**TECHNICAL DATA**

# Fluke CNX™ t3000 Temperature Measurement Kit

# Key features

The CNX t3000 Temperature Measurement Kit provides measurement of all common electrical and temperature parameters.

**The CNX 3000 Wireless Multimeter offers:**

- True RMS AC and DC voltage measurements to 1000V
- True RMS AC and DC current with 0.01 mA resolution
- Continuity, resistance, diode test, capacitance and frequency measurements
- MIN/MAX Recording
- CAT III 1000 V; CAT IV 600 V; IP54

**The CNX t3000 K-Type Wireless Temperature Module provides:**

- Temperature measurements from -200 °C to 1372 °C
- ± 0.5% accuracy
- Memory recording up to 65,000 readings
- Backlit LCD display
- IP42 with thermocouple attached

The CNX wireless system can track up to 10 measurement modules simultaneously, with results sent to a PC for detailed analysis.

# Product overview: Fluke CNX™ t3000 Temperature Measurement Kit

The CNX t3000 Temperature Measurement Kit is part of the team of Fluke wireless troubleshooting tools.

Connect the CNX t3000 Wireless Temperature Module to your test point, and view the results up to 20 meters away on the CNX Wireless Multimeter. You'll save time, with less run-around collecting multiple measurements. Use multiple modules for measurements on several test points, simultaneously. Or use as a stand-alone measurement tool or combine with other CNX modules as a system for multiple measurements. From short distances, you can even view readings from modules through closed electrical panels. Plus no more writing down data as the CNX t3000 temperature module captures up to 65,000 sets of time stamped min/max/avg readings, using the optional PC adapter. CNX wireless test tools also offer increased safety by letting you view readings in a separate location from the test point. Now you can take readings on moving machinery, with only the measurement module in harm's way.

[View other members of the wireless team](#)

# Specifications: Fluke CNX™ t3000 Temperature Measurement Kit

**CNX 3000 Wireless Multimeter**

For all specifications: accuracy is specified for one year after calibration, at operating temperatures of 18 °C to 28 °C, with relative humidity at 0 % to 90 %. Accuracy specifications take the form of ± ([ % of Reading ] + [ Number of least

significant digits ]).

## Detailed Specifications

### AC Voltage

| Range [1] | Resolution | Accuracy [2] [3] | |
| --- | --- | --- | --- |
| | | 45 Hz to 500 Hz | 500 Hz to 1 kHz |
| 600.0 mV | 0.1 mV | 1.0 % + 3 | 2.0 % + 3 |
| 6.000 V | 0.001 V | | |
| 60.00 V | 0.01 V | | |
| 600.0 V | 0.1 V | | |
| 1000 V | 1 V | | |

**Notes:**
[1] All AC voltage ranges are specified from 1 % of range to 100 % of range.
[2] Crest factor of ⫤ 3 at full scale p to 500 V, decreasing linearly to crest factor < 1.5 at 1000 V.
[3] For non-sinusoidal waveforms, add –(2 % of reading + 2 % full scale) typical, for crest factor up to 3.

### DC Voltage, Continuity, Resistance, Diode Test and Capacitance

| Function | Range | Resolution | Accuracy |
| --- | --- | --- | --- |
| mV | 600.0 mV | 0.1 mV | 0.09 % + 2 |
| V | 6.000 V | 0.001 V | 0.09 % + 2 |
| | 60.00 V | 0.01 V | |
| | 600.0 V | 0.1 V | |
| | 1000 V | 1 V | 0.15 % + 2 |
| Ω | 600 Ω | 1 Ω | Meter beeps at < 25 Ω, beeper detects opens or shorts of 250 µs or longer. |
| Ω | 600.0 Ω | 0.1 Ω | 0.5 % + 2 |
| | 6.000 kΩ | 0.001 kΩ | 0.5 % + 1 |
| | 60.00 kΩ | 0.01 kΩ | |
| | 60.00 kΩ | 0.1 kΩ | |
| | 600.0 kΩ | 0.001 MΩ | |
| | 50.00 MΩ | 0.01 MΩ | 1.5 % + 3 |
| Diode test | 2.000 V | 0.001 V | 1 % + 2 |
| µF | 1000 nF | 1 nF | 1.2 % + 2 |
| | 10.00 µF | 0.01 µF | |
| | 100.0 µF | 0.1 µF | |
| | 9999 µF[1] | 1 µF | 10 % typical |

**Notes:**
[1] In the 9999 µF range for measurements to 1000 µF, the measurement accuracy is 1.2 % + 2.

### AC and DC Current

| Function | Range [1] | Resolution | Accuracy |
|---|---|---|---|
| mA AC (45 Hz to 1 kHz) | 60.00 mA | 0.01 mA | 1.5 % + 3 |
| | 400.0 mA [3] | 0.1 mA | |
| mA DC [2] | 60.00 mA | 0.01 mA | 0.5 % + 3 |
| | 400.0 mA | 0.1 mA | |

**Notes:**
[1] All AC current ranges are specified from 5 % of range to 100 % of range.
[2] Input burden voltage (typical): 400 mA input 2 mV/mA.
[3] 400.0 mA accuracy specified up to 600 mA overload.

## Frequency

| Range | Resolution | Accuracy [1] |
|---|---|---|
| 99.99 Hz | 0.01 Hz | 0.1 % + 1 |
| 999.9 Hz | 0.1 Hz | |
| 9.999 kHz | 0.001 kHz | |
| 99.99 kHz | 0.01 kHz | |

**Notes:**
[1] Frequency is specified up to 99.99 kHz in volts and up to 10 kHz in amps.

## Input Characteristics

| Function | Overload Protection | Input Impedance (nominal) | Common Mode Rejection Ratio (1 kΩ unbalance) | Normal Mode Rejection |
|---|---|---|---|---|
|  | 1100 V RMS | > 10 MΩ < 100 pF | > 120 dB at DC, 50 Hz or 60 Hz | > 60 dB at 50 Hz or 60 Hz |
|  | 1100 V RMS | > 10 MΩ < 100 pF | > 60 dB, DC to 60 Hz | |
|  | 1100 V RMS | > 10 MΩ < 100 pF | > 120 dB at DC, 50 Hz or 60 Hz | > 60 dB at 50 Hz or 60 Hz |

| Open circuit test voltage | | | Full scale | Typical short circuit current |
|---|---|---|---|---|
|  | 1100 V RMS | < 2.7 V DC | **To 6 MΩ:** < 0.7 V DC **50 MΩ:** < 0.9 V DC | < 350 mA |
|  | 1100 V RMS | < 2.7 V DC | **To 6 MΩ:** 2.000 V DC | < 1.1 mA |

| Function | Overload Protection | Overload |
|---|---|---|
| mA | Fused, 44/100 A, 1000 V FAST Fuse | 600 mA overload for 2 minutes maximum, 10 minutes rest minimum |

## MIN/MAX Recording

| Function | Accuracy |
|---|---|
| DC functions | The specified accuracy of the measurement function ± 12 counts for changes > 350 mS in duration. |
| AC functions | The specified accuracy of the measurement function ± 40 counts for changes > 900 mS in duration. |

## General Specifications

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| | |
|---|---|
| Maximum voltage between any terminal and earth ground | 1000 V DC or AC RMS |
| Ω fuse protection from A inputs | 0.44 A (44/100 A, 440 mA), 1000 V FAST Fuse, Fluke specified part only |
| Display (LCD) | Update rate: 4/sec<br>Volts, amps, ohms: 6000 counts<br>Frequency: 10,000 counts<br>Capacitance: 1,000 counts |
| Baery type | Three AA Alkaline baeries, NEDA 15A IEC LR6 |
| Baery life | 300 hours minimum |
| Temperature | Operating: -10 °C to 50 °C<br>Storage: -40 °C to 60 °C |
| Relative humidity | 0 % to 90 % (0 °C to 35 °C)<br>0 % to 75 % (35 °C to 40 °C)<br>0 % to 45 % (40 °C to 50 °C) |
| Altitude | Operating: 2,000 m<br>Storage: 12,000 m |
| Temperature coefficient | 0.1 X (specified accuracy) / °C (<18 °C or >28 °C) |
| Wireless frequency | 2.4 GHz ISM Band 20 meter range |
| Size (HxWxL) | 4.75 cm x 9.3 cm x 20.7 cm<br>(1.87 in x 3.68 in x 8.14 in) |
| Weight | 340 g (12 oz) |
| Safety standards | US ANSI: ANSI/ISA 61010-1 / (82.02.01): 3rd edition<br>CSA: CAN/CSA-C22.2 No 61010-1-12: 3rd edition<br>CE European: IEC/EN 61010-1:2010 |
| Electromagnetic compatibility EMI, RFI, EMC, RF | EN 61326-1:2006, EN 61326-2-2:2006<br>ETSI EN 300 328 V1.7.1:2006, ETSI EN 300 489<br>V1.8.1:2008, FCC Part 15 Subpart C Sections 15.207, 15.209, 15.249<br>FCCID : T68-FWCS IC:6627A-FWCS |
| Ingress Protection (IP) rating | IP54 |

**Notes:**
• Accuracy is specified as ± ([% of reading] + [number of least significant digits]).
• All ranges are autoranging.
• Accuracy is specified from 5 % to 100 % of the range obtained by autoranging, from 18 °C to 28 °C.

**Fluke CNX t3000 Wireless K-Type Temperature Module**

| Specifications | |
|---|---|
| Range | -200 °C to 1372 °C |
| Resolution | 0.1 °C |
| Accuracy | ±[0.5 % + 0.3 °C] counts |
| Input terminals | K-Type mini |
| LCD w/backlight | 3 digits |

| | |
|---|---|
| Log rate/interval | 1 sec minimum/adjustable by PC |
| Baery type | 2 AA, NEDA 15 A, IEC LR6 |
| Baery life | 400 hours |
| Memory | Record up to 65,000 readings |
| RF communications | 2.4 GHZ ISM Band |
| RF communication range | 20 Meters |
| Operating temperature | -10 °C to +50 °C |
| Storage temperature | -40 °C to +60 °C |
| Temperature scale | ITS-90 |
| Operating humidity | 90 % at 35 °C, 75 % at 40 °C, 45 % at 50 °C |
| EMC | EN 61326-1:2006 |
| Safety compliance | CAT I per IEC/EN 61010-1:2010<br>EN/IEC 61010-2-030:2010 |
| Pollution degree | 2 |
| Temperature coefficient | 0.01 % of reading +0.03 °C per °C |
| Certifications | CSA, FCC T68-FWCS IC:6627A-FWCS |
| Ingress Protection (IP) rating | IP42 with thermocouple aached |
| Size (HxWxD) | 16.5 cm x 6.35 cm x 3.56 cm (6.5 in x 2.5 in x 1.4 in) |
| Weight | .22 kg (8 oz) |

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