

The MT2005 Professional True RMS Industrial Digital Multimeter with built-in 80 x 80 Thermal Imager, and TFT color LCD display, provides fast A/D converting sampling time, high accuracy. It is a fast and easy solution to find and solve problems with production equipment, providing Bluetooth technology BLE. It is a safe instrument with double molded plastic housing and has a IP65 waterproof rating.

## **Features**

- 6000 count 2.8" TFT Color LCD display
- Built-in Thermal imager with MIN/MAX
- Temperature Range -20°C to 260°C
- 50Hz fast Thermal image frame rate
- DC voltage
- AC, AC+DC TRMS Voltage
- DC current
- AC, AC+DC TRMS current
- Resistance and Continuity test
- Diode test
- Capacity
- Frequency
- **Duty Cycle**
- Temperature with K-type probe
- Flexible coil current











## MT2005 Thermal Multimeter TRUE RMS

Imaging and Optical DataField of View21° x 21°/0.5mSpartial resolution (IFOV)4.53mradThermal sensitivity/NETD<0.1°C @ +30°C/100mKImage Range50HzIR Resolution80 x 80 pixelsImage PresentationDisplayDisplay2.8" LCD, 240 x 320 pixelsMeasurementTemperature range-20°C to 260°C±(3% +3°C)Measurement analysisSpotCenter spotAutomaticHot & cold markersAdjustable EmmisivityVariable 0.01 to 0.99Measurement correctionsEmissivity, reflected temperatureData CommunicationsBluetooth BLEInterfacesBluetooth BLEAC Voltage600.0mV - 1000V±(0.09% +5)AC Voltage600.0mV - 1000V±(0.9% +5)AC + DC TRMS Voltage6.000V - 1000V±(2.4% +20)DC Current600.0µA - 10A±(0.9% +5)AC Current600.0µA - 10A±(0.9% +5)Flexi Coil AC Current30.00A - 3000A±(0.8% + 5)Duty Cycle5.0% to 95.0%±(1.2% +2)Resistance600.0µC - 60MQ±(0.5% + 5)Frequency40.00Hz - 10MHz±(0.09% +5)Capacitance60.00nF - 6mF±(1.2% + 8)Digital Display6000 count 2,8" TFTInput impedance>10MQ VDC & >10MQ VACSize195 x 88 x 58mmWeight540g	Function	Range	Accuracy
Spartial resolution (IFOV)4.53mradThermal sensitivity/NETD<0.1°C @ +30°C/100mK	Imaging and Optical Data		
Thermal sensitivity/NETD	Field of View	21° x 21°/0.5m	
Image Range   SOHz   IR Resolution   80 x 80 pixels	Spartial resolution (IFOV)	4.53mrad	
IR Resolution   80 x 80 pixels	Thermal sensitivity/NETD	<0.1°C @ +30°C/100mK	
Image Presentation           Display         2.8" LCD, 240 x 320 pixels           Measurement           Temperature range         -20°C to 260°C         ±(3% +3°C)           Measurement analysis         Spot         Center spot           Automatic         Hot & cold markers           Adjustable Emmisivity         Variable 0.01 to 0.99           Measurement corrections         Emissivity, reflected temperature           Data Communications         Bluetooth BLE           Interfaces         Multimeter           DC Voltage         600.0mV - 1000V         ±(0.09% +5)           AC Voltage         600.0mV - 1000V         ±(0.8% +5)           AC + DC TRMS Voltage         6.000V - 1000V         ±(2.4% +20)           DC Current         600.0µA - 10A         ±(0.9% +5)           AC Current         600.0µA - 10A         ±(0.12% +5)           Flexi Coil AC Current         30.00A - 3000A         ±(0.8% +5)           Duty Cycle         5.0% to 95.0%         ±(1.2% +2)           Resistance         600.00 - 60MΩ         ±(0.5% +5)           Frequency         40.00Hz - 10MHz         ±(0.09% +5)           Capacitance         60.00nF - 6mF         ±(1.2% + 8)           Temperature         -40 - 600°	Image Range	50Hz	
Display         2.8" LCD, 240 x 320 pixels           Measurement           Temperature range         -20°C to 260°C         ±(3% +3°C)           Measurement analysis           Spot         Center spot           Automatic         Hot & cold markers           Adjustable Emmisivity         Variable 0.01 to 0.99           Measurement corrections         Emissivity, reflected temperature           Data Communications         Bluetooth BLE           Interfaces         Multimeter           DC Voltage         600.0mV - 1000V         ±(0.09% +5)           AC Voltage         600.0mV - 1000V         ±(0.8% +5)           AC + DC TRMS Voltage         6.000V - 1000V         ±(2.4% +20)           DC Current         600.0µA - 10A         ±(0.9% +5)           AC Current         600.0µA - 10A         ±(0.12% + 5)           Flexi Coil AC Current         30.00A - 3000A         ±(0.8% + 5)           Duty Cycle         5.0% to 95.0%         ±(1.2% +2)           Resistance         600.00 Ω - 60MΩ         ±(0.5% + 5)           Capacitance         60.00nF - 6mF         ±(0.09% +5)           Capacitance         60.00nF - 6mF         ±(1.2% + 8)           Temperature         -40 - 600°C	IR Resolution	80 x 80 pixels	
Measurement           Temperature range         -20°C to 260°C         ±(3% +3°C)           Measurement analysis         Spot         Center spot           Adjustable Emmisivity         Variable 0.01 to 0.99           Measurement corrections         Emissivity, reflected temperature           Data Communications         Bluetooth BLE           Interfaces         Multimeter           DC Voltage         600.0mV - 1000V         ±(0.09% +5)           AC Voltage         600.0mV - 1000V         ±(2.4% +20)           DC Current         600.0µA - 10A         ±(0.9% +5)           AC Current         600.0µA - 10A         ±(0.9% +5)           AC Current         30.00A - 3000A         ±(0.8% + 5)           Duty Cycle         5.0% to 95.0%         ±(1.2% +2)           Resistance         600.0Q - 60MQ         ±(0.5% + 5)           Frequency         40.00Hz - 10MHz         ±(0.09% +5)           Capacitance         60.00nF - 6mF         ±(1.2% + 8)           Temperature         -40 - 600°C         ±(1.5% + 3)           Digital Display         6000 count 2,8" TFT           Input impedance         >10MQ VDC & >10MQ VAC           Size         195 x 88 x 58mm	Image Presentation	·	
Temperature range $-20^{\circ}\text{C}$ to $260^{\circ}\text{C}$ $\pm (3\% + 3^{\circ}\text{C})$ Measurement analysis         Spot         Center spot           Automatic         Hot & cold markers           Adjustable Emmisivity         Variable 0.01 to 0.99           Measurement corrections         Emissivity, reflected temperature           Data Communications         Bluetooth BLE           Interfaces         Hot Voltage           Multimeter         DC Voltage           DC Voltage $600.0\text{mV} - 1000\text{V}$ $\pm (0.9\% + 5)$ AC + DC TRMS Voltage $6.000\text{V} - 1000\text{V}$ $\pm (2.4\% + 20)$ DC Current $600.0\mu\text{A} - 10\text{A}$ $\pm (0.9\% + 5)$ AC Current $600.0\mu\text{A} - 10\text{A}$ $\pm (0.9\% + 5)$ Flexi Coil AC Current $30.00\text{A} - 3000\text{A}$ $\pm (0.8\% + 5)$ Duty Cycle $5.0\% \text{ to } 95.0\%$ $\pm (1.2\% + 2)$ Resistance $600.0\Omega - 60\text{M}\Omega$ $\pm (0.5\% + 5)$ Frequency $40.00\text{Hz} - 10\text{MHz}$ $\pm (0.09\% + 5)$ Capacitance $60.00\text{F} - 6\text{mF}$ $\pm (1.2\% + 8)$ Digital Display $6000 \text{ count } 2.8'' \text{ TFT}$ Input impedance $>10\text{M}\Omega \text{VDC} \otimes >10M$	Display	2.8" LCD, 240 x 320 pixels	5
Measurement analysis           Spot         Center spot           Automatic         Hot & cold markers           Adjustable Emmisivity         Variable 0.01 to 0.99           Measurement corrections         Emissivity, reflected temperature           Data Communications         Bluetooth BLE           Interfaces         Multimeter           DC Voltage         600.0mV - 1000V         ±(0.09% +5)           AC Voltage         600.0mV - 1000V         ±(2.4% +20)           DC Current         600.0mV - 1000V         ±(2.4% +20)           DC Current         600.0µA - 10A         ±(0.9% +5)           AC Current         600.0µA - 10A         ±(0.12% + 5)           Flexi Coil AC Current         30.00A - 3000A         ±(0.8% + 5)           Duty Cycle         5.0% to 95.0%         ±(1.2% + 2)           Resistance         600.00 - 60MΩ         ±(0.5% + 5)           Frequency         40.00Hz - 10MHz         ±(0.09% +5)           Capacitance         60.00nF - 6mF         ±(1.2% + 8)           Temperature         -40 - 600°C         ±(1.5% + 3)           Digital Display         6000 count 2,8" TFT           Input impedance         >10MΩ VDC & >10MΩ VDC           Size         195 x 88 x 58mm </td <td>Measurement</td> <td></td> <td></td>	Measurement		
Spot         Center spot           Automatic         Hot & cold markers           Adjustable Emmisivity         Variable 0.01 to 0.99           Measurement corrections         Emissivity, reflected temperature           Data Communications Interfaces         Bluetooth BLE           Multimeter         DC Voltage           DC Voltage         600.0mV - 1000V         ±(0.09% +5)           AC Voltage         600.0mV - 1000V         ±(2.4% +20)           DC Current         600.0µA - 10A         ±(0.9% +5)           AC Current         600.0µA - 10A         ±(0.1.2% + 5)           Flexi Coil AC Current         30.00A - 3000A         ±(0.8% + 5)           Duty Cycle         5.0% to 95.0%         ±(1.2% +2)           Resistance         600.0Q - 60MQ         ±(0.5% + 5)           Frequency         40.00Hz - 10MHz         ±(0.09% +5)           Capacitance         60.00nF - 6mF         ±(1.2% + 8)           Temperature         -40 - 600°C         ±(1.5% + 3)           Digital Display         6000 count 2,8" TFT           Input impedance         >10MQ VDC & >10MQ VAC           Size         195 x 88 x 58mm	Temperature range	-20°C to 260°C	±(3% +3°C)
Automatic         Hot & cold markers           Adjustable Emmisivity         Variable 0.01 to 0.99           Measurement corrections         Emissivity, reflected temperature           Data Communications         Bluetooth BLE           Interfaces         Multimeter           DC Voltage         600.0mV - 1000V         ±(0.09% +5)           AC Voltage         600.0mV - 1000V         ±(0.8% +5)           AC Voltage         6.000V - 1000V         ±(2.4% +20)           DC Current         600.0µA - 10A         ±(0.9% +5)           AC Current         600.0µA - 10A         ±(0.1.2% + 5)           Flexi Coil AC Current         30.00A - 3000A         ±(0.8% + 5)           Duty Cycle         5.0% to 95.0%         ±(1.2% + 2)           Resistance         600.0Q - 60MQ         ±(0.5% + 5)           Frequency         40.00Hz - 10MHz         ±(0.09% +5)           Capacitance         60.00nF - 6mF         ±(1.2% + 8)           Temperature         -40 - 600°C         ±(1.5% + 3)           Digital Display         6000 count 2,8" TFT           Input impedance         >10MΩ VDC & >10MΩ VAC           Size         195 x 88 x 58mm	Measurement analysis		
Adjustable Emmisivity         Variable 0.01 to 0.99           Measurement corrections         Emissivity, reflected temperature           Data Communications         Bluetooth BLE           Interfaces         Bluetooth BLE           Multimeter         600.0mV - 1000V         ±(0.09% +5)           AC Voltage         600.0mV - 1000V         ±(0.8% +5)           AC + DC TRMS Voltage         6.000V - 1000V         ±(2.4% +20)           DC Current         600.0µA - 10A         ±(0.9% +5)           AC Current         600.0µA - 10A         ±(0.12% +5)           Flexi Coil AC Current         30.00A - 3000A         ±(0.8% + 5)           Duty Cycle         5.0% to 95.0%         ±(1.2% +2)           Resistance         600.00 - 60MΩ         ±(0.5% + 5)           Frequency         40.0Hz - 10MHz         ±(0.09% +5)           Capacitance         60.00nF - 6mF         ±(1.2% + 8)           Temperature         -40 - 600°C         ±(1.5% + 3)           Digital Display         6000 count 2,8" TFT           Input impedance         >10MΩ VDC & >10MΩ VAC           Size         195 x 88 x 58mm	Spot	Center spot	
Measurement corrections         Emissivity, reflected temperature           Data Communications         Bluetooth BLE           Interfaces         Multimeter           DC Voltage         600.0mV - 1000V         ±(0.09% +5)           AC Voltage         600.0mV - 1000V         ±(0.8% +5)           AC + DC TRMS Voltage         6.000V - 1000V         ±(2.4% +20)           DC Current         600.0µA - 10A         ±(0.9% +5)           AC Current         600.0µA - 10A         ±(0.12% + 5)           Flexi Coil AC Current         30.00A - 3000A         ±(0.8% + 5)           Duty Cycle         5.0% to 95.0%         ±(1.2% +2)           Resistance         600.00 - 60MΩ         ±(0.5% + 5)           Frequency         40.00Hz -10MHz         ±(0.09% +5)           Capacitance         60.00nF - 6mF         ±(1.2% + 8)           Temperature         -40 - 600°C         ±(1.5% + 3)           Digital Display         6000 count 2,8" TFT           Input impedance         >10MΩ VDC & >10MΩ VAC           Size         195 x 88 x 58mm	Automatic	Hot & cold markers	
Data Communications         Bluetooth BLE           Interfaces         Multimeter           DC Voltage $600.0$ mV - $1000$ V $\pm (0.09\% + 5)$ AC Voltage $600.0$ mV - $1000$ V $\pm (0.8\% + 5)$ AC + DC TRMS Voltage $6.000$ V - $1000$ V $\pm (2.4\% + 20)$ DC Current $600.0$ μA - $10$ A $\pm (0.9\% + 5)$ AC Current $600.0$ μA - $10$ A $\pm (0.1.2\% + 5)$ Flexi Coil AC Current $30.00$ A - $3000$ A $\pm (0.8\% + 5)$ Duty Cycle $5.0\%$ to $95.0\%$ $\pm (1.2\% + 2)$ Resistance $600.0$ D - $60$ MQ $\pm (0.5\% + 5)$ Frequency $40.0$ Hz - $10$ MHz $\pm (0.09\% + 5)$ Capacitance $60.0$ DnF - $6$ mF $\pm (1.2\% + 8)$ Temperature $-40$ - $600$ °C $\pm (1.5\% + 3)$ Digital Display $6000$ count $2.8$ " TFT           Input impedance $>10$ MQ VDC & $>10$ MQ VAC           Size $195 \times 88 \times 58$ mm	Adjustable Emmisivity	Variable 0.01 to 0.99	
Interfaces           Multimeter           DC Voltage $600.0$ mV - $1000$ V $\pm (0.09\% + 5)$ AC Voltage $600.0$ mV - $1000$ V $\pm (0.8\% + 5)$ AC + DC TRMS Voltage $6.000$ V - $1000$ V $\pm (2.4\% + 20)$ DC Current $600.0$ μA - $10$ A $\pm (0.9\% + 5)$ AC Current $600.0$ μA - $10$ A $\pm (0.1.2\% + 5)$ Flexi Coil AC Current $30.00$ A - $3000$ A $\pm (0.8\% + 5)$ Duty Cycle $5.0\%$ to $95.0\%$ $\pm (1.2\% + 2)$ Resistance $600.0\Omega - 60$ MΩ $\pm (0.5\% + 5)$ Frequency $40.0$ Hz - $10$ MHz $\pm (0.09\% + 5)$ Capacitance $60.0$ 0nF - $6$ mF $\pm (1.2\% + 8)$ Temperature $-40$ - $600$ °C $\pm (1.5\% + 3)$ Digital Display $6000$ count $2.8$ " TFT           Input impedance $>10$ MΩ VDC & $>10$ MΩ VAC           Size $195 \times 88 \times 58$ mm	Measurement corrections	Emissivity, reflected temp	perature
Multimeter           DC Voltage $600.0$ mV - $1000$ V $\pm (0.09\% + 5)$ AC Voltage $600.0$ mV - $1000$ V $\pm (0.8\% + 5)$ AC + DC TRMS Voltage $6.000$ V - $1000$ V $\pm (2.4\% + 20)$ DC Current $600.0$ μA - $10$ A $\pm (0.9\% + 5)$ AC Current $600.0$ μA - $10$ A $\pm (0.1.2\% + 5)$ Flexi Coil AC Current $30.00$ A - $3000$ A $\pm (0.8\% + 5)$ Duty Cycle $5.0\%$ to $95.0\%$ $\pm (1.2\% + 2)$ Resistance $600.0\Omega - 60$ MΩ $\pm (0.5\% + 5)$ Frequency $40.0$ Hz - $10$ MHz $\pm (0.09\% + 5)$ Capacitance $60.0$ 0nF - $6$ mF $\pm (1.2\% + 8)$ Temperature $-40 - 600$ °C $\pm (1.5\% + 3)$ Digital Display $6000$ count $2.8$ " TFT           Input impedance $>10$ MΩ VDC & $>10$ MΩ VAC           Size $195 \times 88 \times 58$ mm	Data Communications	Bluetooth BLE	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Interfaces		
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	Multimeter		
AC + DC TRMS Voltage $6.000V - 1000V$ $\pm (2.4\% + 20)$ DC Current $600.0\mu A - 10A$ $\pm (0.9\% + 5)$ AC Current $600.0\mu A - 10A$ $\pm (0.1.2\% + 5)$ Flexi Coil AC Current $30.00A - 3000A$ $\pm (0.8\% + 5)$ Duty Cycle $5.0\%$ to $95.0\%$ $\pm (1.2\% + 2)$ Resistance $600.0\Omega - 60M\Omega$ $\pm (0.5\% + 5)$ Frequency $40.00Hz - 10MHz$ $\pm (0.09\% + 5)$ Capacitance $60.00nF - 6mF$ $\pm (1.2\% + 8)$ Temperature $-40 - 600^{\circ}C$ $\pm (1.5\% + 3)$ Digital Display $6000$ count $2.8''$ TFT         Input impedance $>10M\Omega$ VDC $8 > 10M\Omega$ VAC         Size $195 \times 88 \times 58mm$	DC Voltage	600.0mV - 1000V	±(0.09% +5)
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	AC Voltage	600.0mV - 1000V	±(0.8% +5)
AC Current $600.0\mu A - 10A$ $\pm (01.2\% + 5)$ Flexi Coil AC Current $30.00A - 3000A$ $\pm (0.8\% + 5)$ Duty Cycle $5.0\%$ to $95.0\%$ $\pm (1.2\% + 2)$ Resistance $600.0\Omega - 60M\Omega$ $\pm (0.5\% + 5)$ Frequency $40.00Hz - 10MHz$ $\pm (0.09\% + 5)$ Capacitance $60.00nF - 6mF$ $\pm (1.2\% + 8)$ Temperature $-40 - 600^{\circ}C$ $\pm (1.5\% + 3)$ Digital Display $6000$ count $2.8''$ TFT         Input impedance $>10M\Omega$ VDC $8 > 10M\Omega$ VAC         Size $195 \times 88 \times 58mm$	AC + DC TRMS Voltage	6.000V - 1000V	±(2.4% +20)
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	DC Current	600.0μΑ - 10Α	±(0.9% +5)
$\begin{array}{llllllllllllllllllllllllllllllllllll$	AC Current	600.0μΑ - 10Α	±(01.2% + 5)
Resistance $600.0\Omega - 60M\Omega$ $\pm (0.5\% + 5)$ Frequency $40.00$ Hz - $10$ MHz $\pm (0.09\% + 5)$ Capacitance $60.00$ nF - $6$ mF $\pm (1.2\% + 8)$ Temperature $-40 - 600$ °C $\pm (1.5\% + 3)$ Digital Display $6000$ count $2.8$ " TFT           Input impedance $>10M\Omega$ VDC & $>10M\Omega$ VAC           Size $195 \times 88 \times 58$ mm	Flexi Coil AC Current	30.00A - 3000A	$\pm(0.8\% + 5)$
	Duty Cycle	5.0% to 95.0%	±(1.2% +2)
Capacitance $60.00nF - 6mF$ $\pm (1.2\% + 8)$ Temperature $-40 - 600^{\circ}C$ $\pm (1.5\% + 3)$ Digital Display $6000 \text{ count } 2,8'' \text{ TFT}$ Input impedance $>10M\Omega \text{ VDC } 8 > 10M\Omega \text{ VAC}$ Size $195 \times 88 \times 58 \text{mm}$	Resistance	600.0Ω - 60ΜΩ	, ,
Temperature $-40 - 600^{\circ}\text{C} \pm (1.5\% + 3)$ Digital Display $6000 \text{ count } 2.8'' \text{ TFT}$ Input impedance $>10M\Omega \text{ VDC } \& >10M\Omega \text{ VAC}$ Size $195 \times 88 \times 58 \text{mm}$	Frequency	40.00Hz -10MHz	
$ \begin{array}{lll} \mbox{Digital Display} & 6000 \mbox{ count 2,8" TFT} \\ \mbox{Input impedance} & >10M\Omega \mbox{ VDC } \& >10M\Omega \mbox{ VAC} \\ \mbox{Size} & 195 \times 88 \times 58 \mbox{mm} \\ \end{array} $	Capacitance	60.00nF - 6mF	±(1.2% + 8)
Input impedance     >10MΩ VDC & >10MΩ VAC       Size     195 x 88 x 58mm	Temperature		
Size 195 x 88 x 58mm			
		>10MΩ VDC & >10MΩ VA	AC .
Weight 540g	Size	195 x 88 x 58mm	
	Weight	540g	









Built-in Infrared Thermal Imager offers you non invasive measurements of potential hot spots. These images can be transferred via Bluetooth to a Smartphone for analysis. Simply turn on the bluetooth of the smartphone. Press the Thermview+ icon and enter into the home interface, then press the Connect Device icon and the bluetooth device name will appear. Touch the device name listed in Bluetooth devices list to connect to the device.

MT2005

Thermal Multimeter

Contact Us **South Africa** 





