

# 2226a

## Digital Micro Ohmmeter

*Datasheet*



# HAEFELY

Current and voltage – our passion

Designed by



# General Description

The digital micro ohmmeter type 2226a is a 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  $\mu\Omega$  ... 20 k $\Omega$ .

Features	Advantages
▪ Functions based on 4-wire Kelvin principle	☑ Eliminates lead wire resistances
▪ Selectable test current up to 10 A	☑ Variable measurement range
▪ 18 range combinations	☑ Flexible measuring range
▪ Wide resistance measuring range (0.1 $\mu\Omega$ ... 20 k $\Omega$ )	☑ Wide dynamic measurement range
▪ Digital LCD display 4 ½ digit with high contrast	☑ Supreme test measurement display
▪ Safe operation by use of status indicators (safe disconnect)	☑ Ensures safety of personnel and equipment
▪ Available data outputs and remote programming capability via USB interface	☑ Easy storage and recall of measurement data
▪ Automatic temperature compensation for copper and aluminum	☑ High precision measurements

## Applications

Resistance measurement of:

- Cable wires and screens
- Switches and relay contacts
- Shunts, potentiometers, slide-wires, heater elements etc.

## Scope of Supply

- Digital micro-ohmmeter 0.1  $\mu\Omega$  ... 20 k $\Omega$   $\pm$  0.01 / 0.03 %
- Temperature sensor for aluminium and copper
- Rack Mount Kit for 19" racks
- 4-wire Kelvin cable set, length 1.2 m
- USB computer interface for data transfer
- Operating Manual

# Technical Data

Measurement	
Max. Kick-Back Protection	500 A Peak Induced Current
Compliance Voltage	Normal Mode: 7.5 VDC nominal at 10 A resistive Charging Inductor Mode: > 20 VDC when indicator is lit
Open Circuit Voltage	<20 mV between IHI and ILO terminals (Test current off)

Range	Test Voltage	Full Scale	Resolution	Current Source <sup>1</sup>	Accuracy <sup>2</sup> (±% of Reading ±Ω)	Temperature <sup>3</sup> Coefficient
2 mΩ	20 mV	2.0000 mΩ	100 nΩ	10 A	±0.06 ± 0.0006 m	±50 ppm/°C
20 mΩ	20 mV	20.000 mΩ	1 μΩ	1 A	±0.04 ± 0.006 m	±50 ppm/°C
200 mΩ	20 mV	200.00 mΩ	10 μΩ	0.1 A	±0.04 ± 0.06 m	±50 ppm/°C
2 Ω	20 mV	2.0000 Ω	100 μΩ	10 mA	±0.04 ± 0.0006	±50 ppm/°C
20 Ω	20 mV	20.000 Ω	1 mΩ	1 mA	±0.04 ± 0.006	±50 ppm/°C
200 Ω	20 mV	200.00 Ω	10 mΩ	0.1 mA	±0.04 ± 0.06	±50 ppm/°C
20 mΩ	200 mV	20.000 mΩ	1 μΩ	10 A	±0.06 ± 0.003 m	±50 ppm/°C
200 mΩ	200 mV	200.00 mΩ	10 μΩ	1 A	±0.04 ± 0.03 m	±50 ppm/°C
2 Ω	200 mV	2.0000 Ω	100 μΩ	0.1 A	±0.04 ± 0.0003	±50 ppm/°C
20 Ω	200 mV	20.000 Ω	1 mΩ	10 mA	±0.04 ± 0.003	±50 ppm/°C
200 Ω	200 mV	200.00 Ω	10 mΩ	1 mA	±0.04 ± 0.03	±50 ppm/°C
2 kΩ	200 mV	2.0000 kΩ	100 mΩ	0.1 mA	±0.04 ± 0.0003 k	±50 ppm/°C
200 mΩ	2 V	200.00 mΩ	10 μΩ	10 A	±0.06 ± 0.03 m	±50 ppm/°C
2 Ω	2 V	2.0000 Ω	100 μΩ	1 A	±0.04 ± 0.0003	±50 ppm/°C
20 Ω	2 V	20.000 Ω	1 mΩ	0.1 A	±0.04 ± 0.003	±50 ppm/°C
200 Ω	2 V	200.00 Ω	10 mΩ	10 mA	±0.04 ± 0.03	±50 ppm/°C
2 kΩ	2 V	2.0000 kΩ	100 mΩ	1 mA	±0.04 ± 0.0003 k	±50 ppm/°C
20 kΩ	2 V	20.000 kΩ	1 Ω	0.1 mA	±0.04 ± 0.003 k	±50 ppm/°C

(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.

Hardware	
Display	Multi Section VFD 140px x 32 px
Overload Indication	Display flashed "OVERLOAD"
Terminal Configuration	Four-wire Kelvin
ADC Conversion rate	45 conversions/second
Display Update	5 User selections (100 ms, 200 ms, 300 ms, 400 ms, 500 ms)

Mains Power Supply	
Voltage	105 ... 125 or 210 ... 250 V AC
Power	200 VA max.
Frequency	50 - 60 Hz

Environmental	
Operating temperature	0 °C ... +50 °C
Storage temperature	-30 °C ... +70 °C
Humidity	70 % r.h. , at 40 °C non-condensing

Mechanical	
Dimensions (W x D x H)	430 x 430 x 100 mm (16.9 x 16.9 x 3.9 in)
Weight	9.1 kg (20 lb)

## Global Presence

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HIGH VOLTAGE



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