

CCP Intensity Probe Type 50GI

Product Data

Typical Applications

- Sound intensity measurements
- Sound source location
- Sound power measurements
- IEC 61043 standard measurements
- Sound source ranking
- Sound intensity mapping

Type 50GI is a sound intensity probe for direct connection to signal analyzers or data acquisition devices with IEPE inputs. The probe includes a pair of phase-matched prepolarized precision microphones which meet the requirements in IEC standard 61043* for a class-1 intensity probe. The small rugged ¼" CCP preamplifiers ensure minimum disturbances to the sound field for accurate measurements in the full frequency range.

The probe set includes solid interchangeable spacers for microphone separations from 12 mm to 100 mm so that the probe can cover the frequency range from 50 Hz to 10 kHz.

All components are made specifically for sound intensity applications. Each small ¼" diameter by 40 mm long microphone preamplifier is housed in a robust stainless steel casing, which enables novel probe designs for reducing disturbances to the sound field otherwise brought about by the effects of shadows and diffraction, and a symmetry which enables reliable calibrations as described in the proposed standard (ISO/DIS 9614-2) for sound power measurements using sound intensity measurements.



Fig. 1 Intensity Probe Type 50GI

The CCP Intensity Probe Type 50GI comprises:

- Sound Intensity Microphone Pair Type 40GK (see separate data sheet)
- two CCP Microphone Preamplifiers Type 26CB (see separate data sheet)
- four solid spacers of various lengths
- windscreen
- probe handle.

The Type 50GI is delivered in a carrying case as a ready-to-use kit, complete with all the above accessories.

The microphones are ½" free-field prepolarized microphones with a uniquely-designed pressure equalisation system which ensures extremely well defined phase characteristics.

The microphones and preamplifiers are mounted on a swivel head on the telescopic arm of the Remote-control handle. To cover the full frequency range from 50 Hz to 10 kHz, the Type 50GI probe is delivered with four solid spacers for spacing the microphones at 12 mm, 25 mm, 50 mm and 100 mm. These spacers can be easily interchanged without dismantling the probe.

* IEC 61043, Electroacoustics, Instruments for the Measurement of Sound Intensity - Measurements with Pairs of Pressure Sensing Microphones 1993 for Class 1 Sound intensity probes.

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Specifications

2 x Sound intensity microphone Type 40GK:
1/2" free-field

Frequency response and phase matching:
IEC 61043 Class 1

2 x 1/4" CCP Preampifier Type 26CB:
Phase-matched

Weight:
0.3 kg (0.7 lbs)

Frequency range:
with 100-mm spacer:30 Hz - 1 KHz
with 50-mm spacer:80 Hz - 1.5 KHz
with 25-mm spacer:120 Hz - 5 KHz
with 12-mm spacer:200 Hz - 10 KHz

See also Product Data for Type 40GK and Type 26CB.

Accessories

Accessories Included

Microphone set Type 40GK
comprising:

1/2" Free-field Sound Intensity
Microphone setType 40GI
Spacer, 100 mmGR0044
Spacer, 50 mm.GR0043
Spacer, 25 mmGR0042
Spacer, 12 mm GR0041
Straight adapter RA0003
Angled adapter RA0001

1/4" CCP Preampifier set Type 26CB

3-m cable (supplied with Type 26CB) AA0018

Probe handle AI0044

WindscreenAI0001

Optional Accessories

Power Module, single-channel CCPType 12AL

Power Module, dual-channel Type 12AQ

8-mm Spacer for microphone separation: . . . GR0045

Microphone Adapter
(microdot-microdot (female) AE0046

5-m Cable (microdot-BNC) AA0061

10-m Cable (microdot-BNC) AA0062

For Calibration:

Intensity CalibratorType 51AB

Pistonphone with built-in barometer
and thermometer (recommended) Type 42AP

PistonphoneType 42AA

Two-port Calibration Coupler
(for Pistonphones Type 42AP or 42AARA0024

G.R.A.S. Sound & Vibration reserves the right to change specifications and accessories without notice.