

Awning control with sunlight, wind and rain measurement

Task definition

easy is required to provide the controls for an awning.

A switch allows selection of Automatic or Manual mode.

- In Manual mode, the awning can be opened and closed using the P buttons on the easy.
- With Automatic mode, the awning position is controlled by the level of sunlight, rain and wind measured.

If sunlight exceeds a set value, the awning is opened out. If the sunlight is below the set value, the awning is closed.

The awning is also closed for safety reasons when the wind is strong and when it is raining. The relevant limit switch is used to stop the motor during opening and closing operations.

Device class used

easyE4

Wiring

Inputs

P01	easy push button ◀ (stop)
P02	easy push button ▲ (up)
P03	easy push button ▶ (stop)
P04	easy push button ▼ (down)
I01	Selector switch S1 (Automatic ON / OFF)
I02	Limit switch S2 (awning opened out)
I03	Limit switch S3 (awning closed)
I04	PKZ Overload protection S4
I06	Humidity sensor S5
I07	Analog input, sunlight (A1, A2)
I08	Analog input, wind strength (A3, A4)

Outputs

Q01	Motor (down)
Q02	Motor (up)

Parameters

A01	$I07 \geq 5,5 \text{ V}$ (open awning)
A02	$I07 \leq 4,5 \text{ V}$ (close awning)
A03	$I08 \geq 5,5 \text{ V}$ (close awning)
A04	$I08 \leq 4,5 \text{ V}$ (awning ENABLE)