

## **TECHNICAL DATA**

# **Fluke 279 FC Thermal Multimeter**



**CAMERA** Built-in thermal imager

DISPLAY Full-color LCD screen provides clean, crisp readings

#### **iFLEX**®

Expand your measurement capabilities-get into tight, hard to reach spaces for current measurement (up to 2500 A AC)

FLUKE CONNECT Transmit results wirelessly to your smartphone with Fluke Connect





### Find. Repair. Validate. Report.

The 279 FC is a full-featured digital multimeter with integrated thermal imaging and is designed to increase your productivity and confidence. The thermal multimeter helps you find, repair, validate, and report many electrical issues quickly so that you are confident problems are solved.

## Locate the problem immediately

Thermal imaging multimeters are a first-line troubleshooting tool for electrical equipment that can check hot spots on high-voltage equipment and transformers, detect heating of fuses, wires, insulators, connectors, splices and switches. Scanning with the 279 FC's thermal imager reveals many electrical issues rapidly and from a safe distance. By combining two tools into one, the thermal multimeter lightens the load and increases productivity.

## **Expanded functionality**

Compatible with iFlex<sup>®</sup> (a flexible current clamp) to expand your measurement capabilities and get into tight, hard to reach spaces for current measurement (up to 2500 A AC). The large full-color LCD screen makes for easier and clearer viewing of images and read-ings. The 10 hour+ rechargeable battery keeps you going all day long under normal conditions.

### **Communicate your results**

With built-in Fluke Connect<sup>®</sup>, transmit results wirelessly to a smartphone and save time on reporting to validate work is complete. Troubleshoot better by instantly trending and monitoring measurements live on your smartphone screen. Create and email reports right from the field.



## **Product highlights**

- Full-featured multimeter with built-in thermal imager
- 15 measurement functions including: AC voltage with low-pass filter, DC voltage, Resistance, Continuity, Capacitance, Diode test, Min/Max/Avg, AC current (with iFlex), Frequency
- Thermal imaging reveals many electrical issues quickly and safely, eliminating the need for time-consuming testing and validation
- Two-in-one tool is designed to increase productivity-no need to go back to the truck or office to retrieve a shared camera or wait for the thermographer-do more in less time!
- iFlex expands your measurement capabilitiesget into tight, hard to reach spaces for current measurement (up to 2500 A AC)
- Designed for durability, built to withstand a 3 m (9.8Ft) drop, double insulated with raised rubber holster for increased protection

#### **Specifications**

- Save measurements and images while communicating wirelessly with a smart phone up to 20 feet/6.1 m away (no obstructions)
- Image resolution-80 x 60
- 3.5"/8.89 cm color LCD screen
- Rechargeable lithium ion battery allows for a for a full work day (10+ hours) under normal conditions
- Assembled in the USA
- Three year standard warranty
- · Auto power off to save battery power
- CAT III 1000 V, CAT IV 600 V measurement category
- Optional accessories: Fluke i2500-10 or i2500-18 iFlex\* Flexible Current Probes, Fluke BC500 AC Power Charger and Fluke BP500 Lithium-ion Battery 3000 mAh

AC voltage				
Range <sup>1</sup> /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 <sup>2, 3, 4, 5</sup>	45 Hz to 65 Hz	1.0 % + 3		
	65 Hz to 200 Hz	4.0 % + 3		
	200 Hz to 500 Hz	15 % + 3		
AC mV				
Range <sup>1</sup> /resolution	600.0 mV / 0.1 mV			
Accuracy <sup>2, 3, 4</sup>	45 Hz to 500 Hz	1.0 % + 3		
<sup>1</sup> AC voltage ranges are specified from 1 % of range to 100 % of range. <sup>2</sup> Crest factor of ≤ 3 at full scale up to 500 V, decreasing linearly to crest factor < 1.5 at 1000 V. <sup>3</sup> For non-sinusoidal waveforms, add - (2 % of reading + 2 % full scale) typical, for crest factor up to 3. <sup>4</sup> Do not exceed 10 <sup>7</sup> V-Hz. <sup>5</sup> Full-time low pass filter				
DC voltage				
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	6 V, 60 V, 600 V	0.09 % + 2		
	1000 V	0.15 % + 2		
DC mV				
Range/resolution	600.0 mV / 0.1 mV			
Accuracy	0.09 % + 2			
Continuity				

Range/resolution $600 \Omega / 1 \Omega$ AccuracyMeter beeps at < 25  $\Omega$ , beeper detects opens or shorts of 600 µs or longer



## **Detailed specifications (continued)**

Resistance		
Range/resolution	600.0 Ω / 0.1 Ω 6.000 kΩ / 0.001 kΩ 60.00 kΩ / 0.01 kΩ 600.0 kΩ / 0.1 kΩ 6.000 MΩ / 0.001 MΩ 50.00 MΩ / 0.01 MΩ	
Accuracy	600 Ω	0.5 % + 2
	6 kΩ to 600 kΩ	0.5 % + 1
	50 ΜΩ	1.5 % + 3
Diode test		
Range/resolution	2.000 V / 0.001 V	
Accuracy	1 % + 2	
Capacitance		
Range/resolution	1000 nF / 1 nF 10.00 μF / 0.01 μF 100.0 μF / 0.1 μF 9999 μF' / 1 μF	
Accuracy	1000 nF thu 100 µF	1.2 % + 2
	9999 µF	10 % typical
$^1 In$ the 9999 $\mu F$ range for measurements to 1000 $\mu F$	the measurement accuracy is $1.2 \% + 2$ .	
AC current		
Range/resolution	999.9 A / 0.1 A 2500 A / 1 A (with iFlex)	
Accuracy	45 Hz to 500 Hz	3.0 % + 5
Frequency		
Range/resolution	99.99 Hz / 0.01 Hz 999.9 Hz / 0.1 Hz	
Accuracy	0.1 % + 1	
Input characteristics		
AC voltage	Input impedance (nominal)	$>$ 10 M $\Omega$ < 100 pF
	Common mode rejection ratio (1 k $\Omega$ unbalance)	> 60 dB, DC to 60 Hz
	Overload protection	1100 V rms
DC voltage	Input impedance (nominal)	> 10 MΩ < 100 pF
	Common mode rejection ratio (1 k $\Omega$ 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
AC mV / DC mV	Input impedance (nominal)	> 10 MΩ < 100 pF
	Common mode rejection ratio (1 k $\Omega$ 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
Resistance / capacitance	Open circuit test voltage	< 2.7 V DC
	Full scale voltage to 6 $M\Omega$ Full scale voltage 50 $M\Omega$	< 0.7 V DC < 0.9 V DC
	Typical short circuit current	< 350 mA
	Overload protection	1100 V rms
Continuity / diode test	Open circuit test voltage	< 2.7 V DC
	Full scale voltage	2.000 V DC
	Typical short circuit current	< 1.1 mA



## **Detailed specifications (continued)**

ArchanceJournameBranderIsolate drama sectorInfract cameraIsolate dram	MIN/MAX recording accuracy			
Infrared camera temperatureRange-IO 'Co 'Co 'Co'' (14 "F to 392 "F]Infrared camera temperatureMeasurement tesolution0.1 "CTemperature measurementYes, centerpointAccuracy15 °C or 15 % (as tested at 25 °C, whichever is greater)Image performanceResolution80 x 60Image aprive frequency8 HzIndex option for optionSo to 000 Wandulun oxideTermal sensitivity (NETD)\$ 200 mKInfrared spectra Iband75 µm to 14 µmInfrared spectra Iband75 µm to 14 µmInfrared spectra Iband162:1Image presentationPeleton to opotPatter on point162:3Image capture equationSo frequencyRead spanAntoImage capture and data storageImage capture and spanImage capture and data storageImage captureImage capture and data storageIndex cancerImage capture (captore)Index cancerImage capture (captore)Index cancerIm	AC functions	40 counts for changes > 900 ms in dura	40 counts for changes > 900 ms in duration	
Infrard camea temperature     Rage     -10 °C to 200 °C (14 °P to 392 °F)       Measurement resolution     0.1 °C       Measurement resolution     Ves. conterpoint       Accuracy     45 °C or ± 5 % (as tested at 25 °C, whichever is greater)       Image performance     Resolution     80 x 60       Image capture frequency     8 Hz       Detector type     Uncooled vanadium oxide       Thermal sensitivity (NETD)     > 50 m to 14 um       Distance to spot     1621       Infrared spectral band     1621       Distance to spot     1621       Fold of view     So (as (as tested at 25 °C, whichever is greater)       Image capture forquency     8 Hz       Infrared spectral band     1621       Distance to spot     1621       Infrared spectral band     1621       Image available for review before a save     1000 v       Image capture and data storage     Image available for review before a save       Image transfer     Internal memory stores up to 100 images       Image capture and data storage     Storage medium     Internal memory stores up to 100 images       Image capture and data storage     Mage and at	DC functions	12 counts for changes > 350 ms in durat	12 counts for changes > 350 ms in duration	
	Infrared camera			
Imperature measurement     Yes, centerpoint       Accuracy     45° Cor + 5 % (sat tested at 25° C, whichever is greater)       Image performance     Resolution     0.95 fixed       Image capture frequency     8 Ka     Nacole Core       Image capture frequency     8 Ka     Nacole Core       Infrared spectral band     5 (up to 14 µm     Nacole Core       Infrared spectral band     36 (up to 27 M)     Nacole Core       Index of the own     36 (up to 27 M)     Nacole Core       Index of the own     36 (up to 27 M)     Nacole Core       Index of the own     36 (up to 27 M)     Nacole Core       Index of the own     36 (up to 27 M)     Nacole Core       Index of the own     36 (up to 27 M)     Nacole Core       Index of the own     Auto     Nacole Core       Index of the own     Softee medium     Nacole Core       Index of the own     Softee medium     Softee medium       Index of the own     Softee medium     Softee medium       Index of the own     Softee medium     Softee medium       Index of the own     Softee medium     Softee medium <t< td=""><td rowspan="2">Infrared camera temperature</td><td>Range</td><td>-10 °C to 200 °C (14 °F to 392 °F)</td></t<>	Infrared camera temperature	Range	-10 °C to 200 °C (14 °F to 392 °F)	
		Measurement resolution	0.1 °C	
Image performance     Emissivity     0.95 fixed       Image capture frequency     80 x 60       Image capture frequency     8 Hz       Detector typ     Uncooled vanadium oxide       Thermal sensitivity (METD)     \$ 200 mK       Infarred spectral band     7.5 µm to 14 µm       Distance to sopt     162.1       Pateus     36 (w) x 27 (h)       Pocus mechanism     Fixed Cocus       Image presentation     Palette       Image capture and data storage     Inage capture       Image transfer     Image transfer       Palette     Indege capture       Image transfer     Indege transfer       Palette rate     8.9 cm (3.5 in) diagonal       Center     Valts, amgs, chms       Palette rate     4.9 cc       Update rate     4.9 cc       Valts, amgs, chms     6.000 counts       Palette rate     1000 V       Valts, amgs, chms     6.0000 counts       Paletter type     1000 V       Display (LCD)     Update rate     4.9 cc       Valts, amgs, chms     6.0000 counts       Par		Temperature measurement	Yes, centerpoint	
Image performance     Resolution     80 x 60       Image capture frequency     8 Hz       Detector type     Uncooled vandum oxide       Detector type     Uncooled vandum oxide       Termal sensitivity (NETD)     5 200 mK       Infrared spectral band     7.5 µm to 14 µm       Distance to spot     162:1       Food of view     36 (vin x 27 'ln)       Food of view     162:1       Toronow     162:1       Image presentation     Fixed focus       Image capture and data storage     Palette     Image vandue for review before a save       Image transfer     Image vandue for review before a save     Image transfer       Image transfer     Fuke Connect' / SmartView*     Image transfer       Image transfer     Fuke Connect' / SmartView*     Image transfer       Image transfer     Image capture and data storage     Ipdate rate     4/sec       Maximum voltage between any terminal and earth ground     Ipdate rate     4/sec       Viets, amps, ohms     6000 counts     Image       Itery type     Ipdate rate     4/sec       Viets, amps, ohms     6000 counts		Accuracy	$\pm 5$ °C or $\pm$ 5 % (as tested at 25 °C, whichever is greater)	
Image capture frequency     8 Hz       Detector type     0 colocid vanadium oxide       Detector type     0 colocid vanadium oxide       Infrard spectral band     7.5 µm to 14 µm       Distance to spot     162:1       Indra of spectral band     5 µm to 14 µm       Distance to spot     162:1       Image presentation     Palete     1600 W       Image capture and data storage     Image capture     Nato       Image capture and data storage     Image capture     Nato       Image capture and data storage     Image capture     Nato       Image transfer     Nato     Nato       Image transfer     Nato     Nato       Image transfer     Size Connect' / SmartView"     Nato       Maximum voltage between any     Noto     Nato       Voltas naps, ohms     6000 counts     Nato       Notos maintimum instructure     Voltas naps, ohms     0000 counts       Reader Hype     Prequency     10000 counts       Image there instructure     Voltas namp, ohms     0000 counts       Reader Hype     Nato     Nato		Emissivity	0.95 fixed	
Detector type     Uncooled vanadium oxide       Thermal sensitivity (NETD)     \$ 200 mK       Infrared spectral band     7.5 µm to 14 µm.       Distance to spot     162.1       Field of view     36 '(w) x 27 '(h)       Focus mechanism     Pixed focus       Image presentation     Palette       Image capture and data storage     Image capture       Image transfer     Flue Connect', SmartView"       Pile format     iz2       Josplay size     8.9 cm (3.5 in) diagonal       Over and span     Muto       Image transfer     Flue Connect', SmartView"       Pile format     iz2       Josplay size     8.9 cm (3.5 in) diagonal       Over and span     View Connect', SmartView"       Pile format     iz2       Display size     8.9 cm (3.5 in) diagonal       Display LCD)     Update rate     4/sec       Volts, amps, ohms     6000 counts       Frequency     10000 vouts       Capacitance     10000 counts       Capacitance     10000 counts       Pile BPS00 lithium ion battery     Up to 0.5 m <tr< td=""><td rowspan="2">Image performance</td><td>Resolution</td><td>80 x 60</td></tr<>	Image performance	Resolution	80 x 60	
Thermal sensitivity (NETD)     \$ 200 mK       Infrared spectral band     7.5 µm to 14 µm       Distance to spot     162:1       Distance to spot     162:1       Field of view     36 (w) x 27 (h)       Focus mechanism     Fied focus       Image presentation     Palette       Image capture and data storage     Image capture       Image transfer     Inage available for review before a save       Image transfer     Field connect* / SmartView*       File format     is2       Instrum voltage between any transfer     File format       Display size     8.9 cm (3.5 in) diagonal       Central specifications     Uod v       Volta rate     4/sec       Volta present     60000 counts       Display (LCD)     Update rate     4/sec       Volta present     60000 counts       Return train and act format     1000 V     10000 counts       Battery type     100 Lours minimum     60000 counts       Return train and set format     10 bours minimum     10 bours minimum       Reformaninications range     2.4 GHZ ISM Band     10 bours minimum </td <td>Image capture frequency</td> <td>8 Hz</td>		Image capture frequency	8 Hz	
Infrared spectral band     7.5 µm to 14 µm       Distance to spot     162:1       Field of view     36 '(w) x 27 '(h)       Focus mechanism     Fixed focus       Image presentation     Palete     Ironow       Image capture and data storage     Image capture     Image available for review before a save       Image capture and data storage     Image capture     Internal memory stores up to 100 mages       Image transfer     File format     is2       Image transfer     File format     is2       Display size     8.9 cm (3.5 in) diagonal     1000 V       Centerninal and earth ground     1000 V     10000 counts     10000 counts       Display (LCD)     Update rate     4/sec     10000 counts       Capacitance     10000 counts     6000 counts     1000 counts       Referently life     Ioburs minimum     10000 counts     1000 counts       Referently life     10 bours minimum     10 bours minimum     10 bours minimum       RF communications range     Quertical anclosure     Up to 20 m     10 bours minimum       RF communication range     Operating     -10 °C to 50 °C (14		Detector type	Uncooled vanadium oxide	
Distance to spot     162:1       Field of view     36 '(w) x 27 '(h)       Field of view     162:0       Paces mechanism     Fixed focus       Palete     Ionbow       Lavel and span     Auto       Image capture and data storage     Image capture     Image capture       Image taster     Storage medium     Internal memory stores up to 100 images       Image taster     Fike Connect* / SmartView*       Image taster     Storage medium     Storage medium       Image taster     Storage medium     Storage       Image taster     Fike Connect* / SmartView*       Image taster     Storage medium     Storage       Maximum voltage between any terminal and earth ground     1000 V     Storage       Yots, amps, ohms     6000 counts     Capacitance       Prequency     1000 counts     Storage       Battery life     Ohours minimum     Storage       Ref communications     2.4 GHZ ISM Band     Storage       Ref construction enclosure     Open air, unobstructed     Up to 0.5 m       Ref construction enclosure     Operating     Storage		Thermal sensitivity (NETD)	≤ 200 mK	
Field of view     36 '(m) x 27 '(m)       Focus mechanism     Fixed focus       Inage presentation     Fixed focus       Image capture and data storage     Incerel and span     Auto       Image capture and data storage     Isorage medium     Internal memory stores up to 100 images       Image transfer     File format     Isorage medium       Image transfer     File format     Isorage medium       Otereat specifications     Isorage medium     Isorage medium       Maximum voltage between any terminal and earth ground     Ipdate rate     4/sec       Display (LCD)     Update rate     4/sec       Reference     1000 counts     1000 counts       Terequency     10000 counts     1000 counts       Reference     1000 counts     1000 counts       Reference     1000 counts     1000 counts       Reference     1000 counts     1000 coun		Infrared spectral band	7.5 μm to 14 μm	
Focus mechanism     Fixed focus       Image presentation     Palette     Ironbow       Level and span     Auto       Image capture and data storage     Image capture     Image available for review before a save       Brange transfer     File format     Internal memory stores up to 100 images       Image transfer     File format     is2       Display size     8.9 cm (3.5 in) diagonal <b>Central specifications</b> Maximum voltage between any terminal and earth ground     1000 V       Display (LCD)     Update rate     4/sec       Volts, amps, ohms     6000 counts       Frequency     10000 counts       Capacitance     10000 counts       Eattery type     10.4 Ust samps, ohms     6000 counts       Frequency     10000 counts     10000 counts       Eattery type     10.4 Ust samps, ohms     10000 counts       RF communications     2.4 GHZ ISM Band     Upt co 2.m       RF communication range     Open air, unobstructed     Up to 3.5 m       Obstructed, cheotrock wall     Up to 5.5 m     Up to 3.5 m       Temperature coefficient     Operati		Distance to spot	162:1	
Inage presentation     Palette     ironbow       Level and span     Auto       Image capture and data storage     Image capture     Image available for review before a save       Storage medium     Internal memory stores up to 100 images       Image transfer     Flue Connect* / SmartView*       Pile format     is2       Display size     8.9 cm (3.5 in) diagonal       Cercera specifications     Vertex       Maximum voltage between any terminal and earth ground     1000 V       Display (LCD)     Update rate     4/sec       Agaacitance     1000 counts       Battery type     Fuke BPS00 lithium ino battery       Battery life     10 hours minimum       RF communications     2.4 GHZ ISM Band       RF communication range     Open air, unobstructed, neotrock wall, or steel electrical enclosure     Up to 3.5 m       Obstructed, sheetrock wall     Up		Field of view	36 °(w) x 27 °(h)	
Ievel and span     Auto       Image capture and data storage     Image capture     Image wailable for review before a save       Storage medium     Internal memory stores up to 100 images       Image transfer     Pluke Connect* / SmartView*       File format     is2       intege between any     000 V       Maximum voltage between any     1000 V       Prequency     6000 counts       Capacitance     00000 counts       Prequency     1000 counts       Capacitance     1000 counts       Referency     1000 counts       Communications     2.4 GHZ ISM Band		Focus mechanism	Fixed focus	
Image capture and data storage     Image capture     Image capture       Inage transfer     Fluk Connect' / SmartView*       Inage transfer     Fluk Connect' / SmartView*       Image capture and data storage     Flue format     is2       Image capture and data storage     Image transfer     Image capture*       Image capture and data storage     Flue format     is2       Image capture and data storage     Image transfer     Image capture*       Image capture and data storage     Image transfer     Image capture*       Image capture and data storage     Image transfer     Image capture*       Image capture and data storage     Image transfer     Image capture*       Image capture and data storage     Image transfer     Image capture*       Image capture and data storage     Image capture and data storage     Image capture and data storage       Image capture and data storage     Ipolate transfer     Image capture and data storage     Image capture and data storage       Image capture and data storage     Ipolate transfer     Ipolate transfer     Image capture and data storage       Image capture and data for point     Ipolate transfer     Image capture and data storage     Image cap	Image presentation	Palette	Ironbow	
Strage medium     Internal memory stores up to 100 images       Image transfer     Fluke Connect* / SmartView*       File format     is2       Display size     8.9 cm (3.5 in) diagonal       General specifications       Maximum voltage between any terminal and earth ground     1000 V       Update rate     4/sec       Volts, amps, ohms     6000 counts       Frequency     10000 counts       Capacitance     10000 counts       Capacitance     10000 counts       Battery type     Fluke BPS00 lithium ion battery       Battery life     10 hours minimum       RF communication range     Open air, unobstructed     Up to 20 m       Obstructed, sheetrock wall     Up to 3.5 m       Obstructed, concrete wall, or steel electrical enclosure     Up to 3.5 m       Temperature     Open air, unobstructed     Up to 0.5 0°C (14 °F to 122 °P)       Temperature coefficient     0.1 X (specified accuracy) / °C (< 18 °C °C (4 °F to 140 °F)		Level and span	Auto	
Image transfer     Fluke Connect / SmartView*       File format     is2       Display size     8.9 cm (3.5 in) diagonal       Centerators       Centerations       Maximum voltage between any terminal and earth ground     1000 V       Display (LCD)     Update rate     4/sec       View and some some some some some some some some	Image capture and data storage	Image capture	Image available for review before a save	
File format     is2       Display size     8.9 cm (3.5 in) diagonal       General specifications       Maximum voltage between any terminal and earth ground     1000 V       Display (LCD)     Update rate     4/sec       Volts, amps, ohms     6000 counts       Frequency     10000 counts       Capacitance     1000 counts       Battery type     Fuke BP500 lithium ion battery       Battery life     10 hours minimum       RF communications     2.4 GHZ ISM Band       RF communication range     Open air, unobstructed     Up to 2.0 m       Obstructed, sheatrock wall     Up to 3.5 m       Obstructed, concrete wall, orsteel electrical enclosure     Up to 3.5 m       Temperature     Operating     -20 °C to 60 °C (14 °F to 122 °F)       Temperature coefficient     0.1 X (specified accuracy) / °C (< 18 °C · > 28 °C)       Relative humidity     0% to 90 % (0 °C to 35 °C)     -20 °C to 60 °C (-4 °F to 140 °F)       Temperature     0% to 90 % (0 °C to 35 °C)     -20 °C to 60 °C (-4 °F to 140 °F)       Temperature coefficient     0.1 X (specified accuracy) / °C (< 18 °C · > 28 °C)     -20 °C to 60 °C (-4 °F to 140 °F)       Temp		Storage medium	Internal memory stores up to 100 images	
Display size8.9 cm (3.5 in) diagonalGeneral specificationsMaximum voltage between any terminal and earth ground000 VDisplay (LCD)Updat rate4/secMaximum voltage between any terminal and earth ground000 CountsDisplay (LCD)Updat rate4/secMaximum voltage between any terminal and earth ground0000 countsPaquency10000 countsCapacitance10000 countsBattery typeFuke BP500 lithium ion batteryBattery life010 hours minimumRF communications2.4 CHZ ISM BandRF communication rangeOpen air, unobstructedUp to 2.0 mDistructed, scherter kwall, on sith electrical enclosureUp to 3.5 mTemperatureOperating-00° to 10° C (14 °F to 122 °F)Temperature coefficient0.1 X (specified accuracy) / °C (< 18 °C - X = C)		Image transfer	Fluke Connect <sup>®</sup> / SmartView <sup>®</sup>	
General specificationsMaximum voltage between any terminal and earth ground1000 VDisplay (LCD)Update rate4/secVolts, amps, ohms6000 countsFrequency1000 countsCapacitance1000 countsCapacitance1000 countsBattery typeFluke BP500 lithium ion batteryBattery life10 hours minimumRF communications2.4 GHZ ISM BandRF communication rangeOpen air, unobstructedUp to 20 mObstructed, sheetrock wallUp to 6.5 mObstructed, concrete wall, or steel electrical enclosureUp to 3.5 mTemperatureOperating-10 °C to 50 °C (14 °F to 122 °F)Storage.20 °C to 60 °C (-4 °F to 140 °F)Temperature coefficient0.1 X (specified accuracy) / °C (< 18 °C J > 28 °C)Relative humidity0° to 75 % (35 °C) 0 % to 75 % (35 °C) 0 % to 75 % (35 °C) 0 % to 75 % (35 °C)AltitudeOperating2000 m		File format	is2	
Maximu voltage between any terminal and earth ground1000 VDisplay (LCD)Update rate4/secVolts, amps, ohms6000 countsFrequency10000 countsCapacitance1000 countsBattery typeFluke BF500 lithium ion batteryBattery life10 hours minimumRF communications2.4 GHZ ISM BandRF communication rangeOpen air, unobstructedUp to 6.5 mObstructed, sheetrock wallUp to 6.5 mObstructed, concrete wall, or steel electrical enclosureUp to 3.5 mTemperatureOperating-00°C to 60°C (14°F to 122°F)Temperature coefficient0.1 X (specified accuracy) /°C (< 18°C × 28°C)		Display size	8.9 cm (3.5 in) diagonal	
terminal and earth ground     Under rate     4/sec       Display (LCD)     Update rate     4/sec       Volts, amps, ohms     6000 counts       Frequency     10000 counts       Capacitance     1000 counts       Battery type     Pluke BP500 lithium ion battery       Battery life     10 hours minimum       RF communications     2.4 GHZ ISM Band       Frequency     Up to 20 m       Open air, unobstructed     Up to 6.5 m       Obstructed, sheetrock wall     Up to 3.5 m       Temperature     Operating       Storage     -10 °C to 50 °C (14 °F to 122 °F)       Storage     -20 °C to 60 °C (-4 °F to 140 °F)       Temperature coefficient     0.1 X (specified accuracy) / °C (< 18 °C -> 28 °C)       Relative humidity     Operating     -20 °C to 60 °C (-4 °F to 140 °F)       Over to 55 °C (0 °C to 35 °C)     0 % to 55 % (25 °C to 40 °C)     >28 °C)       Altitude     Operating     2000 m	General specifications			
Volts, amps, ohms   6000 counts     Frequency   10000 counts     Capacitance   10000 counts     Battery type   Fuke BP500 lithium ion battery     Battery life   10 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   Up to 3.5 m     electrical enclosure   -00 °C to 50 °C (14 °F to 122 °F)     Storage   -20 °C to 60 °C (-4 °F to 140 °F)     Temperature coefficient   0.1 X (specified accuracy) / °C (< 18 °C -> 28 °C)     Relative humidity   0 % to 90 % (0 °C to 35 °C) 0 % to 45 % (40 °C to 50 °C)     Altitude   Operating   2000 m		1000 V		
Frequency     10000 counts       Capacitance     10000 counts       Battery type     Fluke BPS00 lithium ion battery       Battery life     10 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     Opto 3.5 m       Obstructed, concrete wall, or steel     Vp to 3.5 m       Temperature     Operating     -10 °C to 50 °C (14 °F to 122 °F)       Storage     -20 °C to 60 °C (-4 °F to 140 °F)       Temperature coefficient     0.1 X (specified accuracy) / °C (< 18 °C × 28 °C)	Display (LCD)	Update rate	4/sec	
Capacitance1000 countsBattery typeFluke BP500 lithium ion batteryBattery life10 hours minimumRF communications2.4 GHZ ISM BandRF communication rangeOpen air, unobstructedUp to 20 mObstructed, sheetrock wallUp to 6.5 mObstructed, concrete wall, or steel electrical enclosureUp to 3.5 mTemperatureOperating-10 °C to 50 °C (14 °F to 122 °F)Temperature coefficient0.1 X (specified accuracy) / °C (< 18 °C → 28 °C)		Volts, amps, ohms	6000 counts	
Battery type     Fuke BP500 lithium ion battery       Battery life     10 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 (14 °F to 122 °F)       Temperature coefficient     0.1 X (specified accuracy) / °C (< 18 °C J		Frequency	10000 counts	
Battery life   10 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   Up to 3.5 m     Openating   Openating     Pereting   Operating     Temperature coefficient   Operating     Nt (specified accuracy) / °C (< 18 °C ·C /4 °F to 122 °F)		Capacitance	1000 counts	
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   Up to 3.5 m     remperature   Operating   -10 °C to 50 °C (14 °F to 122 °F)     Storage   -20 °C to 60 °C (-4 °F to 140 °F)     Temperature coefficient   0.1 X (specified accuracy) / °C (< 18 °C ∪> 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)   2000 m	Battery type	Fluke BP500 lithium ion battery		
RF communication range     Open air, unobstructed     Up to 20 m       Obstructed, sheetrock wall     Up to 6.5 m     Up to 6.5 m       Obstructed, concrete wall, or steel     Up to 3.5 m     Up to 3.5 m       Temperature     Operating     -10 °C to 50 °C (14 °F to 122 °F)       Storage     -20 °C to 60 °C (-4 °F to 140 °F)       Temperature coefficient     0.1 X (specified accuracy / °C (< 18 °C -> 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)     >200 m	Battery life	10 hours minimum		
Destructed, sheetrock wallUp to 6.5 mObstructed, concrete wall, or steel electrical enclosureUp to 3.5 mTemperatureOperating-10 °C to 50 °C (14 °F to 122 °F)Storage-20 °C to 60 °C (-4 °F to 140 °F)Temperature coefficient0.1 X (specified accuracy) / °C (< 18 °C → 28 °C)	RF communications	2.4 GHZ ISM Band		
Destructed, concrete wall, or steel electrical enclosureUp to 3.5 mTemperatureOperating-0.0°C to 50°C (14 °F to 122 °F)Storage-20°C to 60°C (-4 °F to 140 °F)Temperature coefficient0.1 X (specified accuracy) / °C (< 18 °C ·· > 28 °C)Relative humidity0% to 90% (0°C to 35 °C) 0% to 75% (35 °C to 40 °C) 0% to 45% (40 °C to 50 °C)>200 mAltitudeOperating2000 m	RF communication range	Open air, unobstructed	Up to 20 m	
electrical enclosure   electrical enclosure   Temperature   Operating   torage   0.1 X (specified accuracy) / °C (< 18 °C ·· 28 °C)		Obstructed, sheetrock wall	Up to 6.5 m	
Storage -20 °C to 60 °C (-4 °F to 140 °F)   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 2000 m			Up to 3.5 m	
Temperature coefficient0.1 X (specified accuracy) / °C (< 18 °C or > 28 °C)Relative humidity0 % to 90 % (0 °C to 35 °C) 0 % to 75 % (35 °C to 40 °C) 0 % to 45 % (40 °C to 50 °C)AltitudeOperating2000 m	Temperature	Operating	-10 °C to 50 °C (14 °F to 122 °F)	
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     2000 m		Storage	-20 °C to 60 °C (-4 °F to 140 °F)	
0 % to 75 % (35 °C to 40 °C)       0 % to 75 % (40 °C to 50 °C)       0 % to 45 % (40 °C to 50 °C)       Altitude       Operating       2000 m	Temperature coefficient	0.1 X (specified accuracy) / $^{\circ}$ C (< 18 $^{\circ}$ C or > 28 $^{\circ}$ C)		
	Relative humidity	0 % to 75 % (35 °C to 40 °C)		
Storage 12000 m	Altitude	Operating	2000 m	
		Storage	12000 m	



## **Detailed specifications (continued)**

Certifications	CSA, FCC, CE
Size (H x W x L)	5.7 cm x 9.4 cm x 21.6 cm (2.3 in x 3.7 in x 8.5 in)
Weight	0.80 kg (1.75 lb)
Warranty	Three years



Figure 1. Fluke 279 FC with the iFlex Flexible Current Probe



Figure 2. Fluke 279 FC/iFlex TRMS Thermal Multimeter Kit

## **Ordering information**

**279 FC TRMS** Thermal Multimeter Includes 279 FC TRMS Thermal Multimeter, TL75 Test Leads, rechargeable lithium ion battery and charger

279 FC/iFlex TRMS Thermal Multimeter

Includes 279 FC TRMS Thermal Multimeter, 18" (45.72 cm) iFlex Flexible Current Probe, TL175 test leads, rechargeable lithium ion battery and charger, soft carrying case, hanging strap

#### **Optional accessories**

Fluke i2500-10 Fluke i2500-10 iFlex\* Flexible Current Probe Fluke i2500-18 Fluke i2500-18 iFlex\* Flexible Current Probe Fluke BC500 Fluke BC500 AC Power Charger Fluke BP500 Fluke BP500 Lithium-Ion Battery 3000 mAh battery Fluke C280 Carrying Case Fluke Corporation PO Box 9090, Everett, WA 98206 U.S.A.

Fluke Europe B.V. PO Box 1186, 5602 BD Eindhoven, The Netherlands

#### For more information call:

In the U.S.A. (800) 443-5853 or Fax (425) 446-5116 In Europe/M-East/Africa +31 (0) 40 2675 200 or Fax +31 (0) 40 2675 222 In Canada (800)-36-FLUKE or Fax (905) 890-6866 From other countries +1 (425) 446-5500 or Fax +1 (425) 446-5116 Web access: http://www.fluke.com

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