C30, 2009, D4164T, MTX75, YV1MK765292131804, 131804

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Description of parameters

Hint:

Not all the parameters that are described need to be implemented in the control module. This varies between different systems and markets.

Parameters, value

Vehicle speed (km/h)

Measurement range 0-250 km/h. Displays present speed.

Note! Miles per hour in certain markets.

Battery voltage to control module (V) Measurement range 0 - 28.8 V. The normal value is 13 - 14.5 V when the alternator is charging. Displays the power supply to the engine control module (ECM). **Battery voltage (V)** Measurement range: 0-28.8 V.

0-28.8 V. The normal value is 13-14.5 V when the generator (GEN) is charging. Indicates the power supply to the central electronic module (CEM).

Engine coolant temperature (ECT) (°C)

Measurement range: -50 - +150 °C. The engine control module (ECM) derives the temperature from the engine coolant temperature (ECT) sensor signal. **Boost pressure** "actual value" (Pa) Measurement range: 0-5,000 hPa. The value indicates the pressure in the intake manifold after the turbocharger (TC). The engine control module (ECM) compares the "desired" and "actual" values. In case of deviations the engine control module (ECM) controls the boost pressure. **Boost pressure** "desired value" (Pa) Measurement range: 0-5,000 hPa. The desired value is one of the engine control module (ECM) calculated values. **Atmospheric** pressure (Pa) Measurement range: 0-3,500 hPa. The signal from the internal atmospheric pressure sensor in the control module is used to calculate the atmospheric pressure. Normal value at 0 meters above sea level is approximately 1013 hPa. Analog accelerator pedal (AP)(%) Measurement range:

0-100%. Displays the accelerator pedal (AP) position derived from the analog signal from the accelerator pedal (AP) position sensor. Approximately 0% =the accelerator pedal (AP) completely released. Approximately 99% = accelerator completely depressed. The analog signal is usually used by the engine control module (ECM). Mass air flow (MAF) sensor, (kg/h)The value indicates the mass air flow that passes through the mass air flow (MAF) sensor per hour. The value varies, depending on factors such as exhaust gas recirculation (EGR) and air conditioning (A/C). Normal value when idling is approximately 24 kg/h Mass air flow/stroke "actual value" (g/stroke) The value indicates the mass air flow that passes through the mass air flow (MAF) sensor. Measurement range 0-2,000 mg/s (s =piston stroke) Normal value when the engine is idling is approximately 250 mg/s Mass air flow/stroke "desired

value" (g/stroke)

The value indicates the mass air flow that should pass through the mass air flow (MAF) sensor. The desired value is one of the engine control module (ECM) calculated values.

Turbocharger (TC) control valve (VNT governor)

Displays the control signal for the turbocharger (TC) control valve. At idle speed the value must be approximately 65%. With the ignition on the value must be approximately 84%.

Air temperature MAF (°C)

Measurement range: -40 - +120 °C. The engine control module (ECM) calculates the temperature from the temperature sensor for intake air (integrated in the mass air flow (MAF) sensor).

Intake air temperature (IAT) (°C)

Measurement range: -40 - +120 °C. The engine control module (ECM) calculates the temperature from the temperature sensor on the intake manifold.

Fuel pressure sensor, rail (Pa)

Measurement range: 0-2.000.000 hPa Displays the pressure in the rail. The pressure must

be approximately 280,000 hPa at idle speed.

Fuel temperature sensor (°C)

Measurement range -50 - +205 °C. Displays the fuel temperature in the return line.

Current through the fuel pressure control valve (A)

Displays the current through the fuel pressure control valve. Measurement range: 0 - 32,500 mA. Normal value when idling is approximately 1400 mA. With ignition on the value must be approximately 400 mA. **Engine speed**

Engine speed (rpm) sensor

Measurement range 0-6,000 rpm. The engine control module (ECM) calculates the engine speed (RPM) using the engine speed (RPM) sensor. Normal value when the engine is idling is 780-800 rpm.

Temperature sensor particle filter (°C)

Measurement range: 100 - 1000 °C. Displays present temperature on the particle filter. Normal value when idling is approximately 100 -200 °C.

Note! The lowest possible temperature that

the temperature sensor can measure is 100 °C. This means that the value is 100 °C even when the actual temperature is less.

Pressure sensor particle filter (Pa)

Measurement range: 0-5,000 hPa. Indicates the difference in pressure upstream and downstream of the particle filter. Normal value when idling is approximately 3 - 20 hPa.

EGR valve

Measurement range 0-100%. Shows how Engine control module (ECM) deploys the EGR-valve. Normal value when idling for over 2 minutes is approx. 100 %, (EGR closed). Normal value during throttle application is approx. 10-70% (EGR open). **EGR** position sensor Measurement range 0-100%. Indicates actual throttle position in the EGR-valve. Normal value when idling for over 2 minutes is approx. 0-2 %, (EGR closed). Normal value during

throttle application is approx. 10-90% (EGR open).

Neutral position sensor, PWM signal (%) (Only versions with automatic

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start/stop of
engine)
Shows the gear
lever's position
based on the three
options, odd gears,
neutral position and
even gears,
according to:
25 - 35 % = Odd
gears
45 - 55 % = Neutral
mode
70 - 80 % = Even
gears
Number of
adaptations, even
gears (Each) (Only
versions with
automatic
start/stop of
engine)
Shows the number of
successful
adaptations in even
gears. For automatic
start/stop of engine
to be active, the
number of
adaptations, even
gears, must be 5.
Number of
adaptations, odd
gears (Each) (Only
versions with
automatic
start/stop of
engine)
Shows the number of
successful
adaptations in odd
gears. For automatic
start/stop of engine
to be active, the
number of
adaptations, odd
gears, must be 5.
Air pressure, brake
booster (kPa)
(Only versions
with automatic
start/stop of
engine)
Shows the air
pressure, in kPa, in
the brake booster
registered by the
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vacuum pressure sensor.

Parameter, status

Glow plug relay

Displays if the glow plug relay is activated or not. OFF = Glow plug not activated ON = Glow plug activated

Air conditioning (A/C) relay

Displays if the Air conditioning (A/C) relay is activated or not. OFF = Glow plug not activated ON = Glow plug activated

Stop lamp switch

The engine control module (ECM) calculates the value from the stop lamp switch signal. Stop lamp switch activated. Stop lamp switch not activated.

Clutch pedal position

The engine control module (ECM) calculates the value from the clutch pedal signal. Clutch pedal activated. Clutch pedal not activated.

Additive dosing module (ADM) status

Engine control module (ECM) checks the status of the additive dosing module (ADM). Ok = Signal from additive dosing module (ADM) is OK. Not Ok = Signal from additive dosing

module (ADM) is incorrect.

Neutral position sensor, adaptation status (Only versions with automatic start/stop of engine)

After a successful adaptation of the neutral position sensor has been carried out parameter 1 appears when the gear lever is in the neutral position and 0 when a gear is engaged. If adaptation failed, the parameter value shown is 0 when the gear lever is in the neutral position.

Clutch pedal switch, 25% (Only versions with automatic start/stop of engine)

The clutch pedal switch is activated when the clutch is depressed 25%, where 0% corresponds to a fully released clutch pedal. Activated = Clutch depressed 25%. Deactivated - Clutch not depressed 25%.

Clutch pedal switch, 75% (Only versions with automatic start/stop of engine)

The clutch pedal switch is activated when the clutch is depressed 75%, where 0% corresponds to a fully released clutch pedal. Activated = Clutch

depressed 75%. Deactivated - Clutch not depressed 75%.

Automatic start/stop of engine

Note! Only on vehicle with the function automatic engine start/stop and brake energy regeneration.

Seat belt buckle, driver's side

The parameter indicates whether the Engine control module (ECM) senses whether the driver's seat belt buckle is locked or not. Engine control module (ECM) obtains the value via CAN from the Supplemental restraint system module (SRS). Locked = the driver's seat belt buckle is engaged. Not engaged = the driver's seat belt buckle is not engaged. **DRIVe button**, status The parameter indicates whether the Engine control module (ECM) recognizes whether the DRIVe button has been pressed in or not. Not pressed = the button is not pressed in. Pressed = the button is pressed in.

The Engine control module (ECM) obtains the value via CAN from the climate control unit (CCM). When the button is

pressed in, it produces a short signal. The signal then returns to the not pressed-in position regardless of the button position. The button is located in the tunnel console.

DRIVe button indication, status

The parameter shows the status of the request for illuminating the DRIVe button's indication LED from the Engine control module (ECM). Off = No request (indication must not illuminate) On - The request is sent (indication should illuminate) The engine control module (ECM) sends the request via CAN to the climate control system that illuminates the indication.

Battery Monitoring Module

Note! Only on vehicle with the function automatic engine start/stop and brake energy regeneration.

Battery current

The parameter shows the current in respectively out of the battery. Measurement range: -512 A - +512 A. The value shows the vehicle's actual power consumption calculated by the battery monitoring sensor via the Engine control module (ECM). The

battery monitoring sensor registers the current in to or out of the battery and its size. With the ignition on without the external battery or battery charger connected, the vehicle's actual power consumption can be measured. By switching on different consumers their power consumption can be noted.

Caution! With the engine running, external battery or

battery charger connected, it is only possible to note whether current goes in to or out of the battery and its size. If a consumer is then switched on in the vehicle, it is not guaranteed to be noted as the alternator/battery charger compensates for the current change.

Battery voltage

The parameter shows the battery voltage at the battery poles. Measurement range: 0-16 V. The value indicates the battery's actual voltage calculated by the battery monitoring sensor via the Engine control module (ECM).

Temperature (main) battery

The parameter indicates the battery's calculated

temperature. Measurement range: -40 - +80 °C. The battery monitoring system calculates battery's internal temperature (battery acid) from the negative pole's temperature with the aim of regulating the correct charge voltage and calculating the correct battery capacity. Charge level (main level) battery (SoC State of Charge) The parameter indicates the battery's calculated charge level. Measurement range 0-100%. The value indicates the battery charge level calculated by the battery monitoring system via the Engine control module (ECM). Expressed as the amount of electrical energy that can be stored in a fully charged battery. Stated in % of full charge. Also called State of Charge, SoC **Charge balance** batterv The parameter indicates the actual charge balance of the battery. Measurement range: -100 - +100 Ah. The value indicates the charge balance calculated by the battery monitoring sensor via the Engine control module (ECM) for the actual operating cycle. A positive

value indicates that the battery is charged with energy (increased its capacity). A negative value indicates that the energy is discharged from the battery (reduced its capacity). **Calculating battery** status The parameter indicates the actual status of the battery monitoring sensor's calculation of the battery status. Not reliable = The sensor's calculation is not reliable. Reliable = The sensor's calculation is reliable. There are situations where the battery monitoring sensor's calculations of the battery status are temporarily unreliable. In such an instance the battery is charged directly from its poles or when the standby current consumption is more than 250 mA for 7 davs. This means that the sensor never has the opportunity to measure the battery's standby voltage and thus does not calculate the battery's charge status. If the calculation is not reliable, functions such as brake energy regeneration and automatic start/stop of the engine are blocked. Standby current

average value

The parameter

indicates the actual status of the battery monitoring sensor's calculation of the battery status. Measurement range: 0 - 250 mA In "sleep mode", the battery monitoring sensor registers the vehicle's standby current every minute. The readout indicates the standby current's average value that the vehicle has had over the last 10 hours that the car has been in "sleep mode". The average value of the vehicle's standby current should be less than 25 mA. Communication battery monitoring system, status The parameter indicates the actual status of communication between the battery monitoring sensor and the Engine control module (ECM) via the serial communication method, LIN. The following can be shown: No communication = Communication not working. Communication OK = Communication works. In the event of a communication fault, a DTC will be stored in the Engine control module (ECM).

Hint:

In the event of a fault or an intermittent fault, it can take up to 10 seconds for the control module to

show the correct status.

Battery monitoring sensor, status

The parameter indicates the actual status of the internal checks that the battery monitoring system performs. The following can be shown: Internal fault detected - Fault detected. Fault-free = No fault detected. In the event of a detected internal fault, a DTC will be stored in the Engine control module (ECM).

Hint:

In the event of a fault or an intermittent fault, it can take up to 10 seconds for the control module to show the correct status.

Battery operating time since reset of battery monitoring sensor

The parameter indicates how long the battery monitoring sensor has calculated the battery to be in the vehicle for. Measurement range: 0 - 4095 days

Note! When resetting information about the power supply, where the battery monitoring sensor is reset, among other things, the value for operating time is reset.

Request charge voltage alternator

The parameter indicates the voltage that the alternator should generate at the actual point of driving. Measurement range: 10.6 - 16.0 V In the event of a detected internal fault, a DTC will be stored in the Engine control module (ECM).

Note! On some occasions the Engine control module (ECM) permits other voltage levels than the request does. This occurs for example when the Engine control module (ECM) activates the brake energy regeneration function.

Alternator control

The parameter indicates the actual status of alternator control. The alternator is controlled differently depending on the engine's efficiency, power consumption in the vehicle and the battery's status. The following can be shown: Conventional charging Brake energy regeneration, slow Brake energy regeneration, fast Brake energy regeneration, slow without discharge Battery reconditioning For further

information, see Design and function Brake energy regeneration.

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