

DIGITAL ACQUISITION MODULE

CAOM MAD50

The MAD50 is a digital acquisition module capable to monitor 16 distinctive points. It is designed for 16 differential digital inputs, individually galvanically isolated, which realize data collection.

The device can be connected to a RS485 network for computer monitoring of the input channels in order to set and to read the parameters. A protocol ASCII is used for communication.

The module is based on a 8 bits microcontroller with the following tasks:

- Ø Communication into a RS485 network
- Ø Input data collection
- Ø Signalization of input channels status
- Ø Signalization of module status through LEDs
- Ø Signalization of module network status through LEDs
- Ø Errors signalization through LEDs



Technical characteristics:

Supply voltage	12 V- 35 V
Input	7 differential digital inputs
Inputs characteristics	<ul style="list-style-type: none"> Ø each input is galvanically isolated Ø protection to inverse connection Ø level of input voltage: <ul style="list-style-type: none"> Ø 0L: 0 ~ +3 V max. Ø 1L: +10 ~ +35 V max.
Outputs	8 digital outputs, open collector type: <ul style="list-style-type: none"> Ø Each output is galvanically isolated Ø protection to inverse connection Ø charging: < +30V, max 30 mA RS485 with the following characteristics: <ul style="list-style-type: none"> Ø allows the reading of module's parameters Ø inputs reading Ø parameters programming Ø communication speeds: 1200, 2400, 4800, 9600, 19.2 K, 38.4 K, 57.6 K, 115.2 K bps maximum distance: 1200 m
Signalization	The status of module, network and inputs is signalized through LEDs
Programmable parameters	<ul style="list-style-type: none"> Ø Module's address in the network Ø Communication speed Ø Control sum: <ul style="list-style-type: none"> Ø No control sum Ø LRC Ø CRC <p>These parameters can be stored in external memory and they will be reloaded when module is charging.</p>
Mounting	Mount-rail
Carcass	105 x 86 x 58,5 mm
Operating temperature	5 -60 °C
Humidity	Max. 80% , no condense
Weight	0,350 kg

ANALOGICAL ACQUISITION MODULE

CAOM MAD18

The MAD18 is a digital acquisition module with 8 analogical inputs in voltage and current, such as:

- Ø thermocouples J,K, T,E , R,S and B
- Ø ± 15 mV, ± 50 mV, ± 100 mV, ± 500 mV
- Ø ± 1 V, $\pm 2,5$ V
- Ø ± 20 mA

The device can be connected to a RS485 network for computer monitoring and data reading. A protocol ASCII is used for communication.

The module is based on a 8 bits microcontroller with the following tasks:

- Ø Communication into a RS485 network
- Ø Communication with CAN for input data collection
- Ø Signalization of module status through LEDs
- Ø Signalization of module network status through LEDs
- Ø Errors signalization through LEDs
- Ø Storage of operating parameters into a non- volatile external memory

Technical characteristics:

Supply voltage	24 V c.c. $\pm 10\%$
Input	8 analogical inputs, as follows: Ø thermocouples J,K, T,E , R,S and B Ø ± 15 mV, ± 50 mV, ± 100 mV, ± 500 mV Ø ± 1 V, $\pm 2,5$ V Ø ± 20 mA
Outputs	RS485 with the following characteristics: Ø allows the reading of module's parameters Ø inputs reading Ø parameters programming Ø communication speeds: 1200, 2400, 4800, 9600, 19.2 K, 38.4 K, 57.6 K, 115.2 K bps Ø maximum distance: 1200 m
Signalization	The status of module and network
Programmable parameters	Ø Module's address in the network Ø Communication speed Ø Control sum: Ø No control sum Ø LRC Ø CRC These parameters can be stored in external memory and they will be reloaded when module is charging.
Mounting	Mount-rail
Carcass	105 x 86 x 58,5 mm
Operating temperature	5 -60 $^{\circ}$ C
Humidity	Max. 80% , no condense
Weight	0,350 kg

DIGITAL ACQUISITION MODULE

CAOM MAD51

The MAD50 is a digital acquisition module capable to monitor 16 differential digital inputs, individually galvanically isolated. The device can be connected to a RS485 network for computer monitoring of the input channels in order to set and to read the parameters. The communication protocol implemented by the network is compatible with ASCII communication protocol.

The module is based on a 8 bits microcontroller with the following tasks:

- Ø Communication into a RS485 network
- Ø Input data collection
- Ø Signalization of input channels status
- Ø Signalization of module status through LEDs
- Ø Signalization of module network status through LEDs
- Ø Errors signalization through LEDs
- Ø Storage of operating parameters into a non- volatile external memory

Technical characteristics:

Supply voltage	12 V- 36 Vc.c.
Input	16 differential digital inputs
Inputs characteristics	<ul style="list-style-type: none"> Ø each input is galvanically isolated Ø protection to inverse connection Ø level of input voltage: <ul style="list-style-type: none"> Ø 0L: 0 ~ +3 V max. Ø 1L: +10 ~ +35 V max.
Outputs	RS485 with the following characteristics: <ul style="list-style-type: none"> Ø allows the reading of module's parameters Ø inputs reading Ø parameters programming Ø communication speeds: 1200, 2400, 4800, 9600, 19.2 K, 38.4 K, 57.6 K, 115.2 K bps maximum distance: 1200 m
Signalization	The status of module, network and inputs is signalized through LEDs
Programmable parameters	<ul style="list-style-type: none"> Ø Module's address in the network Ø Communication speed Ø Control sum: <ul style="list-style-type: none"> Ø No control sum Ø LRC Ø CRC <p>These parameters can be stored in external memory and they will be reloaded when module is charging.</p>
Mounting	On metallic bars
Carcass	105 x 86 x 58,5 mm
Operating temperature	5 -60 °C
Humidity	Max. 80%
Weight	0,300 kg

DIGITAL COMMAND MODULE

CAOM MAD68

The MAD68 is a command module with relay outputs. It is configured with 8 relays, 4 of them have two contacts accessible from exterior and the other four have three contacts, controlled by a microcontroller.

The device can be connected to a RS485 network for computer monitoring of the input channels in order to control the relays from the computer, to set and to read the module parameters. The communication protocol implemented by the network is compatible with ASCII communication protocol.

The module is based on a microcontroller with the following tasks:

- Ø Communication into a RS485 network
- Ø Relays command
- Ø Signalization of relays status
- Ø Signalization of module status through LEDs
- Ø Signalization of module network status through LEDs
- Ø Errors signalization through LEDs
- Ø Storage of operating parameters into a non- volatile external memory

Technical characteristics:

Supply voltage	12 V- 36 Vc.c.
Input	-
Relays characteristics	<ul style="list-style-type: none"> Ø 8 relay outputs with the following specifications: Ø Two output contacts for 4 relays Ø Three output contacts for 4 relays
Outputs	RS485 with the following characteristics: <ul style="list-style-type: none"> Ø allows the reading of module's parameters Ø inputs reading Ø parameters programming Ø communication speeds: 1200, 2400, 4800, 9600, 19.2 K, 38.4 K, 57.6 K, 115.2 K bps maximum distance: 1200 m
Signalization	The status of module, network and inputs is signalized through LEDs
Programmable parameters	<ul style="list-style-type: none"> Ø Module's address in the network Ø Communication speed Ø Control sum: <ul style="list-style-type: none"> Ø No control sum Ø LRC Ø CRC These parameters can be stored in external memory and they will be reloaded when module is charging.
Mounting	On metallic bars
Carcass	105 x 86 x 58,5 mm
Operating temperature	5 -60 °C
Humidity	Max. 80%
Weight	0,350 kg