Racal Instruments
http://www.racalinstruments.com

PRODUCT INFORMATION

4 or 8-Channel High-Voltage Isolated Amplifier Model 6064

- **4 or 8 Separate Isolated Channels**
- **$50V_{pk-pk}$ or $80V_{pk-pk}$ max. per Channel**
- **12-bits Gain Resolution**
- **2-Wire or 4-Wire Mode**
- **20kHz Full Power Bandwidth**
- **Message-based, SCPI Compatible**

The Model 6064 High-voltage isolated amplifier provides four or eight isolated output channels with separate 12-bits of programmable gain.

Each channel is fully independent and has 12-bit resolution. Channels are fully isolated between themselves and between VXI ground. Channels may be connected in series or parallel with other channels to achieve greater voltage or currents. For example, the 8 channels on the 6064-8 may be connected in series to create an output voltage of up to 320 Volts.

6064 option S2 offers $80V_{pk-pk}$ output per channel. For this option, all channels are isolated from module ground but are not isolated from each other.

Maximum output current is 50mA per channel for gains lower than 2 and 10mA for gains greater than 2. All outputs of the 6064 are short-circuit protected.

The 6064 is easily programmed using SCPI compatible commands. Each channel is individually programmable.

The 6064 is an ideal companion for single or multiple channel Arbitrary Waveform Generators (AWG's) where high voltage and isolation are required.

The 6064 is also useful for fixed frequency applications requiring several variable level outputs.

6064 SPECIFICATIONS

ANALOG OUTPUTS

Max Number of Channels
4 (6064-4) or 8 (6064-8)

Output Type
Isolated

Isolation
750V_{rms}, chan-chan, chan-gnd

Output Level
40V_{pk-pk}. max. @ 50mA
50V_{pk-pk} max. @ 10mA

Ripple Voltage (20 Hz- 20 MHz)
15mV_{rms}, 100mV_{pk-pk}

Channel to Channel Crosstalk
-60dB at 10kHz

Bandwidth
DC to 20kHz Full Power Bandwidth
DC to 40kHz Small Signal Bandwidth

Slew Rate
2V/µs

Offset Error (23°C +/- 2°C)
±10mV

Offset Thermal Drift
±1mV/°C typ.

Gain (Full Scale)
0 to 2.5

Gain Resolution
12-bits

Gain Accuracy
±15mV

Gain Thermal Drift
+2mV/ °C max

Output Current
±50mA, max (Gain of 62)

Linearity Error
+/-15 mV

Settling Time to 0.1%
50 µs

Short Circuit Protection
Continuous

Capacitive Load
3.3nF, max.

S2 Opt. ANALOG OUTPUTS

Max Number of Channels
4 (6064-4) or 6 (6064-8)

Output Type
Isolated in pairs and from ground

Isolation
750V_{rms}, by channel pairs, chan-gnd

Output Level
80V_{pk-pk} max. @ 50mA

Ripple Voltage (20 Hz- 20 MHz)
30 mV_{rms}, 200mV_{pk-pk}

Channel to Channel Crosstalk
<-40dB at 10kHz

Bandwidth
DC to 20kHz Full Power Bandwidth
DC to 50kHz Small Signal Bandwidth

Slew Rate
2V/µs

Offset Error (23°C +/- 2°C)
±10mV

Offset Thermal Drift
±1 mV/ °C typ.

Gain (Full Scale)
0 to 2.5

Gain Resolution
12-bits

Gain Accuracy
±15mV

Gain Thermal Drift
+2mV/ °C max

Output Current
±50mA, max.

Linearity Error
+/-15 mV

Settling Time to 0.1%
50 µs

Short Circuit Protection
Continuous

Capacitive Load
3.3nF, max.

10V REFERENCE OUTPUT

Accuracy (at 23°C±2°C, Iout=1 mA)
±0.1%

Temperature Coefficient
50ppm/°C

Maximum Current Output
20mA

VXIbus INTERFACE DATA

Device Type
VXIbus Message Based & Register based

Compatibility
VXIbus Rev. 1.4

VXIbus Protocol
Word serial protocol

Languages
Native: SCPI
Drivers: LabVIEW, LabWindows/CVI,
VXI*plug&play*(WIN95, WIN NT Framework)

Execution Time in Interactive Mode
<5ms per channel

Input Connector Type
Positronic SGMC, 20 pins

Output Connector Type
Positronic SGMC, 26 pins

Power Requirements

	+24V	+5V	-24V
I_{Pm}	1.5A	3.0A	1.5A
I_{Dm}	0.8 A	0.6 A	0.8 A

Cooling
4 l/s @ 0.5 mm H_20

Operating Temperature
10°C to 50°C

MTBF
50 000 Hours at 25°C
40 000 Hours at 35°C

Weight
2.5kg

ORDERING INFORMATION			
Model	**Description**	**Part Number**	**Options**
6064	User manual	33-1090-99999	ALL
6064-4	Four Isolated Outputs, 50Vpp	33-1090-00000	Standard
6064-8	Eight Isolated Outputs, 50Vpp	33-1091-00000	Standard
6064-4-S2	Four Isolated Outputs, 80Vpp	33-1092-00000	S2
6064-8-S2	Eight Isolated Outputs, 80Vpp	33-1093-00000	S2

CE The CE Mark indicates that the product has completed and passed rigorous testing in the area of RF Emissions, Immunity to Electromagnetic Disturbances and complies with European electrical safety standards.

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