. The sensor allows you to easily collect and interpret vibration and temperature data from your rotating equipment. Once you have the sensor, download the SKF Pulse app from the Apple Store or GooglePlay. You will be able to take advantage of a free trial of the SKF Pulse subscription when you register on the app, so be sure to wait until you have your sensor to get started!

- **What devices/operating systems are supported by SKF Pulse?**

The SKF Pulse app is designed to be compatible with devices running iOS 13 or later and Android 8 or later.

SKF Pulse can be found on the Apple Store and Google Play.

- **I'm having connection problems; how do I troubleshoot?**

1. Confirm Bluetooth® is enabled on your device.
2. Confirm sensor is turned on and has a charged battery (see battery indicator light).
3. Confirm you are within range of your sensor.

- **What is the IP rating of the sensor?**

The SKF QuickCollect sensor is currently rated IP65.

- **How do I order the SKF QuickCollect sensor?**

Contact your Authorized SKF Distributor to order the SKF QuickCollect sensor that is now available in four models. A standard or hazardous area sensor with or without a carrying case and accessories.

- **What do I do if I am missing parts or need to order parts?**

Contact the industrial distributor where you purchased your sensor.

- **My magnet won't stick to my asset, what can I do?**

Confirm that the asset surface is magnetic. If the asset surface is not magnetic, consider a magnetic mounting pad. If the sensor will not stick, hold the sensor in place as needed.

- **Is there a limit to the number of assets I can enter in the app or measure with one sensor?**

You can monitor an unlimited number of assets with one SKF QuickCollect sensor.

- **Can asset setup fields be left blank if data is unknown?**

Required fields are indicated by an asterisk in the app and must be entered for proper analysis. Fields without an asterisk may be left blank. However, the more information provided, the more accurate the analysis will be.



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CMDT 391-PRO-K-SL:

Standard Sensor with carrying case and accessories

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- **How do I correct a mistake made when building an asset?**

The app allows you to “Edit My Asset” (Go to “My Assets,” select the asset in need of correction, then select “Edit Asset” and change as needed.)

- **How are thresholds set?**

Based on asset data entered in the SKF Pulse app, default thresholds for velocity alarms are set to ISO standards. User can customize velocity alarm thresholds if desired.

- **How do I know where to take measurements on my asset?**

The app has an intuitive visual interface that guides users through the data collection process.

- **How do I request an SKF Pulse Check?**

Go to My Assets, select specific asset for which you have collected data to get asset details screen and then select Request Pulse Check. Tap the button to send the request. Data must be collected on an asset to submit an SKF Pulse Check.

- **How is data analyzed?**

Data is sent to an SKF remote diagnostic center where it is analyzed by a team of experts via an SKF Pulse Check, available in the app. An SKF Pulse Check report will be sent by the analyst in the SKF Pulse app within one business day advising corrective actions, if required.

- **How do I turn off my sensor?**

Manual power off: Press and hold power button for 3+ seconds

Auto power off: After 15 minutes of no activity.

- **Does SKF Pulse require a subscription?**

The sensor is purchased through your Authorized SKF industrial distributor. The app can be downloaded from the Apple Store and Google Play free of charge. SKF offers a Basic and Advanced subscription package, after a 30-day Free Trial. [Learn more.](#)

- **How do I reach technical support?**

You can submit your support request via the Pulse app under Settings or online at www.skf.com/cm/tsg. Once your support case is submitted, a technician will contact you ASAP to begin working on your issue. For urgent issues, please call 1-800-523-7514 or 1-858-496-3627.

- **What is the warranty for the QuickCollect sensor?**

The SKF QuickCollect sensor comes with a one year warranty covering manufacturing defects.

- **What do I need to know about sensor calibration?**

The SKF QuickCollect sensor calibration certification is valid for two years after the first use. Please contact Mapro.Repair.USA@skf.com for re-certification.



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