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DATA-SHEET



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WHY BUY
WHEN YOU CAN HIRE

FLUKE®

Fluke 805 Vibration Meter

Technical Data

Now compatible with Fluke
Connect™ Mobile App

The reliable, repeatable, accurate way to check bearings and overall vibration.

Make go or no-go maintenance decisions with confidence. The Fluke 805 Vibration Meter is the most reliable vibration screening device available for frontline mechanical troubleshooting teams that need repeatable, severity-scaled readings of overall vibration and bearing condition

What makes the Fluke 805 the most reliable vibration screening device available?

- Innovative sensor design minimizes measurement variations caused by device angle or contact pressure
- Consistent data quality at both low and high frequency ranges
- Four-level severity scale assesses urgency of problems for overall vibration and bearing condition
- Exportable data via USB
- Trending in Microsoft® Excel using built-in templates
- Overall vibration measurement (10 Hz to 1,000 Hz) for acceleration, velocity and displacement units of measurement for a wide variety of machines
- Crest Factor+ technology provides reliable bearing assessment using direct sensor tip measurements between 4,000 Hz and 20,000 Hz
- Compare vibration levels with ISO-10816 severity scales and store results to the Fluke Connect Cloud
- Get authorization to take next steps in an instant if machine health is at risk via Fluke Connect™ ShareLive™ video call
- Colored lighting system (green, red) and on-screen comments indicate how much pressure needs to be applied to take measurements
- Temperature measurement with Spot IR Sensor increases diagnostic capabilities
- On-board memory holds and saves up to 3,500 measurements
- External accelerometer support for hard to reach locations
- Flashlight for viewing measurement locations in dark areas
- Large screen with high resolution for easy navigation and viewing



Built with
**FLUKE
CONNECT™**

See it. Save it. Share it.
All the facts, right in the field.

Fluke Connect with ShareLive™ is the only wireless measurement system that lets you stay in contact with your entire team without leaving the field. The Fluke Connect mobile app is available for Android™ (4.3 and up) and iOS (4s and later) and works with over 20 different Fluke products—the largest suite of connected test tools in the world. And more are on the way. Go to the Fluke website to find out more.

Make the best decisions faster than ever before by viewing all temperature, mechanical, electrical and vibration measurements for each equipment asset in one place. Get started saving time and increasing your productivity.

Download the app at:



Smart phone not included with purchase.

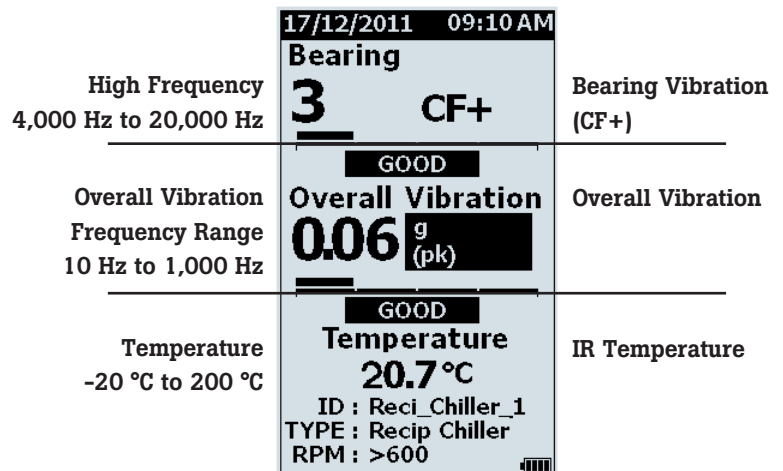
What is Crest Factor +?

Fluke 805 with Crest Factor + takes the confusion out of bearing assessment

The original Crest Factor is used by vibration analysts to identify bearing faults. It is defined as the ratio of the peak value/RMS value of a time domain vibration signal.

A key limitation of using Crest Factor to identify bearing faults is that the Crest Factor does not increase linearly as the bearing degrades. In fact, the Crest Factor can actually decrease as a bearing nears catastrophic failure due to large RMS values.

In order to overcome this limitation, Fluke uses a proprietary algorithm known as Crest Factor + (CF+). CF+ values range from 1 to 16. As the bearing condition worsens, the CF+ value increases. To keep things simple, Fluke has also included a four-level severity scale that identifies the bearing health as Good, Satisfactory, Unsatisfactory or Unacceptable.



Exporting and Trending with the 805

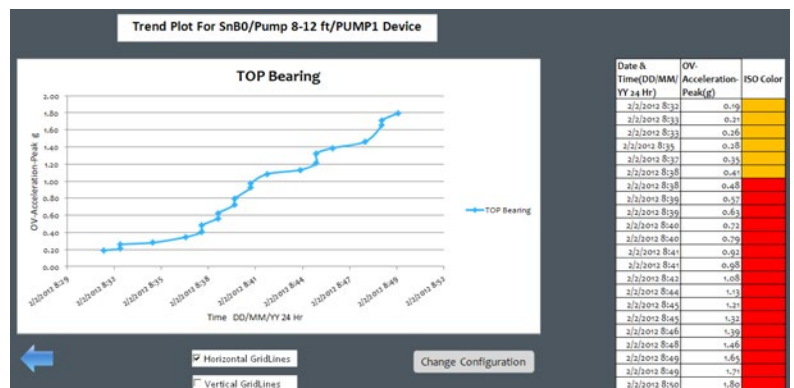
Export and Trend in Excel

Trending, or repeated vibration measurements kept in a spreadsheet over time, is the best method to track machine health. With 805 you can easily:

- Export your result to Excel through USB connection
- Trend the readings with the pre-built Excel templates and plot graphs
- Compare the overall vibration readings to ISO Standards (10816-1, 10816-3, 10816-7)

Import measurements from the 805 Vibration Meter to an Excel template on your PC in order to trend the bearing parameters: overall vibration, CF+, and temperature. Looking at just the number alone for the overall vibration or temperature might not be of much benefit to the operator or technician if they don't know what the number means. The user may not know what is normal or what indicates a problem.

If measurements taken on the operator rounds are easily loaded into Excel, then the trend will show patterns of something that is becoming abnormal. The user can now see a clear picture of the changing bearing condition and deteriorating health of the machine.



Sample trend plot using the Fluke 805 trending template.

Use the Fluke 805 Vibration Meter to check these machine categories:

Chiller (refrigeration)

- Reciprocating (Open motor and compressor separate)
- Reciprocating (Hermetic motor and compressor)
- Centrifugal (Hermetic or Open Motor)

Fans

- Belt-driven Fans 1800 to 3600 RPM
- Belt-driven fans 600 to 1799 RPM
- General direct drive fans (direct coupled)
- Vacuum blowers (belt or direct drive)
- Large forced draft fans (fluid film brgs.)
- Large induced draft fans (fluid film brgs.)
- Shaft-mounted intergral fan (extended motor shaft)
- Axial flow fans (belt or direct drive)

Cooling tower drives

- Long, hollow drive shaft (motor)
- Belt drive (motor and fan - all arrangements)
- Direct drive (motor and fan - all arrangements)

Centrifugal Pumps

Note: height is measured from grade to top motor bearing

- Vertical pumps (12' to 20' height)
- Vertical pumps (8' to 12' height)
- Vertical pumps (5' to 8' height)
- Vertical pumps (0' to 5' height)
- Horizontal centrifugal end suction pumps – direct coupled

- Horizontal centrifugal double suction pumps – direct coupled
- Boiler feed pumps (turbine or motor driven)

Positive Displacement Pumps

- Positive displacement horizontal piston pumps (under load)
- Positive displacement horizontal gear pumps (under load)

Air compressors

- Reciprocating
- Rotary screw
- Centrifugal with or without external gearbox
- Centrifugal – internal gear (axial meas.)
- Centrifugal – internal gear (radial meas.)

Blowers

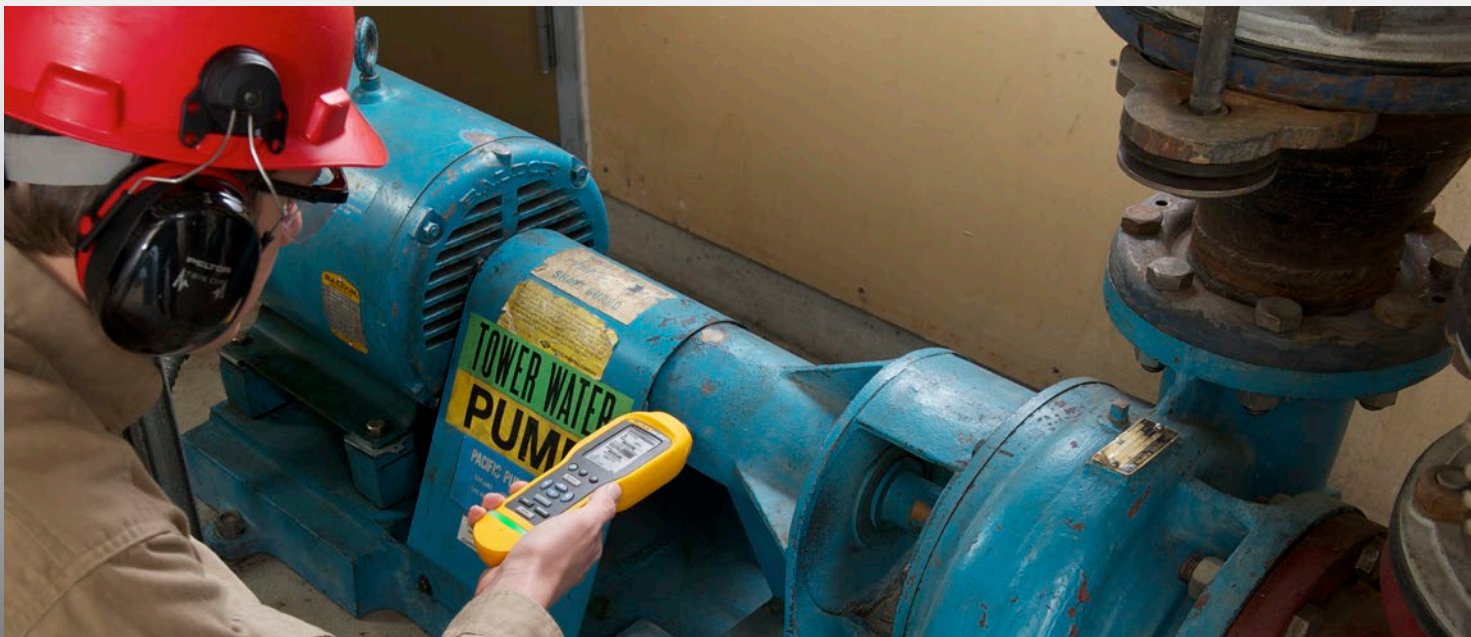
- Lobe-type rotary blowers (belt or direct drive)
- Multi-stage centrifugal blowers (direct drive)

Generic gearboxes (rolling element bearings)

- Single stage gearbox

Machine tools

- Motor
- Gearbox input
- Gearbox output
- Spindles – roughing operations
- Spindles – machine finishing
- Spindles – critical finishing



Technical specifications

| Vibration meter | |
|---|--|
| Low frequency range (overall measurement) | 10 Hz to 1,000 Hz |
| High frequency range (CF+ measurement) | 4,000 Hz to 20,000 Hz |
| Severity levels | Good, Satisfactory, Unsatisfactory, Unacceptable |
| Vibration limit | 50 g peak (100 g peak-peak) |
| A/D converter | 16-bit |
| Signal to noise ratio | 80 dB |
| Sampling rate | |
| Low frequency | 20,000 Hz |
| High frequency | 80,000 Hz |
| Real time clock backup | Coin battery |
| Sensor | |
| Sensitivity | 100 mV / g ± 10% |
| Measurement range | 0.01 g to 50 g |
| Low frequency range (overall measurement) | 10 Hz to 1,000 Hz |
| High frequency range (CF+ measurement) | 4,000 Hz to 20,000 Hz |
| Resolution | 0.01 g |
| Accuracy | At 100 Hz ± 5 % of measured value |
| Amplitude units | |
| Acceleration | g, m/sec ² |
| Velocity | in/sec, mm/sec |
| Displacement | mils, mm |
| Infrared thermometer (temperature measurement) | |
| Range | -20 °C to 200 °C (-4 °F to 392 °F) |
| Accuracy | ±2 °C (4 °F) |
| Focal length | Fixed, at ~3.8 cm (1.5") |
| External sensor | |
| Note: Fluke supports, but does not provide, external sensors. | |
| Frequency range | 10 Hz to 1,000 Hz |
| Bias voltage (to supply power) | 20 V dc to 22 V dc |
| Bias Current (to supply power) | Maximum 5 mA |
| Firmware | |
| Calibration | Factory calibration required |
| External interfaces | USB 2.0 (full speed) communication |
| Data capacity | Database on internal flash memory |
| Upgrade | through USB |
| Memory | Up to 3,500 measurements |
| Radiated emission | |
| Electrostatic discharge: Burst | Standard EN 61000-4-2 |
| Electromagnetic interference | Standard EN 61000-4-3 |
| RE | Standard CISPR 11, Class A |

(RF connection time (binding time) can take up to 1 minute.)

| Environmental | |
|--------------------------------------|---|
| Operating temperature | -20 °C to 50 °C (-4 °F to 122 °F) |
| Storage temperature | -30 °C to 80 °C (-22 °F to 176 °F) |
| Operating humidity | 10 % to 95 % RH (non-condensing) |
| Operating/Storage altitude | Sea Level to 3,048 meters (10,000 feet) |
| IP rating | IP54 |
| Vibration limit | 500 g peak |
| Drop test | 1 meter |
| General specifications | |
| Battery type | AA (2)Lithium Iron Disulfide |
| Battery life | 250 measurements |
| Size (L x W x H) | 25.72 cm x 16.19 cm x 9.84 cm (10.13 in x 6.38 in x 3.875 in) |
| Weight | 1.16 kg (2.55 lb) |
| Fluke Connect™ mobile app compatible | Yes |
| Connectors | USB mini-B 7-pin, external sensor jack (SMB connector) |

Ordering information

Fluke-805 FC Vibration Meter

Includes: 805 FC Vibration Meter, USB cable, storage case, belt holster, quick reference guide, CD-ROM (includes MS Excel template and documentation), and four AA batteries

Fluke. Keeping your world up and running.®

Fluke Corporation
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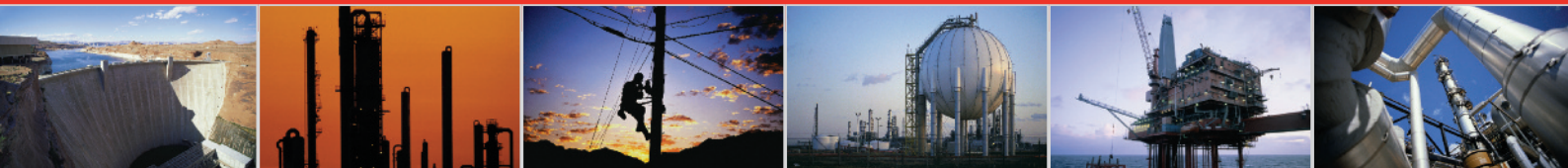
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OUR COMMITMENT TO YOU

A wealth of knowledge and experience.

You can take advantage of expert advice to ensure you get the best, most appropriate and cost effective equipment for the job. We supply a wide variety of industries, so if there is another way to do the job or save you time and money we'll pass on the benefit of our experience for free.

Honest advice, just a phone call away.

If we don't have a particular item, rather than hiring you something that won't do the job, we would rather direct you to an alternative supplier. You will always be provided with full instructions and if you still need help, call our technical team on Nationwide Low Call 0333 6000 600. Our aim is to save you time, frustration and money.

Top quality equipment from major manufacturers.

With Inlec you'll get the most accurate, reliable and well-maintained equipment available. Prices are regularly reviewed to ensure you always enjoy the best value for money. We have made a significant investment in test equipment so we ensure that it's well packed to minimise damage and delay.

We really do listen to you.

You won't waste your time contacting Inlec. Every request for equipment is logged and carefully considered. Listening to our customers helps keep our product range up to date and relevant. If you are unhappy about any aspect of our service please let us know so we can put it right.

YOUR 5 WAY GUARANTEE

1 GUARANTEE SAME DAY DESPATCH

We understand why prompt delivery is important to you. So, if we confirm your order before 3pm, you are guaranteed same day despatch.

2 OUR PRICE GUARANTEE

Inlec guarantee you real value for money. Our price match policy is simple - if you can hire the same product for less elsewhere, we guarantee to match that price and reduce it by a further 10% of the difference - and still deliver our industry leading technical and customer support.

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3 TOP QUALITY GUARANTEED

All equipment is thoroughly checked prior to dispatch to ensure you receive it in full, safe working order. Your shipment will be securely packed and include manufacturer's instructions, accessories or consumables and a valid calibration certificate where appropriate. In addition, Inlec offer a 24 hour replacement service if you decide the equipment is not suitable for your application*.

4 FRIENDLY, KNOWLEDGEABLE ADVICE GUARANTEED

Inlec are happy to provide you with free advice, from an unbeatable team of experienced, knowledgeable and friendly engineers and hire experts.

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*subject to availability and conditions

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