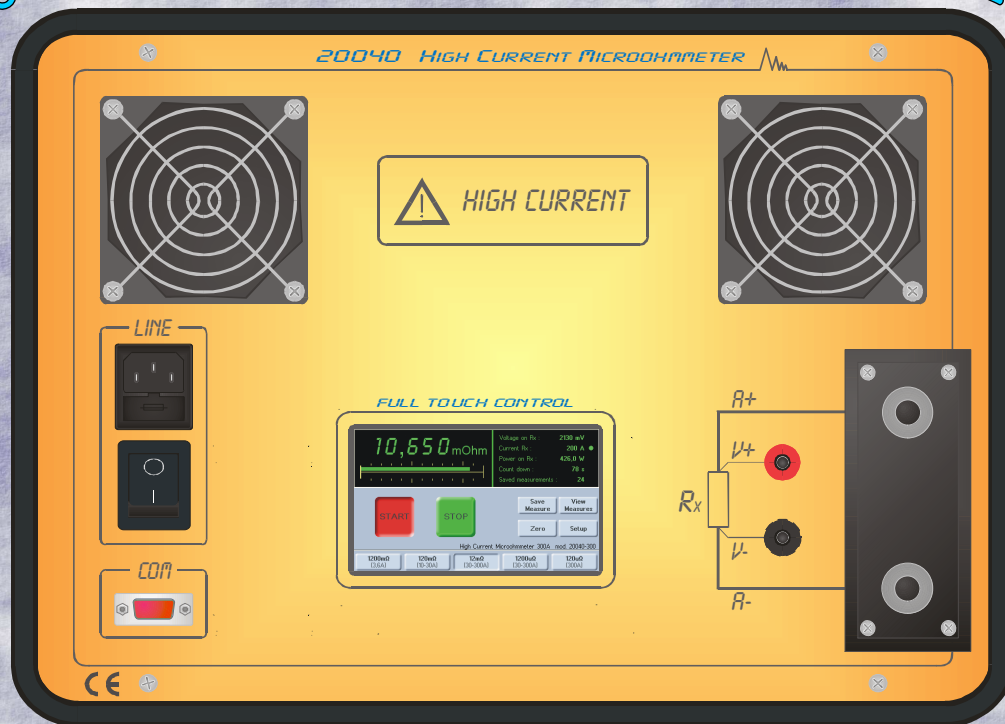


# 20040 High Current Microohmmeter



12000 points

1200m $\Omega$  – 10n $\Omega$

300A

**20040** is a microohmmeter specifically designed for high-current measurements for testing of high power contactors. With a sturdy plastic case watertight easily transportable and weighing less than 9Kg, is able to deliver current up to 300A and measure resistive elements comprised between 1200m $\Omega$  and 10n $\Omega$ .

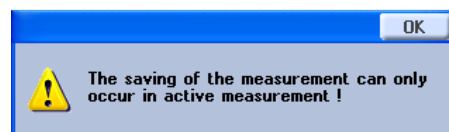
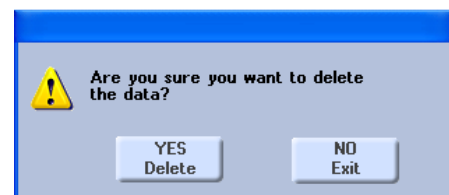
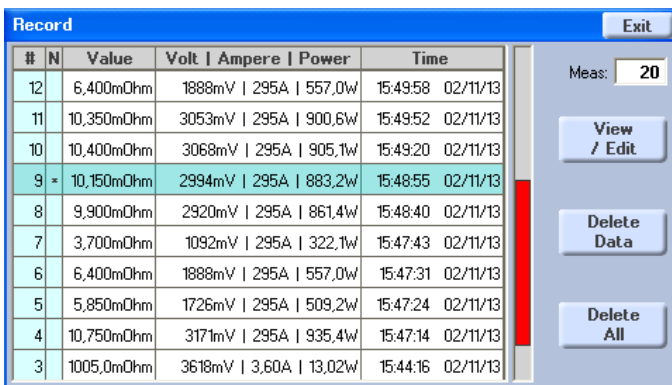
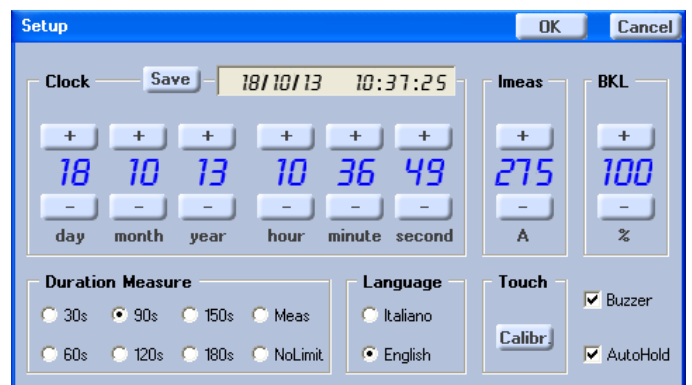
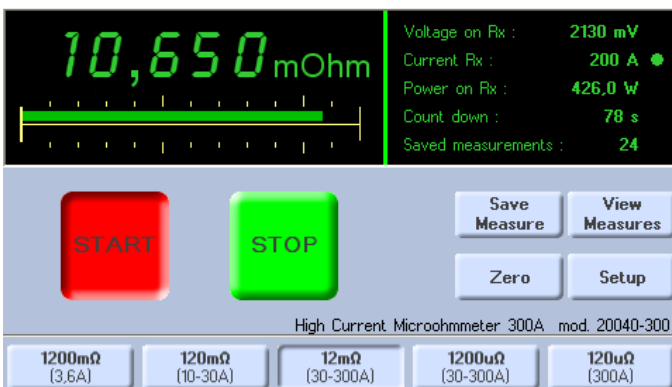
The interface to the operator is constituted by a smart display 4.3" 480x272 pixels with touch that allows the entire management of the instrument in a very simple, comprehensive and intuitive, but especially new for this class of instrument, in an environment very similar to the Windows.

- ▶ 12000 measuring points / 2 measurements per second
- ▶ 5 ranges from 1200m $\Omega$  to 120 $\mu\Omega$  (from 100  $\mu\Omega$  to 10 n $\Omega$  of resolution)
- ▶ settable measuring currents up to 300A in steps of 5A
- ▶ measurement times can be set in various ways / values
- ▶ smart color display with resistive touch
- ▶ save up to 200 measurements each with: ohmic value, voltage seen on Rx, current measurement, power dissipation of Rx, date and time of the saving data with resolution of the second and message up to 180 characters
- ▶ language: Italian and English
- ▶ alert windows with various detailed signaling messages in case of incorrect settings or selections
- ▶ bar graph of 240 points
- ▶ backlight adjustable from 20% to 100%
- ▶ acoustic signal activable/deactivable
- ▶ measure hold activable/deactivable
- ▶ reading data and setting via optocoupled USB
- ▶ only two commands: one to read all the data and one to read saved measures and notes

The main window, in addition to indicating the measure also in bar graph mode and provide keys for selecting the desired range, setting and saving data, provide other useful information such as the voltage across the unknown resistance and the power dissipated by it, the current measurement, the elapsed time of the measurement or the time remaining at its end, depending on the selection of functional mode, as well as the number of saved measurements. There is also a bar graph bicolor (green superiorly for properly positive values and red lowerly for negative values) that helps give a visual indication of the measure due to its 240 points of resolution.

In the window **Record** lists the measures saved by the **Save Measure** key together with auxiliary measures and time and date. The scroll of the saved measures can be possible by means of the bar to the side that directly touching the list and sliding a finger. The presence of an asterisk indicates that the measure also has a message, or note, up to a maximum of 180 characters, which you can view, edit, delete or modify using a QWERTY keyboard that has all the characters and normal editing keys.

The measuring current reaches the predetermined value with an increase of about 50A / second, so as to avoid excessive peak currents in the device under test. Appropriate acoustic and visual signals indicate if the current is increased, decreased, has settled to the set value or the current circuit is opened.



Main and setup windows, window with list of saved measurements, keyboard and alerts messages, all in an environment similar to Windows.

## TECHNICAL DATA

<b>Power supply</b>	90÷260Vac 47-63Hz 10AT (230Vac) or 20AT (110Vac)		
<b>Power requirement</b>	1800VA max		
<b>Representation</b>	smart touch display 4.3" 480x272 pixels with 16 million colors		
<b>Brightness backlight</b>	280 cd/m <sup>2</sup> adjustable from 20% to 100%		
<b>Points of measure</b>	12000		
<b>Display refresh rate</b>	2 Hz		
<b>Range</b>	120.00μΩ, 1200.0μΩ, 12.000mΩ, 120.00mΩ, 1200.0mΩ		
<b>Range selection</b>	manual		
<b>Resolution</b>	10nΩ, 100nΩ, 1μΩ, 10μΩ, 100μΩ		
<b>Measurement accuracy</b>	±(1% + 5 dgt)	(range 120.00μΩ)	
	±(1% + 3 dgt)	(ranges 1200.0μΩ, 12.000mΩ e 120.00mΩ)	
	±(2% + 10 dgt)	(range 1200.0mΩ)	
<b>Measure current</b>	120.00μΩ	→	300A
	1200.0μΩ	→	selectable from 30A to 300A in step of 5A
	12.000mΩ	→	selectable from 30A to 300A in step of 5A
	120.00mΩ	→	selectable from 10A to 30A in step of 5A
	1200.0mΩ	→	3,6A
<b>Circuit voltage of the current terminals</b>	6V approximately		
<b>Maximum power dissipation on load (connection cables including)</b>	1500W approximately		
<b>Power cables available on request</b>	2x5m 25mm <sup>2</sup>	(nominal resistance overall of 8mΩ)	
	2x5m 50mm <sup>2</sup>	(nominal resistance overall of 4mΩ)	
	2x10m 75mm <sup>2</sup>	(nominal resistance overall of 5,3mΩ)	
	2x10m 95mm <sup>2</sup>	(nominal resistance overall of 4,2mΩ)	
<b>Maximum length of power cables usable to 300A 25°C</b>	2x10m 25 mm <sup>2</sup>	(nominal resistance overall of 16mΩ)	
	2x20m 50 mm <sup>2</sup>	(nominal resistance overall of 16mΩ)	
	2x30m 75 mm <sup>2</sup>	(nominal resistance overall of 16 mΩ)	
	2x38m 95 mm <sup>2</sup>	(nominal resistance overall of 16 mΩ)	
<b>Measurement time</b>	10sec, 30sec, 60sec, 90sec, 120sec, 150sec, 180sec and "NoLimit"		
<b>Rate of increase / decrease measuring current</b>	50A/sec		
<b>Reading accuracy of the current measurement</b>	better than 0,5%	(ranges from 120.00μΩ to 120.00mΩ)	
	better than 1,5%	(range 1200.0mΩ)	
<b>Reading accuracy of voltage measurement</b>	better than 0.5% on all ranges		
<b>Input impedance voltmeter section</b>	>1MΩ		
<b>Saving measures</b>	up to 200 measures, each with: resistance value, voltage across Rx, measuring current, power dissipation of Rx, date, time and eventual records up to 180 characters		
<b>Measures retention time</b>	no limit		
<b>Clock/calendar</b>	yes, as standard		
<b>Battery autonomy clock/calendar</b>	10 years (battery type: CR2032)		
<b>Language messages</b>	selectable Italian or English		
<b>Optocoupled USB connection</b>	with optional USB converter		
<b>Weight</b>	8,85 Kg approximately		
<b>Dimension</b>	410x325x175mm (W x H x D)		
<b>Working temperature range</b>	-20°C ÷ +50°C		
<b>Storage temperature range</b>	-30°C ÷ +70°C		