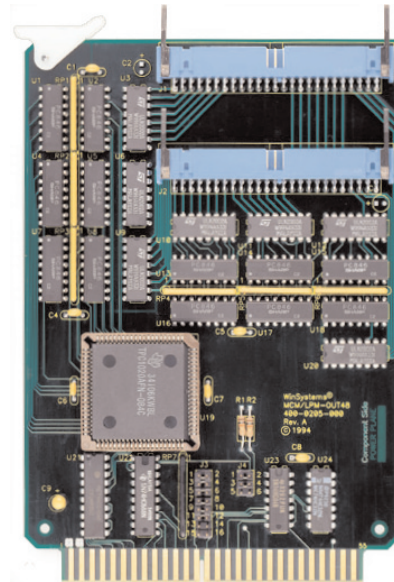


### MCM-OUT48

- \* Supports 48 digital outputs
- \* Each line has an open collector transistor with:
  - Diode clamp for inductive spikes from relays
  - 100mA sink current with Darlington array
  - 30V high-level interface voltage
  - Optical isolation for each output
- \* Each line has output with readback
- \* Dual 50-pin header connectors
- \* STD Bus and CMOS STD Bus interface
- \* +5 volt only operation
- \* Optional extended temperature operation: -40° to +85°C



### FUNCTIONAL CAPABILITY

WinSystems' MCM-OUT48 is a 48-line, relay driver card for the STD Bus. Its medium voltage and current output capability combined with diode clamping, makes it well suited for driving relays, lamps, or medium current loads. The on-board resets all the output lines to deenergize relays upon either power-up or PBRESET to initialize the board to a known status.

**Bus Interface** - Available in both STD Bus and CMOS STD Bus interfaces, the units are designated with the MCM or LPM prefix respectively. CMOS logic offers a different bus interface, with lower power requirements and extended operational temperature range.

**Digital Output Circuit** - Each digital output line on the LPM/MCM-OUT48 is wired in series from the WinSystems' 16C148 I/O controller ASIC to a photocoupler and then to a NPN Darlington pair.

**ASIC** - These units support 48 latched output lines with WinSystems'

WS16C148 OUT48 I/O controller ASIC. The 48 lines are addressed as 6 contiguous ports.

**Opto Isolation** - Each output line is optically isolated from the bus interface circuits. A separate isolated ground and supply voltage path is provided. The isolation voltage rating between the input and output of the photocoupler device exceeds 1500V.

Each output has a NPN Darlington transistor pair with an integral diode clamp capable of sinking 100mA of current required by most relays. This allows direct control of up to 48 relays with a signal MCM-OUT48 card for high-density I/O support.

**I/O Connectors** - The output lines are wired to two, 50-pin connectors. Each connector has 24 data lines alternated with 24 ground lines. The connector pin-out is compatible with the standard 4- to 24-position I/O module mounting racks from Opto-22, etc.

### SPECIFICATIONS

#### **Electrical**

Input isolation voltage = 1500 volts  
LPM-OUT48 Vcc = +5v @ 12mA typ.  
MCM-OUT48 Vcc = +5v @ 120mA typ.

#### **Mechanical**

Dimensions: 4.5" x 6.5"

#### **Connectors**

Digital I/O: Two 50-pin dual 0.100" grid  
STD Bus: 56-pin dual 0.125 inch center

#### **Environmental**

CMOS STD Bus: -40° to +85° C  
STD Bus: 0° to +65° C

Contact WinSystems for a  
**COMPLETE** data sheet and  
ordering information.

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