



Sensor Alarm (SA10 Series)

The SA10 is a low power microprocessor based devices that provides a alarm output (relay contact or FET) based on the sensor or voltage input.

Installation

The SA10 is connected between the output of an Environdata sensor or voltage source, and the system requiring the alarm signal.

Mechanism

The SA10 measures and averages the frequency of the incoming signal every second over five seconds, or measures the voltage every second and compares this each second to the set trip points. A rate control determines the time the input signal must be in an alarm state before setting an alarm condition.

Alarm Modes

To allow for setting an alarm condition suitable for most possible applications, the SA10 has four alarm condition modes that are easily set by internal switches.

1. *If the input is greater than trip point 1.*
2. *If the input is less than trip point 1.*
3. *If the input is greater than trip point 1 and less than trip point 2.*
4. *If the input is less than trip point 1 or greater than trip point 2.*

All modes feature an alarm rate adjustment. This provides an adjustable time setting that the input must be in an alarm condition before the actual alarm is activated. The default adjustment range is 1 to 60 seconds but can be changed by Environdata if required. *Note: the input for the Environdata sensor is averaged over 5 seconds, and as such can vary the rate adjustment by up to ± 4 seconds.*



Control

A power on-off switch is located on the circuit board to allow the alarm to be turned off easily.

The trip points and rate are normally set with a single turn trimmer adjustment.

For more precise adjustment, a multi-turn trimmer can be specified when ordering to allow very accurate setting of these values by measuring a voltage at a test point with a digital voltmeter while adjusting the trimmer.

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Ordering Information

Part number

SA10-n-(MIN-MAX-RATE) or (Sensor Type)

n = Sensor input type

E = Envirodata sensor

V = Voltage input

min = minimum frequency or voltage

max = maximum frequency or voltage

rate = number of seconds of rate adjustment.

For Envirodata sensors, please advise which sensor is required, and we will configure the SA10 to suit the output range of your chosen sensor.

If you wish to specify your own frequency range, or you wish to select a different sensor range than the default (you may only want the alarm range to be adjustable over 0 to 20 degrees from a temperature sensor that has a range of -20 to +60 degrees)

Specifications

Power Supply :

Current drain FET output mode:

Current drain relay output mode:

Frequency input range limit:

Voltage input range limit:

Voltage input impedance:

Supply voltage for sensor:

Sensor supply current maximum:

Cable termination:

Enclosure:

Example Part Numbers

Specify Envirodata sensor

SA10-E-TA10 (Air Temperature Sensor)

SA10-E-WS30 (Wind Speed Sensor)

SA10-E-LW10 (Leaf Wetness Sensor)

Specify specific frequency range

SA10-E-0-10-60 (0-10 Hertz, 60 seconds rate)

SA10-E-7-18-30 (7-18Hertz, 30 seconds rate)

Specify voltage range

SA10-V-0-10-60 (0-10V, 60 seconds rate)

SA10-V-0-1-10 (0-1V, 10 seconds rate)

8 to 28 volts DC

4mA + Sensor + FET Load

120mA (Relay On) + Sensor

1 to 100Hz

0 to 5V DC (Can be changed in factory)

Other values are 0-1V, 0-10V, or user defined.

100K Ohms

6.3 volts DC

50mA

On board screw terminals

Piccolo type IP66/67

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