The DAM800 Dual Alarm Module and SAM800 Single Alarm Module replace the obsolete Hagan 7100 signal comparators.

The DAM800 is a solid-state unit that produces a voltage or a contact closure when a conditioned input exceeds a preset limit. Each alarm channel is independent of the other, allowing two different setpoints. The DAM800 can operate in:

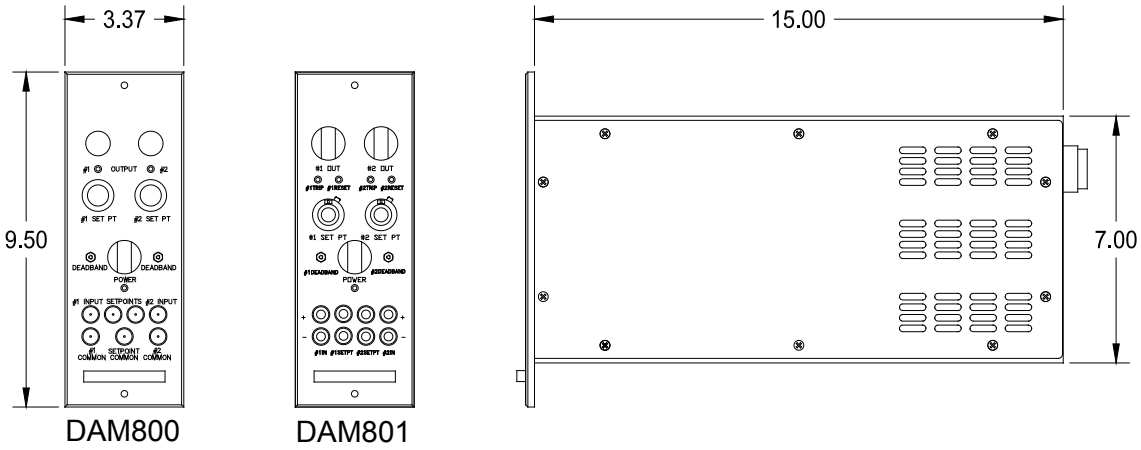
- Dual Mode: with two independent channels.
- Single Mode: with a single input feeding both alarm channels.
- Difference Mode: with the difference between two inputs feeding both alarm channels.
- Deviation Mode: with the difference between two inputs (A-B) feeding one alarm channel, and its inversion (B-A) feeding the other alarm channel.

The SAM800 has only a single alarm channel and can only operate in the Single Mode and Difference Mode. Each alarm channel can be configured to "trip" on a rising signal or on a falling signal. A trip can signal the solid-state relay to pass a signal (NO) or block a signal (NC).

The output can be driven by either an external or internal wetting voltage. Input and output ranges are jumper-configurable, with possible ranges listed below under Specifications.

Two output pin configurations are available. In the standard configuration, output pin K is fused on channel 1 and output pin N (DAM only) is fused on channel 2. In the "/1" option configuration, output pin P is fused on channel 1 and output pin M (DAM only) is fused on channel 2. LEDs on the face plate can be configured to operate opposite the output.

**DAM801**



# NUSI 800 Series

*Signal Comparator*

## SPECIFICATIONS

| | |
|---|---|
| Power Supply Voltage: | 120 Vac RMS (±10%), 60 Hz (±5%) |
| Power Consumption: | 5 W nominal, 10 VA maximum (not including internally supplied wetting voltages) |
| Fuses: | F1: 1 A, 250 Vac, 3AG (indicating fuse holder)<br>F2: 7 A, 250 Vac, PCB mount<br>F3 (/F4): 3 A, very fast acting, GBB, front panel mounted |
| Inputs: | 0 to 20 mA (or 4 to 20 mA) into 249.9 Ω<br>0 to 50 mA (or 10 to 50 mA) into 100 Ω<br>0 to 5 V (or 1 to 5 V) into 500 kΩ<br>0 to 10 V (or 2 to 10 V) into > 166 kΩ |
| Outputs: | Internal 120 Vac @ 2.5 A maximum, 300 VA maximum per channel<br>(supply voltage)<br>Internal 168 Vdc @ 1 A maximum, 300 VA maximum per channel<br>(unregulated, unfiltered, no-load bridge-rectified supply voltage) |
| Accuracy: | Repeatable to 0.5% of input span with 2% dial setting accuracy for the trip point<br>Reset point repeatable to 0.5% of input span |
| Sensitivity: | Better than ±5 mV at the input |
| Setpoint Range: | 0% to 100% of input range, dial calibrated in percent |
| Deadband: | 0.5% to 25% of input range (20 mV minimum deadband required), 20-turn (minimum)<br>recessed pot accessible from front panel |
| Time Response: | Less than 5 ms from application of a step change at the input to a change in the output (resistive load) of 63% of the final value for solid state outputs. (Filters bypassed or not in the circuit). |
| Dielectric Withstand: | 1000 Vdc and 1000 Vac (RMS) from input to output<br>1000 Vdc and 750 Vac (RMS) from output to case |
| Surge Withstand: | Using the waveform described in IEEE-472-1974 |
| Temperature Effects: | Less than 0.04% of input full scale change in set and reset points for each 1 °C change in temperature (less than 0.33% change for each 15 °F change) |
| Electrical Qualification: | Plant protection, qualified to IEEE 323-1974/1983 and IEEE 344-1975/1987 |
| Ambient Temperature: | 35 °F to 122 °F (2 °C to 50 °C) (normal operation)<br>122 °F to 135 °F (50 °C to 57 °C) (abnormal operation for 200 hours)<br>–40 °F to 185 °F (–40 °C to 85 °C) (storage) |
| Relative Humidity: | 0% RH to 95% RH, non-condensing |
| Pressure: | Atmospheric |
| Radiation Limits: | $10^4$ rad TID gamma over forty years |

## HOW TO ORDER

The model number typically should be specified as follows:
DAM800 or DAM801

For complete configuration information please request a SAM/DAM800 Operation & Maintenance Manual.

**CONTACT INFORMATION:** Curtiss-Wright Nuclear Division / I&C Products
1350 Whitewater Drive, Idaho Falls, ID, 83402 T: (208) 497.3333