

## Product Data Sheet

Manufacturer : Robin

Model : AR4000 Series Of Multimeters

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Robins AR6000 series of digital multimeters are compact and light weight and have been designed for demanding field conditions.

**AR 4000**



The manual ranging **AR 4000** can measure voltage, current and resistance and has the ability to make accurate measurements of non-filtered DC signals. It also features a continuity beeper for fast circuit checks and a diode test function.

**AR 4001**



Ideal for first level electronic and electrical system troubleshooting applications, the **AR 4001** features autoranging DC and AC voltage and resistance measurement plus the ability to measure capacitance, frequency and logic levels on digital circuits and serial communications. Its compact size makes it an ideal companion in the field.

**AR 4002**



The **AR 4002** features autoranging voltage, current and resistance measurements. It can accurately measure raw DC signals to within 0.5%, particularly important when measuring instrumentation signals superimposed with electrical noise in industrial environments.

**AR 4003**



The **AR 4003** is a high specification, autoranging, True RMS multimeter with automatic reading hold, diode test and continuity beeper. It can also measure capacitance and frequency.

All models have been designed to the CE marking UL1244CSA C22.2 N0.231 and ISA-DS82. They come with a heavy duty rubberised holster and are both dust & splash proof.

**Included with all models:** Test Leads, Safety Holster, Instruction Manual, Certificate of Conformity.

**Optional:** Snap-Lok Fused Test Leads, Certificate of Calibration, RS 232 Adaptor Kit (AR4009), TP 1-8 Temperature Probes (AR 4007, AR 4009).

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AR 4007



The **AR 4007** offers autoranging, true RMS measurement and total harmonic distortion measurement. It also features comparator, Go-No-Go and percentage programming capabilities. All this plus frequency, capacitance and temperature measurement make the **AR 4007** the cost effective solution for laboratory or field use

AR 4009



The **AR 4009** is a true RMS multimeter with user programmable test levels. It is fully autoranging and measures capacitance, frequency and temperature. It can also measure total harmonic distortion on electrical circuits as a % of total RMS current or voltage - a feature normally only found on expensive analysing instruments.

An RS-232C communication port is provided for downloading measurements and monitoring readings on a computer.

AR 4011



The **AR 4011** is a high performance, general purpose multimeter offering a 4½ digit 20000 count display for improved measurement resolution, and offers a basic DC voltage accuracy of 0.1%.

The **AR 4011** features AC and DC voltage and Current measurement and resistance measurement to 20Mohm. It also has a diode test, Data Hold button and continuity buzzer

AR 40012



The **AR 4012** Automotive Multimeter Kit has been specifically developed for the testing of automotive electrical and combustion systems. The instrument was developed for a large national vehicle breakdown organisation and provides all of the tests generally required for garage or field use. The instrument is provided as a complete kit and includes inductive pick-up coil, K-Type thermocouple, test leads and innovative cable piercing test probes. A comprehensive manual and user guide is also provided.

**Robin AR4000 Series Comparison Table**

	AR 4001	AR 4000	AR 4011	AR 4012
<b>DC Voltage Range &amp; Accuracy</b>	400mV 4V 40V 400V 750V ± (0.9% + 2 dgt)	200mV 2V 20V 200V 1000V ± (0.5% + 1 dgt)	200mV 2V 20V 200V 1000V ± (0.1% + 6 dgt)	4V 40V 400V ± (0.3% + 2 dgt) 1000V ± (0.75% + 3 dgt)
<b>AC Voltage Range &amp; Accuracy</b>	4V 40V 400V 750V ± (1.9% + 3 dgt)	200mV 2V 20V 200V ± (0.8% + 3 dgt) 750V ± (1.2% + 3 dgt)	200mV 2V 20V ± (0.5% + 10 dgt) 200V 750V ± (1.0% + 10 dgt)	4V 40V 400V ± (0.75% + 3dgt) @ 50 – 60Hz 750V ± (0.75% + 5dgt) @ 50-60Hz

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## Robin AR4000 Series Comparison Table Cont'd

Cont'd	AR 4001	AR 4000	AR 4011	AR 4012
DC Current Range & Accuracy	n/a	200uA 2mA 20mA 200mA 2A ± (0.8% + 1 dgt) 10A ± (2.0% + 10 dgt)	200uA 2mA 20mA ± (0.5% + 3 dgt) 200mA 2A ± (0.8% + 3 dgt) 10A ± (2.0% + 10 dgt)	400uA 4000uA 40mA 400mA ± (0.5% + 1 dgt) 4A 14A 10A ± (1.0% + 5 dgt)
AC Current Range & Accuracy	n/a	200uA 2mA 20mA 200mA 2A ± (1.5% + 3 dgt) 10A ± (3.5% + 10 dgt)	200uA 2mA 20mA ± (1.0% + 10 dgt) 200mA 2A ± (1.2% + 3 dgt) 10A ± (3.0% + 10 dgt)	40uA 400uA 40mA 400mA 4A 10A ± (1.0% ± 5 dgt)
Resistance Range & Accuracy	400Ω 4kΩ 40kΩ 400kΩ 4MΩ ± (0.75% + 2 dgt) 20MΩ ± (1.5% + 3 dgt)	200Ω ± (0.5% + 0 dgt) 2kΩ 20kΩ 200kΩ 2MΩ ± (0.5% + 1 dgt) 20MΩ ± (1.0% + 2 dgt)	200Ω 2kΩ 20kΩ 200kΩ ± (0.3% + 2 dgt) 2MΩ 20MΩ ± (0.5% ± 5 dgt)	400Ω ± (0.5% + 10 dgt) 4kΩ 40kΩ 400kΩ 4MΩ ± (0.5% + 3 dgt) 40MΩ ± (1.5% + 10 dgt)
Capacitance Range & Accuracy	1uF 10uF 100uF 1000uF ± (2.5% + 15dgt) 10000uF ±(10% + 90dgt)	N/A	N/A	N/A
Frequency Range & Accuracy	20kHz 200kHz Autoranging ± (0.2% + 2 dgt)	n/a	n/a	200Hz 2000Hz ± (0.2% + 2 dgt) 20kHz 200kHz ± (0.05% + 2 dgt)
Temperature Range & Accuracy	N/A	N/A	±(3.0°C + 1dgt) (-40 to -10°C) ± 3°C (-10°C to 20°C) ± (1% + 2°C) (20°C to 400°C) ±(3.0% of reading) (400°C to 1 370°C)	±(3.0°C + 1 dgt) (-40 to -10°C) ± 3°C (-10°C to 20°C) ± (1% + 2°C) (20°C to 400°C) ±(3.0% of reading) (400°C to 1 370°C)
Dimensions	154 x 40 x 80mm (without holster)	190 x 40 x 85mm (without holster)	190 x 40 x 85mm (without holster)	190 x 40 x 85mm (without holster)
Weight	420g (without holster)	380g (without holster)	380g (without holster)	380g (without holster)

	AR 4009	AR 4007	AR 4003	AR 4002
DC Voltage Range & Accuracy	400mV 4V 40V 400V ± (0.3% + 2 dgt) 1000V ±( 0.75% + 3 dgt)	400mV 4V 40V 400V ± (0.3% + 2 dgt) 1000V ± (0.75% + 3 dgt)	400mV 4V 40V 400V ± (0.3% + 2 dgt) 1000V ± (0.75% + 3 dgt)	326mV 3.26V 32.6V 326V ± (0.5% + 2 dgt) 1000V ± (0.75% + 3 dgt)
AC Voltage Range & Accuracy	4V 40V 400V ± ( 0.75% + 3 dgt) (50 – 60Hz) ± (2.5% + 5 dgt) (45 – 1kHz) 750V ± (0.75% + 5 dgt) (50 – 60kHz) ± (2.5% + 5 dgt) (45 – 1kHz)	4V 40V 400V ± ( 0.75% + 3 dgt) (50 – 60Hz) ± (2.5% + 5 dgt) (45 – 1kHz) 750V ± (0.75% + 5 dgt) (50 – 60kHz) ± (2.5% + 5 dgt) (45- 1kHz)	4V 40V 400V ± ( 0.75% + 3 dgt) (50 – 60Hz) ± (2.5% + 5 dgt) (45 – 1kHz) 750V ± (0.75% + 5 dgt) (50 – 60kHz) ± (2.5% + 5 dgt) (45- 1kHz)	3.26V 32.6V 326V ± (0.75% + 3 dgt) 750V ± (1.0% + 3 dgt)
DC Current Range & Accuracy	400µA 4000µA 40mA 400mA ± (0.5% + 1 dgt) 4A 10A ± (1.0% + 5 dgt)	400µA 4000µA 40mA 400mA ± (0.5% + dgt) 4A 10A ± (1.0% + 5 dgt)	400A 4000µA 40mA 400mA ± (0.5% + 1 dgt) 4A 10A ± (1.0% + 5 dgt)	326µA 3260µA 32.6mA 326mA ± (0.5% + 3 dgt) 10A ± (1.0% + 5 dgt)
AC Current Range & Accuracy	400µA 4000µA 40mA 400mA 4A 10A ± (1.5% + 7 dgt)	400µA 4000µA 40mA 400mA 4A 10A ± (1.5% + 7 dgt)	400µA 4000µA 40mA 400mA 4A 10A ± (1.5% + 7 dgt)	326µA 3260µA 32.6mA 326mA ± (1.5% + 3 dgt) 10A ±(1.5% + 7 dgt)

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**Robin AR4000 Series Comparison Table Cont'd**

	AR 4009	AR 4007	AR 4003	AR 4002
<b>Resistance Range &amp; Accuracy</b>	400Ω ± (0.5% + 10 dgt) 4kΩ 40kΩ 400kΩ 4MΩ ± (0.5% + 3 dgt) 40MΩ (±1.0% + 10 dgt)	400Ω ± (0.5% + 10 dgt) 4kΩ 40kΩ 400kΩ 4MΩ ± (0.5% + 3 dgt) 40MΩ (± 1.0% + 10 dgt)	400Ω ± (0.5% + 10 dgt) 4kΩ 40kΩ 400kΩ 4MΩ ± (0.5% + 3 dgt) 40MΩ (± 1.0% + 10 dgt)	326Ω, 3.26kΩ, 32.6kΩ 326kΩ 3.26MΩ ± (0.5% + 3 dgt) 32.6MΩ ± (1.0% + 10 dgt)
<b>Capacitance</b>	1μF, 10μF, 100μF, 1000μF (±1.9%+2dgt)	1μF, 10μF, 100μF, 1000μF (±1.9%+2dgt)	1μF, 10μF, 100μF, 1000μF (±1.9%+2dgt)	1μF, 10μF, 100μF, 1000μF (±1.9%+2dgt)
<b>Frequency Range &amp; Accuracy</b>	200Hz, 2kHz, 20kHz, 200kHz, >200kHz ± (1.0%+2 dgt)	200Hz, 2kHz, 20kHz, 200kHz, >200kHz ± (1.0%+2 dgt)	200Hz, 2kHz, 20kHz, 200kHz, >200kHz ± (1.0%+2 dgt)	200Hz, 2kHz, 20kHz, 200kHz, >200kHz ± (1.0%+2 dgt)
<b>Temperature Range &amp; Accuracy</b>	-40°C to 1370°C ± (3% + 1°C) (-40°C to 0°C) ± (1% + 2°C) (0°C to 400°C) ± (3% of reading) (400°C to 1370°C)	N/A	N/A	N/A
<b>Dimensions</b>	190 x 40 x 85mm (without holster)	190 x 40 x 85mm (without holster)	190 x 40 x 85mm (without holster)	190 x 40 x 85mm (without holster)
<b>Weight</b>	380g (without holster)	380g (without holster)	380g (without holster)	380g (without holster)

**Robin AR4000 Series Features**

	AR 4000	AR 4001	AR 4002	AR 4003	AR 4007	AR 4009	AR 4011	AR 4012
Display Count	2000	4000	3260	4000	4000	4000	20000	4000
LCD Display	3 ½	3 ¾	3 ¾	3 ¾	3 ¾	3 ¾	4 ½	3 ¾
Ranging	Manual	Auto	Auto	Auto	Auto	Auto	Manual	Auto
Basic DC Volts Accuracy	0.5%	0.9%	0.5%	0.3%	0.3%	0.3%	0.1%	0.3%
Basic AC Volts Accuracy	0.8%	1.9%	0.75%	0.5%	0.5%	0.5%	0.5%	0.95%
True-RMS				✓	✓	✓		
Bar Graph Data Hold		✓	✓	✓	✓	✓	✓	✓
Fused 10A Range	✓			✓	✓	✓	✓	✓
Continuity Bleeper and Diode Test	✓	✓	✓	✓	✓	✓	✓	✓
THD Measurement (50/60Hz)					✓	✓		
Frequency Measurement		✓		✓	✓	✓		✓
Capacitance Measurement		✓		✓	✓	✓		
Temperature Measurement					✓	✓		✓
Recording Offset and Relative Mode					✓	✓		✓
Go-No-Go Programming					✓	✓		
Safety Holster	✓	✓	✓	✓	✓	✓	✓	✓
RS232 Port (optional adaptor required)						✓		
Logic Probe Function		✓						

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