

The 6048 is a four-channel input module for use with tachometers, flowmeters and other transducers that have frequency outputs. It can also measure the period between events and count or totalize events. Digital measurement of frequency provides the highest accuracy. Much better for example than-voltage-to frequency converters.

The 6048 has optic isolated trigger, pause and reset inputs and may be triggered by input waveforms from 100mV to 100 Volts at zero crossings. It can measure frequency to 500 kHz, period down to 100 uS and count events to over 4 billion.

The 6048 has numerous programmable operating modes available, which include frequency measurement, period measurement, and pulse counting. Other programmable features incorporated in the Model 6048 are time base, number of measurement periods, and counter reset mode. The frequency, period, and pulse count measurements can be from either optic isolated digital inputs or a zero crossing detector. The counters can be reset by external inputs or automatically after each reading. Power is provided for transducers requiring 12V or for using the optic isolated inputs with external contacts.

Using digital measurement techniques the 6048 does not have analog outputs. An analog voltage proportional to frequency can be obtained by using the 6042 DSP to scale the 6048 measurement and convert it to analog using digital-to-analog converters. This provides the accuracy of a digital measurement with the analog output of a frequency to voltage converter.



FEATURES

- Four independent 32-bit channels
- Digital or zero crossing triggers
- Optic isolated inputs
- Noise reduction input filters
- Programmable time base
- 12 Volt isolated power for inputs

SPECIFICATIONS

DIGITAL INPUTS (OPTIC ISOLATED)

LevelRequires 5 Volts at 8 mA to trigger the optic coupled input. Inputs are protected to ± 50 Volts.

Isolation300 Volt.

Frequency.....DC to 500 kHz.

ANALOG INPUTS (ZERO CROSSING DETECTOR)

TypeDifferential.

Level100 mV minimum to 100 Volts maximum.

FilterTerminals for single pole, user installed filter.

Impedance100K Ohms.

Frequency.....DC to 100 kHz.

OUTPUT

Resolution32-bits

FormatOutput as two 16-bit data words on adjacent output ports.

RANGE

Frequency.....0.1 Hz to 500 kHz.

Period100 μ S to over 11 million hours.

Count0 to 2^{32}

ACCURACY

Frequency.....0.01%, ± 1 count

Period0.01% down to 1 mS, 0.1% down to 100 μ S.

Count ± 1 count.

TIME BASE

Selection0.1 Hz, 1 Hz, 10 Hz, 100 Hz, 1 kHz, 10 kHz, 100 kHz, 1 MHz, 10 MHz.

Accuracy $\pm 0.01\%$.

Periods1 or 10.

ISOLATED POWER

Voltage12 Volts.

Current1 Amp maximum.

GENERAL

MountingOccupies one slot in Series 6000 enclosures.

Connector50-pin, Type D. Connector is mounted on the front and the mate is supplied.

Temperature0°C to +50°C

ORDERING INFORMATION

60484-channel, 32-bit frequency/period/counter module.