

GOV10 Modbus Register List 04/26/06 Release version 2.0

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#####
# read permitted only in blocks of 8 #
# example: 00001 through 00008 #
#####
00001 "Local/Remote RPM Target 0=Loc "
00002 "ROI active on RTU port 1=ON "
00003 "FMP Auto Zero Bit 1=ON "
00004 "FSP Auto Zero Bit 1=ON "
00005 "FCP Auto Zero Bit 1=ON "
00006 "DP Auto Zero Bit 1=ON "
00007 "RESERVED "
00008 "RESERVED "
```

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#####
# read permitted only in blocks of 8 #
# examples:00001 through 00008 #
#           00001 through 00040 #
#           00033 through 00040 #
#####
10001 "Control Pressure Low "
10002 "Control Pressure High "
10003 "Outlet Pressure Low "
10004 "Outlet Pressure High "
10005 "Supply Pressure Low "
10006 "Supply Pressure High "
10007 "Delta P Low "
10008 "Delta P High "
10009 "Barometric Pressure Low "
10010 "Barometric Pressure High "
10011 "Fuel Temperature Low "
10012 "Fuel Temperature High "
10013 "Demand (ma) Signal Low "
10014 "Demand (ma) Signal High "
10015 "RESERVED "
10016 "RESERVED "
10017 "Auxiliary #1 (ma) Signal Low "
10018 "Auxiliary #1 (ma) Signal High "
10019 "Auxiliary #2 (ma) Signal Low "
10020 "Auxiliary #2 (ma) Signal High "
10021 "RESERVED "
10022 "RESERVED "
10023 "RESERVED "
10024 "RESERVED "
10025 "3.3V Power Supply Low "
10026 "3.3V Power Supply High "
10027 "5V Power Supply Low "
10028 "5V Power Supply High "
10029 "10V Power Supply Low "
10030 "10V Power Supply High "
10031 "24V Power Supply Low "
10032 "24V Power Supply High "
10033 "Braking "
10034 "Act. Max Authority Reached "
10035 "FSP Max Authority Reached "
10036 "Digital Input #1 Energized "
10037 "Digital Input #2 Energized "
10038 "Digital Output Energized "
10039 "EEPROM Value Change Detected "
10040 "FMP Start Limit Active "
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#####
# INPUT REGISTERS 30xxx #
# RANGE 1 TO 100 REGISTERS PER REQUEST #
#####
30001 "mirror of inputs 10016-10001 "
30002 "mirror of inputs 10032-10017 "
30003 "mirror of inputs 10048-10033 "
30004 "mirror of inputs 10064-10049 "
30005 "mirror of inputs 10080-10065 "
30006 "mirror of inputs 10096-10081 "
30007 "mirror of inputs 10112-10097 "
30008 "mirror of inputs 10128-10113 "
30009 "GOV10 status NOW "
30010 "Current state timer if present" unsigned
30011 "Engine Acceleration RPM/sec " signed
30012 "Engine Speed RPM Filtered " unsigned
30013 "Engine Speed RPM*10 NOW " unsigned
30014 "Speed target NOW " unsigned
30015 "RPM error (rpm-sp) NOW RPM " signed
30016 "Acceleration Target NOW " signed
30017 "Acceleration error NOW " signed
30018 "START rate NOW " signed
30019 "START target sp NOW " unsigned
30020 "Start error NOW " signed
30021 "START rate sp NOW " signed
30022 "START rate err NOW " signed
30023 "Actuator Counts NOW " unsigned
30024 "Supply Pressure psig *100 " signed
30025 "Manifold Pressure psig *100 " signed
30026 "Control Pressure psig *100 " signed
30027 "Actuator Pressure psi *100 " signed
30028 "Delta Pressure psi *100 " signed
30029 "Delta Pressure A/D counts" unsigned
30030 "Baro(sys)Pressure psi *100 " signed
30031 "Baro(sen)Pressure psi *100 " signed
30032 "Fuel Temp deg K *10 " unsigned
30033 "Fuel Flow SCFM " unsigned

30034 "Fuel Flow / RPM SCFR*10000" unsigned v2.0 scale
30035 "SCFx SD seconds sec * 10" unsigned
30036 "Demand Signal Input mA * 100" unsigned
30037 "Demand Signal Setpoint RPM " unsigned
30038 "Aux 1 Signal Input mA * 100" unsigned
30039 "Air Manifold Pressure inHg*100" signed
30040 "FMP per AMP bias PSI/inHg*100" unsigned
30041 "Aux 2 Signal Input mA * 100" unsigned
30042 "Aux 2 Signal Input si units" signed
30043 "Aux 1 Signal Output mA * 100" unsigned
30044 "Aux 2 Signal Output mA * 100" unsigned
30045 "FMP AutoZero Offset psig *100" signed

30046 "FSP AutoZero Offset psig *100 " signed v2.0 new
30047 "FCP AutoZero Offset psig *100 " signed v2.0 new
30048 "DP AutoZero Offset counts " signed v2.0 new

; \ / updated upon GOVstat change to STOPPING \ /
30049 "STOP decision " unsigned
30050 "GOV10 status at STOP decision " unsigned
30051 "Engine Speed at STOP decision " unsigned
30052 "Engine Accel at STOP decision " signed
30053 "Speed target at STOP decision " unsigned
30054 "Press target at STOP decision " signed
30055 "FSP psig at STOP decision " signed
30056 "FMP psig at STOP decision " signed
30057 "FCP psig at STOP decision " signed
30058 "Delta psig at STOP decision " signed
30059 "Fuel Temp at STOP decision " unsigned

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30060 "Fuel Flow      at STOP decision " unsigned
30061 "Fuel Flow/R    at STOP decision " unsigned
; /\ updated upon GOVstat change to STOPPING /\
30070 "GOV VOLTAGE 24V      volts *10 " unsigned
30071 "GOV VOLTAGE 10V      volts *10 " unsigned
30072 "GOV VOLTAGE 5.0V     volts *10 " unsigned
30073 "GOV VOLTAGE 3.3V     volts *10 " unsigned
30074 "FSP Voltage         volts *100" unsigned
30075 "FMP Voltage         volts *100" unsigned
30076 "FCP Voltage         volts *100" unsigned
30077 "Baro Voltage         volts *100" unsigned
30078 "Delta Voltage       volts *100" unsigned
30079 "Fuel Temp Voltage   volts *100" unsigned
```

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#####
# READ/WRITE REGISTERS 40xxx #
# RANGE 1 TO 100 REGISTERS PER REQUEST #
#####
40001 "mirror of coils 00016-00001" " bitflags
40002 "mirror of coils 00032-00017" " bitflags
40003 "mirror of coils 00048-00033" " bitflags
40004 "mirror of coils 00064-00049" " bitflags
40005 "mirror of coils 00080-00065" " bitflags
40006 "mirror of coils 00096-00081" " bitflags
40007 "mirror of coils 00112-00097" " bitflags
40008 "mirror of coils 00128-00113" " bitflags
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Type(byte)= 128(signed)+64(2bytes)+4(nochangeModBus)+2(reg limits)+1(nochange running)

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** Setup **
40009 "Local Speed RPM setpoint" {type,Min,Max } {Default}
40010 "RPM Dampener 0-254 0=No Filter" {2,40030,40031} DEF={ 250}
40010 "RPM Dampener 0-254 0=No Filter" {0,00000, 254} DEF={ 240}

** Start Config **
40011 "Start Speed (begin gov)" {type,Min,Max } {Default}
40012 "Start base FMP PSIG*100" {0,00000, 3000} DEF={ 150}
40013 "Start ramp FMP PSIG*100" {0,00000, 5000} DEF={ 500}
40014 "Start bias AMP PSI/SEC*100" {0,00000, 200} DEF={ 0}
40015 "Start limit FMP 0-10.00*100" {0,00000, 1000} DEF={ 000}
40016 "Start limit FMP PSIG*100" {0,00000, 5000} DEF={ 2500}
40017 "Start abort Seconds 0-999s" {0,00000, 999} DEF={ 10}
40017 "Wait for FSP sec 0-999s" {0, 0, 999} DEF={ 20}

** Start Control **
40018 "START Max PSI Rate PSI*100/s" {type,Min,Max } {Default}
40019 "START PSI Err Lim PSI*100" {0, 5, 9999} DEF={ 500}
40020 "START Rate Lim PSI PSI*100/s" {0, 5, 9999} DEF={ 1000}
40021 "START Rate Lim PSI PSI*100/s" {0, 50, 9999} DEF={ 500}
40022 "START Gain PSI 1-255" {0, 1, 255} DEF={ 200}
40023 "START Reset Rate 0.01-9.99s" {0, 1, 999} DEF={ 20}
40023 "Act. Kick Counts" {0, 0, 1000} DEF={ 500}

** RPM Control **
40024 "ACCEL Max Accel Rate RPM/sec" {type,Min,Max } {Default}
40025 "ACCEL Acc Err Limit RPM/sec" {0, 50, 9999} DEF={ 2000}
40026 "ACCEL Acc Err Limit RPM/sec" {0, 50,16383} DEF={ 2000}
40027 "ACCEL Accel Limit RPM RPM" {0, 10, 500} DEF={ 30}
40028 "ACCEL Gain Accel 1-255" {0, 1, 255} DEF={ 180}
40029 "ACCEL Reset Rate 0.01-9.99s" {0, 1, 999} DEF={ 40}
40029 "ACCEL Brake Percent 1-100%" {0, 1, 99} DEF={ 15}

** Engine Config **
40030 "RPM Minimum (also warmup)" {type,Min,Max } {Default}
40031 "RPM Maximum" {1,00000, 3000} DEF={ 200}
40032 "RPM Maximum" {1,00000, 3000} DEF={ 300}
40033 "Crank Speed (begin purge)" {0,00000, 3000} DEF={ 50}
40034 "Overspeed shutdown 0-1000" {0,00000, 3000} DEF={ 330}
40035 "Gearteeth" {1, 60, 1000} DEF={ 360}
40036 "KReloadDivider:KToothDly" {65, 257,65535} DEF={ 2815}
40037 "KTimeDly" {65, 1, 255} DEF={ 3}
40038 "RPM_LB:ACC_LB" {65, 257, 7681} DEF={ 6401}
40039 "Purge Time 0-999s" {0,00000, 999} DEF={ 5}
40040 "Warmup Time 0-999s" {0,00000, 999} DEF={ 30}
40041 "Shutdown Lo FSP PSIG*100" {0,00000,12000} DEF={ 6000}
40042 "Shutdown Hi FMP PSIG*100" {0,00000,12000} DEF={ 4000}
40043 "FSP ready limit PSIG*100" {0,00000,12000} DEF={ 200}
40043 "FMP ready limit PSIG*100" {0,00000,12000} DEF={ 200}

** Flow Config **
40044 "Flow Calibration" {type,Min,Max } {Default}
40045 "DPOffset" {0,00000,65535} DEF={ 4200} v2.0 range
40046 "Shutdown Hi SCFM (power)" {0,00000,65535} DEF={58200}
40047 "Shutdown Hi SCFR (torque)" {0,00000,65535} DEF={60000}
40048 "Shutdown limit SCFx 0-999sec" {0,00000, 999} DEF={60000} v2.0 scale
40048 "Shutdown limit SCFx 0-999sec" {0,00000, 999} DEF={ 300}
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** Analog1 Config **
40049 "ANA1 30k register of interest " {type,Min,Max } {Default}
40050 "ANA1 30k register min value " {0,00000,65535} DEF={30033} //SCFM
40051 "ANA1 30k register max value " {0,00000,65535} DEF={ 0}
40052 "ANA1 min ma * 100 " {0, 300, 2500} DEF={ 500}
40053 "ANA1 max ma * 100 " {0, 300, 2500} DEF={ 400}
40053 "ANA1 max ma * 100 " {0, 300, 2500} DEF={ 2000}

** Analog1 Config **
40054 "ANA2 30k register of interest " {type,Min,Max } {Default}
40055 "ANA2 30k register min value " {0,00000,65535} DEF={30012} //RPM
40056 "ANA2 30k register max value " {0,00000,65535} DEF={00000}
40057 "ANA2 min ma * 100 " {0, 300, 2500} DEF={ 400}
40058 "ANA2 max ma * 100 " {0, 300, 2500} DEF={ 400}
40058 "ANA2 max ma * 100 " {0, 300, 2500} DEF={ 2000}

** Sensor Config **
40059 "FuelSupplyPres Sensor Span " {type,Min,Max } {Default}
40060 "FuelSupplyPres Sensor Zero " {0, 3000,27300} DEF={26000} v2.0 range
40061 "FuelManifoldPres Sensor Zero " {128,-1300,1300} DEF={00000}
40062 "FuelManifoldPres Sensor Span " {0, 3000,27300} DEF={26000} v2.0 range
40063 "FuelManifoldPres Sensor Zero " {128,-1300,1300} DEF={00000}
40064 "FuelControlPress Sensor Span " {0, 3000,27300} DEF={26000} v2.0 range
40065 "FuelControlPress Sensor Zero " {128,-1300,1300} DEF={00000}
40066 "AirManifoldPress Sensor Span " {0, 0, 65535} DEF={00000}
40067 "AirManifoldPress Sensor Zero " {128,-32768,32767} DEF={00000}
40068 "AUX2 Sensor Span " {0, 0, 65535} DEF={00000}
40068 "AUX2 Sensor Zero " {128,-32768,32767} DEF={00000}

** H/W Config **
40069 "Uart #1 baud:node " {type,Min,Max } {Default}
40070 "Starve % " {64, 1, 2047} DEF={ 1281} //9600baud:1node
40071 "Act. Pressure Max (factory) " {0, 1, 150} DEF={ 95} v2.0 range
40072 "Act. Pressure Max (factory) " {0, 1000, 2200} DEF={ 2000}
40072 "Atmospheric Constant psi*100 " {0, 700, 1600} DEF={ 1400} v2.0 range

** new registers for start mode **
40073 "Start Abort FMP PSIG*100" {type,Min,Max } {Default}
40074 "Start Type 0=fmp,1=scfr,2=scfm" {0, 0,15000} DEF={ 2500} v2.0 new
40075 "Start Type 0=fmp,1=scfr,2=scfm" {0, 0, 1} DEF={ 0} v2.0 new
40075 "Start base SCFR*10000 " {0, 0,65000} DEF={01500} v2.0 new

** new registers for SCFR start mode**
40076 "CL SCFR Max Rate SCFR*10000/s" {type,Min,Max } {Default}
40077 "CL SCFR Err Lim SCFR*10000/s" {0, 5,16383} DEF={01000} v2.0 new
40078 "CL Rate Lim SCFR SCFR*10000" {0, 5,16383} DEF={01000} v2.0 new
40079 "CL Rate Lim SCFR SCFR*10000" {0, 5,16383} DEF={00500} v2.0 new
40079 "CL SCFR Gain 1-255" {0, 1, 255} DEF={ 200} v2.0 new
40080 "CL SCFR Reset Rate 0.01-9.99s" {0, 1, 999} DEF={ 20} v2.0 new

** new registers for analog outs **
40081 "DAC0 Dampener 0-254 0=NoFilter" {type,Min,Max } {Default}
40082 "DAC1 Dampener 0-254 0=NoFilter" {0, 0, 254} DEF={ 1} v2.0 new
40082 "DAC1 Dampener 0-254 0=NoFilter" {0, 0, 254} DEF={ 1} v2.0 new

```