



Innovator In Spectroscopy Equipment

QA2314



QUAD DC AMPLIFIER MODEL QA2314



CATALOG



NIM MODULE



FREE DOWNLOAD

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QUAD DC AMPLIFIER MODEL QA2314

Features

- Noise: $< 50\mu\text{V}$ rms, referred to the input
- Normal Gain: $4.0\pm 5\%$ (each section)
- Nonlinearity: $< \pm 2\%$ for V output to $\pm 1\text{V}$
- Instability: $< \pm 100\mu\text{V}/^\circ\text{C}$ referred to the output
- Overload recovery: $< 4\text{ns}$ for a X20 overload
- Band width: dc to 300MHz, noninverting
- Propagation delay: 2ns per section typical



Noise: $< 50\mu\text{Vrms}$,
referred to the input

Propagation delay:
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Description

The model QA2314 contains four independent amplifiers. Each amplifier has a wide bandwidth, short rise and fall times with very small overshoot, and a large output swing. This module is particularly suited for "single photon" counting applications. The 2314 output signal range is compatible with the threshold range of all other discriminator modules and with other M100 Nuclear Instrumentation System Modules that accept fast negative signals. The degenerative feedback used in each amplifier section provides excellent linearity and gain stability. AC-coupling between amplifier stages allows high gain without amplification of input offset.

Specifications

Inputs

Dc- coupled, front panel BNC connector per section, bipolar

Impedance

50 ohm

Linear Range

$\pm 220\text{m}$

Reflections

<5% from $\pm 10\text{V}$ transient with 1nSec rise times

Protection

$\pm 10\text{V}$, $\pm 50\text{V}$ transient

Offset

$< \pm 50\mu\text{V}$

Outputs

Dc- coupled, front panel BNC connector per section, bipolar

Linear Range

$\pm 1\text{V}$ on 50 ohm

Rise and Fall Times

Typ. 1.2nSec

Overshoot

<3% for 1ns rise time input signal

Offset

adjustable to $\pm 100\mu\text{V}$ on 50 ohm

Controls(Front Panel)

DC-Ball

one 22-turn front panel potentiometer per section, adjusts the output offset within the range of $\pm 100\mu\text{V}$ on 50 ohm

Application

- Timing on a number of detectors
- optimum timing for up to four germanium detectors
- Timing with various solid state detectors
- General purpose wide-band amplification
- Selectable bandwidth amplification

Electrical and Mechanical

Power required

$\pm 12\text{V} - 165\text{mA}$

$\pm 24\text{V} - 85\text{mA}$

Physical

weight	994 g
Dimensions	220 x 34 x 248(mm)
Storage temperature	0°C to 40°C
Operating temperature	0°C to 50°C

Software


The device doesn't have any software







Ordering info

Standard package includes

Part #	Image	Description
QA2314		QUAD DC AMPLIFIER
ACCE2314001		CD User guide (1 Pack)
ACCE2314002		box with foam insert
ACCE2314003		Guarantee (one year)

Optional accessories and services

Part #	Image	Description
ACCE2314004		Installation
ACCE2314005		Training
ACCE2314006		Re-calibration services
ACCE2314010		RG58A/U , 50 Ω cable with two BNC male plugs
ACCE2314011		BNC Terminator 50 Ω

ACCE2314012		CONN HOUSING plug 50POS AMP CONNECTORS
ACCE2314013		CONN PIN HOOD INT 50POS PANEL MT
ACCE2314014		GUIDE PIN 4-40
ACCE2314015		TE CONNECTIVITY AMP CONNECTORS MULTIMATE,TYPE II SERIES PIN
ACCE2314016		BIN GUIDE PIN
ACCE2314017		GUIDE SOCKET



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