

SCT Series

Air Curtain Thermostat

20260623R1

Technical Catalogue



The **Havkon SCT.2350.AC Series** is a modern **air curtain thermostat** designed to provide efficient temperature and airflow control in commercial and industrial entrance applications. Featuring a **3.2-inch LCD display** and **capacitive touch buttons**, it offers an intuitive user interface with reliable daily operation.

Designed specifically for **air curtain systems**, the SCT.2350.AC controls up to **three fan speeds** and **two-stage electric heaters**, ensuring optimum comfort while reducing energy consumption. **Automatic and manual operating modes** allow the controller to adapt to different application requirements.

Advanced control functions, configurable service parameters, **door contact support**, and optional **Modbus RTU communication** make the SCT.2350.AC suitable for both standalone installations and **Building Management Systems (BMS)**.

Combining **reliable performance**, **flexible control functionality**, and an elegant modern design, the SCT.2350.AC Series provides a professional solution for today's **air curtain control applications**.

Features

- 3-Speed Fan Control (Low / Medium / High)
- 2-Stage Electric Heater Control
- Automatic and Manual Heater Level Selection
- Door Contact Input
- External NTC Temperature Sensor Input
- Optional Modbus RTU Communication
- 3.2" LCD Display with Capacitive Touch Buttons
- Configurable Service Parameters & Key Lock Function
- Optional RTC & Weekly Scheduling

Order Codes

SCT.2350.AC.W	Weekly Programmable Air Curtain Thermostat, White Housing
SCT.2350.AC.B	Weekly Programmable Air Curtain Thermostat, Black Housing
SCT.2350.AC.T.M.W	Weekly Programmable Air Curtain Thermostat, Modbus RTU, White Housing
SCT.2350.AC.T.M.B	Weekly Programmable Air Curtain Thermostat, Modbus RTU, Black Housing

Warnings



Before installing and operating the device, carefully read the user manual and the instructions below.

- The user is responsible for any damage, loss, or injury caused by improper use or failure to follow these instructions.
- Do not modify, disassemble, or attempt to repair the device.
- Ensure correct supply voltage before powering the device.
- Disconnect power before installation and wiring.

Failure to comply with these instructions may result in device malfunction and will void the warranty.

SCT Series

Air Curtain Thermostat

20260623R1

Technical Catalogue

Product Overview

The **SCT.2350.AC Series** is designed specifically for **air curtain applications**, providing reliable control of fan speed and electric heating to maintain a comfortable indoor environment while reducing unnecessary energy consumption.

With **three fan relay outputs**, **two-stage electric heater control**, configurable operating parameters, and optional **Modbus RTU communication**, the controller offers a flexible solution for commercial entrances, retail stores, hotels, office buildings, and other public facilities where air curtain systems are installed.



Key Features & Functions

Application Areas

- Air Curtain Systems
- Retail Stores & Shopping Malls
- Hotels & Hospitality Facilities
- Office Buildings
- Commercial Entrances

Control Architecture

- 3-Speed Fan Relay Outputs
- 2-Stage Electric Heater Control
- Door Contact Integration
- Manual 3-Speed Fan Selection
- Optional Modbus RTU Communication

User Experience

- 3.2" LCD Display
- Capacitive Touch Button Interface
- Key Lock Function
- Adjustable Temperature Setpoint
- Configurable Service Parameters

Control Functions

- Automatic Heating Control
- External NTC 10K Sensor Support
- Weekly Scheduler (Optional)
- Real-Time Clock (Optional)
- Temperature Calibration

SCT Series

Air Curtain Thermostat

20260623R1

Technical Catalogue

Technical Specifications

Electrical Data	Power Supply	230 VAC $\pm$ 10%
	Frequency	50/60 Hz
	Power Consumption	Max. 3 VA
	Connection	Terminal block, 1.5 mm ²
	Real Time Clock (RTC) Backup Battery	Optional: CR1220 Lithium Cell, 3V
	Communication	Modbus RTU (RS-485) (Modbus Models Only)
Environmental Conditions	Operating Temperature	0 ... +50°C
	Storage Temperature	-20 ... +70°C (without icing and condensation)
	Relative Humidity	Max. 95% RH (Non-condensing)
	Operating Altitude	Max. 2000 m
User Functions	Display	3.2" LCD Display
	User Interface	Capacitive Touch Buttons
	Operating Modes	Heating / Fan Operation
	Fan Control	3-Speed Fan Control (Low / Medium / High)
	Electric Heater Control	2-Stage Electric Heater Control
	Application	Air Curtain Systems
	External Sensor Input	NTC 10K / Door Contact
	Door Contact Input	Available
	Key Lock Function	Available
	Service Parameters	Configurable
Protection & Standards	Temperature Limits	Adjustable
	Protection Degree	IP 20
	Standard	EN 60529
	Housing	Polycarbon Plastic Enclosure
	Color Options	White / Black

Enclosure Specifications

Mounting	Wall mounting
Dimensions	W86xH86xD40mm (Width x Height x Depth)
Visible Screen Area	W66xH50mm
Weight	188 g

Connections

The device must be installed and operated in accordance with applicable electrical regulations.

- Ensure that the power supply is disconnected before installation and wiring.
- Use appropriate cable cross-sections according to load and installation conditions.
- Do not route signal cables together with power cables.
- Protect the device from moisture, dust, and vibration.

Recommended: Use an external fuse rated max. 6A for supply protection.

SCT Series

Air Curtain Thermostat

20260623R1

Technical Catalogue

User Interface & Operation

The main screen provides real-time information about room temperature, fan speed, heater stage, operating mode, and system status. All functions can be accessed using the capacitive touch buttons on the front panel.

The display shows:

- Room Temperature
- Temperature Setpoint
- Fan Speed Level
- Heater Stage (H0 / H1 / H2)
- Operating Mode
- Weekly Timer Status (Optional)
- Clock & Date (RTC Models)

Button	Function
□ Power	Device On / Off
M Mode / OK	Mode Selection / Confirm
Fan	Fan Speed Selection
▲	Increase Value / Navigate Up
▼	Decrease Value / Navigate Down

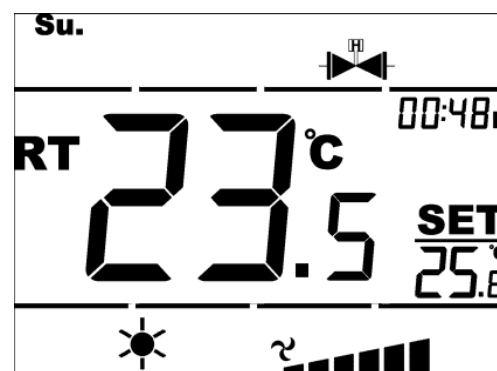


Operating Modes

The device supports multiple operating modes for flexible temperature and comfort control. Users can easily switch between operating modes using the **M (MODE/OK)** button, while the active mode is continuously displayed on the main screen.

- **Heating Mode** – Controls room temperature using the selected electric heater stage.
- **Fan Mode** – Runs the air curtain fan without electric heater operation.
- **Manual Heater Selection** – Allows selection of H0, H1 or H2 heater stages.
- **Weekly Schedule (Optional)** – Automatically starts and stops the air curtain according to programmed time periods.

The active operating mode and system status information are continuously displayed on the main screen for convenient daily monitoring.



SCT Series

Air Curtain Thermostat

20260623R1

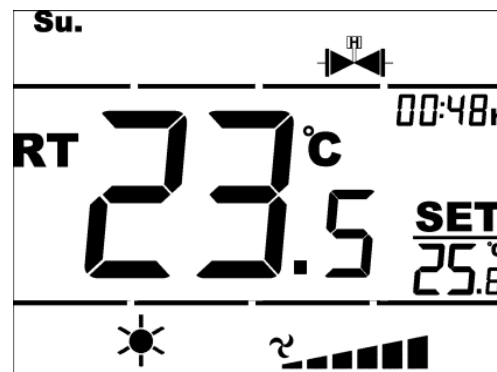
Technical Catalogue

Set Temperature Adjustment

The desired room temperature can be adjusted directly using the ▲ and ▼ buttons. The selected setpoint value is displayed on the main screen and can be modified at any time during heating operation.

- **Increase Setpoint** – Press the ▲ button to increase the desired temperature
- **Decrease Setpoint** – Press the ▼ button to decrease the desired temperature.
- **Setpoint Display** – The configured temperature value is continuously shown on the main screen

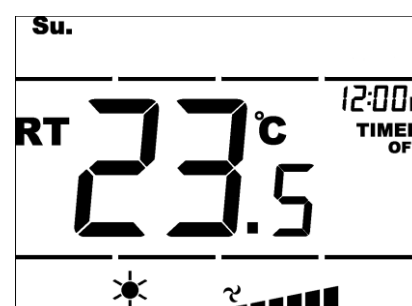
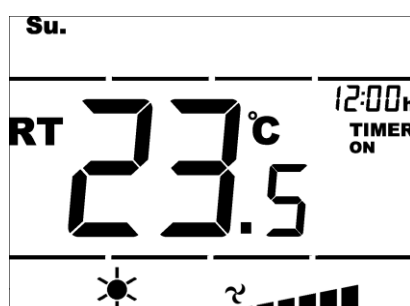
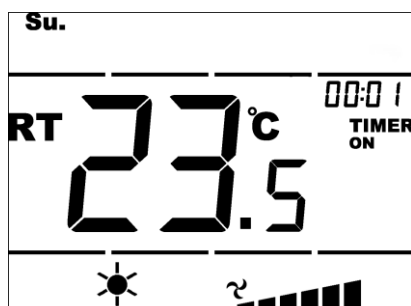
Temperature adjustment is available during heating operation.



Weekly Program

The **Havkon SCT.2350.AC.T.M Series** includes a weekly scheduling function for automatic air curtain operation during selected time periods.

Users can define individual start and stop times for each day of the week, allowing the controller to operate according to the programmed schedule.



The weekly program menu allows:

- Daily start and stop time adjustment
- Individual weekday programming
- Automatic scheduled operation
- Weekly timer activation and deactivation

When the weekly schedule is active, the clock icon appears on the main display screen.

Notes

- If the start time is later than the stop time, weekly scheduling is ignored and the device remains off for the selected day.
- If the start time and stop time are identical, weekly scheduling is disabled for the selected day.
- When a valid weekly schedule is active, the clock icon is displayed on the main screen during the programmed operating period.

SCT Series

Air Curtain Thermostat

20260623R1

Technical Catalogue

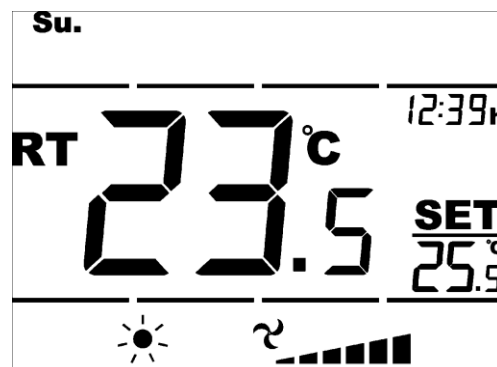
Date & Time Settings

The device includes an integrated date and time setting function for weekly scheduling and time-based scheduled air curtain operation.

Users can configure:

- Date information
- Time information
- Day of the week

All settings are adjusted using the front buttons through the setup menu. Correct date and time configuration is required for accurate weekly program operation.



Display Backlight Settings

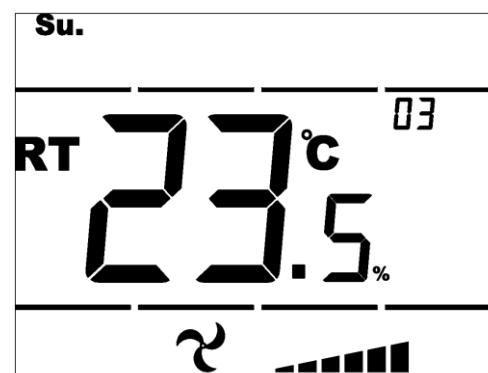
The display backlight timeout can be adjusted to suit different installation environments and user preferences. The setting is available through **Parameter 2** in the user menu and allows the backlight duration to be configured according to the desired operating conditions.

Users can configure:

- Display backlight timeout
- Backlight duration setting (1–10)
- Automatic return to normal display mode

The backlight timeout value can be adjusted between 1 and 10, where 1 represents the minimum duration and 10 represents the maximum duration.

The selected backlight setting helps optimize display visibility and user comfort during daily operation.

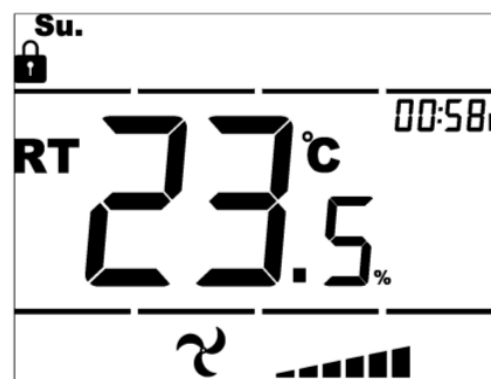


Key Lock Function

The key lock function prevents unauthorized or accidental changes to thermostat settings during normal operation. When enabled, user inputs are temporarily disabled while the device continues to operate normally.

To activate or deactivate the key lock function, press and hold the **Fan button** for **approximately 5 seconds**.

The lock status is indicated by the key lock icon displayed on the main screen.



SCT Series

Air Curtain Thermostat

20260623R1

Technical Catalogue

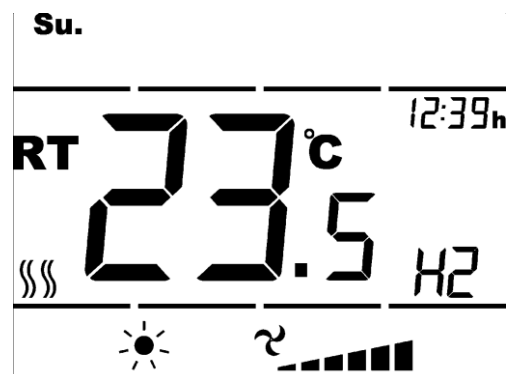
Heater Stage Selection (H0-H1-H2)

The electric heater output can be adjusted by selecting one of the available heater stages. Press the **M (MODE/OK)** button until the heater stage indicator (**H0**, **H1**, or **H2**) appears on the display, then use the **▲** and **▼** buttons to select the desired operating level.

Available heater stages:

- **H0** = Heater Off
- **H1** = Stage 1 Heater
- **H2** = Stage 2 Heater

The selected heater stage remains active until changed by the user and is continuously displayed on the main screen during heating operation.



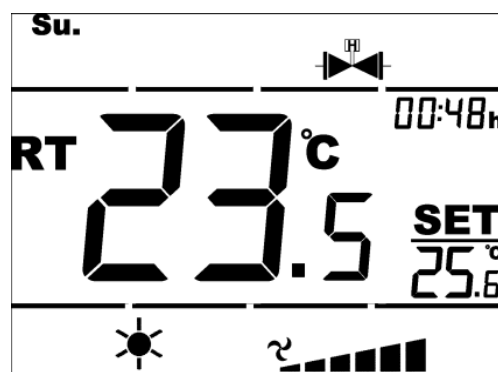
Device Mode Selection

The **Havkon SCT.2350.AC** Series allows users to switch between operating modes using the **M (MODE/OK)** button. The selected mode is shown on the main display for quick and convenient operation.

Available operating modes:

- **Heating Mode** – Controls room temperature using automatic fan operation together with the selected electric heater stage.
- **Fan Mode** – Operates the air curtain fan without activating the electric heater, providing air circulation only.

The operating mode can be changed at any time during normal operation and is stored automatically for the next startup.



SCT Series

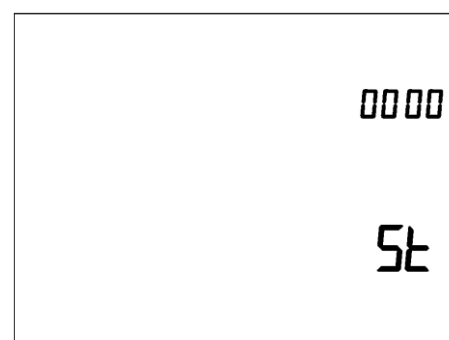
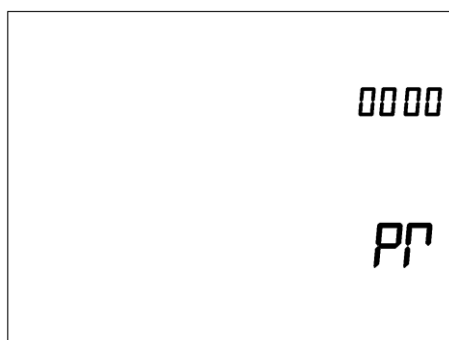
Air Curtain Thermostat

20260623R1

Technical Catalogue

Service Settings Menu

The service settings menu provides access to advanced configuration parameters used for system commissioning, operation, and communication settings. Authorized personnel can modify device parameters to match specific application requirements.



To access the service menu:

- Press and hold the ▲ and ▼ buttons simultaneously for approximately **2 seconds** while the device is in the standby mode
- Enter the service password and confirm using the **M (MODE/OK)** button
- Select the desired parameter and adjust its value as required
- Confirm the new setting using the **M (MODE/OK)** button

The service menu allows configuration of temperature control, fan control, system settings, communication parameters, and advanced control functions.

Notes

- **Default service password: 20**
- Parameter changes should only be performed by qualified technical personnel.



Warning

Incorrect parameter settings may affect thermostat operation and system performance.
Service menu access is intended for commissioning and maintenance purposes only.

SCT Series

Air Curtain Thermostat

20260623R1

Technical Catalogue

MODBUS-RTU Configuration

The **SCT.2350.AC.T.M** model supports **Modbus RTU communication** for integration with Building Management Systems (BMS) and HVAC automation networks.

Communication parameters can be configured through the service menu to match system requirements.

Users can configure:

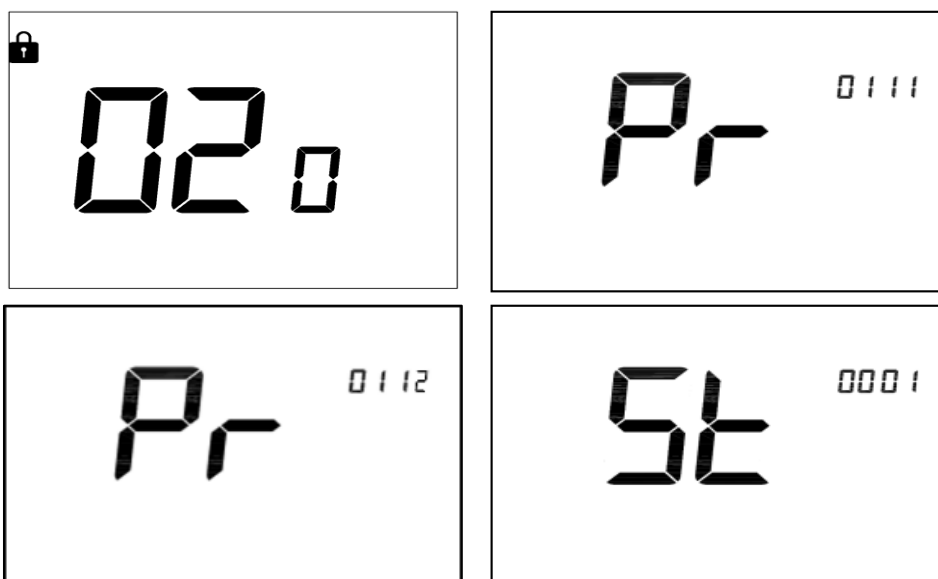
- Modbus Device Address
- Communication Baud Rate
- Communication Parameters

Supported baud rate options:

- 1200 bps
- 2400 bps
- 4800 bps
- 9600 bps
- 19200 bps

Communication Specifications

- Protocol: Modbus RTU
- Interface: RS-485
- Slave Address Range: 1–247
- Register Type: Holding Registers
- Register Data Type: Signed 16-bit Integer (INT16)



Temperature Registers:

Temperature values are represented with one decimal place.

Example:

280 = 28.0 °C

215 = 21.5 °C

-50 = -5.0 °C

Time Registers:

Time values are entered in HHMM format.

Example:

1210 = 12:10

0830 = 08:30

Notes

- Default service password: **20**
- Default Modbus Address: **Parameter 16**
- Default Baud Rate: **Parameter 17**
- Communication format is fixed as **8 Data Bits, No Parity, 1 Stop Bit**
- All Modbus register values are stored as signed 16-bit integers.



Warning

Parameter changes in the service menu should only be performed by authorized technical personnel. Incorrect communication settings may interrupt Modbus communication or device operation.

SCT Series

Air Curtain Thermostat

20260623R1

Technical Catalogue

Service Settings Menu

No	Parameter	Description	Factory Setting	Equivalent Value
0	Temperature Sensor Calibration	Adjusts the measured room temperature value to compensate for sensor deviations.	0	0.0°C
1	System Type Selection	Selects the application type. 0 → Fan Coil (2-Pipe) 1 → Fan Coil (4-Pipe) 2 → Air Curtain (2-Stage Electric Heater)	2	Air Curtain
2	Minimum Setpoint Limit	Defines the minimum allowable temperature setpoint. Example: 150 → 15.0°C.	150	15.0°C
3	Maximum Setpoint Limit	Defines the maximum allowable temperature setpoint. Example: 350 → 35.0°C.	350	35.0°C
4	Electric Heater Deadband (ΔT)	Temperature differential between room temperature and setpoint for electric heater operation. Example: 9 → 0.9°C.	9	0.9°C
7	Fan Control Deadband (ΔT)	Temperature differential between room temperature and setpoint for fan operation. Example: 9 → 0.9°C.	9	0.9°C
8	Fan Speed Differential (ΔT)	Temperature differential between fan speed stages. Example: 10 → 1.0°C.	10	1.0°C
9	Fan Thermostatic Control	Selects fan operation when setpoint is reached. 0 → Fan and electric heater stop together. 1 → Electric heater stops while fan continues running.	0	Fan & Heater Stop
10	Automatic Mode Fan Speed	Fan operating level in automatic mode. 0 → Stop, 1 → Speed 1, 2 → Speed 2, 3 → Speed 3.	0	Stop
11	Fan / Electric Heater Delay Time	Delay time applied to fan and heater operation.	20	20 s
12	Temperature Source Selection	0 → Internal Sensor, 1 → External Sensor, 2 → Door/Window Contact.	2	Door/Window Contact
13	Door Contact Type	0 → Normally Open (NO), 1 → Normally Closed (NC).	0	NO
14	Door Contact Delay	Delay time before door/window contact status is accepted.	20	20 s

SCT Series

Air Curtain Thermostat

20260623R1

Technical Catalogue

Service Settings Menu

No	Parameter	Description	Factory Setting	Equivalent Value
15	Temperature Filter Constant	Filter coefficient used to stabilize temperature readings.	5	Level 5
16	Modbus Device Address	Modbus RTU slave address.	1	Address 1
17	Modbus Baud Rate	Communication baud rate. 0→1200, 1→2400, 2→4800, 3→9600, 4→19200 bps.	3	9600 bps
18	Control Mode Selection	Defines the operating mode of the thermostat according to the application requirements. 0→Full Control 3→Heating+Fan Mode 5→Fan Only Mode 6→2-Stage Electric Heater <i>Other control modes are reserved for platform compatibility.</i>	0	Full Control
21	Power Recovery Mode	Defines the operating state after power restoration. 0→Resume Previous State 1→Start in Standby Mode.	0	Resume Previous State
22	Fan Delay Time	Defines the fan delay time after operation. 0→0 s, adjustable by the user.	0	0 s
23	Door Contact Efficiency Mode	Enables energy-saving operation when the door contact is activated. 0→Disabled 1→Enabled	0	Disabled
24	Efficiency Mode Fan Speed Offset	Defines the fan speed increase when Efficiency Mode is active. Adjustable between 0–3 . If the selected level exceeds the maximum fan speed, the fan operates at Speed 3 .	0	No Increase
25	Efficiency Mode Heater Stage Offset	Defines the electric heater stage increase when Efficiency Mode is active. Adjustable between 0–2 . If the selected level exceeds the maximum heater stage, the controller operates at Stage 2 .	0	No Increase

SCT Series

Air Curtain Thermostat

20260623R1

Technical Catalogue

Register Address	Offset	Parameter Name	R/W	Range	Description
General Device Control Values					
40001	0	Device On / Off Command	R/W	0...1	0:OFF 1:ON
40002	1	Room Temperature	R	-400...999	Temperature value with one decimal resolution. Example: 280 = 28.0 °C.
40003	2	Temperature Setpoint	R/W	150-350	Temperature setpoint with one decimal resolution. Example: 230 = 23.0 °C.
40004	3	Operating Mode	R/W	0...4	0: Fan Mode 1: Automatic Heating 2: Reserved 3: Reserved 4: Manual Heater Control
40005	4	Fan Speed Setpoint	R/W	0...3	0: Stop 1: Speed 1 2: Speed 2 3: Speed 3
Device Status Registers					
40006	5	Current Fan Speed	R	0...3	Current fan speed level. 0: Stop 1: Speed 1 2: Speed 2 3: Speed 3
40007	6	Fan Speed 1 Output Status	R	0...1	Indicates the status of the Fan Speed 1 relay output. 0: OFF, 1: ON.
40008	7	Fan Speed 2 Output Status	R	0...1	Indicates the status of the Fan Speed 2 relay output. 0: OFF, 1: ON.
40009	8	Fan Speed 3 Output Status	R	0...1	Indicates the status of the Fan Speed 3 relay output. 0: OFF, 1: ON.
40010	9	Electric Heater Stage 1 Status	R	0...1	Indicates the status of the Stage 1 electric heater output. 0: OFF, 1: ON.
40011	10	Electric Heater Stage 2 Status	R	0...1	Indicates the status of the Stage 2 electric heater output. 0: OFF, 1: ON.
40012	11	Door / Remote Contact Status	R	0...1	Indicates the status of the door / remote ON-OFF contact input. 0: Open, 1: Closed.
System Lock & Access Registers					
40013	12	Key Lock	R/W	0...1	Enables or disables the front panel keypad. 0: Key Lock Disabled 1: Key Lock Enabled
40014	13	Setpoint Adjustment Lock	R/W	0...1	Enables or disables temperature setpoint adjustment. 0: Adjustment Enabled 1: Adjustment Disabled
40015	14	Fan Speed Adjustment Lock	R/W	0...1	Enables or disables fan speed adjustment. 0: Adjustment Enabled 1: Adjustment Disabled

SCT Series

Air Curtain Thermostat

20260623R1

Technical Catalogue

Register Address	Offset	Parameter Name	R/W	Range	Description
System Lock & Access Registers					
40016	15	Operating Mode Adjustment Lock	R/W	0...1	Enables or disables operating mode selection. 0: Adjustment Enabled 1: Adjustment Disabled
40017	16	Manual Heater Stage Setpoint	R/W	0...2	Selects the manual electric heater stage. 0: Heater Off 1: Stage 1 Heater 2: Stage 2 Heater
Date & Time Registers					
40019	18	Weekly Program Status	R	0...2	Indicates the current weekly program status. 0: Weekly Program Disabled 1: Weekly Program Enabled – Device Running 2: Weekly Program Enabled – Device Stopped
40020	19	Current Day	R	0...31	Current day of the month.
40021	20	Current Month	R	0...12	Current month.
40022	21	Current Year	R	0...99	Current year (YY format).
40023	22	Current Hour	R	0...23	Current hour (24-hour format).
40024	23	Current Minute	R	0...59	Current minute.
40025	24	Current Second	R	0...59	Current second.
40026	25	Current Day of Week	R	1...7	Current day of the week. 1: Sunday 2: Monday 3: Tuesday 4: Wednesday 5: Thursday 6: Friday 7: Saturday
Weekly Program Time Registers					
40027	26	Sunday Start Time (HHMM)	R/W	0...2359	Start time for Sunday.
40028	27	Sunday Stop Time (HHMM)	R/W	0...2359	Stop time for Sunday.
40029	28	Monday Start Time (HHMM)	R/W	0...2359	Start time for Monday.
40030	29	Monday Stop Time (HHMM)	R/W	0...2359	Stop time for Monday.
40031	30	Tuesday Start Time (HHMM)	R/W	0...2359	Start time for Tuesday.
40032	31	Tuesday Stop Time (HHMM)	R/W	0...2359	Stop time for Tuesday.
40033	32	Wednesday Start Time (HHMM)	R/W	0...2359	Start time for Wednesday.
40034	33	Wednesday Stop Time (HHMM)	R/W	0...2359	Stop time for Wednesday.
40035	34	Thursday Start Time (HHMM)	R/W	0...2359	Start time for Thursday.
40036	35	Thursday Stop Time (HHMM)	R/W	0...2359	Stop time for Thursday.
40037	36	Friday Start Time (HHMM)	R/W	0...2359	Start time for Friday.
40038	37	Friday Stop Time (HHMM)	R/W	0...2359	Stop time for Friday.
40039	38	Saturday Start Time (HHMM)	R/W	0...2359	Start time for Saturday.
40040	39	Saturday Stop Time (HHMM)	R/W	0...2359	Stop time for Saturday.

SCT Series

Air Curtain Thermostat

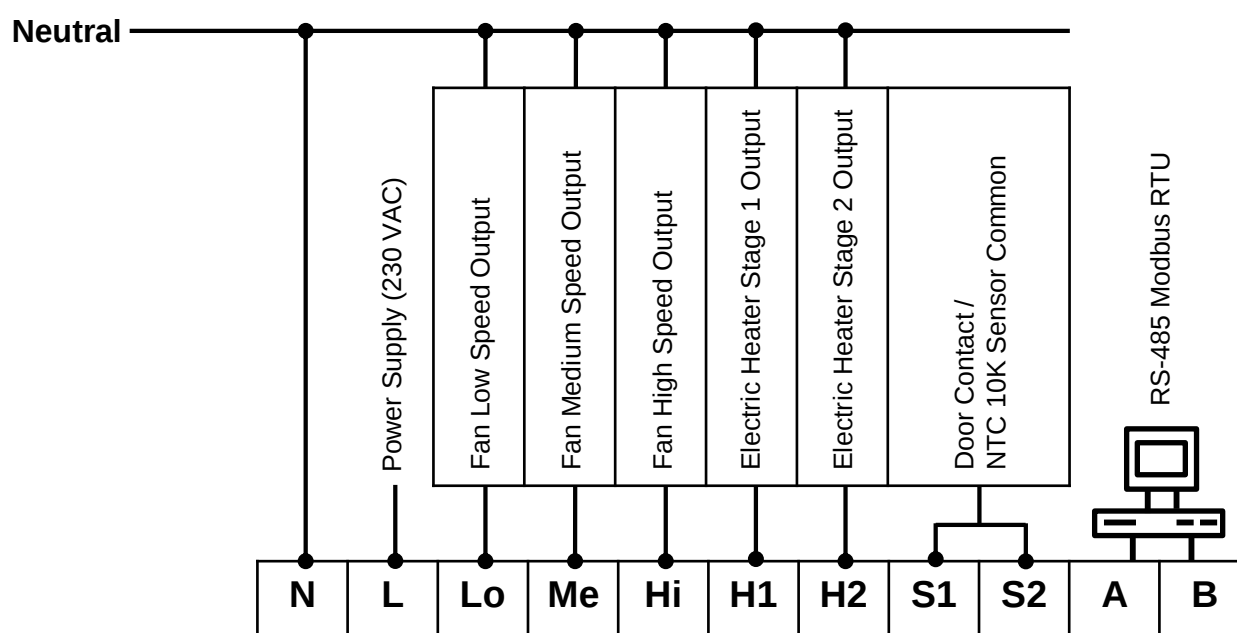
20260623R1

Technical Catalogue

Wiring Diagram

Air Curtain System

The following diagram illustrates the typical wiring connections for the **Havkon SCT.2350.AC Series**, including the 230 VAC power supply, three-speed fan relay outputs, two-stage electric heater outputs, door contact / NTC 10K sensor input, and RS-485 Modbus RTU communication.



SCT Series

Air Curtain Thermostat

20260623R1

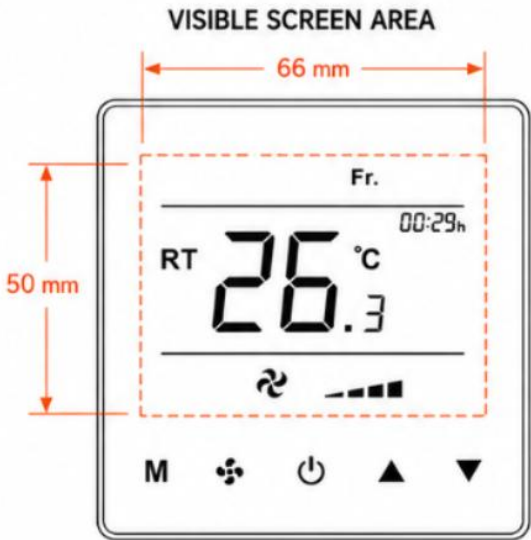
Technical Catalogue

Dimensions

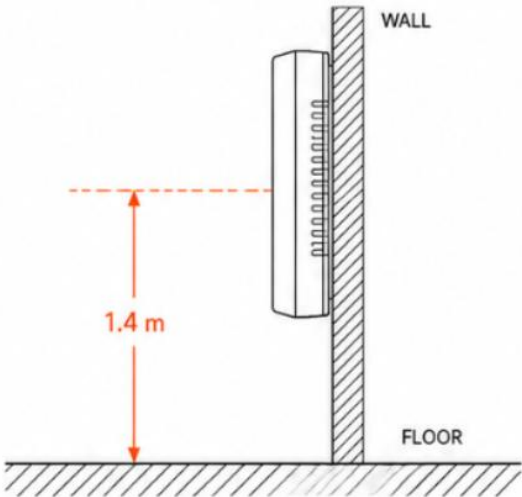
The Havkon SCT.2350.AC Series features a compact wall-mounted enclosure designed for air curtain control applications.



Weight: 188 g



RECOMMENDED INSTALLATION HEIGHT



PARAMETER	VALUE
Width	86 mm
Height	86 mm
Depth	40 mm
Visible Screen Area	66 × 50 mm
Weight	140 g
Installation Height	1.4 m

NOTE

All dimensions are given in millimeters.