

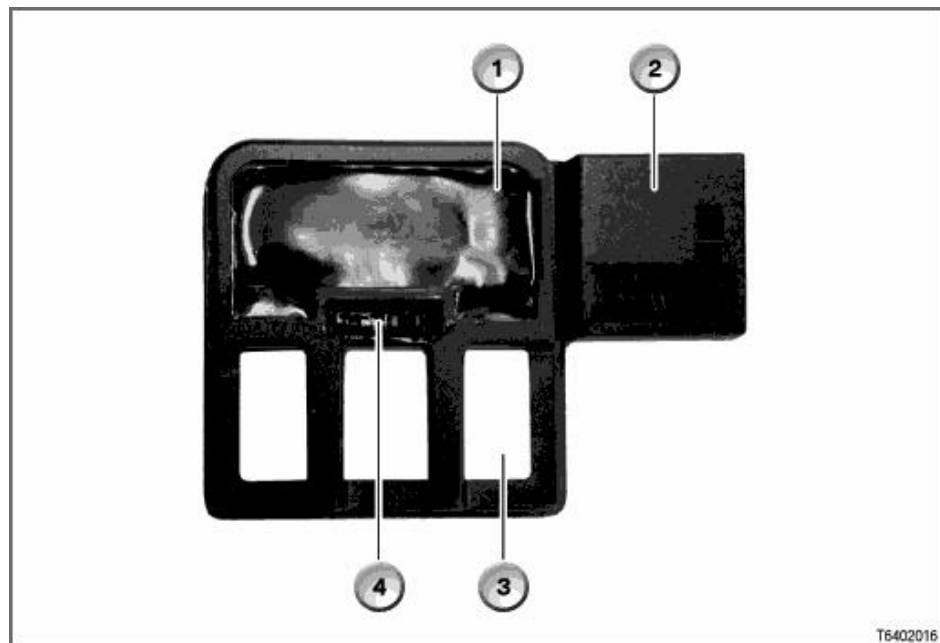
## E60, E61, E63, E64 - Condensation sensor

### Installation location

The condensation sensor is located on the inside of the windscreen, under the mirror base cover, beneath the rain-light sensor.

The condensation sensor must be positioned within the sweep range of the windscreen wiper. This ensures that changes in temperature caused by snow or ice on the outside of the windscreen have no effect.

### Construction



Key	Explanation	Key	Explanation
1	Sensor electronics (protected by a sealing compound)	2	3-pin connector to IHKA control unit
3	Wet measuring cell with protective membrane made of teflon	4	Calibration shaft with laser-calibrated resistances (sensor calibration by manufacturer)

### How it works

The condensation sensor is only active when the IHKA is in automatic mode.

The condensation sensor indirectly exposes condensation on the window surfaces. In other words, the condensation sensor monitors the environment in which condensation forms on the window surfaces. Humidity on the windscreen and the temperature of the windscreen inside the vehicle are measured and a frequency-dependent signal is generated.

To measure the atmospheric humidity, the condensation sensor contains a capacitive sensor element. The sensor element is a component of an electrical oscillation circuit. The oscillation circuit is detuned in proportion to the change in humidity at the windscreen. The resonant frequency of the oscillation circuit is then used as a reference to measure the air humidity. The IHKA control unit evaluates the frequency-dependent signal.

Moreover, the interior and exterior temperatures and the temperatures of the windscreen inside the vehicle are evaluated.

If an air humidity of more than 65 % is detected at the windscreen, the IHKA control unit will initiate measures to prevent condensation on the windows .