CERBERUS PYROTRONICS ALD-2I Analog Loop Driver Owner's Manual

ALD-2I Analog Loop Driver

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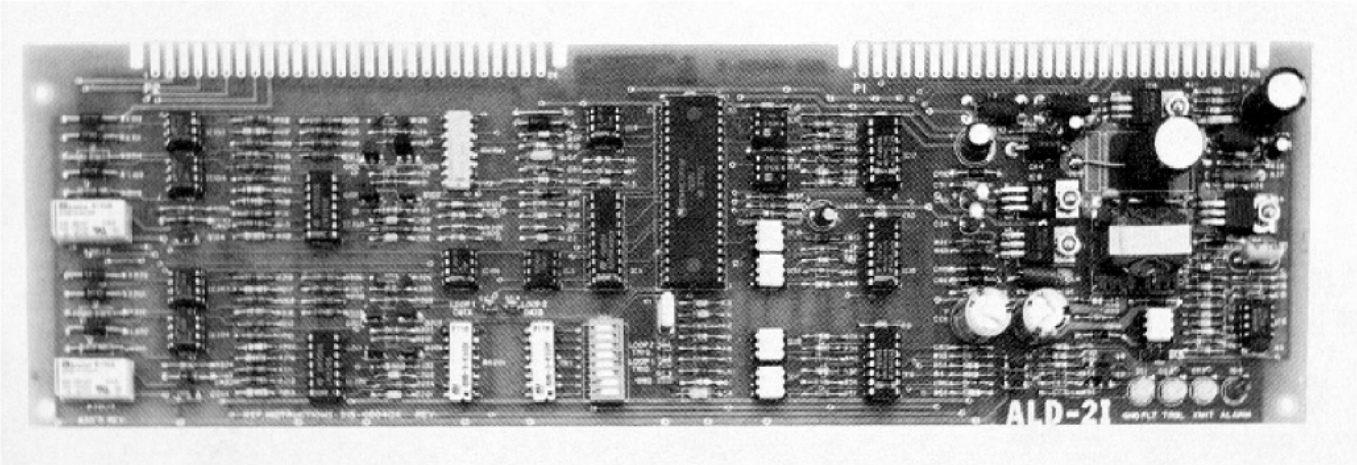
ENGINEER AND ARCHITECT SPECIFICATIONS



- Dynamic Supervision
- 2 Intelligent Analog Device Circuits
- Remote Smoke Detector Sensitivity, Voltage Read-out/Printout
- Device Identification
- 32 Character Custom Alphanumeric Message Per Device
- Accepts Remote Conventional Zone Modules (CZM-1)
- Alarm, Trouble, Supervisory, Security and Status Reporting
- Supports Audible Bases
- Short Circuit Isolation with LIM-1
- On Board Microprocessor
- Isolated Power Supply
- Power Limited Per NEC 760
- Programmable Input/Output Module
- 60 Intelligent Devices Per Circuit
- Remote Smoke Detector Sensitivity Adjustment
- Independent Control of Detector Relays (Up to 60 per Circuit)
- Intelligent Contact Monitoring Devices
- Supports T-Tap Wiring
- Style 4 (Class B) or Style 6 (Class A) Wiring
- Degrade Mode
- On-Board Ground Fault Detection
- Listed, ULC Listed, FM, CSFM, NYMEA, and City of Chicago Approved

Description

The ALD-2I is an MXL Network option module that supplies two intelligent analog circuits utilizing Cerberus Pyrotronics “I” series type intelligent devices. It occupies two addresses on the Network and, through the use of a unique communications protocol, devices connected to the ALD-2I circuits are dynamically supervised by the MXL Control Panel. Smoke detectors are monitored for sensitivity and notification is given when the sensitivity is outside normal parameters. Each of the ALD-2I circuits supports
the use of up to 60 alarm, trouble, security, status and supervisory type devices as well as remote conventional initiating device zone modules (CZM-1) and intelligent output devices (TRI-60R, ICP). Sensitivity of any smoke detector can be queried and adjusted from the control panel. Sensitivity as well as other device information can be displayed and printed at the control panel. The ALD-2I supports the use of relay bases and audible bases

(independently controllable).
To provide analog loop short circuit isolation, the LIM-1 module can be used to prevent a single short from interrupting loop device communication.
Each ALD-2I circuit can be wired in either a Style 4 (Class B) or Style 6 (Class A) configuration. When using the Style 4 method, T-Tapping is permitted with no loss of supervision.
The ALD-2I has an on board microprocessor that provides it with the ability to function in a degrade mode and initiate alarm conditions even if the MXL main microprocessor fails.
The ALD-2I plugs into one full option slot in the MOM-2 or MOM-4 card cage.
This equipment is approved for operation over the temperature range of 0°C and 49°C.

Engineer and Architect Specifications
Intelligent analog device circuits shall be provided by an ALD-2I Analog Loop Driver Module. This module shall plug into one full slot of the MOM-2 or MOM-4 card cage
as a part of the Cerberus Pyrotronics MXL or MXLV systems. Each ALD-2I shall provide two circuits. Each of these circuits shall support the use of up to 60 intelligent devices, as well as remote conventional initiating zone modules. Sensitivity of any smoke detector can be queried and adjusted from, as well as displayed at, the control panel. Sensitivity change shall be performed either manually or automatically through the time based logic.
The ALD-2I shall support the use of relay bases, audible bases, and remote lamps.
ALD-2I circuits shall be capable of being wired to meet the requirements of either NFPA Style 4 or Style 6. When wired as a Style 4 circuit, it shall support the use of parallel branch circuits (T-Tapping).
The ALD-2I shall utilize an on board CPU as well as network interface circuitry and A/D converters. It shall be capable of operation in a degrade mode in the event of MXL main processor failure or loss or network communication link. In the degrade mode the ALD-2I circuits shall be capable of sensing an alarm condition from its connected devices and activating local notification appliance circuits through a degrade alarm bus.
ALD-2I circuits shall meet the requirements of NEC 760 for power limiting.

Electrical Specifications
ALD-2I Electrical Ratings

1. **Electrical Ratings**

   Supervisory 28 VDC peak, 60mA max

   Alarm 28 VDC peak, 60mA max (60 devices in alarm)
2. All wiring must be in accordance with Article 760 of NEC and local building codes.
3. Only the devices in the following list may be used. A maximum of 60 devices (excluding CZM-1, LIM-1 and ICP) in any combination my be connected to a single loop. The UL identifiers for compatibility are the same as the model names specified below.

Detector	Installation Instructions
CZM-1	P/N 315-090725
ILP-1	P/N 315-092594
ILPT-1	P/N 315-092594
ILI-1/ILI-1H	P/N 315-092724
ILI-1A/ILI-1AH	P/N 315-092724
ILI-1B/ILI-1BH	P/N 315-092724
ID-60I/60IH	P/N 315-090287
ID-60IA/60IAH	P/N 315-090287
ID-60IB/60IBH	P/N 315-086590
TRI-2/2R/2D	P/N 315-090556
TRI-60/60R/60D	P/N 315-091857
ICP	P/N 315-092471
LIM-1	P/N 315-092135
MSI-1	P/N 315-090437
MSI-10	P/N 315-090903
MS-MI	P/N 315-092169
MSI-20	P/N 315-090903
ID-60T-135	P/N 315-090288

4. No end of line device is required.
5. Both circuits are power limited to NFPA 70, per NEC 760. Each detector, or group of detectors, requires a two-wire circuit of 18 AWG minimum thermoplastic fixture wire enclosed in a conduit of 18 AWG limitedenergy shielded cable without conduit, if permitted by local building codes.
6. Total circuit resistance must not exceed 100 ohms.

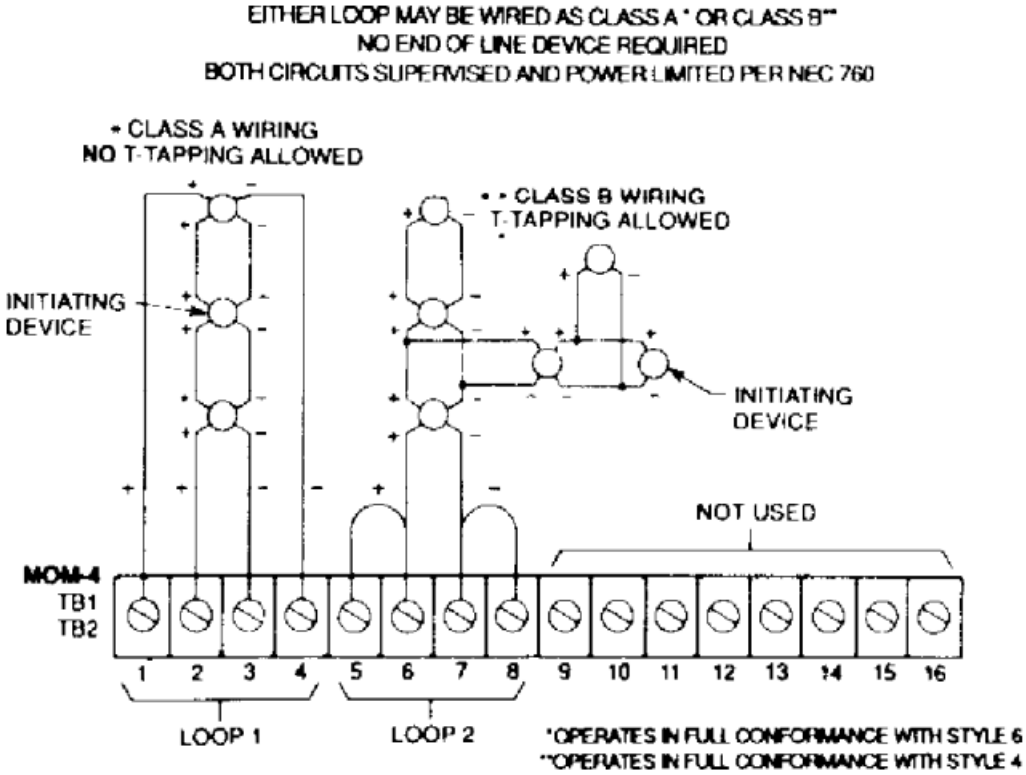
   Maximum Capacitance:

   0.4µF, between loop+ and loop

   0.8µF, between loop+ and chassis

   0.8µF, between loop- and chassis
7. T-Tapping is not allowed on Class A loops.

Wiring Diagram



NOTICE: The use of other than Cerberus Pyrotronics detectors and bases with Cerberus Pyrotronics control equipment will be considered a misapplication of Cerberus Pyrotronics equipment and as such void all warranties, either expressed or implied with regard to loss, damage, liabilities and/or service problems.

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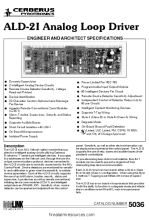
September 1995
Supersedes sheet dated 3/95

Documents / Resources

	**CERBERUS PYROTRONICS ALD-2I Analog Loop Driver** [pdf] Owner's Manual ALD-2I Analog Loop Driver, ALD-2I, Analog Loop Driver, Loop Driver, Driver

References

- **Fire Alarm Resources | Download fire alarm documents**