DP-VXI-5106, is a 32 Channel Analog Comparator Module with 32 channels of differential analog window comparators. Each channel is provided with a window comparator as well as a Level Comparator, software selectable on an independent channel basis. All the 32 channels have been grouped into four groups of 8 channels each. This allows the user to configure the comparator module based on the application to initiate alarm action to exactly meet application requirements. Each Comparator channel can be programmed to generate a VXI bus interrupt or can be masked through software. An Interrupt is generated on an individual channel basis or on a group basis. Front panel outputs of buffered TTL and a 2-CO relay contact is available for every group (4 outputs total each). Also, a common buffered TTL interrupt output and a common 2-CO relay contact is also available at the facia providing extensive flexibility in application engineering.

This module is an ideal device for GO / NO-GO testing in Test Stand Automation where important signals must be continuously monitored for system shut down purposes and safety inter-lock implementation. The hardware implementation in the Comparator module provides high-speed throughput and reliable inter-lock implementation. The interrupt out signal can be further wired as trigger signals for pre and post trigger analysis of signal data for post acquisition detailing.

Each channel provides a Window Comparator implementation and a Level Comparator implementation. The configuration is programmable through software and the alarm can be generated if the signal is within the window or outside the window. Similarly, a high and low limit can be set and a trigger is generated if the signal exceeds the high limit or drops below the low limit.

The input ranges of ±10V, ±20V and ±60V are jumper selectable. This module provides two 14 bit DACs on a per channel basis to set the threshold voltages, thus providing excellent resolution and accuracy for very demanding applications.

A programmable debounce oscillator is provided per group so as to eliminate noise triggers. The debounce time is programmable from 10μsec to 5sec.

Masking of interrupts is also provided to fit the application engineering needs. The interrupts are latched and available to VXI backplane for easy application access.

The module provides a complete built-in self-test. An on-card DAC can be programmed and routed to individual channels through software to verify proper module operation. On-card switch assembly isolates the input signals during self-test. The self-test is carried out at ±10V level subsequent to the divider network.

The DP-VXI-5106 is a register based VXI module. VXI Plug and Play frame works is supported. Drivers to VXI standards are available in Windows, Labview, HPVee and other standard platforms.
SPECIFICATIONS

INPUTS
- Number of Channels: 32
- Input Ranges: ±10V, ±20V, ±60V jumper selectable
- Input Threshold: High and low per channel is programmable with resolution of 1.22mV in ±10V range, 2.44mV in ±20V range and 7.32mV in ±60V range
- Accuracy: 0.05% in 10V range, 0.1% in other ranges
- Input impedance: 500kΩ differential minimum
- Input type: Differential
- Maximum Com mode volt: Upto the signal level of the selected range

Output
- Number of Outputs: 5 Relay Outputs
- Relay type: 2 Form C Relay / electro mechanical
- Relay switching power: 125VA, 60W (1A DC, AC), 250mA DC
- Relay life: At no Load - 10⁸ operations
- At rated Load 5 x 10⁸ operations
- Relay Closure Time: ≤3msec
- Relay Release Time: ≤2msec
- Types of Alarm: Within window, outside window, above level, below level

ALARM OUTPUTS
- Total interrupts for field wiring: 5 Buffered TTL
- VXI Backplane interrupts are maskable
- Debounce oscillator: 4 independent oscillators (1/group of prog, debounce time from 10sec to 0.55Sec
- Types of Alarm: Within window, outside window, above level, below level

POWER
- 5V @ 2A, ±12V @ 250mA

MECHANICAL
- Board: 233.5mm (H) x340mm (D)
- Module: 6U (H), 6T (W) VXI-C Size

CONNECTORS
- Backplane Interface: VXI interface
- Field Interface: One 96 pin Euro for analog inputs
- One 64 pin Euro for outputs

ENVIRONMENT
- Commercial version only

ORDERING INFORMATION
- Factory options specified based on applications
- 3 - Commercial version

BLOCK DIAGRAM OF DP-VXI-5106