

## Window regulator

### Switches

The power windows are operated by means of the "switch block for mirror and power window operation" in the driver's door and three further switches in each of the doors.

The switches in the passenger's door and in the rear doors signal the switch status via two lines to the door or general module (ground signal). The switch block in the driver's door transfers its data via the "P-bus" to the door and general module.

**Note:** On series E38 up to 9/95 the "driver's door module" and the "switch block for mirror and power window operation" are two separate control units. As of 9/95, the door module, driver's door is integrated in the switch block.

All switches feature two switch stages. The window is opened or closed by lightly pressing forward or back. On releasing the switch the power window drive is switched off immediately.

The second switch stage is activated by suppressing the first stage. The power window drive is now in automatic mode and is operated until the window is completely opened or closed. Automatic mode is cancelled by operating the switch once again.

Due to legal stipulations, automatic mode is dependent on coded data. Example: In the Australia variant automatic mode in "close" direction is only possible on the driver's door.

### End-position cut-out

In automatic mode, the drive is switched off by way of current measurement. On reaching the end position, the drive is blocked temporarily thus resulting in an increase in the power intake. This increase in power intake is detected in the door module (front windows) or in the rear module (rear windows) and the drive is switched off.

### Finger-trap protection

A finger-trap protection strip is installed at the top of all door window frames. This strip consists of two contact strips enclosed in plastic which make an electrically conductive connection when pressure is applied.

If pressure is applied to the finger-trap protection strip while closing the window, the closing function is interrupted and the window is driven in open direction for approx. 1-2 seconds.

When pressure is applied permanently to the finger-trap protection strip, the window can only be closed by pressing the switch to automatic setting.

The finger-trap protection strips are monitored for line failure by means of a resistor connected in parallel. If a break occurs, the window can also only be closed by pressing the switch to automatic position.

### Convenience opening/closing

The windows and sunroof can be opened and closed via the lock cylinder in the driver's door and by means of remote control.

Convenient opening takes place when the lock cylinder is held in the "unlock" position for longer than 3 seconds or when the corresponding button on the remote control is pressed and held.

Convenient closing takes place when the lock cylinder is held in the "lock" position for longer than 2 seconds or when the corresponding button on the remote control is pressed and held.

The functions can be activated or deactivated by encoding.

### Deactivation of operation

The power windows are active when terminal R is switched on. Initially, the power windows are still operable after switching off terminal R. Automatic cut-out (deactivation) takes place after 16 minutes.

Depending on legal stipulations in the relevant country, the power windows are additionally deactivated by opening the driver's or passenger's door.

Two different versions are codeable:

ECE version	Deactivation after switching off terminal R and opening and closing the driver's or passenger's door.
USA and Australia	Deactivation after switching off terminal R and opening the driver's or passenger's door.

These cutout (deactivation) conditions also apply to the sunroof.