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Opto 22 Releases HART SNAP Analog I/O Modules

Two-channel SNAP I/O analog input and output modules work on a
4-20mA current loop with HART communications.

Temecula, CA—September 24, 2014—Industrial automation manufacturer Opto 22 has
released the SNAP-AIMA-iH and SNAP-AOA-23-iH two-channel analog input and output
modules, each with HART communications. Both SNAP I/O modules use the HART
communications protocol to extract status, diagnostics, and other information from smart
devices such as field-mounted process transmitters and analyzers. This information can be
used by the automation system and/or the asset management system to increase uptime,
improve productivity and enhance safety.

HART is the most widely used digital communications protocol in process automation, and the
HART Communication Foundation (www.hartcomm.org) is continually updating the protocol.

The SNAP-AIMA-iH analog input module has two isolated 4–20 mA input channels, and the
SNAP-AOA-23-iH output module has two isolated 4–20 mA output channels. Each channel
features an integrated HART modem that allows the channel to communicate digitally with
the HART FSK (frequency-shift keying) signal imposed on the 4–20 mA current loop, enabling
communication with the target smart device.

Each channel is a HART master device when used with Opto 22 programmable automation
controllers (PACs), and can communicate with other HART current loop devices in either point-
to-point or multidrop configurations.

The SNAP-AIMA-iH analog input module is categorized by the HART protocol as a current
input connection type, which means that the module is a low-impedance device. The SNAP-

AOA-23-iH analog output module is categorized by the HART protocol as a current output device, which means that each channel can provide the required loop current and is a high-impedance device.

Each module includes LED indicators to provide status information, such as HART channel operation, communication errors, or zero loop current or voltage reading.

Both analog modules are transformer isolated as well as optically isolated from all other modules and from the I/O processor. Transformer isolation prevents ground loop currents from flowing between field devices and causing noise that produces erroneous readings. Ground loop currents are caused when two grounded field devices share a connection, and the ground potential at each device is different. Transformer isolation provides 1500 volts of transient (1500 V for 1 s) protection from industrial field signals.

In addition, all channels are isolated from each other. Channel-to-channel isolation provides complete freedom from ground-loop problems, even on grounded devices connected to channels on the same module.

SNAP-AIMA-iH and SNAP-AOA-23-iH modules are used with Opto 22's SNAP PAC System, which includes programmable automation controllers (PACs), Ethernet-based I/O systems, and PAC Project automation software. All HART commands for wired devices including universal, common practice, and device-specific commands are available for these modules in PAC Control programming software (version 9.4 and higher), facilitating quick integration with HART smart devices.

Process engineers can incorporate data from HART devices into their control applications just as they do the analog, digital, and serial I/O signals received from other SNAP I/O modules installed on the I/O rack. And using Opto 22's *groov* mobile operator interface, HART device and all other control system data can be displayed quickly and simply on any mobile device.

The modules can also be used with other process controllers. Opto 22 offers the SNAP PAC .NET HART developer toolkit so a user can easily integrate the HART SNAP I/O modules into an existing application. This toolkit is available for download at www.opto22.com.

Availability

The SNAP-AIMA-iH and SNAP-AOA-23-iH modules are available now at a list price of $599 USD each. For more information, visit the SNAP I/O landing page at op22.co/HART4SNAP, or contact Opto 22 Pre-Sales at 951-695-3000 or toll free at 1-800-321-6786.

About Opto 22

Opto 22 develops and manufactures hardware and software for applications involving industrial automation and control, energy management, remote monitoring, and data acquisition. Designed and made in the U.S.A., Opto 22 products have an established reputation worldwide for ease-of-use, innovation, quality, and reliability. Opto 22 products, including the *groov* mobile operator interface, use standard, commercially available networking and computer technologies, and are used by automation end-users, OEMs, and information technology and operations personnel in over 10,000 installations worldwide. The company was founded in 1974 and is privately held in Temecula, California, U.S.A. Opto 22 products are available through a global network of distributors and system integrators. For more information, contact Opto 22 headquarters at +1-951-695-3000 or visit www.opto22.com.

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