

N.B. In ventilation mode, the temperature cannot be adjusted: it does not appear on the display.

### Screen

Press **SCREEN** to turn on or off the light display that, on board IKARO HW indicates temperature, or fault codes.

### Turning off

Press **ON/OFF**: (OFF) appears and the machine is stopped.

## 16.5 MODBUS RTU

Connect the RS 485 cables to the three-position Modbus connector, which can be found by lifting the lid of the device.

**NB:** Size the termination resistor according to the type of network chosen.

The device can be connected as a slave to a Modbus network with a baud rate of 9600 bps, 8 data bits, no parity, 1 stop bit.

The default Modbus address is 15. When this address is entered, the devices allow only address changing and not querying or changing parameters.

In order to interact with Ikaro via Modbus network, it is essential to assign a different address number.

The following functions are available:

- 0x03: read holding register
- 0x04: read input register
- 0x10: write multiple registers

### Modbus read values (input register)

Address	Description	Type of data	Format	Default value
46.801	Measured ambient temperature	Int16 signed	The value is in tenths of a degree (24°C = 240), accuracy 0.5°C	-
46.803	Fan speed	Int16 signed	0= stop, 2= low speed, 3= medium speed, 4= high speed, 5= very high speed, 6= auto speed.	-

### Example of reading

In this example, the input registers of register 46.801 of a device at the default address are read.

0F	04	B6 D1	00 01	46 95
Device address	Reading function	Address of the first register	Number of registers to be read	CRC

The answer is as follows:

0F	04	02	01 36	51 77
Device address	Reading function	Bytes contained in the response (2)	Measured ambient temperature (310 = 31°C)	CRC

### Modbus read/write values (holding register)

Address	Description	Type of data	Format	Default value
28.301	Turning the unit on and off	Int16 signed	0 = the unit is turned off 1 = the unit is turned on	-
28.302	Operation mode of the unit	Int16 signed	1=cooling, 4= heating	-
28.303	Fan speed	Int16 signed	2 = minimum speed 3 = average speed 4 = high speed 6= automatic speed	-

Address	Description	Type of data	Format	Default value
28.310	Target temperature in the cooling mode	Int16 signed	Specifies the desired target temperature (in tenths of a degree 24° = 240)	-
28.311	Target temperature in the heating mode	Int16 signed	Specifies the desired target temperature (in tenths of a degree 24° = 240)	
28.321	Modbus address of the unit	Int16 signed	Acceptable values between 1 and 32	15

### Example of holding register reading

In this example, holding registers 28.301 to 28.303 of a device at the default address are read.

0F	03	6E 8D	00 03	88 26
Device address	Reading function	Address of the first register	Number of registers to be read	CRC

The answer is as follows:

0F	03	06	00 01	00 01	00 06	81 17
Device address	Reading function	Bytes contained in the response (6)	Device status (1 = on)	Operation modes (1 = cool.)	Ventilation speed (6 = auto)	CRC

### Example of holding register writing

In this example, holding registers 28.301 to 28.303 of a device are written to the default address.

0F	10	6E 8D	00 03	06	00 01	00 01	00 02	41 34
Device address	Writing function	Address of the first register	Number of records to be written	Data byte counting	Device status (1 = on)	Operation mode (1 = cooling)	Ventilation speed (2 = minimum)	CRC

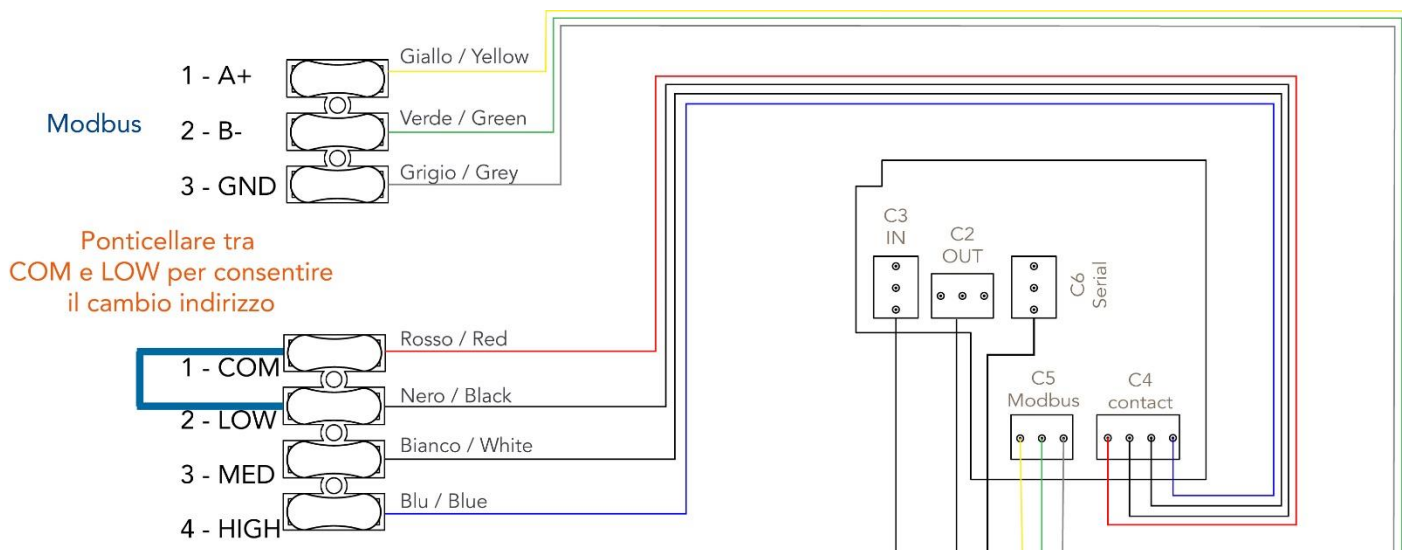
The answer is:

0F	10	6E 8D	00 03	0D 05
Device address	Writing function	Address of the first register	Number of written records	CRC

- NB:** before turning on Ikaro, be sure to assign a temperature setpoint target away from the room temperature that will ensure that Ikaro is turned on (otherwise Ikaro will turn off).
- For proper operation of Ikaro keep addresses 28.301 to 28.303 inclusive and the target temperature register (310 or 311 depending on Heating or Cooling mode) written.
- Dehumidification, Ventilation and automatic mode functions cannot be activated via Modbus.
- The swing is always adjustable by remote control even when controlled by Modbus or dry contact thermostat.
- Use scan rates higher than 300 ms.
- Once controlled by Modbus, if the device detects no Modbus traffic affecting it for more than 3 minutes, Ikaro will shut down and accept commands from the remote control. As soon as Modbus traffic restarts, the master takes precedence over the remote control

### Changing the Modbus address of the device

The Modbus address of Ikaro is located at register 28321 and can be changed with a 0x10 write multiple registers query. However, to avoid accidental overwriting of the address, it can only be changed if a jumper is first applied between the LOW contact and the common of the thermostat terminal block.

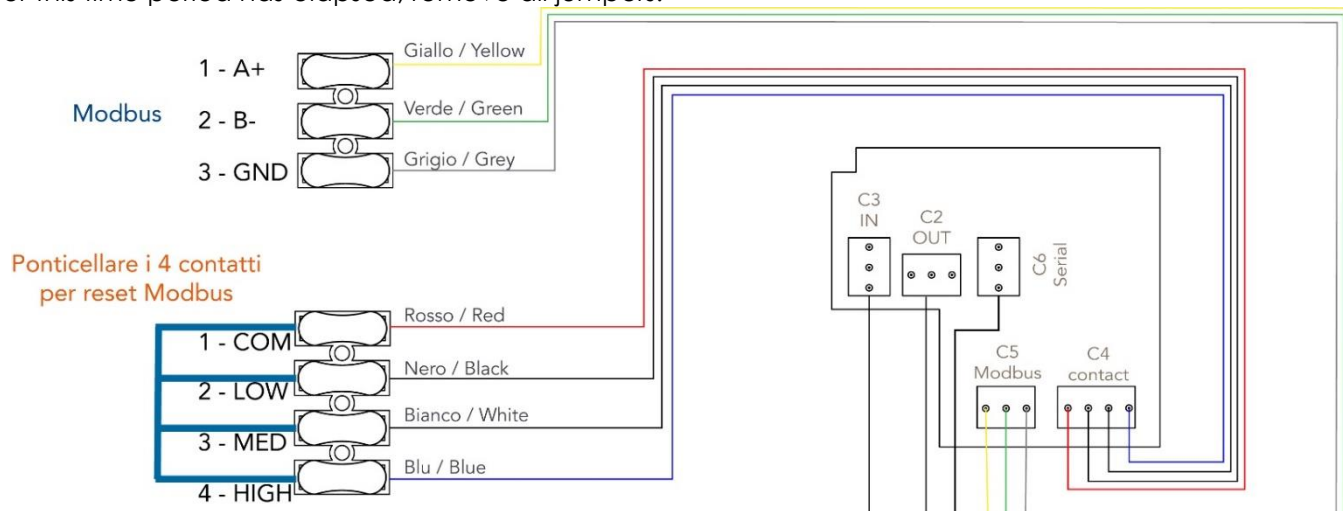


When the address change has taken place, **the jumper should be removed**.

### Modbus address reset

To reset the Modbus address of the device to the default value, it is necessary to close all HIGH- MED- LOW- COM contacts of the thermostat terminal block at the same time and leave them closed for at least 10 seconds.

After this time period has elapsed, remove all jumpers.



## 16.6 WIFI CONNECTION

### (COMPATIBLE WITH 2.4 GHZ NETWORKS ONLY)

Connection of the device to the WiFi network is possible following installation of the "Wi-Fi+" accessory Code TQCT07, to be purchased separately.

Before using the Wi-Fi connection for the first time you need to configure the WI-FI signal and settings via your smartphone or Tablet, this will enable communication between the connected devices.

It is recommended that Bluetooth also be enabled for quick device recognition.