RTD Temperature Controller & Transmitter

MIH8

The **MIH8** is an 8-channel RTD temperature transmitter and controller for PT100/PT1000 sensors. It monitors up to eight independent temperature inputs, communicates over RS485 (Modbus RTU), and provides four relay outputs for local monitoring and protection.

Key Features

- 8 RTD input channels
- PT100 / PT1000 compatible
- 2-, 3-, and 4-wire RTD support
- RS485 (Modbus RTU)
- 4 relay outputs
- IP20 enclosure

Typical Applications

- Motor and transformer protection
- Industrial control panels
- Process automation
- HVAC systems
- Boilers and heaters
- Cooling systems
- Temperature alarm systems

Package Contents: 1 x HAS, 1 × Quick Start Guide

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Safety Instruction

Please read this manual: Read these instructions before installing or operating the SAFIR A201. Failure to follow these instructions may result in injury, equipment damage, or improper operation.

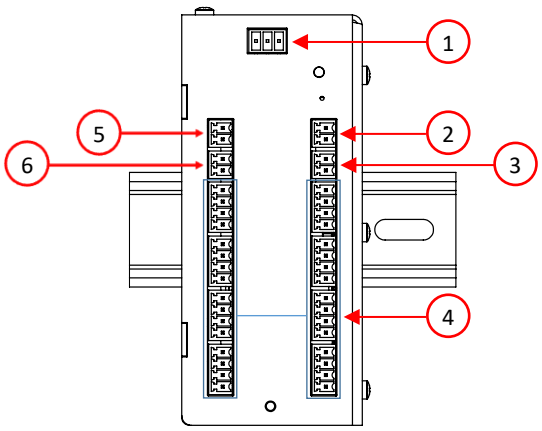
Qualified Personnel: Installation, wiring, commissioning, and maintenance must be performed only by qualified personnel familiar with industrial control equipment and applicable electrical safety regulations.

| DANGER | HAZARD OF ELECTRIC SHOCK	• Disconnect and completely isolate all primary power sources before installing, removing, or servicing the device. Failure to follow these instructions **WILL result in** death or serious injury.
| WARNING |	• Connect the device strictly to a stable auxiliary DC power source between 7V and 35V DC. Applying alternating current (AC) or exceeding 35VDC creates an immediate risk of fire and hardware destruction. • The four built-in hardware relays (**Trip, Fan, Fault, Alarm**) are intended for low-current signal control circuits. Do not connect high-current loads (such as a cooling fan motor or industrial heater) directly to these terminal pins; always route the control loop through an external interposing relay or magnetic contactor. Failure to follow these instructions **COULD result in** death, serious injury, or equipment damage.
| CAUTION | HOT SURFACE	• Ensure all wires are firmly tightened into the 3.51 mm pitch screw terminals. Loose connections create parasitic resistance, which will degrade measurement accuracy and lead to false thermal alarms. • Ensure the ambient air temperature immediately surrounding the module inside the cabinet does not exceed the ?? **-20°C to +70°C??** operating range. Provide adequate panel ventilation to avoid localized heat build-up. Failure to follow these instructions **COULD result in** minor or moderate injury.
|NOTICE | RISK OF EQUIPMENT DAMAGE	• Always separate low-voltage RTD sensor wires and RS485 communication lines from high-voltage motor or power cables. Run data lines in dedicated, grounded steel or plastic wire ducts to eliminate electromagnetic interference. • Use high-quality shielded, twisted-pair cabling for all long sensor runs and Modbus networks. Tie the shield to earth at a single point to prevent ground loops. Failure to follow these instructions **MAY result in** equipment damage or reduced product life.

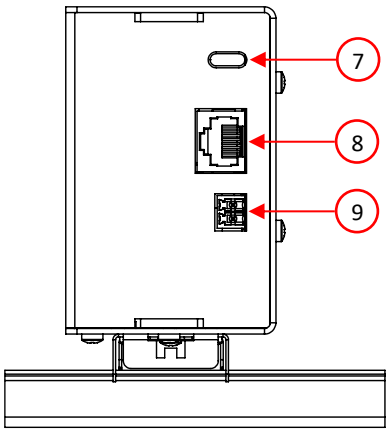
Product Specification

Parameter	Specification
ELECTRICAL & INPUTS	
Supply Voltage	7 to 35 VDC
Input Channels	8 Channels
Supported Sensors	PT100 / PT1000
Wiring Configuration	2-wire / 3-wire / 4-wire
Measurement Range	–200°C…+850°C
Measurement Accuracy	To be specified
Relay Outputs	4 x Dedicated Relays
COMMUNICATION & INTERFACE	
User Interface	LCD TFT Touchscreen
Communication Interface	RS485 (MODBUS RTU)
Monitoring	Independent monitoring of 8 channels
MECHANICAL	
Connection	Screw Terminals, 3.51 mm pitch
Ingress Protection	IP20
ENVIRONMENT	
Operating Temperature	-20°C…+70°C
Storage Temperature	-40°C…+85°C
Warranty	10-Year Limited

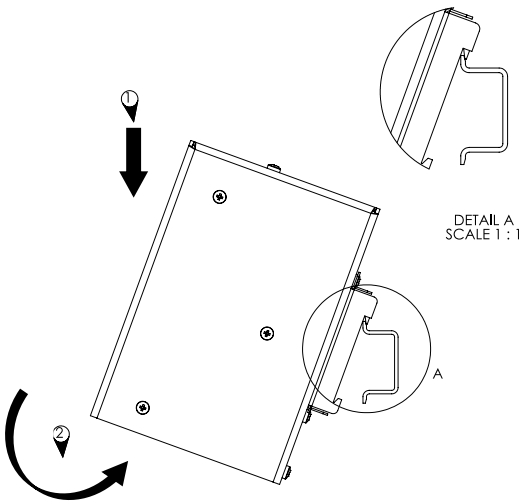
Product Identification



1. RS-485 Modbus RTU
2. Fan Output
3. Alarm Output
4. 8 RTD Channel
5. Trip Output
6. Fault Output
7. USB type C
8. HMI Port
9. Power Terminal

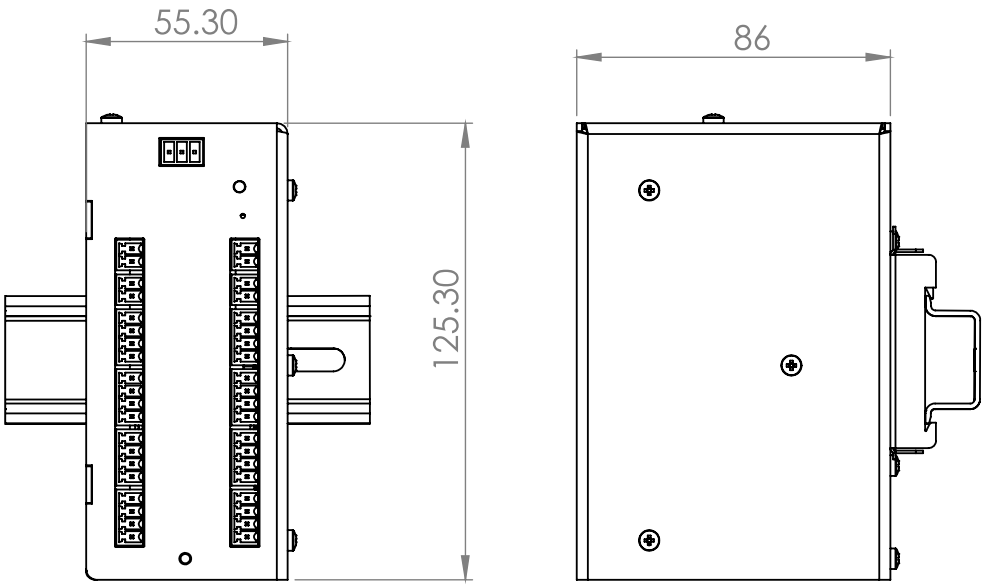


Installation



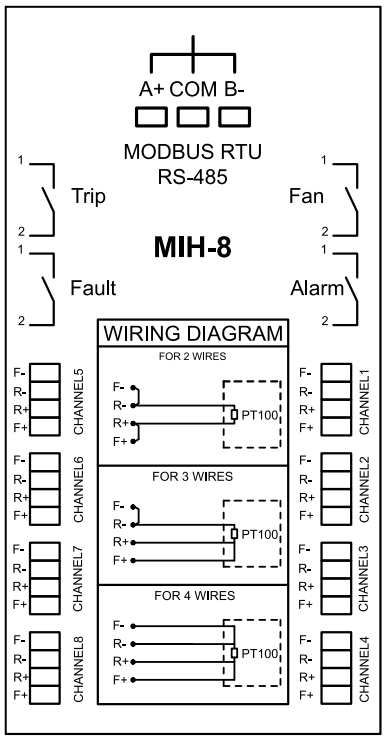
1. Hook the upper DIN-rail slot over the top edge of the rail.
2. Pivot and press the bottom of the housing firmly toward the rail until the lower spring-loaded clip snaps into place.

Dimension



Wiring Instruction

Connect all field wiring according to the diagrams and terminal assignments provided below. This section covers **RTD sensor connections, RS485 communication, and relay output terminals**.



RTD Sensor Connections

RTD Type	Sensor Connection	Jumper(s)
2-Wire	R-, R+	F−↔R− and F+↔R+
3-wire	F-, R-, R+	R+↔F+
4-Wire	F−, R−, R+, F+	None

RS485 Communication Terminal

Terminal	Function
A+	Modbus RS485 DATA+ (D+/ A)
COM	Signal Common / Shield
B-	Modbus RS485 Data- (D- / B)

Relay Outputs

Relay	Function
Tip	Critical temperature trip output
Fault	Sensor or device fault output
Fan	Cooling fan control output
Alarm	High-temperature warning output

