

iSMA-B-AAC20

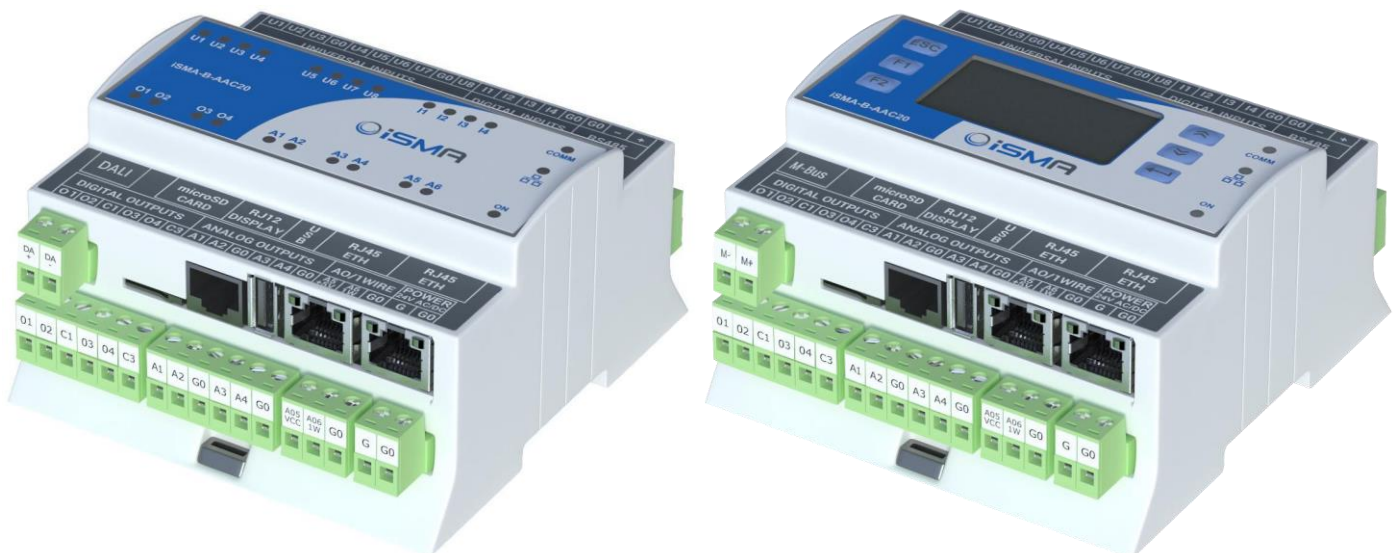
AAC20 controller (iSMA-B-AAC20) is an advanced device to control building automation and HVAC systems. Use of SVM (Sedona Virtual Machine) allows for quick and easy programming in real time. Large number of inputs and outputs allows to integrate with other devices and sensors (AAC20 provides 8xUI, 4xDI, 4/6xAO and 4xDO). Its fast processor allows to control of even very large objects. Big, fully programmable LCD can be used as simple user interface to allows local operation of system.

Built-in RS485 can be used to expand number of I/O by connecting MINI or MIX series I/O modules using Modbus ASCII/RTU. In addition, to increase the versatility of the controller, it supports many open communications protocols like: BACnet, Modbus, SOX, DALI, M-Bus, 1-wire or oBIX (optional).

AAC20 is mounted in a housing adapted for DIN rail mounting or directly on a panel. Separate, easy to remove connectors allow quick wiring without removing the entire module.

Key Features

- Sedona Framework 1.2 support
- Configuration via web
- 2x Fast Ethernet with built-in switch
- Built-in Modbus Gateway TCP/IP to RS485
- RS485 port (Modbus or BACnet)
- DALI Interface: built-in power supply (option)
- M-Bus Interface: up to 20 devices (option)
- 1-Wire Interface
- USB Host Interface
- Supporting oBIX
- An external display
- Built-in LCD Display (option)
- Real Time Clock (RTC)
- Micro SD card slot to log historical data and alarms
- Fast processor with ARM dual core 204MHz



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Specification

8x Universal Inputs (8UI)

All universal inputs have 16-bit resolution which support the following types of inputs:

- Temperature input support the following types of sensors: 10K3A1, 10K4A1, Carel 10K, 20K6A1, 2.2K3A1, 3K3A1, 30K6A1, SIE1, TAC1, SAT1, Pt1000, Ni1000

For sensor Pt1000 and Ni1000 use only 16-bit resolution

- Voltage input 0-10 V DC: input resistance 100 k Ω accuracy $\pm 0,1\%$ measurement resolution 3 mV @ 12bit and 1 mV @ 16bit
- Current input 0-20 mA (external resistor 499 Ω required)
- Resistive input 0-1000 k Ω : measurement resolution for 20 k Ω load 20 Ω @ 12bit and 1 Ω @ 16bit
- Dry contact input

4x Digital Inputs (4DI)

- Dry contact inputs
- Fast pulse counter up to 100 Hz save in EEPROM memory

4/6x Analog Outputs (4/6AO)

All analog outputs are equipped with 12-bit ADC provides 10 mV resolution and accuracy less than $\pm 0,5\%$. They support the following output types:

- Output: 0-10 V DC maximum load up to 20mA (AO6- 5 mA)
- PWM: 0,01 Hz, 0,1 Hz, 1 Hz, 10 Hz, 100 Hz

AO5 and AO6 can only be used if 1-wire port is not in use, please notice for AO6 maximum current load is up to 5 mA.

4x Digital Outputs (4DO)

- Relay output (NO): max. 3 A, 230 V AC/30 V DC

Platform

- ARM Cortex-M4 204MHz
- ARM Cortex-M0 204MHz

Communication

- Interface RS485 half duplex
- Baud rate: 2400 to 115200 bps
- 2x Ethernet with built-in switch
- DALI Interface: built-in power supply 130 mA (option)
- M-Bus Interface: up to 20 devices (option)
- 1-Wire Interface
- Micro SD card slot
- USB Host Interface
- Protocols: Modbus, BACnet, SOX, DALI, M-Bus, 1-wire or oBIX

Power supply

- 24 V AC/DC

Housing

- Dimension: 106x110x62 mm
- Construction: plastic, self-extinguishing (PC/ABS)
- DIN rail mounting DIN (DIN EN 50022 norm)
- Cooling: internal air circulation

Environment

- Operating temperature: -10°C to 50°C
- Storage temperature: -40°C to 85°C
- Relative humidity: 5% to 95%, no condensation
- Ingress Protection Rating: IP40 – for indoor installation

