

ISOTRON® Signal Conditioner

**ENDEVCO
MODEL
2792B**



Model 2792B

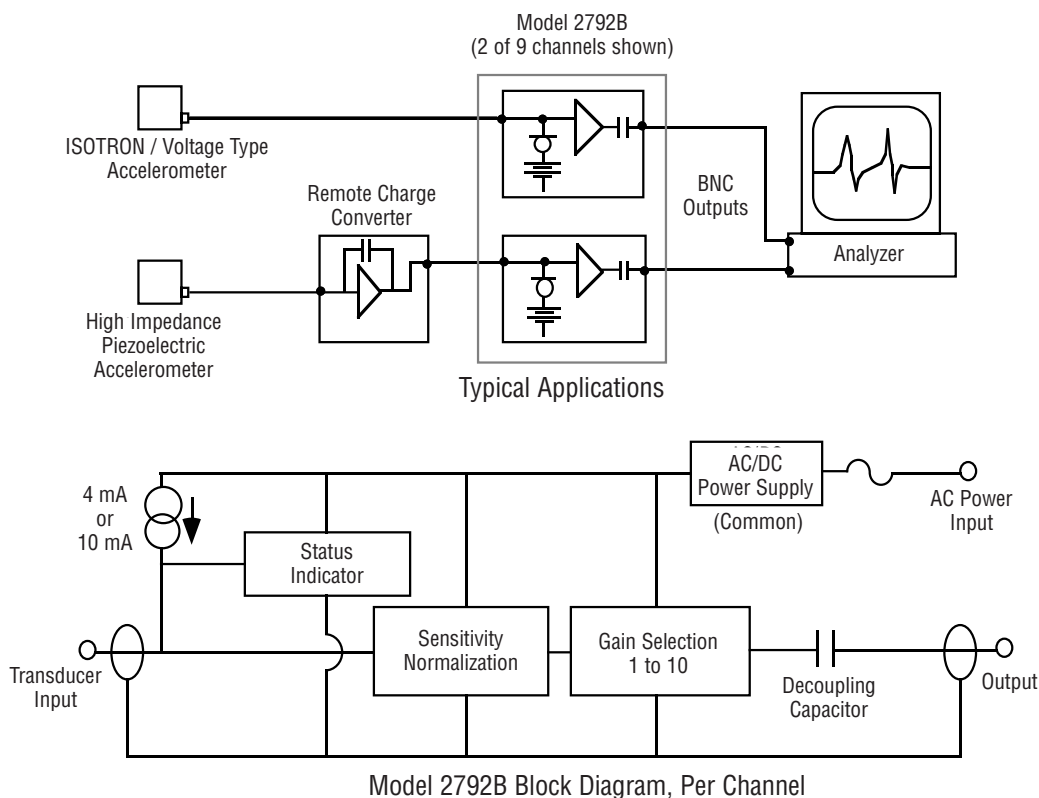
- 9-Channel Constant Current Supply/ Amplifier for ISOTRON (Piezoelectric Voltage Mode) Accelerometers or Remote Charge Convertors
- Transducer Sensitivity Normalization and LED Status Indicators
- Wide Frequency Range: 1 Hz to 80 kHz



Not actual size

DESCRIPTION

The ENDEVCO® Model 2792B nine-channel signal conditioner is a versatile power supply/amplifier for ISOTRON accelerometers and other piezoelectric voltage mode transducers. It can also power Remote Charge Convertors (RCC) in a high impedance piezoelectric measurement system. Each channel provides a constant current excitation (4 mA or 10 mA) for the transducer or the RCC, input sensitivity normalization, and a switched gain output. Individual LED status indicator informs the user of short, open, or normal conditions.



SPECIFICATIONS

INPUTS

TYPE	Single-ended, constant current two-wire system
INPUT IMPEDANCE	> 20 k Ω
EXCITATION CURRENT	4 mA or 10 mA \pm 10%, set by internal jumper, per channel
COMPLIANCE VOLTAGE	> 18 V. This voltage is the sum of AC and DC components

OUTPUTS

TYPE	Single-ended one side connected to circuit ground
OUTPUT IMPEDANCE	< 10 Ω , in series with at least 40 μ F
LINEAR OUTPUT VOLTAGE	10 V pk-pk (3.535 V rms) or greater
LINEAR OUTPUT CURRENT	2.0 mA pk-pk or greater

TRANSFER CHARACTERISTICS

GAIN	0.001 to 99.9 continuously Adjustable using the full scale Digi switch and THD x1/x10 switch
Accuracy	\pm 1.5% (Including variation with temperature and time)
FREQUENCY RESPONSE	Flat within \pm 5% from 1 Hz to 30 kHz, reference at 100 Hz
Lower Cutoff Frequency	-5% at 1 Hz, -3dB at 0.3 Hz (typical)
Upper Cutoff Frequency	-5% at 30 kHz, -3dB at 80 kHz (typical)
AMPLITUDE LINEARITY	1% of reading from best-fit straight line approximation
RESIDUAL NOISE	0.4 mV rms maximum for gains 0.5 to 2.0 gain. 2 mV rms maximum for 5.0 to 20.0 or 2.0 or 2 mV rms gains of 5.0 to 20.0 within a 30 KHz bandwidth.
TOTAL HARMONIC DISTORTION	Less than 1% for signals of full scale or less at any gain from .5 to 20.0
CROSSTALK	20.0 mV rms maximum RTO or 1.0 mV rms RTI whichever is greater Crosstalk specification is valid for the following conditions: One channel set at 100% of nominal sensitivity and x1 gain Adjacent channel set at any gain up to 20.0 (eg. 50% nominal sensitivity and x 10 gain) with a 250 Ω shunt resistor at the input

ENVIRONMENTAL CHARACTERISTICS

TEMPERATURE	Operating +32°F to +122°F (0°C to +50°C) Storage -65°F to +185°F (-54°C to +85°C)
HUMIDITY	95% R.H.

POWER

LINE VOLTAGE	100/120/220/240 VAC 50 to 60 Hz (switch selectable)
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PHYSICAL

DIMENSIONS	19" rack mounting, 1.73" h x 19.00" w x 9.45" d (44 mm x 483 mm x 240 mm)
WEIGHT	3.97 lbs. (1.8 kg)
FRONT PANEL FEATURES	Power Indicator LED indicates when power is applied Gain Switch Two-position, recessed switch for gain of 1 or 10 Sensitivity Normalization Four-digit pushbutton switch. See example below Status Indicators LED will light green, when the transducer is connected properly. The LED will light red when the input is shorted. The LED will not light when the input is open
REAR PANEL FEATURES	Input Connectors BNC Output Connectors BNC

ACCESSORIES

Instruction Manual EW599	AC POWER CORD
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SENSITIVITY NORMALIZATION/ADJUSTMENT:

A four digit push button switch is used to normalize each channel to allow for variation in nominal sensitivity of the transducer. The switch is set to read the actual percentage of nominal (desired) sensitivity. For example, if the nominal (desired) sensitivity is 10.0 mV/g and the actual sensitivity is 10.21 mV/g, set Percentage of Nominal Sensitivity Switch to 102.1; Gain Switch to x1. If nominal (desired) sensitivity is 100 mV/g and the actual sensitivity is 10.21 mV/g, set Percentage of Nominal Sensitivity Switch to 10.21 and Gain Switch to x 10.

Continued product improvement necessitates that Endevco reserve the right to modify these specifications without notice. Endevco maintains a program of constant surveillance over all products to ensure a high level of reliability. This program includes attention to reliability factors during product design, the support of stringent Quality Control requirements, and compulsory corrective action procedures. These measures, together with conservative specifications have made the name Endevco synonymous with reliability.