MC102A ICCP Power Supply

Features:

- Provides power for microphones, accelerometers and other ICCP transducers
- 2 channel input/output with BNC connector
- LED indicators show the status of each input channel
- 4 mA/24 V ICCP power supply
- 7 V~30 V wide voltage DC power supply

Applications:

- Power for microphones, accelerometers and other ICCP compatible transducers

Introduction

MC102A power supply can provide power for prepolarized microphones, accelerometers and other ICCP compatible transducers. It has two channels input/output with BNC connector, and wide voltage power supply supports the use of various DC power supplies.

ICCP is a well-established standard which is widely used in the acoustic and vibration field to convert the high impedance signal of measurement microphones and piezoelectric transducers to a low impedance voltage output signal. The abbreviation ICCP stands for "Integrated Constant Current Power" and has many manufacturer specific names such as ICP® (Integrated Circuit Piezoelectric), CCLD (Constant Current Line Drive), DeltaTron®, ISOTRON® and IEPE (Integrate Electronics Piezoelectric). MC102A is compatible with microphones or transducers using any of the above proprietary names.

MC102A has an all-aluminum housing, which can effectively shield the internal signal. The LED indicators display the power supply status and the input status of each channel (input open (sensor not connected), OK (sensor connected), and input shorted). Each channel has a 35Vp input and output protection circuit, which can protect sensors and data acquisition equipment.

®TRADEMARK

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Specifications

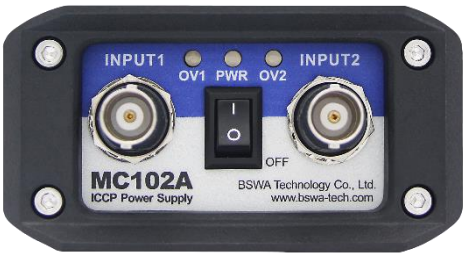
Input Channel	2 x BNC
Output Channel	2 x BNC
Constant Current Source	4 mA (3.5 mA~5 mA), 24V (±1 V)
Maximum Input Voltage[1]	±10 Vp
Maximum Output Voltage[1]	±10 Vp
Input / Output Protection Voltage	35 Vp
Output Impedance[2]	As source in serial with 10 μF and parallel 100 kΩ
Frequency Response[1]	4 Hz ~ 100 kHz (±0.2 dB), 0.4 Hz ~ 200 kHz (±3 dB)

Output Noise	A-weighted	<3 μV (2.5 μV typ.)
	Linear	<5 μV (3.8 μV typ.)
Crosstalk		-120 dB (linear, ICCP powered enabled)
Input Status Indicator		Bi-color LED: off=input open, yellow=OK, red=input shorted, Cable Fault Voltage threshold: 2 V and 22 V.
Power Supply		7 V~30 V DC power supply, ≥200 mA
Operating Temperature Range		- 10 °C ~ 50 °C
Operating Humidity Range		0 %RH ~ 95 %RH (no condensation)
Dimensions (mm)		W82 x H44 x D142
Weight		262 g

Note 1: Depend on the performance and frequency response of preamplifier.

Note 2: Source output impedance refers to the output impedance of the device connected to the input of the power supply / conditioner, which is generally the output impedance of the preamplifier.

Front and Rear Panels



BSWA Technology Co., Ltd. Room 1003, North Ring Center, No.18 Yumin Road, Xicheng District, Beijing 100029, China • Tel: 86-10-5128 5118 • Fax: 86-10-8225 1626 • E-mail: info@bswa.com.cn • URL: www.bswa-tech.com