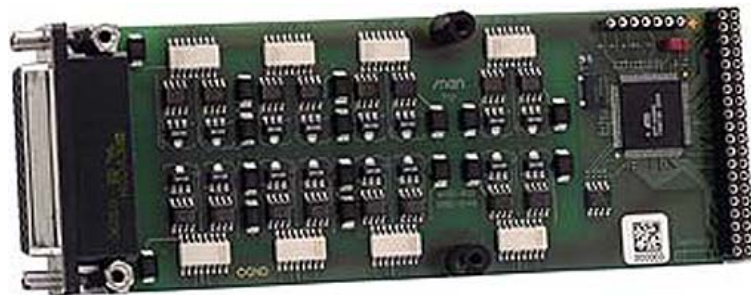


M82 – 16 Binary Inputs

- 16 fast 20-kHz inputs
- 0..40 V input voltage
- Constant current inputs
- Hysteresis function
- Interrupt generation
- 500 V DC isolation from the system
- 100 V DC isolation between the channels
- -40 to +85°C with qualified components



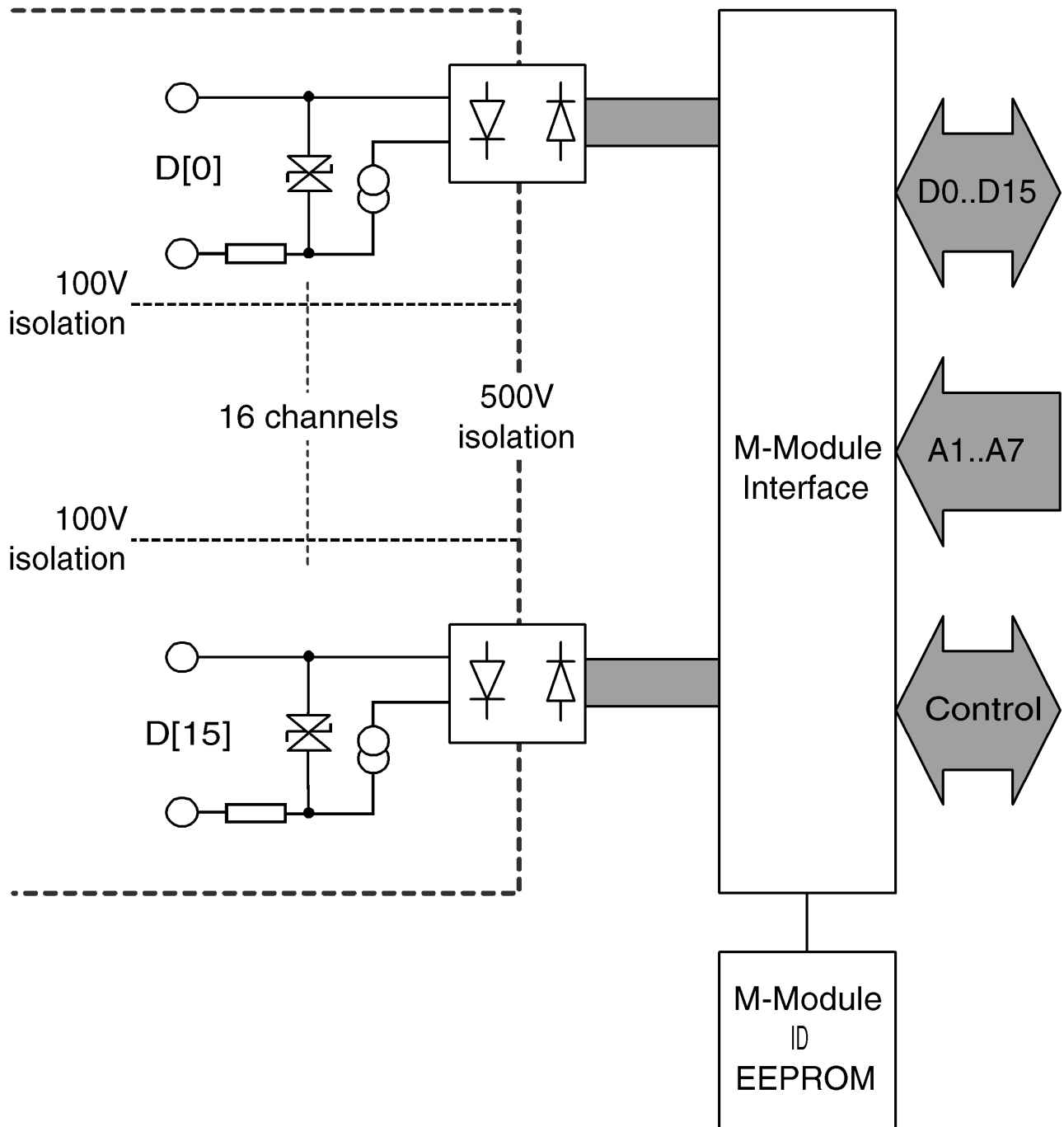
The mezzanine card M82 is a 16-channel fully isolated input M-Module with latching and comparator capabilities for industrial applications. A current limit for each input guarantees an input voltage range of 0 to 40 V. Each input signal edge generates a maskable interrupt for each channel. The voltage-sensitive inputs have a hysteresis function.

Typical I/O applications include automated test equipment, simulators and PLC-like applications with different voltage requirements.

The M82 is software-compatible with the M31.

The M82 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.

Diagram



Technical Data

Binary Inputs	<ul style="list-style-type: none"> ■ FET constant current source inputs <ul style="list-style-type: none"> □ 5.6mA typ. ■ Input voltages and currents: <ul style="list-style-type: none"> □ 0..40V max. □ 5.5V, ±0.5V (switching voltage 0) @ 3mA min., 3.3mA typ., 4mA max. □ 9.5V, ±0.5V (switching voltage 1) @ 4mA min., 5.6mA typ., 10mA max. □ 15.2V, ±0.5V (switching voltage 2) @ 4mA min., 5.6mA typ., 10mA max. ■ Switching Times <ul style="list-style-type: none"> □ Rise time: 4.2µs typ. □ Fall time: 32µs typ.
Miscellaneous	<ul style="list-style-type: none"> ■ Hysteresis function ■ Interrupt generation with maskable interrupt
Peripheral Connections	<ul style="list-style-type: none"> ■ Via front panel on a shielded 44-pin HD-Sub receptacle connector
M-Module Characteristics	<ul style="list-style-type: none"> ■ A08, D16, INTA, INTB, IDENT
Electrical Specifications	<ul style="list-style-type: none"> ■ Isolation voltage: <ul style="list-style-type: none"> □ 500V DC between isolated side and digital side □ All channels are optically isolated (100V between the channels) ■ Supply voltage/power consumption: +5V (4.85V..5.25V), 220mA typ. ■ MTBF: 370,000h @ 40°C (derived from MIL-HDBK-217F)
Mechanical Specifications	<ul style="list-style-type: none"> ■ Dimensions: conforming to M-Module Standard ■ Weight: 72g
Environmental Specifications	<ul style="list-style-type: none"> ■ Temperature range (operation): <ul style="list-style-type: none"> □ 0..+60°C or -40..+85°C □ 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	<ul style="list-style-type: none"> ■ PCB manufactured with a flammability rating of 94V-0 by UL recognized manufacturers
EMC	<ul style="list-style-type: none"> ■ Tested according to EN 55022 (radio disturbance), IEC1000-4-2 (ESD) and IEC1000-4-4 (burst)
Software Support	<ul style="list-style-type: none"> ■ MEN Driver Interface System (MDIS for Windows®, Linux, VxWorks®, QNX®, OS-9®) ■ For more information on supported operating system versions and drivers see Downloads.

Ordering Information

Standard M82 Models	04M082-00	16 binary inputs, fully isolated, -40..+85°C with qualified components
Miscellaneous Accessories	05M000-14	M-Module cable, 2.5m, with 44-pin HD-Sub plug/housing to pig tail
	05M000-17	25 mounting screw sets to fix M-Modules on carrier boards
Software: Linux	This product is designed to work under Linux. See below for potentially available separate software packages from MEN.	
	13M031-06	MDIS5 low-level driver sources (MEN) for M31, M32 and M82
Software: Windows®	This product is designed to work under Windows®. See below for potentially available separate software packages from MEN.	
	13M031-70	MDIS4/2004 / MDIS5 Windows® driver (MEN) for M31, M32 and M82
Software: VxWorks®	This product is designed to work under VxWorks®. For details regarding supported/unsupported board functions please refer to the corresponding software data sheets.	
	13M031-06	MDIS5 low-level driver sources (MEN) for M31, M32 and M82
Software: QNX®	This product is designed to work under QNX®. For details regarding supported/unsupported board functions please refer to the corresponding software data sheets.	
	13M031-06	MDIS5 low-level driver sources (MEN) for M31, M32 and M82
Software: OS-9®	This product is designed to work under OS-9®. For details regarding supported/unsupported board functions please refer to the corresponding software data sheets.	
	13M031-06	MDIS5 low-level driver sources (MEN) for M31, M32 and M82
For operating systems not mentioned here contact MEN sales.		
Documentation	Compare Chart binary I/O M-Modules » Download	
	20M000-00	M-Module Draft Specification, Rev. 3.0
	20M082-00	M82 User Manual

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