

**FLUKE**®**Calibration**

1551A Ex/1552A Ex Intrinsically Safe “Stik” Thermometers

The best alternative to mercury thermometers

Finally, a digital substitute for your mercury-in-glass thermometers! Accurate and repeatable to ± 0.05 °C over its full range, the Fluke Calibration 1551A/1552A “Stik” Thermometer is the new “gold standard” of industrial temperature calibration.

- Accuracy of ± 0.05 °C (± 0.09 °F) over full range
- Intrinsically safe (conforms to ATEX requirements)
- Two models to choose from (-50 to 160 °C or -80 to 300 °C)
- Display temperature in °C or °F
- 300-hour battery life

What’s wrong with my mercury thermometer?

Although mercury thermometers are accurate, they are also fragile and pose the risk of a mercury spill. Many U.S. states and European Union countries have banned their use in industrial applications. The U.S. Environmental Protection Agency has funded research to identify alternatives. But such initiatives have been hampered by the lack of an electronic alternative that was intrinsically safe, repeatable and accurate. The Fluke “Stik” Thermometers help solve this problem by providing the measurement accuracy, durability and safety required in industries such as oil and gas production and petrochemicals—with no mercury hazard.

Why calibrate process temperature sensors?

Because temperature effects the accuracy of a volumetric measurement, process manufacturers of chemical, pharmaceutical, food or petroleum products require accurate temperature measurements—especially for processes where quality or custody transfer are regulated by government agencies. Since all temperature sensors are subject to drift with time, regular calibration or verification against a reliable reference thermometer is required.

Thermometer probe and digital readout combined into one unit

The stainless steel probe and digital readout of the Fluke 1551A Ex/1552A Ex “Stik” Thermometers are fixed together and calibrated as a system. Unlike competing products, the large backlit LCD display rotates 90 degrees, making it easy to read from any angle. A user-configurable stability/trend indicator lets the technician know when the temperature is stable enough to record an accurate measurement. A low-battery indicator and stop-measure function prevent erroneous measurements from being made due to low battery life. Data logging to internal memory of up to 10,000 time-stamped measurements is optionally available.



Specifications

	1551A Ex	1552A Ex
Measurement range	-50 °C to 160 °C (-58 °F to 320 °F)	-80 °C to 300 °C (-112 °F to 572 °F)
Accuracy (1 year)	±0.05 °C (± 0.09 °F)	
Resolution	Selectable: 0.1, 0.01, 0.001 (default 0.01)	
Probe temperature coefficient	0.00385 Ω/Ω/°C nominal	
Operating temperature range of readout	-10 °C to 50 °C (14 °F to 122 °F)	
Humidity range	0 to 95 % RH non-condensing	
Storage temperature range	-20 °C to 60 °C (-4 °F to 140 °F)	
Display units	°C, °F	
Sensor type	100 Ω thin-film RTD	100 Ω wire-wound PRT
Minimum immersion depth	Wet medium (liquid bath, thermowell with thermal compound) 70 mm (2.8 in) Dry medium (dry-well, thermowell without thermal compound) 120 mm (4.8 in)	
Maximum immersion depth	50 mm (2 in) less than the total length. Make sure the last 50 mm of probe, nearest to the internal electronics of the device, are not put into the heat	75 mm (3 in) less than the total length. Make sure the last 75 mm of the probe, nearest to the internal electronics of the device, are not put into the heat source.
Probe sheath material	Stainless steel	
Optional data logging*	Up to 10,000 time-stamped readings stored to internal memory	
Communications	RS-232 stereo jack (access calibration parameters only)	
Power	3-AAA alkaline batteries, typical battery life of 300 hours (12.5 days) without LCD backlight	
Battery life	Approximately 300 hours (12.5 days) of continuous operation with the backlight off	
Readout size (H x W x D)	125 mm x 62 mm x 35 mm (5 in x 2.5 in x 1.4 in)	
Weight	200 g (6.9 oz)	
Calibration (included)	NVLAP-accredited, NIST-traceable	

*See ordering information for optional data logging configurations

Ordering information

1551A Ex

1551A-9	Thermometer, Fixed RTD, -50 °C to 160 °C, 4.8 mm x 229 mm (3/16 in x 9 in)
1551A-12	Thermometer, Fixed RTD, -50 °C to 160 °C, 6.35 mm x 305 mm (1/4 in x 12 in)
1551A-20	Thermometer, Fixed RTD, -50 °C to 160 °C, 6.35 mm x 508 mm (1/4 in x 20 in)

1552A Ex

1552A-12	Thermometer, Fixed PRT, -80 °C to 300 °C, 6.35 mm x 305 mm (1/4 in x 12 in)
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Accessories

1551-CASE	Case, 1551-2, Carrying
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Standard accessories include: NVLAP-accredited report of calibration, User's Guide on CD-ROM, three AAA batteries

Note: Model number appended with a -9, -12, -20 indicates probe sheath length in inches. All probe diameters are 6.35 mm (1/4 in) with the exception of the 1551A-9, which is 4.8 mm diameter (3/16 in).

Data logging options: append "-DL" to your model number of choice to configure your "Stik" Thermometer with the data logging option.



Ex ib IIB T4 Gb
(-10 °C ≤ Ta ≤ +50 °C)
ITS19ATEX204844X
IECEx ETL 19.0023X



II 2 G

Fluke Calibration.

Precision, performance, confidence.™

Electrical
RF
Temperature
Humidity
Pressure
Flow
Software

Fluke Calibration

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