

## Component specifications

The component specification gives the value of the component when the connector is disconnected. Where no value is given, it is not possible to measure a relevant value at the component.

The figure within the brackets indicates the terminal pin on the component to which the value refers.

Designation	Type	Supply voltage	Value	Other
Air conditioning (A/C) relay	Mechanical relay	12V (#1)	Approximately 70 $\Omega$ (coil)	
A/C pressure sensor	Absolute manifold absolute pressure (MAP) sensor	5 V (#3)	-	
Air conditioning (A/C) pressure switch	Pressure switch (Pressostat)	12 V (#2)	0 $\Omega$ at air conditioning (A/C) off	-
Stop lamp switch	Position switch	12 V (#1)	The switch is closed when the pedal is depressed (terminals #1-#2)	
Fuel temperature sensor	NTC resistor	5V (#3)	5896 $\Omega$ at 0 °C 3792 $\Omega$ at 10 °C 2500 $\Omega$ at 20 °C 1707 $\Omega$ at 30 °C 1175 $\Omega$ at 40 °C (#1-#2)	Integrated in the fuel pressure sensor
Fuel pressure sensor	Piezo resistive pressure sensor	5V (#3)	-	
Engine cooling fan (FC) control module	-	12 V (#2)	-	
Evaporative emission system (EVAP) valve	Electromagnetic valve	12 V (#1)	17-24 $\Omega$ at 20 °C (terminals #1-#2)	
Accelerator pedal (AP) position sensor	Electronic pedal sensor with two output signals, PWM and a linear analog	12 V (terminal #1) 5 V (terminal #6)	-	

	signal			
Throttle unit	Electronic throttle control module with two integrated potentiometers and a damper motor	5 V (#3)	1.2-3.5 $\Omega$ (terminals #1-#4 motor winding). 1000-1500 $\Omega$ (terminals #2-#3 Parallel connection of potentiometers 1 and 2). Approximately 820 $\Omega$ when the throttle is closed. Approximately 1580 $\Omega$ at wide open throttle (terminals #2-#6 potentiometer 1). Approximately 1480 $\Omega$ when the throttle is closed. Approximately 500 $\Omega$ at wide open throttle (terminals #2-#5 potentiometer 2)	-
Injector	Electromagnetic injector valve	12 V (#1)	Approximately 12 $\Omega$ at 20 °C (terminal #1-#2)	
Camshaft sensor	Magneto-resistive sensor	5 V (#1)	-	
Knock sensor (KS)	Piezo electric component	-	Greater than 1 M $\Omega$ (terminal #1-#2 front knock sensor (KS)). Greater than 1 M $\Omega$ (terminals #3-#4 rear knock sensor (KS))	Separate signal ground for the knock sensors (KS)
Boost pressure sensor	Absolute manifold absolute pressure (MAP) sensor	5 V (#3)	-	

Preheating front heated oxygen sensor (HO2S)	PTC resistor	12 V (#3)	2.6-3.4 $\Omega$ at 20 °C (terminals #3-#4)	
Preheating, rear heated oxygen sensor (HO2S)	PTC resistor	12 V (#1)	Approximately 9 $\Omega$ at 20 °C (terminal #1-#2)	
Mass air flow (MAF) sensor	-	12 V (#2) 5 V (#4)	-	
Air temperature sensor, intake	NTC resistor	5 V (#3)	5886 $\Omega$ at 0 °C 3791 $\Omega$ at 10 °C 2510 $\Omega$ at 20 °C 1715 $\Omega$ 30 °C (#1-#2)	Integrated in the boost pressure sensor
Leak diagnostic unit	Consists of an air pump, an electromagnetic valve and an internal heating element (PTC resistor)	12 V (#4)	Approximately 118 $\Omega$ (terminals #1-#4 pump motor winding) 27.9 -34.1 $\Omega$ (terminals #3-#4 Valve coil)	
Engine coolant temperature (ECT) sensor	NTC resistor	5 V (#1)	15040 $\Omega$ at -20 °C 2450 $\Omega$ at 20 °C 318 $\Omega$ at 80 °C (#1- #2)	
Oil pressure switch	Pressure switch (Pressostat)	12 V (#1)	Grounded in the cylinder block. Closed switch when the oil pressure is low	
Camshaft reset valve	Electromagnetic valve	12 V (#1)	3-5 $\Omega$ (#1-#2)	
Flywheel sensor	Engine speed sensor	-	125 $\Omega$ (+/- 17 $\Omega$ ) at 20 °C (terminals #1-#2)	
System relay	Mechanical relay	12V (#1)	Approximately 80 $\Omega$ (coil)	
Starter relay	Mechanical relay	12V (#1)	Approximately 80 $\Omega$ (coil)	
Turbocharger (TC) control valve	Electromagnetic valve (3 way)	12 V (#1)	23 $\Omega$ (+/- 1.2 $\Omega$ ) at 20 °C (terminals #1-#2)	