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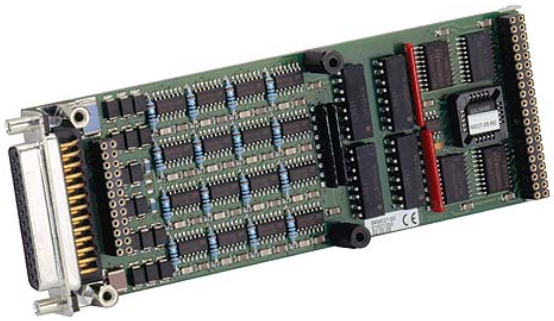
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Embedded Solutions

M27 - 16 Binary Outputs



- **16 outputs 8..36 V**
- **500 mA output current per channel**
- **Thermal and short-circuit protection**
- **Load on supply voltage**
- **Optical isolation**

The M27 with its open-collector outputs can be used in process I/O applications (cf. M28 with open-emitter outputs). If there are currents of above 500mA an intelligent power switch guarantees that the respective transistor is switched off. The M-Module™ is equipped with suppressor diodes for protection against overvoltage caused by inductive loads. The output registers can be read back.
The M27 is based on the M-Module™ ANSI mezzanine standard. It can be used as an I/O extension in any type of bus system, i.e. CPCI, VME or on any type of stand-alone SBC. Appropriate M-Module™ carrier cards in 3U, 6U and other formats are available from MEN or other manufacturers.

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Technical Data

Output Voltage
- 8..36V; 10µA max. (open)
- 2V max.; 500mA (closed)

Output Current
- Max. 500mA per channel
- No derating

Miscellaneous
- Load on supply voltage
- Thermal and short circuit protection

Peripheral Connections
- Via front panel on a shielded 25-pin D-Sub receptacle connector
- Via carrier board (rear I/O)

M-Module™ Characteristics
- A08, D16, IDENT

Electrical Specifications
- Isolation voltage:
  - 500V DC between isolated side and digital side
  - Voltage between the connector shield and isolated ground is limited to 180V using a varistor; AC coupling between connector shield and isolated ground through 47nF capacitor
- Supply voltage/power consumption: +5V (4.85V..5.25V), 100mA typ.
- MTBF: 58,000h @ 50°C (derived from MIL-HDBK-217F)

Mechanical Specifications
- Dimensions: conforming to M-Module™ Standard
- Weight: 84g

Environmental Specifications
- Temperature range (operation):
  - 0..+60°C
  - Industrial temperature range on request
  - Airflow: min. 10m³/h
- Temperature range (storage): -40..+85°C
- Relative humidity range (operation): max. 95% non-condensing
- Relative humidity range (storage): max. 95% non-condensing
- Altitude: -300m to + 3,000m
- Shock: 15g/11ms
- Bump: 10g/16ms
- Vibration (sinusoidal): 2g/10..150Hz
- Conformal coating on request

Safety
- PCB manufactured with a flammability rating of 94V-0 by UL recognized manufacturers

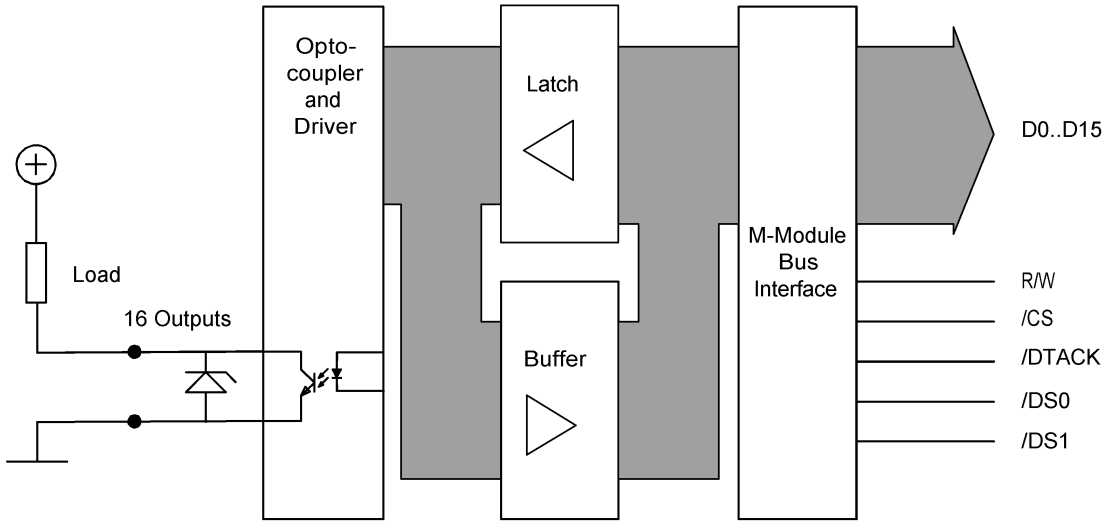
EMC
- Tested according to EN 55022 (radio disturbance), IEC1000-4-2 (ESD) and IEC1000-4-4 (burst)

Software Support
- MEN Driver Interface System (MDIS™ for Windows®, Linux, VxWorks®, QNX®, OS-9®)
- For more information on supported operating system versions and drivers see Software.

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Diagram



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Embedded Solutions

Ordering Information

Standard Hardware

04M027-00 16 binary sink outputs, 0..+60°C

Miscellaneous

05M000-00 M-Module cable, 2m, with 25-pin D-Sub plug/housing to pig tail

05M000-17 25 mounting screw sets to fix M-Modules on carrier boards

Software: OS independent

13M027-06 MDIS4/2004 low-level driver sources (MEN) for M27, M28 and M81

Software: Windows

13M027-70 MDIS4/2004 Windows driver (MEN) for M27, M28 and M81

Documentation

20M000-00 M-Module Draft Specification, Rev. 3.0

20M027-00 M27 User Manual

For the most up-to-date ordering information and direct links to other data sheets and downloads, see the M27 online data sheet under » www.men.de.

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