

CCP Supply Type 12AL

Product Data and Specifications

Typical applications and features

- **Power supply for ICP® transducers and preamplifiers**
- **General-purposes measurements**
- **Precision measurements**
- **Wide-band measurements**
- **Switchable A-weighting network**
- **Low noise**
- **Battery operated**

The G.R.A.S. CCP (Constant Current Power) Supply Type 12AL (Fig. 1) is a low-noise single-channel power supply for CCP transducers and preamplifiers (also known as ICP® transducers and preamplifiers). Examples of G.R.A.S. products requiring a CCP supply are:

- ½-inch Preamplifier Type 26CA
- ¼-inch Preamplifier Type 26CB
- Array Microphones Type 40PR and Type 40PQ
- Probe Microphone Type 40SC

See separate data sheets. The Type 12AL can also be used with similar products from other manufacturers.

The Type 12AL will supply a transducer with a constant current of 4mA. It has a wide operating frequency range from about 1 Hz (depending on load impedance) to well over 200kHz. It also has an A-weighting filter which can be switched in or out.



Fig. 1 CCP Supply Type 12AL

The Type 12AL can be powered either by two internal AA alkaline batteries or from an external DC supply of 3 - 6V. A regulated mains/line adapter AB0005 is available for supplying external DC power.

LEDs are used to indicate battery condition; green for power OK and red for battery low. Another red LED is used to indicate cable break, short circuit and overload.

The Type 12AL has zero gain since the output signal from the transducer is wired directly via 22 µF to the output connector. Zero gain is also preserved at 1 kHz when the A-weighting network has been switched in.

The size and weight of the Type 12AL make it a compact and handy power supply for ICP® transducers both in the laboratory and in the field.

® ICP is a registered trademark of PCB Piezotronics Inc.

Specifications

<p>Input: Connector for transducer: BNC Impedance > 100 kΩ</p> <p>Output: Connector for transducer signal: BNC Impedance with and without A-weighting with: 100 Ω in serial with 22 μF without: as source in serial with 22 μF</p> <p>Gain: 0 dB</p> <p>Bandwidth (without A-weighting): Upper limit: >> 200 kHz Lower-limit (-3 dB) when signal output is used with an impedance of: 10 kΩ: 0.7 Hz 100 kΩ: 0.07 Hz</p> <p>Filter: A-weighting: IEC 60651 Type 0</p> <p>Noise (measured with G.R.A.S. Preamplifier Type 26CA from 20 Hz - 20 kHz) A-weighting off: 4 μV RMS A-weighting on: 15 μV RMS</p> <p>Transducer supply: Source voltage: 28 V Current: 4 mA</p>	<p>Power supply: Batteries: 2 x AA Battery life (alkaline bateries) 24 hours External DC: voltage: 3 - 6 V DC current consumption: 50 - 120 mA connector (+ on centre) 5 mm with 2 mm pin Internal switching frequency: 1.4 MHz</p> <p>LED indicators: Power OK: green Bat. low: red Overload, cable break, short circuit: red</p> <p>Overload, cable break, short-circuit detection: Hold time for indication 1 sec Detection levels 4.4 V and 21.5 V</p> <p>Operating temperature range: -10 $^{\circ}$C to +50 $^{\circ}$C</p> <p>Dimensions: Casing: 91 mm x 66 mm x 28 mm</p> <p>Weight: With alkaline batteries: 160 gm Without batteries: 110 gm</p> <p>Accessories available: Mains/line adapter: AB0005</p>
---	--

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

G.R.A.S.
Sound & Vibration

Skovlytoften 33
2840 Holte, Denmark
Tel +45 45 66 40 46 Fax +45 45 66 40 47
e-mail: gras@gras.dk www.gras.dk