

Description

DAG-ASAT is an addressable smart alarm terminal designed for powering and interfacing with acquisition modules manufactured by Dagman. The communication with these modules is based on a proprietary long-range failsafe bus. The controller is offered in IP54/NEMA 3S water-resistant wall-mounted enclosure, to be installed in technical rooms and other premises where dripping water might be potentially present. The primary use of DAG-ASAT is to monitor one or two circuits with long detection strings for conductive liquids or organic solvents, hydrocarbons of up to 300 m each. The communication frontend permits robust and reliable operation even in case of partial failure of the circuit of acquisition modules. Each individual acquisition module is connected to an independent sensor and the system provides true multi-leak capability. All compatible acquisition modules are powered by the terminal through the proprietary bus and the need of additional infrastructure for power supply is considerably reduced. The maximum distance covered with this wired layout (accumulated sensor and jumper cables) is in excess of 1.6 km. The optional loopback wiring increases the system reliability in case of cable breaks and shorts. This provides a redundancy architecture. Alarm threshold adjustment on each sensing cable installed is possible.

The intuitive password-protected user interface on the touch panel provides flexible configuration and adjustable alarm threshold.

Features and Benefits

- Long range of leak detection circuit
- Easy T-branching - no special devices/components needed
- Adjustable alarm threshold (sensitivity 1-9)
- Can be installed in humid environments
- Able to interface with sensor modules for various types of liquids as water, acids, bases, hydrocarbons, organic solvents, etc.






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High-level interfacing to BMS/DCS/SCADA is implemented through Modbus RTU, Modbus TCP, email alerts and SNMP Traps. Configurable dry contacts (number 12 - DPDT) for general alarm, leak alarm, power failure and trouble are also available. The blind panels, without display, allow easy extension of leak detection circuits and remote relay functions.

Typical Applications

- Leak detection in data centers and commercial buildings
- Monitoring of storage tanks and fuel lines of emergency generators
- Monitoring of Military and Scientific facilities
- Leak detection in chemical and petrochemical plants

Compatible Acquisition Modules and Remote Devices

DAG-CLS-DIGI		Smart sensing cable for detecting conductive liquids indoor. Shipped with an addressable miniature electronic device as a separate module. Maximum length of sensor: 15 m
FLD-MXM		Acquisition module for hydrocarbons (manufactured by EVTeam) interfacing with sensor cables for detecting unwanted presence of hydrocarbons or fumes indoor or outdoor. Compatible with Dagman modular multisection sensor cable for hydrocarbons.
DAG-COST+		DC-powered version of the stand-alone alarm terminal for detecting leaks of polar or non-polar liquids. Interfacing to DAG-aSAT through Modbus RTU or Modbus TCP.

Technical Data

Display Size and Resolution	7-in TFT, 800 x 480; or without display
Dimensions	295 x 260 x 125 mm (11.61 x 10.24 x 4.92 in.)
Weight	1.3 kg (3 lb.)
Fire Rating	UL94-HB (UL94-V0 available on request)
Ingress Rating	IP54/NEMA 3S - indoor use only (IP65/NEMA 4 available on request)
Operating Temperature Range	0°C to +50°C for controllers with display; -25°C to +65°C for no display units
Power Supply Input	100-240VAC or 24VDC
Maximum Length of Cable	Accumulated length of Sensor and Lead Cables per channel: 1.6 km
Power Consumption	18.5W max.
Audible Sounder	80dB max. Buzzer with Silence button
Relay Contact	Power Failure + Leak + Cable Break: DPDT (NO/NC)
Relay Switching Capacity	DPDT - Switching current - 0.5 A at 250 VAC; 1A at 30 VDC
Relay Switching Power	60W
Supported Protocol (Monitoring)	Modbus RS485, Modbus TCP/IP, Bacnet over IP (External Gateway)
Installation	Wall-mounted (Flush mount possible)

DAG-ASAT alarm terminal is currently undergoing assessment and is supplied with CE-approved / cULus Listed display controller. It shall be used according to the relevant local regulations and installed by qualified personnel.

Product Codes

DAG-ASAT7	Dual-channel alarm terminal for circuits with a maximum of 10 acquisition modules each, with Modbus RTU/TCP, SNMP Traps and 12 DPDT relay outputs
DAG-ASAT7-HC	Dual-channel alarm terminal for circuits with a maximum of 10 Evteam FLD-MXM acquisition modules each, with Modbus RTU/TCP, SNMP Traps and 12 DPDT relay outputs
DAG-ASAT7-COST-(HC)	Alarm terminal for interfacing with a maximum of 10 DAG-COST+ or DAG-COST+HC. Provides DC power to the DAG-COST+ devices, with Modbus RTU/TCP connection, SNMP Traps and 12 DPDT relay outputs
DAG-ASAT-12R-485	Dual-channel remote alarm terminal without display with a maximum of 10 acquisition modules each, with Modbus RTU and 12 DPDT relay outputs
DAG-ASAT-12R-TCP	Dual-channel remote alarm terminal without display with a maximum of 10 acquisition modules each, with Modbus TCP and 12 DPDT relay outputs

Manufacturer



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Certifications



Valid only when used with the sensor modules approved by Dagman.

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