HIRSCHMANN
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New Product Bulletin

NP 1031HE

Digital I/O Media Module for the Switches in the MICE Family

With the new digital Hirschmann™ I/O media module, the modular Industrial Ethernet switches in the MICE family can now offer both Fast Ethernet and Gigabit Ethernet speeds plus I/O functionality in a single device, a combination that is entirely new in the field of automation technology.

Digital Media Module from Hirschmann™: I/O Functionality for Industrial Ethernet Switches

This digital I/O media module from Hirschmann™ makes it easy to add I/O functionality to the Industrial Ethernet switches of the MICE family. You can attach and monitor sensors and actuators to control doors, conveyor belts, lighting elements, etc., not only locally but also – via Internet – at a great distance. The only proviso is that your MICE switches must be running Version 7.0 of the "Layer 2 Professional" software from Hirschmann™.

Three versions of the I/O media module are currently available. The standard version (MM24-IOIOIOIOSZHH) is designed for temperatures in the range 0°C to +60°C. There is also a version with an extended temperature range from -40°C to +70°C (MM24-IOIOIOIOTZHH). The third version (MM24-IOIOIOIOEZHH) is not only designed to operate at temperatures in the range -40°C to +70°C but also uses circuit boards that are equipped with a conformal coating to protect them against condensation, enabling these digital I/O media modules to withstand even the most extreme climatic conditions.

All versions of the I/O media module possess four digital inputs and outputs that can be used for conveying signals and evaluating status messages. There is also an auxiliary 24 V DC output with a power rating of 3W, enabling attached components to be controlled without the need for an additional power source. Additional features include protection class IP20, a high level of resistance to shocks and vibration and broad immunity to electro-static discharges and magnetic fields.

The digital inputs of the I/O media module comply with the EN 61131-2:2007/type 3 standard. The digital outputs are potential-free changeover relays, each with a current carrying capacity of 1 A. The inputs and outputs are connected via eight-pole or twelve-pole terminal strips on the underside of the media module, where there is also a two-pole terminal strip for the auxiliary output.

The I/O media module, which boasts a MTBF rating of 107.6 years, can be quickly installed by plug-and-play and easily configured using either a command line interface (CLI) or via the web interface. Its input/output and power supply status is shown by the LEDs on the front of the unit and can also be accessed with an internet browser via the user interface of the MICE switches. Generous labeling fields make it easy to identify the individual modules and clearly show the assignments of their connections.
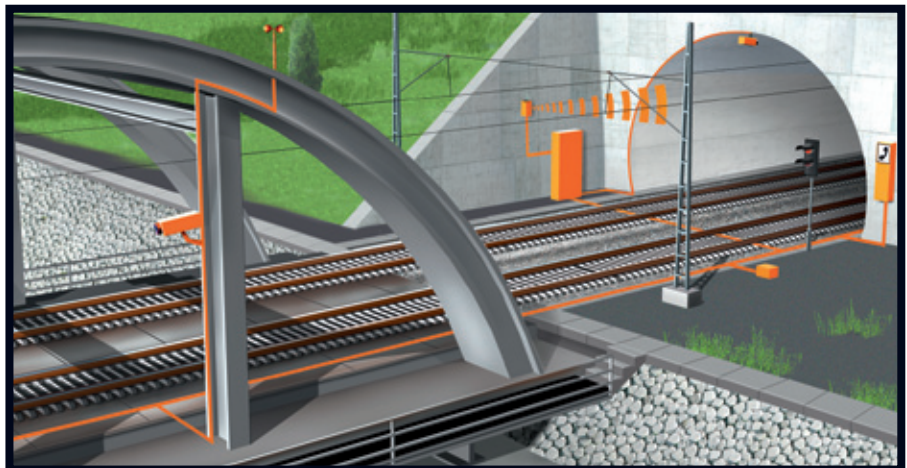
Hirschmann™ MICE Family

The switches in Hirschmann™'s MICE family, which are especially designed for use in tough industrial environments, comprise a switch unit with integrated backplane that can be equipped with up to seven media modules. They support both Fast and Gigabit Ethernet and various routing, redundancy and security methods. Fanless cooling and a redundant 24 V DC power supply contribute to their high level of operational reliability. Since these switches can be mounted on top-hat rails they can equally be used centrally in switch cabinets and decentrally in distribution boxes.

The Advantages at a Glance

- I/O functionality for Industrial Ethernet switches
- Connect and monitor a variety of components, both locally and remotely
- Designs available for different climatic conditions
- Four digital inputs compliant with EN 61131-2:2007/type-3
- Four digital outputs with potential-free changeover relays
- Auxiliary 24 V DC output with 3W
- High level of resistance to shocks and vibration
- Broad immunity to electrostatic discharges and magnetic fields
- Protection rating IP20
- Fast activation by plug and play
- Status displayed on LEDs on the front and via the user interface of the MICE switches
- Generous labeling fields
- MTBF 107.6 years

Control and Monitoring of Non-critical Applications

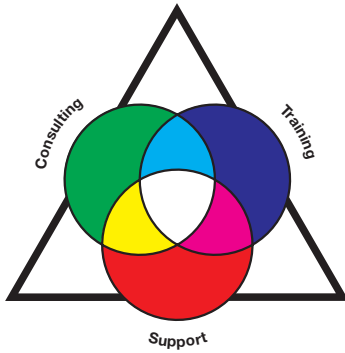MICE modules are used for transmission of simple status messages.

Technical Information

Product Information	
Type	**MM24-IOIOIOIOSZHH, MM24-IOIOIOIOTZHH, MM24-IOIOIOIOEZHH**
Description	Fast Ethernet media module for MICE Switches (MS...) with 4 digital inputs and 4 digital outputs to transmit status signals, modul needs at least SW7.0 Layer 2 Professional
Port Type and Quantity	Port 1: 1x digital input, 1x digital output; Port 2: 1x digital input, 1x digital output; Port 3: 1x digital input, 1x digital output; Port 4: 1x digital input, 1x digital output
Order No.	943 938-999
Power Requirements	
Operating Voltage	Power supply via the backplane of the MICE switch
Power Consumption	7.5 W
Ambient Conditions	
Operating Temperature	-40°C to +70°C
Storage/Transport Temperature	-40°C to +70°C
Protective Paint on PCB	yes, for MM24-IOIOIOIOEZHH
Relative Humidity (non-condensing)	10% to 95%
Mechanical Construction	
Dimensions (W x H x D)	38 x 134 x 118 mm
Mounting	Backplane
Weight	n/a
Protection Class	IP20
Mechanical Stability	
IEC 60068-2-27 Shock	15 g, 11 ms duration, 18 shocks
IEC 60068-2-6 Vibration	3.5 mm, 5 to 8.4 Hz, 10 cycles, 1 octave/min; 1 g, 8.4 to 150 Hz, 10 cycles, 1 octave/min
EMC Interference Immunity	
EN 61000-4-2 Electrostatic Discharge (ESD)	4 kV contact discharge, 8 kV air discharge
EN 61000-4-3 Electromagnetic Field	10 V/m (80 to 1000 MHz)
EN 61000-4-4 Fast Transients (Burst)	2 kV power line, 1 kV data line
EN 61000-4-5 Surge Voltage	power line: 1 kV (line/earth), 0.5 kV (line/line), 1 kV data line
EN 61000-4-6 Conducted Immunity	10 V (150 kHz to 80 MHz)
EMC Emitted Immunity	
FCC CFR47 Part 15	FCC 47 CFR Part 15 Class A
EN 55022	EN 55022 Class A
Approvals	
Hazardous Locations	cUL 1604 Class1 Div 2 (in preparation)
Scope of Delivery and Accessories	
Scope of Delivery	Module, operating manual
Accessories to order separately	ML-MS2/MM labels

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