Fluke 424D, 419D and 414D Laser Distance Meters

Technical Data

Professional-grade distance measuring tools that are fast, easy to use, and fit in your pocket.

The Fluke laser distance meters use the most advanced distance measuring technology. These meters are fast, accurate, durable, and easy to use—just point and shoot. Their simple design and easy one-button operation means you spend less time measuring while increasing the reliability of the answers that you need.

The compact and handy Fluke laser distance meters were designed for indoor and limited outdoor applications. All three models are simple to operate, with the Fluke durability and quality you expect. And, with specific function buttons, different tasks can be completed quickly and easily.

The extra bright laser is clearly visible so you can always see your targeting point even if the target object is in a hard-to-reach spot, or a long distance away. These units have a large LCD screen and buttons positioned for one-handed measurements.

Features and benefits

All meters offer:

- Reduction of estimation errors, saving both time and money
- The most advanced laser technology for distance measurement
- Instant measurement with one-button operation
- Easy targeting with bright laser
- Quick calculation of area (square footage) and volume
- Easy addition and subtraction of measurements
- Minimum/maximum function
- Improved battery life from automatic shut-off feature
- Pythagoras calculation for determining distance indirectly from two other measurements
- Pouch with Fluke logo
- Three-year warranty

Fluke 414D, 419D and 424D Laser Distance Meters.

The 424D and 419D additionally offers:

- Improved visibility with backlit screen
- Ability to measure up to 80 m (260 ft) for 419D, 100 m (330 ft) for 424D
- Tripod mode allows you to mount to a tripod for measuring long distances
- Stake out function
- Enhanced Pythagoras calculation for determining distance indirectly from three other measurements
- Audible keypad feedback
- Storage of the last twenty measurements for quick recall of distance
- Strong environmental protection with IP54 (water spray and dust proof) sealing

The 424D additionally offers:

- Inclination sensor for taking measurements in hard to reach areas
- Compass provides a "heading" for distance measurement
- Automated endpiece correction: when measuring from an edge or corner, a built-in sensor detects the position of this bracket and automatically changes the reference point

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General specifications

Distance measurement	414D	419D	424D
Typical measuring tolerance[1]	± 2.0 mm[3]	± 1.0 mm[3]	
Maximum measuring tolerance[2]	± 3.0 mm[3]	± 2.0 mm[3]	
Range at Leica target plate GZM26	50 m/165 ft	80 m/260 ft	100 m/330 ft
Typical range[1]	40 m/130 ft	80 m/260 ft	80 m/260 ft
Range at unfavorable condition[4]	35 m/115 ft	60 m/195 ft	60 m/195 ft
Smallest unit displayed	1 mm /$^1/_{16}$ in	1 mm /$^1/_{32}$ in	
Power Range Technology™	no	yes	yes
⌀ laser point at distances	6/30/60 mm (10/50/100 m) 0.23/1.18/2.36 in (32.8/164/330)	6/30/60 mm (10/50/100 m) 0.23/1.18/2.36 in (32.8/164/330)	
Tilt measurement			
Measuring tolerance to laser beam[5]	no	no	± 0.2°
Measuring tolerance to housing[5]	no	no	± 0.2°
Range	no	no	360°
General			
Laser class	II		
Laser type	635 nm, <1 mW		
Protection class	IP40	IP54	
Automatic laser off	After 90 seconds		
Automatic power off	After 180 seconds		
Battery life (2 x AAA) 1.5 V NEDA 24A/IEC LR03	up to 3,000 measurements	up to 5,000 measurements	
Size (HxWxD)	116 mm x 53 mm x 33 mm (4.56 in x 2.08 in x 1.29 in)	127 mm x 56 mm x 33 mm (5 in x 2.20 in x 1.29 in)	127 mm x 56 mm x 33 mm (5 in x 2.20 in x 1.29 in)
Weight (with batteries)	113 g (3.98 oz)	153 g (5.39 oz)	158 g (5.57 oz)
Temperature range: Storage / Operation	–25 °C to +70°C (–13 °F to +158 °F) / 0 °C to +40 °C (32 °F to +104 °F)	–25 °C to +70°C (–13 °F to +158 °F) / –10 °C to +50 °C (14 °F to +122 °F)	
Calibration cycle	Not applicable	Not applicable	tilt and compass
Maximum altitude	3000 m	3000 m	3000 m
Maximum relative humidity	85 % at 20 °F to 120 °F (–7 °C to 50 °C)	85 % at 20 °F to 120 °F (–7 °C to 50 °C)	85 % at 20 °F to 120 °F (–7 °C to 50 °C)
Safety	CAN/CSA-C22.2 No. 61010-1-04, UL Std. No. 61010-1 (2nd Edition), ISA-82.02.01, IEC Standard No. 61010-1:2001, EN60825-1:2007 (Class II)		
EMC	61326-1:2006		

[1] Applies for 100 % target reflectivity (white painted wall), low background illumination, 25 °C (13 °F).
[2] Applies for 10 % to 500 % target reflectivity, high background illumination, –10 °C to +50 °C (14 °F to +122 °F).
[3] Tolerances apply from 0.05 m to 10 m (0.001 ft to 32.8 ft) with a confidence level of 95 %. The maximum tolerance may deteriorate to 0.1 mm/m (0.003 in/ft) between 10 m to 30 m (32.8 ft to 98.4 ft) and to 0.15 mm/m (0.005 in/ft) for distances above 30 m (98.4 ft).
[4] Applies for 100 % target reflectivity, background illumination between 10'000 lux and 30'000 lux.
[5] After user calibration. Additional angle related deviation of ± 0.01° per degree up to ± 45° in each quadrant. Applies at room temperature. For the whole operating temperature range the maximum deviation increases by ± 0.1°.

Ordering information

Fluke 424D   Laser Distance Meter
Fluke 419D   Laser Distance Meter
Fluke 414D   Laser Distance Meter

All models include: Laser distance meter, two AAA batteries, users manual on CD, quick reference guide, vinyl carrying pouch, and three-year warranty

Why use a distance meter?

Fluke. *Keeping your world*

Instant measurements up to 100 meters/330 feet. Just point, click, done.
Measure with greater accuracy. Up to ± 1 mm. No scales to interpret or misread.
Do the work of two. Instead of holding the tape, your helper can do other jobs.
Speed up the job. Easily measure hard-to-access areas, like high ceilings, without climbing a ladder.
Keep it on the level. New inclination sensor on the Fluke 424D helps with leveling, height tracking, and measuring around obstacles.
Reduce estimating errors—let the meters do the math. Find area and volume. Easily add and subtract distances. Use Pythagoras calculations for height.
Trust Fluke tools. Rugged and reliable, dust- and splash-proof, you can work indoors and out with confidence, because they're Fluke tools.