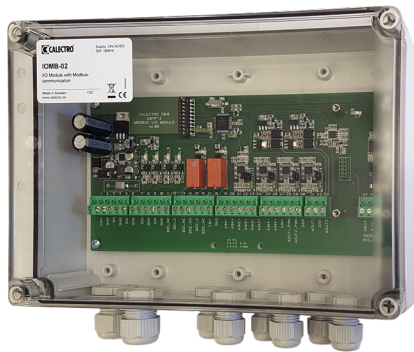


# IOMB-02, I/O-MODULE WITH MODBUS COMMUNICATION

4 digital and 4 analogue inputs and 2 digital and 2 analogue outputs / PWM.



## TECHNICAL DATA

<b>Supply voltage:</b>	24V AC/DC $\pm 10\%$
<b>Power consumption</b>	<100 mA, excl. PWM output
<b>Analogue inputs:</b>	4 x 0-10V DC, (input impedance 5.3 k $\Omega$ ) or 4 x Pt1000/Ni1000LG
<b>Analogue outputs:</b>	2 x 0-10V DC / PWM
- Max load/output 0-10V:	>5 k $\Omega$ imp.
- Max load PWM:	1A (24V)
<b>Digital inputs:</b>	4, via potential-free closing contact
<b>Digital outputs, relay:</b>	2 x 5A, 250V
<b>Indicators LED:</b>	6 amber: Digital I/O, 1 green: Operation/communication
<b>Communication:</b>	Modbus RTU (RS485)
- RS485 unit load:	96kOhm (1/8 UL)
- Parity selectable:	None, even, odd
- Stop bits:	1 or 2, selectable for no parity
- Speed (baud rate, kbps):	9.6 / 19.2 / 38.4 / 57.6
- Address:	1-64
- Terminating resistor:	120 $\Omega$ via jumper J7
<b>Ambient temperature:</b>	-20 till +50°C
<b>Cable inlets:</b>	6 x M16 and 2 x M20
<b>Weight grams:</b>	778 g
<b>Dimensions (WxHxD):</b>	250x175x75 mm
<b>Protection class:</b>	IP67

## ORDERING EXAMPLE

Item code	Description
IOMB-02	I/O Module with Modbus communication, 8 in & 4 out / PWM-output, transparent cover
IOMB-03	I/O Module with Modbus communication, 6 in & 6 out, transparent cover
OMB-04	I/O Module with Modbus communication, 10 in & 4 out, transparent cover
IOMB-TCP/IP	Modbus-IP gateway for IOMB

## CHARACTERISTICS

- Gathers sensor signals
- Communicates with Modbus RTU
- Universal
- Microprocessor technology
- Operation indicator
- Adjustable setting for communication interference
- Compatible with both Pt1000 and Ni1000LG
- PWM output

## FUNCTION

IOMB-02 is an IP67 enclosed I/O module that transmits measurement and control signals via Modbus to and from DUC regulators. The IOMB-02 has 4 digital and 4 analogue inputs and 2 digital and 2 analogue outputs.

The analogue outputs can be configured via Modbus for either 0-10V or PWM output for controlling, for example, a thermal actuator. **NB** 0-10V or PWM for respective analogue output.

The analogue inputs can be configured (via jumpers) to receive either 0-10V or temperature sensor (Pt1000/Ni1000LG). Choice of Pt1000 or Ni1000LG is set on the Modbus register 4x0026-29.

The digital in and outputs both have an amber LED. The green operation LED blinks during Modbus communication.

Addressing, choice of parity and baud rate is set with DIP switches. IOMB-02 should be de-energised at these settings

The housing has 6 M16 and 2 M20 cable fittings.

**Selectable default function:** IOMB-02 has a selectable function for dealing with interruptions in the Modbus communication. This means that the two digital and analogue outputs can be set individually should the Modbus communication be interrupted for a certain amount of time. The time for communication interruption before the default function kicks in can be set between 1 and 600 seconds. If set to 0 seconds then the function is deactivated (factory setting).

As an accessory, a Modbus-IP gateway is available for retrofit.

## APPLICATION

IOMB-02 is used to collect and distribute analogue and digital signals to and from regulators (DUC) using Modbus RTU communication.

## MOUNTING

IOMB-02 is wall-mounted indoors. For more information please refer to the installation instructions supplied with the product.

## MAINTENANCE

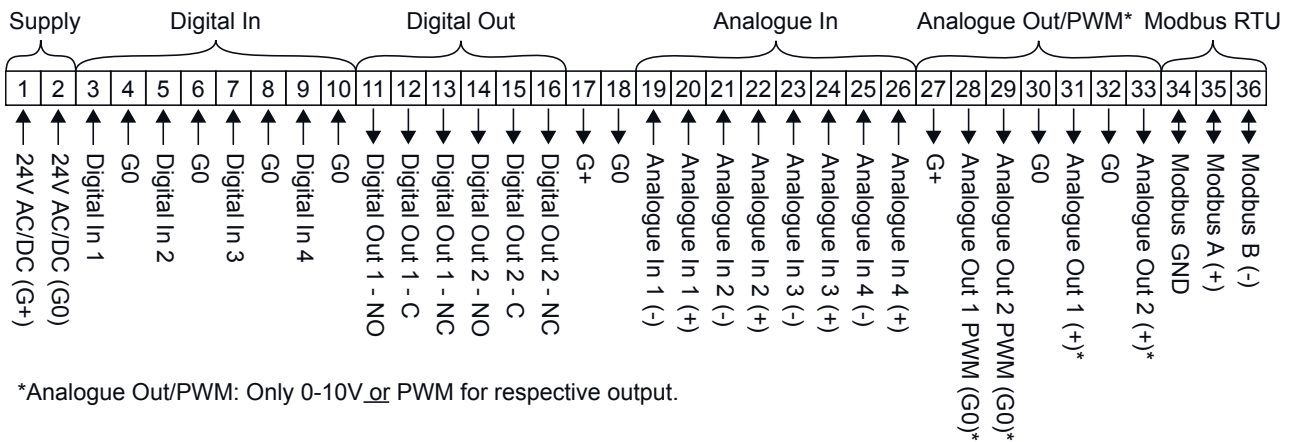
IOMB-02 is maintenance-free.

# IOMB-02, I/O-MODULE WITH MODBUS COMMUNICATION

4 digital and 4 analogue inputs and 2 digital and 2 analogue outputs / PWM.

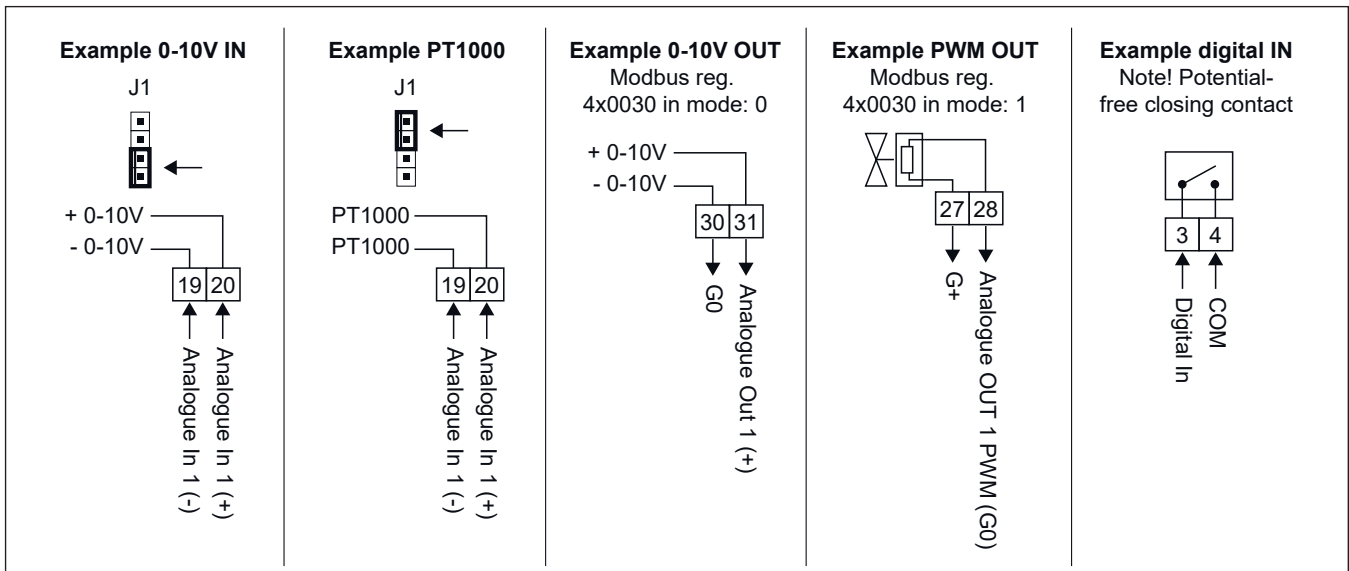


## WIRING DIAGRAM



\*Analogue Out/PWM: Only 0-10V or PWM for respective output.

## EXAMPLE SETTINGS



## LED INDICATION

LED Diod	Function	Status
L1	DIN1	Closed
L2	DIN2	Closed
L3	DIN3	Closed
L4	DIN4	Closed
L5	DUT1	Active
L6	DUT2	Active
L7	Operation	
L7 Blinks	Modbus communication	Active

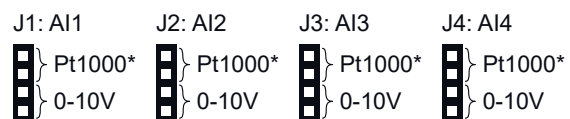
## MODBUS-COMMUNICATION

Reference	Description
0x	Read/Write Discrete Outputs or Coils
1x	Read Discrete Inputs
3x	Read Input Registers
4x	Read/Write Output or Holding registers

## MODBUS SETTINGS

For Modbus register and Modbus addresses, please refer to the installation instructions supplied with the product.

## ANALOGUE INPUTS, CONFIGURATION OF JUMPERS



\* Choice of Pt1000 or Ni1000LG is set in Modbus register 4x0026-28.