G4 Analog ICTD Input

Features

❯ Small size, rugged packaging

❯ Optical & transformer isolation, 4000 Vrms transient

❯ Runs on a single 24 VDC supply

❯ Factory-calibrated, no user adjustment necessary

❯ 12-bit Resolution

❯ Operating temperature 0° to 70° C

G4AD4

Description

The G4AD4 module works in conjunction with a standard ICTD temperature probe and provides a single channel of optically-isolated temperature-to-digital conversion.

Modules plug into an Opto 22 modular controller or an analog I/O brick and are secured by a captive screw. Field connections are made to the terminal strip located on the brick base or controller I/O board.

The G4AD4 module includes complete electrical channel-to-channel isolation, which eliminates troublesome ground loop problems. The ICTD can be used in energy management, freezer control, and similar applications.

The G4AD4 module is compatible with industry-standard ICTDs as well as Opto 22's ICTD temperature probes. See form 2072, the *ICTD Temperature Probes Data Sheet*.

NOTE: Any system using analog sensors and input modules should be calibrated annually for analog signals. To do so, use OptoControl commands "Calculate and Set Analog Offset" and "Calculate and Set Analog Gain."

Specifications

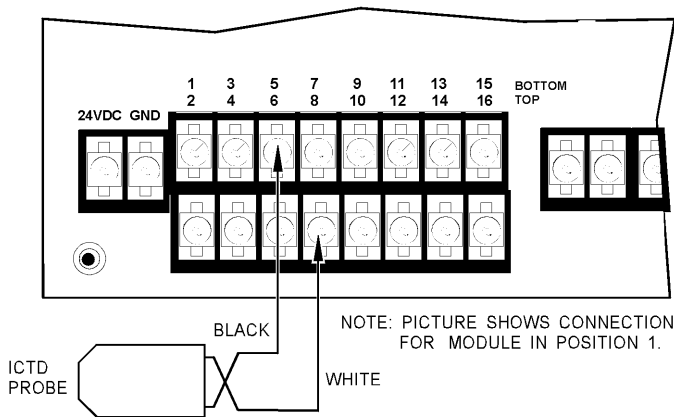|	

Input Temperature Range
  G4AD4
  ICTD Probe
	-188.4 °C to 150 °C
	 - 40 °C to 100 °C

Input response time	5% full scale step change in 7.8 seconds 63% full scale step change in 150 seconds
Output accuracy*	±0.8 °C
Resolution	12 bits
Thermal time constant (ICTD)	2.5 minutes typical (still air)
Cable length	> 2,000 feet (610 meters)

Isolation(Transient)
  Input-to-output
  Input-to-analog supply
	
	4,000 Vrms
	4,000 Vrms

Module Ambient Temperature
  Operating
  Storage
	
	-30 °C to 70 °C
	-40 °C to 85 °C

*Accuracy figure requires use of gain and offset commands.

Part Numbers

Part	Description
G4AD4	ICTD Temperature Input

Connections

More About Opto 22

Products

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

OptoEMU Energy Management System

The easy-to-use OptoEMU Sensor monitors electrical energy use in your facility and delivers detailed, real-time data you can see, analyze, and use in building and control systems. The Sensor can monitor energy data from pulsing meters, electrical panels or subpanels, and equipment. View energy data online using a software service or incorporate the data into your control system for complete energy management.

SNAP PAC System

Designed to simplify the typically complex process of selecting 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, modular controllers based on open standards.

Opto 22 has been manufacturing PACs for over two decades. The standalone SNAP PAC S-series, the rack-mounted SNAP PAC R-series, and the software-based SoftPAC™ all handle a wide range of digital, analog, and serial functions for 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 easily, without the expense and limitations of proprietary networks and protocols. Wired+Wireless™ models are also available.

PAC Project Software Suite

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

Control programming includes both easy-to-learn flowcharts and optional scripting. 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 one

SoftPAC, OptoOPCServer, OptoDataLink, options for controller 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, and serial 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, 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 test each product twice before it leaves our factory, rather than only testing a sample of each batch, we can guarantee most solid-state relays and optically isolated I/O modules for life.

Free Product Support

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

Additional support is always available on our website: how-to videos, OptoKnowledgeBase, self-training guide, troubleshooting and user's guides, and OptoForums.

In addition, hands-on training is available for free at our Temecula, California headquarters, and you can register online.

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.

www.opto22.com