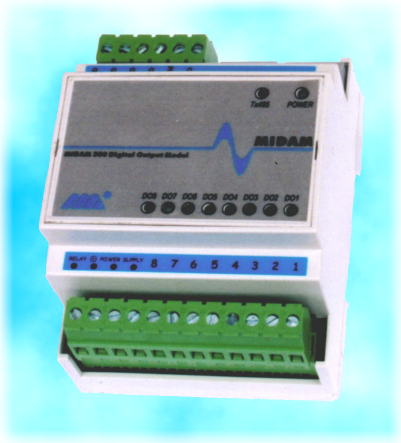
MIDAM 300 Digital Output Modul



MIDAM 300 is an intelligent module with eight digital outputs. The condition of the outputs may be controlled via the RS485 communication bus. The outputs are of the open collector type and they may be loaded up to 0,5A and may switch up to 50V. The module has to be installed on a DIN strip.

The module communicates and is controlled solely via the RS485 data bus. Its communication protocol is identical with the ADAM 4000 module series produced by ADVANTECH company. The MIDAM 300 sensor operates in the same way as the ADAM 4060 module. This means that a standard actuator used with the ADAM modules can be used to provide control in various programmes.

The module wiring to the RS485 bus is provided by two RJ45 connectors. The connectors are in parallel connection. Thus it is possible to lead the bus from the module further to other modules in the network. Communication inputs are protected against overvoltage. In case that the converter has been installed as a terminal device on the bus, a terminating resistor may be used. To attain this, remove the case cover and connect the terminal resistor to the line by short-circuiting the contacts on the printed circuit board.

Some communication cables include more wire pairs in a cable. Therefore the convertor has been designed to allow that the module power supply can be brought via the free conducters in the cable. This measure makes the module installation easier and reduces the cabling requirements.

All adjustments are saved in an EEPROM memory. The module is fitted with the WATCHDOG circuit which is guarding proper operation of the processor. There are eight LEDs on the top panel of the module indicating status of each output and two LEDs indicating communication with the module and power supply connection.

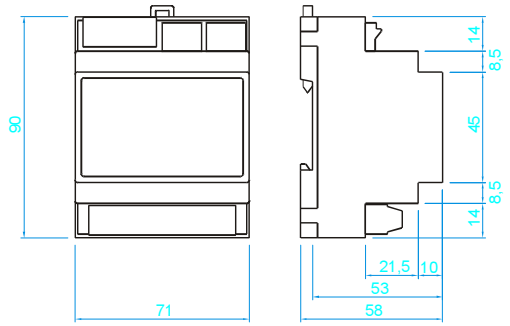
To avoid the damage of the output transistors caused by overvoltage during switching inductive load (e.g. relay), the module is fitted with „RELAY ⊕ POWER SUPPLY“ terminals. The power supply ⊕ lead of the switched load has to be connected to these terminals.

Technical data

Supply voltage	10 V ÷ 35 V DC non-regulated
	14 V ÷ 24 V AC
Power input	1 W
Permissible module inner temperature	0 ÷ 70°C
Communication properties	data transmission via RS 485 data bus
	baud rates: 1200, 2400, 4800, 9600, 19200 Bd
	max. segment lenth: 1200 m, asynchronous transmission
	up to 256 modules per one serial port
	communication protocol identical with the ADAM 4000 modules
The number of outputs	8
Output type	open collector
Output transistor parametres	U_{max} = 50 V_{ss} [1)]
	I_{max} = 500 mA_{ss} [1)]
Total power loss of all transistors	P_{tot} = 2250 mW at $T_{inside\ the\ module}$ = 25°C [1)]

Note: 1) These output parametres are limit, for maximum operational paremetres refer to the diagram 1 on the following page.

Module external dimensions



Max. Current Values

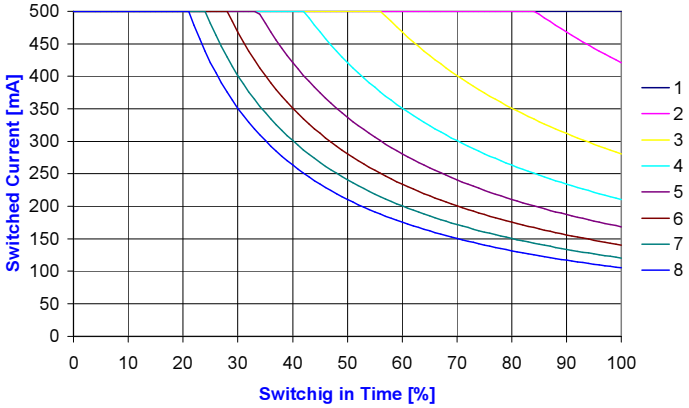
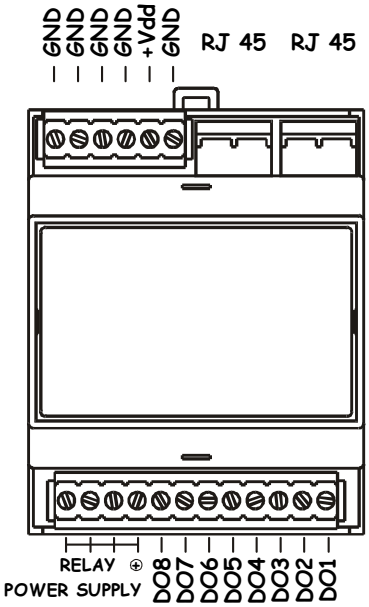
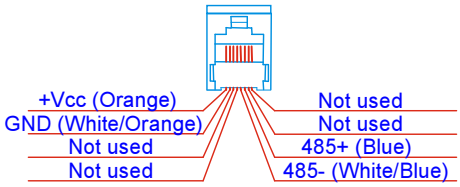


Diagram 1: The dependence of the individual switches output current on the rate of switching in time and the number of the switched outputs.

Terminals wiring



Recommended wiring of the RJ 45 connector



Designation	Description
DO1 to DO8	Open collector type digital outputs
Relay + Power Supply	Terminals for wiring the power supply ⊕ lead for switching inductive load
+Vcc	+ module power supply terminal
GND	- module power supply terminal
RJ 45	Connectors for wiring a data bus and possibly for power supply to the module

As an optional feature available on customer's demand, another communication protocol may be implemented into the module or the module can be programmed as a control module.

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