

**TECHNICAL DATA** 

# Fluke v3003 FC Wireless AC-DC Voltage Measurement Kit







Ø rue covez		
January – December 2014 Timeline	FILTER V SEARCH ASSETS Q GRAPH VIEW: 12 MOR	ms • X ±
Compressor 1 Compressor	<ul> <li>JAN FEB MAR APR MAY JUN JUL AUG BEP OCT.</li> </ul>	NOV DEC >
External Pump Pump	Status Change Notes (2) 1/16/2014 – 1/21/2014	
Circulation 3 Motor	We balanced the loads on the 3-Prises and set up a temperature islem: threshold-30 °C) on the motor to give an early warning going forward.	-
Line 2 Supply Connector	US12014 6x84 AM   Jate Brown This motor eventeeted and shut down again today. The motor field winding insulation was damaged	_
Field Pump 7 Pump	from the excessive Next That exceeded the temperature spects on the nameplanu. V16/2014 1000 AM   Jake Brown	_
Line 3 Supply Connector	View Asset Halory	_
PARTICIPACITY CONNECTION		

2 Fluke Corporation Fluke v3003 FC Wireless AC-DC Voltage Measurement Kit





# **Key features**

#### The Fluke FC Wireless v3003 AC-DC Voltage Measurement Kit

The Fluke 3000 FC Series Wireless Multimeter with the Fluke Connect® app has all the essentials for convenient test and measurement troubleshooting:

- 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

With the Fluke v3000 FC Wireless AC Voltage Module you can:

- Measure up to 1000 V True-RMS AC
- Use as a standalone meter or as part of the system
- Use the logging function for recording and saving up to 65,000 readings

The Fluke v3001 FC Wireless DC Voltage Module lets you:

- Measure up to 1000 V DC
- Use as a standalone meter or as part of the system
- Use the logging function for recording and saving up to 65,000 readings



# Product overview: Fluke v3003 FC Wireless AC-DC Voltage Measurement Kit

# The FC Wireless v3003 AC-DC Voltage Measurement Kit is part of the Fluke Connect team of wireless test tools

Connect the v3000 FC Wireless AC Voltage and v3001 FC Wireless DC Voltage Modules to your test points, and view the results up to 20 meters away on the 3000 FC Wireless Digital Multimeter.

You'll save time, with less run-around collecting multiple measurements. Use multiple modules for measurements on three-phase systems, as a stand-alone measurement tool or combine with other Fluke Connect® 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 FC Wireless Voltage Modules capture up to 65,000 sets of time stamped min/max/avg readings, using the optional PC adapter. Fluke Connect 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.

# Specifications: Fluke v3003 FC Wireless AC-DC Voltage Measurement Kit

### Fluke 3000 FC Wireless Digital Multimeter

\* For all specifications: accuracy is specified for one year after calibration, at operating temperatures of  $18^{\circ}$ C to  $28^{\circ}$ C, with relative humidity at 0% to 90%. Accuracy specifications take the form of  $\pm([\% \text{ of Reading }] + [\text{ Number of least significant digits }]).$ 

AC Voltage			
21	Desclution	Accuracy <sup>234</sup>	Accuracy <sup>234</sup>
Range <sup>1</sup>	Resolution	45 Hz to 500 Hz	500 Hz to 1 kHz
500.0 mV	0.1 mV		
5.000 V	0.001 V		2.0% + 3
0.00 V	0.01 V	1.0% + 3	
500.0 V	0.1 V		
000 V	1 V		

3. For non-sinusoidial waveforms, add  $\pm(2\%$  of reading + 2% full scale) typical, for crest factor up to 3.

4. Do not exceed 107 V-Hz.



Function	Range	Resolution	Accuracy
mV	600.0 mV	0.1 mV	0.09% + 2
	6.000 V	0.001 V	
	60.00 V	0.01 V	0.09% + 2
V	600.0 V	0.1 V	
	1000 V	1 V	0.15% + 2
Ω	600 Ω	1Ω	Meter beeps at < 25 $\Omega$ , beeper detects opens or shorts of 250 $\mu$ s or longer.
	600.0 Ω	0.1 Ω	0.5% + 2
	6.000 kΩ	0.001 kΩ	
Ω	60.00 kΩ	0.01 kΩ	0.5% + 1
()	60.00 kΩ	0.1 kΩ	0.5% + 1
	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
	1000 nF	1 nF	
-	10.00 μF	0.01 μF	1.2% + 2
μF	100.0 μF	0.1 μF	
	9999 μF <sup>1</sup>	1 μF	10% typical

1. In the 9999  $\mu$ F range for measurements to 1000  $\mu$ F, the measurement accuracy is 1.2% + 2.

## AC and DC Current

Function	Range <sup>1</sup>	Resolution	Accuracy
mA AC	60.00 mA	0.01 mA	1 504 + 2
(45 Hz to 1 kHz)	o 1 kHz) 400.0 mA <sup>3</sup> 0.1 mA 1.5% + 3	1.5% + 3	
mA DC <sup>2</sup>	60.00 mA	0.01 mA	0.5% + 2
	400.0 mA <sup>3</sup>	0.1 mA	0.5% + 3

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

## Frequency

Range	Resolution	Accuracy <sup>1</sup>
99.99 Hz	0.01 Hz	
999.9 Hz	0.1 Hz	0.10/ + 1
9.999 kHz	0.001 kHz	0.1% + 1
99.99 kHz	0.01 kHz	



1. Frequency is specified up	to 99.99 kHz in vo	olts and up to 10 kł	Hz in amps.			
Input Characteristics						
Function	Overload protection	Input impedance (nominal)			Normal mode rejection	
×	1100 Vrms	> 10 MΩ < 100 pF			> 60 dB at 50 Hz or 60 Hz	
×	1100 Vrms	> 10 MΩ < 100 pF	> 60 dB, DC to 60 Hz			
×	1100 Vrms	> 10 MΩ < 100 pF	> 1/0 dB at D( 50 Hz or 60 Hz)		> 60 dB at 50 Hz or 60 Hz	
Open circuit test veltage			Full scale vol	tage	Typical short	
Open circuit test voltage			Το 6 ΜΩ	50 ΜΩ	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	Fused, 44/100 A, 1000 V FAST Fuse				
Overload	600 mA overload for 2 minutes maximum, 10 minutes rest minimum					
MIN/MAX Recording Accu	racy					
DC functions	The specified accuracy of the measurement function $\pm 12$ counts for changes > 350 mS in duration.					
AC functions	The specified accuracy of the measurement function $\pm 40$ counts for changes > 900 mS in duration.					
General Specifications						
Maximum voltage between any terminal and earth ground	1000 VDC or AC rms					
$\Omega$ fuse protection from A inputs	0.44 A (44/100 A, 440 mA), 1000 V FAST Fuse, Fluke specified part only					
	Update rate		4/sec			
Display (LCD)	Volts, amps, ohms		6000 counts			
Display (LCD)	Frequency		10,000 counts			
	Capacitance		1,000 counts			
Baery type	Three AA Alkaline baeries, NEDA 15A IEC LR6					
Baery life	250 hours minir	num				
RF communications	2.4 GHZ ISM Ba	nd				
	Open air, unobstructed		Up to 20 m			
RF communication range	Obstructed, sh	neetrock wall	Up to 6.5 m			
	Obstructed, co steel electrica	oncrete wall, or l enclosure	Up to 3.5 m			

6 Fluke Corporation Fluke v3003 FC Wireless AC-DC Voltage Measurement Kit



	Operating	-10°C to 50°C		
Temperature	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		
Altitude	Storage	12,000 m		
Electromagnetic compatibility EMI, RFI, EMC, RF	ETSI EN 300 328 V1.7.1:2006, ETSI V1.8.1:2008, FCC Part 15 Subpart 0	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)	340 g (12 oz)		
Warranty	Three years			
Not compatible with Fluke	CNX test tools			

## Fluke v3000 FC Wireless AC Voltage Module

Accuracy is specified as  $\pm([\% \text{ of reading}] + [number \text{ of least significant digits}])$ . All ranges are autoranging. Accuracy is specified from 5% to 100% of the range obtained by autoranging, from 18°C to 28°C.

Specifications				
Range <sup>1</sup> / Resolution	6.000 V / 0.001 V 60.00 V / 0.01 V 600.0 V / 0.1 V 1000 V / 1 V			
Accuracy <sup>234</sup>	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 $\Box$ 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.				
General Specifications				
LCD w/ backlight	3½ digits, 6000 counts, updates 4/sec			

7 Fluke Corporation Fluke v3003 FC Wireless AC-DC Voltage Measurement Kit



Baery type	2 AA, NEDA 15 A, IEC LR6		
Baery life	400 Hours		
Memory	Record up to 65000 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	0.1 x (specified accuracy) / °C (< 18°C or > 28°C)		
Operating humidity	90% at 35°C, 45% at 40°C, 45% at 50°C		
Altitude	Operating	2,000 m	
	Storage	12,000 m	
EMC	EN 61326-1:2006		
	ANSI/ISA 61010-1 / (82.02.01)	3rd edition	
Cafaty compliance	CAN/CSA-C22.2 No 61010-1-12	3rd edition	
Safety compliance	UL 61010-1	3rd edition	
	IEC/EN 61010-1	2010	
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		
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)		
5	Three years		
Warranty	Three years		

#### Fluke v3001 FC Wireless DC Voltage Module

Accuracy is specified for 1 year after calibration, at operating temperatures of  $18^{\circ}$ C to  $28^{\circ}$ C, with relative humidity at 0% to 90%. Accuracy specifications take the form of  $\pm([\% \text{ of Reading }] + [Number \text{ of least significant digits}])$ . All ranges are autoranging. Accuracy is specified from the range obtained by autoranging, from  $18^{\circ}$ C to  $28^{\circ}$ C.

Voltage Specifications				
Function				
	Range <sup>1</sup> / Resolution	600.0 mV / 0.1 mV		
mVDC	Accuracy	0.09% + 3		



	Range <sup>1</sup> / Resolution	6.000 V / 0.001 V 60.00 V / 0.01 V 600.0 V / 0.1 V			
VDC	Accuracy	0.09% + 3			
	Range <sup>1</sup> / Resolution	1000 V / 1 V			
	Accuracy	0.15% + 2			
General Specifications					
LCD w/ backlight	3 ½ digits, 6000 counts, 4/sec update rate				
Baery type	2 AA Alkaline baeries, NEDA 15A, IE	EC LR6			
Log rate/interval	Adjustable by PC from 1 sec to 1 h	r, default 1 min			
Baery life	400 hours minimum				
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	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)				
EMC	IEC 61236-1, Portable				
Safety compliance	IEC 61010-1, 600 V CAT IV / 1000 V CAT III, 3rd edition, Pollution Degree 2				
Certifications	CSA, CE, FCC: T68-FBLE IC: 6627A-FBLE				
Ingress Protection (IP) rating	IP42				
Size (H x W x D)	160 x 66 x 38 mm (6.3 x 2.6 x 1.5 ir	1)			
Weight	0.255 kg (9 oz)				
Warranty	Three years				
Not compatible with Fluke CNX test tools					



## **Ordering information**



## FLK-v3003 FC Kit

Fluke v3003 FC Wireless AC-DC Voltage Measurement Kit

Includes:

- Fluke 3000 FC Series Wireless Multimeter
- Fluke v3000 AC Voltage Module
- Fluke v3001 DC Voltage Module
- TL175 Test Leads
- TL224 Test Leads
- TL222 Test Leads
- AC175 Alligator Clips
- AC285 Alligator Clips
- AC220 Alligator Clips
- Magnetic hanging straps





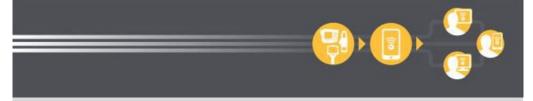
#### Preventive maintenance simplified. Rework eliminated.

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<sup>™</sup> video calls and emails.

#### Find out more at **flukeconnect.com**





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.