

TRACEABLE MEASUREMENT CAPABILITY

MEASURED QUANTITY AND RANGE	BEST MEASUREMENT CAPABILITY (\pm)	REMARKS
<u>DC RESISTANCE</u>		
1 m Ω - 1 M Ω	(15 ppm + 0.15 m Ω)	
1 M Ω - 10 M Ω	40 ppm	
10 M Ω - 1 G Ω	4 ppm/M Ω	
1 G Ω	0.5 %	
10 G Ω	0.5 %	
100 G Ω	0.5 %	
1 T Ω	0.5 %	
		SOURCING CAPABILITY ONLY @ 100 V, 250 V & 500 V
<u>DC VOLTAGE</u>		
0 – 200 mV	(18 ppm + 3 μ V)	
200 mV – 2 V	(7 ppm + 3 μ V)	
2 V – 20 V	(5 ppm + 11 μ V)	
20 V – 200 V	(8 ppm + 200 μ V)	
200 V – 1000 V	(13 ppm + 1.5 mV)	
1 kV – 25 kV	0.5 %	
<u>DIRECT CURRENT</u>		
10 μ A	55 ppm	
100 μ A	55 ppm	
1 mA	55 ppm	
10 mA	60 ppm	
100 mA	75 ppm	
1 A	110 ppm	
		SPECIFIC VALUES
0 μ A – 200 μ A	(80 ppm + 5 nA)	
200 μ A – 2 mA	(80 ppm + 4 nA)	
2 mA – 20 mA	(80 ppm + 50 μ A)	
20 mA – 200 mA	(80 ppm + 2 μ A)	
200 mA – 2 A	(100 ppm + 25 μ A)	
2 A – 10 A	0.035 %	
10 A – 20 A	0.05 %	
20 A – 50 A	0.1 %	

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<u>ALTERNATING VOLTAGE</u>			
30 µV – 1 V	10 kHz – 500 MHz	3.75 %	
30 µV – 1 V	500 MHz – 1 GHz	6.25 %	
10 mV – 100 mV	40 Hz – 4 kHz	0.04 %	
100 mV – 1000 V	40 Hz – 4 kHz	0.03 %	
200 mV – 200 V	4 kHz – 40 kHz	0.04 %	
200 mV – 2000 V	40 kHz – 100 kHz	0.04 %	
20 V – 200 V	1 kHz – 100 kHz	0.1 %	
200 V – 1000 V	1 kHz – 30 kHz	0.1 %	
10 mV – 200 mV	40 Hz – 1 kHz	(0.05 % + 5 µV)	
10 mV – 200 mV	1 kHz – 10 kHz	(0.06 % + 5 µV)	
10 mV – 200 mV	10 kHz – 100 kHz	(0.09 % + 5 µV)	
200 mV – 1 kV	40 Hz – 30 kHz	0.015 %	SOURCING ONLY
200 mV – 20 V	30 kHz – 100 kHz	0.015 %	
<u>ALTERNATING CURRENT</u>			
20 µA – 200 mA	40 Hz – 1 kHz	0.02 %	
200 mA – 2 A	40 Hz – 1 kHz	0.03 %	
2 A – 50 A	40 Hz – 1 kHz	0.2 %	MEASUREMENT ONLY
<u>FREQUENCY</u>			
1 mHz – 100 kHz		(2 parts in 10 ⁷ + 30 µHz)	
100 kHz – 1 MHz		2 parts in 10 ⁷	
1 MHz – 1 GHz		2 parts in 10 ⁸	
<u>TIME/PERIOD</u>			
> 100 ns		2 parts in 10 ⁷ to 0.5 %	
<u>RISETIME</u>			
1 ns – 20 ns		60 ps	SOURCING ONLY

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<u>AC POWER</u> 1 μW – 100 mW	10 MHz – 18 GHz	2.5 %	50 Ω SYSTEM
<u>MODULATION</u> CARRIER FREQUENCY 3 MHz – 1.5 GHz			
AM 0 % - 100 %	50 Hz – 30 kHz	1 %	
FM 0 kHz – 150 kHz	50 Hz – 30 kHz	1 %	
<u>ATTENUATION</u> + 60 dB to - 60 dB	40 Hz – 100 kHz	0.2 %	
0 dB to - 60 dB	10 kHz – 500 MHz	3.75 %	
0 dB to -30 dB	3 MHz – 18 GHz	0.005 dB/10 dB	
0 dB to -120 dB	10 MHz – 1.2 GHz	0.05 dB/10 dB	
<u>PHASE</u> 0 ° - 360 °	10 Hz – 100 kHz	0.1 °	
<u>DISTORTION</u> 0.003 % - 100 %	10 Hz – 10 kHz	0.2 dB	
0.003 % - 100 %	10 kHz – 100 kHz	1.5 dB	
<u>CAPACITANCE</u> 1 pF – 160 μF	1 kHz	(0.1 % + 0.01 pF)	
100 pF – 1 μF	1 kHz	(0.03 % + 0.5 pF)	<u>SOURCING ONLY</u>
<u>INDUCTANCE</u> 0 – 1600 H	1 kHz	(0.1 % + 0.1 μH)	
1 μH – 1 H	1 kHz	(0.03 % + 0.15 μH)	<u>SOURCING ONLY</u>
<u>TEMPERATURE</u> Electrical Calibration: Thermocouples PRT's		0.2 °C 0.02 °C	
System Calibration: -20 °C to 100 °C 100 °C to 300 °C 300 °C to 500 °C		0.13 °C 0.8 °C 1 °C	
Nominal 20 °C (Ambient)		0.06 °C	
iR (Blackbody) Calibration: Ambient to 300 °C		0.5 % Reading + 0.1 °C	

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<p><u>SOUND LEVEL</u> 94 dB, 104 dB, 114 dB</p> <p><u>TORQUE</u> 0.2 Nm – 1 Nm 1 Nm – 10 Nm 10 Nm – 1000 Nm</p> <p><u>OIL PRESSURE</u> 0 bar – 20 bar 20 bar – 200 bar 200 bar – 700 bar</p> <p><u>AIR PRESSURE</u> - 1 bar – 0 bar 0 bar – 200 mbar 200 mbar – 7 bar 7 bar – 20 bar</p> <p><u>AIR FLOW</u> 1 L/min - 26 L/min</p> <p><u>RELATIVE HUMIDITY</u> 23 % RH 54 % RH 75 % RH</p> <p><u>GAS CONCENTRATION</u> CO (Carbon Monoxide) 50 ppm 400 ppm 500 ppm O₂ (Oxygen) 5 % 10 % 15 % CH₄ (Methane) 50 ppm 80 ppm 0.25 % 2.5 % 50 %</p> <p><u>CRIMP PULL TESTS</u> Up to – 250 N</p>		<p>0.2 dB</p> <p>1.0 % 0.25 % 1.0 %</p> <p>0.003 bar 0.02 bar 0.04 bar</p> <p>0.2 mbar (0.000 2 bar) 0.02 mbar 1 mbar (0.001 bar) 3 mbar (0.003 bar)</p> <p>0.2 L/min</p> <p>2.5 % RH 2.5 % RH 2.5 % RH</p> <p>2 % CONCENTRATION 2 % CONCENTRATION 2 % CONCENTRATION</p> <p>2 % CONCENTRATION 2 % CONCENTRATION 2 % CONCENTRATION</p> <p>2 % CONCENTRATION 2 % CONCENTRATION 2 % CONCENTRATION 2 % CONCENTRATION</p> <p>0.2 N</p>	<p><u>SOURCING ONLY</u></p>

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<p><u>SCALES</u> Up to – 300 kg</p> <p><u>LIGHT METERS</u> Illuminance. 1.0 to 10.0 Lux 10.0 to 20.0 Lux 20.0 to 200.0 Lux 200.0 to 1000 Lux 1000 to 2000 Lux 2000 to 20000 Lux</p> <p>Luminance. 1.9 cd m⁻² 10.2 cd m⁻² 20.6 cd m⁻² 139 cd m⁻² 1457 cd m⁻² 15674 cd m⁻²</p> <p><u>INCLINOMETERS</u> 0 TO 360 °</p>		<p>0.01 %</p> <p>2.6%</p> <p>4.3 %</p> <p>3.0 %</p> <p>2.5 %</p> <p>3.0 %</p> <p>8.4 %</p> <p>4.34 %</p> <p>4.04 %</p> <p>3.92 %</p> <p>3.32 %</p> <p>3.15 %</p> <p>3.12 %</p> <p>12 Seconds of Arc</p>	