TRANSMILLE
SOLUTIONS IN CALIBRATION

8100 SERIES

ADVANCED 8.5 DIGIT MULTIMETER

8104
EXTENDED SPECIFCATIONS



www.transmille.com

Interpreting Specifications

Transmille have taken great care over presenting the extended specificaiton in a manner that is easy to read while including a high level of detail

Transmille specify specification as both Absolute and Relative specification, with varying calibration intervals from 90 Days to 2 Years

By 'Absolute Uncertainties' this means that all internal components of the multimeter have been compensated for. This includes staiblity, line voltage variation, temperature and humidity as well as the uncertainty of calibration as performed by Transmille Ltd. Two specifications are provided, the first for use at temperatures 1°C from calibration temperature, the second for use at temperatures 3°C from calibration temperature. The term 'Tcal' has been used to indicate the Temperautre of calibration

This does NOT include external sources of uncertainty such as the leads that are used to connect the multimeter to sources, nor does it include zero offsets that may have been stored.

Relative Accuracy refers to the stability of the instrument itself, without any external factors with the exception of temperature variation. This means that no allowance is made for the uncertainty of calibration.

During re-calibration, the 'Absolute Uncertainties' should be used for verification of the instrument. If the calibration laboratory performing the calibration offers better uncertainties than those of Transmille the published absolute uncertianties may be used, or new absolute uncertainties can be calculated by combining the relative specification and uncertainty of calibration.

If the calibration laboratory has LARGER uncertainties than that of Transmille, new absolute uncertainties must be calculated for the instrument as the absolute specification in this datasheet will no longer be valid.

All of Transmille's Absolute Uncertainty specifications are presented at a confidence interval of 95%, $k=2$

This is for ease of use in an accredited laboratory where other uncertainty contributions are likely to be calculated or $k=2$, minimising the requirement for allowing for differences in confidence intervals

DC Voltage

Range Specifications

Range	Full Scale	Resolution	Input Impedance
100 mV	120,000,000	1nV	> 10 GOhms
1 V	1.200,000,00	10nV	> 10 GOhms
10 V	12.000,000,0	100nV	> 10 GOhms
100 V	120.000,000	1µV	10 MOhms, 1%
1000 V	1.050,000,00	10µV	10 MOhms, 1%

Accuracy Relative To Calibration Standards

Range	90 Day	180 Day	1 Year	2 Year
	± (ppm Reading + ppm Range)			
100 mV	3.8 + 1.7	4.3 + 1.7	4.8 + 1.7	7.0 + 1.7
1 V	3.0 + 0.6	3.5 + 0.6	3.9 + 0.6	5.5 + 0.6
10 V	3.0 + 0.6	3.5 + 0.6	3.9 + 0.6	5.5 + 0.6
100 V	4.6 + 0.8	5.2 + 0.8	5.8 + 0.8	8.0 + 0.8
1000 V	4.6 + 1.2	5.2 + 1.2	5.8 + 1.2	8.0 + 1.2

Absolute Uncertainty (95% Confidence)

Range	1 Year					
	Tcal ± 1°C			Tcal ± 3°C		
	± (ppm Reading + ppm Range)					
100 mV	7.5	+	1.7	9.0	+	1.7
1 V	4.9	+	0.6	6.4	+	0.6
10 V	5.4	+	0.6	6.8	+	0.6
100 V	7.3	+	0.8	9.5	+	0.8
1000 V	7.3	+	1.2	9.5	+	1.2

Notes :
1) Specifications valid only when Null verified/performed. Errors caused by thermals on external leads can be greater than 5uV which equates to 5ppm at the 1V level
2) Specifications apply for default filter settings.
3) All DC Voltage ranges are available at both Front and Rear terminals.
4) Input protection of 1,100V RMS is provided on all ranges

DC Current

Range Specifications

Range	Full Scale	Resolution	Input Impedance	Input Terminals
100 µA	120,000,00	10pA	10 kOhms	Front & Rear
1 mA	1.200,000,0	100pA	1 kOhms	Front & Rear
10 mA	12.000,000	1nA	100 Ohms	Front & Rear
100 mA	120,000,00	10nA	10 Ohms	Front & Rear
1 A	1.200,000,0	100nA	0.5 Ohms	Front & Rear
10 A	12.000,000	1µA	10 mOhms	Front
30 A	30.500,00	10µA	10 mOhms	Front

Accuracy Relative To Calibration Standards

Range	90 Day			180 Day			1 Year			2 Year		
	± (ppm Reading + ppm Range)											
100 µA	5.5	+	4	6	+	4	7	+	4	10	+	4
1 mA	5.5	+	4	6	+	4	7	+	4	10	+	4
10 mA	7.2	+	4	8.1	+	4	9	+	4	13	+	4
100 mA	24	+	6	27	+	6	30	+	6	42	+	6
1 A	120	+	13	135	+	13	150	+	13	210	+	13
10 A	290	+	35	320	+	35	360	+	35	500	+	35
30 A	390	+	145	440	+	145	490	+	145	690	+	145

Total Accuracy (95% Confidence)

Range	1 Year					
	Tcal ± 1°C			Tcal ± 3°C		
	± (ppm Reading + ppm Range)					
100µA	11	+	4	14	+	4
1mA	11	+	4	14	+	4
10mA	13	+	4	16	+	4
100mA	36	+	6	47	+	6
1A	174	+	13	234	+	13
10A	418	+	35	561	+	35
30A	569	+	145	764	+	145

Notes :
1) Specifications valid only when Null verified/performed
2) Specifications apply for default filter settings.
3) Current ranges up to 1A are available at both Front and Rear Terminals. Current above 1A on high current terminals only
4) 1A Fuse provided on rear panel for protection of 1A range and below

DC Current (Electrometer)

Range Specifications

Range	Full Scale	Resolution	Input Impedance
10 nA	12.000,00	0.001pA	Virtual Ground
100 nA	120.000,0	0.01pA	Virtual Ground
1 µA	1.200,000	0.1pA	Virtual Ground
10 µA	12,000,00	1pA	Virtual Ground

Accuracy Relative To Calibration Standards

Range	90 Day			180 Day			1 Year			2 Year		
	± (ppm Reading + ppm Range)											
10 nA	4000	+	80	4500	+	80	5000	+	80	7000	+	80
100 nA	1440	+	34	1620	+	34	1800	+	34	2520	+	34
1 µA	160	+	17	180	+	17	200	+	17	280	+	17
10 µA	24	+	10	27	+	10	30	+	10	42	+	10

Total Accuracy (95% Confidence)

Range	1 Year					
	Tcal ± 1°C			Tcal ± 3°C		
	± (ppm Reading + ppm Range)					
10nA	14227	+	80	15148	+	80
100nA	2454	+	34	3087	+	34
1µA	268	+	17	339	+	17
10µA	40	+	10	50	+	10

Notes :
1) Specifications valid only when Null verified/performed
2) Specifications apply for default filter settings.
3) Electrometer input provided as shielded BNC connector on front panel for exceptional noise rejection.

AC Voltage

Range Specifications

Range	Full Scale	Resolution	Input Impedence
100mV	105,000,0	0.1µV	>1 GOhm / 90pF
1V	1.050,000	1µV	>1 GOhm / 90pF
10V	10.500,00	10µV	>1 GOhm / 90pF
100V	105.000,0	100µV	1 MOhm / 130pF
1000V	1050.000	1mV	1 MOhm / 130pF

Accuracy Relative To Calibration Standards

Range	Frequency	90 Day			180 Day			1 Year			2 Year		
		± (% Reading + % Range)											
100mV	10Hz to 40Hz	0.040	+	0.015	0.045	+	0.015	0.05	+	0.015	0.070	+	0.015
	40Hz to 200Hz	0.017	+	0.009	0.019	+	0.009	0.021	+	0.009	0.029	+	0.009
	200Hz to 1KHz	0.014	+	0.008	0.015	+	0.008	0.017	+	0.008	0.024	+	0.008
	1kHz to 2kHz	0.014	+	0.008	0.015	+	0.008	0.017	+	0.008	0.024	+	0.008
	2kHz to 20kHz	0.020	+	0.01	0.023	+	0.01	0.025	+	0.010	0.035	+	0.010
	20kHz to 100kHz	0.048	+	0.05	0.054	+	0.05	0.06	+	0.050	0.080	+	0.050
1V, 10V [5]	10Hz to 40Hz	0.030	+	0.015	0.036	+	0.015	0.04	+	0.015	0.060	+	0.015
	40Hz to 200Hz	0.015	+	0.006	0.017	+	0.006	0.019	+	0.006	0.027	+	0.006
	200Hz to 1KHz	0.012	+	0.006	0.014	+	0.006	0.015	+	0.006	0.021	+	0.006
	1KHz to 2KHz	0.012	+	0.006	0.014	+	0.006	0.015	+	0.006	0.021	+	0.006
	2kHz to 20kHz	0.020	+	0.01	0.023	+	0.01	0.025	+	0.010	0.035	+	0.010
	20kHz to 100kHz	0.048	+	0.05	0.054	+	0.05	0.06	+	0.050	0.084	+	0.050
	100kHz to 1MHz[5]	0.800	+	2.5	0.900	+	2.5	1	+	2.5	1.400	+	2.5
100V, 1000V [6]	10Hz to 40Hz	0.040	+	0.015	0.045	+	0.015	0.05	+	0.015	0.070	+	0.015
	40Hz to 200Hz	0.016	+	0.009	0.018	+	0.009	0.02	+	0.009	0.028	+	0.009
	200Hz to 1kHz	0.014	+	0.007	0.016	+	0.007	0.018	+	0.007	0.025	+	0.007
	1kHz to 2kHz	0.014	+	0.007	0.016	+	0.007	0.018	+	0.007	0.025	+	0.007
	2kHz to 20kHz	0.024	+	0.01	0.027	+	0.01	0.03	+	0.010	0.042	+	0.010
	20kHz to 50kHz	0.064	+	0.05	0.072	+	0.05	0.08	+	0.050	0.112	+	0.050

Notes :
1) Specifications valid from 10% + 3mV of range
2) High input impedance on 100mV, 1V and 10V range enable direct connection for AC current shunts for measurement of current
3) Settling time : 100mV, 1V, 10V Ranges : < 20 s, 100V, 1000V Ranges : < 5s
4) Input protection of 1,100V RMS provided
5) 1V Range up to 1MHz, 10V Range to 200kHz
6) 100V Range to 50kHz, 1000V Range to 10kHz

Absolute Uncertainty (95% Confidence)

Range	Frequency	1 Year					
		Tcal ± 1°C			Tcal ± 3°C		
		± (% Reading + % Range)					
100mV	10Hz to 40Hz	0.04	+	0.015	0.08	+	0.015
	40Hz to 200Hz	0.03	+	0.009	0.03	+	0.009
	200Hz to 1kHz	0.03	+	0.008	0.03	+	0.008
	1kHz to 2kHz	0.04	+	0.008	0.03	+	0.008
	2kHz to 20kHz	0.04	+	0.01	0.04	+	0.01
	20kHz to 100kHz	0.08	+	0.050	0.09	+	0.05
1V 10V [5]	10Hz to 40Hz	0.05	+	0.015	0.06	+	0.015
	40Hz to 200Hz	0.03	+	0.006	0.03	+	0.006
	200Hz to 1kHz	0.02	+	0.006	0.02	+	0.006
	1kHz to 2kHz	0.02	+	0.006	0.02	+	0.006
	2kHz to 20kHz	0.04	+	0.01	0.04	+	0.01
	20kHz to 100kHz	0.08	+	0.050	0.09	+	0.05
	100kHz to 1MHz[5]	1.16	+	2.5	1.56	+	2.5
100V 1000V [6]	10Hz to 40Hz	0.07	+	0.015	0.08	+	0.015
	40Hz to 200Hz	0.03	+	0.009	0.03	+	0.009
	200Hz to 1kHz	0.02	+	0.007	0.03	+	0.007
	1kHz to 2kHz	0.04	+	0.007	0.03	+	0.007
	2kHz to 20kHz	0.05	+	0.010	0.05	+	0.01
	20kHz to 50kHz	0.10	+	0.05	0.12	+	0.05

Notes :
1) Specifications valid from 10% + 3mV of range
2) High input impedance on 100mV, 1V and 10V range enable direct connection for AC current shunts for measurement of current
3) Settling time : 100mV, 1V, 10V Ranges : < 20 s, 100V, 1000V Ranges : < 5s
4) Input protection of 1,100V RMS provided
5) 1V Range up to 1MHz, 10V Range to 200kHz
6) 100V Range to 50kHz, 1000V Range to 10kHz

AC Current

Range Specifications

Range	Full Scale	Resolution	Input Impedance	Input Terminals
100µA	100.500,0	0.1nA	1 kOhm	Front & Rear
1mA	1.050,000	1nA	1 kOhm	Front & Rear
10mA	10.500,00	10nA	100 Ohms	Front & Rear
100mA	105.000,0	100nA	10 Ohms	Front & Rear
1A	1.050,000	1µA	0.5 Ohms	Front & Rear
10A	10.500,00	10µA	10 mOhms	Front
30A	30.500,0	100µA	10 mOhms	Front

Accuracy Relative To Calibration Standards

Range	Frequency	90 Day			180 Day			1 Year			2 Year		
		± (% Reading + % Range)											
100µA , 1mA 10mA, 100mA	10Hz to 40Hz	0.040	+	0.015	0.045	+	0.015	0.05	+	0.015	0.07	+	0.015
	40Hz to 1kHz	0.024	+	0.012	0.027	+	0.012	0.03	+	0.012	0.042	+	0.012
	1KHz to 10kHz	0.056	+	0.030	0.063	+	0.030	0.07	+	0.030	0.098	+	0.030
1 A	10Hz to 40Hz	0.048	+	0.020	0.054	+	0.020	0.06	+	0.020	0.084	+	0.020
	40Hz to 1kHz	0.032	+	0.015	0.036	+	0.015	0.04	+	0.015	0.056	+	0.015
	1KHz to 10kHz	0.056	+	0.050	0.063	+	0.050	0.07	+	0.050	0.098	+	0.050
10 A 30 A	10Hz to 40Hz	0.064	+	0.040	0.072	+	0.040	0.08	+	0.040	0.112	+	0.040
	40Hz to 1kHz	0.056	+	0.030	0.063	+	0.030	0.07	+	0.030	0.098	+	0.030

Absolute Uncertainty (95% Confidence)

Range	Frequency	1 Year					
		Tcal ± 1°C			Tcal ± 3°C		
		± (% Reading + % Range)					
100µA, 1mA 10mA, 100mA	10Hz to 40Hz	0.07	+	0.015	0.09	+	0.015
	40Hz to 1kHz	0.04	+	0.012	0.05	+	0.012
	1kHz to 10kHz	0.09	+	0.03	0.12	+	0.03
1A	10Hz to 40Hz	0.09	+	0.02	0.11	+	0.02
	40Hz to 1kHz	0.06	+	0.015	0.07	+	0.015
	1kHz to 10kHz	0.10	+	0.05	0.13	+	0.05
10A 30A	10Hz to 40Hz	0.14	+	0.04	0.16	+	0.04
	40Hz to 1kHz	0.10	+	0.03	0.12	+	0.03

Notes :
1) Specifications valid from 10% of range
2) Current ranges up to 1A are available at both Front and Rear Terminals. Current above 1A on high current terminals only
3) 1A Fuse provided on rear panel for protection of 1A range and below

Resistance

Range Specifications

Range	Full Scale	Resolution	Measurment Current
1 Ohm	1.200,000,00	0.01 µOhm	100mA
10 Ohm	12.000,000,0	0.1 µOhm	10mA
100 Ohm	120.000,000	1 µOhm	10mA
100 Ohm Low Current	120.000,000	1 µOhm	1mA
1 kOhm	1.200,000,00	10 µOhms	10mA
1 kOhm Low Current	1.200,000,00	10 µOhms	1mA
10 kOhm	12.000,000,0	100 µOhms	1mA
10 kOhm Low Current	12.000,000,0	100 µOhms	100µA
100 kOhm	120.000,000	1 mOhms	100µA
1 MOhm [1]	1.200,000,00	10 mOhms	10µA
10 MOhm [1]	12.000,000,0	100 mOhms	1µA
100 MOhm [12]	120.000,000	1 Ohm	1uA / 10 Mohm
1 GOhm [12]	1.100,000,00	10 Ohms	1uA / 10 Mohm

Accuracy Relative To Calibration Standards

Range	90 Day			180 Day			1 Year			2 Year		
	± (ppm Reading + ppm Range)											
1 Ohm	12.0	+	6.0	13.5	+	6.0	15.0	+	6.0	21.0	+	6.0
10 Ohm	8.0	+	3.0	9.0	+	3.0	10.0	+	3.0	14.0	+	3.0
100 Ohm	7.2	+	1.0	8.1	+	1.0	9.0	+	1.0	12.6	+	1.0
100 Ohm Low Current	8.0	+	7.0	9.0	+	7.0	10.0	+	7.0	14.0	+	7.0
1 kOhm	6.4	+	0.8	7.2	+	0.8	8.0	+	0.8	11.2	+	0.8
1 kOhm Low Current	7.2	+	3.0	8.1	+	3.0	9.0	+	3.0	12.6	+	3.0
10 kOhm	7.6	+	0.8	8.6	+	0.8	9.5	+	0.8	13.3	+	0.8
10 kOhm Low Current	8.4	+	8.0	9.5	+	8.0	10.5	+	8.0	14.7	+	8.0
100 kOhm	8.0	+	0.8	9.0	+	0.8	10.0	+	0.8	14.0	+	0.8
1 MOhm [1]	8.8	+	2.0	9.9	+	2.0	11.0	+	2.0	15.4	+	2.0
10 MOhm [1]	12.0	+	8.0	13.5	+	8.0	15.0	+	8.0	21.0	+	8.0
100 MOhm [12]	400	+	2.0	450	+	2.0	500	+	8.0	700	+	2.0
1 GOhm [12]	0.4%	+	8.0	0.45%	+	8.0	0.5%	+	10.0	0.7%	+	8.0

Notes :
1) Available as 2 Wire Measurement Only
2) Measurement performed in Parallel with 10 MOhm
3) Specifications valid only after Null performed with measurement leads or in Ohms Compensation
4) Ohms Compensation function available - automatically compensates for thermals in measurement leads

Absolute Uncertainty (95% Confidence)

Range	1 Year					
	Tcal ± 1°C			Tcal ± 3°C		
	± (ppm Reading + ppm Range)					
1 Ohm	17.6	+	6	23.5	+	6
10 Ohm	11.9	+	3	15.8	+	3
100 Ohm	10.5	+	1.0	14.1	+	1
100 Ohm Low Current	11.7	+	7	15.6	+	7
1 kOhm	9.3	+	0.8	12.5	+	0.8
1 kOhm Low Current	10.5	+	3	14.0	+	3
10 kOhm	11.0	+	0.8	14.8	+	0.8
10 kOhm Low Current	12.2	+	8	16.4	+	8
100 kOhm	11.7	+	8	15.6	+	8
1 MOhm [1]	13.5	+	2	17.7	+	2
10 MOhm [1]	20.5	+	8	25.8	+	8
100 MOhm [12]	597	+	2	792	+	2
1 Gohm [12]	0.58%	+	8	0.78%	+	8

Notes :
1) Available as 2 Wire Measurement Only
2) Measurement performed in Parallel with 10 MOhm
3) Specifications valid only after Null performed with measurement leads or in Ohms Compensation
4) Ohms Compensation function available - automatically compensates for thermals in measurement leads

Electrometer Resistance

Range Specifications

Voltage Setting	Current Range	Resistance Range	Resolution
10V	10µA	800k Ohm - 9 MOhm	10 Ohm
	1µA	8M Ohm - 90 MOhm	100 Ohm
	100nA	800 MOhm - 900 MOhm	1 kOhm
	10nA	800 MOhm - 1 TOhm	100 kOhm
50V	10µA	5M Ohm - 45 MOhm	10 Ohm
	1µA	40M Ohm - 450 Mohm	100 Ohm
	100nA	400 Mohm - 4.5GOhm	1kOhm
	10nA	4 Gohm - 1TOhm	100kOhm
100V	10µA	8M Ohm - 90 Mohm	10 Ohm
	1µA	80 Mohm - 900 Mohm	100 Ohm
	100nA	800Mohm - 9GOhm	1kOhm
	10nA	8GOhm - 2TOhm	100kOhm
150V	10µA	12M Ohm - 135 MOhm	10 Ohm
	1µA	120M Ohm - 1350 Mohm	100 Ohm
	100nA	1200 Mohm - 13.5GOhm	1kOhm
	10nA	12 Gohm - 2TOhm	100kOhm
200V	10µA	20M Ohm - 180 MOhm	10 Ohm
	1µA	160M Ohm - 1800 Mohm	100 Ohm
	100nA	1600 Mohm - 18GOhm	1kOhm
	10nA	16 Gohm - 2TOhm	100kOhm
250V	10µA	25M Ohm - 225 MOhm	10 Ohm
	1µA	200M Ohm - 2250 Mohm	100 Ohm
	100nA	2000 Mohm - 22.5GOhm	1kOhm
	10nA	20 Gohm - 2TOhm	100kOhm
300V	10µA	30M Ohm - 270 MOhm	10 Ohm
	1µA	240M Ohm - 2700 Mohm	100 Ohm
	100nA	2400 Mohm - 27GOhm	1kOhm
	10nA	24 Gohm - 2TOhm	100kOhm

Notes :
1) Measurement performed via front Panel BNC connectors
2) Voltage Accuracy ± 75ppm from calibrated value
3) Use high quality cable with high insulation resistance to avoid errors due to leakage caused by cabling.

Accuracy Relative To Calibration Standards

Voltage Setting*	Resistance Range	90 Day	180 Day	1 Year	2 Year
		± ppm Reading			
10V	800kOhm - 9MOhm	----------	----------	----------	----------
	8M Ohm - 90 Mohm	----------	----------	----------	----------
	80 Mohm - 900 Mohm	----------	----------	----------	----------
	800 Mohm - 1TOhm	----------	----------	----------	----------
50V	5M Ohm - 45 MOhm	112	126	140	196
	40M Ohm - 450 Mohm	360	405	450	630
	400 Mohm - 4.5GOhm	1440	1620	1800	2520
	4 Gohm - 1TOhm	18400	20700	23000	32200
100V	8M Ohm - 90 Mohm	112	126	140	196
	80 Mohm - 900 Mohm	332.8	374.4	416	582.4
	800Mohm - 9GOhm	1448	1629	1810	2534
	8GOhm - 2TOhm	18400	20700	23000	32200
150V	12M Ohm - 135 MOhm	108	121.5	135	189
	120M Ohm - 1350 Mohm	368	414	460	644
	1200 Mohm - 13.5GOhm	1520	1710	1900	2660
	12 Gohm - 2TOhm	14133	15900	17667	24733
200V	20M Ohm - 180 MOhm	108	121.5	135	189
	160M Ohm - 1800 Mohm	344	387	430	602
	1600 Mohm - 18GOhm	1448	1629	1810	2534
	16 Gohm - 2TOhm	12000	13500	15000	21000
250V	25M Ohm - 225 MOhm	105	118	132	184
	200M Ohm - 2250 Mohm	344	387	430	602
	2000 Mohm - 22.5GOhm	1448	1629	1810	2534
	20 Gohm - 2TOhm	10720	12060	13400	18760
300V	30M Ohm - 270 MOhm	105	118	132	184
	240M Ohm - 2700 Mohm	332	373.5	415	581
	2400 Mohm - 27GOhm	1448	1629	1810	2534
	24 Gohm - 2TOhm	9840	11070	12300	17220

Notes :
1) Measurement performed via front Panel BNC connectors
2) Voltage Accuracy ± 75ppm from calibrated value
3) Use high quality cable with high insulation resistance to avoid errors due to leakage caused by cabling.

Temperature

Thermocouple

Thermocouple Type	Range	1 Year Accuracy Relative To Calibration Standards
B	300°C to 500°C	0.25°C
	500°C to 1820°C	0.15°C
E	0°C to 800°C	0.05°C
J	-210°C to 1200°C	0.08°C
K	-140°C to 1340°C	0.08°C
N	-200°C to 1300°C	0.09°C
R	-50°C to 600°C	0.25°C
	600°C to 1760°C	0.15°C
S	0°C to 1760°C	0.15°C
T	-200°C to 400°C	0.08°C

Notes :
1) Thermocouple ranges use 100mV DC Range
2) 1) Specifications valid only when Null verified/performed. Errors caused by thermals on external leads can be greater than 5uV which equates to 5ppm at the 1V level
3) Automatic Cold Junction Compensation available via TCLEAD accessory or 4 Wire PRT Probe connected to rear of unit

PRT / RTD

Resistance Range	Absolute Resistance Uncertainty	Typical Temperature Accuracy			
		Probe Type	Nominal Temperature (°C)	Nominal Resistance (Ohms)	Accuracy ± °C
100R Low Current	11.7 + 0.7mR	25 Ω PRT / SPRT	-200	5	0.0068
		25 Ω PRT / SPRT	0	25	0.0099
		25 Ω PRT / SPRT	600	79	0.02
		100 Ω PRT / SPRT	-200	18.52	0.0021
		100 Ω PRT / SPRT	0	100	0.0048
1kR Low Current	10.5 + 3mR	100 Ω PRT / SPRT	500	280.98	0.018

Notes :
1) Measurement current of 1mA used to minimise self heating in probe
2) ITS-90 and Callendar van Dusen linearisation available, with storage for more than 50 probes in memory
3) Readout available in °C, °F and K
4) Specifications do not include sensor error

Frequency

Signal Amplitude Range	5% of range to full scale	
Resolution (FAST Gate)	0.1Hz (after 5 samples)	
Resolution (SLOW Gate)	1Hz - 99.999Hz	10uHz
	100Hz to 999.99Hz	100uHz
	1kHz to 9.9999kHz	1mHz
	10kHz to 1MHz	1Hz
Frequency Range	1Hz to 1MHz	
Accuracy (1 Year)*	2ppm ± 2 Digits	
Sample Interval	FAST : 1s, SLOW 5s	

Operational Specifications

Resolution	Filter Speeds
4.5 Digits	**125 ms**, 250 ms, 500 ms, 1s, 2s, 4s, 8s, 16s, 32s
5.5 Digits	125 ms, **250 ms**, 500 ms, 1s, 2s, 4s, 8s, 16s, 32s
6.5 Digits	125 ms, 250 ms, **500 ms,** 1s, 2s, 4s, 8s, 16s, 32s
7.5 Digits	**1s**, 2s, 4s, 8s, 16s, 32s
8.5 Digits	**4s**, 8s, 16s, 32s

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We truly believe in offering Solutions in Calibration, offering bespoke solutions for calibration laboratories and manufacturers across the globe. Our mission statement is not just a phrase, it is our design and support philosophy, offering support and advice that cannot be found elsewhere with a friendly atmosphere.

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