5898
MICRO-OHMMETER

FEATURING HIGH MEASUREMENT CURRENT UP TO 200A

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PRECISION INSTRUMENTS

OVERVIEW

The MICRO-OHMMETER 5898 is used to determine electric resistances on very low - resistance objects (e. g. bus bars, any connectors) while using a very high measurement current. The 5898B is able to generate a maximum current up to 200A.

Under normal conditions, the electric resistance can be determined using a much lower current. For example, our MICRO-OHMMETER MR300C-A has a 10A measurement current with a resolution of 10nΩ (10-8Ω!). However, faulty connections can not be found this way, as a high current is needed to determine the dissipation causing unstable or rising measurement values on bad connections. To perform this aconstant high measurement current in the 5898B will be generated max. 3 seconds as suggested in QVA-Z10-31-00 testing standard.

Although line powered the 5898 is battery buffered. Therefore a limited count of measurements without active line source are possible.

Additionally, the measurement values can be send to any PC based spreadsheet program e.g. EXCEL© using the integrated interface. Time based sending is also supported, e.g. when evaluating the dissipation, measurement values are sent via interface.

KEY FEATURES

- Useful Range 20µΩ – 2Ω (within specified uncertainty)
- Max. resolution 100 Nanoohm
- Display 4 digits
- Measuring current 1..20A
- Current duration max. 3s @ 200A
- Interface RS232C, USB-B
- Built-in thermal printer
- Cables included: STD 5m 2x current-(25mm^2), 2x sense-, ground-, line and RS232/USB-cable (PC)
- Factory calibration certificate
- Rugged, robust mobile case

HIGH PRECISION RESISTANCE METERS MICRO-OHMMETERS

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TEST CURRENT	max. 200A (True DC). Increment 1A Adjustable and presetable from 0 to 100%
RESISTANCE RANGES	0-199.9 µW (test current: up to 200A) 0-1.999 mW (test current: up to 200A) 0-19.99 mW (test current: up to 100A) 0-199.9 mW (test current: up to 20A) 0-1999 mW (test current: up to 2A).
READING RESOLUTION	0.1 µW for R < 200 µW 1 µW for R < 2000 µW 10 µW for R < 20 mW
OUTPUT VOLTAGE	4..5 Vdc @ all currents
DISPLAY	4 digits result, current and time LCD 9mm character height with backlight
TOTAL RESISTANCE	max. 20 mW@ 200A max. 40 mW@ 100A
MEASUREMENT PRINCIPLE	Four-terminal due to Kelvin
THERMAL PROTECTION	Protects the instrument from overheating
BASIS ACCURACY	± 0.3% of reading ± 0.1% of Range
CURRENT FLOW DURATION	The Duration (time) for current flow is limited to 3s at 200A! At lower currents measuring time can be increased (e.g. 30s at 10A)
ADVANCED FEATURES	Digital direct reading of resistance, current, measuring time and updated evey second
BUILT-IN MEMORY	Storage of 1000 test readings
INTERFACE RS232	@ 2400, 4800, 9600 baud., USB-B
ENVIRONMENTAL PROTECTIONS	IP54 (with closed lid)
SAFETY CLASS	Meets the requirements of IEC 61010-1:1990, IEC 61010-1:1992 amendment 2
POWER SUPPLY	90~264 VAC / 47..63Hz single phase
OPERATING TEMPERATURE	0°C to 45°C (Battery limited)
STORAGE TEMPERATURE	-10°C to 55°C (Battery limited)
HUMIDITY RANGE	95% of RH (non condensing)
EQUIPMENT WEIGHT	Approx. 12kg
DIMENSIONS	410W x 330D x 180Hmm
PRINTER	Thermal printer

All technical datas are evaluated with 5m Standard Measuring Cables, 100 µΩ test resistance, battery source, at 23°C room temperature.

This instrument can be delivered as MR5-200C version too. There are two main differences between the MR5-200C and the 5898B:

The P-Version offers only short current pulses with a series of measurements in a predefined total time. In the same time the C-Version uses continuous current flow instead. On the other hand the P-Version can be used for short time measurements without line connection, the C-Version needs line source for all operation modes.

	MR5-200C	**5898B**
Current flow	up to 1 h cont.	max. 3 s at 200A
Battery operation	no	yes
Max.Measurements	no limit	100 (500ms pulse) @ 200A
Weigh	9.5 kg	10.5 kg
Inductive objects	only small loads	no inductive loads

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