

Load-shedding relay for ignition and fuel injection system

Terminal 87 provides the load-shedding relay for ignition and injection to the connected control units and components.



Note!

The correct installation location for the load-shedding relay for ignition and injection can be called up via the hotspot in the diagnosis wiring diagram.

Functional description

As of terminal 15, the engine control unit controls the load-shedding relay for ignition and injection.

After actuation by the engine control unit, terminal 30 connects with the excitation coil. The load-shedding relay for ignition and fuel injection system engages. Terminal 30 (supply voltage) is switched to the ignition coils e.g. via the fuse carrier.

The ignition coil operates according to the principle of a transformer. 2 coils are placed onto a shared ferric core: a primary coil and a secondary coil. One end of the primary coil is connected to the vehicle voltage via the load-shedding relay for ignition and injection. The other end of the primary coil is connected to the ignition output stage.

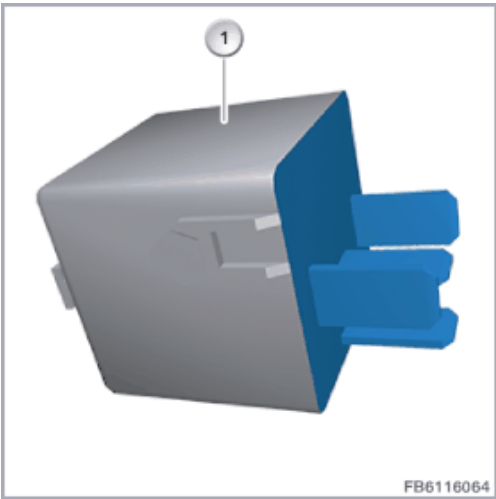
The task of the ignition output stage is to connect the primary circuit for the ignition coil to the ground. The ignition output stages are integrated into the engine control unit.



Note!

Observe the wiring diagram in the diagnosis!

The following graphic shows an example of a relay.



Item	Explanation
1	Relay (4-poles)

Structure and inner electrical connection

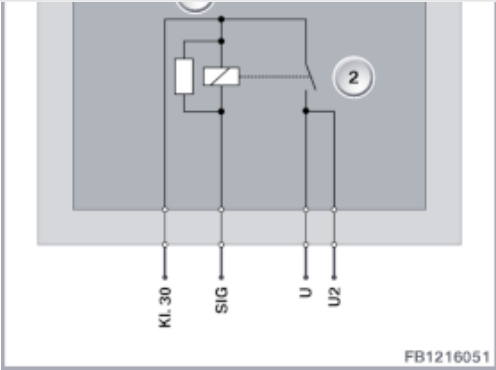
A mechanical relay works according to the principle of the electromagnet. A current flow in the excitation coil creates a magnetic current through the ferromagnetic core. Here, there is a moving anchor mounted on bearings,



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Item	Explanation
1	Excitation coil
2	Switch contact

Pin assignments

Pin	Explanation
Terminal 30	Terminal 30 permanent positive
SIG	Excitation coil actuation (by engine control unit as of terminal 15 ON)
U	Terminal 87 power supply line (e.g. to the ignition coils via fuse carriers)
U2	Terminal 87 power supply line (depending on the equipment)

Nominal values

Observe the following setpoint values for the load-shedding relay for ignition and injection:

Variable	Value
Supply voltage of low voltage side	9 to 16 V
Temperature range	-40 to 85 °C

Diagnosis instructions

Failure of the component:

If the load-shedding relay for ignition and injection fails, the following behaviour is to be expected:

- Fault entry in the engine control unit

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