Double Dual Limit Window Comparator

**Description**

This window comparator circuit has 4 limits, 2 lower limits and 2 upper limits, which can produce up to 4 separate outputs, each dedicated to a warning, an alarm or a control condition. These outputs can be tied together to produce any number of desired responses, with output drivers built-in, depending on the responses required when the input level crosses each input limit. For example, VL1 and VH1 can be tied together to produce a single wired-OR output whenever the input signal exceeds either VL1 (below) or VH1 (above) limits. This type of output signal is typically used as a warning signal. VL2 and VH2 can also be connected to produce a second output signal, which can be used, for example, as a “system shutdown” type of control signal whenever VL2 or VH2 has been exceeded. Note that this circuit works with either open-drain or push-pull types of comparator output.

**Recommended Components**

- **ALD4301** and **ALD4303** for open-drain outputs
- **ALD4302** for push-pull outputs
- 2x **ALD2321** for high precision applications

**Other Related Circuit Ideas**

- **Schematic no. cd_23002.0** Dual Limit Window Comparator
- **Schematic no. cd_23003.0** Dual Limit Photo-Detector Monitor