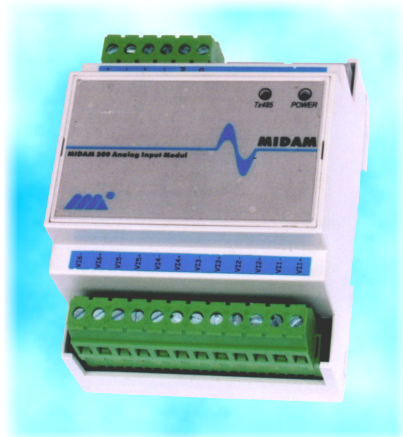




# MIDAM

## MIDAM 500 Analog Input Modul



**MIDAM 500** is an intelligent module with eight voltage and current analog inputs. The inputs are differential and their condition may be controlled via the RS485 communication bus. 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 500** sensor operates in the same way as the ADAM 4017 module. This means that a standard actuator used with the ADAM modules can be used for 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 converter has been designed to allow that the module power supply can be brought via the free conductors 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 two LEDs on the top panel indicating communication with the module and power supply connection. The module is galvanically separated from power supply.

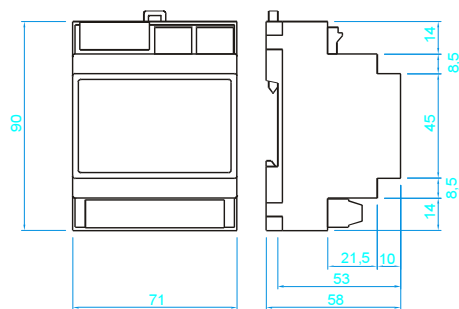


When reading current, it is necessary to connect  $125\Omega / 0,1\%$  resistors in parallel to the input terminals so that input current goes through the resistors. The overall input current readings accuracy depends on the accurate resistance value.

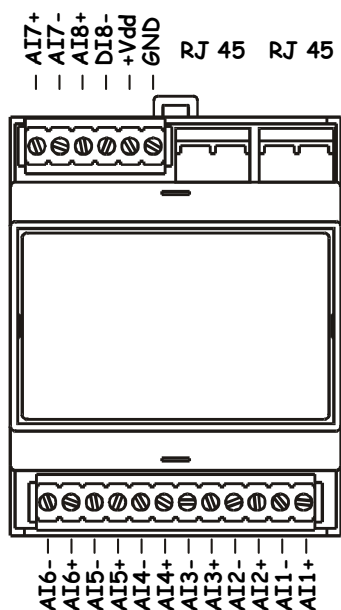
### Technical data

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 length: 1200 m, asynchronous transmission up to 256 modules per one serial port communication protocol identical with the ADAM 4000 modules
The number of measuring channels	8, differential
Input ranges	$\pm 150\text{mV}$ , $\pm 500\text{mV}$ , $\pm 1\text{V}$ , $\pm 5\text{V}$ , $\pm 10\text{V}$ $\pm 20\text{mA}$
Sampling rate	Total of 10 samples/s
Effective resolution	16 bit
Accuracy	0,1%
Input resistor (in voltage mode)	10M $\Omega$
Suppression of corresponding interference	>90dB

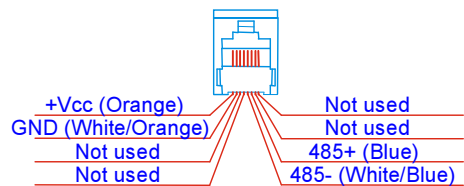
Module external dimensions



Terminals wiring



Recommended wiring of the RJ 45 connector



Designation	Description
AI1+ až AI8+	+ analog input terminals
AI1- až AI8-	- analog input terminals
+Vdd	+ 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.

Represtatative

MIKRO

S.r.o.

CONTROL SYSTEMS

Mikroklima s.r.o. , Veverkova 1343  
500 02 Hradec Králové, Czech Republic  
Tel.:049/5813355, fax: 049/5813357  
e-mail: midam@mikroklima.cz

