Noise and vibration testing electronics

CMME 7001 A/B/C

General description

The CMME 7001 is the latest generation of vibration testing electronics that can be used for in- and offline vibration measurements. The CMME 7001 is a robust industrial Mini-PC with specific hardware components.

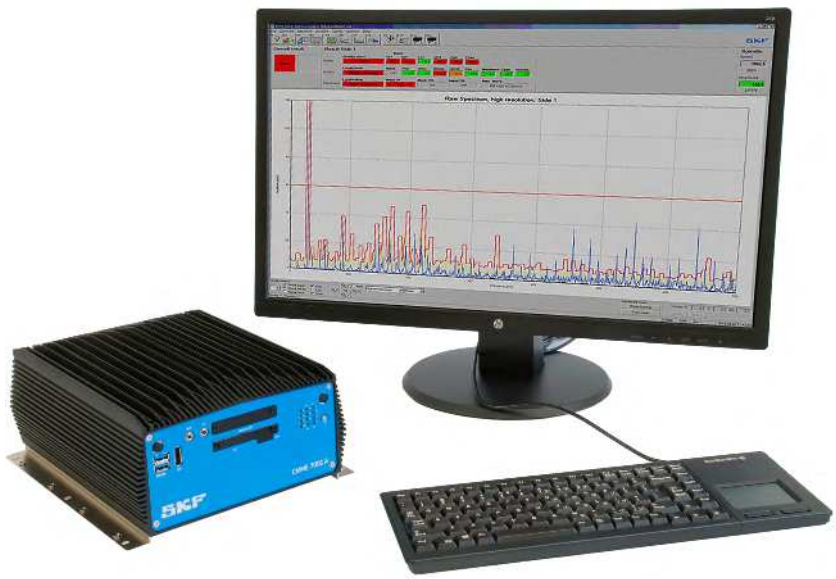
There are three versions available, CMME 7001 A, CMME 7001 B and CMME 7001 C.

In the CMME 7001 A electronics, a high-precision data acquisition board is used to read vibration signals from the MEA 106/ MEA 200 pickups. This board also provides the loudspeaker output and supply voltage for the pickups.

The MEA 106/MEA 200 pickups work according to the inductive principle and have a velocity-proportional output signal. A small amplifier is built into the pickup housing, therefore, the vibration signal is already amplified and has a high signal-to-noise ratio when fed to the A/D card. The very robust MEA 200 pickup can be directly connected to the CMME 7001 A as well as its MEA 106 predecessor.

The CMME 7001 B is equipped with a miniStreamer board and is used to read the digital SPDIF signal of the SKF Laser Vibrometer MSL-7000. This SKF Laser Vibrometer combines a robust integrated single-box design with the clear advantages of non-contact laser-based vibration measurement. The setup of the laser parameters is performed via a RS-232 interface.

The CMME 7001 C electronics is a plain industrial PC without additional ports. It is used in different applications and for the MSL-7100 SKF Laser Vibrometer which is connected via Ethernet.



Software

Depending on the customer's needs, two different software packages are available for the CMME 7001 electronics:

FPM

FPM is a bearing noise testing software and is used for checking the noise level of rolling bearings. The same package is used for measurements performed during the production as well as for tests in the laboratory. The user just needs to select the fully prepared configuration for the specific equipment in use. For further details about this software product see the corresponding data sheet.

BeQuiet+

The BeQuiet+ is a grease noise testing software and is used for analyzing the noise and damping behaviour of greases. Such an equipment is typically used in laboratories of all major grease producers for development purposes, but also to perform quality checks during the production of low noise greases supplied to the bearing industry. For further details about this software product see the data sheet for BeQuiet+.

CMME 7001 A

With STAC SP220 board used for MEA 106/MEA 200 pickups.

CMME 7001 B

Used for SKF Laser Vibrometer MSL-7000.

Optional items

Not included in the delivery

MEA 200

MSL-7000

CMME 7001 C

Used for SKF Laser Vibrometer MSL-7100.

Optional items

Not included in the delivery

MSL-7100

Technical specifications

CMME 7001 A/B/C

- Processor: Intel Core i7-6700TE, Quad Core, 2,4 GHz, 8 MB cache (will be updated continuously)
- Memory: 16 MB DDR4 PC2400 (will be updated continuously)
- Operating System: Microsoft Windows 10 IoT Enterprise 64-bit, English
- Solid state drive: 240 GB SSD SATA-6G 2,5" (will be updated continuously)
- Interface:
  - Front
    - 1 x Display port
    - 1 x Line-out and 1 x Line-in
    - 2 x USB 3.0
  - Back
    - 2 x DB9 for RS-232 COM port
    - 3 x Intel I210IT GbE LAN ports
    - 4 x USB 3.0
    - 2 x USB 2.0
    - 1 x DVI-D port
    - 1 x HDMI port
- Network: 3 x Intel I120 Gigabit-LAN
- Housing: Aluminium housing without fan, EMC–protection IP 42
- Monitor: LCD monitor
- Keyboard: USB type, normal PC keyboard
- Extension slots
  - Only CMME 7001 A (for MEA 106 and MEA 200 pickups)
    - 1 x PCI used for PCI-1761
    - 1 x PCI used for STAC SP220
  - Only CMME 7001 B (for MSL-7000 vibration sensor)
    - 1 x PCI used for PCI-1761
    - 1 x PCI used for miniStreamer

Dimensions and power requirements

- Dimensions (H × W × D): 114 × 215 × 272 mm *(4.49 × 8.46 × 10.71 in.)*
- Weight: Approx. 6 kg *(13.23 lbs)*
- Power requirements: 9 to 30 V DC, 120 W
- Power adapter input: 100 to 240 V 50/60 Hz

Technical specifications subject to change without notice.
For more information on your specific application please contact:

SKF Österreich AG
Quality Technology
Seitenstettner Strasse 15 · 4401 Steyr · Austria
Tel: +43 (0)7252 797-571 · Fax: +43 (0)7252 797-574
Email: qt-steyr@skf.com

www.skf.com/qt

PUB CM/P2 14879/4 EN · June 2019