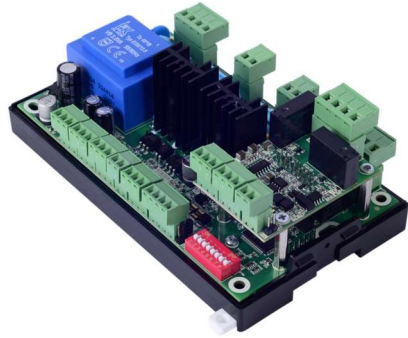


Features

- 220V AC power supply
- 7 pcs passive inputs that can be used as dry contact or NTC10K sensor
- 2 pcs 0-10V Analog Inputs
- 6 pcs Digital Outputs/ 5 A Relay (2 pcs optional)
- 4 pcs 0-10V Analog Outputs (Optional)
- 2 pcs Triac Outputs
- Configuration DIP Switch
- Modbus RTU, BACnet MS/TP communication (Optional)
- Room panel connection
- Real Time Weekly Schedule (Optional)



Applications

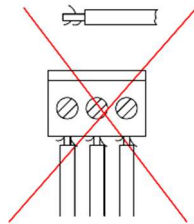
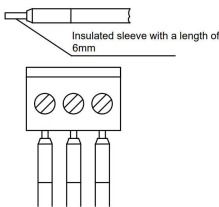
The HR130 series is used in building automation and HVAC applications. The device has been designed and manufactured to work seamlessly with all devices thanks to its Modbus communication module (optional).

Notes on Usage

Please read this datasheet carefully. HR130 is designed and manufactured with the latest technological developments and safety rules. To avoid injury and property damage, safety warnings must be observed.

Security Advice – Caution

Installation, maintenance, and repair of the device should be made by authorized personnel. The power supply of the device is 220V AC and the device has a 1A internal fuse. Relay outputs don't have internal protection due to the variety of components that can be used. It is recommended to use an external C-type fuse that is suitable for the required current level. Each pin of the supply and relay terminals can carry 20 A current maximum. Before making relay output connections, attention should be paid to recommended current levels.



The ends of the connection wires must be protected against delamination using insulated sleeves as shown in the figure.



Ordering Information

Product Code	Description	Power	Communication
HR130.11	6 pcs Digital Outputs/Relay (2 pcs Optional) 4 pcs Analog Outputs (Optional)	4VA max	Modbus RTU
HR130.12	7 pcs Passive Inputs 2 pcs Analog (Active) Inputs 2 pcs Triac Outputs		BACnet MS/TP

Technical Specifications

Power Supply	220VAC +%10-%15, 50/60Hz
Power Consumption	4VA max
Operating Temperature	0°C... +50°C
Storage Temperature	-20°C ... +70°C
Relative Humidity	%5...95 RH, Non-Condensing
Cable Connected	Socket Terminal Block, max 1 x 2,5 mm2
Measuring Range	NTC10K -50°C ...+150°C Analog Input Voltage 0-10V
Measuring Resolution	NTC: 0,1°C Analog Input: 0,1V
Inputs	7 pcs Passive Input (NTC10K Temp sensor or Voltage Free Dry Contact) 2 pcs 0-10V Analog Inputs
Outputs	6 pcs Digital Outputs* (2 pcs Optional) 4 pcs 0-10V Analog Outputs (Optional) 2 pcs Triac Outputs**
Communication	1 pcs RS-485, Modbus RTU, BACnet MS/TP(Optional)
Box Type	Din Rail Base Case (Optional Junction Box)
Plastic Enclosure Material	ABS (UL 94 V-0)
Dimensions	157 x 103 x 43 mm (W x H x D)
Dimensions with EQUB	157 x 103 x 56 mm (W x H x D)

*There are relays with 5A current capability on the product. The recommended maximum current level for optimum relay life is 4A for resistive loads and 2A for inductive loads.

**Recommended maximum current is 8A. Considering the inrush current, a 10 A fuse is installed.

Mounting Location

Due to its structure, the device is suitable for wall mounting or rail mounting within the panel. It is recommended to leave space for cable connections to the terminals to be made while mounting on the rail.

CAUTION: Power off the supply at C type circuit breaker or glass fuse before installation to avoid fire, shock or death

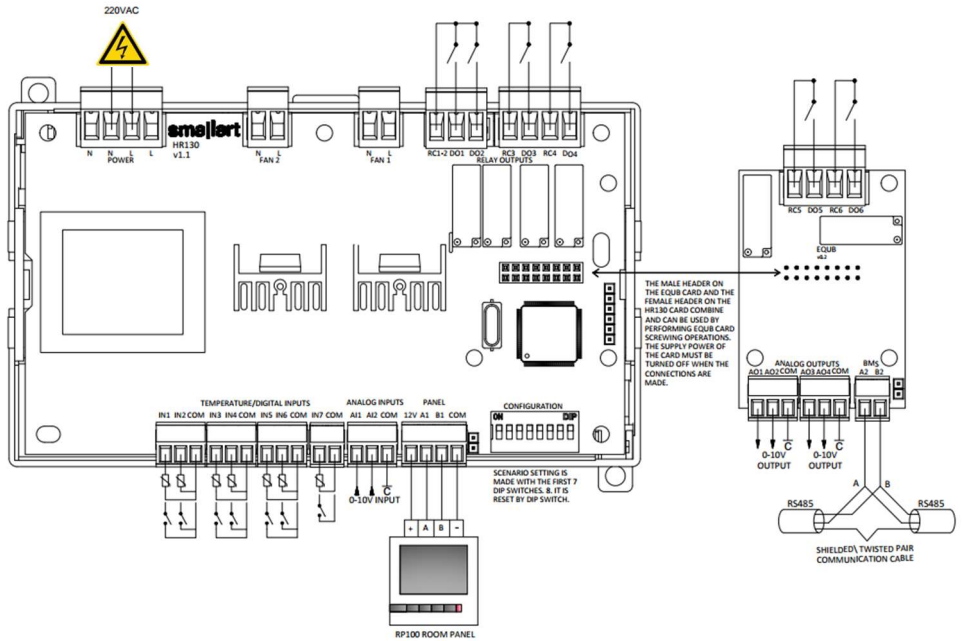


Mounting Instructions

Please follow the below instructions during mounting.

1. **Step:** Make sure the device is powered OFF.
2. **Step:** Connect the wires and equipment according to the connection diagrams below.
3. **Step:** Scenario selection and factory reset operations are done via the CONFIGURATION DIP Switches.
4. **Step:** Make sure that all connections are made correctly.
5. **Step:** Power the device.

Connection Diagram



HR130 and EQUB Connection Diagram

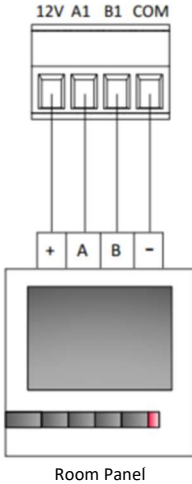
NOTE: The EQUB module is optional. It can be used by connecting to the HR130 board.

Device Power Connection



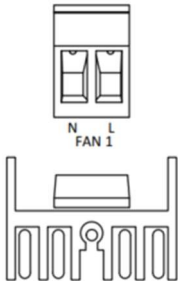
Line output of 220VAC power supply is connected to L(Line) terminal and neutral output of the 220VAC power supply is connected to N(Neutral) terminal. The maximum current that can pass through the power input is 20A.

Panel Communication



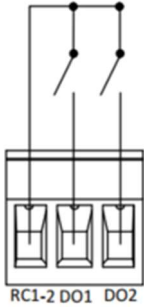
Connections are made as shown in the left figure to ensure communication between the panel and the card.

Triac Connection



Fan connections L(line) and N (Neutral) cables are connected to the relevant terminals on the board as shown in the left figure. The maximum fan current that can be used at triac outputs is 8 A.

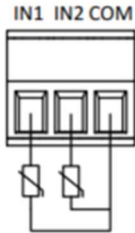
Digital Outputs



The voltage to be switched with DOx relays must be connected to the RC terminal. The voltage connected to the RC terminals can be received from the DOx terminals when the DOx relays are closed. This applies to all digital output terminals.

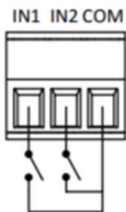
NOTE: DO5 and DO6 digital outputs are optional. It can be used by inserting the EQUB module.

Passive Inputs (NTC10K)



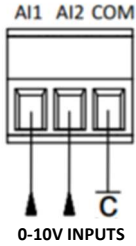
Connect the two cables of the NTC10K sensor as shown in the left picture. You can also make this connection for other passive input terminals.

Passive Input (Dry Contact)



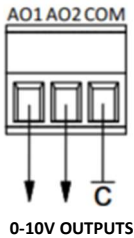
Connect the two cables of the Dry contact as shown in the left picture. You can also make this connection for other passive input terminals.

Analog Inputs



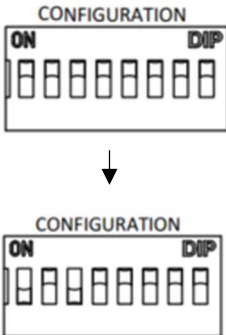
Connect the 0-10V output cables coming from the sensors, field devices, etc. to the AIx input. Connect the GND or COM cable of the relevant device to the “COM” terminal of the HR130 module as shown in the left picture.

Analog Outputs



Connect the 0-10V output of the EQUB (optional) module to the 0-10V input of the related device. Connect the GND or COM cable of the relevant device to the “COM” terminal as shown in the left picture.

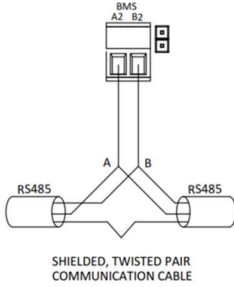
Switch Settings



The first 7 keys are used for scenario selection. Scenario selection is made according to the binary number system. Switch 8 must be turned **ON** and **OFF** again to restore factory settings. Then power off the card and turn it back on.

→ **For example:** When the **1st** and **3rd** switches are turned **ON**, the device works in the **5th** scenario.

Communication Connection and End of Line (EOL)

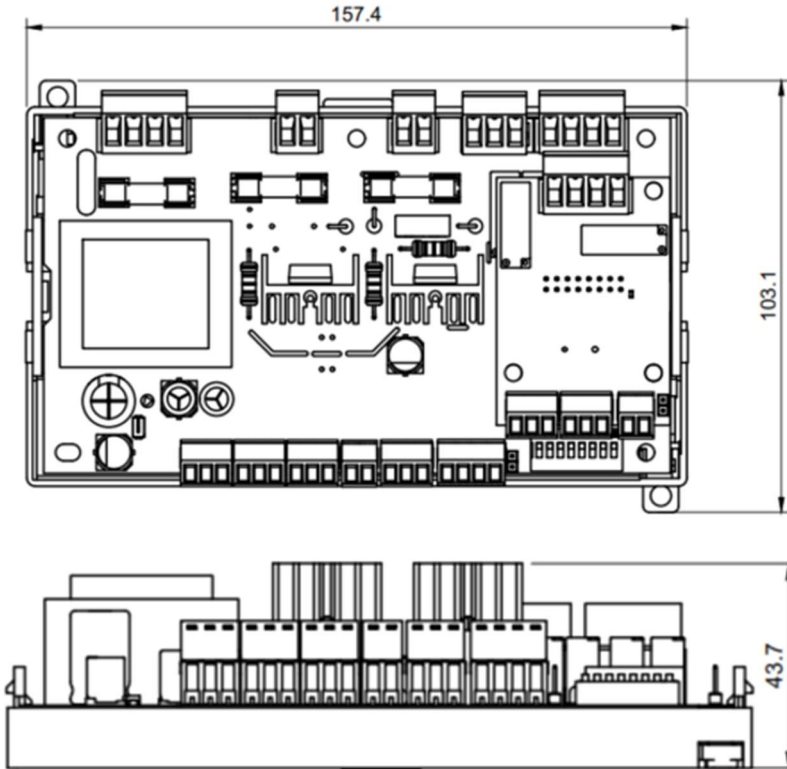


Communication connection on the EQUB module can be made as shown in the left figure. Make a connection between the "A" or "+" terminal of the device communication port and the A2 terminal of the control card and between the "B" or "-" terminal and the B2 terminal. To activate the end-of-line resistor, activate the jumper next to the word A2 B2 on the PCB.

Default baud rate: 9600
Default parity value: None
Default address value: 1

Note: Baud rate and address value can be changed via the service menu.

Dimensions (mm)



Dimensions with EQUB

