

Single-Channel 400Vp-p WideBand Amplifier

MODEL 9100A



- Single channel
- High voltage output to 400Vp-p ($\pm 200V$)
- Output current to 125 mA
- Monitor Output
- Precise signal amplification for multiple applications
- Full power bandwidth from DC to >500 kHz
- Compatible with any of the Tabor arbitrary waveform generators

Description

The Model 9100A was designed as a general purpose, wide band and high voltage amplifier however, with specific applications in mind. It's a single four channel built in a small case size to save space and cost but without compromising bandwidth and signal integrity.

Operation Mode

Channel amplifies and outputs bipolar signals with a gain of x50. In this mode, the input signal is amplified and delivered to the output terminal without modification of its original properties, except its amplitude level.

Single Channel

Model 9100A can output signals from -200 to +200 V with continuous currents up to 50 mA. The output is driven from a 0.1Ω source and, with some degradation of its bandwidth, can drive capacitive loads up to 1 nF, while maintaining its full amplitude range. Model 9100A has a rear-panel monitor output that divides the main output signal by 100 for applications that require monitoring of the output signal with low voltage sensors.

Safety

Safety played a major role during the design of the Model 9100A. The high voltage path to the amplifier circuit is blocked by a front panel mechanical switch and accidental application of high power to the UUT is prevented by a safety latch. The Model 9100A will output high voltage signals only after the safety latch has been lifted and the high voltage switch flipped to ON position. In emergency situations, one can hit the protective latch to immediately remove the high voltage power from the output terminals. As an additional visual safety feature, a red light glows on the front panel whenever the high voltage is turned on.

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Service and Support

Beyond providing precision Test & Measurement instruments, Tabor Electronics provides unparalleled service and support, and is continuously finding new ways to bring added value to its customers.

Our after-sales services are comprehensive. They include all types of repair and calibration, and a single point of contact that you can turn to whenever you need assistance. As part of our extensive support, we offer individualized, personal attention Help Desk, both online and offline, via e-mail, phone or fax.

Tabor Electronics maintains a complete repair and calibration lab as well as a standards laboratory in Israel and USA. Service is also available at regional authorized repair/calibration facilities.

Contact Tabor Electronics for the address of service facilities nearest you.

Applications

For expert technical assistance with your specific needs and objectives, contact your local sales representative or our in-house applications engineers.

Manuals, Drivers, and Software Support

Every instrument comes equipped with a dedicated manual, developer libraries, I/O drivers, and software. However, if your specific manual is lost or outdated, Tabor Electronics makes it possible to log-on to its Download Center and get the latest data "in a click".

Product Demonstrations

If your application requires that you evaluate an instrument before you purchase it, a hands-on demonstration can be arranged by contacting your local Tabor Electronics representative or the Sales Department at our Corporate Headquarters.

Three-year Warranty

Every Tabor Electronics instrument comes with a three-year warranty. Each one has full test results, calibration certificate, and CD containing product's manual and complete software package. Our obligation under this warranty is to repair or replace any instrument or part thereof which, within three years after shipment, proves defective upon examination. To exercise this warranty, write or call your local Tabor representative, or contact Tabor Headquarters and you will be given prompt assistance and shipping instructions.

Visit our website at www.taborelec.com


TABOR ELECTRONICS Inc.
Since 1971

Specification Single-Channel 400Vp-p WideBand Amplifier

Model 9100A



CONFIGURATION

Amplifier Channel: 1 single-ended output

INPUT CHARACTERISTICS

Connectors: BNC
Impedance: 1M Ω
Coupling: DC
Amplitude Level: 8 Vp-p (-4 to +4 V peaks)
Frequency Range:
 Full power DC to > 500 kHz
 Unipolar mode DC to > 200kHz

OUTPUT CHARACTERISTICS

GENERAL

Connectors: BNC
Source Impedance: 0.1 Ω
Load impedance: Resistive, recommended for full power bandwidth spec, load resistance limited by the output current ; Capacitive, up to 100 pF has minimal effect on bandwidth, 1 nF reduces the full power bandwidth to 100 kHz
Coupling: DC
Protection: Short-circuit, 10 seconds
Gain: x50, fixed
Polarity: Output normal; half wave rectified
Amplitude: 0 to 400 Vp-p (-200 to +200 V)

SQUARE WAVE CHARACTERISTICS

Transition Time: <1 μ s
 Aberrations: <10%

SINE WAVE CHARACTERISTICS

Small Signal:
 Bandwidth (-3dB) 1.5 MHz, at 20 Vp-p
Large Signal:
 Bandwidth (-3dB) 500 kHz, at 400 Vp-p
Accuracy: (2% of full-scale amplitude range + 50 mV), Square wave at 1 kHz
THD: <0.1%, 10 Hz to 50 kHz
 <0.8%, 50 kHz to 200 kHz

OUTPUT MONITOR CHARACTERISTICS

Connectors: BNC (rear panel)
Source Impedance: 3 k Ω
Load impedance: 1 M Ω
Ratio: 100:1, \pm 10%

ENVIRONMENTAL

Operating Temperature: 0°C - 40°C, RH 80% (non-condensing)
Storage Temperature: -30°C to 80°C

GENERAL

Physical Size: 2U, half-rack size
Power Requirements: 100V/115V/230V, 47-63 Hz, <150 VA; <120W
Weight: Approximately 14 lbs (6.5 kg)
EMC Certification: CE marked
Reliability: MTBF per MIL-HDBK-217E, 25°C, Ground Benign
Safety: Designed to meet IEC EN61010-1, UL 3111-1
Workmanship Std: Conforms to IPC-A-610D
Warranty: 3 years standard; Extended warranty available upon request

ORDERING INFORMATION

Single-Channel 400Vp-p WideBand Amplifier

MODEL	9100A-50 (*)
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(*) Custom gain available upon request, however, bandwidth may change.