

DATA SHEET

Form 440-100303

Description

The voltage input analog module provides a single channel of optically-isolated voltage-to-digital conversion. The modules offer wide nominal input and special over/under range capabilities. The "T" module also includes 4,000 V_{rms} channel-to-channel isolation which eliminates any ground loop problems. Modules plug into a Standard analog I/O rack and are secured by a captive screw.



Part Numbers	Description
AD6	0 to +5 VDC Input
AD6T	0 to +5 VDC Input Isolated
AD6HS	0 to +5 VDC Input-High Speed
AD7	0 to +10 VDC Input
AD9T	0 to 50 mV Input Isolated
AD11	-5 to +5 VDC Input
AD12	-10 to +10 VDC Input
AD12T	+10V to -10 mV Input Isolated
AD13T	0 to 100 mV Input Isolated

	AD6 AD6HS	AD6T	AD7	AD9T
Nominal Voltage Input	0 to 5 VDC	0 to 5 VDC	0 to 10 VDC	0 to 50 mVDC
Over/Under Range Capability	-.125 to 11 VDC	-.125 to 11 VDC	-.250 to 11 VDC	-.125 to 110 mVDC
Accuracy*	± 5 mV	± 5 mV	± 10 mV	± 100 mV
Power Requirements	16 mA at +15 VDC 11 mA at -15 VDC	35 mA at +15 VDC 35 mA at -15 VDC	16 mA at +15 VDC 11 mA at -15 VDC	35 mA at +15 VDC 35 mA at -15 VDC

*May be improved by the use of the "Set Offset" or "Set Gain" commands in the OPTOMUX command set.

	AD11	AD12 AD12T	AD13T
Nominal Voltage Input	-5 to + 5 VDC	-10 to 10 VDC	0 to 100 mVDC
Over/Under Range Capability	-5.25 to 11 VDC	-10.5 to 11 VDC	-.250 to 220 mVDC
Accuracy*	± 10 mV	± 20 mV	± 100 μV
Power Requirements	15 mA at +15 VDC 12 mA at -15 VDC	15 mA at +15 VDC 12 mA at -15 VDC	35 mA at +15 VDC 35 mA at -15 VDC

*May be improved by the use of the "Set Offset" or "Set Gain" commands in the OPTOMUX command set.

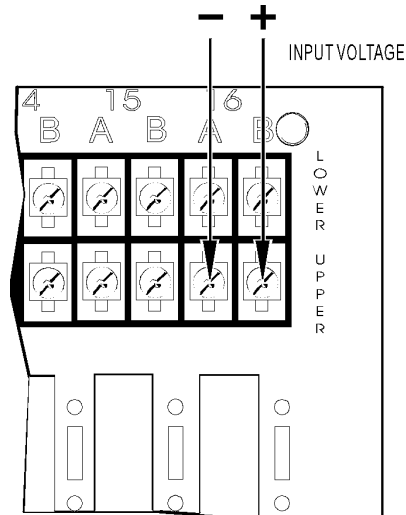
Specifications

Input Response Time*	5% of scale change in 8.5 ms 63% of scale change in 165 ms
Resolution	12-bits
Isolation Input-to-Output Input-to-Analog Supply ("T" Modules)	4,000 Vrms 4,000 Vrms
Temperature Operating Storage	0° to 70° C -25° to 85° C

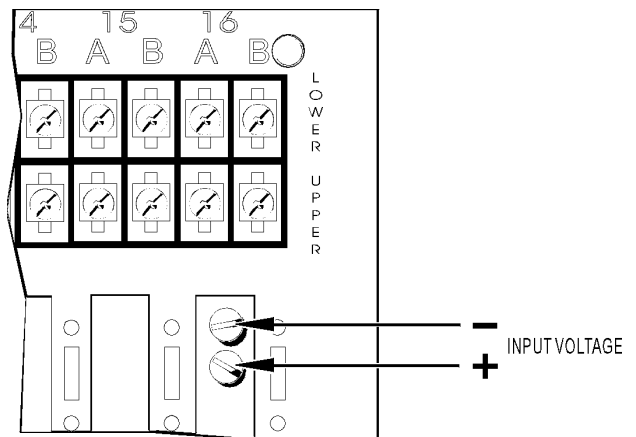
*AD6HS input response 100% step change in less than 3 milliseconds.

Connections

WIRING FOR AD6, AD6T, AD6HS, AD7,
AD11, AD12, AND AD12T



WIRING FOR AD9T AND AD13T



More About Opto 22

Products

Opto 22 develops and manufactures reliable, flexible, easy-to-use hardware and software products for industrial automation, remote monitoring, and data acquisition applications.

SNAP PAC System

Designed to simplify the typically complex process of understanding, selecting, buying, and applying an automation system, the SNAP PAC System consists of four integrated components:

- SNAP PAC controllers
- PAC Project™ Software Suite
- SNAP PAC brains
- SNAP I/O™

SNAP PAC Controllers

Programmable automation controllers (PACs) are multifunctional, multidomain, modular controllers based on open standards and providing an integrated development environment.

Opto 22 has been manufacturing PACs for many years. The latest models include the standalone SNAP PAC S-series and the rack-mounted SNAP PAC R-series. Both handle a wide range of digital, analog, and serial functions and are equally suited to data collection, remote monitoring, process control, and discrete and hybrid manufacturing.

SNAP PACs are based on open Ethernet and Internet Protocol (IP) standards, so you can build or extend a system without the expense and limitations of proprietary networks and protocols.

PAC Project Software Suite

Opto 22's PAC Project Software Suite provides full-featured and cost-effective control programming, HMI (human machine interface) development and runtime, OPC server, and database connectivity software to power your SNAP PAC System.

These fully integrated software applications share a single tagname database, so the data points you configure in PAC Control™ are immediately available for use in PAC Display™, OptoOPCServer™, and OptoDataLink™. Commands are in plain English; variables and I/O point names are fully descriptive.

PAC Project Basic offers control and HMI tools and is free for download on our website, www.opto22.com. PAC Project Professional, available for separate purchase, adds OptoOPCServer, OptoDataLink, options for Ethernet link redundancy or segmented networking, and support for legacy Opto 22 serial *mistic*™ I/O units.

SNAP PAC Brains

While SNAP PAC controllers provide central control and data distribution, SNAP PAC brains provide distributed intelligence for I/O processing and communications. Brains offer analog, digital, and serial functions, including thermocouple linearization; PID loop control; and optional high-speed digital counting (up to 20 kHz), quadrature counting, TPO, and pulse generation and measurement.

SNAP I/O

I/O provides the local connection to sensors and equipment. Opto 22 SNAP I/O offers 1 to 32 points of reliable I/O per module, depending on the type of module and your needs. Analog, digital, serial, and special-purpose modules are all mixed on the same mounting rack and controlled by the same processor (SNAP PAC brain or rack-mounted controller).

Quality

Founded in 1974 and with over 85 million devices sold, Opto 22 has established a worldwide reputation for high-quality products. All are made in the U.S.A. at our manufacturing facility in Temecula, California. Because we do no statistical testing and each part is tested twice before leaving our factory, we can guarantee most solid-state relays and optically isolated I/O modules for life.

Free Product Support

Opto 22's Product Support Group offers free, comprehensive technical support for Opto 22 products. Our staff of support engineers represents decades of training and experience. Product support is available in English and Spanish, by phone or email, Monday through Friday, 7 a.m. to 5 p.m. PST.

Free Customer Training

Hands-on training classes for the SNAP PAC System are offered at our headquarters in Temecula, California. Each student has his or her own learning station; classes are limited to nine students. Registration for the free training class is on a first-come, first-served basis. See our website, www.opto22.com, for more information or email training@opto22.com.

Purchasing Opto 22 Products

Opto 22 products are sold directly and through a worldwide network of distributors, partners, and system integrators. For more information, contact Opto 22 headquarters at 800-321-6786 or 951-695-3000, or visit our website at www.opto22.com.

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