

J1939

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MODBUS REGISTER MAP

Can access total of 32 successive registers.(1 register = 2 bytes)

Modbus RTU set to 9600,N,8,2

NOTE: Registers are initially set to HEX FFFF.

Some PID's occupy 2 registers. (ie. 247)

Register
Address

1	127	91	92	94	100	102	105	110
9	190	84	168	172	173	174	175	177
17	247	247	XX	183	52	90	98	99
25	109	111	124	XX	101	XX	158	176
33	XX	22	184	185	186	XX	XX	182
41	182	235	235	236	236	244	244	245
49	245	XX	XX	XX	XX	248	248	249
57	249	250	250	XX	XX			

<i>Sample Modbus RTU Request:</i>	<i>Sample Slave Response to the Modbus RTU Request:</i>
<p>To fetch Register 20 to 22:</p> <p>121,03,00,19,00,03,CRC_LO,CRC_HI</p> <p>121 = Slave Address 03 = Function Code 00 = Starting Address High 19 = Starting Address Low 00 = No. of Registers High 03 = No. of Registers Low</p>	<p>121,03,06,D1,D2,D2,D4,D5,D6,CRC_LO,CRC_HI</p> <p>121 = Slave Address 03 = Function Code 06 = Byte Count D1 - D6 = Data</p>

PARAMETER I.D. DESCRIPTION

22. Extended Crank Case Blow-By Pressure

Data Length: 1 byte
Resolution: 0.05 kPa/bit gain
No offset

52. Engine Intercooler Temperature

Data Length: 1 byte
Resolution: 1EC/bit gain
-40EC offset

84. Wheel Based Vehicle Speed

Data Length: 2 bytes (msb first)
Resolution: 1/256 km/h per bit gain
No offset

90. Power Takeoff Oil Temperature

Data Length: 1 byte
Resolution: 1EC/bit gain
-40EC offset

91. Accelerator Pedal Position

Data Length: 1 byte
Resolution: 0.4%/bit gain
No offset

92. Percent Load at Current Speed

Data Length: 1 byte
Resolution: 1%/bit gain
No offset

94. Fuel Delivery Pressure

Data Length: 1 byte
Resolution: 4 kPa/bit gain
No offset

98. Engine Oil Level

Data Length: 1 byte
Resolution: 0.4%/bit gain
No offset

99. Engine Oil Filter Differential Pressure

Data Length: 1 byte
Resolution: 0.5 kPa/bit gain
No offset

100. Engine Oil Pressure

Data Length: 1 byte
Resolution: 4 kPa/bit gain
No offset

101. Crankcase Pressure

Data Length: 2 bytes (msb first)
Resolution: 7.8125×10^{-3} kPa/bit gain
-250 kPa offset

102. Boost Pressure

Data Length: 1 byte
Resolution: 2 kPa/bit gain
No offset

105. Intake Manifold Temperature

Data Length: 1 byte
Resolution: 1%/bit gain
-40EC offset

109. Coolant Pressure

Data Length: 1 byte
Resolution: 2kPa/bit gain
No offset

110. Engine Coolant Temperature

Data Length: 1 byte
Resolution: 1EC/bit gain
-40EC offset

111. Coolant Level

Data Length: 1 byte
Resolution: 0.4%/bit gain
No offset

124. Transmission Oil Level

Data Length: 1 byte
Resolution: 0.4%/bit gain
No offset

127. Transmission Oil Pressure

Data Length: 1 byte
Resolution: 16kPa/bit gain
No offset

158. Battery Potential (Voltage) - Switched

Data Length: 2 bytes (msb first)
Resolution: 0.05V/bit gain
No offset

168. Electrical Potential (Voltage)

Data Length: 2 bytes (msb first)
Resolution: 0.05V/bit gain
No offset

172. Air Inlet Temperature

Data Length: 1 byte
Resolution: 1EC/bit gain
-40EC offset

173. Exhaust Gas Temperature

Data Length: 2 bytes (msb first)
Resolution: -0.03125EC/bit gain
-273EC offset

174. Fuel Temperature

Data Length: 1 byte
Resolution: 1EC/bit gain
-40EC offset

175. Engine Oil Temperature

Data Length: 2 bytes (msb first)
Resolution: -0.03125EC/bit gain
-273EC offset

176. Turbo Oil Temperature

Data Length: 2 bytes (msb first)
Resolution: -0.03125EC/bit gain
-273EC offset

177. Transmission Oil Temperature

Data Length: 2 bytes (msb first)
Resolution: -0.03125EC/bit gain
-273EC offset

182. Trip Fuel

Data Length: 4 bytes (msb first)
Resolution: 0.05L/bit gain
No offset

183. Fuel Rate

Data Length: 2 bytes (msb first)
Resolution: 0.05L/h per bit gain
No offset

184. Instantaneous Fuel Economy

Data Length: 2 bytes (msb first)
Resolution: 1/512 km/L per bit gain
No offset

185. Average Fuel Economy

Data Length: 2 bytes (msb first)
Resolution: 1/512 km/L per bit gain
No offset

186. Power Takeoff Speed

Data Length: 2 bytes (msb first)
Resolution: 0.125 rpm/bit gain
No offset

190. Engine Speed

Data Length: 2 bytes (msb first)
Resolution: 0.125 rpm/bit gain
No offset

235. Total Idle Hours

Data Length: 4 bytes (msb first)
Resolution: 0.05 h/bit gain
No offset

236. Total Idle Fuel Used

Data Length: 4 bytes (msb first)
Resolution: 0.5L/bit gain
No offset

244. Trip Distance

Data Length: 4 bytes (msb first)
Resolution: 0.125 km/bit gain
No offset

245. Total Vehicle Distance

Data Length: 4 bytes (msb first)
Resolution: 0.125 km/bit gain
No offset

247. Total Engine Hours

Data Length: 4 bytes (msb first)
Resolution: 0.05 h/bit gain
No offset

248. Total Power Takeoff Hours

Data Length: 4 bytes (msb first)
Resolution: 0.05 h/bit gain
No offset

249. Total Engine Revolutions

Data Length: 4 bytes (msb first)
Resolution: 1000 r/bit gain
No offset

250. Total Fuel Used

Data Length: 4 bytes (msb first)
Resolution: 0.5 L/bit gain
No offset