

Fluke Ti400 a3001 FC iFlex® Kit



Key features

The Ti400 offers:

- Consistently in-focus images with the exclusive LaserSharp® Auto Focus system
- See the crucial details needed to help clearly identify potential problems with precisely blended visual and infrared images – only with IR Fusion® technology with AutoBlend™ mode.
- Fluke Connect® compatible - the largest network for wirelessly enabled tools
- Faster communication with wireless image transfer directly to your PC, Apple® iPhone® or iPad®
- High-temperature measurement up to 1200 °C
- Ruggedized high resolution 640 x 480 capacitive touch screen for quick menu navigation
- Capture additional digital images to show location or additional site details with IR-PhotoNotes™ Annotation System
- More advanced display output options to get the details via streaming video to PC or high definition monitor (USB and HDMI)
- Voice recording and annotation gets additional details saved with the image file
- Optional interchangeable lenses for greater flexibility in additional applications
- Ruggedized Touchscreen Display (Capacitive) 8.9 cm (3.5 in) diagonal landscape color VGA (640 x 480) LCD with backlight for quick menu navigation
- 5 MP industrial-performance digital camera for high definition image quality
- Included SmartView® and SmartView Mobile App Analysis and Reporting Software

The 3000 FC Wireless Multimeter offers:

- AC and DC voltage measurements to 1000 V
- 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 iFlex™ Wireless Current Module allows you to measure around awkward sized conductors or get into tight spaces and makes wire access easier. The a3001 FC offers:

- One (1) true-RMS flexible current meter
- One (1) iFlex i2500-10 flexible current probe
- Measure up to 2500 A AC
- Use as a standalone meter or as part of the system
- Logging function for recording and saving up to 65,000 readings
- Inrush function
- Magnetic hanging strap

Product overview: Fluke Ti400 a3001 FC iFlex® Kit

[See How It Works](#)
[Fluke Connect FAQs](#)

The Ti400 Thermal Camera combined with the Fluke Connect® App and the a3001 FC iFlex module is a high performance cutting edge kit that helps you accurately troubleshoot issues and get you back online. Safely capture AC current measurements with your Fluke a3001 FC iFlex module from up to 20 meters away on the 3000 FC DMM, while simultaneously conducting an infrared inspection with your Ti400 thermal camera. Upload all your measurement data to the Cloud via your smart phone and you can analyze and share your inspection results for each piece of equipment from anywhere, with any team member, at any time - only with Fluke Connect.

The Ti400 is one of only three thermal cameras in the Fluke portfolio equipped with LaserSharp® Auto Focus for consistently in-focus images. Every. Single. Time. Without an in-focus image, temperature measurements may be off by as much as 20 degrees, making it much easier to miss a potential problem. LaserSharp Auto Focus tells you exactly where you are focusing. It uses a laser to calculate the distance to your target before it focuses. Place the red laser dot on the equipment you are inspecting, then pull and release the trigger for a perfect in-focus image. Uptime or downtime. Your Results Matter.

Specifications: Fluke Ti400 a3001 FC iFlex® Kit

Fluke Ti400 Infrared Camera

Detailed Specifications	
Temperature	
Temperature measurement range (not calibrated below -10°C)	-20°C to +1200°C (-4°F to +2192°F)
Temperature measurement accuracy	±2°C or 2% (at 25°C nominal, whichever is greater)
On-screen emissivity correction	Yes (by number and table)
On-screen reflected background temperature compensation	Yes
On-screen transmission correction	Yes
Imaging Performance	

Image capture frequency	60 Hz refresh rate
Detector type	Focal Plane Array, uncooled microbolometer, 320 x 240 pixels
Thermal sensitivity (NETD)	≤ 0.05°C at 30°C target temp (50 mK)
Total pixels	76,800
Infrared spectral band	7.5 μm to 14 μm (long wave)
Visual (visible light) camera	Industrial performance 5.0 megapixel
Standard Infrared Lens Type	
Field of view	24° x 17°
Spatial resolution (IFOV)	1.31 mRad
Minimum focus distance	15 cm (approx. 6 in)
Optional Telephoto Infrared Lens Type	
Field of view	12° x 9°
Spatial resolution (IFOV)	0.65 mRad
Minimum focus distance	45 cm (approx. 18 in)
Optional Wide-Angle Infrared Lens Type	
Field of view	46° x 34°
Spatial resolution (IFOV)	2.62 mRad
Minimum focus distance	15 cm (approx. 6 in)
Focus Mechanism	
LaserSharp® Auto Focus system	Yes
Advanced manual focus	Yes
Image Presentation	
Palettes	
Standard	Ironbow, Blue-Red, High Contrast, Amber, Amber Inverted, Hot Metal, Grayscale, Grayscale Inverted
Ultra Contrast™	Ironbow Ultra, Blue-Red Ultra, High Contrast Ultra, Amber Ultra, Amber Inverted Ultra, Hot Metal Ultra, Grayscale Ultra, Grayscale Inverted Ultra
Level and span	Smooth auto-scaling and manual scaling of level and span
Fast auto toggle between manual and auto modes	Yes
Fast auto-rescale in manual mode	Yes
Minimum span (in manual mode)	2.0°C (3.6°F)
Minimum span (in auto mode)	3.0°C (5.4°F)
IR-Fusion® Information	
Picture-in-Picture (PIP)	Yes
Full screen infrared	Yes
AutoBlend™ mode	Yes

Color alarms (temperature alarms)	High-temperature , low-temperature, and isotherm (user-selectable)
Image Capture and Data Storage	
Image capture, review, save mechanism	One-handed image capture, review, and save capability
Storage medium	Micro SD Memory Card, on-board flash memory, save-to-USB capability, direct download via USB-to-PC connection
File formats	Non-radiometric (.bmp) or (.jpeg) or fully-radiometric (.is2)
	No analysis software required for non-radiometric (.bmp and jpg) files
Export file formats w/SmartView® software	BMP, DIB, GIF, JPE, JFIF, JPEG, JPG, PNG, TIF, and TIFF
Memory review	Thumbnail view navigation and review selection
Other Time-Saving and Productivity Features	
Voice annotation	60 seconds maximum recording time per image; reviewable playback on imager
IR-PhotoNotes™	Yes
Wi-Fi connectivity	Yes, to PC, iPhone®, iPad® and WiFi to LAN ¹
Text annotation ¹	Yes
Video recording ¹	Standard and radiometric
Streaming video	Via USB to PC and HDMI to HDMI compatible screen
Fluke Connect compatible	Yes (where available)
Auto capture (temperature and interval) ¹	Yes
Remote control and operation (for special and advanced applications)	Yes
General Specifications	
Operating temperature	-10°C to +50°C (14°F to 122°F)
Storage temperature	-20°C to +50°C (-4°F to 122°F) without batteries
Relative humidity	10% to 95% non-condensing
Ruggedized touchscreen display (capacitive)	8.9 cm (3.5 in) diagonal landscape color VGA (640 x 480) LCD with backlight

Controls and adjustments	User selectable temperature scale (°C / °F)
	Language selection
	Time/Date set
	Emissivity selection
	Reflected background temperature compensation
	Transmission correction
	User selectable hot spot and cold spot, and center point on the image
	Expandable-contractable Measurement Box with MIN-AVG-MAX temp
	Color alarms
	User selectable backlight setting graphical information display preference
	Graphical information display preference
Software	SmartView® and SmartView Mobile App - full analysis and reporting software included
Batteries	Two lithium ion rechargeable smart battery packs with five-segment LED display to show charge level, all models
Battery life	Four+ hours continuous use per battery pack (assumes 50% brightness of LCD and average usage)
Battery charge time	2.5 hours to full charge
AC battery charging	Two-bay AC battery charger (110 VAC to 220 VAC, 50/60 Hz) (included), or in-imager charging. AC mains adapters included. Optional 12 V automotive charging adapter.
AC operation	AC operation with included power supply (110 VAC to 220 VAC, 50/60 Hz). AC mains adapters included.
Power saving	User selectable sleep and power off modes
Safety standards	UL 61010-1:2012 CAN/CSA-C22.2 No.61010-1-12 IEC 61010-1 3rd Edition (2010)
Electromagnetic compatibility	EN 61326-1:2006 IEC 61326-1:2005
C Tick	IEC/EN 61326-1
US FCC	CFR 47, Part 15 Subpart B Class B
Vibration	0.03 g ² /Hz (3.8 grms), 2.5 g IEC 68-2-6
Shock	25 g, IEC 68-2-29
Drop	Engineered to withstand 2 meter (6.5 feet) with standard lens
Size (H x W x L)	27.7 x 12.2 x 16.7 cm (10.9 x 4.8 x 6.5 in)
Weight (battery included)	1.04 Kg (2.3 lb)
Enclosure rating	IP54 (protected against dust, limited ingress; protection against water spray from all directions)
Warranty	Two-years (standard), extended warranties are available.
Recommended calibration cycle	Two-years (assumes normal operation and normal aging)

Supported languages	Czech, Dutch, English, Finnish, French, German, Hungarian, Italian, Japanese, Korean, Polish, Portuguese, Russian, Simplified Chinese, Spanish, Swedish, Traditional Chinese, and Turkish
1. Coming soon via firmware update. Users notified via SmartView software when available.	

Fluke 3000 FC Series 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 $\pm([\% \text{ of Reading}] + [\text{Number of least significant digits}])$.

Detailed Specifications		
AC Voltage		
Range ¹ / Resolution	600.0 mV / 0.1 mV 6.000 V / 0.001 V 60.00 V / 0.01 V 600.0 V / 0.1 V 1000 V / 1 V	
Accuracy ^{2 3 4}	45 Hz to 500 Hz	1.0% + 3
	500 Hz to 1 kHz	2.0% + 3
1. All AC voltage ranges are specified from 1% of range to 100% of range. 2. Crest factor of ≤ 3 at full scale up to 500 V, decreasing linearly to crest factor < 1.5 at 1000 V. 3. For non-sinusoidal waveforms, add $\pm(2\% \text{ of reading} + 2\% \text{ full scale})$ typical, for crest factor up to 3. 4. Do not exceed 107 V-Hz.		
DC Voltage, Continuity, Resistance, Diode Test and Capacitance		
Function		
mV	Range / Resolution	600.0 mV / 0.1 mV
	Accuracy	0.09% + 2
V	Range / Resolution	6.000 V / 0.001 V 60.00 V / 0.01 V 600.0 V / 0.1 V 1000 V / 1 V
	Accuracy	0.09% + 2 0.15% + 2
)))	Range / Resolution	600 Ω / 1 Ω
	Accuracy	Meter beeps at $< 25 \Omega$, beeper detects opens or shorts of 250 μs or longer.
Ω	Range / Resolution	600.0 Ω / 0.1 Ω 6.000 k Ω / 0.001 k Ω 60.00 k Ω / 0.01 k Ω 60.00 k Ω / 0.1 k Ω 600.0 k Ω / 0.001 M Ω 50.00 M Ω / 0.01 M Ω
	Accuracy	0.5% + 2 0.5% + 1 1.5% + 3

Diode test	Range / Resolution	2.000 V / 0.001 V
	Accuracy	1% + 2
μF	Range / Resolution	1000 nF / 1 nF 10.00 μF / 0.01 μF 100.0 μF / 0.1 μF 9999 μF ¹ / 1 μF
	Accuracy	1.2% + 2 10% typical

1. In the 9999 μF range for measurements to 1000 μF, the measurement accuracy is 1.2% + 2.

AC and DC Current

Function

mA AC (45 Hz to 1 kHz)	Range¹ / Resolution	60.00 mA / 0.01 mA 400.0 mA ³ / 0.1 mA
	Accuracy	1.5% + 3
mA DC ²	Range¹ / Resolution	60.00 mA / 0.01 mA 400.0 mA ³ / 0.1 mA
	Accuracy	0.5% + 3

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	99.99 Hz / 0.01 Hz 999.9 Hz / 0.1 Hz 9.999 kHz / 0.001 kHz 99.99 kHz / 0.01 kHz
Accuracy ¹	0.1% + 1

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 Vrms	> 10 MΩ < 100 pF	> 120 dB at DC, 50 Hz or 60 Hz	> 60 dB at 50 Hz or 60 Hz	
	1100 Vrms	> 10 MΩ < 100 pF	> 60 dB, DC to 60 Hz	> 60 dB at 50 Hz or 60 Hz	
	1100 Vrms	> 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 voltage	Typical short circuit current	
			To 6 MΩ	50 MΩ	Typical short circuit current
	1100 Vrms	< 2.7 VDC	< 0.7 VDC	< 0.9 VDC	< 350 mA
	1100 Vrms	< 2.7 VDC	2.000 VDC		< 1.1 mA

mA Function		
Overload protection	Fused, 44/100 A, 1000 V FAST Fuse	
Overload	600 mA overload for 2 minutes maximum, 10 minutes rest minimum	
MIN/MAX Recording 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		
Maximum voltage between any terminal and earth ground	1000 VDC 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
	Volts, amps, ohms	6000 counts
	Frequency	10,000 counts
	Capacitance	1,000 counts
Battery type	Three AA Alkaline batteries, NEDA 15A IEC LR6	
Battery life	250 hours minimum	
RF communications	2.4 GHZ ISM Band	
RF communication range	Open air, unobstructed	Up to 20 m
	Obstructed, sheetrock wall	Up to 6.5 m
	Obstructed, concrete wall, or steel electrical enclosure	Up to 3.5 m
Temperature	Operating	-10°C to 50°C
	Storage	-40°C to 60°C
Temperature coefficient	0.1 x (specified accuracy) / °C (< 18°C or > 28°C)	
Relative humidity	0% to 90% (0°C to 35°C) 0% to 75% (35°C to 40°C) 0% to 45% (40°C to 50°C)	
Altitude	Operating	2,000 m
	Storage	12,000 m
Electromagnetic compatibility EMI, RFI, EMC, RF	EN 61326-1:2006, EN 61326-2-2:2006 ETSI EN 300 328 V1.7.1:2006, ETSI EN 300 489 V1.8.1:2008, FCC Part 15 Subpart C Sections 15.207, 15.209, 15.249 FCCID : FCC: T68-FDMMBLE IC: 6627A-FDMMBLE	
Safety compliance	ANSI/ISA 61010-1 / (82.02.01): 3rd edition CAN/CSA-C22.2 No 61010-1-12: 3rd edition UL 61010-1: 3rd edition IEC/EN 61010-1:2010	
Certifications	CSA, FCC, CE	

Ingress Protection (IP) rating	IP54
Pollution Degree	2
Size (H x W x L)	4.75 x 9.3 x 20.7 cm (1.87 x 3.68 x 8.14 in)
Weight	340 g (12 oz)
Warranty	Three years
Not compatible with Fluke CNX test tools	

Fluke a3001 FC Wireless iFlex AC Current Module

Specifications		
Range	0.5 A to 2500 A AC	
Resolution	0.1 A	
Accuracy	3% ±5 digits (5 Hz to 500 Hz)	
Crest factor (50 Hz / 60 Hz)	3.0 at 1100 A 2.5 at 1400 A 1.42 at 2500 A add 2% for C.F. > 2	
LCD w/ backlight	3½ digits	
Log rate/interval	1 sec minimum/adjustable by PC or front panel	
Battery type	2 AA, NEDA 15 A, IEC LR6	
Battery life	400 hours	
Memory	Record up to 65,000 readings	
RF communications	2.4 GHZ ISM Band	
RF communication range	Open air, unobstructed	Up to 20 m
	Obstructed, sheetrock wall	Up to 6.5 m
	Obstructed, concrete wall or steel electrical enclosure	Up to 3.5 m
Operating temperature	-10°C to +50°C	
Storage temperature	-40°C to +60°C	
Temperature coefficient	Add 0.1 x (specified accuracy) / °C (< 18°C or > 28°C)	
Operating humidity	90% at 35°C 75% at 40°C 45% at 50°C	
Altitude	Operating	2,000 m
	Storage	12,000 m
EMC	EN 61326-1:2006	
Safety compliance	IEC 61010-1, 600 V CAT IV/1000 V CAT III, 3rd edition	
Safety rating	CAT IV 600 V, CAT III 1000 V	
Certifications	CSA, CE, FCC: T68-FBLE IC: 6627A-FBLE	



Ingress Protection (IP) rating	IP42
Pollution Degree	2
Jaw opening	25.4 cm (10 in) coil
Size (H x W x D)	16.5 x 6.35 x 1.4 cm (6.5 x 2.5 x 1.4 in)
Weight	.22 kg (8 oz)
Warranty	Three years
Not compatible with Fluke CNX test tools	

Ordering information



FLK-Ti400 60HZ/FCA

Fluke Ti400 a3001 FC iFlex® Kit

Includes:

Ti400 Infrared Camera

- AC power supply and battery pack charger (including mains adapters)
- Two, rugged lithium ion smart battery packs
- Micro SD memory card
- USB cable
- HDMI video cable
- SmartView® software available via free download
- Rugged, hard carrying case
- Soft transport bag
- Adjustable hand strap
- Warranty registration card
- International adapter set (9 Hz only)

3000 FC Series Wireless Multimeter

- Fluke 3000 FC Wireless Digital Multimeter with three (3) AA batteries (installed)
- One (1) a3001 FC Module with two (2) AA batteries (installed)
- One (1) iFlex 10" coil
- One (1) magnet/strap
- TL175 Test Leads (1 pair)
- AC175 Alligator Clips (1 pair)
- C3003 3-compartment soft case
- Information pack



Preventive maintenance simplified. Rework eliminated.

Save time and improve the reliability of your maintenance data by wirelessly syncing measurements using the Fluke Connect™ system.

- Eliminate data-entry errors by saving measurements directly from the tool and associating them with the work order, report or asset record.
- Maximize uptime and make confident maintenance decisions with data you can trust and trace.
- Access baseline, historical and current measurements by asset.
- Move away from clipboards, notebooks and multiple spreadsheets with a wireless one-step measurement transfer.
- Share your measurement data using ShareLive™ video calls and emails.

Find out more at flukeconnect.com



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Smart phone wireless service and data plan not included with purchase. Fluke Connect is not available in all countries.

Fluke. Keeping your world up and running.®

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