

## AVME943x-i Isolated Digital Output

- AVME9430-i: 32 solid-state relays (P2 access)
- AVME9431-i: 64 solid-state relays
- AVME9432-i: 96 solid-state relays

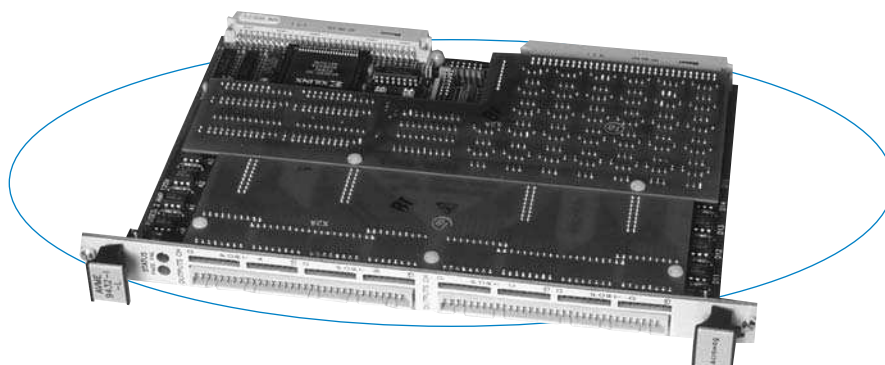
These boards provide an economical method for isolating and interfacing digital output signals from the VMEbus. The outputs are designed to control valves, switch counters, mechanical/optical relays, indicator lamps and more. Individual channels may be connected for either high-side switching or low-side switching.

Built-in solid state relays with very high current ratings 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. This safety feature protects computer hardware from noise and transient signals, from ground loops and pick-up, as well as system failures caused by faults in field wiring.

### Features

- 32, 64 or 96 outputs with solid state relays
- All outputs are isolated from VMEbus [250V AC (354V DC) continuous]
- Solid state relay outputs carry up to 1A DC, from up to a 55V DC source
- Optional LEDs indicate channel status
- All channels individually connected for SOURCE (externally supplied) or SINK
- User can read back output states
- Interfaces to TTL and CMOS logic
- On-board thermal protection with status bits



*These digital output boards provide isolation between individual channels and from the VMEbus for maximum protection.*

### Specifications

#### Solid State Relay Outputs

Channels: 32, 64 or 96 depending on model.  
Outputs: Solid-state relay, SPST-NO (Form A).  
Output "off" voltage range: 0 to 55V.  
Output "off" leakage current: 5µA DC maximum.  
Output "on" current range: 0 to 1A DC (0 to 40°C).  
Derate "on" current above 40°C: 10mA/°C.  
Output "on" voltage @ 1A DC: 0.5V DC maximum.  
Output response @ 1 Amp DC: 2.0mS maximum.  
Logic interface: TTL and CMOS logic.  
Output fuse: F1-32, (64) (2 Amp).  
LED "on" indicators for front panel channels:  
64 red LEDs (with -L option only).

#### Environmental

Operating temperature: 0 to 70°C (32 to 158°F).  
Isolation: Each channel individually isolated via solid-state relays. Rated 250V AC or 354V DC continuous from channel to channel and from VMEbus. Withstands 1500V AC surge for 60 seconds.

Power:  
+5V DC: 2.5A maximum (all inputs ON with LEDs).  
+12V DC: 0.0mA (not used).

#### Over-Temperature Monitor

Low limit setpoint: 69°C, typical (156°F).  
High limit setpoint: 79°C, typical (174°F).

#### 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.  
VMEbus access time: 590nS typical (all registers; measured from the falling edge of DSx to the falling edge of DTACK).

#### Connectors

P1: DIN 41612 96-pin Type C, Level II.  
P2: DIN 41612 64-pin Type C, Level II, rows A and C.  
P3, P4: DIN 41612 64-pin Type B, Level II.  
AVME9430-i: This model has 32 outputs brought out through rows A and C of the P2 connector.  
AVME9431-i: This model has 64 outputs brought out through front panel connectors.  
AVME9432-i: This model has 96 outputs where 64 are brought out through the front panel and 32 are brought out through P2 rows A and C.

### Ordering Information

#### I/O Boards

**AVME9430-i:** 32 solid-state relays (P2 access)  
**AVME9431-i:** 64 solid-state relays (Front access)  
**AVME9431-i-L:** Same as AVME9431-i plus LEDs  
**AVME9432-i:** 96 solid-state relays (Front & P2 access)  
**AVME9432-i-L:** Same as AVME9432-i plus LEDs

#### Software (see Page 81)

**90SW-API-VXW**  
VxWorks® software support package

#### Accessories (see Page 87)

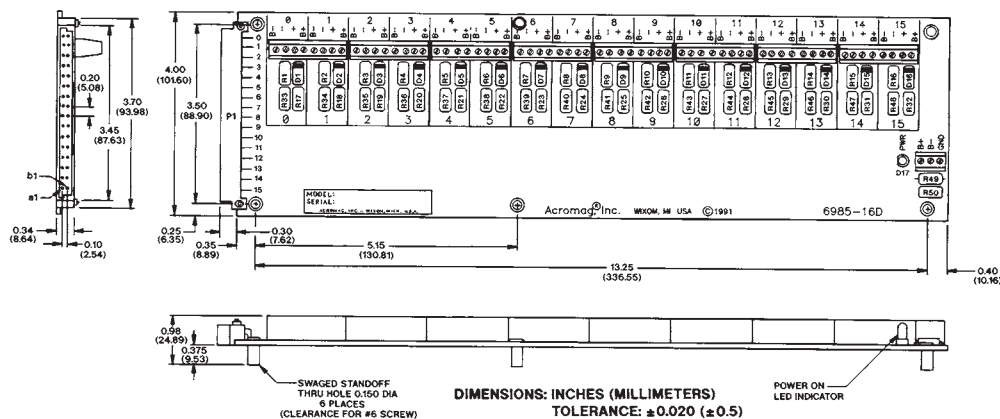
**6985-32DO**  
Isolated digital I/O panel, 32 output channels

**6985-16DO**  
Isolated digital I/O panel, 16 output channels

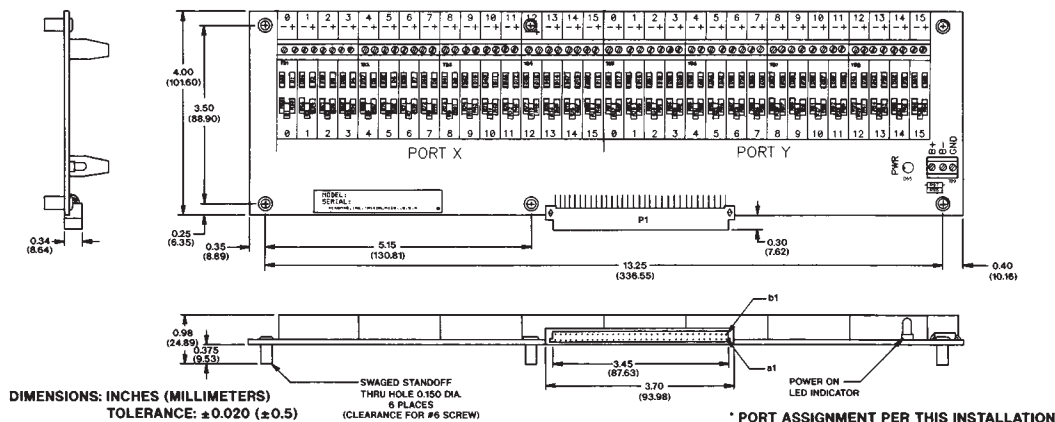
**9944-x**  
Cable, 64-pin female connectors at both ends.  
Links VME board front connector to 6985-32DO panel. Specify length, x, in feet (12 feet max).

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

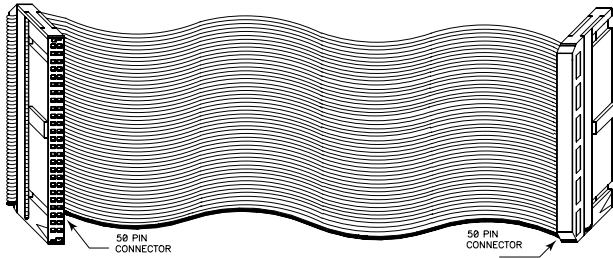
## 6985-16DI and 6985-16DO Termination Panels



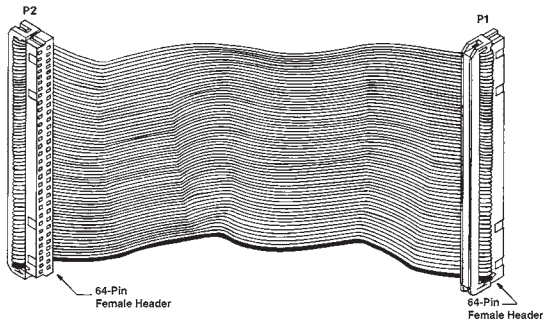
## 6985-32DI and 6985-32DO Termination Panels



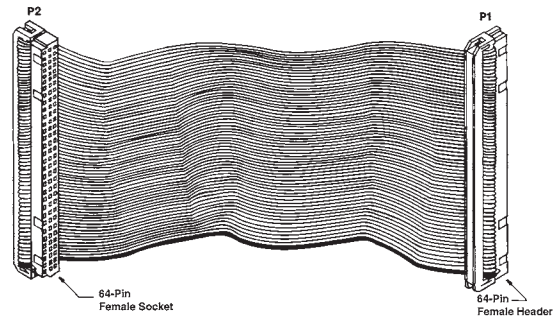
## 5025-550/551 Cable



## 9944 Cable



## 9948 Cable



## 5028-187 Cable

