

Manual: QA Blind Control

Automatic blind control according to the weather forecast, the climate mode and the room temperature.

Introduction

QA Blind Control is an application for automatic blind control in the SHE system. It provides you with comfort when watching television as well as shading as protection against overheating of the room. The application works with the weather forecast and, according to the annual climate mode, the actual room temperature and the setpoint temperature, provides shade during the time of sun exposure. It can also close the blinds when watching television and reacts to wind, rain and arming of the building.

The application cooperates with Mervis SCADA for visualisation and with the other QA applications for room comfort — thus ensuring unified optimal control.

Upstream and downstream applications

Upstream applications

Mandatory:

- **QA Weather Forecast YR** — source of the weather forecast (cloud fraction, wind, rain).

Optional:

- **QA Global Climate Mode** — annual climate mode (summer / winter).
- **QA Profile Control** — household modes.
- **QA Jablotron Integration (JA-121T)** — arming state of the building.
- **TV on state** — for the closing function when watching television.
- **Wind, irradiation and rain sensors, room temperature and outdoor temperature sensors** — make the control more accurate; without sensors, the application works with the weather forecast.

Downstream applications

In terms of control, the application is the last link in the chain — it directly controls the blinds integrated in the unit, which you assign to it on the Device settings card. It does not require any downstream QA application.

Installation and initial setup of the QA

Installation

Purchase the application in the Smart Home and Energy e-shop (<https://eshop.smarthomeenergy.cz>). After the purchase you receive an e-mail with a link to the activation form, in which you choose one of the two installation methods:

- **Installation via the SHE Installation Application (recommended)** — installation and updates take place automatically. Requires the "superuser" credentials for the unit. See the separate "Installation Application" manual for details.
- **Standalone installation file (*.fqax)** — install the file manually into the unit according to the unit manufacturer's instructions (logged in as "superuser"). This option does not allow automatic updates.

You can try out the full functionality of the application before purchase with the TRIAL version, which is available for 2 days.

After a successful installation, the application cards — Blind control, Rooms overview, Setting Properties and Device settings — appear on the unit desktop, together with the mode tiles AUTO, TODAY-DOWN, TODAY-UP, MAN-UP and MAN-DOWN.

Operating prerequisites

- A Fibaro HC3 or Fibaro HC3L controller.
- Blinds integrated in the unit (you assign them on the **Device settings** card).
- **QA Weather Forecast YR** — source of the weather forecast.
- Optionally wind, irradiation and rain sensors and room temperature and outdoor temperature sensors.
- For closing when watching television, the TV on state must be available in the unit.

Opening the application control card

To open the application card in a web browser, move the cursor over the tile (e.g. **Device settings**, **Setting Properties**) and click the eye icon in the top-right corner of the tile.

Warning: Not all cards and tiles are displayed to all users. Each user selects which cards and tiles are displayed on the Display Settings card (sheViewControl application) — levels SHORT, ADVANCED and ADMIN. If you cannot see a described card, check the settings on this card.

User settings

Initial setup procedure

1. **"Device settings" card** — select the section and the room, assign the main schedule, the temperature sensors, the sensors and the controlled blinds. Confirm the settings with the **SAVE** button.
2. **"Setting Properties" card** — set the parameters of the sun protection, the action in wind, rain and arming, closing when watching television and the room parameters.
3. **"Blind control" card** — choose the control mode, for normal operation **AUTO**.

"Device settings" card

On the card you assign the devices and data sources to the application:

- **SECTION** and **ROOMS** — selection of the section and the room in which the application controls the blinds.
- **MAIN SCHEDULE** — Climate schedule from which the application takes over the setpoint temperature.
- **ROOM TEMPERATURE** and **OUTDOOR TEMPERATURE** — room temperature and outdoor temperature sensors.
- **WIND SENSOR, IRRADIATION SENSOR** and **RAIN SENSOR** — optional sensors; if a sensor is not installed, the application works with the weather forecast.
- **BLINDS** — selection of the blinds the application controls.

Confirm the changes with the **SAVE** button.

 **Warning:** When saving settings, always wait until Run status changes to Running. Do not press SAVE before that.

"Setting Properties" card

Sun protection

The setting determines when the blind is closed for shading against overheating of the room:

- **Correction the set cooling temperature** — correction of the setpoint temperature from the Climate schedules (e.g. -2 °C).
- **CLOUD FRACTION LIMIT** — shading takes place only with sufficient sunshine, according to the set cloud fraction limit.
- **Solar protection time From / To** — time window in which the protection applies (e.g. 10–16 h).
- **Sun protection summer** — activation of the sun protection in the summer climate mode.

Wind

Action of the blind when the forecast or the wind speed sensor reading is higher than the **Wind speed limit** (e.g. 30 km/h). With the **Nothing** button you switch the limit off. With the **Wind Open / Wind Close** buttons you choose which action the blind performs.

Closing during TV

The application can close the blind while you are watching television. If an irradiation sensor is installed, the irradiation must be higher than the **Exposure limit**; with the **Nothing** button you switch the limit off. With the **TV Day Close** button, the blind closes only during the day; with the **TV Always Close** button, every time television is watched.

When it rains

With the **Rain Open / Rain Close** buttons you choose the action of the blind when it rains. **Delay after rain** determines the delay after the rain ends (e.g. 5 min).

Arming

The **Armed Close** and **Part.armed Close** buttons determine whether the blinds close when the building is armed or partially armed.

Room Specifications

Setting of how the outdoor environment affects the room temperature:

- **Temperature gain Total**, **Temperature gain by transfer** and **Temperature gain by sunlight** — display the calculated temperature gain of the room.
- **OUTDOOR TEMPERATURE TRANSMISSION** — degree of influence of the difference between the outdoor and indoor temperature.
- **SOLAR GAIN** — degree of the temperature gain from sun exposure.
- **Prediction hours** — number of forecast hours from which the temperature gain is calculated (e.g. 24 h).

“Blind control” card

The main control card of the application. The card header shows the current control state (e.g. AUT-UP).

Control modes:

- **AUTO** — the blinds are controlled by the application according to the configured rules; the recommended mode for normal operation.
- **MANUAL-CLOSED / MANUAL-OPEN** — permanent manual switching of the blinds. With the 0–100 slider you set the required blind position.
- **OPEN TODAY / CLOSED TODAY** — manual switching valid for the current day.

The lower part of the card shows the current values — room and outdoor temperature, setpoint after correction, cooling setpoint, cloud fraction, room cooling state, global climate mode, sensor data (wind, irradiation, rain), weather and the times of sunrise and sunset.

The active control mode is also shown by the **AUTO**, **TODAY-DOWN**, **TODAY-UP**, **MAN-UP** and **MAN-DOWN** tiles on the unit desktop.

“Rooms overview” card

Summary overview of the room state:

- **Blinds** — All / Open / Closed.
- **Auto Ventilation Windows** — All / Open / Cooling by ventilation Efficient / Cooling by ventilation Effective up to setpoint.
- **Cooling** — All / Active.

Notes

- The range of automatic actions depends on the installed sensors (wind, irradiation, rain) — without a sensor, the application works with the weather forecast.
- For closing when watching television, the TV on state must be available in the unit.
- You can verify the full functionality of the application before purchase with the TRIAL version (available for 2 days).
- For clear visualisation and for working with the measurement history and charts, we recommend connecting to **Mervis SCADA**.