Use of Model 378C20

Model 378C20 is a 1/2 in (12 mm) prepolarized random incidence response microphone and preamplifier combination. The 378C20 has a low noise floor and flat response in diffuse field applications where low sound pressure levels need to be measured accurately in the presence of acoustic reflections.

Acoustic pressure waves may be altered by objects in the sound field including the microphone itself. The 378C20 corrects for its own presence, providing more accurate measurements within a diffuse field.

Polarization Voltage – ICP® (0V) Prepolarized

PCB® is the inventor of ICP® sensor power technology. All manufacturers of IEC 61094-4 compliant prepolarized (0V) microphones use the technology that PCB developed. Prepolarized microphones operate on 2-20 mA constant current supply and use coaxial cables resulting in significant per channel cost savings over the PCB 200V models. Other ICP® compatible sensors such as accelerometers, force, strain, and pressure sensors use the same power supplies and cables as prepolarized microphones, further reducing set-up time and initial investment costs.
378C20 PREPOLARIZED RANDOM INCIDENCE MICROPHONE SYSTEM

Nominal Microphone Diameter: 1/2 (12) in (mm)
Sensitivity at 250 Hz (± 1.5 dB): mV/Pa (dB re 1 V/Pa) 50 (-26)
Frequency Range (± 2 dB): Hz 3.75 - 16,000
Cartridge Thermal Noise (Microphone): dB[A] re 20 μPa 14
Inherent Noise with 426E01 Preamp: dB[A] re 20 μPa 16
Harmonic Distortion Limit: 3% dB re 20 μPa 146
Distortion Limit with 426E01 Preamp: dB re 20 μPa 137

Environmental Specifications

Operating Temperature Range
Microphone: °F (°C) -40 to +248 (-40 to +120)
Operating Temp. with 426E01 Preamp: °F (°C) -40 to +176 (-40 to +80)
Operating Temp. with HT426E01 Preamp: °F (°C) -40 to +248 (-40 to +120)

Electrical Specifications

Polarization Voltage: V 0
Constant Current Excitation: mA 2 - 20

Physical Specifications

Size (Diameter x Length with Grid): in (mm) 0.52 x 3.82 (13.2 x 91.9)
Connector: Coaxial BNC Jack

* all specifications typical unless otherwise noted

OPTIONAL ACCESSORIES

- 426A13 – 1/2’ short preamplifier
- 426A10 – 1/2’ preamplifier with 20 Hz high pass filter
- 426A11 – 1/2’ preamplifier with gain and filter switches
- HT426E01 – 1/2” preamplifier, high temperature (125° C)
- 079A06 – windscreen for 1/2” microphones
- 079A11 – microphone holder
- 079A15 – tripod microphone stand with boom arm
- 079B16 – miniature microphone stand
- 079A18 – clamp on flexible extension arm
- 079C23 – microphone holder with swivel mount
- CAL200 – handheld calibrator
- ACS-63 – microphone system calibration