Series SD PID Controller Modbus Registers

8/18/2003

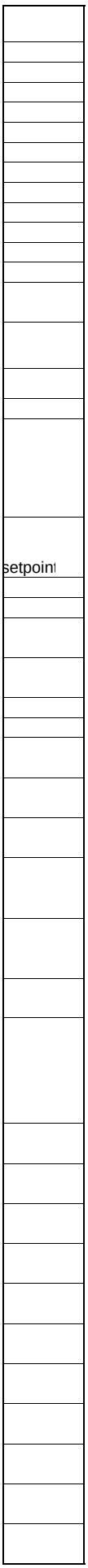
Name	Display Name	Offset	# Regs	Enumerator or Range	Scale			
Model Prefix		0	1	5344 hex = SD				
Serial Number 1	Sn_	7	1					
Serial Number 2	Sn_	8	1					
Mfg Date Code		9	1					
Software ID		10	1	3				
Software Version		11	1	5				
Software Build Number		13	1	114				
Non-Volatile Writes		17	1	0 = no save, 1 = save				
Comms Temperature Units		18	1	0 = F, 1 = C		To Read from Modbus		
Process Value		20	2	-1999000 to 9999000	/1000			
Filtered Process Value		22	2	-1999000 to 9999000	/1000			
Analog Input Error Status		24	1	0 = None, 1 = Error				
Auto-Manual Mode	A-M	25	1	0 = Auto, 1 = Manual				
Open Loop Output Power		26	1	-10000 to 0 for cool, 0 to 10000 for heat, -10000 to 10000 for heat/cool	/100			
Closed Loop Set Point		27	2	Set point low limit to set point high limit		Enter -2000000001Deg F to turn off		
Alarm 1 Low Side Status		29	1	0 = None, 1 = Alarm				
Alarm 1 High Side Status		30	1	0 = None, 1 = Alarm				
Alarm 2 Low Side Status		31	1	0 = None, 1 = Alarm				
Alarm 2 High Side Status		32	1	0 = None, 1 = Alarm				
Alarm 3 Low Side Status		33	1	0 = None, 1 = Alarm				
Alarm 3 High Side Status		34	1	0 = None, 1 = Alarm				
Alarm 1 Acknowledge		35	1					
Alarm 2 Acknowledge		36	1					
Alarm 3 Acknowledge		37	1					
Temperature Units	C-F	40	1	0 = F, 1 = C				
Temperature Decimal Places	S.dEC	41	1	0 = 0, 1 = 0.0				
Process Decimal Places	P.dEC	42	1	0 = 0, 1 = 0.0, 2 = 0.00, 3 = 0.000				
Lockout	LOC	43	1	0 = no lockout, 1 = Set point and A/M and alarm access, 2 = Set point and A/M access, 3 = Set point access, 4 = no access				
Active Displays	dSP	44	1	0 = Both Displays, 1 = Lower Display, 2 = Upper Display				
Units of Measurement	Unit	45	1	0 = US, 1 = SI				
Programmable Setting 1	P1	48	1					
Programmable Setting 2	P2	49	1					
Programmable Setting 3	P3	50	1					
Programmable Setting 4	P4	51	1					
Programmable Setting 5	P5	52	1					
Programmable Setting 6	P6	53	1					
Programmable Setting 7	P7	54	1					
Programmable Setting 8	P8	55	1					
Programmable Setting 9	P9	56	1					

Programmable Setting 10	P10	57	1					
Programmable Setting 11	P11	58	1					
Programmable Setting 12	P12	59	1					
Programmable Setting 13	P13	60	1					
Programmable Setting 14	P14	61	1					
Programmable Setting 15	P15	62	1					
Programmable Setting 16	P16	63	1					
Programmable Setting 17	P17	64	1					
Programmable Setting 18	P18	65	1					
Programmable Setting 19	P19	66	1					
Programmable Setting 20	P20	67	1					
Sensor Type	SEn	70	1	0 = T/C, 1 = rtd, 2 = mA, 3 = V				
TC Linearization	Lin	71	1	0 = J, 1 = K, 2 = T, 3 = E, 4 = N, 5 = C, 6 = D, 7 = PT2, 8 = R, 9 = S, 10 = B				
RTD Linearization	Lin	72	1					
Process mA Scale Low	Sc.Lo	73	2					
Process mA Scale High	Sc.hi	75	2					
Process Volt Scale Low	Sc.Lo	77	2					
Process Volt Scale High	Sc.hi	79	2					
Process Units Scale Low	rg.Lo	81	2	-1999000 to 9999000	/1000			
Process Units Scale High	rg.hi	83	2	-1999000 to 9999000	/1000			
Calibration Offset	CAL	85	2					
Filter Value	FLtr	87	2	0 to 60000	/1000			
Input Filter Effectivity	Ftr.E	89	1	0 = none, 1 = display filter, 2 = control filter, 3 = display & control filter				
Input Error Latching	I.Err	90	1	0 = Off, 1 = On				
INFOSENSE Enable	IS.En	91	1	0 = no, 1 = yes				
INFOSENSE 1	IS.P1	92	1	0 to 999	/1			
INFOSENSE 2	IS.P2	93	1	0 to 999	/1			
INFOSENSE 3	IS.P3	94	1	0 to 999	/1			
INFOSENSE 4	IS.P4	95	1	0 to 999	/1			
Alarm 1 Deviation Low	A1.Lo	98	2					
Alarm 1 Deviation High	A1.hi	100	2					
Alarm 1 Process Low	A1.Lo	102	2					
Alarm 1 Process High	A1.hi	104	2					
Alarm 1 Hysteresis	hyS1	106	2	0 to 9999000	/1000			
Alarm 1 Latching	LAt1	108	1	0 = Off, 1 = On				
Alarm 1 Silencing	SiL1	109	1	0 = Off, 1 = On				
Alarm 1 Message	dSP1	110	1	0 = Off, 1 = On				
Alarm 2 Deviation Low	A2.Lo	113	2					
Alarm 2 Deviation High	A2.hi	115	2					
Alarm 2 Process Low	A2.Lo	117	2					
Alarm 2 Process High	A2.hi	119	2					
Alarm 2 Hysteresis	hyS2	121	2	0 to 9999000	/1000			
Alarm 2 Latching	LAt2	123	1	0 = Off, 1 = On				
Alarm 2 Silencing	SiL2	124	1	0 = Off, 1 = On				

Alarm 2 Message	dSP2	125	1	0 = Off, 1 = On				
Alarm 3 Deviation Low	A3.Lo	128	2					
Alarm 3 Deviation High	A3.hi	130	2					
Alarm 3 Process Low	A3.Lo	132	2					
Alarm 3 Process High	A3.hi	134	2					
Alarm 3 Hysteresis	hyS3	136	2	0 to 9999000	/1000			
Alarm 3 Latching	LAt3	138	1	0 = Off, 1 = On				
Alarm 3 Silencing	SiL3	139	1	0 = Off, 1 = On				
Alarm 3 Message	dSP3	140	1	0 = Off, 1 = On				
Output 1 Function	Ot 1	143	1	0 = Off, 1 = Process Alarm, 2 = Deviation Alarm, 3 = Heat Control, 4 = Cool Control, 5 = Event				
Control Method Output 1	Ctr1	144	1	0 = Fixed Time Base, 1 = Variable Time Base				
Fixed Time Base Output 1 (Cycle Time)	Ftb1	145	2	1000 to 60000	/1000			
Analog Output 1 Units	AO1.U	147	1	0 = mA, 1 = V				
Analog Output 1 mA Scale Low	O1.Lo	148	2	0 to 20000	/1000			
Analog Output 1 mA Scale High	O1.hi	150	2	0 to 20000	/1000			
Analog Output 1 Volt Scale Low	O1.Lo	152	2	0 to 10000	/1000			
Analog Output 1 Volt Scale High	O1.hi	154	2	0 to 10000	/1000			
Power Limit Output 1	PL 1	160	1	0 to 10000	/100			
Output 1 Power Scale Low	PSL1	161	1	0 to 10000	/100			
Output 1 Power Scale High	PSh1	162	1	0 to 10000	/100			
Output 1 Non-Linear Function	nLF1	163	1	0 = Off, 1 = Curve 1, 2 = Curve 2				
Alarm 1 Logic	Lgc1	164	1	0 = Closed on Alarm, 1 = Open on Alarm				
Output 2 Function	Ot 2	167	1	0 = Off, 1 = Process Alarm, 2 = Deviation Alarm, 3 = Heat Control, 4 = Cool Control, 5 = Event				
Control Method Output 2	Ctr2	168	1	0 = Fixed Time Base, 1 = Variable Time Base				
Fixed Time Base Output 2 (Cycle Time)	Ftb2	169	2	1000 to 60000	/1000			
Power Limit Output 2	PL 2	171	1	0 to 10000	/100			
Output 2 Power Scale Low	PSL2	172	1	0 to 10000	/100			
Output 2 Power Scale High	PSh2	173	1	0 to 10000	/100			
Output 2 Non-Linear Function	nLF2	174	1	0 = Off, 1 = Curve 1, 2 = Curve 2				
Alarm 2 Logic	Lgc2	175	1					
Output 3 Function	Ot 3	178	1	0 = Off, 1 = Process Alarm, 2 = Deviation Alarm, 3 = Heat Control, 4 = Cool Control, 5 = Event				
Control Method Output 3	Ctr3	179	1	0 = Fixed Time Base, 1 = Variable Time Base				
Fixed Time Base Output 3 (Cycle Time)	Ftb3	180	2	1000 to 60000	/1000			
Analog Output 3 Units	AO3.U	182	1	0 = mA, 1 = V				
Analog Output 3 mA Scale Low	O3.Lo	183	2	0 to 20000	/1000			
Analog Output 3 mA Scale High	O3.hi	185	2	0 to 20000	/1000			
Analog Output 3 Volt Scale Low	O3.Lo	187	2	0 to 10000	/1000			
Analog Output 3 Volt Scale High	O3.hi	189	2	0 to 10000	/1000			
Power Limit Output 3	PL 3	195	1	0 to 10000	/100			
Output 3 Power Scale Low	PSL3	196	1	0 to 10000	/100			

Output 3 Power Scale High	PSh3	197	1	0 to 10000	/100			
Output 3 Non-Linear Function	nLF3	198	1	0 = Off, 1 = Curve 1, 2 = Curve 2				
Alarm 3 Logic	Lgc3	199	1					
Output 1 Hardware	O.ty1	202	1					
Output 3 Hardware	O.ty3	204	1					
Default Parameters	dFLt	207	1					
Restore Factory Calibration	rESt	208	1					
Restore Customer Settings	USr.r	209	1					
Save Customer Settings	USr.S	210	1					
Heat Control Method	ht.M	213	1					
Cool Control Method	CL.M	214	1					
Autotune	Aut	215	1					
Proportional Band Heat (Temperature)	Pb.ht	216	2					
Proportional Band Cool (Temperature)	Pb.CL	218	2					
Proportional Band Indirect (Process)	Pb.ht	220	2					
Proportional Band Direct (Process)	Pb.CL	222	2					
Integral Heat	It.ht	224	2					
Integral Cool	It.CL	226	2					
Derivative Heat	dE.ht	228	2					
Derivative Cool	dE.CL	230	2					
Heat Hysteresis - Temperature	h.hyS	232	2					
Indirect Hysteresis - Process	h.hyS	234	2					
Cool Hysteresis - Temperature	C.hyS	236	2					
Direct Hysteresis - Process	C.hyS	238	2					
Set Point Low Limit - T/C	SP.Lo	240	2	Sensor based				
Set Point High Limit - T/C	SP.hi	242	2	Sensor based				
Set Point Low Limit - RTD	SP.Lo	244	2	Sensor based				
Set Point High Limit - RTD	SP.hi	246	2	Sensor based				
Set Point Low Limit - Process	SP.Lo	248	2	Sensor based				
Set Point High Limit - Process	SP.hi	250	2	Sensor based				
Input Error Failure Mode	FAIL	252	1	0 = Off, 1 = Bumpless, 2 = Manual				
Input Error Power	MAn	253	1	-10000 to 10000	/100			

Current Ramp Set Point	rP	254	2	-1999000 to 9999000	/1000			
Power Heat	Po.ht	256	1	0 to 10000	/100			
Power Cool	Po.CL	257	1	0 to 10000	/100			
Proportional Term	ProP	258	1					
Integral Term	It	259	1					
Derivative Term	dE	260	1					
Ramping Mode	rP	266	1	0 = Off, 1 = Ramp on Startup, 2 = Ramp on Startup and Set point Changes				
Ramp Scale	rP.Sc	267	1	0 = Degrees/Hour, 1 = Degrees/Minutes				
Ramp Rate	rP.rt	268	2	0 to 999000	/1000			
AC Line Frequency	ACLF	276	1	0 = 50, 1 = 60				
Ambient Temperature	AMb	277	2					
Heat Deadband	db.ht	279	2					
Cool Deadband	db.CL	281	2					
Output 1 Process Value	A.Ot1	283	1					
Output 3 Process Value	A.Ot3	285	1					
Upper Display Char 1		287	1					
Upper Display Char 2		288	1					
Upper Display Char 3		289	1					
Upper Display Char 4		290	1					
Lower Display Char 1		292	1					
Lower Display Char 2		293	1					
Lower Display Char 3		294	1					
Lower Display Char 4		295	1					
Profile Type	PtyP	354	1	0 = Time Based, 1 = Rate Based				
Profile Start	PStr	355	1	0 = Static Set point, 1 = Process				
Guaranteed Soak Deviation Enable	gS.dE	356	1	0 = No, 1 = Yes				
Guaranteed Soak Deviation Value	gSd	357	2	1 to 999000	/1000			


setpoint