

Fault code 29

Outside air/recirculation air motor - No reaction to activation, signal unclear

Diagnostic conditions

- Ignition on



Note!

- ◆ No control module fault stored
- ◆ No fault with supply voltage (5 V)

Possible cause of fault

- ◆ Short circuit to voltage/ground or open circuit in the wiring between the air-conditioning system regulator and the outside air/recirculation air
- ◆ Servo motor for outside air/recirculation air faulty or flap does not open/close smoothly.

Affected terminals

Plug B, terminals 9, 17 and 20

Plug D, terminals 5 and 13

Diagnosis/troubleshooting

Work instruction			Display OK	If not OK
1	Visual inspection	<ul style="list-style-type: none"> ◆ Switch off ignition ◆ Unplug connector for outside air / recirculation from servo motor. 	Check the connector for corrosion and that it is correctly inserted ⇒ Step 2	Clean connector or plug in correctly → End
2	Check 5 V - supply line to outside air/recirculation air	<ul style="list-style-type: none"> ◆ Switch on ignition ◆ Measure voltage at plug of outside air/recirculation air between pin 3 and ground ◆ Measure voltage at plug of the outside air/recirculation air between pin 3 and pin 1 	approx. 5 V ⇒ Step 3	⇒ Step 6

Work instruction			Display OK	If not OK
3	Check signal line and servo motor line for short to B+	<ul style="list-style-type: none"> ◆ Switch off ignition ◆ Remove plug B from the air-conditioning system regulator ◆ Measure voltage at plug B of the air-conditioning system regulator between pin 13 and ground ◆ Measure voltage at plug D of the air-conditioning system regulator between pin 10 and ground ◆ Measure voltage at plug D of the air-conditioning system regulator between pin 2 and ground 	0 V ⇒ Step 4	Repair wiring harness → End
4	Check signal line and servo motor line for short to ground	<ul style="list-style-type: none"> ◆ Measure resistance at plug B of the air-conditioning system regulator between pin 13 and ground ◆ Measure resistance at plug D of the air-conditioning system regulator between pin 10 and ground ◆ Measure resistance at plug D of the air-conditioning system regulator between pin 2 and ground 	$\infty \Omega$ ⇒ Step 5	Repair wiring harness → End
5	Check signal line and servo motor line for interruption	<ul style="list-style-type: none"> ◆ Switch off ignition ◆ Remove plug B from the air-conditioning system regulator ◆ Measure resistance between plug B on the air-conditioning system regulator pin 13 and plug on servo motor for outside air/recirculation air pin 2 ◆ Measure resistance at plug D of the air-conditioning system regulator between pin 10 and ground ◆ Measure resistance at plug D of the air-conditioning system regulator between pin 2 and ground 	< 5 Ω ⇒ Step 10	Repair wiring harness → End

Work instruction			Display OK	If not OK
6	Check 5 V supply lead for short to B+	<ul style="list-style-type: none"> ◆ Remove plug B from the air-conditioning system regulator ◆ Switch on ignition ◆ Measure voltage at plug B of the air-conditioning system regulator between pin 20 and ground 	0 V ⇒ Step 7	Repair wiring harness → End
7	Check 5 V supply line for short to ground	<ul style="list-style-type: none"> ◆ Measure resistance at plug B of the air-conditioning system regulator between pin 20 and ground 	$\infty \Omega$ ⇒ Step 8	Repair wiring harness → End
8	Check 5 V supply line and ground line for open circuit	<ul style="list-style-type: none"> ◆ Measure resistance between plug B on the air-conditioning system regulator pin 20 and plug on servo motor for outside air/recirculation air pin 3 ◆ Measure resistance between plug B on the air-conditioning system regulator pin 9 and plug on servo motor for outside air/recirculation air pin 1 	$< 5\Omega$ ⇒ Step 9	Repair wiring harness → End
9	Check ground line for open circuit	<ul style="list-style-type: none"> ◆ Measure resistance between plug of the air-conditioning system regulator pin B9 and plug on servo motor for outside air/recirculation air pin 5 	$< 5\Omega$ ⇒ Step 11	Repair wiring harness → End
10	◆ Replace servo motor for outside air/recirculation air		→ End	
11	◆ Replace air-conditioning system regulator		→ End	