



AVME944x-i Isolated Digital Output

- **AVME9444-i:** 32 solid-state relays
- **AVME9445-i:** 32 electromechanical relays

These boards provide an economical method for isolating and interfacing digital output signals from the VMEbus. Select built-in optical solid state or electromechanical relays to eliminate the expense of external relay panels and simplify installations. The digital outputs are designed to control valves, switch counters, mechanical/optical relays, indicator lamps and more.

The AVME9444/45-i series interfaces digital output signals from the VMEbus and provides channel-to-channel isolation. In addition, the exceptionally high current ratings eliminate the need for external relays.

Individual channels may be connected for either high side switching (source current externally supplied) or low side switching (functions as a current sink).

FEATURES

- 32 digital output channels
- All outputs are isolated from VMEbus and each other
- Solid state relay outputs carry up to 1A DC, from up to a 55V DC source
- Electromechanical relays carry up to 1.5A DC @ 30V DC (0.6A AC @ 125V AC)
- 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
- Front panel access for field wiring

SPECIFICATIONS

Solid State Relays

Output type: SPST-NO (Form A)

Output "off" voltage range: 0 to 55V

Output "off" leakage current: 5 μ A DC max. at 55V DC

Output "on" current: 0 to 1 Amp DC (0 to 40°C)

Derate "on" current above 40°C: 10mA/°C

Output "on" voltage @ 1 Amp DC: 0.5V DC maximum.

Output response @ 1 Amp DC: 2.0mS maximum

Logic interface: TTL and CMOS logic

Output fuse: F1-32 (2 AMP)

LED channel "on" indicators: 32 red LEDs

Electromechanical Relays

Output type: SPST-NO (Form A) or closed (Form B) jumper-selectable on each channel

Relay contact protection: metal-oxide varistor

Output fuse: F1-32 (3 AMP)

Relay contact resistance: 0.05 ohms, maximum

Relay contact material: Ag (Au clad)

*Maximum switching power: 60W, 125VA

*Maximum switching voltage: 125V AC, 125V DC

*Rated load: 0.6A @ 125V AC, 0.6A @ 110V DC, 1.5A @ 30V DC
(derate 10mA/°C above 20°C)

LED channel "on" indicators: 32 red LEDs driven by the input signal to the relay

Operate time: 5mS maximum (mean value approx. 3mS)

Release time: 3mS max. (mean value approx. 1.2mS)

Bounce time (operate): actual value approx. 0.5mS

Bounce time (release): actual value approx. 0.5mS

Service life (mechanical): 100 million operations, minimum (at 36,000 operations/hr)

* Resistive load (p.f. = 1)

Environmental

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

Power: +5V DC: 1.5A typical (all channels on)

Isolation: Each channel individually isolated via relays. Rated 250V AC or 354V DC continuous from channel to channel and from VMEbus. Withstands 1500V AC surge for 60 seconds.

Connectors: P1: 96 pin 603-2-IEC class 2. P3, P4: Panduit No.

100-532-053; Type B male connectors, rows A and B equipped, even pins only (32 pins total)

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)

ORDERING INFORMATION

AVME9444-i

32 solid state relay outputs

AVME9444-i-L

Same as above, plus LEDs

AVME9445-i

32 electromechanical relay outputs

AVME9445-i-L

Same as above, plus LEDs

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