



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

MATERIALS MANAGEMENT DIVISION

Powai, Mumbai - 400076

Technical Specifications of Mircophone

RFx No. 610001127 (Reference No. 100021317)

Detailed Technical Specification of Microphone:

Sr. No.	Specification	Quantity
01	<p>1/4" LEMO Free-field Standard Microphone Set.</p> <ul style="list-style-type: none"> • Polarization/Connection - 200 V / Traditional • Frequency range (± 1 dB) – Hz - 10 to 40 k • Frequency range (± 2 dB) – Hz - 4 to 100 k • Dynamic range lower limit with GRAS preamplifier - dB(A) – 35 • Dynamic range upper limit with GRAS preamplifier @ +28 V / ± 14 V power supply – dB – 163 • Dynamic range upper limit with GRAS preamplifier @ +120 V / ± 60 V power supply – dB – 172 • Set sensitivity @ 250 Hz (± 3 dB) - mV/Pa – 3.6 • Set sensitivity @ 250 Hz (± 3 dB) - dB re 1V/Pa - -49 • Output impedance – Ω – 75 • Power supply min. to max. (single/balanced) – V - 28 to 120 / ± 14 to ± 60 • DC-offset, min., single supply – V - 0.5 x Vs – 1 • DC-offset, max., single supply – V - 0.5 x Vs + 4 • DC-offset, balanced supply – V - -1 to 4 • Microphone venting – Rear • IEC 61094-4 Designation - WS3F • Temperature range, operation - $^{\circ}\text{C}$ / $^{\circ}\text{F}$ - -30 to 70 / -22 to 158 • Temperature range, storage - $^{\circ}\text{C}$ / $^{\circ}\text{F}$ - -40 to 85 / -40 to 185 • Temperature coefficient @250 Hz - dB/$^{\circ}\text{C}$ / dB/$^{\circ}\text{F}$ - -0.01 / -0.006 • Static pressure coefficient @250 Hz - dB/kPa - -0.02 • Humidity range non-condensing - % RH - 0 to 90 • Humidity coefficient @250 Hz - dB/% RH - -0.0013 • Influence of axial vibration @1 m/s² - dB re 20 μPa – 60 • TEDS UTID (IEEE 1451.4) - 27 v. 1.0 • Connector type - 5-pin LEMO 00 • CE/RoHS compliant/WEEE registered - Yes / Yes/Yes • Weight - g / oz - 8 / 0.282 	4
02	<p>3 m LEMO 00 5-pin to LEMO 1B 7-pin Cable</p> <ul style="list-style-type: none"> • 3 m (9.8 feet) cable with LEMO 00 5pin female and LEMO 1B 7-pin male connectors. • Stainless steel, alloys, and high-quality composites. • 2 years warranty 	4
03	<p>2-channel Power Module with gain, filters & Syscheck generator.</p> <p>CONDITIONING:</p> <ul style="list-style-type: none"> • Frequency range (± 1 dB) - Hz - 3.5 to 200 k 	1

	<ul style="list-style-type: none"> • Frequency range (± 3 dB) – Hz - 2 to 250 k • Output channel(s) – 2 • Output impedance - Ω – 30 • Direct coupling input to output – Yes • Inherent noise, LIN (20 Hz to 20 kHz), grounded input - μVrms - <1.6 • Inherent noise, A-weighted, (20 Hz to 20 kHz), grounded input - μVrms - <1 • Inherent noise, A-weighted with dummy preamplifier (20 Hz to 20 kHz) - μVrms - <3.2 • Inherent noise, LIN with dummy microphone (20 Hz to 20 kHz) - μVrms - <5.7 • Gain settings, 20 dB steps – dB - -20 to +40 • Gain error – dB - < 0.2 • A-weighting filter according to - IEC 60651 Type 0 • High-pass filter - 3-pole Butterworth, -1 dB @ 20 Hz • Linear mode - Yes • SysCheck level @ 1 kHz – Vrms – 1 • Type - Traditional power supply (LEMO) • Input channel(s), traditional power supply – 2 • Channel separation (20 Hz to 20 kHz) – dB - >65 • Preamplifier supply – V - 28 / 120 • Polarization voltage – V - 0 / 200 • Overload indication – • PC controllable – No • External filter option – No • Power amplifier overload detection – No <p>POWER SUPPLY:</p> <ul style="list-style-type: none"> • Power supply, battery - 10 x LR6 (AA) • Power supply, external – Vdc - 12 to 18 • Power consumption – mA - 160 to 190 • Battery life, 28 V preamp. Supply – h – 10 • Battery life, 120 V preamp. Supply – h – 8 • Battery low indication – Yes • Fuse – mA – 315 • Temperature range, operation - $^{\circ}\text{C}$ / $^{\circ}\text{F}$ - -10 to +50 / 14 to 122 • Weight - g / oz - 810 / 28,572 	
<p>04</p>	<p>10 m BNC - BNC Cable</p> <ul style="list-style-type: none"> • 10 m (32.8 feet) coaxial cable type RG-58 with BNC male connectors. • Stainless steel, alloys, and high-quality composites. • 2 years warranty 	<p>4</p>