

# Audio Precision 378M31 Measurement Microphone System

## Complete Specifications

	ENGLISH	SI	Notes
<b>Performance</b>			
Nominal Microphone Diameter	1/2"	1/2"	
Frequency Response Characteristic (at 0° incidence)	Free-Field	Free-Field	
Sensitivity	50 mV/Pa	50 mV/Pa	[3]
Sensitivity ( $\pm 1.5$ dB)	-26 dB re 1 V/Pa	-26 dB re 1 V/Pa	[3]
Frequency Range ( $\pm 1$ dB)	7 Hz to 10 kHz	7 Hz to 10 kHz	
Frequency Range ( $\pm 2$ dB)	3.75 Hz to 20 kHz	3.75 Hz to 20 kHz	
Lower Limiting Frequency (-3 dB)	1.0 to 3.0 Hz	1.0 to 3.0 Hz	
Inherent Noise	15.5 dBA re 20 $\mu$ Pa	15.5 dBA re 20 $\mu$ Pa	[2]
Dynamic Range (3% Distortion Limit)	137 dB re 20 $\mu$ Pa	137 dB re 20 $\mu$ Pa	[2]
TEDS Compliant	Yes	Yes	[4]
<b>Environmental</b>			
Temperature Range (Operating)	-40 to +176 °F	-40 to +80 °C	
Temperature Coefficient of Sensitivity (+14 to +158°F (-10 to +70°C))	0.005 dB/°F	0.009 dB/°C	[2][3]
Static Pressure Coefficient	-0.013 dB/kPa	-0.013 dB/kPa	[2][3]
Humidity Coefficient of Sensitivity (0 to 100%, non-condensing)	$\pm 0.001$ dB/%RH	$\pm 0.001$ dB/%RH	[3]
Influence of Axial Vibration (0.1g (1 m/s <sup>2</sup> ))	63 dB re 20 $\mu$ Pa	63 dB re 20 $\mu$ Pa	[2]
<b>Electrical</b>			
Polarization Voltage	0 V	0 V	[1]
Excitation Voltage	20 to 30 VDC	20 to 30 VDC	
Constant Current Excitation	2 to 20 mA	2 to 20 mA	
Output Bias Voltage	10 to 14 VDC	10 to 14 VDC	
Maximum Output Voltage	$\pm 7$ Vpk	$\pm 7$ Vpk	
Output Impedance	<50 Ohm	<50 Ohm	
<b>Physical</b>			
Housing Material	Stainless Steel	Stainless Steel	
Venting	Rear	Rear	[5]
Electrical Connector	BNC Jack	BNC Jack	
Mounting Thread (Grid)	0.5 - 60 UNS	0.5 - 60 UNS	
Size (Diameter x Length) (with grid)	0.52 in x 3.62 in	13.2 mm x 91.9 mm	
Size (Diameter x Length) (without grid)	0.50 in x 3.58 in	12.7 mm x 90.9 mm	
Weight	1.63 oz.	45.8 gm	[2]
<b>Notes</b>			
[1] Prepolarized			
[2] Typical			
[3] re 250 Hz			
[4] TEDS Capable Digital Memory and Communication, compliant with IEEE 1451.4			
[5] Venting through Preamp			

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