



Innovator In Spectroscopy Equipment

G&D2214



GATE & DELAY GENERATOR MODEL G&D2214

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CATALOG



NIM MODULES



FREE DOWNLOAD

GATE & DELAY GENERATOR

MODEL G&D2214

Features

- Delay nonlinearity < ± 2
- Excellent time delay stability
- Allows time delays up to $110\mu\text{s}$
- Accepts either polarity of input pulse
- Positive or negative polarity input pulse
- Delay generator dead time adjusted delay plus 200ns on $1.1\mu\text{s}$
- Delay temperature instability < $+0.03\%$ of adjusted delay per $^{\circ}\text{C}$
- Provides output pulses of selectable polarity, amplitude, and width
- High stability
- Splash resistant design
- Wide operational temperature range
- Delay jitter < 0.02% of selected range
- Ultra reliable industry standard design
- Output generator dead time adjusted width plus $0.2\mu\text{s}$
- Being robust and suitable for use in challenging conditions



DELAY JITTER < 0.02% OF SELECTED RANGE & EXCELLENT TIME DELAY STABILITY

Description

The G&D2214 from Control Farayand Pasargad (CFP) is a single width module that conforms to DOE/ER- 0457T. It accepts either polarity of logic pulses, provides an adjusted delay for each input pulse, and generates output pulses with both polarities that have an adjusted amplitude and width. It serves as a convenient interface between logic pulse origin and its end use. Typical applications for the G&D2214 include gating multichannel analyzers for either coincidence or anticoincidence control, alignment of coincidence timing between two channels of information that use dissimilar pulse shaping modes, and start and/or stop logic pulses for a time to pulse height converter. The logic pulse delay is adjustable from 0.1 through 110 μ s in three overlapping ranges. The amplitude of both polarities of output pulses are adjustable within the range of 2 to 10V. The output pulse width can be adjusted within the range of 400ns through 4 μ s. Operation is simple and reliable. The flexibility of the G&D2214 permits it to be normalized to the input requirements of all currently available nuclear instruments and too many other applications.

Specifications

Input(s)

Input power

TAC2038 powered from a standard NIM bin and power supply

NEG INPUT

Front-panel BNC connector accepts NIM standard fast negative logic pulses; -250mV pulse minimum; 5ns minimum width, dc-coupled; impedance 50 Ω

POS INPUT

Front and rear-panel BNC connectors; +2V pulse minimum, 12V maximum; 100ns minimum width, dc-coupled; impedance 100 Ω

Output(s)

POS/NEG DELAYED OUT

Front-panel BNC connectors, with test points, provide simultaneous output pulses with identical characteristics except for opposite polarity; impedance < 10s.

POS/NEG DELAYED gate Outputs

Rear-panel BNC connectors, with test points, provide simultaneous output pulses with identical characteristics except for opposite polarity; impedance < 10s.

DLY'D MARKER

Front-panel BNC connector, with test point, provides NIM-standard fast negative logic pulse at the end of delay time.

Amplitude, -0.6V into 50s load; rise time < 10ns; width < 25 ns; impedance <10s

DELAYED PERIOD

Rear-panel BNC connector, with test point, provides positive pulse width equal to the adjusted delay; amplitude +5V; rise time < 50ns; impedance < 10s

Control(s)

DELAY

Delay 10-turn locking potentiometer with direct reading duo-dial for continuous adjustment within the range selected by the locking 3-position toggle switch.

A 1.1 μ sec mode achieves the range of 0.1 to 1.1 μ s for the delay potentiometer

A 11 μ sec mode achieves the 1 to 11 μ sec rang

A 110 μ sec mode achieves the 10 to 110 μ sec rang

AMPLITUDE

Front-panel screwdriver control permits the output pulse amplitude to be adjusted within the range of 2 to 10V, both polarities (i.e., +2 to +10V and -2 to -10V)

WIDTH 0.4-4 μ sec

Front-panel screwdriver control permits the width of output pulses to be adjusted within the range of 400ns to 4 μ s

Indicator(s)

No indicator

Performance

Gate width

Range: 100ns to 10s (50ns width at reduced accuracy and stability)

Accuracy: \pm 0.2% of full scale

Temperature stability < 200 ppm/ $^{\circ}$ C

Jitter < 0.3% of setting

Resolution: 0.1% of full scale

Delay width

Width options: 10ns, 30ns, 100ns and 300ns

Accuracy: \pm 20%

Delay nonlinearity

$\leq \pm$ 2%

Delay temperature instability

$\leq \pm$ 0.03% of adjusted delay per $^{\circ}$ C

Delay jitter

\leq 0.02% of selected range

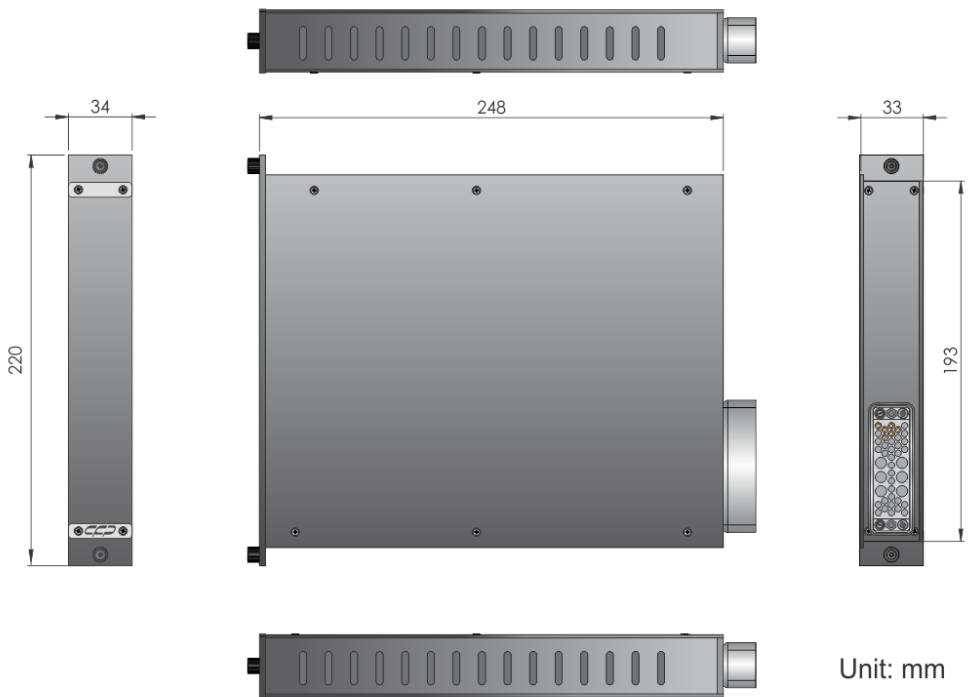
Application

- Gating
- Scientific
- Spectrometry
- Radiation detection

General laboratory usage

Electrical and Mechanical

Unit: G&D2214

Version type	NPHV2039-PRO	NPHV2039A-PRO	NPHV2039B-PRO	NPHV2039C-PRO	NPHV2039D-PRO	NPHV2039E-PRO
Electrical						
Power required	Its power from a NIM bin power supply. Required dc voltages and currents are +24 V, 60mA; -24 V, 60mA; 12V, 85mA and -12 V, 55mA.					
Physical						
Dimensions (L x W x H)	220mm x 34mm x 248mm (L x W x H)					
Weight	0.994kg					
Mechanical	 <p style="text-align: right;">Unit: mm</p>					
Environmental						
Storage temperature	- 40°C to + 85°C					
Operating temperature	0°C to +50°C					
Relative humidity	< 80%					

Software and user interface

The device doesn't have any software

Ordering info


TAC2038 Standard package includes

Part #	Image	Description
G&D2214 main		Gate & delay generator model G&D2214
ACCE2214001		CD user guide (1 Pack)
ACCE2214002		Box with foam insert
ACCE2214003*		Guaranty (one year)

* =we stand behind our products. We guarantee your satisfaction in the quality of our instruments by providing a complete one-year warranty covering any defect of workmanship, material, and/or design. If our products do not perform, we will provide complete repair and/or replacement. for guaranty conditions, please refer to manual device (G&D2214 - Manual)

Optional accessories and services

Part #	Image	Description
ACCE2214004		Installation
ACCE2214005		Training
ACCE2214006**		Re-calibration (interval) services. 1year factory maintenance suggested, not required
ACCE2214011		BNC terminator 50Ω
ACCE2214012		RG58A/U, 50Ω cable with two BNC male plugs
ACCE2214013		Conn housing plug 50POS AMP connectors
ACCE2214014		Conn pin hood int 50pos panel MT
ACCE2214015		Guide pin 4-40
ACCE2214016		TE connectivity AMP connectors multimate, type II series pin
ACCE2214017		Bin guide pin

ACCE2214018		Guide socket
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** = The proper maintenance & calibration of your instruments is critical to ensure proper performance & accuracy. for Re-calibration (interval) services, please call with CFP company (021- 4604538)





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