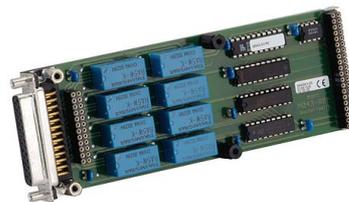


M43 – 8 Relay Outputs

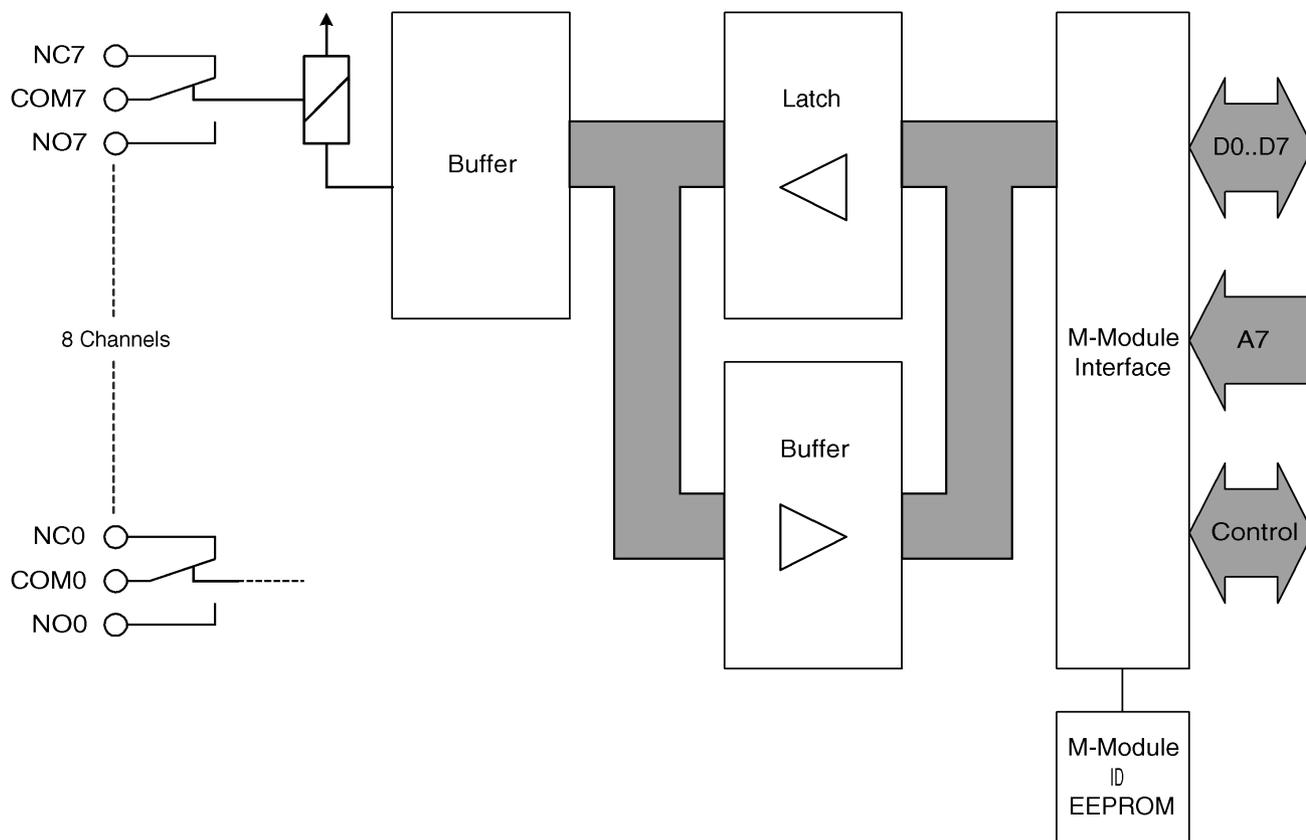
- **8 relay outputs**
- **1 A switching power per relay**
- **One throw-over contact per relay**
- **Output voltage range max. 48 V**
- **No separate supply voltage**



The mezzanine card M43 is a relay output M-Module for free potential switching of eight signals. It is designed for industrial process I/O applications.

The relays implemented guarantee highest reliability and long life. The M43 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

Relay Outputs	<ul style="list-style-type: none"> ■ 8 outputs as throw-over contacts ■ NO (normally open), NC (normally closed) and common contacts
Ratings	<ul style="list-style-type: none"> ■ Maximum switching voltage: 48V ■ Maximum switching current: 3A ■ Maximum operation current: 1A ■ Maximum switching power: 60W
Switching Time	<ul style="list-style-type: none"> ■ 2ms typ. for NO and NC
Miscellaneous	<ul style="list-style-type: none"> ■ Relay status can be read out - "read-modify-write" accesses possible ■ Low heat development by use of CMOS components
Peripheral Connections	<ul style="list-style-type: none"> ■ Via front panel on a shielded 25-pin D-Sub receptacle connector ■ Via carrier board (rear I/O)
M-Module Characteristics	<ul style="list-style-type: none"> ■ A08, D08, IDENT
Electrical Specifications	<ul style="list-style-type: none"> ■ Supply voltage/power consumption: +5V (-3%/+5%), 700mA typ. (all relays active) ■ MTBF: 1,000,000h @ 50°C (derived from MIL-HDBK-217F)
Mechanical Specifications	<ul style="list-style-type: none"> ■ Dimensions: conforming to M-Module Standard ■ Weight: 98g
Environmental Specifications	<ul style="list-style-type: none"> ■ Temperature range (operation): <ul style="list-style-type: none"> □ 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	<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 M43 Models	04M043-00	8 relay outputs, 0..+60°C
Miscellaneous Accessories	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: Linux	This product is designed to work under Linux. See below for potentially available separate software packages from MEN.	
	13M043-06	MDIS4/2004 / MDIS5 low-level driver sources (MEN) for M43
Software: Windows®	This product is designed to work under Windows®. See below for potentially available separate software packages from MEN.	
	13M043-70	MDIS4/2004 / MDIS5 Windows® driver (MEN) for M43
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.	
	13M043-06	MDIS4/2004 / MDIS5 low-level driver sources (MEN) for M43
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.	
	13M043-06	MDIS4/2004 / MDIS5 low-level driver sources (MEN) for M43
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.	
	13M043-06	MDIS4/2004 / MDIS5 low-level driver sources (MEN) for M43
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
	20M043-00	M43 User Manual

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