STANDARD VOLTAGE OUTPUT MODULES

Features

> Provides a single channel of optically-isolated digital-to-voltage conversion

> "T" module is transformer isolated which eliminates any ground loop problems

> The modules are available in uni-polar and bi-polar versions

DA5

DESCRIPTION

The voltage output analog module provides a single channel of optically-isolated digital-to-voltage conversion. The "T" modules are transformer isolated, which eliminates any ground loop problems. The modules are available in uni-polar and bi-polar versions. Modules plug into a Standard analog I/O rack and are secured by a captive screw.

SPECIFICATIONS

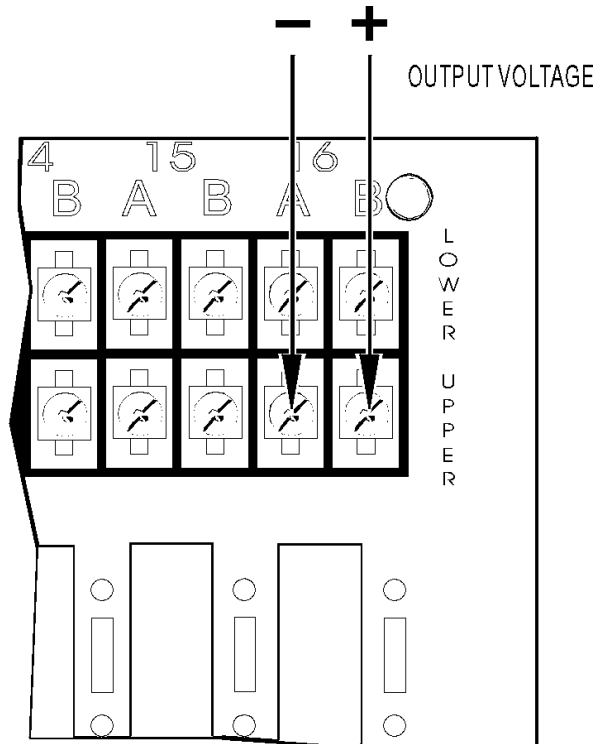|	DA4 [Obsolete]	DA4T	DA5	DA6	DA7	DA7T [Obsolete]
Output Voltage	0 to 5 VDC	0 to 5 VDC	0 to 10 VDC	-0 to +5 VDC	-10 to +10 VDC	-10 to +10 VDC
Accuracy	±5 mV	±5 mV	±10 mV	±10 mV	±20 mV	±20 mV
Power Requirements	20 mA at +15 (+/- 0.25) VDC 10 mA at -15 (+/- 0.25) VDC	35 mA at +15 (+/- 0.25) VDC 35 mA at -15 (+/- 0.25) VDC	20 mA at +15 (+/- 0.25) VDC 10 mA at -15 (+/- 0.25) VDC	20 mA at +15 (+/- 0.25) VDC 10 mA at -15 (+/- 0.25) VDC	20 mA at +15 (+/- 0.25) VDC 10 mA at -15 (+/- 0.25) VDC	20 mA at +15 (+/- 0.25) VDC 10 mA at -15 (+/- 0.25) VDC
Agency Approvals	UL, CE; UKCA	CE, UKCA	UL, CE; UKCA	UL, CE, RoHS; UKCA	CE, RoHS; UKCA	CE, RoHS; UKCA

Output Current	
DA4, DA5, DA6, DA7	70 mA
DA4T, DA7T	25 mA
Output Response Time	Full-scale step change in 3 ms
Resolution	12 bits
Isolation	
Input-to-Output	4,000 Vrms (Transient)
Input-to-Analog Supply	4,000 Vrms
Temperature	
Operating	0 °C to 70 °C
Storage	- 25 °C to 85 °C

Part Numbers

Part	Description
DA4 [Obsolete]	0 to +5 VDC Analog Output **[Obsolete]**
DA4T	0 to +5 VDC Analog Output, Isolated
DA5	0 to +10 VDC Analog Output
DA6	-5 to +5 VDC Analog Output
DA7	-10 to +10 VDC Analog Output
DA7T [Obsolete]	-10 to +10 VDC Analog Output, Isolated **[Obsolete]**

MADE IN THE
USA

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CONNECTIONS

Voltage Output Connection Diagram

PRODUCTS

Opto 22 develops and manufactures reliable, easy-to-use, open standards-based hardware and software products. Industrial automation, process control, remote monitoring, data acquisition, and industrial internet of things (IIoT) applications worldwide all rely on Opto 22.

groov RIO®

groov RIO edge I/O offers a single, compact, PoE-powered industrial package with web-based configuration and IIoT software built in, support for multiple OT and IT protocols, and security features like a device firewall, data encryption, and user account control.

Standing alone, *groov* RIO connects to sensors, equipment, and legacy systems, collecting and securely publishing data from field to cloud. Choose a universal I/O model with thousands of possible field I/O configurations, with or without Ignition from Inductive Automation®, or a RIO EMU energy monitoring unit that reports 64 energy data values from 3-phase loads up to 600 VAC, Delta or Wye.

You can even write an IEC 61131-3 compliant control program to run on *groov* RIO, using CODESYS. You can also use *groov* RIO with a Modbus/TCP master or as remote I/O for a *groov* EPIC system.

groov EPIC® System

Opto 22's *groov* Edge Programmable Industrial Controller (EPIC) system gives you industrially hardened control with a flexible Linux®-based processor with gateway functions, guaranteed-for-life I/O, and software for your automation and IIoT applications.

groov EPIC Processor

The heart of the system is the *groov* EPIC processor. It handles a wide range of digital, analog, and serial functions for data collection, remote monitoring, process control, and discrete and hybrid manufacturing.

In addition, the EPIC provides secure data communications among physical assets, control systems, software applications, and online services, both on premises and in the cloud. No industrial PC needed.

Configuring and troubleshooting I/O and networking is easier with the EPIC's integrated high-resolution color touchscreen. Authorized users can manage the system locally on the touchscreen, on a monitor connected via the HDMI or USB ports, or on a PC or mobile device with a web browser.

groov EPIC I/O

groov I/O connects locally to sensors and equipment. Modules have a spring-clamp terminal strip, integrated wireway, swing-away cover, and LEDs indicating module health and discrete channel status. *groov* I/O is hot swappable, UL Hazardous Locations approved, and ATEX compliant.

groov EPIC Software

The *groov* EPIC processor comes ready to run the software you need:

- Programming: Choose flowchart-based PAC Control, CODESYS Development System for IEC61131-3 compliant programs, or secure shell access (SSH) to the Linux OS for custom applications
- Node-RED for creating simple IIoT logic flows from pre-built nodes
- Efficient MQTT data communications with string or Sparkplug data formats
- Multiple OPC UA server options
- HMI: *groov* View to build your own HMI viewable on touchscreen, PCs, and mobile devices; PAC Display for a Windows HMI; Node-RED dashboard UI
- Ignition or Ignition Edge® from Inductive Automation (requires license purchase) with OPC-UA drivers to Allen-Bradley®, Siemens®, and other control systems, and MQTT communications

Older products

From solid state relays, to world-famous G4 and SNAP I/O, to SNAP PAC controllers, older Opto 22 products are still supported and working hard at thousands of installations worldwide. You can count on us for the reliability and service you expect, now and in the future.

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 testing a sample of each batch, we can afford to 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 technical support for Opto 22 products from engineers with 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.

Support is always available on our website, including free online training at OptoU, how-to videos, user's guides, the Opto 22 KnowledgeBase, and OptoForums.

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** (toll-free in the U.S. and Canada) or **+1-951-695-3000**, or visit our website at www.opto22.com.