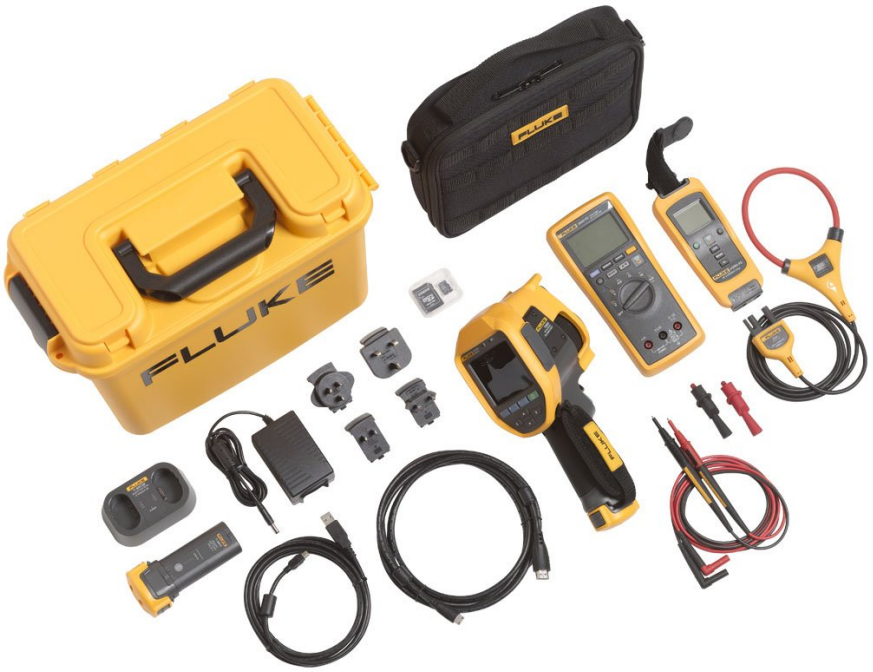
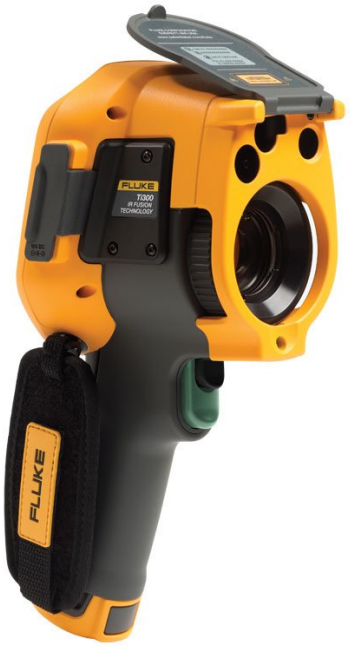
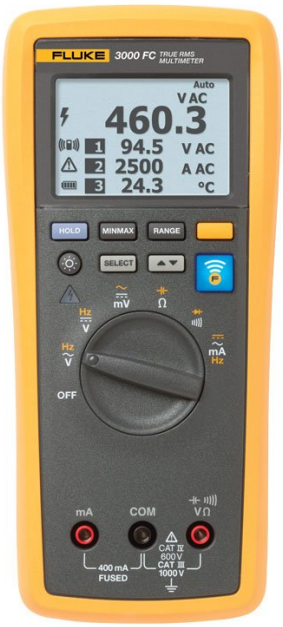
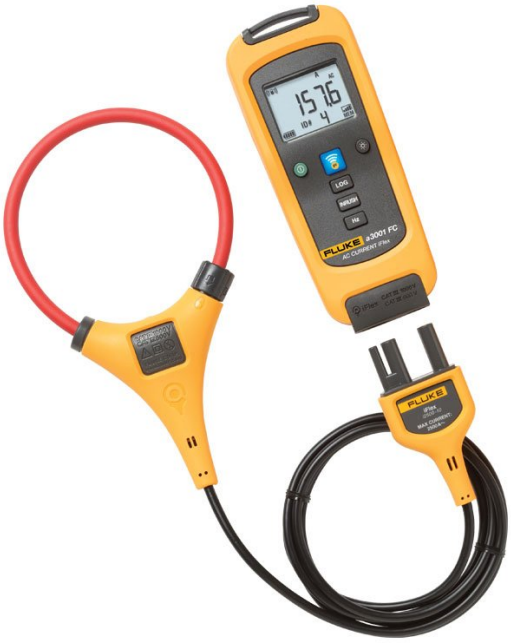
TECHNICAL DATA

Fluke Ti200 a3001 FC iFlex® Kit






FLUKE 3000 FC TRUE RMS MULTIMETER
Auto
V AC
460.3
1 94.5 V AC
2 2500 A AC
3 24.3 °C
HOLD
MINMAX
RANGE
SELECT
OFF
mA
COM
VΩ
400 mA FUSED
CAT II 600 V
CAT III 1000 V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FLUKE a3001 FC
AC CURRENT iFlex

Key features

The Ti200 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®
- Ruggedized high resolution 640x480 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 1000V
- 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 Ti200 a3001 FC iFlex® Kit

When you combine the Ti200 thermal imaging camera, a3001 FC iFlex modules and the Fluke Connect® App you get a powerful solution that allows you to quickly identify and diagnose problems directly from the field. Aggregate all your data from both inspections into the Fluke Connect® app and you can instantly share your results from anywhere, with any team member, at any time. Get started saving time and increasing your productivity now.

The Ti200 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 is much easier to miss a 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 Ti200 a3001 FC iFlex® Kit

Fluke Ti200 Infrared Camera

Detailed Specifications	
Temperature	
Temperature measurement range (not calibrated below -10°C)	-20°C to + 650°C (-4°F to + 1202°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, 200 X 150 pixels
Thermal sensitivity (NETD)	□ 0.075°C at 30°C target temp (75 mK)
Total pixels	30,000
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)	2.09 mRad
Minimum focus distance	15 cm (approx. 6 in)
Optional Telephoto Infrared Lens Type	
Field of view	12° x 9°
Spatial resolution (IFOV)	1.05 mRad
Minimum focus distance	45 cm (approx. 18 in)
Optional Wide-Angle Infrared Lens Type	
Field of view	46° x 34°
Spatial resolution (IFOV)	4.19 mRad
Minimum focus distance	15 cm (approx. 6 in)

Focus Mechanism	
LaserSharp® Auto Focus system	Yes
Advanced manual focus	Yes
Image Presentation	
Palees	
Standard	Ironbow, Blue-Red, High Coast, Amber, Amber Inverted, Hot Metal, Grayscale, Grayscale Inverted
Ultra Coast™	Ironbow Ultra, Blue-Red Ultra, High Coast 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
WiFi connectivity	Yes, to PC, iPhone®, iPad® and WiFi to LAN*
Text annotation*	Yes
Video recording*	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)*	Yes
Remote cool and operation (for special and advanced applications)	No
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 baeries
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
Cools 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-coactable Measurement Box with MIN-AVG-MAX temp
	Color alarms
	User selectable backlight seing graphical information display preference
	Graphical information display preference
Software	SmartView® and SmartView Mobile App - full analysis and reporting software included
Baeries	Two lithium ion rechargeable smart baery packs with five-segment LED display to show charge level, all models
Baery life	Four+ hours continuous use per baery pack (assumes 50% brightness of LCD and average usage)
Baery charge time	2.5 hours to full charge
AC baery charging	Two-bay AC baery charger (110 V AC to 220 V AC, 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 V AC to 220 V AC, 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 g2/Hz (3.8 grms), 2.5g 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 (baery 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
*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 ± ([% of Reading] + [Number of least significant digits]).

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-sinusoidial waveforms, add ± (2% of reading + 2% full scale) typical, for crest factor up to 3. 4. Do not exceed 107 V-Hz.		
DC Voltage, Continuity, Resistance, Diode Test and Capacitance		
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 Ω, beeper detects opens or shorts of 250 µs or longer.

Ω	**Range / resolution**	600.0 Ω / 0.1 Ω 6.000 kΩ / 0.001 kΩ 60.00 kΩ / 0.01 kΩ 60.00 kΩ / 0.1 kΩ 600.0 kΩ / 0.001 MΩ 50.00 MΩ / 0.01 MΩ
	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		
mA AC (45 Hz to 1 kHz)	**Range[1] / resolution**	60.00 mA / 0.01 mA 400.0 mA[3] / 0.1 mA
	Accuracy	1.5% + 3
mA DC[2]	**Range[1] / 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		
	Overload protection	1100 V RMS
	Input impedance (nominal)	> 10 MΩ < 100 pF
	Common mode rejection ratio (1 kΩ unbalance)	> 120 dB at DC, 50 Hz or 60 Hz
	Normal mode rejection	> 60 dB at 50 Hz or 60 Hz

	Overload protection	1100 V RMS
	Input impedance (nominal)	> 10 MΩ < 100 pF
	Common mode rejection ratio (1 kΩ unbalance)	> 60 dB, DC to 60 Hz
	Normal mode rejection	> 60 dB at 50 Hz or 60 Hz
	Overload protection	1100 V RMS
	Input impedance (nominal)	> 10 MΩ < 100 pF
	Common mode rejection ratio (1 kΩ unbalance)	> 120 dB at DC, 50 Hz or 60 Hz
	Normal mode rejection	> 60 dB at 50 Hz or 60 Hz
Open Circuit Test Voltage		
	Overload protection	1100 V RMS
	Input impedance (nominal)	< 2.7 V DC
	Full scale voltage to 6 MΩ Full scale voltage 50 MΩ	< 0.7 V DC < 0.9 V DC
	Typical short circuit current	< 350 mA
	Overload protection	1100 V RMS
	Input impedance (nominal)	< 2.7 V DC
	Full scale voltage to 6 MΩ Full scale voltage 50 MΩ	2.000 V DC
	Typical short circuit current	< 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	± 12 counts for changes > 350 mS in duration.	
AC functions	± 40 counts for changes > 900 mS in duration.	
General Specifications		
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
	Volts, amps, ohms	6000 counts
	Frequency	10,000 counts
Capacitance	1,000 counts	
Baery type	Three AA Alkaline baeries, NEDA 15A IEC LR6	

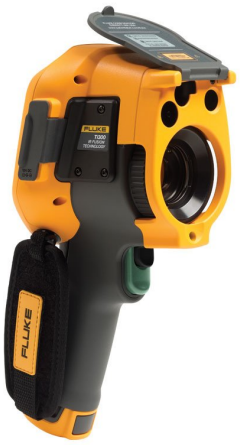
Baery life	250 hours minimum	
RF communications	2.4 GHZ ISM Band	
RF communication range	**Open air, unobstructed**	Up to 20m
	Obstructed, sheetrock wall	Up to 6.5m
Obstructed, concrete wall, or steel electrical enclosure	Up to 3.5m	
Temperature	**Operating**	-10°C to 50°C
	Storage	-40°C to 60°C
Temperature 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	
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	**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-TI200 60HZ/FCA
Fluke Ti200 a3001 FC iFlex® Kit

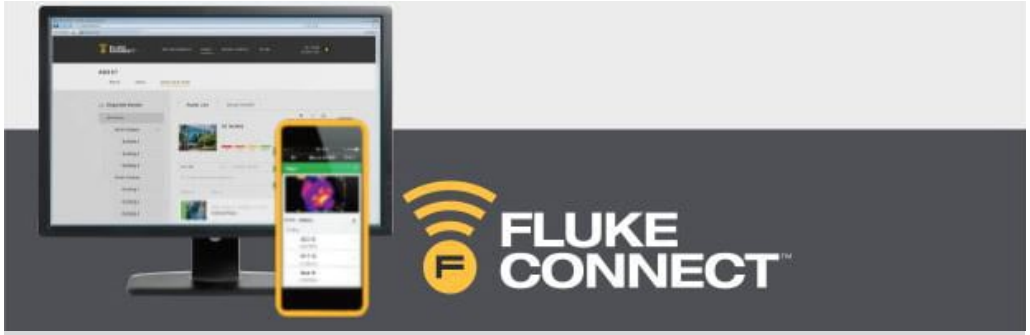
Includes:

Ti200 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**

Download on the App Store

ANDROID APP ON Google play

All trademarks are the property of their respective owners. WiFi or cellular service required to share data. Smartphone, wireless service and data plan not included with purchase. First 5 GB of storage is free. Phone support details can be viewed at **fluke.com/phones**.

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