

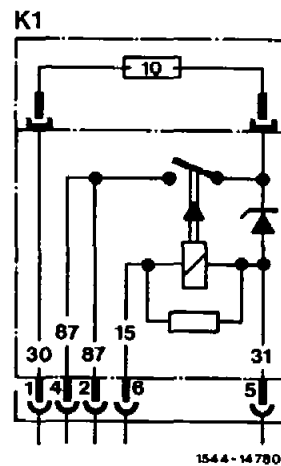
42-0725 Function and test of 5, 7 and 9-pln relays Overvoltage protection from 09/85

Depending on vehicle model and special equipment, a 5-, 7- or 9-pole overvoltage protection relay has been installed. These relays protect the control units (ABS, CIS-E, etc.) from overvoltage.

Function

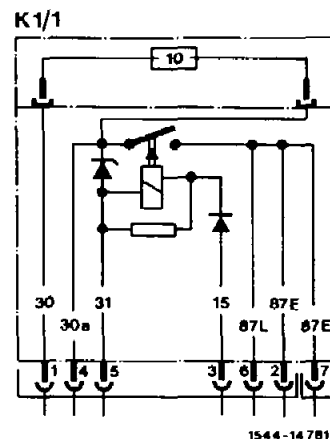
The existing battery voltage is permanently available at terminal 30 of the relay. On the 7- and 9-pole versions the battery voltage is also led to terminal 30a via the 10 A flat plug fuse. If the ignition/starter switch is turned to position 2 (driving position), voltage exists at terminal 15 and the relay operates. Terminal 87 (5-pole version) or 87E and 87L (7- and 9-pole version) are supplied with voltage.

Voltages > 22 V in the electric system are led directly to ground by the Z-diode (fuse defective).



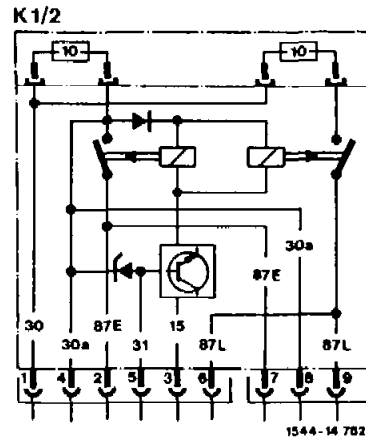
Circuit - 5-pole overvoltage protection

In the event of overloads, which occur after the overvoltage protection, the circuit is interrupted by the 10 A flat plug fuse. The 9-pole version is fused separately at terminals 87E and 87L, whereby an interruption of the fuse from 87E also causes switching off of 87L.



Circuit - 7-pole overvoltage protection

Circuit - 9-pole overvoltage protection
(e.g. 4MATIC, ASD without ASR)



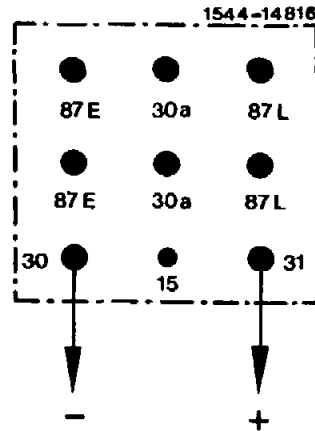
Testing Z-diode In relay (5-pole)

Perform test with ABS tester and protective adapter in accordance with test step 12.

Testing Z-diode In relay (7- and 9-pole)

Perform test with an approved multimeter as follows:

1. Switch multimeter to the measuring range for diode testing.
2. Connect the relay which has been removed to the multimeter while paying attention to polarity; connection + of multimeter to terminal 31 and connection - to terminal 30. Use electrical connection set for this purpose.



Nominal value 0.4 to 1.5 V

3. If the nominal value is not attained, check 10 A flat plug fuse or replace overvoltage protection relay.