

# GRAS 12AL

1-Channel CCP Power Module with A-weighting filter



Connection: CCP  
Channel(s): 1

The GRAS 12AL CCP (Constant Current Power) Supply is a low-noise single-channel power supply for CCP transducers and preamplifiers.

## Typical applications and use

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

## Design

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

The 12AL can be powered either by two internal AA alkaline batteries or from an external DC supply of 3 - 6 V. 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 a cable break, short circuit, and overload.

The 12AL has zero gain since the output signal from the transducer is wired directly via 22 Ω 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 12AL make it a compact and handy power supply for CCP transducers both in the laboratory and in the field.

## Warranty

All GRAS products are made of high-quality

materials that will ensure life-long stability and robustness. The 12AL is delivered with a 2-year warranty. The warranty does not cover products that are damaged due to negligent use.

## Service and Repairs

All repairs are made at GRAS International Support Center located in Denmark. Our Support Center is equipped with the newest test equipment and staffed with dedicated and highly skilled engineers. Upon request, we make cost estimates based on fixed repair categories. If a product covered by warranty is sent for service, it is repaired free of charge, unless the damage is the result of negligent use or other violations of the warranty.

<b>CONDITIONING</b>		
Frequency response ( $\pm 3.0$ dB) (with 10 k load)	Hz	0.7 to 200 k
Frequency response ( $\pm 3.0$ dB) (with 100 k load)	Hz	0.07 to 200 k
Output channel(s)		1
Output impedance, with A-weighting		100 in serial with 22 $\mu$ F
Output impedance, without A-weighting		As source in serial with 22 $\mu$ F
Direct coupling input to output		No
Inherent noise, A-filter "on" and with dummy microphone (20 Hz to 20 kHz),	$\mu$ Vrms	15
Inherent noise, A-filter "off" and with dummy microphone (20 Hz to 20 kHz),	$\mu$ Vrms	4
A-weighting filter according to		IEC 61651 Type 0
Linear mode		Yes
Type		Constant Current Power (CCP)
Input channel, CCP		1
Input channel(s), traditional power supply		1
CCP preamplifier supply @ +28 V	mA	4
Overload indication		Yes
PC controlable		No
External filter option		No
Power amplifier overload detection		No
<b>POWER SUPPLY</b>		
Power supply, battery		2 x LR6 (AA)
Power supply, external	Vdc	3 to 6
Power consumption	mA	50 to 120
Battery life	h	24
Battery low indication		Yes

Weight	g / oz	110.00 / 3.88
Weight with batteries	g / oz	160 / 5,6

[GRAS AB0005](#)

Mains/line adapter

GRAS Sound & Vibration reserves the right to change specifications and accessories without notice.

# GRAS Worldwide

Subsidiaries and distributors in more  
than 40 countries

## HEAD OFFICE, DENMARK GRAS SOUND & VIBRATION

Skovlytoften 33  
2840 Holte  
Denmark  
Tel: +45 4566 4046  
[www.grasacoustics.com](http://www.grasacoustics.com)  
[gras@grasacoustics.com](mailto:gras@grasacoustics.com)

## USA GRAS SOUND & VIBRATION

5750 S.W. Arctic Drive  
Beaverton, OR 97005  
Tel: 503-627-0832  
Toll Free: 800-231-7350  
[www.grasacoustics.com](http://www.grasacoustics.com)  
[sales-usa@grasacoustics.com](mailto:sales-usa@grasacoustics.com)

## CHINA GRAS SOUND & VIBRATION

Room 303, Building T6  
Hongqiaohui, 990, Shenchang Road  
Minhang District, Shanghai  
China, 201106  
Tel: +86 21 64203370  
[www.gras.com.cn](http://www.gras.com.cn)  
[cnsales@grasacoustics.com](mailto:cnsales@grasacoustics.com)



## ABOUT GRAS SOUND & VIBRATION

GRAS is a worldwide leader in the sound and vibration industry. We develop and manufacture state-of-the-art measurement microphones to industries where acoustic measuring accuracy and repeatability is of utmost importance in R&D, QA and production. This includes applications and solutions for customers within the fields of aerospace, automotive, audiology, and consumer electronics. GRAS microphones are designed to live up to the high quality, durability and accuracy that our customers have come to expect and trust.

**GRAS** Sound & Vibration