AIO-168

Analog Input Alarm Module

Supports 16 Supervised Inputs and 8 outputs

The new AIO-168 is a **combination supervised alarm/ relay module** that offers **surface mount technology** and **flash memory** at a **low cost**. Flash memory allows **firmware upgrades via E-mail** and a notebook computer. New technology microchips enabled Apollo design engineers to package this unit on a module much more compact than previous designs. This unit also offers reduced power consumption and can be **used with the new compact low cost AUS-12** (120v) and **AUS-12 I** (240v) uninterruptible power units now available from APOLLO.

The module is available as **alarm only (AIO-16), relay only (AIO-8)** and **alarm/relay (AIO-168).**

The AIO-168 alarm and relay processor module provides **16 zones which meet UL Grade A analog line supervision** requirements and **8 form C dry contact relay outputs.** All inputs are **monitored for line fault conditions** and the type of fault (open, short, ground, or circuit fault) is reported to the host. The AIO-168 also monitors and reports cabinet tamper and power status. Inputs may be switched to grade "B" - unsupervised, if desired.

The AIO-168 has **field changeable RS-485 or RS-232 plug-in modules** for communication with the host, which can be an AP-550 master reader or an AAN-100/32 controller. An interrogation/response protocol is provided between the AIO-168 alarm panel and the host processor. Unit address and baud rate are configured via an on-board DIP switch.

Alarm contact status is scanned up to 240 times per second for each zone. The data is filtered for noise rejection to prevent false alarms. The AIO-168 has two diagnostic LEDs, - one for host communication and one for AIO-168 heart beat.

Auxiliary Output Linkage

Each relay output can be controlled by a combination of the following 21 conditions:

- Alarm inputs 1-16
- Power fault
- Cabinet tamper
- Any zone fault
- Host comm loss
- Time zone control

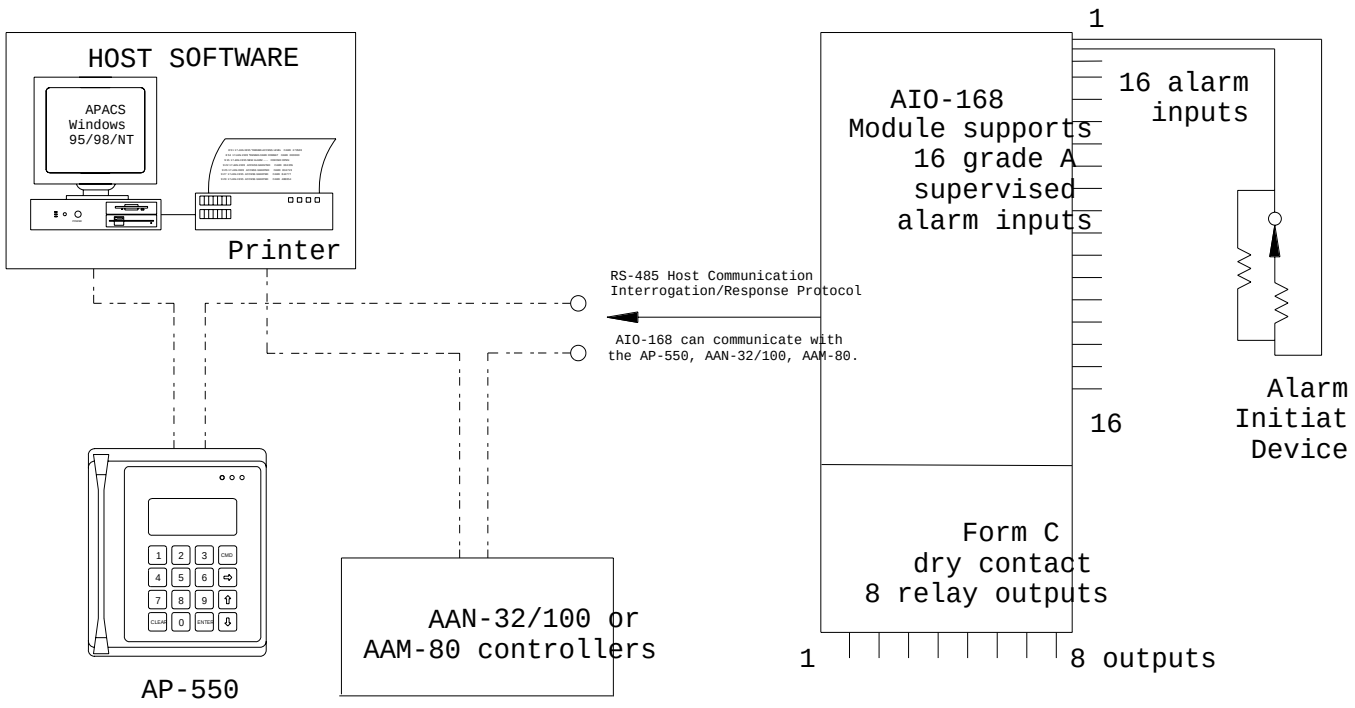
Any of the above conditions can initiate one or more relay outputs. A different time zone can be specified for each auxiliary relay output.

Off-line Alarm Event Storage

When the AIO-168 is on-line with the host, **status changes (alarm inputs) are sent immediately to the host** on the next interrogation/response sequence. When the **AIO-168 is off line, up to 100 alarms are stored in a FIFO log alarm** event buffer. At least one alarm event for each zone that was in alarm since the AIO-168 went off-line is saved.

3610 Birch Street
Newport Beach, California 92660-2619 USA
Phone 949-852-8178 • FAX 949-852-8172
http://www.apollo-security.com
E-mail: apollo@netbox.com

HIGH LINE SECURITY USING GRADE A ANALOG LINE SUPERVISION



Each stored event contains:

- Time of event
- Alarm zone number
- Alarm zone status after change
- Alarm zone status before change

The AIO-168 supports the following host commands:

- Device Identification Request
- Set date/time
- Set/delete time zone
- Set/delete holiday schedule
- Configure alarm zone
- Set output relay pulse duration
- Configure output relay linkage
- Alarm status report request
- Set/reset output relay
- Set entry/exit delay
- Set time zone for masking
- Set time zone for auxiliary relay output
- Send stored events

The AIO-168 transmits the following to the host:

- Device identification report
- Alarm status report
- Stored event report
- Type of fault

Hardware features include:

- Flash memory (no proms/roms)
- Surface mount technology
- Low power CMOS microprocessor
- Plug-in RS-232 or RS-485 host communication modules (up to 4000 feet / 1200 meters with RS-485).
- 16 UL Grade A supervised alarm inputs
- Dual path reporting when used with the APX-20
- 8 Form C dry contact relay outputs
- Cabinet tamper input
- Power fault input
- 2 diagnostic LEDs
- Configuration DIP switches
- 12-28 Vdc operation
- Dimensions: The AIO-168, mounted in its enclosure, is 10”×10”×4” (25 cm × 25 cm × 10 cm).

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