

MODBUS REGISTER	Parameter	Operation	Notes
2 (0x0001)	Process Value	Read Only	Actual Input Value
3 (0x0002)	Unit Status	Read Only	Binary value, details below
		[High Byte]	bit7 Auto/Manual mode, 0=Auto 1=Man
			bit6 Comm. mode 0=Local 1=Remote
			bit5 Not used
			bit4 1=Error present, read register 0x0003
			bit3 Alarm 1 output 0=Off 1=On
			bit2 Alarm 2 output 0=Off 1=On
			bit1, bit0 Local set point selected
			0,0=1SP1 0,1=2SP1
			1,0=3SP1 1,1=4SP1
		[Low Byte]	bit7 1=NAT error (no activity timer)
			bit6 Not used
			bit5,4 <b>Decimal point for Process Value</b>
			00=0 01=0.0 10=0.00 11=0.000
			bit3 Not used
			bit2,bit1 Engineering units
			00=None 01=Deg. F 10=Deg. C
			bit0 Input value sign 0= Pos. 1= Neg.
4 (0x0003)	Unit Error Status	Read Only	Binary value, details below
		[High Byte]	bit7 Unit Failed Self-test
			bit6 Not used
			bit5 Unit Calibration bad
			bit4 Input overflow
			bit3 Input underflow
			bit2 Bad input
			bit1 Open input
			bit0 Unit Ambient Temp. beyond spec.
		[Low Byte]	bit7 Control Loop break
			bit6 Sensor rate of change exceeds limit
			bit5,bit4,bit3,bit2,bit1,bit0 Not used
7 (0x0006)	Active Segment	Read Only	Programmer segment 1 to 16
8 (0x0007)	TBAS	Read Only	0 = 1 second 1 = 60 seconds
257 (0x0100)	Active Set Value	Read Only	**** See note
258 (0x0101)	1SP1	R/W	**** See note
259 (0x0102)	2SP1	R/W	**** See note
260 (0x0103)	3SP1	R/W	**** See note
261 (0x0104)	4SP1	R/W	**** See note
262 (0x0105)	SP2	R/W	**** See note

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263 (0x0106)	A1LO	R/W	**** See note	
264 (0x0107)	A1HI	R/W	**** See note	
265 (0x0108)	A2LO	R/W	**** See note	
266 (0x0109)	A2HI	R/W	**** See note	
267 (0x010A)	SP1D	R/W		
268 (0x010B)	SP2D	R/W		
269 (0x010C)	1PB1	R/W	!! See note	
270 (0x010D)	2PB1	R/W	!! See note	
271 (0x010E)	3PB1	R/W	!! See note	
272 (0x010F)	4PB1	R/W	!! See note	
273 (0x0110)	PB2	R/W	!! See note	
274 (0x0111)	1RES	R/W	- # = reset + # = offset	
275 (0x0112)	2RES	R/W	- # = reset + # = offset	
276 (0x0113)	3RES	R/W	- # = reset + # = offset	
277 (0x0114)	4RES	R/W	- # = reset + # = offset	
278 (0x0115)	1RTE	R/W	WR 1 for 00.01 minutes WR 0 = OFF	
279 (0x0116)	2RTE	R/W	WR 1 for 00.01 minutes WR 0 = OFF	
280 (0x0117)	3RTE	R/W	WR 1 for 00.01 minutes WR 0 = OFF	
281 (0x0118)	4RTE	R/W	WR 1 for 00.01 minutes WR 0 = OFF	
282 (0x0119)	ARTE	R/W	WR 1 for 00.01 minutes WR 0 = OFF	
283 (0x011A)	FINT	R/W	WR 1 for 1% WR 0 = OFF	
284 (0x011B)	FBND	R/W		
285 (0x011C)	FRTE	R/W	WR 1 for 00.01 counts/second	
286 (0x011D)	PEA	Read Only	!! See note	
287 (0x011E)	VAL	Read Only	!! See note	
288 (0x011F)	Ti	Read Only	Time remaining in segment.	
289 (0x0120)	1Ti	R/W	Time for segment.	
290 (0x0121)	1SP	R/W	**** See note	
291 (0x0122)	2Ti	R/W	Time for segment.	
292 (0x0123)	2SP	R/W	**** See note	
293 (0x0124)	3Ti	R/W	Time for segment.	
294 (0x0125)	3SP	R/W	**** See note	
295 (0x0126)	4Ti	R/W	Time for segment.	
296 (0x0127)	4SP	R/W	**** See note	
297 (0x0128)	5Ti	R/W	Time for segment.	
298 (0x0129)	5SP	R/W	**** See note	
299 (0x012A)	6Ti	R/W	Time for segment.	
300 (0x012B)	6SP	R/W	**** See note	
301 (0x012C)	7Ti	R/W	Time for segment.	
302 (0x012D)	7SP	R/W	**** See note	

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303 (0x012E)	8Ti	R/W	Time for segment.	
304 (0x012F)	8SP	R/W	**** See note	
305 (0x0130)	9Ti	R/W	Time for segment.	
306 (0x0131)	9SP	R/W	**** See note	
307 (0x0132)	10Ti	R/W	Time for segment.	
308 (0x0133)	10SP	R/W	**** See note	
309 (0x0134)	11Ti	R/W	Time for segment.	
310 (0x0135)	11SP	R/W	**** See note	
311 (0x0136)	12Ti	R/W	Time for segment.	
312 (0x0137)	12SP	R/W	**** See note	
313 (0x0138)	13Ti	R/W	Time for segment.	
314 (0x0139)	13SP	R/W	**** See note	
315 (0x013A)	14Ti	R/W	Time for segment.	
316 (0x013B)	14SP	R/W	**** See note	
317 (0x013C)	15Ti	R/W	Time for segment.	
318 (0x013D)	15SP	R/W	**** See note	
319 (0x013E)	16Ti	R/W	Time for segment.	
320 (0x013F)	16SP	R/W	**** See note	
321 (0x0140)	INPC	R/W	RD / WR in counts	**** See note
			Other parameters can reset to 0	
322 (0x0141)	LPBR	R/W	WR 1 = 1 second	0 = OFF
323 (0x0142)	SECR	R/W	1 to 4	
324 (0x0143)	INPT	R/W	WR 1 = 0.1 minutes	
325 (0x0144)	SENC	R/W	Can pwr cycle to clr error	
326 (0x0145)	SCAL	R/W	Read Only for <b>INP</b> 1 to 14	!! See note
327 (0x0146)	SCAH	R/W	Read Only for <b>INP</b> 1 to 14	!! See note
328 (0x0147)	SPL	R/W		!! See note
329 (0x0148)	SPH	R/W		!! See note
330 (0x0149)	S1OL	R/W	WRITE 50 for 50%	
331 (0x014A)	S1OH	R/W	WRITE 50 for 50%	
332 (0x014B)	S2OL	R/W	WRITE 50 for 50%	
333 (0x014C)	S2OH	R/W	WRITE 50 for 50%	
334 (0x014D)	POL	R/W		
335 (0x014E)	POH	R/W		
336 (0x014F)	RSCL	R/W		
337 (0x0150)	RSCH	R/W		
340 (0x0153)	MANUALSP1	R/W	WRITE 500 for 50.0%	(auto must be off)
341 (0x0154)	MANUALSP2	R/W	WRITE 500 for 50.0%	(auto must be off)

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350 (0x015D)	ALEVNT1_8	R/W	bit=1=On bit=0=Off
		[High Byte]	bit7 Segment 1 A1 msb
			bit6 Segment 1 A2
			bit5 Segment 2 A1
			bit4 Segment 2 A2
			bit3 Segment 3 A1
			bit2 Segment 3 A2
			bit1 Segment 4 A1
			bit0 Segment 4 A2 lsb
		[Low Byte]	bit7 Segment 5 A1 msb
			bit6 Segment 5 A2
			bit5 Segment 6 A1
			bit4 Segment 6 A2
			bit3 Segment 7 A1
			bit2 Segment 7 A2
			bit1 Segment 8 A1
			bit0 Segment 8 A2 lsb
351 (0x015E)	ALEVNT9_16	R/W	bit=1=On bit=0=Off
		[High Byte]	bit7 Segment 9 A1 msb
			bit6 Segment 9 A2
			bit5 Segment 10 A1
			bit4 Segment 10 A2
			bit3 Segment 11 A1
			bit2 Segment 11 A2
			bit1 Segment 12 A1
			bit0 Segment 12 A2 lsb
		[Low Byte]	bit7 Segment 13 A1 msb
			bit6 Segment 13 A2
			bit5 Segment 14 A1
			bit4 Segment 14 A2
			bit3 Segment 15 A1
			bit2 Segment 15 A2
			bit1 Segment 16 A1
			bit0 Segment 16 A2 lsb
352 (0x015F)	PCTOUT1	Read Only	READ 50 for 50% SP1 Output
353 (0x0160)	PCTOUT2	Read Only	READ 50 for 50% SP2 Output

MODBUS REGISTER	Parameter	Operation	Notes
769 (0x0300)	OUT1	Read Only	[A write to SP1D sets to ON/OFF] 00 or 01 = Time Proportioning 06 = Current or Voltage Output 08 = Pulse 16 = On/Off
770 (0x0301)	OUT1_TP	R/W	1 to 80
771 (0x0302)	OUT1_PUL	R/W	1 to 7
772 (0x0303)	OUT2	Read Only	[A write to SP2D sets to ON/OFF] 00 or 01 = Time Proportioning 06 = Current or Voltage Output 08 = Pulse 16 = On/Off
773 (0x0304)	OUT2_TP	R/W	1 to 80
774 (0x0305)	OUT2_PUL	R/W	1 to 7
775 (0x0306)	1TUN	R/W	Rd 0,4,16,32,48,64 Wr 0 to 4 * see note Rd 0 = Self Tune / Learn No Rd 4 = Self Tune / Learn Yes Rd 16 = PID Rd 32 = Slow Rd 48 = Normal Rd 64 = Fast Wr 0 = Self Tune Wr 1 = PID Wr 2 = Slow Wr 3 = Normal Wr 4 = Fast
776 (0x0307)	2TUN	R/W	Refer to the 1TUN data above
777 (0x0308)	3TUN	R/W	Refer to the 1TUN data above
778 (0x0309)	4TUN	R/W	Refer to the 1TUN data above
779 (0x030A)	1DFAC	R/W	0 to 7
780 (0x030B)	2DFAC	R/W	0 to 7
781 (0x030C)	3DFAC	R/W	0 to 7
782 (0x030D)	4DFAC	R/W	0 to 7
783 (0x030E)	PID2	R/W	0 = Off # = On
784 (0x030F)	ARUP	R/W	0 = Off # = On
785 (0x0310)	PCTO	R/W	0 = Off # = On

MODBUS REGISTER	Parameter	Operation	Notes
786 (0x0311)	PROG	R/W	0 = Off # = On
787 (0x0312)	PSET	R/W	0 = Off # = On
788 (0x0313)	STAT	R/W	0 = Off # = On
789 (0x0314)	RUNHOLD	R/W	0 = RUN # = HOLD
790 (0x0315)	PEND	R/W	0 = Hold 1 = Ooff 2 = Loop 3 = SP1
791 (0x0316)	FILT	R/W	0 to 99
792 (0x0317)	INP	R/W	1 = J-IC 2 = CA 3 = E 4 = T 5 = L 6 = N 7 = R-13 8 = S-10 9 = B 10 = C 11 = P392 12 = N120 13 = P385 14 = 1P38 15 = CURRENT 16 = VOLTAGE 17 = DIFFERENTIAL
793 (0x0318)	OSUP	R/W	0 = Off # = On
794 (0x0319)	UNIT	R/W	0 = NONE 1 = DEG. F 2 = DEG. C
795 (0x031A)	DPT	R/W	0 = 0 1 = 0.0 2 = 0.00 3 = 0.000



MODBUS REGISTER	Parameter	Operation	Notes
800 (0x031F)	AL2	R/W	0 = Off 1 = Lo 2 = Hi 3 = HiLo 4 = Evnt
801 (0x0320)	AL2SETUP	R/W [Low Byte]	[High byte] Not used bit7 Not used bit6 A2Lb 1 = On 0 = Off bit5 A2iH 1 = On 0 = Off bit4 A2Pi 1 = On 0 = Off bit3 A2rE 1 = OnOF 0 = Hold bit2 A2LP 1 = Oon 0 = OoFF bit1 A2St 1 = OPEn 0 = CLOS bit0 A2t 1 = AbS 0 = dE
802 (0x0321)	POSR	R/W	0 = InP # = SPt
803 (0x0322)	SP	R/W	0 = 1SP1 1 = 2SP1 2 = 3SP1 3 = 4SP1
804 (0x0323)	SPSA	R/W	0 = Int # = rE
805 (0x0324)	LOrE	R/W	0 = LOC # = rE
806 (0x0325)	nAt	Read Only	0 to 99
807 (0x0326)	RSPT	R/W	0 = Off # = On
813 (0x032C)	STOR	R/W	0 = No (WR to RAM) # = Yes (EEPROM)
1025 (0x0400)	LOrE_rE	Write Only	
1026 (0x0401)	LOrE_LOC	Write Only	
1028 (0x0403)	ACK_AL1	Write Only	
1029 (0x0404)	ACK_AL2	Write Only	
1030 (0x0405)	ACK_AL12	Write Only	
1031 (0x0406)	ACK_SP1	Write Only	
1032 (0x0407)	ACK_SP2	Write Only	

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REGISTER	Parameter	Operation	Notes
1033 (0x0408)	AUTO_ON	Write Only	
1034 (0x0409)	AUTO_OFF	Write Only	
1035 (0x040A)	RESET_PEA	Write Only	
1036 (0x040B)	RESET_VAL	Write Only	
1037 (0x040C)	PCTO_ON	Write Only	
1038 (0x040D)	PCTO_OFF	Write Only	
1039 (0x040E)	SPSA_RE	Write Only	
1040 (0x040F)	SPSA_INT	Write Only	
1041 (0x0410)	SP_1SP1	Write Only	
1042 (0x0411)	SP_2SP1	Write Only	
1043 (0x0412)	SP_3SP1	Write Only	
1044 (0x0413)	SP_4SP1	Write Only	
1045 (0x0414)	PID2_ON	Write Only	
1046 (0x0415)	PID2_OFF	Write Only	
1047 (0x0416)	ARUP_ON	Write Only	
1048 (0x0417)	ARUP_OFF	Write Only	
1049 (0x0418)	PROG_ON	Write Only	
1050 (0x0419)	PROG_OFF	Write Only	
1051 (0x041A)	PSET_ON	Write Only	
1052 (0x041B)	PSET_OFF	Write Only	
1053 (0x041C)	STAT_ON	Write Only	
1054 (0x041D)	STAT_OFF	Write Only	
1055 (0x041E)	TBAS_1	Write Only	
1056 (0x041F)	TBAS_60	Write Only	
1057 (0x0420)	RunHold_RUN	Write Only	
1058 (0x0421)	RunHold_HOLD	Write Only	
1059 (0x0422)	OSUP_ON	Write Only	
1060 (0x0423)	OSUP_OFF	Write Only	
1061 (0x0424)	POSR_SPT	Write Only	
1062 (0x0425)	POSR_INP	Write Only	
1063 (0x0426)	RSPT_ON	Write Only	
1064 (0x0427)	RSPT_OFF	Write Only	
1067 (0X042A)	1LEARN_YES	Write Only	
1068 (0X042B)	1LEARN_NO	Write Only	
1069 (0X042C)	2LEARN_YES	Write Only	
1070 (0X042D)	2LEARN_NO	Write Only	
1071 (0x042E)	3LEARN_YES	Write Only	
1072 (0x042F)	3LEARN_NO	Write Only	
1073 (0x0430)	4LEARN_YES	Write Only	
1074 (0x0431)	4LEARN_NO	Write Only	



BIT	REGISTER	Parameter	Operation	Notes
1	(0x0000)	Reserved	Read Only	
2	(0x0001)	CHEC LORE	Read Only	No Activity Timer timeout 0=FALSE 1=TRUE
3	(0x0002)	AL2	Read Only	Alarm 2 output state 0=OFF 1=ON
4	(0x0003)	AL1	Read Only	Alarm 1 output state 0=OFF 1=ON
5	(0x0004)	ERROR PRESENT	Read Only	0=FALSE 1=TRUE
6	(0x0005)	LOC/REM	Read Only	0=LOCAL 1=REMOTE
7	(0x0006)	SENC BAD	Read Only	RATE OF CHANGE > LIMIT 0=FALSE 1=TRUE
8	(0x0007)	AREA	Read Only	AMBIENT BEYOND SPEC 0=FALSE 1=TRUE
9	(0x0008)	OPEN INP	Read Only	0=FALSE 1=TRUE
10	(0x0009)	BAD INP	Read Only	0=FALSE 1=TRUE
11	(0x000A)	UFL	Read Only	0=FALSE 1=TRUE
12	(0x000B)	OFL	Read Only	0=FALSE 1=TRUE
13	(0x000C)	CHEC CAL	Read Only	0=FALSE 1=TRUE
14	(0x000D)	FAIL TEST	Read Only	0=FALSE 1=TRUE
15	(0x000E)	LOOP BAD	Read Only	0=FALSE 1=TRUE
16	(0x000F)	AUTO/MANUAL	Read Only	0=AUTO 1=MANUAL