

DSP-1 WINDOW ALARM BOARD

DESCRIPTION

The DSP-1 is designed as a separate board to monitor critical sensor data from a sensor amplifier/conditioner device such as TM-1 or TM-2. The window is normally associated with: below normal (yellow), go range or acceptable (green) and above acceptable (red). Side LEDs provide this status, as do output relays. The window is set by high and low potentiometers with set values measurable at high and low test pins. A ground test pin is provided for measurement convenience. Output relays can be used to drive larger external alarm devices or to shut off the process or activity that is causing the unacceptable level.

The TM-1 signal amplifier/conditioner fits perfectly on top of DSP-1 via four standoffs (provided), both boards acting like a single unit, powered by the same power supply.

SPECIFICATIONS

Alarm Settings:	2-High and Low
Status Levels:	3-Low, Go and High
Alarm Range:	0 to 10 VDC
Alarm Response:	Less than 15 milliseconds
Alarm Setting:	Via external voltmeter
Power:	12 VDC / 100 mA max
Relay Rating:	2 A @ 100 VAC or 24 VDC, Contact resistance 50 mohm
Dimensions:	3"L x 2.6"W x 0.6"H

DSP-1 TERMINAL BLOCK WIRING

The unit has an 8 position terminal block, labeled from 1 to 8, with the following functions:

POSITION	FUNCTION
1	Power Supply: +12 VDC
2	Power Supply: GND
3	Input: GND
4	LOW, GO and HIGH Relays: Common
5	LOW Relay, Normally Open Contact
6	Go Relay, Normally Open Contact
7	HIGH Relay, Normally Open Contact
8	Input: Signal

Both window levels can be set from 0 to 10 VDC, via the LOW and HIGH potentiometers.

The LED display turns yellow when the input signal is below the LOW level, green when the input signal is between LOW and HIGH levels and red when the input signal is above the HIGH level.

In the same time as the display shows the input voltage level, the normally open contacts of the relays establish continuity between the terminal block positions as follows:

- 4 with 5 when the input signal is below LOW level
- 4 with 6 when the input signal is between LOW and HIGH levels
- 4 with 7 when the input signal is above HIGH level

The unit can be powered from the same 12 VDC power supply used to power a TM-1 unit.

When using a TM-1 with a DSP-1 the output voltage generated by the TM-1 will be supplied straight to the DSP-1 input, position 8 on the terminal block.