

Function: Automatic Closing

With this module you can adjust the opening time for a garage door via a potentiometer. After the adjusted time the door will be closed automatically. With the three DIP-switches more functions are available.

Usage

The module was designed for the use with garage door operators, model TS 75, TS 100 and SE 130 TS. It may be used in single garages and car parks, when automatic closing is required. For car parks the following restrictions apply:

Used with door operator	Maximum of cars
TS 75	Max. 5 cars
TS 100	Max. 25 cars when no time-switch is used Max. 40 cars with a time-switch, keeping the door opened during rush-hour periods
SE 130 TS	Max. 60 cars (time switch during rush-hours recommended).

With a time-switch a permanent opening during rush-hours can be adjusted (e.g. between 08:00 and 08:30 o'clock in the mornings). The closing procedures are interrupted especially during rush-hours (by impulses from the handsets or the photo-cells) - this may lead to a shorter life-time of the motors' gear. We do not recommend the use in car parks equipped with an up-and-over-door; a sectional door will provide a longer life-time of the operator.



The Safety Advices in the Installation Instructions and User Guides for TS-operator are also valid for the use of the AZ-module!



Important notes for using the AZ-module:

- When using the AZ-module a photo-cell or security-beam must be connected for additional safety! We recommend to use both safety-devices together in car parks.

- Please follow the set-up routine of the TS-operators (force-adjustment and programming of the running-distance) before plugging the AZ-module onto the operator!

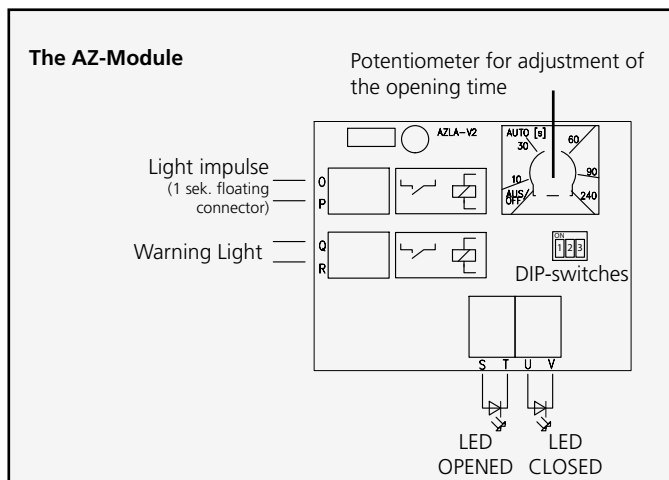
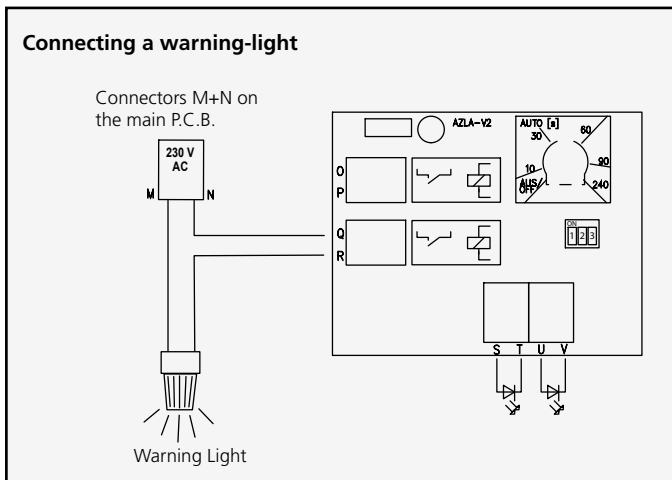
Should the module already be plugged on, we strongly recommend to disable the automatic-closing function (the potentiometer AUTO must be turned to "0").

Adjusting the DIP-switches

The functions may be adjusted to the needs of the users - we recommend to inform the users about the available functions and to agree on the options required. Please pay attention to the changing function of two DIP-switches on the main-electronics (please refer to the table "DIP-switches on the main P.C.B.")

DIP-switches on the AZ-module	
DIP No. 1	„Fast Closing“ - the photo-cell works as a security-device and as impulse-giving device for closing
ON	The garage door will be closed as soon as a car has passed the photo-cell. Should no car pass the photo-cell, then the garage door will be closed after the adjusted time for keeping the door open has elapsed.
OFF	Fast closing is not activated (factory setting)
DIP No. 2	„Closing on Impulse“ - the garage door will be closed on an impulse
ON	When an impulse is given, the open garage door will be closed. If no impulse is given whilst the garage door is open, then the door will be closed automatically after the adjusted time.
OFF	When an impulse is given, the time for keeping the door opened is extended (as to the adjusted time). (Example: 2 minutes are adjusted - an incoming impulse whilst the door is open extends the time by another 2 minutes.) (This is the factory setting)
DIP No. 3	„French Mode“ - Two photo-cells can be connected
ON	This function refers to the French directive N.F.P. 25.362(10.92) - before using this function please check if this function is legal in the country of installation! In case of any doubt, this function may not be used! Two photo-cells can be connected to the main-electronics: C+D: photo-cell TOP (Opening) E+F: photo-cell BOTTOM (Closing) The TOP photo-cell is used to detect obstacles which are about to be pulled into the garage at the top of the garage door. To avoid damages or insurries the door will reverse into the CLOSING direction when a obstacle is detected.
OFF	French Mode is not activated (factory setting)

ATTENTION: The functions of the folloing two DIP-switches on the main-P.C.B. change when the AZ-module is plugged on!	
DIP-switches on the main P.C.B.:	
DIP No. 3	Pre-Warning
ON	4 sec. pre-warning before EACH movement of the door
OFF	4 sec. pre-warning ONLY BEFORE CLOSING the garage door
DIP-No. 4	Reverse Operation
ON	Garage Door will reverse until fully opened <i>Once the automatic closing was interrupted five times in sequence by detection of an obstacle, the operator will only reverse a couple of centimeters on the sixth detection and then stop. With this function it is avoided that the operator tries closing the door permanently. On the next incoming impulse the operator will procede as usual.</i> (This is the factory setting)
OFF	Garage Door will reverse a couple of centimeters to set the obstacle free - the operator remains in this position until an impulse is given. (This option is not recommended when using the automatic-closing function)



Connectors on the AZ-module	
O + P	1 second contact (floating connector) From this connector a 1 second impulse is given to an external device. This impulse may be used for a programmable light-switch, which switches off the light automatically after a period of time. <i>This 1 second impulse will only be given when the operators' internal light comes on - when using the connector we recommend to reduce the time for the internal light to the minimum (potentiometer LIGHT).</i>
Q + R	Pre-warning light (blinking) Connector for an external warning light - the blinking will be regulated automatically by an on-board relays. Supplied Voltage: 230V AC (in reference to the connectors M+N on the main-P.C.B. - please refer to the diagram above.)
S + T	LED "Door OPEN" Connector for an external Diode (LED-lamp) for control of the garage doors' position. The LED-lamp connected here will glow when the operators' opening limit-switch is activated (e.g. the garage door is open)
U + V	LED "Door CLOSED" Connector for an external Diode (LED-lamp) for control of the garage doors' position. The LED-lamp connected here will glow when the operators' closing limit-switch is activated (e.g. the garage door is closed)

Adjusting the time for which the garage door is kept open

The time for keeping the garage door opened is adjusted with the potentiometer AUTO. When turned fully to the left, the automatic closing is disabled. Turning it to the right enables the automatic closing and increases the time.

The maximum time the garage can be kept open is 240 seconds.

Please notice, that the adjusted time might be shorter/longer as to the adjustment of DIP-switch no. 1 and 2.

Connections for external safety-devices (the connector C+D, G+H and I+J are placed on the main P.C.B.)

Additional information concerning the safety-devices can be obtained from the operators' installation instructions

Safety-Beam



Safety-Beam and Hatch-Door Switch

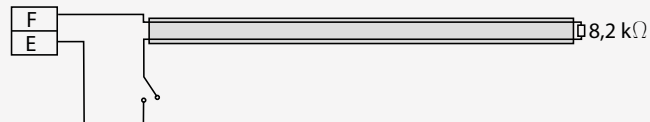


Photo-Cell without selftest

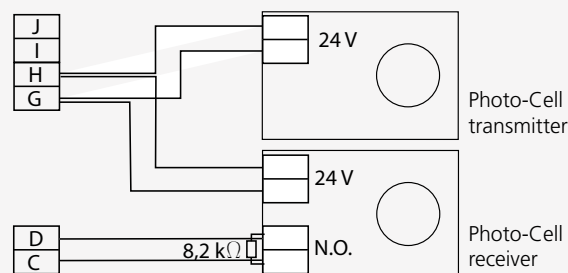


Photo-Cell with selftest

