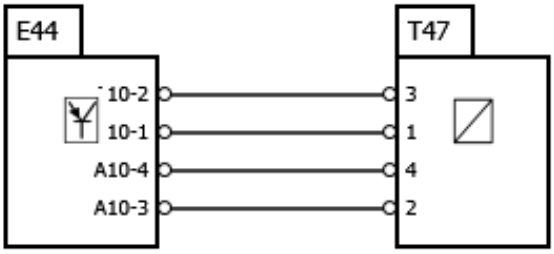
YS2R6X400E9183445 / EMS, Engine Management System / E 44, EMS control unit / S6 / T, Sensors and monitors / T47, Combined sensor



T47, Combined sensor

T47, Combined sensor

The combined sensor is located on the intake manifold and measures the pressure and temperature of the charge air to the cylinders. Measurement range is 0-4 bar (A). The temperature sensor operates in the same way as the charge air temperature sensor T121. The pressure sensor is a capacitive sensor and measures the absolute pressure.For the temperature sensor, the resistance between the two conductors (black and brown) is 2,410 ± 195 ohms at 20°C.

Charge air pressure

The charge air pressure sensor detects the absolute pressure in the intake manifold, i.e. the atmospheric pressure plus the positive pressure provided by the turbocharger.

Charge air temperature

The charge air temperature in the intake manifold should be approximately 30°C for an engine at operating temperature running at idling speed and if the ambient temperature is approximately 20°C. If the engine is switched off, residual heat from the intake manifold may affect the temperature. Temperatures of almost 80°C often indicate a fault in the temperature sensor. A fault indication may be that the cooling fan is running at full speed even when the engine is cold.