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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

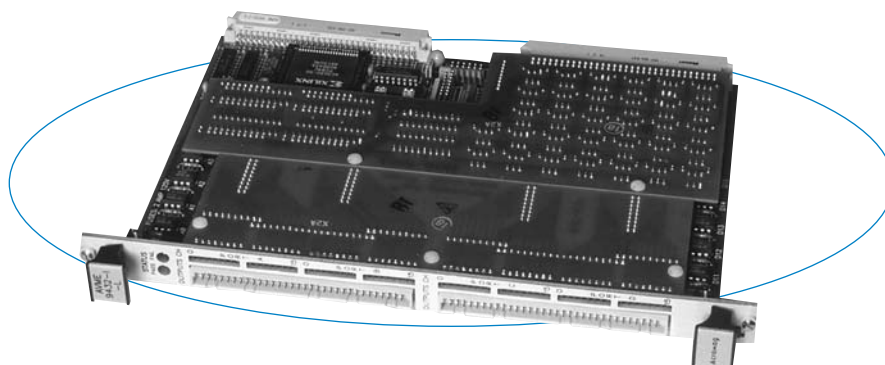
These boards provide an economical method for isolating and interfacing digital output signals from the VMEbus. The outputs are designed to control valves, switch counters, mechanical/optical relays, indicator lamps and more. Individual channels may be connected for either high-side switching or low-side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

Technical drawing of the Acromag 6985-16D backplane showing dimensions in inches and millimeters.

Dimensions (Inches / Millimeters):

- Overall Height: 3.70 (93.98)
- Module Height: 3.45 (87.63)
- Pin Header Height: 0.20 (5.08)
- Standoff Height: 0.34 (8.64)
- Standoff Clearance: 0.10 (2.54)
- Module Spacing: 4.00 (101.60)
- Module Width: 3.50 (88.90)
- Pin Pitch: 0.32 (8.13)
- Pin Header Width: 0.30 (7.62)
- Pin Header Clearance: 0.35 (8.89)
- Module Length: 5.15 (130.81)
- Backplane Length: 13.25 (336.55)
- Backplane Width: 0.40 (10.16)

Labels:

- Acromag Inc. WYOM, MI USA ©1991
- 6985-16D
- SWAGED STANDOFF THRU HOLE 0.150 DIA 6 PLACES (CLEARANCE FOR #6 SCREW)
- POWER ON LED INDICATOR

Dimensions: INCHES (MILLIMETERS)

Tolerance: ± 0.020 (± 0.5)

PORT X

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

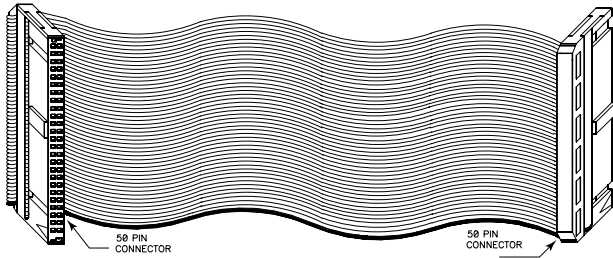
PORT Y

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

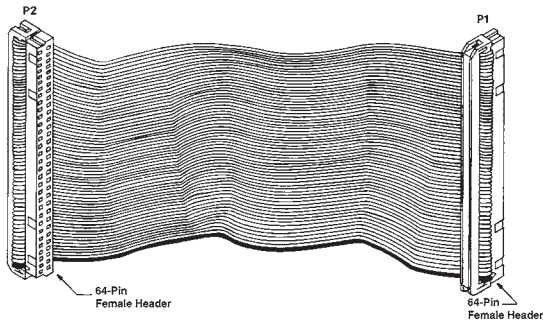
DIMENSIONS: INCHES (MILLIMETERS)
TOLERANCE: ± 0.020 (± 0.5)

PORT ASSIGNMENT PER THIS INSTALLATION

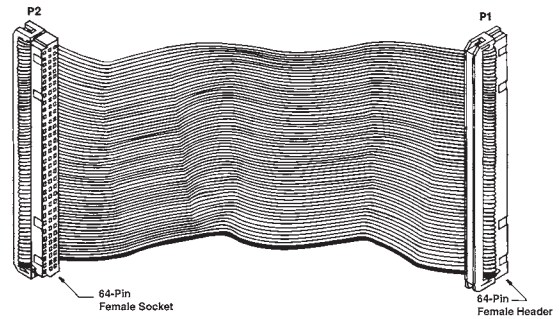
5025-550/551 Cable



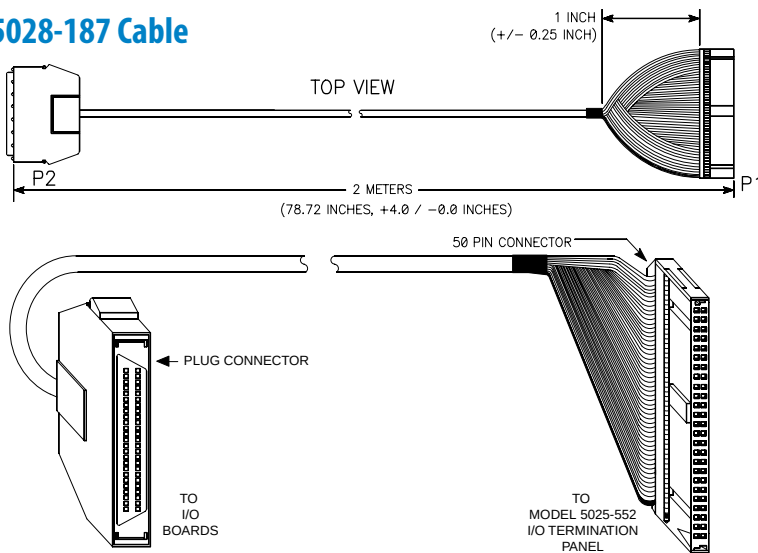
9944 Cable



9948 Cable



5028-187 Cable





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