

## 97 Measurement of closed-circuit current

- Tools
- Preparations on the vehicle
- Measurement

### Tools

Closed-circuit current should be measured using an analog ammeter or a digital multimeter with a long integration time (to filter out voltage peaks).



Item	Special tool designation	Remarks
	Multimeter 155	Workshop Equipment Manual, Gr. 2.5

### Preparations on the vehicle



#### Note

- Before measuring the closed-circuit current, determine the vehicle equipment (M-number, I-number) and establish the expected closed-circuit current with the aid of the attached table. => Measurement

1. Open the front luggage compartment.
2. Using a suitable tool - e.g., upper part of lock with a suitable handle - close lower part of luggage compartment lock while keeping the luggage compartment lid open.
3. Remove the ignition key and lock vehicle (alarm unit is primed).

### Connect measuring instrument

To retain the radio code or PCM code, the following procedure is recommended:

1. Set the measuring instrument to the highest possible current-measuring range.
2. With two alligator clips, connect the measuring instrument to the battery ground and to the unoccupied second body ground which is always available for RHD or LHD.
3. Remove ground strap from the body and secure against contact with the body. The entire vehicle current now flows through the ammeter.

### Measurement

- Select a measuring range which ensures that the pointer of the instrument is in the upper third of the scale, as far as possible. Switch over measuring range without interruption. Read off the measured value only when 30 minutes have passed since the vehicle was locked.
- Do not switch on any electrical loads during measurement. (opening the central locking system, etc.).



#### Note

- If the value of the closed-circuit current is higher than the value determined in the table, the cause must be established systematically.
- The recommended troubleshooting procedure: with the measuring instrument connected, remove the fuse of terminal 30 and the relays one after the other. Observe the display values of the measuring instrument when removing in order to recognize a reduction in current.
- After troubleshooting, screw the ground strap back onto the body in the proper manner.
- The measured values could vary by approx. 20%.
- The values listed in the table depend on the condition of the battery, the room temperature, and the engine temperature.

M number	Designation	Closed-circuit current [mA]
Standard 531 651	Generator, Motronic, Instrument cluster, immobilizer/ central locking, rear power window	14
249	Tiptronic control unit (after	1

Tiptronic	the battery has been disconnected, terminal 15 must have been connected to the control unit at least once).	
Cabrio	Rear power windows, convertible top control module	3
534	Alarm system with passenger compartment monitoring and radio remote control	7
537	Seat memory	1
662, 692, 490, 680	Radio or PCM CD changer and sound package	4
	Total	(max. 30)
	+ 20% tolerance	(max. 6)
	Maximum value	(max. 36)

---

996110, 996111, 996210, 996211, 996310, 996311, 996410, 996411, 996610, 996611, 996810, 996811, 996850, 996851, 996430, 996431