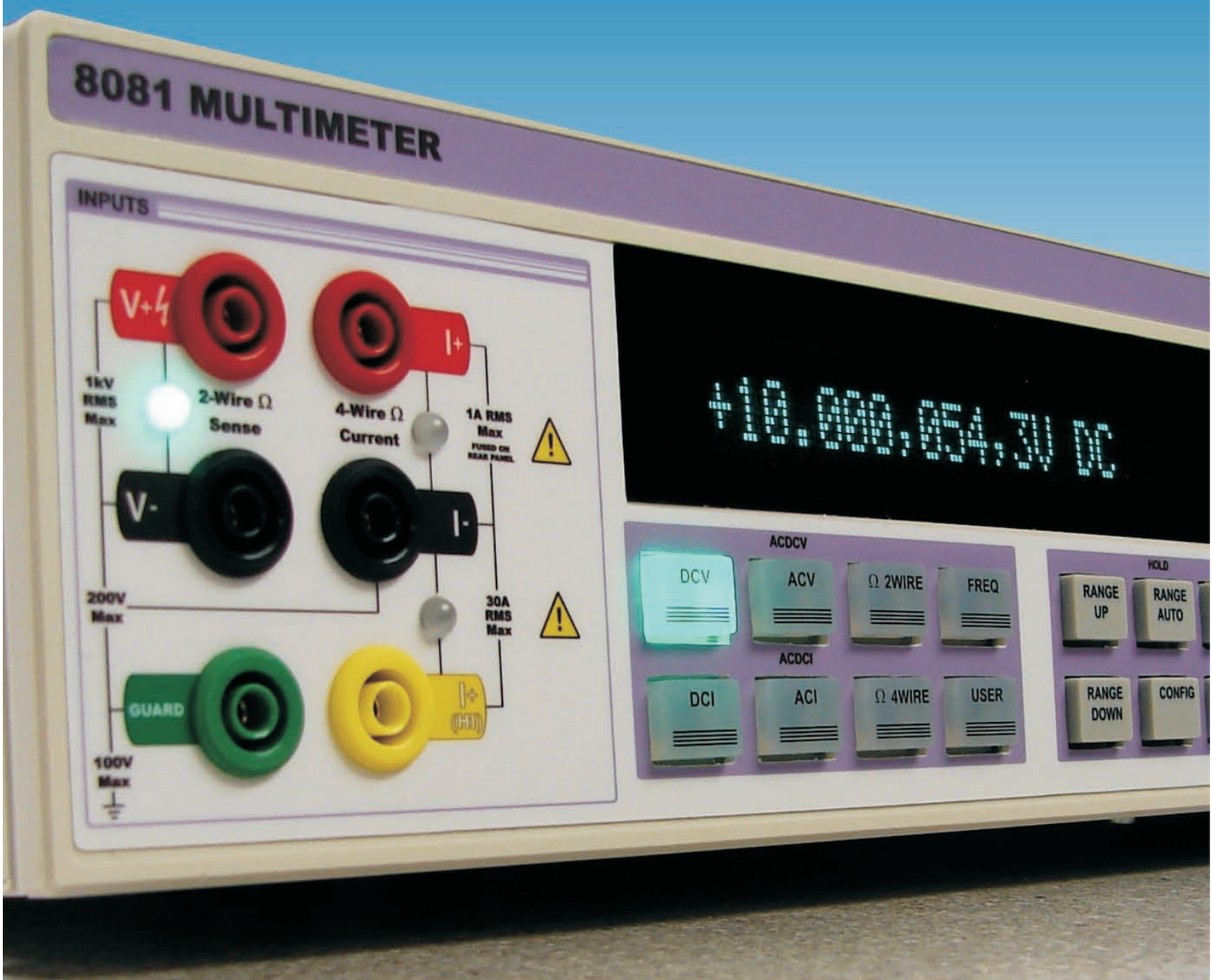
EXTENDED SPECIFICATIONS



MODEL 8071

9 PPM PRECISION DIGITAL MULTIMETER

TRANSMILLE
SOLUTIONS IN CALIBRATION

DC Voltage: 10nV to 1050V in 5 Ranges.					*INSTRUMENT UNCERTAINTY (RELATIVE TO CAL. STDS)**											
Range	**Full Scale**	**Resolution**	**Input Impedance**		**90 Day**			**180 Day**			**1 Year**			**2 Year**		
					± ppm Reading + Range			± ppm Reading + Range			± ppm Reading + Range			± ppm Reading + Range		
100mV	120,000,00	10nV	> 10 GOhms		10.0	+	4.0	11.0	+	4.0	12	+	4.0	17	+	4.0
1V	1.200,000,0	100nV	> 10 GOhms		7.0	+	1.4	8.0	+	1.4	9	+	1.4	13	+	1.4
10V	12.000,000	1uV	> 10 GOhms		7.0	+	1.4	8.0	+	1.4	9	+	1.4	13	+	1.4
100V	120.000,00	10uV	10 MOhms, 1%		11.0	+	1.8	13.0	+	1.8	14	+	1.8	20	+	1.8
1000V	1.050,000,0	100uV	10 MOhms, 1%		11.0	+	2.8	13.0	+	2.8	14	+	2.8	20	+	2.8

Input Protection : 1100Volts

DC Current 100pA to 30 Amps in 7 Ranges					*INSTRUMENT UNCERTAINTY (RELATIVE TO CAL. STDS)**											
Range	**Full Scale**	**Resolution**	**Input Impedance**		**90 Day**			**180 Day**			**1 Year**			**2 Year**		
					± ppm Reading + Range			± ppm Reading + Range			± ppm Reading + Range			± ppm Reading + Range		
100uA	120,000,0	100pA	10 kOhms		20	+	14	23	+	14	25	+	14	35	+	14
1mA	1.200,000	1nA	1 kOhms		20	+	14	23	+	14	25	+	14	35	+	14
10mA	12.000,00	10nA	100 Ohms		30	+	14	32	+	14	35	+	14	49	+	14
100mA	120,000,0	100nA	10 Ohms		90	+	22	100	+	22	110	+	22	150	+	22
1A	1.200,000	1uA	0.5 Ohms		440	+	45	495	+	45	550	+	45	770	+	45
10A	10.500,00	10uA	10 mOhms		1200	+	120	1350	+	120	1500	+	120	2100	+	120
30A	30.500,0	100uA	10 mOhms		1600	+	500	1800	+	500	2000	+	500	2800	+	500

Resistance : 1uOhm to 10MOhm in 7 Ranges					*INSTRUMENT UNCERTAINTY (RELATIVE TO CAL. STDS)**											
Range	**Full Scale**	**Resolution**	**I/P Impedance**		**90 Day**			**180 Day**			**1 Year**			**2 Year**		
					± ppm Reading + Range			± ppm Reading + Range			± ppm Reading + Range			± ppm Reading + Range		
10 Ohm	12.000,000	1 uOhm	10mA		24	+	8	27	+	8	30	+	8	42	+	8
100 Ohm	120.000,00	10 uOhms	10mA		20	+	3	23	+	3	25	+	3	35	+	3
1 kOhm	1.200,000,0	100 uOhms	10mA		16	+	2	18	+	2	20	+	2	28	+	2
10 kOhm	12.000,000	1 mOhm	1mA		20	+	2	23	+	2	25	+	2	35	+	2
100 kOhm	120.000,00	10 mOhms	100uA		24	+	2	27	+	2	30	+	2	42	+	2
1 MOhm	1.200,000,0	100 mOhms	10uA		28	+	5	32	+	5	35	+	5	50	+	5
10 MOhm	12.000,000	1 Ohm	1uA		38	+	20	43	+	20	48	+	20	70	+	20

AC Voltage 1uV to 1000 Volts in 5 Ranges					*INSTRUMENT UNCERTAINTY (RELATIVE TO CAL. STDS)**			
					90 Day	180 Day	1 Year	2 Year
Range	**Full Scale**	**Resolution**	**I/P Impedance**	**Frequency**	± % Reading + Range	± % Reading + Range	± % Reading + Range	± % Reading + Range
100mV	105,000	1uV	>1 GOhm / 90pF	10Hz to 40Hz	0.160 + 0.08	0.180 + 0.08	0.20 + 0.08	0.30 + 0.08
				40Hz to 200Hz	0.064 + 0.05	0.072 + 0.05	0.08 + 0.05	0.11 + 0.05
				200Hz to 2KHz	0.056 + 0.04	0.063 + 0.04	0.07 + 0.04	0.10 + 0.04
				2kHz to 20kHz	0.080 + 0.05	0.090 + 0.05	0.10 + 0.05	0.14 + 0.05
				20kHz to 100kHz	0.240 + 0.20	0.270 + 0.20	0.30 + 0.20	0.40 + 0.20
1V	1.050,00	10uV	>1 GOhm / 90pF	10Hz to 40Hz	0.144 + 0.08	0.162 + 0.08	0.18 + 0.08	0.25 + 0.08
10V	10.500,0	100uV	>1 GOhm / 90pF	40Hz to 200Hz	0.056 + 0.05	0.063 + 0.05	0.07 + 0.05	0.10 + 0.05
				200Hz to 2KHz	0.040 + 0.03	0.045 + 0.03	0.05 + 0.03	0.07 + 0.03
				2kHz to 20kHz	0.080 + 0.05	0.090 + 0.05	0.10 + 0.05	0.14 + 0.05
				20kHz to 100kHz	0.240 + 0.20	0.270 + 0.20	0.30 + 0.20	0.40 + 0.20
100V	105.000	1mV	1 MOhm / 130pF	10Hz to 40Hz	0.144 + 0.09	0.160 + 0.09	0.18 + 0.09	0.25 + 0.09
1000V	1050.00	10mV	1 MOhm / 130pF	40Hz to 200Hz	0.064 + 0.06	0.070 + 0.06	0.08 + 0.06	0.10 + 0.06
				200Hz to 2KHz	0.048 + 0.03	0.050 + 0.03	0.06 + 0.03	0.08 + 0.03
				2kHz to 20kHz	0.080 + 0.05	0.090 + 0.05	0.10 + 0.05	0.14 + 0.05

AC Current 1nA to 30A in 7 Ranges					*INSTRUMENT UNCERTAINTY (RELATIVE TO CAL. STDS)**			
					90 Day	180 Day	1 Year	2 Year
Range	**Full Scale**	**Resolution**	**I/P Impedance**	**Frequency**	± % Reading + Range	± % Reading + Range	± % Reading + Range	± % Reading + Range
100uA	100.500	1nA	10 kOhms	10Hz to 40Hz	0.10 + 0.04	0.12 + 0.04	0.13 + 0.04	0.18 + 0.04
1mA	1.050,00	10nA	1 kOhm	40Hz to 1kHz	0.06 + 0.03	0.07 + 0.03	0.08 + 0.03	0.11 + 0.03
10mA	10.500,0	100nA	100 Ohms	1KHz to 10kHz	0.24 + 0.09	0.27 + 0.09	0.30 + 0.09	0.42 + 0.09
100mA	105.000	1uA	10 Ohms					
1A	1.050,00	10uA	0.5 Ohms	10Hz to 40Hz	0.16 + 0.06	0.18 + 0.06	0.20 + 0.06	0.28 + 0.06
				40Hz to 1kHz	0.08 + 0.05	0.09 + 0.05	0.10 + 0.05	0.14 + 0.05
				1KHz to 10kHz	0.24 + 0.15	0.27 + 0.15	0.30 + 0.15	0.42 + 0.15
10A	10.500,0	100uA	10 mOhms	10Hz to 40Hz	0.24 + 0.10	0.27 + 0.10	0.30 + 0.10	0.42 + 0.10
30A	30.500	1mA	10 mOhms	40Hz to 1kHz	0.32 + 0.10	0.36 + 0.10	0.40 + 0.10	0.56 + 0.10

Frequency 1Hz to 1MHz	
Signal Amplitude Range	5%
Resolution	1Hz
Frequency Range	1Hz to 1MHz
Accuracy (1 Year)	5ppm ± 2 Digits
Sample Interval	1s

INSTRUMENT UNCERTAINTY (RELATIVE TO CAL. STDS)*

Instrument accuracy relative to calibration standards covers the uncertainty of the multimeter only - these figures must be combined with the calibrating laboratory uncertainties to determine actual performance.

This benefits the user by allowing a choice of which laboratory to use for calibration of the multimeter and adding this laboratory's uncertainties to the stated uncertainties in this specification document to calculate the absolute uncertainty.

TCal ± 1°C