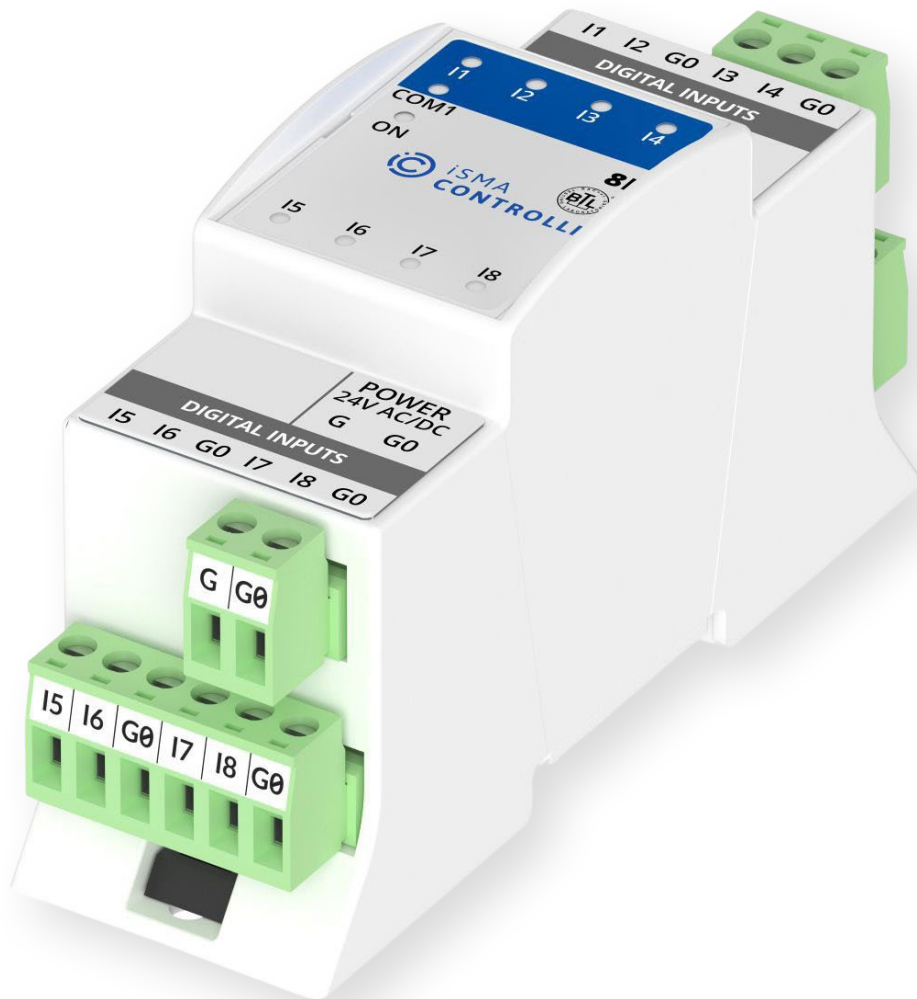


ISMA-B-8I

Installation Instructions



iSMA-B-8I



SPECIFICATION	
Power supply	DC: 24 V ± 20%, 0.4 W; AC: 24 V ± 20%, 0.6 VA
Digital inputs	8x dry contact input, high-speed pulse counter up to 100 Hz
Interface	RS485 half-duplex: Modbus RTU/ASCII, up to 128 devices on the bus
Address	Set by switch in range from 0 to 99
Baudrate	Set by switch in range from 4800 to 115200 bps
Ingress protection rating	IP40 - for indoor installation
Temperature	Operating: -10°C to +50°C (14°F to 122°F) Storage: -40°C to +85°C (-40°F to 185°F)
Relative humidity	5 to 95% RH (without condensation)
Connectors	Separable, max 2.5 mm² (18 - 12 AWG)
Dimension	37x110x62 mm (1.45x4.33x2.44 in)
Mounting	DIN rail mounting (DIN EN 50022 norm)
Housing material	Plastic, self-extinguishing PC/ABS

TOP PANEL

Status of digital inputs

RS485 Communication

Power Status

ON

1 2 3 4 5 6

7 8

S2 S1

Status of digital inputs

Switch for setting baudrate, protocol, and restoring the default settings

mini USB

Switches for setting the device address
Address = S2*10 + S1

BAUDRATE 1,2,3	PROTOCOL 4,5	BIT 6
000 USER	00 MODBUS RTU	ON = Factory default
010 4800	01 MODBUS ASCII	
011 9600	10 BACnet	
100 19200	11 BACnet SLAVE	
101 38400		
110 57600		
001 76800		
111 115200		

DIGITAL INPUTS

Dry contact

I1 I2 G0 I3 I4 G0

Shielded Twisted Cable

Output current ~1 mA

COMMUNICATION

RS485 Modbus or BACnet

GND

+

G0 - +

Shielded Twisted Cable

POWER SUPPLY

G G0

24 V AC/DC

Power supply from PELV/SELV source

⚠ WARNING ⚠	TERMINALS OF THE DEVICE
• Note, an incorrect wiring of this product can damage it and lead to other hazards. Make sure the product has been correctly wired before turning the power ON. • Before wiring, or removing/mounting the product, be sure to turn the power OFF. Failure to do so might cause electric shock. • Do not touch electrically charged parts such as the power terminals. Doing so might cause electric shock. • Do not disassemble the product. Doing so might cause electric shock or faulty operation. • Use the product within the operating ranges recommended in the specification (temperature, humidity, voltage, shock, mounting direction, atmosphere etc.). Failure to do so might cause fire or faulty operation. • Firmly tighten the wires to the terminal. Insufficient tightening of the wires to the terminal might cause fire.	The diagram shows the terminal block of the device, divided into TOP and BOTTOM sections. The TOP section has terminals for RS485+ (yellow), RS485- (yellow), and G0 (yellow). The BOTTOM section has terminals for G0, I4, I3, G0, I2, and I1. There are also terminals for POWER (G0 and G) and Digital Inputs (G0, I8, I7, G0, I6, I5). A note on the right states: 'All G0 terminals are connected together internally'.

EN 60730-1 POWER SUPPLY CONSIDERATIONS
• Electrical safety in the building automation and control systems is essentially based on the use of extra low voltage which is strictly separated from the mains voltage. This low voltage is either SELV or PELV according to EN 60730-1. • Protection against electric shock is ensured by the following measures: ◦ limitation of voltage (low voltage AC/DC 24V supply, either SELV or PELV) ◦ protective-separation of the SELV-system from all circuits other than SELV and PELV ◦ simple-separation of the SELV-system from other SELV-systems, from PELV-systems and earth • Field devices such as sensors, status contacts and actuators connected to the low-voltage inputs and outputs of I/O modules must comply with the requirements for SELV or PELV. The interfaces of field devices and other systems must also satisfy SELV or PELV requirements. • When the supply of SELV or PELV circuits is obtained from supply mains of higher voltages it shall be provided by safety transformer or a converter designed for continuous operation to supply SELV or PELV circuits.

FCC COMPLIANCE NOTE
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: • Reorient or relocate the receiving antenna. • Increase the separation between the equipment and receiver. • Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. • Consult the dealer or an experienced radio/TV technician for help.

WIRING
• Line power cables must be routed with spatial separation from signal and data transmission cables. • Analogue and digital signal cables should also be separated. • It is recommended to use shielded cables for analogue signals, cable shields should not be interrupted by intermediate terminals. • The shielding should be earthed directly after the cable enters the cabinet. • It is recommended to install interference suppressors when switching inductive loads (e.g. coils of contactors, relays, solenoid valves). RC snubbers or varistors are suitable for AC voltage and freewheeling diodes for DC voltage loads. The suppressing elements must be connected as close to the coil as possible