sifam tinsley
PRECISION INSTRUMENTATION

DIGITAL MULTIMETER
iJunior / Junior
www.sifamtinsley.co.uk

DATASHEET

Issue 1.0

Multifunction Meters

Transducers & Isolators

Temperature Controllers

Converters & Recorders

Digital Panel Meters

Current Transformers

Analogue Panel Meters

Shunts

Digital Multimeters

Clamp Meters

Insulation Testers

iJUNIOR / JUNIOR

SUBJECT TO CHANGE WITHOUT NOTICE
This datasheet superseded all previous versions – please keep for future reference

iJunior / Junior

Features

- Non Contact Voltage Detectiom
- Data Hold
- Overload protection
- Relative Measurement

iJunior / Junior Multimeter is suited for universal, general applications in the electrical and electronics fields, as well as in radio and television service, training and education. It is of especially pocket size design, and thus fit into pocket. The protective cover, which is provided as optional accessory, can be opened at an angle for convenient reading from the workbench, and provides for easy transport.

Application

Multimeter is 3 digit high performance instruments suited for universal, general applications in the electrical and electronics fields, as well as in radio and television service, training and education. It is of especially pocket size design, and thus fit into pocket.

Product Features

Hold
By pressing the HOLD key, the currently displayed measurement value can be held and “HOLD” is simultaneously displayed

Relative Measurement
By pressing the REL key, the zero correction is made. All functions can do zero correction except Hz/Duty

Auto/Man Measuring Range selection
The measurement functions are chosen with the rotary selector switch. The measuring range is automatically adjusted to the measurement value. The measuring range can also be manually selected with the AUTO/MAN button.

Note : For Frequency (Hz) ,Duty cycle (%), and Capacitance (F) measuring range is AUTO . No Manual range selection is possible.

Hz/ Duty
The instrument can measure frequency (Hz) and duty cycle (%) of the AC Voltage by pressing Function (Yellow) key.

Non Contact Voltage Detection
Instrument allows you to detect the voltage presence in the live circuit without any electrical contact. NCV will be detected above 120V AC without safety cover.

Overload Warning
An acoustic signal occurs when measuring AC voltage>750V,DC Voltage>1000V, AC/DC mA current>400.0mA, AC/DC current>10.00A.

Protective Cover (Optional)
A protective cover of Rubber Holster with a built-in stand protects the instrument against jolts and falls

Energy Saving Circuit
The instrument is switched off automatically, if none of the operating elements have been activated for about 15 minutes.

Diode and Continuity Testing
This provides for the testing of the polarity of diodes, as well as inspection for short-circuits and circuit interruptions. In addition to the display, resistance of less than approx 60 ± 5Ω are indicated with an acoustic signal

Others

It has provision of mounting clip for hands free operation in awkward situation .

Technical Specifications

Reference conditions for Accuracy	
Reference temperature	23°C ± 2K
Relative Humidity	45%...55% RH
Waveform of measured quantity	Sinusoidal
Input frequency	50 or 60 Hz
Battery Voltage	3 V ± 0.1 V
Safety	
Pollution degree	2
High Voltage Test	3.6 kV (IEC 61010-1-2010)
Fuses	
For ranges up to 400 mA	400 mA / 250V; 5 mm x 25 mm.
For the range 10A	12 A / 250V; 5 mm x 25 mm, protects 10 A range up to 250 V.
Battery	
Battery Voltage	2 X 1.5 V Cells
Battery Type	Alkaline Manganese Dioxide Cells
Battery Life	Approx. 400 hours

Applicable Regulations and Standards	
IEC 61326:2002 Class B	Electrical equipment for control technology and laboratory use – EMC requirements
IEC 61000-4-2	8kV atmosphere discharge. 4kV contact discharge
IEC 6100-4-3	3VT/m
DIN EN 60259	Test equipment & test procedures
Applicable Standards	
EMC	IEC 61326: Class B
Immunity	IEC 61000-4-2 8 KV atmosphere discharge, 4 KV contact discharge IEC 61000-4-3 : 3 V/m
IP for water & dust	IEC 60529 : IP 52 for Housing IP 20 for Terminal

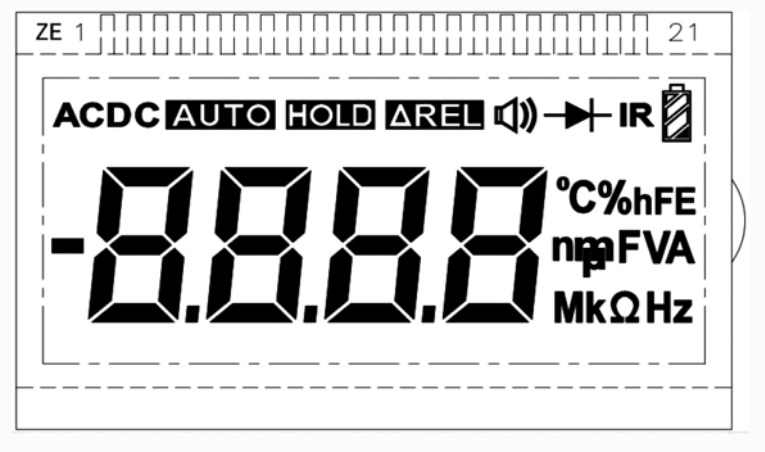
Measuring function	Model		Measuring range	Resolution	Input impedance		Intrinsic uncertainty under Reference Condition ± (...% of rdg+ ...digit)		Overload capacity[1]	
	i Junior	Junior			DC	AC/ACDC	DC	AC	Value	Time
V	•	•	400.0 mV	100 µV[4]	>10 MΩ		1 + 9	2 + 9[4]	1050 V	Cont.
	•	•	4.000 V	1 mV			1 + 9	1.5 + 9		
	•	•	40.00 V	10 mV			1 + 9	1.5 + 9		
	•	•	400.0 V	100 mV			1 + 9	1.5 + 9		
	•	•	600 V	1 V			1 + 9	1.5 + 9		
					Voltage Drop. Approx					
mA	•		40.00 mA	10 µA	45 mV		1.5 + 9	1.5 + 9	480 mA	Cont.
	•		400.0 mA	100 µA	450 mV		1.5 + 9	1.5 + 9		
A[7]	•		4.000 A	1 mA	45 mV		2 + 5	2.5 + 9	12 A: = 30 s	
	•		10.00 A	10 mA	120 mV		2 + 5	2.5 + 9		
				Input	Input Impedance					
Ω	•	•	400Ω	100 mΩ	approx. 0.45V		1 + 5		500V DC/AC rms	5 min
	•	•	4.000 kΩ	1 Ω			1 + 5			
	•	•	40.00 kΩ	10Ω			1 + 5			
	•	•	400.0 kΩ	100Ω			1.5 + 5			
	•	•	4.000 MΩ	1 kΩ			2 + 5			
	•	•	40 MΩ	10 kΩ			2.5 +5			
Continuity	•	•	400.0Ω	100 m Ω			1.5 + 5			
Diode	•	•	1.0V	1 mV	approx. 1V		2.5 + 5			
F	•	•	5.000 nF	1 pF			5 + 402)			
	•	•	50.00 nF	10 F			3 + 102)			
	•	•	500.0 nF	100 pF			1.5 + 102)			
	•	•	5.000 µF	1 nF			2 + 102)			
	•	•	50.00 µF	10 nF			2 + 102)			
	•	•	200.0 µF	100 nF			5 + 403)			
					fmin					
Hz[5][6]	•	•	9.999 Hz	0.001Hz	9 Hz		0.5 + 5	500V DC/AC rms	5 min	
	•	•	99.99 Hz	0.01Hz	9 Hz					
	•	•	999.9 Hz	0.1Hz	9 Hz					
	•	•	9.999 kHz	1Hz	9 Hz					
	•	•	99.99 kHz	10Hz	9 Hz					
	•	•	500.0 kHz	100Hz	9 Hz					
Duty Cycle[5][6]	•	•	2....98%	0.10%			10Hz.....1kHz 5D 1kHz...10kHz 5D/kHz			

1)	At 0°C to 50°C
2)	With Zero Adjus tment "REL"
3)	Time required for Measurement approx, 60 sec
4)	Specified Accuracy is valid for > 5% of the measuring range for 400.0mV AC
5)	For Hz & Duty Cycle measurement, select proper range for VAC function
6)	At input, 5Vrms, Square Wave, Bipolar inputs.
7)	10AMax 5 Minute

Influence Quantities

Influence Quantity	Range of Influence	Measured Quantity / Measuring Range	Variation ± (....%of rdg. + 1) ....digits)
Temperature	0 °C + 21 °C and +25 °C to 50 °C	V, A, Diode, F, Hz,%, OHM	1.5 × intrinsic error / 10K
Relative humidity	75% 3 Days Meter off		1 × intrinsic error
Frequency of Measured Quantity	20 Hz.....<50 Hz	400mV~, 1000V~	3.5 + 3
	>50 Hz ....500 Hz		
	20 Hz.....<50 Hz	4V~, 40V~, 400V~	
	>50 Hz ....750 Hz		
Battery Variation	Upto Low Battery	V, A, Diode, Hz, %,	20D
		OHM	F 70D

Display



1. Digital display with dot and polarity.
2. Low Battery Indication.
3. Display for REL and HOLD.
4. Continuity test display:
Buzzer symbol appears on screen.
5. Display for diode measurement.
6. Measurement unit display.
7. Display for automatic measuring range selection.
8. Display for selected type of Voltage/Current (AC or DC).
9. Display for overload value "OL".

Display	7 Segment
Character Height	Main Display Character: 12.9mm
Number of counts	3999 counts
Over range display	"OL" is displayed
Polarity display	"-" sign is displayed when positive pole at " "
Sampling rate	3 measurements

Mechanical Specifications

Dimensions	W x H x D
With Holster	74.3mm x 154.1mm x 47.6mm
Without Holster	68.3mm x 142.9mm x 39.3mm
Weight	Approx. 0.350kg with battery

Standard Scope of Supply

1 Multimeter

1 Cable Set

1 Copy Operating Instructions

Ordering Information

Product Code	**GM 49-40**	**X**	**X**	**000000000**
Type	iJUNIOUR	1		
	JUNIOUR	2		
Probe Set	Normal (Optional)		N	
	Fine Tip		F	

Optional Accessory	ProtectiveRubber Holster**

**: Please contact our representative for ordering information of this item

Contact

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