

# GRAS 12BC, 12BF AND 12BD

LEMO Power Modules with TEDS Support



Connection: LEMO  
Traditional 200 V  
Channel(s): 1, 2 or 4  
TEDS via USB

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GRAS 12BC, 12BF and 12BD are 1-, 2- and 4-channel LEMO power modules, respectively. They have TEDS support and can be powered by USB or AC mains.

The GRAS 12BC, 12BF and 12BD are, respectively, single- two- and four-channel USB-powered LEMO power modules with TEDS support.

These power modules provide power to microphone sets without signal degradation, gain modification, or attenuation.

This series excels as a simple and cost-effective interface between TEDS-enabled measurement microphones and any [Audio Precision APx series analyzer](#), which will automatically extract TEDS data for seamless integration.

However, these power modules can also be used with other brands. In this case, a utility program provides access to TEDS data on a PC. This [utility program can be downloaded here](#).

Power for 12BC, 12BF and 12BD is provided through a USB cable if the port can supply a minimum of 1.5 A that is required by the module. Power can be supplied via a USB 2.0 or USB 3.0 port connected to a USB-C port on the power module or AC mains power through the AUXPWR port if the minimum 1.5 A is not available through the USB-C port.

If more channels are needed, multiple power modules can be used concurrently.



Type		Traditional power supply (LEMO)
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## USB Interface

Interface		Type A Peripheral Interface
Version		USB C/USB 2.0
Power		USB +5 V, 500 mA max

## Microphone Channel

Channel(s)	Input/Output	LEMO/BNC
Max input voltage (limited by $\pm 15$ V DC pre-amp supply)	$V_{\text{peak}}$	14
Polarization voltage	V DC $\pm 2.0$ V	200
Pre-amp voltage	V DC @ 30 mA DC per channel	$\pm 15$
Max output voltage (limited by $\pm 15$ V DC pre-amp power and microphone pre-amp output)	$V_{\text{peak-to-peak}}$	24
Coupling		AC, 10 Hz high-pass filter

## General

Bandwidth	Hz	10 to 20 ( $\pm 0.06$ dB) 20 to 200 k ( $\pm 0.03$ dB)
Noise, input shorted, 10 Hz to 20 kHz	$\mu\text{V RMS}$	< 2.0
Temperature range, operation	$^{\circ}\text{C} / ^{\circ}\text{F}$	0 to +45 / 32 to 113
Temperature range, storage	$^{\circ}\text{C} / ^{\circ}\text{F}$	-40 to +75 / -40 to 167
Humidity	Up to 40 $^{\circ}\text{C}$ / 104 F	90%, non-condensing
EMC		EN 61326-1: 2013 Class B
Safety		UL/EN/IEC 62368-1, Second Edition
Dimensions, width x height x depth	mm inches	108 x 44.2 x 193.8 4.25 x 1.74 x 7.63

Weight (12BC 12BF 12BD)	g/oz	390/13.8 425/15.0 494/17.4
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GRAS 12BC	1-Channel LEMO Power Module with USB Connection
GRAS 12BF	2-Channel LEMO Power Module with USB Connection
GRAS 12BD	4-Channel LEMO Power Module with USB Connection

### Included

-	USB Cable
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### Optional

Extension cables with 7-pin LEMO connectors

<a href="#">GRAS AA0008</a>	LEMO 7-pin-LEMO 7-pin cable, 3 m
<a href="#">GRAS AA0009</a>	LEMO 7-pin-LEMO 7-pin cable, 10 m
GRAS AA0012	LEMO 7-pin-LEMO 7-pin cable, 30 m
GRAS AA0014	LEMO 7-pin-LEMO 7-pin cable, 100 m
GRAS AA0020-XX	Custom, XX specifies the length in metres

Extension cables with BNC connectors

GRAS AA0033	BNC-BNC cable, 1 meter
GRAS AA0034	BNC-BNC cable, 2 meters
GRAS AA0035	BNC-BNC cable, 3 meters

# GRAS Worldwide

Subsidiaries and distributors in more  
than 40 countries

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## 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 and related equipment for industries where acoustic measuring accuracy and repeatability are of the utmost importance. This includes applications and solutions for customers within the fields of aerospace, automotive, audiology, consumer electronics and other highly demanding industries. GRAS microphones are designed to live up to the high quality, durability and accuracy that our customers have come to expect, trust and require.

GRAS Sound & Vibration is represented through subsidiaries and distributors in more than 40 countries and is part of Axiometrix Solutions, a leading test solutions provider comprised of globally recognized measurement brands. Read more at [www.grasacoustics.com](http://www.grasacoustics.com)

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