Tettex INSTRUMENTS

2226a

Digital Micro Ohmmeter

GENERAL

The digital micro ohmmeter type 2226a is an unique instrument capable of handling even the toughest resistance measurement applications. The type 2226a is designed to measure resistance values in the range of 0.1 µΩ ... 20 kΩ.

APPLICATIONS

- Coils for motors, generators, transformers, generator bars etc.
- Cable wires and screens
- Switches and relay contacts
- Shunts, potentiometers, slide-wires, heater elements etc.

FEATURES

- Four-wire Kelvin principle eliminates lead wire resistances
- Selectable test currents up to 10 A
- Used for quick and accurate low-resistance measurements
- Charging Inductor mode for reduced settling times
- Wide resistance measuring range (0.1 µΩ ... 20 kΩ)
- Digital LCD display 4 ½ digit with high contrast
- Safe operation by use of status indicators (safe disconnect)
- Available data outputs and remote programming capability via USB interface
- Automatic temperature compensation for copper and aluminium

TECHNICAL SPECIFICATIONS (STANDARD MEASUREMENT MODE) – PRELIMENARY SPECIFICATIONS

Range	Test Voltage	Full Scale	Resolution	Current Source[1]	Accuracy[2] (±% of Reading ±Ω)	Temperature[3] Coefficient
2mΩ	20mV	2.0000mΩ	100nΩ	10A	± .06 ± .0006m	±50ppm/°C
20mΩ	20mV	20.000mΩ	1µΩ	1A	± .04 ± .006m	±50ppm/°C
200mΩ	20mV	200.00mΩ	10µΩ	0.1A	± .04 ± .06m	±50ppm/°C
2Ω	20mV	2.0000Ω	100µΩ	10mA	± .04 ± .0006	±50ppm/°C
20Ω	20mV	20.000Ω	1mΩ	1mA	± .04 ± .006	±50ppm/°C
200Ω	20mV	200.00Ω	10mΩ	0.1mA	± .04 ± .06	±50ppm/°C
20mΩ	200mV	20.000mΩ	1µΩ	10A	± .06 ± .003m	±50ppm/°C
200mΩ	200mV	200.00mΩ	10µΩ	1A	± .04 ± .03m	±50ppm/°C
2Ω	200mV	2.0000Ω	100µΩ	0.1A	± .04 ± .0003	±50ppm/°C
20Ω	200mV	20.000Ω	1mΩ	10mA	± .04 ± .003	±50ppm/°C
200Ω	200mV	200.00Ω	10mΩ	1mA	± .04 ± .03	±50ppm/°C
2kΩ	200mV	2.0000kΩ	100mΩ	0.1mA	± .04 ± .0003k	±50ppm/°C
200mΩ	2V	200.00mΩ	10µΩ	10A	± .06 ± .03m	±50ppm/°C
2Ω	2V	2.0000Ω	100µΩ	1A	± .04 ± .0003	±50ppm/°C
20Ω	2V	20.000Ω	1mΩ	0.1A	± .04 ± .003	±50ppm/°C
200Ω	2V	200.00Ω	10mΩ	10mA	± .04 ± .03	±50ppm/°C
2kΩ	2V	2.0000kΩ	100mΩ	1mA	± .04 ± .0003k	±50ppm/°C
20kΩ	2V	20.000kΩ	1Ω	0.1mA	± .04 ± .003k	±50ppm/°C

TECHNICAL SPECIFICATIONS (TEMPERATURE COMPENSATION MODE)

Range	Range Setting	Accuracy[2] (±% of Reading ±Ω)
2m	10A/20mV	± .11 ± .0006m
20m	1A/20mV	± .09 ± .006m
200m	.1A/20mV	± .09 ± .06m
2	10mA/20mV	± .09 ± .0006
20	1mA/20mV	± .09 ± .006
200	.1mA/20mV	± .09 ± .06
20m	10A/200mV	± .11 ± .003m
200m	1A/200mV	± .09 ± .03m
2	.1A/200mV	± .09 ± .0003
20	10mA/200mV	± .09 ± .003
200	1mA/200mV	± .09 ± .03
2k	.1mA/200mV	± .09 ± .0003k
200m	10A/2V	± .11 ± .03m
2	1A/2V	± .09 ± .0003
20	.1A/2V	± .09 ± .003
200	10mA/2V	± .09 ± .03
2k	1mA/2V	± .09 ± .0003k
20k	.1mA/2V	± .09 ± .003k

Notes:
1 Current source is ±1% absolute accuracy
2 Accuracy specifications are valid following a 30 minute warm-up at an ambient temperature between 22°C and 28°C, and include the effects of line voltage variations within the allowed range.
3 Temperature coefficient specified for temperature ranges from 5°C to 21°C and 29°C to 50°C.
4 Accuracy specifications valid following a 30 minute warm-up at an ambient temperature between 21°C and 29°C.

GENERAL SPECIFICATIONS

Display:	Multi Section VFD 140px x 32px
Overload Indication:	Display flashes “OVERLOAD”
Terminal Configuration:	Four-wire Kelvin
ADC Conversion Rate:	45 conversions / second
Display Update:	5 user selections (100ms, 200ms, 300ms, 400ms, 500ms)
Maximum Kick-Back Protection:	500 A Peak Induced Current
Compliance Voltage (Normal Mode):	7.5 VDC nominal at 10A resistive
Compliance Voltage (Charging Inductor Mode):	> 20 VDC when indicator is lit
Open Circuit Voltage (Test Current Off) :	< 20mV between IHI and ILO terminals
Environmental	
Operating Temperature Range:	0 to 50°C
Humidity:	70% RH at 40°C non-condensing
Storage Temperature Range:	-30°C to 70°C
Power Requirements	
Power Supply Voltage:	105-125 or 210-250 VAC
Power Supply Frequency:	50 - 60 Hz
Power Supply Consumption:	200 VA Maximum
Physical	
Dimensions (W x D x H):	430 x 430 x 100 mm (17 x 17 x 4 inch.)
Weight:	9.1 kg (20 lbs) Net; 11.8 kg (26 lbs) Shipping

SCOPE OF SUPPLY

- Digital micro-ohmmeter 0.1 µΩ...20 kΩ ± 0.01 / 0.03 %
- User Manual
- USB computer interface for data transfer
- Temperature Sensor for aluminium and copper
- Rack Mount Kit for 19” racks
- 4-wire Kelvin cable set, length 1.2

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