![Acromag - THE LEADER IN INDUSTRIAL I/O]

AVME942x-i
Isolated Digital Input
(32, 64, or 96 inputs)

These boards provide an economical method for isolating and interfacing DC voltage digital input signals to the VMEbus.

Built-in optocouplers eliminate the expense of external relay panels and simplify installations. Individual channels are optically isolated from each other (channel-to-channel) and from the VMEbus to offer maximum flexibility for field connections.

Interrupts are available on eight front access or P2 channels. This allows the user to take advantage of the VMEbus's ability to service interrupts for a group of critical channels at high speed.

Input channel debounce circuitry offers a selectable time delay to eliminate false signals resulting from contact bounce commonly experienced with mechanical relays and switches. Optional LEDs provide visual indication of 64 channels' status.

Features

- 32, 64, or 96 digital input channels
  4 to 25V or 20 to 55V DC input

- All inputs are isolated from VMEbus

- Bidirectional inputs accept either
  positive (+) or negative (-) DC voltage

- Interfaces to TTL and CMOS logic

- Optional LEDs indicate channel status

- Buffers contain hysteresis (all channels)

- Adjustable debounce circuitry
  (on 8 inputs, front access or P2)

- Vectored interrupts for change-of-state, level/polarity,
  or pattern detection (on 8 inputs, front access or P2)
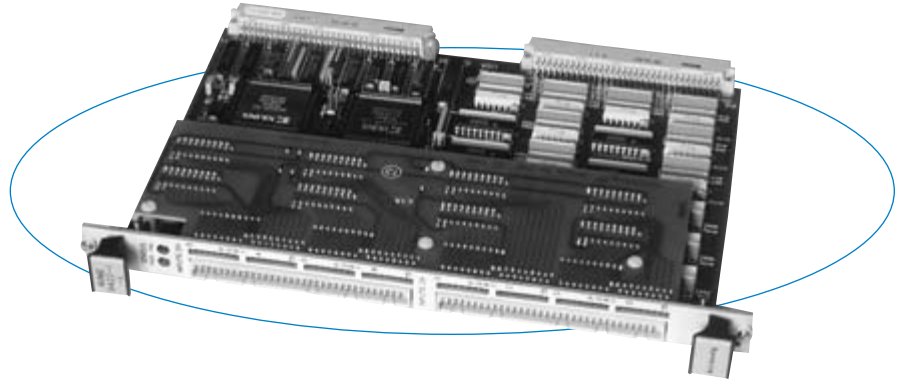
These digital input boards provide optical isolation between individual channels and from the VMEbus for maximum protection.

Specifications

Digital DC Voltage Inputs
Channels: 32, 64 or 96 depending on model.

Input voltage range: 4 to 25V DC or 20 to 55V DC.

Input on/off threshold:
  2V DC typical, 4V DC maximum (4 to 25V range),
  12V DC typical, 20V DC maximum (20 to 55V).

Input current:
  15.8mA DC typical @ 25V (4 to 25V range),
  6.5mA DC typical @ 55V (20 to 55V range).

Input response time (excluding debounce):
  ton = 6µS typical at 25°C,
  toff = 60µS typical at 25°C.

Interrupt channels with debounce: 8 channels.

Input debounce: Four ranges (jumper-selectable for
  8 channels); 7 to 8µS, 336 to 384µS, 672 to 768µS, or
  1.344 to 1.536mS.

LED "on" indicators: 64 green LEDs for front panel inputs
  (-L option only).

Environmental
Operating temperature: 0 to 70°C (32 to 158°F).

Isolation: Withstands 1500V AC dielectric strength test for
  60 seconds without breakdown (250V AC or 354V DC
  continuous) between all channels and the VMEbus. 125V
  AC or 125V DC continuous between individual channels.

Power:
  +5V DC: 2.0A maximum (all channels ON with LEDs)
  +12V DC: 0.0mA (not used).

VME Compliance
Meets VME Specifications per revision C.1 dated
  October 1985 and IEC 821-1987.

Data transfer bus: A24/A16:D16/D08 (EO) DTB slave.

Address modifier codes: 29H, 2DH, 39H, 3DH.

Memory map: standard or short address space occupying
  1K byte.

Interrupts: I(1-7) request levels; D08 (O) RORA. VMEbus access
  time: 600nS typical (all registers; measured from the falling
  edge of DSx to the falling edge of DTACK).

Connector
P1: DIN 41612 96-pin Type C, Level II.

P2: DIN 41612 64-pin Type C, Level II, rows A & C.

P3, P4: DIN 41612 64-pin Type B, Level II.

Ordering Information

I/O Boards
AVME9420-i: 32 inputs (P2 access), 4 to 25V DC

AVME9421-i: 64 inputs (Front access), 4 to 25V DC

AVME9421-i-L: Same as AVME9421-i plus LEDs

AVME9422-i: 96 inputs (P2 & front access), 4 to 25V DC

AVME9422-i-L: Same as AVME9422-i plus LEDs

AVME9425-i: 32 inputs (P2 access), 20 to 55V DC

AVME9426-i: 64 inputs (Front access), 20 to 55V DC

AVME9426-i-L: Same as AVME9426-i plus LEDs

AVME9427-i: 96 inputs (P2 & front access), 20 to 55V DC

AVME9427-i-L: Same as AVME9427-i plus LEDs

Software *(see Page 81)*
90SW-API-VXW
  VxWorks® software support package

Accessories *(see Page 87)*
6985-32DI
  Isolated digital I/O panel, 32 input channels

6985-16DI
  Isolated digital I/O panel, 16 input channels

9944-x
  Cable, 64-pin female connectors at both ends.
  Links VME board front connector to 6985-32DI panel.
  Specify length, x, in feet (12 feet max).

9948-x
  Cable, 64-pin female connectors at both ends.
  Links VME board P2 connector to 6985-16DI panel.
  Specify length, x, in feet (12 feet max).

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