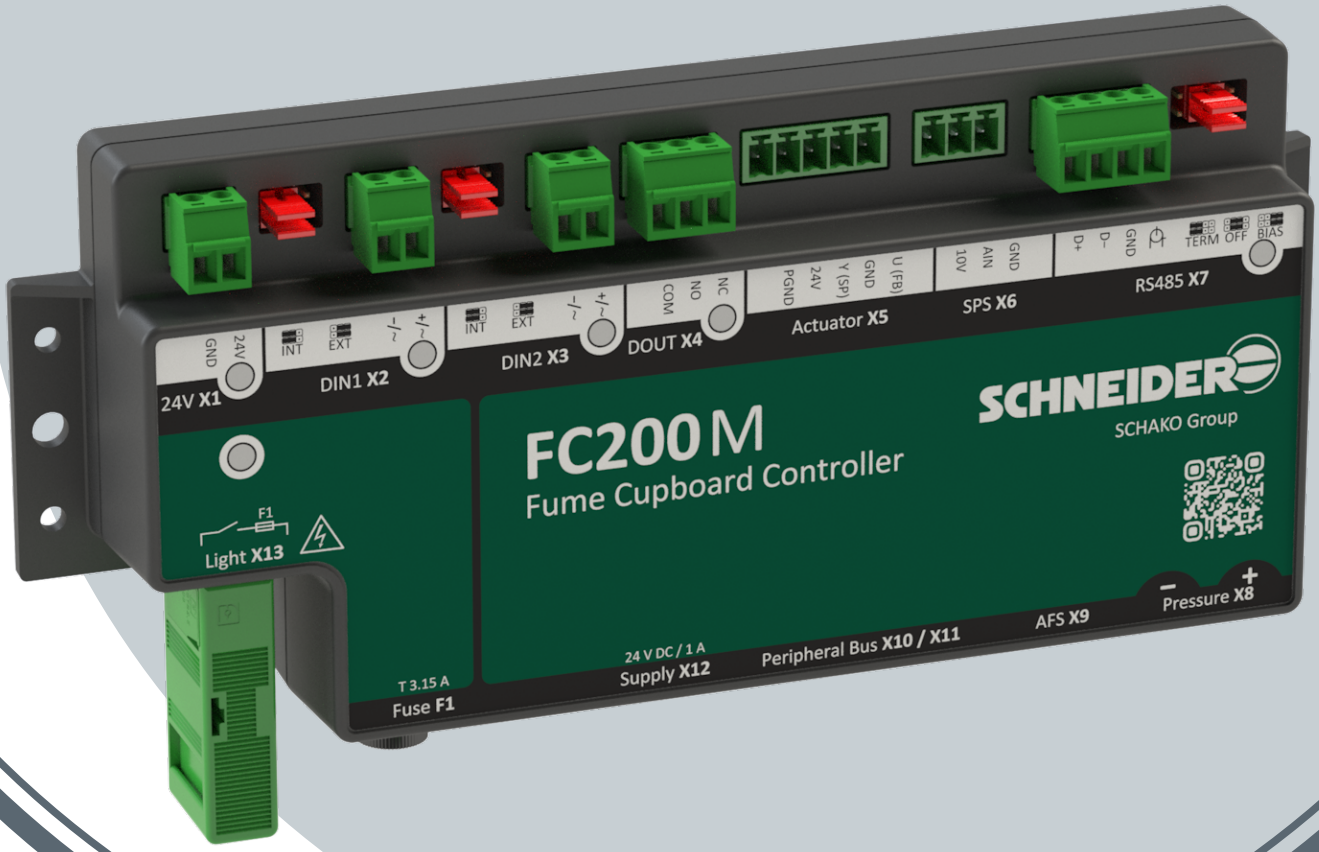

Configuration Values

Fume Cupboard Controller FC200

SCHNEIDER
SCHAKO Group

General Information

Device Type Fume Cupboard Controller FC200

Firmware Version FC200 1.1a

Firmware Release Date 2025-10-13

This document lists all configuration and display values that can be read or configured via the service interface of the FC200. The visibility of values may depend on several factors. In general, entries that are rarely required are hidden by default. These can be identified by the *Expert Setting* symbol. To make them visible, activate Expert Mode in the settings of the PC4500.

The type of each parameter can be identified by the symbol preceding it.

Standard. Basic configuration for commissioning.
Advanced. Configuration or display values that are less frequently required.
Expert. These values normally remain unchanged in all standard applications.

In addition, individual parameters or entire groups may be hidden in the configuration software depending on the state of other values. For example, configuration parameters of analog interfaces only appear if these interfaces are present and active in the respective device variant. If such dependencies exist, they are indicated for the corresponding parameter.

Example:

> Availability depends on **Other Parameter**.

1 Present Values

1.0.1 Face Velocity

The current face velocity, measured with the connected airflow sensor.

Resolution 0.01 m/s

1.0.2 Volume Flow

The current volume flow, determined from the current differential pressure.

1.0.3 Pressure Volume Flow

The current differential pressure for the volume flow calculation, measured with the integrated differential pressure sensor.

Resolution 0.01 Pa

1.0.4 Damper State

Current Damper State

Availability depends on **Actuator Type** .

Disconnected *(Default Value)*	The damper actuator is not connected.
Blocked	The damper is blocked.
Steady	The damper position ist currently stable.
Opening	The damper is currently opening.
Closing	The damper is currently closing.
Fully Opened	The damper is completely opened.
Fully Closed	The damper is completely closed.
Limit Min	The damper is at the lower limit.
Limit Max	The damper is at the upper limit.

1.0.5 Damper Position

The current damper position.

1.0.6 Fan Speed

Current fan speed.

> Availability depends on **Actuator Type** .

1.0.7 Sash Position

The current sash position, measured with the connected sash position sensor.

1.0.8 Sash State

The current sash state.

Unknown *(Default Value)*	The position sensor is not calibrated or the configuration is incorrect.
Not Connected	The position sensor is not connected.
Broken	The position sensor is outside the calibrated range, cable may have broken.
Closed	The sash is completely closed.
Below Working Height	The sash is not closed, but under working height.
Working Height	The sash is at working height.
Above Working Height	The sash is above working height.

1.0.9 DIN 1 Value

The current status of digital input 1.

LOW *(Default Value)*

HIGH

1.0.10 DIN 2 Value

The current status of digital input 2.

LOW *(Default Value)*

HIGH

1.0.11 Relay 1 State

Current state of relay 1

LOW *(Default Value)*

HIGH

1.0.12 Analog Interface 1

The current voltage at the analog interface 1.

Resolution 0.001 V

1.0.13 Analog Interface 2

The current voltage at the analog interface 2.

Resolution 0.001 V

1.0.14 Light

The current status of the fume hood cupboard light relay (on or off).

Off *(Default Value)*

On

1.0.15 Alarm

Current alarm state of the Device (active or inactive)

Inactive *(Default Value)*

Active

1.0.16 Operating Mode

Displays the current operating mode (Day, Night, Override, Off).

Day *(Default Value)*

Night

Override

Off

2 Operating Mode

2.1 General

2.1.1 Startup Mode

Defines the operating mode in which the device starts operating after a restart - for example, due to a power failure.

Previous State	Starts in the last operating mode before restarting the device.
Day *(Default Value)*	
Night	
Override	
Off	

2.1.2 Follow Room Operating Mode

Determines how the local operating mode follows the room operating mode.

Never *(Default Value)*	The local operating mode never follows the room operating mode.
Always Permanent	The local operating mode always follows the room operating mode permantent (local operating mode can not been different from room operating mode).
All Change Events	The local operating mode always follows the changes of the room operating mode.
Night Change Event	The local operating mode follows the changes of the room operating mode in night.

2.2 Day

2.2.1 Actuator Mode Day

Determines the function of the actuator in the operating mode day.

Stop (Freeze)	The current actuator position is retained. No control takes place!
Control *(Default Value)*	The actuator is controlled by the control system. Depending on the configured control type, the setpoint volume flow or face velocity is controlled.

Close Completely	The actuator is closed completely (without consideration of actuator limits).
Open Completely	The actuator is opened completely (without consideration of actuator limits).
Lower Limit	The actuator is closed down to the lower actuator limit.
Upper Limit	The actuator is opened up to the upper actuator limit.
Modbus	The actuator position is determined by the Modbus data point.
Swing	The actuator alternately opens completely and closes completely (for testing purposes).

2.2.2 Light Behavior Day

Determines the influence of the change to day operating mode on the fume hood cupboard light.

No Change *(Default Value)*	The previous status of the fume hood cupboard light is retained.
Switch On	When switching to this operating mode, the fume hood cupboard light is switched on.
Switch Off	When switching to this operating mode, the fume hood cupboard light is switched off.
Always On	In this operating mode, the fume hood cupboard light is always switched on.
Always Off	In this operating mode, the fume hood cupboard light is always switched off.

2.3 Night

2.3.1 Actuator Mode Night

Determines the function of the actuator in the operating mode night.

Stop (Freeze)	The current actuator position is retained. No control takes place!
Control *(Default Value)*	The actuator is controlled by the control system. Depending on the configured control type, the setpoint volume flow or face velocity is controlled.
Close Completely	The actuator is closed completely (without consideration of actuator limits).
Open Completely	The actuator is opened completely (without consideration of actuator limits).
Lower Limit	The actuator is closed down to the lower actuator limit.
Upper Limit	The actuator is opened up to the upper actuator limit.

Modbus	The actuator position is determined by the Modbus data point.
Swing	The actuator alternately opens completely and closes completely (for testing purposes).

2.3.2 Light Behavior Night

Determines the influence of the change to night operating mode on the fume hood cupboard light.

No Change *(Default Value)*	The previous status of the fume hood cupboard light is retained.
Switch On	When switching to this operating mode, the fume hood cupboard light is switched on.
Switch Off	When switching to this operating mode, the fume hood cupboard light is switched off.
Always On	In this operating mode, the fume hood cupboard light is always switched on.
Always Off	In this operating mode, the fume hood cupboard light is always switched off.

2.3.3 Endless Night Mode Duration

Determines whether the night operating mode can be active endlessly (adjustable duration or endless).

Adjustable Duration

Endless *(Default Value)*

2.3.4 Night Mode Duration

Night operating mode is deactivated after the night mode duration has elapsed. Only if night operating mode endless is configured to 'Adjustable duration'.

Availability depends on **Endless Night Mode Duration**.

Minimum 0 min
Maximum 5999 min
Default Value 480 min

2.4 Override

2.4.1 Actuator Mode Override

Determines the function of the actuator in the operating mode override.

Stop (Freeze)	The current actuator position is retained. No control takes place!
Control *(Default Value)*	The actuator is controlled by the control system. Depending on the configured control type, the setpoint volume flow or face velocity is controlled.
Close Completely	The actuator is closed completely (without consideration of actuator limits).
Open Completely	The actuator is opened completely (without consideration of actuator limits).
Lower Limit	The actuator is closed down to the lower actuator limit.
Upper Limit	The actuator is opened up to the upper actuator limit.
Modbus	The actuator position is determined by the Modbus data point.
Swing	The actuator alternately opens completely and closes completely (for testing purposes).

2.4.2 Light Behavior Override

Determines the influence of the change to override operating mode on the fume hood cupboard light.

No Change *(Default Value)*	The previous status of the fume hood cupboard light is retained.
Switch On	When switching to this operating mode, the fume hood cupboard light is switched on.
Switch Off	When switching to this operating mode, the fume hood cupboard light is switched off.
Always On	In this operating mode, the fume hood cupboard light is always switched on.
Always Off	In this operating mode, the fume hood cupboard light is always switched off.

2.4.3 Endless Override Mode Duration

Determines whether the override operating mode can be active endlessly (adjustable duration or endless).

Adjustable Duration *(Default Value)*
Endless

2.4.4 Override Mode Duration

Once the maximum override duration has elapsed, the override operating mode is deactivated. Only if operating mode Override endless is configured to Adjustable duration.

Availability depends on **Endless Override Mode Duration** .

Minimum 0 min

Maximum 5999 min

Default Value 60 min

2.4.5 Override Priority

Determines the priority of the override operating mode in comparison to the night operating mode.

Above 'Night' *(Default Value)*

Below 'Night'

2.5 Off

2.5.1 Actuator Mode Off

Determines the function of the actuator in the operating mode off.

Stop (Freeze)	The current actuator position is retained. No control takes place!
Control	The actuator is controlled by the control system. Depending on the configured control type, the setpoint volume flow or face velocity is controlled.
Close Completely *(Default Value)*	The actuator is closed completely (without consideration of actuator limits).
Open Completely	The actuator is opened completely (without consideration of actuator limits).
Lower Limit	The actuator is closed down to the lower actuator limit.
Upper Limit	The actuator is opened up to the upper actuator limit.
Modbus	The actuator position is determined by the Modbus data point.
Swing	The actuator alternately opens completely and closes completely (for testing purposes).

2.5.2 Light Change Off

Determines the influence of the change to off operating mode on the fume hood cupboard light.

No Change *(Default Value)*	The previous status of the fume hood cupboard light is retained.

Switch On	When switching to this operating mode, the fume hood cupboard light is switched on.
Switch Off	When switching to this operating mode, the fume hood cupboard light is switched off.
Always On	In this operating mode, the fume hood cupboard light is always switched on.
Always Off	In this operating mode, the fume hood cupboard light is always switched off.

3 Control

3.1 General

3.1.1 Control Type

It is essential to ensure that all components and sensors required for the selected control type are connected and that the corresponding setpoints have been programmed.

Face Velocity (F)	Control of the constant face velocity. With: Air flow sensor AFS100.
Face Velocity With Limit (FP)	Control of the constant face velocity with volume flow rate limitation to V_{min} and V_{max}. With: Air flow sensor AFS100 and differential pressure sensor.
Face Velocity From Sash Position (FW)	Control of the constant face velocity by calculating the opening area as a function of the sash position, the horizontal window position is not detected, volume flow limitation to V_{min} and V_{max} possible. With: Position sensor SPS100 and differential pressure sensor.
Position Sensor (W)	Variable volume flow control depending on the sash position, the horizontal window position is not detected. With: Position sensor SPS100 and differential pressure sensor.
Variable (V) *(Default Value)*	Variable volume flow control depending on the front sash and horizontal window position. With: Air flow sensor AFS100, position sensor SPS100 and differential pressure sensor.
Variable With Switches (VS)	Variable volume flow control depending on the front sash and horizontal window position. With: SPS100 position sensor, differential pressure sensor and on-site contacts for detecting the horizontal window opening.

Constant (K)	Constant volume flow control (1-, 2- or 3-point via on-site contacts) depending on the sash position, the horizontal window position is not detected. With: Differential pressure sensor and on-site contacts for detecting the sash opening.
Constant With Position Sensor (KW)	Constant volume flow control via position sensor SPS100 depending on the sash position, the horizontal window position is not detected. With: Position sensor SPS100 and differential pressure sensor.
Pressure (P)	Control of constant pressure. With: Differential pressure sensor.

3.2 Airflow Calculation

3.2.1 Airflow Sensor Type

Selection of the sensor type used.

None

AFS100 *(Default Value)*

AFS200

3.2.2 Airflow Adjustment Factor

The factor corrects the measured value of the air flow sensor in the event of an unfavorable installation position. The measured value can be adjusted as a percentage. Example: 95 % corresponds to a value reduced by 5 %, 110 % corresponds to a value increased by 10 %.

Availability depends on **Control Type**.

Minimum 50 %
Maximum 150 %
Default Value 100 %

3.2.3 Face Velocity

The current face velocity, measured with the connected airflow sensor.

Resolution 0.01 m/s

3.3 Volume Flow Calculation

3.3.1 Constant of measuring unit (C-Value)

The C-Value is used when calculating the volume flow from a differential pressure, with the formula below.

$$\dot{V} = c\sqrt{\frac{\Delta p}{\rho}}$$

Minimum 0.1

Maximum 4999.9

Default Value 96.0

Resolution 0.1

3.3.2 Air Density

The air density Rho is required to calculate the volume flow, see Constant of measuring unit (C-Value).

Minimum 0.50 kg/m³

Maximum 2.00 kg/m³

Default Value 1.20 kg/m³

Resolution 0.01 kg/m³

3.3.3 Pressure Volume Flow

The current differential pressure for the volume flow calculation, measured with the integrated differential pressure sensor.

Resolution 0.01 Pa

3.3.4 Volume Flow

The current volume flow, determined from the current differential pressure.

3.4 Actuator

3.4.1 Actuator Type

Determines the actuator type (damper, fan or no actuator).

Damper *(Default Value)*	A damper motor as an actuator.

Fan	A fan as actuator. Controlled via analog output with 'Frequency Converter' function.
None	No actuator selected. The device only monitors the configured setpoints.

3.4.2 Slope Time Upwards

The ramp-up time determines the minimum time the high speed actuator needs to open the control damper from 0 % to 100 %. The ramp time does not determine the control speed but limits the maximum speed of the control damper movement.

Minimum 3 s
Maximum 99 s
Default Value 3 s

3.4.3 Slope Time Downwards

The ramp-down time determines the minimum time the high speed actuator needs to close the control damper from 100 % to 0 %. The ramp time does not determine the control speed but limits the maximum speed of the control damper movement.

Minimum 3 s
Maximum 99 s
Default Value 5 s

3.4.4 Upper Limit

The upper actuator limit is the highest actuator position which may be approached during the control process.

Minimum 0 %
Maximum 100 %
Default Value 100 %

3.4.5 Lower Limit

The lower actuator limit is the lowest actuator position which may be approached during the control process.

Minimum 0 %
Maximum 100 %
Default Value 0 %

3.4.6 Damper State

Current Damper State

Availability depends on **Actuator Type**.

Disconnected *(Default Value)*	The damper actuator is not connected.
Blocked	The damper is blocked.
Steady	The damper position ist currently stable.
Opening	The damper is currently opening.
Closing	The damper is currently closing.
Fully Opened	The damper is completely opened.
Fully Closed	The damper is completely closed.
Limit Min	The damper is at the lower limit.
Limit Max	The damper is at the upper limit.

3.4.7 Damper Position

The current damper position.

Availability depends on **Actuator Type**.

3.4.8 Fan Speed

Current fan speed.

Availability depends on **Actuator Type**.

3.5 Alarm

3.5.1 Alarm State

Current alarm state of the Device (inactive, pending, active or silenced)

None *(Default Value)*	The alarm is inactive.
Pending	An alarm source reports an alarm, the alarm delay has not yet expired.
Active	The alarm is active.
Silenced	The alarm is active, but silenced.

3.5.2 Alarm Delay Air

An alarm is triggered as soon as the actual value of the controlled variable has been outside the alarm limits for the time set here.

Minimum 1 s

Maximum 60 s

Default Value 10 s

3.5.3 Alarm Delay External

An alarm is triggered as soon as a digital input with the external alarm function is active for the time set here.

Minimum 1 s

Maximum 60 s

Default Value 10 s

3.5.4 Start Alarm Delay

After switching on the FC200 laboratory fume hood cupboard controller, only visual but no acoustic alarms are triggered within the time configured here.

Minimum 5 s

Maximum 900 s

Default Value 30 s

3.5.5 Endless Buzzer Duration

Determines whether the buzzer duration can be endless.

Adjustable Duration *(Default Value)*

Endless

3.5.6 Max Buzzer Duration

The maximum time after which the acoustic alarm is deactivated. Only if buzzer duration endless is configured to 'Adjustable duration'.

Availability depends on **Endless Buzzer Duration** .

Minimum 0 s

Maximum 900 s

Default Value 60 s

3.6 Face Velocity

3.6.1 Airflow Control Factor

Determines the control speed of the face velocity controller. Higher values accelerate the control function, but also increase the risk of overshoot. Lower values lead to slower control, which is more stable in return.

Minimum 0.0001

Maximum 0.9999

Default Value 0.0800

Resolution 0.0001

3.6.2 Airflow Bias

The control bias of the face velocity controller determines how strongly the controller is slowed down within a close range of the setpoint. Small values lead to increased deceleration. A bias of 0.5 corresponds to a uniform speed independent of the control deviation.

Minimum 0.0001

Maximum 0.6000

Default Value 0.2000

Resolution 0.0001

3.6.3 Airflow Deadband

The actual value of the controller must move away from the setpoint by at least this value to move the actuator of a stationary controller. Should be at least as large as the smallest possible value change of the actuator.

Minimum 0.00 m/s

Maximum 0.50 m/s

Default Value 0.05 m/s

Resolution 0.01 m/s

3.6.4 Airflow Deadband Hysteresis

Hysteresis of the face velocity controller. Within this range the actuator is always kept unchanged. The value is given as a percentage of the deadband, so it must be between 0 % and 100 %.

Minimum 0 %

Maximum 100 %

Default Value 50 %

3.7 Volume Flow

3.7.1 Volume Flow Control Factor

Determines the control speed of the volume flow controller. Higher values accelerate the control function, but also increase the risk of overshoot. Lower values lead to slower control, which is more stable in return.

Minimum 0.0001

Maximum 0.9999

Default Value 0.0060

Resolution 0.0001

3.7.2 Volume Flow Bias

The control bias of the volume flow controller determines how strongly the controller is slowed down within a close range of the setpoint. Small values lead to increased deceleration. A bias of 0.5 corresponds to a uniform speed independent of the control deviation.

Minimum 0.0001

Maximum 0.6000

Default Value 0.2000

Resolution 0.0001

3.7.3 Volume Flow Deadband Auto

Determines whether the deadband should be determined automatically.

Manual *(Default Value)*

Automatic

3.7.4 Volume Flow Deadband

The actual value of the controller must move away from the setpoint by at least this value to move the actuator of a stationary controller. Should be at least as large as the smallest possible value change of the actuator.

Availability depends on **Volume Flow Deadband Auto** .

Minimum 0 m³/h

Maximum 100 m³/h

Default Value 20 m³/h

3.7.5 Volume Flow Deadband Hysteresis

Hysteresis of the volume flow controller. Within this range the actuator is always kept unchanged. The value is given as a percentage of the deadband, so it must be between 0 % and 100 %.

Availability depends on **Volume Flow Deadband Auto**.

Minimum 0 %

Maximum 100 %

Default Value 0 %

3.7.6 Volume Flow Sash Influence

Determines the influence of the sash on the volumetric flow setpoint. Values greater than zero cause the setpoint value to increase disproportionately quickly when the sash is opened. Values less than zero cause the setpoint value to increase less rapidly when the sash is opened.

Minimum -0.5000

Maximum 1.0000

Default Value 0.0000

Resolution 0.0001

4 Setpoints

4.1 Face Velocity

4.1.1 Face Velocity

The current face velocity, measured with the connected airflow sensor.

Availability depends on **Control Type**.

Resolution 0.01 m/s

4.1.2 Airflow Unit

Determines the unit in which the face velocity is displayed.

Availability depends on **Control Type**.

m/s *(Default Value)*

ft/min

4.1.3 Face Velocity Day

Setpoint value of the face velocity control in day operating mode.

Availability depends on **Actuator Mode Day** **Control Type**.

Minimum 0.00 m/s
Maximum 2.00 m/s
Default Value 0.50 m/s
Resolution 0.01 m/s

4.1.4 Face Velocity Night

Setpoint value of the face velocity control in night operating mode.

Availability depends on **Actuator Mode Night** **Control Type**.

Minimum 0.00 m/s
Maximum 2.00 m/s
Default Value 0.30 m/s
Resolution 0.01 m/s

4.1.5 Face Velocity Override

Setpoint value of the face velocity control in override operating mode.

Availability depends on **Actuator Mode Override** **Control Type**.

Minimum 0.00 m/s
Maximum 2.00 m/s
Default Value 0.80 m/s
Resolution 0.01 m/s

4.1.6 Face Velocity Off

Setpoint value of the face velocity control in off operating mode.

> Availability depends on **Actuator Mode Off** **Control Type** .

> **Minimum** 0.00 m/s
> **Maximum** 2.00 m/s
> **Default Value** 0.00 m/s
> **Resolution** 0.01 m/s

4.1.7 Face Velocity Alarm Quota

Percentage deviation from the setpoint of the face velocity control above which an alarm is triggered.

> Availability depends on **Control Type** .

> **Minimum** 0 %
> **Maximum** 50 %
> **Default Value** 5 %

4.2 Volume Flow

4.2.1 Volume Flow

The current volume flow, determined from the current differential pressure.

> Availability depends on **Control Type** .

4.2.2 Volume Flow Unit

Determines the unit in which the volume flow value is displayed.

> Availability depends on **Control Type** .

> **m³/h** *(Default Value)*
>
> **l/s**

4.2.3 Volume Flow Maximum

Setpoint value for volume flow control in day operating mode with front sash completely open.

Availability depends on **Actuator Mode Day** **Control Type** .

Minimum 0 m³/h
Maximum 49999 m³/h
Default Value 600 m³/h

4.2.4 Volume Flow Working Height

Setpoint value for volume flow control in day operating mode with front sash at working level.

Availability depends on **Actuator Mode Day** **Control Type** .

Minimum 0 m³/h
Maximum 49999 m³/h
Default Value 480 m³/h

4.2.5 Volume Flow Minimum

Setpoint value for volume flow control in day operating mode with front sash closed.

Availability depends on **Actuator Mode Day** **Control Type** .

Minimum 0 m³/h
Maximum 49999 m³/h
Default Value 200 m³/h

4.2.6 Volume Flow Night

Setpoint value for volume flow control in night operating mode.

Availability depends on **Actuator Mode Night** **Control Type** .

Minimum 0 m³/h
Maximum 49999 m³/h
Default Value 200 m³/h

4.2.7 Volume Flow Override

Setpoint value for volume flow control in override operating mode.

> Availability depends on **Actuator Mode Override** **Control Type** .

> **Minimum** 0 m³/h
> **Maximum** 49999 m³/h
> **Default Value** 800 m³/h

4.2.8 Volume Flow Off

Setpoint value for volume flow control in off operating mode.

> Availability depends on **Actuator Mode Off** **Control Type** .

> **Minimum** 0 m³/h
> **Maximum** 49999 m³/h
> **Default Value** 0 m³/h

4.2.9 Volume Flow Alarm Quota

Percentage deviation from the setpoint value of the volume flow control from which an alarm is triggered.

> Availability depends on **Control Type** .

> **Minimum** 0 %
> **Maximum** 50 %
> **Default Value** 3 %

5 Sash

5.0.1 Sash Calibration

Starts the sash calibration.

5.0.2 Sash Calibration

Confirms the current step in the sash calibration.

5.0.3 Sash Calibration State

The current status of the sash calibration.

Inactive *(Default Value)*	Sash calibration inactive
Close Sash	Close the sash completely.
Open to Working Height	Open the sash to working height.
Open Sash completely	Open the sash completely.
Finished	Sash calibration completed.

5.0.4 Sash State

The current sash state.

Unknown *(Default Value)*	The position sensor is not calibrated or the configuration is incorrect.
Not Connected	The position sensor is not connected.
Broken	The position sensor is outside the calibrated range, cable may have broken.
Closed	The sash is completely closed.
Below Working Height	The sash is not closed, but under working height.
Working Height	The sash is at working height.
Above Working Height	The sash is above working height.

5.0.5 Sash Voltage

Displays the current voltage at the sash input in volts.

Resolution 0.001 V

5.0.6 Sash Position

The current sash position, measured with the connected sash position sensor.

5.0.7 Absolute Sash Position

Shows the current front sash position in centimeters.

5.0.8 Sash Open Buzzer

Determines the behavior of the buzzer when the sash is open.

Adjustable Delay

Deactivated *(Default Value)*

5.0.9 Sash Open Buzzer Delay

Delay of the acoustic alarm when opening the sash above the working height.

> Availability depends on **Sash Open Buzzer** .

> **Minimum** 0 s
> **Maximum** 900 s
> **Default Value** 10 s

5.0.10 Sash Tolerance

Maximum deviation of the current value from the positions recorded during calibration. Is required to derive the front sash state from the front sash position.

> **Minimum** 1 %
> **Maximum** 10 %
> **Default Value** 2 %

5.0.11 Sash Width

The width of the front sash window is required to calculate the opening area in the face velocity with sash position sensor operating mode (FW).

> **Minimum** 1 cm
> **Maximum** 300 cm
> **Default Value** 120 cm

5.0.12 Sash Closed Height

Gap height of the front sash when closed.

> **Minimum** 1 cm
> **Maximum** 200 cm
> **Default Value** 4 cm

5.0.13 Sash Working Height

Window height of the front sash in the working height state.

> **Minimum** 1 cm
> **Maximum** 200 cm
> **Default Value** 50 cm

5.0.14 Sash Voltage Min

Displays the sash voltage when closed

Resolution 0.001 V

5.0.15 Sash Voltage Max

Displays the sash voltage when fully open.

Resolution 0.001 V

5.0.16 Sash Voltage Working Height

Displays the sash voltage when on working hight.

Resolution 0.001 V

6 Relays

6.1 #1

6.1.1 Relay 1 Function

Determines the function of relay 1.

Inactive	
Mode Day	The relay is active when the device is in operating mode Day.
Mode Night	The relay is active when the device is in operating mode Night.
Mode Override	The relay is active when the device is in operating mode Override.
Mode Off	The relay is active when the device is in operating mode Off.
Alarm Pending	The relay is active if the control value is outside the permissible alarm limit.
Alarm *(Default Value)*	The relay is active when the alarm is active.
Light	The relay is active when the light is on.
Buzzer	The relay is active when the buzzer is active.
Window closed	The relay is active when the sash is completely closed.
Window above Working Height	The relay is active when the sash is above working height.
Open Sash	The relay is active when the Open function button is pressed.

Close Sash	The relay is active when the Close function button is pressed.
Damper Actuator Active	The relay is active when the actuator is active and therefore the setpoint has not yet been reached.
Damper Actuator Blocked	The relay is active if an actuator blockage has been detected.
Modbus	The relay is active if the associated Modbus data point is active.

6.1.2 Relay 1 Polarity

Determines the polarity of relay 1.

Normal *(Default Value)*

Inverted

7 Digital Inputs

7.1 General

7.1.1 Occupancy Sensor Delay

Determines the follow-up time of the digital input occupancy sensor. Absence is only detected after no more movement has been detected for the time configured here.

Minimum 0 s
Maximum 900 s
Default Value 30 s

7.2 #1

7.2.1 DIN 1 Function

Determines the function of digital input 1.

None	No function selected.
Mode Off *(Default Value)*	Digital input active means that request operating mode off.
Mode Night	Digital input active means that request operating mode night.
Mode Override	Digital input active means that request operating mode override.

Sash Closed	Digital input active means that the sash is completly closed.
Sash below Working Height	Digital input active means that the sash is under working height.
Horizontal Window closed	Digital input active means that the horizontal window is completly closed.
PIR	Digital input active means that a person is in front of the fume hood.
External Alarm	Digital input active means that an external alarm is present.

7.2.2 DIN 1 Polarity

Determines the polarity of digital input 1.

Normal *(Default Value)*

Inverted

7.3 #2

7.3.1 DIN 2 Function

Determines the function of digital input 2.

None *(Default Value)*	No function selected.
Mode Off	Digital input active means that request operating mode off.
Mode Night	Digital input active means that request operating mode night.
Mode Override	Digital input active means that request operating mode override.
Sash Closed	Digital input active means that the sash is completly closed.
Sash below Working Height	Digital input active means that the sash is under working height.
Horizontal Window closed	Digital input active means that the horizontal window is completly closed.
PIR	Digital input active means that a person is in front of the fume hood.
External Alarm	Digital input active means that an external alarm is present.

7.3.2 DIN 2 Polarity

Determines the polarity of digital input 2.

Normal *(Default Value)*

Inverted

8 Sensors

8.1 Pressure

8.1.1 Calibrate Pressure Sensors

Starts the pressure sensor zero point calibration, for all sensors as required.

9 Analog Interfaces

Availability depends on **HW Variant** .

9.1 #1

9.1.1 Analog Interface 1 - Output Function

Determines the function of analog output 1.

Disabled *(Default Value)*	The analog output is deactivated.
Face Velocity	The analog output scales depending on the current face velocity.
Volume Flow	The analog output scales depending on the current volume flow.
Volume Flow Setpoint	The analog output scales depending on the current volume flow setpoint.
Pressure	The analog output scales depending on the current pressure.
Sash Position	The analog output scales depending on the sash position.
Damper Position	The analog output scales depending on the current damper position.
Modbus	The analog output outputs the value set via Modbus.
Frequency Converter	The analog output controls a frequency converter instead of a damper actuator.

9.1.2 Analog Interface 1 - Voltage Minimum

Determines the minimum voltage of analog output 1.

Minimum 0.000 V

Maximum 10.000 V

Default Value 0.000 V

Resolution 0.001 V

9.1.3 Analog Interface 1 - Voltage Maximum

Determines the maximum voltage of analog output 1.

Minimum 0.000 V

Maximum 10.000 V

Default Value 10.000 V

Resolution 0.001 V

9.1.4 Analog Interface 1 - Value Minimum

Determines the value at which the minimum voltage is reached.

Minimum 0

Maximum 40000

Default Value 0

9.1.5 Analog Interface 1 - Value Maximum

Determines the value at which the maximum voltage is reached.

Minimum 0

Maximum 40000

Default Value 100

9.2 #2

9.2.1 Analog Interface 2 - Output Function

Determines the function of analog output 2.

Disabled *(Default Value)*	The analog output is deactivated.
Face Velocity	The analog output scales depending on the current face velocity.
Volume Flow	The analog output scales depending on the current volume flow.
Volume Flow Setpoint	The analog output scales depending on the current volume flow setpoint.

Pressure	The analog output scales depending on the current pressure.
Sash Position	The analog output scales depending on the sash position.
Damper Position	The analog output scales depending on the current damper position.
Modbus	The analog output outputs the value set via Modbus.
Frequency Converter	The analog output controls a frequency converter instead of a damper actuator.

9.2.2 Analog Interface 2 - Voltage Minimum

Determines the minimum voltage of analog output 2.

Minimum 0.000 V
Maximum 10.000 V
Default Value 0.000 V
Resolution 0.001 V

9.2.3 Analog Interface 2 - Voltage Maximum

Determines the maximum voltage of analog output 2.

Minimum 0.000 V
Maximum 10.000 V
Default Value 10.000 V
Resolution 0.001 V

9.2.4 Analog Interface 2 - Value Minimum

Determines the value at which the minimum voltage is reached.

Minimum 0
Maximum 40000
Default Value 0

9.2.5 Analog Interface 2 - Value Maximum

Determines the value at which the maximum voltage is reached.

Minimum 0
Maximum 40000
Default Value 100

10 User Interface

10.1 General

10.1.1 Button On/Off

Determines whether the ON / OFF button can be used.

Disabled *(Default Value)*

Enabled

10.1.2 Button Night

Determines whether the Night button can be used.

Disabled *(Default Value)*

Enabled

10.1.3 Button Override

Determines whether the Override button can be used.

Disabled

Enabled *(Default Value)*

10.2 Advanced

10.2.1 Language

Determines the display language of the device.

English *(Default Value)*	English
German	German

10.2.2 Display Unit

Determines the unit of the function display in the main view. With AUTO, the value and unit are automatically determined from the control type and setpoint units.

Auto *(Default Value)*	The display value and display unit on the function display are selected automatically.
Airflow m/s	The display value on the function display is face velocity and the display unit is m/s.
Airflow ft/min	The display value on the function display is face velocity and the display unit is ft/min.
Volume Flow m³/h	The display value on the function display is volume flow and the display unit is m³/h.
Volume Flow l/s	The display value on the function display is volume flow and the display unit is l/s.
Pressure Pa	The display value on the function display is pressure and the display unit is Pa.
Pressure mBar	The display value on the function display is pressure and the display unit is mBar.

11 Modbus

Availability depends on **HW Variant** .

11.1 General

11.1.1 HW Variant

Analog

Modbus *(Default Value)*

11.1.2 Function

Determines the function of the Modbus interface (deactivated or server)

Availability depends on **HW Variant** .

Disabled	The Modbus interface is disabled.
Server *(Default Value)*	The Modbus interface is configured as a server.

11.1.3 Use Automatic Device ID

Determines whether the device automatically gets to the Modbus device ID via Modbus.

Availability depends on **Function**.

Static Device ID

Automatic Device ID *(Default Value)*

11.1.4 Device ID

The device ID or device address must be unique within the Modbus network. Values from 1 - 247 are available.

Availability depends on **Function** **Use Automatic Device ID**.

Minimum 1

Maximum 247

Default Value 1

11.1.5 Automatic Device ID

The device ID obtained automatically via Modbus.

Availability depends on **Function** **Use Automatic Device ID**.

11.1.6 Baud Rate

The baud rate (transmission speed) of the Modbus interface. This must be uniform in the Modbus network.

1200

2400

4800

9600

19200 *(Default Value)*

38400

57600

115200

11.1.7 Parity

Determines the presence and function of the parity bit during transmission. This bit helps detecting faulty transmissions.

None	No Parity and two Stopbits
Even *(Default Value)*	Parity Even and one Stopbit.
Odd	Parity Odd and one Stopbit.

11.1.8 Broadcast

Modbus allows communication via broadcasts. This is useful e.g. to switch the operating mode of all devices in the network with a single transmission. If this feature is not desired or leads to any incompatibility with devices of other manufacturers, it can be deactivated.

Availability depends on **Function** .

No

Yes *(Default Value)*

11.1.9 Device Config via Modbus

It is possible to change all configuration parameters of the device via Modbus. This is useful e.g. if the serial configuration interface is no longer physically accessible or if parameters are to be changed globally across many devices. If this feature is not desired, it can be deactivated.

Availability depends on **Function** .

No

Yes *(Default Value)*

12 Service

12.0.1 Demo Mode

Determines whether the device is in demo mode. In demo mode, the volume flow and airflow values are simulated and the real values are not monitored.

Off *(Default Value)*

On

12.0.2 Firmware Version

The currently installed firmware version.

12.0.3 Serial Number Device

The unique serial number of the device set at the factory.

12.0.4 Build Nr

The Build Nr of the current Firmware Version

12.0.5 Endless Service Interval

Determines whether the service interval can be endless and therefore no service reminder and warning is generated.

Adjustable Duration

Endless *(Default Value)*

12.0.6 Service Interval

Determines the runtime of the device after which a service should take place.

Availability depends on **Endless Service Interval** .

Minimum 0 days
Maximum 9999 days
Default Value 365 days

12.0.7 Service Reminder

Defines the time from which a reminder is to be sent before the service interval expires that a service will soon be required.

Minimum 0 days
Maximum 9999 days
Default Value 30 days

12.0.8 Factory Reset

Resets the device to factory settings. All settings will be lost and the device must be recommissioned.

12.0.9 Reboot

Triggers a restart of the device.

13 Runtime

13.0.1 Current Runtime

Current uptime since last restart.

13.0.2 Total Runtime

Total operating hours of the device.

13.0.3 Time in Day Mode

Number of operating hours in day operating mode.

13.0.4 Time in Night Mode

Number of operating hours in night operating mode.

13.0.5 Time in Override Mode

Number of operating hours in override operating mode.

13.0.6 Time in Off Mode

Number of operating hours in off operating mode.

13.0.7 Time since last Change

Number of operating hours that have elapsed since the last configuration change.

13.0.8 Runtime Damper Actuator

Total actuator activity time (no standstill).

13.0.9 Time until Service

Number of operating hours until the next service is due.

Resolution 0.000694444444444444 days

13.0.10 Time since Service

Number of operating hours that have elapsed since last service.

Resolution 0.000694444444444444 days

13.0.11 Time Service is overdue

Number of operating hours that have elapsed since service is required.

Resolution 0.000694444444444444 days

The information and data contained in this documentation have been compiled to the best of our knowledge and in accordance with the current state of the art (subject to technical changes). The currently valid version applies. The proven properties of SCHNEIDER products are based on the use of the products recommended in this documentation. Diverging situations and individual cases are not taken into account, so that we cannot assume any warranty and liability.

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