

Greenhouse ventilation

Task description

easy is required to control the side windows and roof windows of a greenhouse.

The main switch S1 is used to switch the system on and off. Selector switch S2 is used to define whether the windows are to be moved automatically or manually.

Automatic mode

In Automatic mode, the windows open every three hours and close after a fixed time. The opening times are different:

- At 00:00, 03:00, 09:00, 15:00 and 21:00 hours the windows open for 15 minutes
- At 06:00, 12:00 and 18:00 hours they open for half an hour.

If it is raining (S5), the windows close after a delay time of 10 seconds. The windows cannot be reopened until it has stopped raining.

In strong winds, severe drafts must be prevented. For this, a wind monitor outputs a signal (S6) to easy in order to close the side windows.

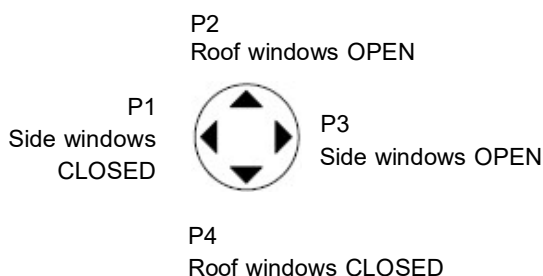
Note

During servicing, you can bridge the contact of the time switch via S7 in order to test the Automatic function.

Manual mode

In Manual mode, you can use S3/S4 to open and close all windows together.

To open or close the windows separately for servicing you use the P buttons on easy.



Note

The integrated limit switches stop the motors of the windows both for opening and closing.

Device class used

easyE4

Wiring

Inputs

I01	S1 Main switch
I02	S2 MANUAL/AUTOMATIC selector
I03	S3 Manual mode: all windows OPEN
I04	S4 Manual mode: all windows CLOSED
I05	S5 Rain sensor
I06	S6 Wind sensor
I07	S7 Test Automatic function

Outputs

Q01	M1 Motor 1 side windows OPEN
Q02	M2 Motor 2 roof windows OPEN
Q03	M1 Motor 1 side windows CLOSED
Q04	M2 Motor 2 roof windows CLOSED

Parameters

T01	Run time of the side windows, 8 sec.
T02	Run time of the roof windows, 10 sec.
T03	500 ms pulse
T04	500 ms pulse
T10	Time delay for all windows CLOSED in the event of rain 10 sec.
H01+H02	Time switch, opening times of the windows

Time Settings of time switches

Time switch H01=	Channel A:	Mo – Su	00:00-00:15
	Channel B:	Mo – Su	03:00-03:15
	Channel C:	Mo – Su	06:00-06:30
	Channel D:	Mo – Su	09:00-09:15
Time switch H02=	Channel A:	Mo – Su	12:00-12:30
	Channel B:	Mo – Su	15:00-15:15
	Channel C:	Mo – Su	18:00-18:30
	Channel D:	Mo – Su	21:00-21:15