TECHNICAL DATA

Fluke 831 Laser Shaft Alignment Tool

Key features

- Fast, easy, and precise alignment that adapts to your needs.
- Rugged build and the highest-in-class IP rating.
- Single-laser technology for the fastest, most accurate laser alignment.
- Cloud connection enables real-time collaboration.
- Use up to 8 measurement points to achieve precision alignment on vertical machines.

Product overview: Fluke 831 Laser Shaft Alignment Tool

Precision laser alignment made easy

The rugged Fluke 831 has an intuitive guided user interface that enables quick and complete shaft alignment without advanced training or complicated programs. And while it's easy to use, laser alignment with the Fluke 831 is powerful enough for the skilled technician. You can cover more of your machines with all the functionality needed on the plant floor, from thermal growth to user defined tolerances and more.

Reduce costs by avoiding downtime

Misalignment causes at least half of all damage to rotating machinery, studies show. Instead of fixing the problem, teams often just treat the symptoms of misalignment and replace bearings, couplings, and seals because they think alignment takes too long.

Contrary to expectations, laser alignment can be fast and easy. So, every machine that is repaired and overhauled should be aligned – not just a few. Teams that embrace laser alignment can save thousands of dollars per year by avoiding downtime and energy waste and reducing the number of bearings and seals they have to replace.

Specifications: Fluke 831 Laser Shaft Alignment Tool

Computer

General specifications	
CPU	Processor: Exynos 9810, 2.7GHz,1.7GHz Octa-Core Memory: 4 GB RAM, 64 GB Flash memory
Display	Technology: TFT Integrated light sensor for automated adjustment of the brightness to the display according to the lighting conditions hence extending battery life. Resolution: 1920 x 1200 Pixel Size: 203.1 mm (8”)
Connectivity	Wi-Fi: 802.11 a/b/g/n/ac/ax 2.4G+5GHz, HE80, MIMO, 1024-QAM. Wireless: 5.0 RFID: NFC
Camera	Main camera resolution: 13.0 MP, Auto Focus Front camera resolution: 5.0 MP
Environmental protection	IP 68: dustproof, submersible 1.5 m
Temperature range	Operation: -20°C to 50°C (-4°F to 122°F)
Battery	Battery Type: Li-Ion rechargeable battery 3.8 V / 5 3.8 V / 5050 mAh / 19.2 Wh Operating time: Up to 11 hours
Dimensions (without hand straps)	Approx. 256 x 149 x 35 mm (10 5/64” x 5 55/64” x 1 3/8”)
Weight (without hand straps)	Approx. 710 g (1.6 lbs)

Reflector (prism)

General specifications	
Type	90° roof prism
Accuracy (average)	> 99%
Environmental protection	IP 67 (submersible, dustproof)

Temperature range	
Operation temperature range:	-20°C to 60°C (-4°F to 140°F)
Storage temperature range:	-20°C to 80°C (-4°F to 176°F)
Dimensions	Approx. 100 x 41 x 35 mm (4” x 1 5/8” x 1 3/8")
Weight	Approx. 65 g (2.3 oz)

Sensor

General specifications	
Measurement principle	Coaxial, reflected laser beam
LED indicators	1 LED for laser beam status and battery status 1 LED for wireless communication
Power supply	
Battery	Lithium-Ion rechargeable battery 3.7 V / 5 Wh
Operating time	10 hours (continuous use)
Charging time	Using charger - 2.5 h for up to 90% 3.5 h for up to 100% Using USB port – 3 h for up to 90% 4 h for up to 100%
Environmental protection	
IP 65:	Dustproof and water jets resistant, shockproof
Relative humidity:	10% to 90% (non-condensing)
Ambient light protection	Yes
Temperature range	
Operation temperature range:	-10°C to 50°C (14°F to 122°F)
Charging temperature range:	0°C to 40°C (32°F to 104°F)
Storage temperature range:	-20°C to 60°C (-4°F to 140°F)
Dimensions	Approx. 105 x 69 x 55 mm (4 9/64” x 2 23/32” x 2 11/64”)
Weight	Approx. 210 g (7.4 oz) with dust cap
Detector	
Measurement range	Unlimited, dynamically extendible
Resolution	1 µm (0.04 mil) and angular 10 µRad
Error (avg)	< 2%
Inclinometer	
Measurement range	0° to 360°
Resolution	0.1°

Error (avg)	0.3% full scale
Laser	
Type	Semiconductor laser diode
Wavelength	630 - 680 nm (red, visible)
Safety class	Class 2 according to IEC 60825-1:2014. The laser complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007.
Beam power	< 1 mW
Beam divergence	< 0.3 mrad
Safety precautions	Do not look into laser beams.
External interface	Wireless communication
Transmission distance	Up to 30 m (98 ft) direct line of sight
CE Conformity	Hereby, Fluke declares that the radio equipment contained in this product is in compliance with Directive 2014/53/ EU. The full text of the EU declarationis available at the following internet address: https://www.fluke.com/en-us/support/declaration-of-conformity
Country radio certifications	Visit fluke.com for more information.

Fluke. *Keeping your world up and running.®*

Fluke Corporation
PO Box 9090, Everett, WA 98206 U.S.A.

For more information call:
In the U.S.A. (800) 443-5853
In Canada (800) 36-FLUKE
From other countries +1 (425) 446-5500
www.fluke.com