

# Audio Precision 378M33 Measurement Microphone System

## Complete Specifications

	ENGLISH	SI	Notes
<b>Performance</b>			
Nominal Microphone Diameter	1/4"	1/4"	
Frequency Response Characteristic (at 0° incidence)	Free-Field	Free-Field	
Sensitivity	2.0 mV/Pa	2.0 mV/Pa	[3]
Sensitivity (± 1.5 dB)	-54 dB re 1 V/Pa	-54 dB re 1 V/Pa	[3]
Frequency Range (± 1 dB)	7 Hz to 12.5 kHz	7 Hz to 12.5 kHz	
Frequency Range (± 2 dB)	5 Hz to 80 kHz	5 Hz to 80 kHz	
Frequency Range (± 3 dB)	4 Hz to 100 kHz	4 Hz to 100 kHz	
Lower Limiting Frequency (-3 dB)	0.75 to 4.0 Hz	0.75 to 4.0 Hz	
Inherent Noise	42 dBA re 20 µPa	42 dBA re 20 µPa	[4][2]
Dynamic Range (3% Distortion Limit)	165 dB re 20 µPa	165 dB re 20 µPa	[2]
TEDS Compliant	Yes	Yes	[5]
<b>Environmental</b>			
Temperature Range (Operating)	-40 to +158 °F	-40 to +70 °C	
Temperature Coefficient of Sensitivity (+14 to +158°F (-10 to +70°C))	0.003 dB/°F	0.006 dB/°C	[2][3]
Static Pressure Coefficient	-0.009 dB/kPa	-0.009 dB/kPa	[2][3]
Humidity Coefficient of Sensitivity (0 to 100%, non-condensing)	± 0.0014 dB/%RH	± 0.0014 dB/%RH	[3]
Influence of Axial Vibration (0.1g (1 m/s <sup>2</sup> ))	60 dB re 20 µPa	60 dB re 20 µPa	[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	± 8 Vpk	± 8 Vpk	
Output Impedance	<50 Ohm	<50 Ohm	
<b>Physical</b>			
Housing Material	Stainless Steel	Stainless Steel	
Venting	Rear	Rear	[6]
Electrical Connector	10-32 Jack	10-32 Jack	
Mounting Thread (Grid)	0.25 - 60 UNS	0.25 - 60 UNS	
Size (Diameter x Length) (with grid)	0.28 in x 2.07 in	7.1 mm x 52.6 mm	
Size (Diameter x Length) (without grid)	0.25 in x 2.02 in	6.35 mm x 51.3 mm	
Weight	0.27 oz.	7.8 gm	[2]
<b>Notes</b>			
[1] Prepolarized			
[2] Typical			
[3] re 250 Hz			
[4] A-Weighted inherent noise is specified from 20 Hz - 20 kHz.			
[5] TEDS Capable Digital Memory and Communication, compliant with IEEE 1451.4			
[6] Venting through preamp			

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