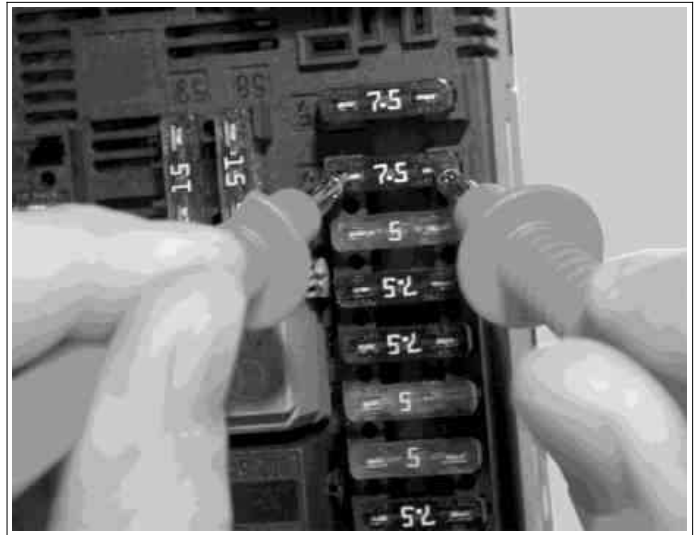


Measurement of voltage drop

P54.15-2847-11

In order to make possible rapid pinpointing of closed-circuit accessories, this can also take place alternatively by disconnecting fuses or CAN-distributors by measuring the voltage drop directly at a fuse.

To do this a measurement must be made directly using a suitable multimeter (e.g. Fluke 189) in the microvolt range on the plugged-in fuse of the circuit 30 control unit.

For the measurement (see picture) use sufficiently pointed probes to guarantee good contact through the opening in the plastic housing of the fuse.

i Use probes from electrical connection kit (part no. A 220 589 00 99 00).

The quiescent current can be computed via Ohm's law from the measured voltage value and the internal resistance of the fuse measured.

Example calculation with a 30-A fuse:

$I=U:R$

$100 \mu V : 1,77 m\Omega = 56 mA$

Measured voltage at the fuse: $100 \mu V$

Internal resistance of fuse: $1.77 m\Omega$

Quiescent current computed: $56 mA$

However, the value computed should not be considered as an absolute value, but due the measurement in the micro-volt-range, serve much more as information as to whether a quiescent current is present or not.

i For exact determination of the quiescent current a measurement is required with current clamps or interruption-free looped-in multimeter.

Approved current clamps: See Online portal GOTIS.

Fuse	Internal resistance
5 A	17,3 M Ω
7.5 A	10,3 M Ω
10 A	7,4 M Ω
15 A	4,6 M Ω
20 A	3,07 M Ω
25 A	2,33 M Ω
30 A	1,77 M Ω
40 A	1,3 M Ω
40 A Maxi	1,52 M Ω