

## PAX2C, PX2FCA0, and PX2FCA1 Modbus Register Tables

LP0905F  
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The following is an example of the necessary query and corresponding response for holding register 2. In this example register 2 is the decimal value 123.

Query: 01 03 00 01 00 01 D5 CA

Response: 01 03 02 00 7B F8 67

### Notes:

1. The PAX2C registers can be read as holding (4x) or input (3x) registers.
2. The PAX2C should not be powered down while parameters are being changed. Doing so may corrupt the non-volatile memory resulting in checksum errors.

### PAX2C Ver 2.0 Modbus Register Table

REGISTER ADDRESS	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
<b>FREQUENTLY USED REGISTERS</b>						
01	Input Process Value	N/A	N/A	N/A	Read	1 = 1 Display Unit
02	Maximum Value	-1999	9999	N/A	Read	1 = 1 Display Unit
03	Minimum Value	-1999	9999	N/A	Read	1 = 1 Display Unit
04	Active Setpoint Value	SPLO	SPHI	0	Read/Write	1 = 1 Display Unit; Limited by setpoint low/high limits
05	Setpoint 1 Value	SPLO	SPHI	0	Read/Write	1 = 1 Display Unit; Limited by setpoint low/high limits
06	Setpoint 2 Value	SPLO	SPHI	0	Read/Write	1 = 1 Display Unit; Limited by setpoint low/high limits
07	Setpoint Deviation	N/A	N/A	N/A	Read Only	1 = 1 Display Unit
08	Output Power	-1000	1000	N/A	Read/Write	Output Power: Heat/Cool; * writable only in manual mode; 1 = 0.1%
09	Active Proportional Band	0	9999	700	Read/Write	1 = 1 Display Unit
10	Active Integral Time	0	65000	120	Read/Write	1 = 0.1 Second
11	Active Derivative Time	0	9999	30	Read/Write	1 = 0.1 Second
12	Active Power Filter	0	600	10	Read/Write	1 = 0.1 Second
13	Auto-Tune Code	0	4	2	Read/Write	0 = Very Aggressive, 1 = Aggressive, 2 = Default, 3 = Conservative, 4 = Very Conservative
14	Auto-Tune Request	0	1	0	Read/Write	0 = Off, 1 = Invoke Auto-Tune, 2 = Auto-Tune CS1, 3 = Auto-Tune CS2, 4 = Auto-Tune CS3, 5 = Auto-Tune CS4, 6 = Auto-Tune CS5, 7 = Auto-Tune CS6
15	Auto-Tune Phase	0	4	0	Read	0 = Off, 4 = Last Phase of Auto-Tune
16	Auto-Tune Done	0	1	0	Read	1 = Successful Auto-Tune since last power cycle.
17	Auto-Tune Fail	0	1	0	Read	0 = Off, 1 = Auto-Tune failed
18	Control Mode	0	1	0	Read/Write	0 = Automatic, 1 = Manual Mode
19	Setpoint Selection	0	1	0	Read/Write	0 = Setpoint 1, 1 = Setpoint 2 ... 5 = Setpoint 6
20	Remote/Local Setpoint Selection	0	1	0	Read/Write	0 = Local, 1 = Remote
21	PID Set Selection	0	1	0	Read/Write	0 = PID Set 1 (Pri), 1 = PID Set 2(Alt), 2 = PID Set 3, 3 = PID Set 4, 4 = PID Set 5, 5 = PID Set 6, 6 = SPSL, 7 = Auto
22	Disable Integral Action	0	1	0	Read/Write	0 = Enabled, 1 = Disabled
23	Disable Setpoint Ramping	0	1	0	Read/Write	0 = Enabled, 1 = Disabled
24	Setpoint Ramping In Process	0	1	0	Read/Write	0 = Off, 1 = In Process
25	Setpoint Ramp Rate Value	-1999	9999	0	Read/Write	1 = 0.1 Setpoint Ramping @ Timebase unit selection
26	Alarm (1-16) Status Register	0	65535	3	Read	Bit 15 = A16, Bit 0 = A1
27	PID Stop/Run	0	1	0	Read/Write	0 = Run PID, 1 = Stop PID (Output Power = 0%)
28	User Input Status	0	2	0	Read	Bit 1 = User Input 2, Bit 0 = User Input 1
29	Digital Output Status	0	15	N/A	Read/Write	Status of Digital Outputs. Bit State: 0 = Off, 1 = On. Bit 3 = Out1, Bit 2 = Out2, Bit 1 = Out3, Bit 0 = Out4. Outputs can only be activated/reset with this register when the respective bits in the Manual Mode Register (MMR) are set.
30	Output Manual Mode Register (MMR)	0	31	0	Read/Write	Bit State: 0 = Auto Mode, 1 = Manual Mode Bit 4 = DO1, Bit 3 = DO2, Bit 2 = DO3, Bit 1 = DO4, Bit 0 = Linear Output
31	Alarm Reset Register	0	65535	0	Read/Write	Bit State: 1 = Reset Alarm, bit is returned to zero following reset processing; Bit 15 = A16, Bit 0 = A1

REGISTER ADDRESS	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
32	Analog Output Register (AOR)	0	4095	0	Read/Write	Functional only if Linear Output is in Manual Mode. (MMR bit 0 = 1) Linear Output Card written to only if Linear Out (MMR bit 0) is set.
33	Active Alarm 1 Value	-1999	9999	0	Read/Write	Active List (A or B); 1 = 1 Display Unit
34	Active Alarm 2 Value	-1999	9999	0	Read/Write	Active List (A or B); 1 = 1 Display Unit
35	Active Alarm 3 Value	-1999	9999	0	Read/Write	Active List (A or B); 1 = 1 Display Unit
36	Active Alarm 4 Value	-1999	9999	0	Read/Write	Active List (A or B); 1 = 1 Display Unit
37	Active Alarm 5 Value	-1999	9999	0	Read/Write	Active List (A or B); 1 = 1 Display Unit
38	Active Alarm 6 Value	-1999	9999	0	Read/Write	Active List (A or B); 1 = 1 Display Unit
39	Active Alarm 7 Value	-1999	9999	0	Read/Write	Active List (A or B); 1 = 1 Display Unit
40	Active Alarm 8 Value	-1999	9999	0	Read/Write	Active List (A or B); 1 = 1 Display Unit
41	Active Alarm 9 Value	-1999	9999	0	Read/Write	Active List (A or B); 1 = 1 Display Unit
42	Active Alarm 10 Value	-1999	9999	0	Read/Write	Active List (A or B); 1 = 1 Display Unit
43	Active Alarm 11 Value	-1999	9999	0	Read/Write	Active List (A or B); 1 = 1 Display Unit
44	Active Alarm 12 Value	-1999	9999	0	Read/Write	Active List (A or B); 1 = 1 Display Unit
45	Active Alarm 13 Value	-1999	9999	0	Read/Write	Active List (A or B); 1 = 1 Display Unit
46	Active Alarm 14 Value	-1999	9999	0	Read/Write	Active List (A or B); 1 = 1 Display Unit
47	Active Alarm 15 Value	-1999	9999	0	Read/Write	Active List (A or B); 1 = 1 Display Unit
48	Active Alarm 16 Value	-1999	9999	0	Read/Write	Active List (A or B); 1 = 1 Display Unit
49	Active Alarm 1 Band/Dev. Value	-1999	9999	0	Read/Write	Active List (A or B). Applicable only for Band or Deviation Alarm Action.
50	Active Alarm 2 Band/Dev. Value	-1999	9999	0	Read/Write	Active List (A or B). Applicable only for Band or Deviation Alarm Action.
51	Active Alarm 3 Band/Dev. Value	-1999	9999	0	Read/Write	Active List (A or B). Applicable only for Band or Deviation Alarm Action.
52	Active Alarm 4 Band/Dev. Value	-1999	9999	0	Read/Write	Active List (A or B). Applicable only for Band or Deviation Alarm Action.
53	Active Alarm 5 Band/Dev. Value	-1999	9999	0	Read/Write	Active List (A or B). Applicable only for Band or Deviation Alarm Action.
54	Active Alarm 6 Band/Dev. Value	-1999	9999	0	Read/Write	Active List (A or B). Applicable only for Band or Deviation Alarm Action.
55	Active Alarm 7 Band/Dev. Value	-1999	9999	0	Read/Write	Active List (A or B). Applicable only for Band or Deviation Alarm Action.
56	Active Alarm 8 Band/Dev. Value	-1999	9999	0	Read/Write	Active List (A or B). Applicable only for Band or Deviation Alarm Action.
57	Active Alarm 9 Band/Dev. Value	-1999	9999	0	Read/Write	Active List (A or B). Applicable only for Band or Deviation Alarm Action.
58	Active Alarm 10 Band/Dev. Value	-1999	9999	0	Read/Write	Active List (A or B). Applicable only for Band or Deviation Alarm Action.
59	Active Alarm 11 Band/Dev. Value	-1999	9999	0	Read/Write	Active List (A or B). Applicable only for Band or Deviation Alarm Action.
60	Active Alarm 12 Band/Dev. Value	-1999	9999	0	Read/Write	Active List (A or B). Applicable only for Band or Deviation Alarm Action.
61	Active Alarm 13 Band/Dev. Value	-1999	9999	0	Read/Write	Active List (A or B). Applicable only for Band or Deviation Alarm Action.
62	Active Alarm 14 Band/Dev. Value	-1999	9999	0	Read/Write	Active List (A or B). Applicable only for Band or Deviation Alarm Action.
63	Active Alarm 15 Band/Dev. Value	-1999	9999	0	Read/Write	Active List (A or B). Applicable only for Band or Deviation Alarm Action.
64	Active Alarm 16 Band/Dev. Value	-1999	9999	0	Read/Write	Active List (A or B). Applicable only for Band or Deviation Alarm Action.
65	Remote SP Value	-1999	9999	0	Read Only	
66	Profile Operating Status	0	5	0	Read/Write	0 = Profile Control Mode Off; Unit will control to active setpoint, 1 = End Profile; Control per profile end action, 2 = Pause, 3 = Error Delay (status only), 4 = Run/Resume/Start, 5 = Advance Profile Segment
67	Active Profile	1	16	1	Read	(0 = Stop, 1-16 = Current Profile)
68	Active Segment	1	20	1	Read	(0 = Stop, 1-20 = Current Segment)
69	Profile Segment Type	0	1	0	Read	0 = Ramp, 1 = Hold
70	Active Profile Cycle Count Remaining	0	250	0	Read/Write	0-250; If Cycle Count is 0 unit is configured for continuous cycling
71	Active Profile Segment Time Remaining (Hi Word)	0	9999	N/A	Read/Write	1 = 0.1 Minute; Can make temporary change on the fly, however, if Active Profile Segment's Time resolution is in minutes, the least significant decade is ignored (i.e., 38 = 30 minutes)
72	Active Profile Segment Time Remaining (Lo Word)					
73	Profile Event Status	0	15	0	Read/Write	Bit 3 = Event 4, Bit 2 = Event 3, Bit 1 = Event 2; Bit 0 = Event 1

REGISTER ADDRESS	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
<b>INPUT PARAMETERS</b>						<b>SEE INPUT MODULE FOR PARAMETER DESCRIPTIONS</b>
<b>Analog Input Parameters</b>						
101	Input Range	0	26	16	Read/Write	0 = 250µA 5 = 250mV 11 = 100Ω 17 = TC-K 23 = RTD 385 1 = 2.5mA 6 = 2V 12 = 1KΩ 18 = TC-R 24 = RTD 392 2 = 25mA 7 = 10V 13 = 10KΩ 19 = TC-S 25 = RTD 672 3 = 250mA 8 = 25V 14 = TC-T 20 = TC-B 26 = RTD 427 4 = 2A 9 = 100V 15 = TC-E 21 = TC-N 10 = 200V 16 = TC-J 22 = TC-C
102	Square Root Linearization	0	1	0	Read/Write	0 = No, 1 = Yes (Valid on Process Inputs)
103	Temperature Scale (TC or RTD only)	0	1	1	Read/Write	0 = °C, 1 = °F
104	Ice Point Compensation (TC only)	0	1	1	Read/Write	0 = Off, 1 = On
105	ADC Conversion Rate (samples/sec)	0	5	2	Read/Write	0 = 5, 1 = 10, 2 = 20, 3 = 40, 4 = 80, 5 = 160
106	Decimal Point	0	3	1	Read/Write	0 = 0, 1 = 0.0, 2 = 0.00, 3 = 0.000
107	Rounding Factor	0	6	0	Read/Write	0 = 1, 1 = 2, 2 = 5, 3 = 10, 4 = 20, 5 = 50, 6 = 100
108	Input Offset Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
109	Digital Input Filter	0	250	10	Read/Write	1 = 0.1 Second
110	Input Scaling Points in List Function	0	1	0	Read/Write	0 = No, 1 = Yes
111	Display Input Units	0	1	1	Read/Write	0 = No, 1 = Yes
112	Input Units Character 1	0	57	0	Read/Write	Label Mnemonic Characters 0 = 9 = I 18 = Q 27 = Z 36 = 8 45 = m(r) 54 = ] 1 = A 10 = J 19 = R 28 = 0 37 = 9 46 = o 55 = / 2 = b 11 = K 20 = S 29 = 1 38 = a 47 = q 56 = ° 3 = C 12 = L 21 = t 30 = 2 39 = c 48 = r 57 = _ 4 = d 13 = M(l) 22 = U 31 = 3 40 = e 49 = u 5 = E 14 = M(r) 23 = V 32 = 4 41 = g 50 = w(r) 6 = F 15 = N 24 = W(l) 33 = 5 42 = h 51 = - 7 = G 16 = O 25 = W(r) 34 = 6 43 = i 52 = = 8 = H 17 = P 26 = Y 35 = 7 44 = n 53 = [
113	Input Units Character 2			56	Read/Write	See Input Units Character 1
114	Input Units Character 3			6	Read/Write	See Input Units Character 1
<b>User Input / Function Keys</b>						
151	User Input Active State	0	1	0	Read/Write	0 = Active Low, 1 = Active High
152	User Input 1 Action	0	29*	0	Read/Write	0 = NONE 7 = SPPrP 14 = dLEV 21 = PrrS 28 = NA-1 1 = PLOC 8 = d-HI 15 = dISP 22 = PrrH 29 = NA-2 2 = ILOC 9 = r-HI 16 = LISt 23 = PStr 30+ = FC Functions 3 = trnF 10 = d-Lo 17 = Prnt 24 = Adnc 4 = SPSt 11 = r-Lo 18 = RnSt 25 = PAUS 5 = RSPt 12 = r-HL 19 = PlrS 26 = PEnd 6 = PSEL 13 = r-AL 20 = PlrH 27 = r-Ev
153	User Input 1 Alarm Mask	0	65535	0	Read/Write	Bit 0 = A1 Bit 4 = A5 Bit 8 = A9 Bit 12 = A13 Bit 1 = A2 Bit 5 = A6 Bit 9 = A10 Bit 13 = A14 Bit 2 = A3 Bit 6 = A7 Bit 10 = A11 Bit 14 = A15 Bit 3 = A4 Bit 7 = A8 Bit 11 = A12 Bit 15 = A16
154	User Input 2 Action	0	29*	0	Read/Write	Same as User Input 1 Action
155	User Input 2 Alarm Mask	0	65535	0	Read/Write	Same as User Input 1 Alarm Mask
156	User F1 Key Action	0	26*	0	Read/Write	0 = NONE 6 = SPPrP 12 = dISP 18 = PrrS 24 = r-Ev 1 = ILOC 7 = r-HI 13 = LISt 19 = PrrH 25 = NA-1 2 = trnF 8 = r-Lo 14 = Prnt 20 = PStr 26 = NA-2 3 = SPSt 9 = r-HL 15 = RnSt 21 = Adnc 27+ = FC Functions 4 = RSPt 10 = r-AL 16 = PlrS 22 = PAUS 5 = PSEL 11 = dLEV 17 = PlrH 23 = PEnd
157	User F1 Key Alarm Mask	0	65535	0	Read/Write	Same as User Input 1 Alarm Mask

REGISTER ADDRESS	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS	
158	User F2 Key Action	0	26*	0	Read/Write	Same as User F1 Key Action	
159	User F2 Key Alarm Mask	0	65535	0	Read/Write	Same as User Input 1 Alarm Mask	
160	User F1 Second Action	0	26*	0	Read/Write	Same as User F1 Key Action	
161	User F1 Second Alarm Mask	0	65535	0	Read/Write	Same as User Input 1 Alarm Mask	
162	User F2 Second Action	0	26*	0	Read/Write	Same as User F1 Key Action	
163	User F2 Second Alarm Mask	0	65535	0	Read/Write	Same as User Input 1 Alarm Mask	
<b>Advanced Input Parameters</b>							
<b>List A</b>	<b>List B</b>	<b>Input Scaling Points Parameters</b>					
171	211	Number of Scaling Points	2	16	2	Read/Write	Number of Linearization Scaling Points
172	212	Reserved	N/A	N/A	N/A	N/A	
173	213	Scaling Pt. 1 Input Value	-1999	9999	0	Read/Write	1 = 0.001
174	214	Scaling Pt. 1 Display Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
175	215	Scaling Pt. 2 Input Value	-1999	9999	1000	Read/Write	1 = 0.001
176	216	Scaling Pt. 2 Display Value	-1999	9999	1000	Read/Write	1 = 1 Display Unit
177 thru 202	217 thru 242	Scaling Pts. 3 thru 15 Values	-1999	9999	0	Read/Write	Registers 40177-40202 and 40217-40242 hold values for Scaling Points 3 thru 15, and follow the same ordering as Scaling Point 1.
203	243	Scaling Pt. 16 Input Value	-1999	9999	0	Read/Write	1 = 0.001
204	244	Scaling Pt. 16 Display Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
<b>OUTPUT PARAMETERS</b>							
251	Output 1 Assignment	0	23*	1	Read/Write	0 = NONE 1 = HEAT 2 = COOL 3 = ALr 4 = MAN 5 = SPSL 6 = SPRP 7 = RSPr 8 = ILOC 9 = tunE 10 = tndn 11 = tnFL 12 = PctL 13 = Prun 14 = PHLd 15 = PAUS 16 = PErb 17 = PErt 18 = PEv1 19 = PEv2 20 = PEv3 21 = PEv4 22 = NA-1 23 = NA-2 24+ = FlexCard Assignments	
252	Output 1 Logic/Alarm Logic Mode	0	2	0	Read/Write	If Out Assignment ≠ ALr; 0 = NOR, 1 = REV If Output Assignment = ALr; 0 = SINGLE, 1 = AND, 2 = OR	
253	Output 1 Alarm Mask	0	65535	0	Read/Write	Bit 0 = A1 Bit 4 = A5 Bit 8 = A9 Bit 12 = A13 Bit 1 = A2 Bit 5 = A6 Bit 9 = A10 Bit 13 = A14 Bit 2 = A3 Bit 6 = A7 Bit 10 = A11 Bit 14 = A15 Bit 3 = A4 Bit 7 = A8 Bit 11 = A12 Bit 15 = A16	
254	Output 1 Cycle Time	0	600	20	Read/Write	1 = 0.1 Second	
255	Output 2 Assignment	0	23*	0	Read/Write	Same as Output 1 Assignment	
256	Output 2 Logic/Alarm Logic Mode	0	2	0	Read/Write	Same as Output 1 Logic/Alarm Logic Mode	
257	Output 2 Alarm Mask	0	65535	0	Read/Write	Same as Output 1 Alarm Mask	
258	Output 2 Cycle Time	0	600	20	Read/Write	1 = 0.1 Second	
259	Output 3 Assignment	0	23*	0	Read/Write	Same as Output 1 Assignment	
260	Output 3 Logic/Alarm Logic Mode	0	2	0	Read/Write	Same as Output 1 Logic/Alarm Logic Mode	
261	Output 3 Alarm Mask	0	65535	0	Read/Write	Same as Output 1 Alarm Mask	
262	Output 3 Cycle Time	0	600	20	Read/Write	1 = 0.1 Second	
263	Output 4 Assignment	0	23*	0	Read/Write	Same as Output 1 Assignment	
264	Output 4 Logic/Alarm Logic Mode	0	2	0	Read/Write	Same as Output 1 Logic/Alarm Logic Mode	
265	Output 4 Alarm Mask	0	65535	0	Read/Write	Same as Output 1 Alarm Mask	
266	Output 4 Cycle Time	0	600	20	Read/Write	1 = 0.1 Second	
<b>Analog Output</b>							
271	Non-Linear Analog Output Scaling	0	1	0	Read/Write	0 = No, 1 = Yes (Use Non-Linear Analog Output Scaling Parameters)	
272	Type	0	2	1	Read/Write	0 = 0-20 mA, 1 = 4-20 mA, 2 = 0-10 V	
273	Assignment	0	6*	0	Read/Write	0 = NONE, 1 = PV, 2 = HI, 3 = LO, 4 = OP, 5 = SP (Active), 6 = dEv, 7+ = FlexCard Assignments	
274	Analog Low Scale Value	-1999	9999	0	Read/Write	Display value that corresponds with 0 V, 0 mA or 4 mA output	
275	Analog High Scale Value	-1999	9999	1000	Read/Write	Display value that corresponds with 10 V or 20 mA output	

REGISTER ADDRESS	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS	
276	Update time	0	100	0	Read/Write	0 = Max update rate, 1 = 0.1 Second	
277	Probe Failure Action (TC or RTD only)	0	1	0	Read/Write	0 = Low Scale, 1 = High Scale (only applies for TC or RTD input)	
<b>Non-Linear Analog Output Scaling</b>							
<b>List A</b>	<b>List B</b>	<b>Analog Output Scaling Point Parameters</b>					
1721	1761	Number of Scaling Points	2	16	2	Read/Write	Number of Linearization Scaling Points
1722	1762	Reserved	N/A	N/A	N/A	N/A	
1723	1763	Output Value for Scaling Point 1	0	2000	0	Read/Write	1 = 0.01
1724	1764	Parameter Value for Scaling Point 1	-1999	9999	0	Read/Write	1 = 1 Analog Output Assignment value unit
1725 to 1754	1765 to 1794	Scaling Pts. 2 thru 16 Values					Registers 41725-41754 and 41765-41794 hold values for Scaling Points 2 thru 16, and follow the same ordering as Scaling Point 1.
<b>DISPLAY CONFIGURATION PARAMETERS</b>							
<b>General</b>							
281	Display Intensity Level	0	4	4	Read/Write	0 = Min.(off), 4 = Max.	
282	Display Contrast Level	0	15	5	Read/Write		
283	Display Update (readings per second)	0	4	1	Read/Write	0 = 1, 1 = 2, 2 = 5, 3 = 10, 4 = 20	
284	Configuration Mode	0	1	1	Read/Write	0 = Advanced, 1 = Basic (Caution: Affects other parameters, see manual)	
	<b>Hardware Label Mnemonic</b>					Adds a user programmable hardware label mnemonic to all PAX2C line 2 parameters in main, parameter, and hidden display loops when programmed (non-blank).	
286	Hardware Label Character 1	0	57	0	Read/Write	Label Mnemonic Characters 0 =    9 = I    18 = Q    27 = Z    36 = 8    45 = m(r)    54 = ] 1 = A    10 = J    19 = R    28 = 0    37 = 9    46 = o    55 = / 2 = b    11 = K    20 = S    29 = 1    38 = a    47 = q    56 = ° 3 = C    12 = L    21 = t    30 = 2    39 = c    48 = r    57 = _ 4 = d    13 = M(l)    22 = U    31 = 3    40 = e    49 = u 5 = E    14 = M(r)    23 = V    32 = 4    41 = g    50 = w(r) 6 = F    15 = N    24 = W(l)    33 = 5    42 = h    51 = - 7 = G    16 = O    25 = W(r)    34 = 6    43 = i    52 = = 8 = H    17 = P    26 = Y    35 = 7    44 = n    53 = [	
287	Hardware Label Character 2	0	57	0	Read/Write	See Hardware Label Character 1	
288	Hardware Label Character 3	0	57	0	Read/Write	See Hardware Label Character 1	
<b>Line 1</b>							
291	Line 1 Display Assignment	0	3*	1	Read/Write	0 = NONE, 1 = PV, 2 = HI, 3 = LO, 4+ = FlexCard Assignments	
292	Line 1 Default Display Color	0	2	2	Read/Write	0 = Grn, 1 = OrNG, 2 = rEd	
293	Deprecated					See Registers 111-114 for Input Units programming	
294	Deprecated						
295	Deprecated						
296	Deprecated						
297	Line 1 Bargraph Assignment	0	3*	1	Read/Write	0 = NONE, 1 = OP, 2 = dEv, 3 = SP, 4+ = FlexCard Assignments	
298	Line 1 Bargraph Low Scale Value	0	9999	0	Read/Write		
299	Line 1 Bargraph High Scale Value	0	9999	1000	Read/Write		
300	Line 1 Green Backlight Assignment	0	25*	0	Read/Write	0 = NONE 5 = ALr    10 = ILOC    15 = Prun    20 = PEv1    25 = NA-2 1 = Out1 6 = MAN    11 = tunE    16 = PHLd    21 = PEv2    26+ = FlexCard 2 = Out2 7 = SPsL    12 = tndn    17 = PAUS    22 = PEv3    Assignments 3 = Out3 8 = SPPrP    13 = tnFL    18 = PErb    23 = PEv4 4 = Out4 9 = RSPt    14 = PctL    19 = PErt    24 = NA-1	
301	Line 1 Green Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR	
302	Line 1 Green Backlight Alarm Mask	0	65535	0	Read/Write	Bit 0 = A1    Bit 4 = A5    Bit 8 = A9    Bit 12 = A13 Bit 1 = A2    Bit 5 = A6    Bit 9 = A10    Bit 13 = A14 Bit 2 = A3    Bit 6 = A7    Bit 10 = A11    Bit 14 = A15 Bit 3 = A4    Bit 7 = A8    Bit 11 = A12    Bit 15 = A16	
303	Line 1 Orange Backlight Assignment	0	25*	0	Read/Write	Same as Line 1 Green Backlight Assignment	

REGISTER ADDRESS	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
304	Line 1 Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
305	Line 1 Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as Line 1 Green Backlight Alarm Mask
306	Line 1 Red Backlight Assignment	0	25*	0	Read/Write	Same as Line 1 Green Backlight Assignment
307	Line 1 Red Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
308	Line 1 Red Backlight Alarm Mask	0	65535	0	Read/Write	Same as Line 1 Green Backlight Alarm Mask
309	Line 1 Green-Orange Backlight Assignment	0	25*	0	Read/Write	Same as Line 1 Green Backlight Assignment
310	Line 1 Green-Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
311	Line 1 Green-Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as Line 1 Green Backlight Alarm Mask
312	Line 1 Red-Orange Backlight Assignment	0	25*	0	Read/Write	Same as Line 1 Green Backlight Assignment
313	Line 1 Red-Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
314	Line 1 Red-Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as Line 1 Green Backlight Alarm Mask
315	Line 1 Red-Green Backlight Assignment	0	25*	0	Read/Write	Same as Line 1 Green Backlight Assignment
316	Line 1 Red-Green Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
317	Line 1 Red-Green Backlight Alarm Mask	0	65535	0	Read/Write	Same as Line 1 Green Backlight Alarm Mask
<b>Line 2</b>						
331	Line 2 Default Display Color	0	2	0	Read/Write	0 = Grn, 1 = OrNG, 2 = rEd
332	Deprecated					See registers 111-114 for Input Unit's programming
333	Deprecated					See registers 111-114 for Input Unit's programming
334	Deprecated					See registers 111-114 for Input Unit's programming
335	Deprecated					See registers 111-114 for Input Unit's programming
336	Line 2 Bargraph Assignment	0	6*	2	Read/Write	0 = NONE, 1 = OP, 2 = dEv, 3 = SP, 4 = OP ANy, 5 = dEv ANy, 6 = SP ANy, 7+ = FlexCard Assignments
337	Line 2 Bargraph Low Scale Value	0	9999	0	Read/Write	
338	Line 2 Bargraph High Scale Value	0	9999	100	Read/Write	
339	Line 2 Green Backlight Assignment	0	25*	0	Read/Write	0 = NONE 5 = ALr 10 = ILOC 15 = Prun 20 = PEv1 25 = NA-2 1 = Out1 6 = MAN 11 = tunE 16 = PHLd 21 = PEv2 26+ = FlexCard 2 = Out2 7 = SPsL 12 = tndn 17 = PAUS 22 = PEv3 Assignments 3 = Out3 8 = SPrP 13 = tnFL 18 = PErb 23 = PEv4 4 = Out4 9 = RSPt 14 = PCtL 19 = PErt 24 = NA-1
340	Line 2 Green Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
341	Line 2 Green Backlight Alarm Mask	0	65535	0	Read/Write	Bit 0 = A1 Bit 4 = A5 Bit 8 = A9 Bit 12 = A13 Bit 1 = A2 Bit 5 = A6 Bit 9 = A10 Bit 13 = A14 Bit 2 = A3 Bit 6 = A7 Bit 10 = A11 Bit 14 = A15 Bit 3 = A4 Bit 7 = A8 Bit 11 = A12 Bit 15 = A16
342	Line 2 Orange Backlight Assignment	0	25*	0	Read/Write	Same as Line 2 Green Backlight Assignment
343	Line 2 Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
344	Line 2 Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as Line 2 Green Backlight Alarm Mask
345	Line 2 Red Backlight Assignment	0	25*	0	Read/Write	Same as Line 2 Green Backlight Assignment
346	Line 2 Red Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
347	Line 2 Red Backlight Alarm Mask	0	65535	0	Read/Write	Same as Line 2 Green Backlight Alarm Mask
348	Line 2 Green-Orange Backlight Assignment	0	25*	0	Read/Write	Same as Line 2 Green Backlight Assignment
349	Line 2 Green-Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
350	Line 2 Green-Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as Line 2 Green Backlight Alarm Mask
351	Line 2 Red-Orange Backlight Assignment	0	25*	0	Read/Write	Same as Line 2 Green Backlight Assignment
352	Line 2 Red-Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
353	Line 2 Red-Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as Line 2 Green Backlight Alarm Mask
354	Line 2 Red-Green Backlight Assignment	0	25*	0	Read/Write	Same as Line 2 Green Backlight Assignment
355	Line 2 Red-Green Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
356	Line 2 Red-Green Backlight Alarm Mask	0	65535	0	Read/Write	Same as Line 2 Green Backlight Alarm Mask

REGISTER ADDRESS	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
<b>Universal Annunciator 1</b>						
361	UA 1 Default Display Color	0	2	0	Read/Write	0 = Grn, 1 = OrNG, 2 = rEd
362	UA 1 Units Mnemonic	0	1	1	Read/Write	0 = Off, 1 = On
363	UA 1 Units Digit 1 (Left)	0	57	16	Read/Write	0 =      9 = I      18 = Q      27 = Z      36 = 8      45 = m(r)      54 = ] 1 = A    10 = J    19 = R    28 = 0    37 = 9    46 = o    55 = / 2 = b    11 = K    20 = S    29 = 1    38 = a    47 = q    56 = ° 3 = C    12 = L    21 = t    30 = 2    39 = c    48 = r    57 = _ 4 = d    13 = M(l)    22 = U    31 = 3    40 = e    49 = u 5 = E    14 = M(r)    23 = V    32 = 4    41 = g    50 = w(r) 6 = F    15 = N    24 = W(l)    33 = 5    42 = h    51 = - 7 = G    16 = O    25 = W(r)    34 = 6    43 = i    52 = = 8 = H    17 = P    26 = Y    35 = 7    44 = n    53 = [
364	UA 1 Units Digit 2 (Right)	0	57	29	Read/Write	
365	UA 1 Units Logic Mode (Active)	0	2	0	Read/Write	0 = nor, 1 = rEv, 2 = FLSh
366	UA 1 Units Assignment	0	25*	1	Read/Write	0 = NONE 5 = ALr    10 = ILOC    15 = Prun    20 = PEv1    25 = NA-2 1 = Out1    6 = MAN    11 = tunE    16 = PHLd    21 = PEv2    26+ = FlexCard 2 = Out2    7 = SPsL    12 = tndn    17 = PAUS    22 = PEv3    Assignments 3 = Out3    8 = SPPrP    13 = tnFL    18 = PErb    23 = PEv4 4 = Out4    9 = RSPt    14 = PCTL    19 = PErt    24 = NA-1
367	UA 1 Assignment Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
368	UA 1 Assignment Alarm Mask	0	65535	0	Read/Write	Bit 0 = A1    Bit 4 = A5    Bit 8 = A9    Bit 12 = A13 Bit 1 = A2    Bit 5 = A6    Bit 9 = A10    Bit 13 = A14 Bit 2 = A3    Bit 6 = A7    Bit 10 = A11    Bit 14 = A15 Bit 3 = A4    Bit 7 = A8    Bit 11 = A12    Bit 15 = A16
369	UA 1 Green Backlight Assignment	0	25*	0	Read/Write	Same as UA 1 Units Assignment
370	UA 1 Green Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
371	UA 1 Green Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 1 Assignment Alarm Mask
372	UA 1 Orange Backlight Assignment	0	25*	0	Read/Write	Same as UA 1 Units Assignment
373	UA 1 Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
374	UA 1 Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 1 Assignment Alarm Mask
375	UA 1 Red Backlight Assignment	0	25*	0	Read/Write	Same as UA 1 Units Assignment
376	UA 1 Red Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
377	UA 1 Red Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 1 Assignment Alarm Mask
378	UA 1 Green-Orange Backlight Assignment	0	25*	0	Read/Write	Same as UA 1 Units Assignment
379	UA 1 Green-Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
380	UA 1 Green-Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 1 Assignment Alarm Mask
381	UA 1 Red-Orange Backlight Assignment	0	25*	0	Read/Write	Same as UA 1 Units Assignment
382	UA 1 Red-Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
383	UA 1 Red-Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 1 Assignment Alarm Mask
384	UA 1 Red-Green Backlight Assignment	0	25*	0	Read/Write	Same as UA 1 Units Assignment
385	UA 1 Red-Green Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
386	UA 1 Red-Green Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 1 Assignment Alarm Mask
<b>Universal Annunciator 2</b>						
391	UA 2 Default Display Color	0	2	0	Read/Write	0 = Grn, 1 = OrNG, 2 = rEd
392	UA 2 Units Mnemonic	0	1	1	Read/Write	0 = Off, 1 = On
393	UA 2 Units Digit 1 (Left)	0	57	1	Read/Write	Same as UA1 Units Selection
394	UA 2 Units Digit 2 (Right)	0	57	29	Read/Write	
395	UA 2 Units Logic Mode (Active)	0	2	0	Read/Write	0 = nor, 1 = rEv, 2 = FLSh
396	UA 2 Units Assignment	0	25*	5	Read/Write	0 = NONE 5 = ALr    10 = ILOC    15 = Prun    20 = PEv1    25 = NA-2 1 = Out1    6 = MAN    11 = tunE    16 = PHLd    21 = PEv2    26+ = FlexCard 2 = Out2    7 = SPsL    12 = tndn    17 = PAUS    22 = PEv3    Assignments 3 = Out3    8 = SPPrP    13 = tnFL    18 = PErb    23 = PEv4 4 = Out4    9 = RSPt    14 = PCTL    19 = PErt    24 = NA-1

REGISTER ADDRESS	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
397	UA 2 Assignment Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
398	UA 2 Assignment Alarm Mask	0	65535	1	Read/Write	Bit 0 = A1 Bit 4 = A5 Bit 8 = A9 Bit 12 = A13 Bit 1 = A2 Bit 5 = A6 Bit 9 = A10 Bit 13 = A14 Bit 2 = A3 Bit 6 = A7 Bit 10 = A11 Bit 14 = A15 Bit 3 = A4 Bit 7 = A8 Bit 11 = A12 Bit 15 = A16
399	UA 2 Green Backlight Assignment	0	25*	0	Read/Write	Same as UA 2 Units Assignment
400	UA 2 Green Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
401	UA 2 Green Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 2 Assignment Alarm Mask
402	UA 2 Orange Backlight Assignment	0	25*	0	Read/Write	Same as UA 2 Units Assignment
403	UA 2 Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
404	UA 2 Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 2 Assignment Alarm Mask
405	UA 2 Red Backlight Assignment	0	25*	5	Read/Write	Same as UA 2 Units Assignment
406	UA 2 Red Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
407	UA 2 Red Backlight Alarm Mask	0	65535	1	Read/Write	Same as UA 2 Assignment Alarm Mask
408	UA 2 Green-Orange Backlight Assignment	0	25*	0	Read/Write	Same as UA 2 Units Assignment
409	UA 2 Green-Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
410	UA 2 Green-Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 2 Assignment Alarm Mask
411	UA 2 Red-Orange Backlight Assignment	0	25*	0	Read/Write	Same as UA 2 Units Assignment
412	UA 2 Red-Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
413	UA 2 Red-Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 2 Assignment Alarm Mask
414	UA 2 Red-Green Backlight Assignment	0	25*	0	Read/Write	Same as UA 2 Units Assignment
415	UA 2 Red-Green Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
416	UA 2 Red-Green Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 2 Assignment Alarm Mask
<b>Universal Annunciator 3</b>						
421	UA 3 Default Display Color	0	2	0	Read/Write	0 = Grn, 1 = OrNG, 2 = rEd
422	UA 3 Units Mnemonic	0	1	1	Read/Write	0 = Off, 1 = On
423	UA 3 Units Digit 1 (Left)	0	57	1	Read/Write	Same as UA1 Units Selection
424	UA 3 Units Digit 2 (Right)	0	57	30	Read/Write	
425	UA 3 Units Logic Mode (Active)	0	2	0	Read/Write	0 = nor, 1 = rEv, 2 = FLSh
426	UA 3 Units Assignment	0	25*	5	Read/Write	0 = NONE 5 = ALr 10 = ILOC 15 = Prun 20 = PEv1 25 = NA-2 1 = Out1 6 = MAN 11 = tunE 16 = PHLd 21 = PEv2 26+ = FlexCard 2 = Out2 7 = SPSL 12 = tndn 17 = PAUS 22 = PEv3 Assignments 3 = Out3 8 = SPrP 13 = tnFL 18 = PErb 23 = PEv4 4 = Out4 9 = RSPt 14 = PctL 19 = PErt 24 = NA-1
427	UA 3 Assignment Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
428	UA 3 Assignment Alarm Mask	0	65535	2	Read/Write	Bit 0 = A1 Bit 4 = A5 Bit 8 = A9 Bit 12 = A13 Bit 1 = A2 Bit 5 = A6 Bit 9 = A10 Bit 13 = A14 Bit 2 = A3 Bit 6 = A7 Bit 10 = A11 Bit 14 = A15 Bit 3 = A4 Bit 7 = A8 Bit 11 = A12 Bit 15 = A16
429	UA 3 Green Backlight Assignment	0	25*	0	Read/Write	Same as UA 3 Units Assignment
430	UA 3 Green Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
431	UA 3 Green Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 3 Assignment Alarm Mask
432	UA 3 Orange Backlight Assignment	0	25*	0	Read/Write	Same as UA 3 Units Assignment
433	UA 3 Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
434	UA 3 Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 3 Assignment Alarm Mask
435	UA 3 Red Backlight Assignment	0	25**	5	Read/Write	Same as UA 3 Units Assignment
436	UA 3 Red Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
437	UA 3 Red Backlight Alarm Mask	0	65535	2	Read/Write	Same as UA 3 Assignment Alarm Mask
438	UA 3 Green-Orange Backlight Assignment	0	25	0	Read/Write	Same as UA 3 Units Assignment
439	UA 3 Green-Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
440	UA 3 Green-Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 3 Assignment Alarm Mask
441	UA 3 Red-Orange Backlight Assignment	0	25*	0	Read/Write	Same as UA 3 Units Assignment



REGISTER ADDRESS	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
442	UA 3 Red-Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
443	UA 3 Red-Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 3 Assignment Alarm Mask
444	UA 3 Red-Green Backlight Assignment	0	25*	0	Read/Write	Same as UA 3 Units Assignment
445	UA 3 Red-Green Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
446	UA 3 Red-Green Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 3 Assignment Alarm Mask
<b>Universal Annunciator 4</b>						
451	UA 4 Default Display Color	0	2	0	Read/Write	0 = Grn, 1 = OrNG, 2 = rEd
452	UA 4 Units Mnemonic	0	1	0	Read/Write	0 = Off, 1 = On
453	UA 4 Units Digit 1 (Left)	0	57	0	Read/Write	Same as UA1 Units Selection
454	UA 4 Units Digit 2 (Right)	0	57	0	Read/Write	
455	UA 4 Units Logic Mode (Active)	0	2	0	Read/Write	0 = nor, 1 = rEv, 2 = FLSh
456	UA 4 Units Assignment	0	25*	0	Read/Write	0 = NONE 5 = ALr 10 = ILOC 15 = Prun 20 = PEv1 25 = NA-2 1 = Out1 6 = MAN 11 = tunE 16 = PHLd 21 = PEv2 26+ = FlexCard 2 = Out2 7 = SPSL 12 = tndn 17 = PAUS 22 = PEv3 Assignments 3 = Out3 8 = SPPr 13 = tnFL 18 = PErb 23 = PEv4 4 = Out4 9 = RSPt 14 = PCTL 19 = PErt 24 = NA-1
457	UA 4 Assignment Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
458	UA 4 Assignment Alarm Mask	0	65535	0	Read/Write	Bit 0 = A1 Bit 4 = A5 Bit 8 = A9 Bit 12 = A13 Bit 1 = A2 Bit 5 = A6 Bit 9 = A10 Bit 13 = A14 Bit 2 = A3 Bit 6 = A7 Bit 10 = A11 Bit 14 = A15 Bit 3 = A4 Bit 7 = A8 Bit 11 = A12 Bit 15 = A16
459	UA 4 Green Backlight Assignment	0	25*	0	Read/Write	Same as UA 4 Units Assignment
460	UA 4 Green Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
461	UA 4 Green Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 4 Assignment Alarm Mask
462	UA 4 Orange Backlight Assignment	0	25*	0	Read/Write	Same as UA 4 Units Assignment
463	UA 4 Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
464	UA 4 Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 4 Assignment Alarm Mask
465	UA 4 Red Backlight Assignment	0	25*	0	Read/Write	Same as UA 4 Units Assignment
466	UA 4 Red Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
467	UA 4 Red Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 4 Assignment Alarm Mask
468	UA 4 Green-Orange Backlight Assignment	0	25*	0	Read/Write	Same as UA 4 Units Assignment
469	UA 4 Green-Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
470	UA 4 Green-Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 4 Assignment Alarm Mask
471	UA 4 Red-Orange Backlight Assignment	0	25*	0	Read/Write	Same as UA 4 Units Assignment
472	UA 4 Red-Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
473	UA 4 Red-Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 4 Assignment Alarm Mask
474	UA 4 Red-Green Backlight Assignment	0	25*	0	Read/Write	Same as UA 4 Units Assignment
475	UA 4 Red-Green Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
476	UA 4 Red-Green Backlight Alarm Mask	0	65535	0	Read/Write	Same as UA 4 Assignment Alarm Mask
<b>Mnemonics</b>						
501	Mnemonic Default Display Color	0	2	0	Read/Write	0 = Grn, 1 = OrNG, 2 = rEd
502	Mnemonic Green Backlight Assignment	0	25*	0	Read/Write	0 = NONE 5 = ALr 10 = ILOC 15 = Prun 20 = PEv1 25 = NA-2 1 = Out1 6 = MAN 11 = tunE 16 = PHLd 21 = PEv2 26+ = FlexCard 2 = Out2 7 = SPSL 12 = tndn 17 = PAUS 22 = PEv3 Assignments 3 = Out3 8 = SPPr 13 = tnFL 18 = PErb 23 = PEv4 4 = Out4 9 = RSPt 14 = PCTL 19 = PErt 24 = NA-1
503	Mnemonic Green Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
504	Mnemonic Green Backlight Alarm Mask	0	65535	0	Read/Write	Bit 0 = A1 Bit 4 = A5 Bit 8 = A9 Bit 12 = A13 Bit 1 = A2 Bit 5 = A6 Bit 9 = A10 Bit 13 = A14 Bit 2 = A3 Bit 6 = A7 Bit 10 = A11 Bit 14 = A15 Bit 3 = A4 Bit 7 = A8 Bit 11 = A12 Bit 15 = A16
505	Mnemonic Orange Backlight Assignment	0	25*	0	Read/Write	Same as Mnemonic Green Backlight Assignment

REGISTER ADDRESS	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
506	Mnemonic Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
507	Mnemonic Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as Line 1 Green Backlight Alarm Mask
508	Mnemonic Red Backlight Assignment	0	25*	0	Read/Write	Same as Mnemonic Green Backlight Assignment
509	Mnemonic Red Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
510	Mnemonic Red Backlight Alarm Mask	0	65535	0	Read/Write	Same as Line 1 Green Backlight Alarm Mask
511	Mnemonic Green-Orange Backlight Assignment	0	25*	0	Read/Write	Same as Mnemonic Green Backlight Assignment
512	Mnemonic Green-Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
513	Mnemonic Green-Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as Line 1 Green Backlight Alarm Mask
514	Mnemonic Red-Orange Backlight Assignment	0	25*	0	Read/Write	Same as Mnemonic Green Backlight Assignment
515	Mnemonic Red-Orange Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
516	Mnemonic Red-Orange Backlight Alarm Mask	0	65535	0	Read/Write	Same as Line 1 Green Backlight Alarm Mask
517	Mnemonic Red-Green Backlight Assignment	0	25*	0	Read/Write	Same as Mnemonic Green Backlight Assignment
518	Mnemonic Red-Green Backlight Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
519	Mnemonic Red-Green Backlight Alarm Mask	0	65535	0	Read/Write	Same as Line 1 Green Backlight Alarm Mask
<b>Line 2 Profile LOCS</b>						
531	Line 2 Profile Control Status Access	0	21	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 2 = PrEd, Bit4 = HrEd; Other bits N/A
532	Line 2 Profile Segment Time Remaining Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
533	Line 2 Profile Cycle Count Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
534	Line 2 Profile Programming Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
<b>Line 2 Display LOCS</b>						
541	Line 2 Input Display Access	0	21	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 2 = PrEd, Bit4 = HrEd; Other bits N/A
542	Line 2 Maximum (Hi) Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
543	Line 2 Minimum (Lo) Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
<b>Line 2 Display LOCS</b>						
551	Display Intensity Level Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
552	Display Contrast Level Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
<b>Line 2 Alarm LOCS</b>						
561	Line 2 Alarm 1 Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
562	Line 2 Alarm 1 Band/Dev.Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
563	Line 2 Alarm 2 Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
564	Line 2 Alarm 2 Band/Dev.Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
565	Line 2 Alarm 3 Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
566	Line 2 Alarm 3 Band/Dev.Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
567	Line 2 Alarm 4 Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
568	Line 2 Alarm 4 Band/Dev.Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt



REGISTER ADDRESS	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
603	Line 2 Setpoint 2 Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
604	Line 2 Setpoint List	0	40	0	Read/Write	0 = LOC; Bit 3 = PEnt, Bit5 = HEnt
605	Line 2 Remote Setpoint Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
606	Line 2 Output Power Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
607	Line 2 Deviation Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 2 = PrEd, Bit4 = HrEd
608	Line 2 Setpoint Ramp Rate Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
609	Line 2 Remote Setpoint Ratio Value Access	0	42	0	Read/Write	0 = LOC, 1 = drEd, 2 = dEnt, 3 = PrEd, 4 = PEnt, 5 = HrEd, 6 = HEnt
610	Line 2 Remote Setpoint Bias Value Access	0	42	0	Read/Write	0 = LOC, 1 = drEd, 2 = dEnt, 3 = PrEd, 4 = PEnt, 5 = HrEd, 6 = HEnt
611	Line 2 Actual Offset Power Value Access	0	42	0	Read/Write	0 = LOC, 1 = drEd, 2 = dEnt, 3 = PrEd, 4 = PEnt, 5 = HrEd, 6 = HEnt
612	Line 2 Actual Proportional Band Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
613	Line 2 Actual Integral Time Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
614	Line 2 Actual Derivative Time Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
615	Line 2 PS1 Offset Power Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
616	Line 2 PS1 Proportional Band Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
617	Line 2 PS1 Integral Time Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
618	Line 2 PS1 Derivative Time Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
619	Line 2 PS2 Offset Power Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
620	Line 2 PS2 Proportional Band Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
621	Line 2 PS2 Integral Time Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
622	Line 2 PS2 Derivative Time Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
623	Line 2 PID Set Selection Value Access	0	40	0	Read/Write	0 = LOC; Bit 3 = PEnt, Bit5 = HEnt
<b>Line 2 Function LOCS</b>						
631	Line 2 Setpoint Selection Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
632	Line 2 Remote Setpoint Transfer (Local/Remote)	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
633	Line 2 Setpoint Ramping Disable	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
634	Line 2 Integral Lock Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
635	Line 2 Auto/Manual Mode Selection Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
636	Line 2 PID Bank Selection Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
637	Line 2 Tune Selection Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
638	Line 2 Reset Max Display Access	0	21	0	Read/Write	0 = LOC; Bit 1 = dEnt, Bit 3 = PEnt, Bit5 = HEnt
639	Line 2 Reset Min Display Access	0	21	0	Read/Write	0 = LOC; Bit 1 = dEnt, Bit 3 = PEnt, Bit5 = HEnt

REGISTER ADDRESS	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
640	Line 2 Reset Max and Min Access	0	21	0	Read/Write	0 = LOC; Bit 1 = dEnt, Bit 3 = PEnt, Bit5 = HEnt
641	Line 2 Reset Alarm Access	0	21	0	Read/Write	0 = LOC; Bit 1 = dEnt, Bit 3 = PEnt, Bit5 = HEnt
642	Line 2 List Selection Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
643	Line 2 Print Request Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
644	Line 2 Reset Alarm Mask	0	65535	0	Read/Write	Bit 0 = A1 Bit 4 = A5 Bit 8 = A9 Bit 12 = A13 Bit 1 = A2 Bit 5 = A6 Bit 9 = A10 Bit 13 = A14 Bit 2 = A3 Bit 6 = A7 Bit 10 = A11 Bit 14 = A15 Bit 3 = A4 Bit 7 = A8 Bit 11 = A12 Bit 15 = A16
645	Line 2 PID Run/Stop Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
646	Line 2 Profile Reset Event Access	0	21	0	Read/Write	0 = LOC; Bit 1 = dEnt, Bit 3 = PEnt, Bit5 = HEnt
647	Line 2 Profile Reset Event Mask	0	15	0	Read/Write	Bit 0 = Ev1, Bit 1 = Ev2, Bit 2 = Ev3, Bit 3 = Ev4
<b>Max (HI)/Min(LO) Values</b>						
651	Max (HI) Capture Delay Time	0	9999	10	Read/Write	0 = Max Update Rate, 1 = 0.1Sec
652	Min (LO) Capture Delay Time	0	9999	10	Read/Write	0 = Max Update Rate, 1 = 0.1Sec
<b>Line 2 Code Configuration</b>						
661	Line 2 Security Code Value	0	250	0	Read/Write	
<b>PID CONFIGURATION PARAMETERS</b>						
<b>Control</b>						
671	Assign	0	1*	1	Read/Write	0 = NONE, 1 = PV, 2+ = Flex Card Assignments
672	Control Type	0	2	0	Read/Write	0 = HEAT, 1 = COOL, 2 = both
673	Control Mode	0	1	0	Read/Write	0 = Auto, 1 = MAN
674	Manual Power	-1000	1000	0	Read/Write	Output Power: Heat/Cool; * writable only in manual mode; 1 = 0.1%
<b>Remote Setpoint</b>						
676	Remote SP Assignment	0	4*	0	Read/Write	0 = NONE, 1 = SP, 2 = PV, 3 = OP, 4 = ScSP, 5+ = Flex Card Assignments
677	Reserved for future use.					
678	Ratio	1	9999	1000	Read/Write	1 = 0.1
679	Bias	-1999	9999	0	Read/Write	1 = 1 Display Unit
680	Select Local / Remote SP	0	1	0	Read/Write	0 = LOC, 1 = REM
<b>Setpoint</b>						
681	Setpoint Selection	0	5	0	Read/Write	0 = SP1, 1 = SP2, 2 = SP3, 3 = SP4, 4 = SP5, 5 = SP6, 6 = SPu
682	Setpoint 1 Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
683	Setpoint 2 Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
684	Setpoint Lo Limit Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
685	Setpoint Hi Limit Value	-1999	9999	9999	Read/Write	1 = 1 Display Unit
686	Ramp Timebase	0	3	0	Read/Write	0 = Off, 1 = Seconds, 2 = Minutes, 3 = Hours
687	Ramp Rate	0	9999	0	Read/Write	1 = 0.1 Ramp Timebase unit
<b>PID Parameters</b>						
691	PID Parameter Selection	0	1	0	Read/Write	0 = PS1 PID Values, 1 = Alternate PID Values
692	PS1 Proportional Band	0	9999	700	Read/Write	1 = 1 Display Unit
693	PS1 Integral Time	0	65000	120	Read/Write	1 = 0.1 Second
694	PS1 Derivative Time	0	9999	30	Read/Write	1 = 0.1 Second
695	PS1 Power Filter Value	0	600	10	Read/Write	1 = 0.1 Second
696	PS1 Output Power Offset	-1000	1000	0	Read/Write	1 = 0.1 %; Applicable when PS1 Integral Time is 0
697	PS2 Proportional Band	0	9999	700	Read/Write	1 = 1 Display Unit
698	PS2 Integral Time	0	65000	120	Read/Write	1 = 0.1 Second
699	PS2 Derivative Time	0	9999	30	Read/Write	1 = 0.1 Second
700	PS2 Power Filter Value	0	600	10	Read/Write	1 = 0.1 Second
701	PS2 Output Power Offset	-1000	1000	0	Read/Write	1 = 0.1 %; Applicable when PS2 Integral Time is 0

REGISTER ADDRESS	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
<b>Power Transfer</b>						
711	Input Fault Power Value	-1999	2000	0	Read/Write	1 = 0.1 %
712	Output Deadband	-1000	1000	0	Read/Write	1 = 0.1 %
713	Output Heat Gain	0	5000	1000	Read/Write	1 = 0.1 %
714	Heat Low Limit	0	2000	0	Read/Write	1 = 0.1 %
715	Heat High Limit	0	2000	1000	Read/Write	1 = 0.1 %
716	Output Cool Gain	0	5000	1000	Read/Write	1 = 0.1 %
717	Cool Low Limit	0	2000	0	Read/Write	1 = 0.1 %
718	Cool High Limit	0	2000	1000	Read/Write	1 = 0.1 %
<b>ON/OFF Control</b>						
741	On-Off Hysteresis	0	500	2	Read/Write	1 = 1 Display Unit
742	On-Off Deadband	-1999	9999	0	Read/Write	1 = 1 Display Unit
<b>Tuning</b>						
751	Tuning Code	0	4	2	Read/Write	0 = Very Aggressive, 1 = Aggressive, 2 = Default, 3 = Conservative, 4 = Very Conservative
752	Auto-Tune Start	0	1	0	Read/Write	0 = NO 1 = YES
<b>PID Setpoints</b>						
761	Setpoint 1 Value	-1999	9999	0	Read/Write	1 = 1 Display Unit (Mirrors Register 682)
762	Setpoint 2 Value	-1999	9999	0	Read/Write	1 = 1 Display Unit (Mirrors Register 683)
763	Setpoint 3 Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
764	Setpoint 4 Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
765	Setpoint 5 Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
766	Setpoint 6 Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
767	User Setpoint Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
<b>PID Constants Sets (PSn)</b>						
801-807	SP1 / PID Set PS1 Constants					Mirrors PS1 PID Constants, registers 692-696
801	Setpoint 1	-1999	9999	0	Read/Write	1 = 1 Display Unit
802	PS1 Proportional Band	0	9999	700	Read/Write	1 = 1 Display Unit
803	PS1 Integral Time	0	65000	120	Read/Write	1 = 0.1 Second
804	PS1 Derivative Time	0	9999	30	Read/Write	1 = 0.1 Second
805	PS1 Power Filter Value	0	600	10	Read/Write	1 = 0.1 Second
806	PS1 Output Power Offset	-1000	1000	0	Read/Write	1 = 0.1 %; Applicable when PS1 Integral Time is 0
807	PS1 Heat Gain	0	5000	1000	Read/Write	1 = 0.1 %
808	PS1 Cool Gain	0	5000	1000	Read/Write	1 = 0.1 %
811-817	SP2 / PID Set PS2 Constants					Same order as SP1 /PID Set PS1 Constants (Register 801-807)
821-827	SP3 /PID Set PS3 Constants					
831-837	SP4 /PID Set PS4 Constants					
841-847	SP5 /PID Set PS5 Constants					
851-857	SP6 /PID Set PS6 Constants					
<b>Slave ID / GUID</b>						
1001-1010	Slave ID	N/A	N/A	N/A	Read Only	<'P' 'X'> <'2' 'C'> <'1' '5'> <2020h> <2020h> <'a' 'b'> <00h 'c'> <0040h> <0040h> <0010h> a = SP Card Status. '0'-No Card, '2'-Dual SP, '4'-Quad SP b = Linear Card Status. "0"-Not Installed, "1"-Installed c = Version Number (1.50 or higher) <0040h> <0040h> = 64 Register Writes, 64 Register Reads (Max.) <0010h> = 16 Register GUID/Scratch
1101-1116	GUID/Scratch	N/A	N/A	N/A	Read/Write	Reserved (may be used in future RLC software)
<b>FACTORY SERVICE</b>						
1151-1156	Factory Service Registers	N/A	N/A	N/A	Read/Write	Factory Use Only - Do Not Modify
<b>Math / Logic</b>						
1121-1200	Reserved for Math/Logic Operations					

REGISTER ADDRESS	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
<b>ALARM PARAMETERS</b>						
<b>Alarm 1</b>						
1201	Assign	0	1*	1	Read/Write	0 = NONE, 1 = PV, 2+ = FlexCard Assignments
1202	Action	0	9	1	Read/Write	0 = NONE, 1 = AbHI, 2 = AbLO, 3 = AUHI, 4 = AULO, 5 = dEHI, 6 = dELO, 7 = bANd, 8 = bdIn, 9 = HCur
1203	Hysteresis Value	1	9999	2	Read/Write	1 = 1 Display Unit
1204	On Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1205	Off Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1206	Output Logic	0	1	0	Read/Write	0 = Normal, 1 = Reverse
1207	Reset Action	0	2	0	Read/Write	0 = Auto, 1 = Latch1, 2 = Latch2
1208	Standby Operation	0	1	0	Read/Write	0 = No, 1 = Yes
1209	Probe Failure Action (TC or RTD Only)	0	1	0	Read/Write	0 = Off, 1 = On (Applies for TC or RTD input)
<b>Alarm 2</b>						
1221	Assign	0	1*	1	Read/Write	0 = NONE, 1 = PV, 2+ = FlexCard Assignments
1222	Action	0	9	1	Read/Write	0 = NONE, 1 = AbHI, 2 = AbLO, 3 = AUHI, 4 = AULO, 5 = dEHI, 6 = dELO, 7 = bANd, 8 = bdIn, 9 = HCur
1223	Hysteresis Value	1	9999	2	Read/Write	1 = 1 Display Unit
1224	On Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1225	Off Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1226	Output Logic	0	1	0	Read/Write	0 = Normal, 1 = Reverse
1227	Reset Action	0	2	0	Read/Write	0 = Auto, 1 = Latch1, 2 = Latch2
1228	Standby Operation	0	1	0	Read/Write	0 = No, 1 = Yes
1229	Probe Failure Action (TC or RTD Only)	0	1	0	Read/Write	0 = Off, 1 = On (Applies for TC or RTD input)
<b>Alarm 3</b>						
1241	Assign	0	1*	0	Read/Write	0 = NONE, 1 = PV, 2+ = FlexCard Assignments
1242	Action	0	9	0	Read/Write	0 = NONE, 1 = AbHI, 2 = AbLO, 3 = AUHI, 4 = AULO, 5 = dEHI, 6 = dELO, 7 = bANd, 8 = bdIn, 9 = HCur
1243	Hysteresis Value	1	9999	2	Read/Write	1 = 1 Display Unit
1244	On Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1245	Off Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1246	Output Logic	0	1	0	Read/Write	0 = Normal, 1 = Reverse
1247	Reset Action	0	2	0	Read/Write	0 = Auto, 1 = Latch1, 2 = Latch2
1248	Standby Operation	0	1	0	Read/Write	0 = No, 1 = Yes
1249	Probe Failure Action (TC or RTD Only)	0	1	0	Read/Write	0 = Off, 1 = On (Applies for TC or RTD input)
<b>Alarm 4</b>						
1261	Assign	0	1*	0	Read/Write	0 = NONE, 1 = PV, 2+ = FlexCard Assignments
1262	Action	0	9	0	Read/Write	0 = NONE, 1 = AbHI, 2 = AbLO, 3 = AUHI, 4 = AULO, 5 = dEHI, 6 = dELO, 7 = bANd, 8 = bdIn, 9 = HCur
1263	Hysteresis Value	1	9999	2	Read/Write	1 = 1 Display Unit
1264	On Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1265	Off Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1266	Output Logic	0	1	0	Read/Write	0 = Normal, 1 = Reverse
1267	Reset Action	0	2	0	Read/Write	0 = Auto, 1 = Latch1, 2 = Latch2
1268	Standby Operation	0	1	0	Read/Write	0 = No, 1 = Yes
1269	Probe Failure Action (TC or RTD Only)	0	1	0	Read/Write	0 = Off, 1 = On (Applies for TC or RTD input)
<b>Alarm 5</b>						
1281	Assign	0	1*	0	Read/Write	0 = NONE, 1 = PV, 2+ = FlexCard Assignments
1282	Action	0	9	0	Read/Write	0 = NONE, 1 = AbHI, 2 = AbLO, 3 = AUHI, 4 = AULO, 5 = dEHI, 6 = dELO, 7 = bANd, 8 = bdIn, 9 = HCur
1283	Hysteresis Value	1	9999	2	Read/Write	1 = 1 Display Unit
1284	On Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1285	Off Time Delay	0	9999	0	Read/Write	1 = 0.1 Second

REGISTER ADDRESS	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
1286	Output Logic	0	1	0	Read/Write	0 = Normal, 1 = Reverse
1287	Reset Action	0	2	0	Read/Write	0 = Auto, 1 = Latch1, 2 = Latch2
1288	Standby Operation	0	1	0	Read/Write	0 = No, 1 = Yes
1289	Probe Failure Action (TC or RTD Only)	0	1	0	Read/Write	0 = Off, 1 = On (Applies for TC or RTD input)
<b>Alarm 6</b>						
1301	Assign	0	1*	0	Read/Write	0 = NONE, 1 = PV, 2+ = FlexCard Assignments
1302	Action	0	9	0	Read/Write	0 = NONE, 1 = AbHI, 2 = AbLO, 3 = AUHI, 4 = AULO, 5 = dEHI, 6 = dELO, 7 = bANd, 8 = bdIn, 9 = HCur
1303	Hysteresis Value	1	9999	2	Read/Write	1 = 1 Display Unit
1304	On Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1305	Off Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1306	Output Logic	0	1	0	Read/Write	0 = Normal, 1 = Reverse
1307	Reset Action	0	2	0	Read/Write	0 = Auto, 1 = Latch1, 2 = Latch2
1308	Standby Operation	0	1	0	Read/Write	0 = No, 1 = Yes
1309	Probe Failure Action (TC or RTD Only)	0	1	0	Read/Write	0 = Off, 1 = On (Applies for TC or RTD input)
<b>Alarm 7</b>						
1321	Assign	0	1*	0	Read/Write	0 = NONE, 1 = PV, 2+ = FlexCard Assignments
1322	Action	0	9	0	Read/Write	0 = NONE, 1 = AbHI, 2 = AbLO, 3 = AUHI, 4 = AULO, 5 = dEHI, 6 = dELO, 7 = bANd, 8 = bdIn, 9 = HCur
1323	Hysteresis Value	1	9999	2	Read/Write	1 = 1 Display Unit
1324	On Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1325	Off Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1326	Output Logic	0	1	0	Read/Write	0 = Normal, 1 = Reverse
1327	Reset Action	0	2	0	Read/Write	0 = Auto, 1 = Latch1, 2 = Latch2
1328	Standby Operation	0	1	0	Read/Write	0 = No, 1 = Yes
1329	Probe Failure Action (TC or RTD Only)	0	1	0	Read/Write	0 = Off, 1 = On (Applies for TC or RTD input)
<b>Alarm 8</b>						
1341	Assign	0	1*	0	Read/Write	0 = NONE, 1 = PV, 2+ = FlexCard Assignments
1342	Action	0	9	0	Read/Write	0 = NONE, 1 = AbHI, 2 = AbLO, 3 = AUHI, 4 = AULO, 5 = dEHI, 6 = dELO, 7 = bANd, 8 = bdIn, 9 = HCur
1343	Hysteresis Value	1	9999	2	Read/Write	1 = 1 Display Unit
1344	On Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1345	Off Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1346	Output Logic	0	1	0	Read/Write	0 = Normal, 1 = Reverse
1347	Reset Action	0	2	0	Read/Write	0 = Auto, 1 = Latch1, 2 = Latch2
1348	Standby Operation	0	1	0	Read/Write	0 = No, 1 = Yes
1349	Probe Failure Action (TC or RTD Only)	0	1	0	Read/Write	0 = Off, 1 = On (Applies for TC or RTD input)
<b>Alarm 9</b>						
1361	Assign	0	1*	0	Read/Write	0 = NONE, 1 = PV, 2+ = FlexCard Assignments
1362	Action	0	9	0	Read/Write	0 = NONE, 1 = AbHI, 2 = AbLO, 3 = AUHI, 4 = AULO, 5 = dEHI, 6 = dELO, 7 = bANd, 8 = bdIn, 9 = HCur
1363	Hysteresis Value	1	9999	2	Read/Write	1 = 1 Display Unit
1364	On Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1365	Off Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1366	Output Logic	0	1	0	Read/Write	0 = Normal, 1 = Reverse
1367	Reset Action	0	2	0	Read/Write	0 = Auto, 1 = Latch1, 2 = Latch2
1368	Standby Operation	0	1	0	Read/Write	0 = No, 1 = Yes
1369	Probe Failure Action (TC or RTD Only)	0	1	0	Read/Write	0 = Off, 1 = On (Applies for TC or RTD input)
<b>Alarm 10</b>						
1381	Assign	0	1*	0	Read/Write	0 = NONE, 1 = PV, 2+ = FlexCard Assignments
1382	Action	0	9	0	Read/Write	0 = NONE, 1 = AbHI, 2 = AbLO, 3 = AUHI, 4 = AULO, 5 = dEHI, 6 = dELO, 7 = bANd, 8 = bdIn, 9 = HCur



REGISTER ADDRESS	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
1383	Hysteresis Value	1	9999	2	Read/Write	1 = 1 Display Unit
1384	On Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1385	Off Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1386	Output Logic	0	1	0	Read/Write	0 = Normal, 1 = Reverse
1387	Reset Action	0	2	0	Read/Write	0 = Auto, 1 = Latch1, 2 = Latch2
1388	Standby Operation	0	1	0	Read/Write	0 = No, 1 = Yes
1389	Probe Failure Action (TC or RTD Only)	0	1	0	Read/Write	0 = Off, 1 = On (Applies for TC or RTD input)
<b>Alarm 11</b>						
1401	Assign	0	1*	0	Read/Write	0 = NONE, 1 = PV, 2+ = FlexCard Assignments
1402	Action	0	9	0	Read/Write	0 = NONE, 1 = AbHI, 2 = AbLO, 3 = AUHI, 4 = AULO, 5 = dEHI, 6 = dELO, 7 = bANd, 8 = bdIn, 9 = HCur
1403	Hysteresis Value	1	9999	2	Read/Write	1 = 1 Display Unit
1404	On Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1405	Off Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1406	Output Logic	0	1	0	Read/Write	0 = Normal, 1 = Reverse
1407	Reset Action	0	2	0	Read/Write	0 = Auto, 1 = Latch1, 2 = Latch2
1408	Standby Operation	0	1	0	Read/Write	0 = No, 1 = Yes
1409	Probe Failure Action (TC or RTD Only)	0	1	0	Read/Write	0 = Off, 1 = On (Applies for TC or RTD input)
<b>Alarm 12</b>						
1421	Assign	0	1*	0	Read/Write	0 = NONE, 1 = PV, 2+ = FlexCard Assignments
1422	Action	0	9	0	Read/Write	0 = NONE, 1 = AbHI, 2 = AbLO, 3 = AUHI, 4 = AULO, 5 = dEHI, 6 = dELO, 7 = bANd, 8 = bdIn, 9 = HCur
1423	Hysteresis Value	1	9999	2	Read/Write	1 = 1 Display Unit
1424	On Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1425	Off Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1426	Output Logic	0	1	0	Read/Write	0 = Normal, 1 = Reverse
1427	Reset Action	0	2	0	Read/Write	0 = Auto, 1 = Latch1, 2 = Latch2
1428	Standby Operation	0	1	0	Read/Write	0 = No, 1 = Yes
1429	Probe Failure Action (TC or RTD Only)	0	1	0	Read/Write	0 = Off, 1 = On (Applies for TC or RTD input)
<b>Alarm 13</b>						
1441	Assign	0	1*	0	Read/Write	0 = NONE, 1 = PV, 2+ = FlexCard Assignments
1442	Action	0	9	0	Read/Write	0 = NONE, 1 = AbHI, 2 = AbLO, 3 = AUHI, 4 = AULO, 5 = dEHI, 6 = dELO, 7 = bANd, 8 = bdIn, 9 = HCur
1443	Hysteresis Value	1	9999	2	Read/Write	1 = 1 Display Unit
1444	On Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1445	Off Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1446	Output Logic	0	1	0	Read/Write	0 = Normal, 1 = Reverse
1447	Reset Action	0	2	0	Read/Write	0 = Auto, 1 = Latch1, 2 = Latch2
1448	Standby Operation	0	1	0	Read/Write	0 = No, 1 = Yes
1449	Probe Failure Action (TC or RTD Only)	0	1	0	Read/Write	0 = Off, 1 = On (Applies for TC or RTD input)
<b>Alarm 14</b>						
1461	Assign	0	1*	0	Read/Write	0 = NONE, 1 = PV, 2+ = FlexCard Assignments
1462	Action	0	9	0	Read/Write	0 = NONE, 1 = AbHI, 2 = AbLO, 3 = AUHI, 4 = AULO, 5 = dEHI, 6 = dELO, 7 = bANd, 8 = bdIn, 9 = HCur
1463	Hysteresis Value	1	9999	2	Read/Write	1 = 1 Display Unit
1464	On Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1465	Off Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1466	Output Logic	0	1	0	Read/Write	0 = Normal, 1 = Reverse
1467	Reset Action	0	2	0	Read/Write	0 = Auto, 1 = Latch1, 2 = Latch2
1468	Standby Operation	0	1	0	Read/Write	0 = No, 1 = Yes
1469	Probe Failure Action (TC or RTD Only)	0	1	0	Read/Write	0 = Off, 1 = On (Applies for TC or RTD input)

REGISTER ADDRESS	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
<b>Alarm 15</b>						
1481	Assign	0	1*	0	Read/Write	0 = NONE, 1 = PV, 2+ = FlexCard Assignments
1482	Action	0	9	0	Read/Write	0 = NONE, 1 = AbHI, 2 = AbLO, 3 = AUHI, 4 = AULO, 5 = dEHI, 6 = dELO, 7 = bANd, 8 = bdIn, 9 = HCur
1483	Hysteresis Value	1	9999	2	Read/Write	1 = 1 Display Unit
1484	On Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1485	Off Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1486	Output Logic	0	1	0	Read/Write	0 = Normal, 1 = Reverse
1487	Reset Action	0	2	0	Read/Write	0 = Auto, 1 = Latch1, 2 = Latch2
1488	Standby Operation	0	1	0	Read/Write	0 = No, 1 = Yes
1489	Probe Failure Action (TC or RTD Only)	0	1	0	Read/Write	0 = Off, 1 = On (Applies for TC or RTD input)
<b>Alarm 16</b>						
1501	Assign	0	1*	0	Read/Write	0 = NONE, 1 = PV, 2+ = FlexCard Assignments
1502	Action	0	9	0	Read/Write	0 = NONE, 1 = AbHI, 2 = AbLO, 3 = AUHI, 4 = AULO, 5 = dEHI, 6 = dELO, 7 = bANd, 8 = bdIn, 9 = HCur
1503	Hysteresis Value	1	9999	2	Read/Write	1 = 1 Display Unit
1504	On Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1505	Off Time Delay	0	9999	0	Read/Write	1 = 0.1 Second
1506	Output Logic	0	1	0	Read/Write	0 = Normal, 1 = Reverse
1507	Reset Action	0	2	0	Read/Write	0 = Auto, 1 = Latch1, 2 = Latch2
1508	Standby Operation	0	1	0	Read/Write	0 = No, 1 = Yes
1509	Probe Failure Action (TC or RTD Only)	0	1	0	Read/Write	0 = Off, 1 = On (Applies for TC or RTD input)
<b>ALARM SCALING PARAMETERS</b>						
<b>List A</b>	<b>List B</b>	<b>Alarm Values</b>				
1551	1651	Alarm 1 Value	-1999	9999	0	Read/Write 1 = 1 Display Unit
1552	1652	Alarm 2 Value	-1999	9999	0	Read/Write 1 = 1 Display Unit
1553	1653	Alarm 3 Value	-1999	9999	0	Read/Write 1 = 1 Display Unit
1554	1654	Alarm 4 Value	-1999	9999	0	Read/Write 1 = 1 Display Unit
1555	1655	Alarm 5 Value	-1999	9999	0	Read/Write 1 = 1 Display Unit
1556	1656	Alarm 6 Value	-1999	9999	0	Read/Write 1 = 1 Display Unit
1557	1657	Alarm 7 Value	-1999	9999	0	Read/Write 1 = 1 Display Unit
1558	1658	Alarm 8 Value	-1999	9999	0	Read/Write 1 = 1 Display Unit
1559	1659	Alarm 9 Value	-1999	9999	0	Read/Write 1 = 1 Display Unit
1560	1660	Alarm 10 Value	-1999	9999	0	Read/Write 1 = 1 Display Unit
1561	1661	Alarm 11 Value	-1999	9999	0	Read/Write 1 = 1 Display Unit
1562	1662	Alarm 12 Value	-1999	9999	0	Read/Write 1 = 1 Display Unit
1563	1663	Alarm 13 Value	-1999	9999	0	Read/Write 1 = 1 Display Unit
1564	1664	Alarm 14 Value	-1999	9999	0	Read/Write 1 = 1 Display Unit
1565	1665	Alarm 15 Value	-1999	9999	0	Read/Write 1 = 1 Display Unit
1566	1666	Alarm 16 Value	-1999	9999	0	Read/Write 1 = 1 Display Unit
1567	1667	Alarm 1 Band/Dev. Value	-1999	9999	0	Read/Write Applicable only for Band or Deviation Alarm Action. 1 = 1 Display Unit
1568	1668	Alarm 2 Band/Dev. Value	-1999	9999	0	Read/Write Applicable only for Band or Deviation Alarm Action. 1 = 1 Display Unit
1569	1669	Alarm 3 Band/Dev. Value	-1999	9999	0	Read/Write Applicable only for Band or Deviation Alarm Action. 1 = 1 Display Unit
1570	1670	Alarm 4 Band/Dev. Value	-1999	9999	0	Read/Write Applicable only for Band or Deviation Alarm Action. 1 = 1 Display Unit
1571	1671	Alarm 5 Band/Dev. Value	-1999	9999	0	Read/Write Applicable only for Band or Deviation Alarm Action. 1 = 1 Display Unit
1572	1672	Alarm 6 Band/Dev. Value	-1999	9999	0	Read/Write Applicable only for Band or Deviation Alarm Action. 1 = 1 Display Unit
1573	1673	Alarm 7 Band/Dev. Value	-1999	9999	0	Read/Write Applicable only for Band or Deviation Alarm Action. 1 = 1 Display Unit
1574	1674	Alarm 8 Band/Dev. Value	-1999	9999	0	Read/Write Applicable only for Band or Deviation Alarm Action. 1 = 1 Display Unit
1575	1675	Alarm 9 Band/Dev. Value	-1999	9999	0	Read/Write Applicable only for Band or Deviation Alarm Action. 1 = 1 Display Unit
1576	1676	Alarm 10 Band/Dev. Value	-1999	9999	0	Read/Write Applicable only for Band or Deviation Alarm Action. 1 = 1 Display Unit
1577	1677	Alarm 11 Band/Dev. Value	-1999	9999	0	Read/Write Applicable only for Band or Deviation Alarm Action. 1 = 1 Display Unit

REGISTER ADDRESS		REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
1578	1678	Alarm 12 Band/Dev. Value	-1999	9999	0	Read/Write	Applicable only for Band or Deviation Alarm Action. 1 = 1 Display Unit
1579	1679	Alarm 13 Band/Dev. Value	-1999	9999	0	Read/Write	Applicable only for Band or Deviation Alarm Action. 1 = 1 Display Unit
1580	1680	Alarm 14 Band/Dev. Value	-1999	9999	0	Read/Write	Applicable only for Band or Deviation Alarm Action. 1 = 1 Display Unit
1581	1681	Alarm 15 Band/Dev. Value	-1999	9999	0	Read/Write	Applicable only for Band or Deviation Alarm Action. 1 = 1 Display Unit
1582	1682	Alarm 16 Band/Dev. Value	-1999	9999	0	Read/Write	Applicable only for Band or Deviation Alarm Action. 1 = 1 Display Unit
<b>SERIAL COMMUNICATION PARAMETERS</b>							
1701		USB Mode	0	1	0	Read/Write	0 = Configuration, 1 = Serial
1702		Type	0	2	2	Read/Write	0 = RLC Protocol (ASCII), 1 = Modbus RTU, 2 = Modbus ASCII
1703		Baud Rate	0	5	5	Read/Write	0 = 1200, 1 = 2400, 2 = 4800, 3 = 9600, 4 = 19200, 5 = 38400
1704		Data Bits	0	1	1	Read/Write	0 = 7 Bits, 1 = 8 Bits
1705		Parity	0	2	0	Read/Write	0 = None, 1 = Even, 2 = Odd
1706		Address	0	99	0	Read/Write	RLC Protocol: 0-99
			1	247	247		Modbus: 1-247
1707		Transmit Delay	0	250	10	Read/Write	1 = 0.001 Second
1708		Abbreviated Transmission (RLC only)	0	1	0	Read/Write	0 = No, 1 = Yes (Not used when communications type is Modbus)
1709		Print Options (RLC only)	0	8191	1	Read/Write	0 = No, 1 = Yes (Not used when communications type is Modbus) Bit 0 – Print Input Value, Bit 1 – Print SP Value, Bit 2 – Print Setpoint Ramp Rate, Bit 3 – Print Output Power, Bit 4 – Print Proportional Value, Bit 5 – Print Integral Value, Bit 6 - Print Derivative Value, Bit 7 – Print Alarm Status, Bit 8 – Print Alarm 1 Value, Bit 9 – Print Alarm 2 Value, Bit 10 – Print Alarm 3 Value, Bit 11 – Print Alarm 4 Value, Bit 12 – Print Control Status Bits
1710		Load Serial Settings	0	1	0	Read/Write	Changing 41701-41710 will not update the PAX2C until this register is written with a 1. After the write, the communicating device must be changed to new PAX2C settings and this register returns to 0.
<b>PROFILE CONTROL</b>							
5001		Profile 1 Cycle Count	1	250	1	Read/Write	1 - 249 = Number of times to run profile, 250 = Run Profile continuously
5002		Profile 1 Link to Profile	0	16	0	Read/Write	0 = No; 1-16 = Profile 1 to 16
5003		Profile 1 Deviation Error Value	0	9999	50	Read/Write	1 = 1 process unit
5004		Profile 1 Error Time	0	9999	0	Read/Write	1 = 0.1 Minute
5005		Profile 1 Power Cycle Status	0	2	0	Read/Write	0 = End per PEnd, 1 = Cont (Continue /Resume), 2 = Strt (Start)
5006		Profile 1 PS2 SP Assignment	0	0*	0	Read/Write	0 = NONE; 1+ = FlexCard PID (Pid)
5007		Profile 1 PS2 Process Deviation Error Value	0	9999	50	Read/Write	1 = 1 process unit
5008		Profile 1 PID Select	0	8	0	Read/Write	0 = NO; 1 = PS1 ... 6 = PS6, 7 = SP5L, 8 = Auto
5009		Profile 1 End Action	0	9	0	Read/Write	0 = End, 1 = StOP, 2 = OFF, 3 = SP1, 4 = SP2, 5 = SP3, 6 = SP4, 7 = SP5, 8 = SP6, 9 = SPu
5010		Profile 1 End Segment	1	20	20	Read/Write	Last Segment to be used
5011		Profile 1 Last Profile	0	1	0	Read/Write	0 = NO (read only); 1 = yES
5021		Profile 2 Registers					See Profile 1
5041		Profile 3 Registers					See Profile 1
5061		Profile 4 Registers					See Profile 1
5081		Profile 5 Registers					See Profile 1
5101		Profile 6 Registers					See Profile 1
5121		Profile 7 Registers					See Profile 1
5141		Profile 8 Registers					See Profile 1
5161		Profile 9 Registers					See Profile 1
5181		Profile 10 Registers					See Profile 1
5201		Profile 11 Registers					See Profile 1
5221		Profile 12 Registers					See Profile 1
5241		Profile 13 Registers					See Profile 1

REGISTER ADDRESS	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
5261	Profile 14 Registers					See Profile 1
5281	Profile 15 Registers					See Profile 1
5301	Profile 16 Registers					See Profile 1
<b>Profile Segment Registers</b>						To calculate specific register number of Segment y, for Profile x use formula: Profile x Segment y register = 6000 + (x-1)*100 + (y-1)5 + <b>Offset</b>
6001	Profile 1 Segment Registers					
6101	Profile 2 Segment Registers					
6201	Profile 3 Segment Registers					
6301	Profile 4 Segment Registers					
6401	Profile 5 Segment Registers					
6501	Profile 6 Segment Registers					
6601	Profile 7 Segment Registers					
6701	Profile 8 Segment Registers					
6801	Profile 9 Segment Registers					
6901	Profile 10 Segment Registers					
7001	Profile 11 Segment Registers					
7101	Profile 12 Segment Registers					
7201	Profile 13 Segment Registers					
7301	Profile 14 Segment Registers					
7401	Profile 15 Segment Registers					
7501	Profile 16 Segment Registers					
<b>Offset</b>						
1	Profile (x + 1) PS1 Setpoint Value	-1999	9999	0	Read/Write	1 = 1 process unit; Limited by Setpoint Limit Low and Setpoint Limit High
2	Profile (x + 1) PS2 Setpoint Value	-1999	9999	0	Read/Write	1 = 1 process unit; Limited by Setpoint Limit Low and Setpoint Limit High
3	Profile (x + 1) Time Value/Ramp Rate	0	9999	0	Read/Write	1 = 0.1 minute or 1 = 1 PV Display Unit/Min (when Ramp/Rate)
4	Profile (x + 1) Mode Register	0	0	4032 (0xFC0)	Read/Write	Bit 11: Event Flag 4 State; 1 = ON, 0 = OFF Bit 10: Event Flag 3 State; 1 = ON, 0 = OFF Bit 9: Event Flag 2 State; 1 = ON, 0 = OFF Bit 8: Event Flag 1 State; 1 = ON, 0 = OFF Bit 7: 1 = 0.1 Min; 0 = 1 Min Bit 6: 1 = Start Point Adjust; 0 = Start Point Adjust disabled Bit 5: Bit 4: 1 = Use Ramp Rate (Reg 3 is Ramp Rate); 0 = Reg 3 is Time Value Bit 3: 1 = Error Delay when PS2 PV is above ScSP + Sc Error Value Bit 2: 1 = Error Delay when PS2 PV is below ScSP - Sc Error Value Bit 1: 1 = Error when PV above SP + Er-V Bit 0: 1 = Error when PV below SP - Er-V

\* Higher limit is applicable with FlexCard installed.

PX2FCA0 Modbus Register Table

REVISED 2017-02-27

REGISTER ADDRESS ❖	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
<b>FREQUENTLY USED REGISTERS</b>						
4n001	Input Process Value (Hi word)	-1999	9999	N/A	Read Only	1 = 1 Display Unit ADC Ovrerrange Value = 1048576, Underrange Value = -1048576
4n002	Input Process Value (Lo word)					
4n003	Input Process Maximum (Hi word)	-1999	9999	N/A	Read Only	1 = 1 Display Unit
4n004	Input Process Maximum (Lo word)					
4n005	Input Process Minimum (Hi word)	-1999	9999	N/A	Read Only	1 = 1 Display Unit
4n006	Input Process Minimum (Lo word)					
4n007	Active SP	-1999	9999	N/A	Read/Write	1 = 1 Display Unit
4n008	Active Remote SP	-1999	9999	N/A	Read Only	1 = 1 Display Unit
4n009	Status Flags	0	255	N/A	Read Only	Bit 8 Set = ADC Underrange, Bit 7 Set = ADC Ovrerrange. Bit 6 Set = SP Ramping Bit 5 Set = Auto Tune Fail Bit 4 Set = Auto Tune Done Bit 3:0 = Auto Tune Phase
4n010	Output Status Register	0	15	0	Read/Write	Status of Solid-State Outputs. Bit State: 0 = OFF, 1 = ON. Bit 3 = O4, Bit 2 = O3, Bit 1 = O2, Bit 0 = O1.
4n011	Heat Power	0	1000	0	Read Only	1 = 0.1%
4n012	Cool Power	0	1000	0	Read Only	1 = 0.1%
4n013	Integral Sum				Read Only	
4n014	Active Proportional Band	0	9999	700	Read/Write	1 = 1 display unit
4n015	Active Integral Time	0	65000	120	Read/Write	1 = 0.1 Second
4n016	Active Derivative Time	0	9999	30	Read/Write	1 = 0.1 Second
4n017	Active Power Filter	0	60	10	Read/Write	1 = 0.1 Second
4n018	Heat Gain	0	5000	1000	Read/Write	1 = 0.1%
4n019	Cool Gain	0	5000	1000	Read/Write	1 = 0.1%
4n020-4n024	Reserved					
4n035	PID Control Flags	0	1000	0	Read/Write	Bit 9: Stop PID; 0=No, 1=Yes (Px2C V2+) Bit 6-8: AutoTune; 0 = No, 1 = Yes, 2 = CS1 ... 7 = CS6 Bit 6: AutoTune; 0 = NO, 1 = YES Bit 5: MAN; 0 = PID Auto Mode, 1 = PID Manual (User) Mode; Bit 4: PSEL; 0 = PS1 PID, 1 = Alternate PID, Bit 3: ILOC; 0 = Enable Integral Action, 1 = Disable Integral Action; Bit 2: RSPT; 0 = Local SP, 1 = Remote SP; Bit 1: SPSL; 0 = SP1, 1 = Req. SP2; Bit 0: SPPrP; 0 = SP Ramping Enable, 1 = SP Ramping Disable
4n041	Control Flags 2	0	118	0	Read/Write	Bit 4-6: PSEL; 0 = PS1 ... 5 = PS6, 6 = SPSL, 7 = Auto (PX2C V2+) Bit 0-2: SPSL; 0 = SP1 ... 5 = SP6, 6 = SPu (Px2C Ver 2+)
<b>INPUT PARAMETERS</b>						<b>SEE INPUT MODULE FOR PARAMETER DESCRIPTIONS</b>
<b>Analog Input Parameters</b>						
4n071	Input Type	0	1	0	Read/Write	0 = 0 to 10V DC, 1 = 0 to 20mA DC
4n072	Input Square Root Linearization	0	1	0	Read/Write	0 = No, 1 = Yes
4n073	Input Decimal Point	0	3	3	Read/Write	0 = 0, 1 = 0.0, 2 = 0.00, 3 = 0.000
4n074	Input Rounding	0	6	0	Read/Write	0 = 1, 1 = 2, 2 = 5, 3 = 10, 4 = 20, 5 = 50, 6 = 100
4n075	Input Offset Value (Hi word)	-1999	9999	0	Read/Write	1 = 1 Display Unit
4n076	Input Offset Value (Lo word)					
4n077	Input Filter Value	0	250	10	Read/Write	1 = 0.1 Second

❖: n = 1 + FlexCard Address

REGISTER ADDRESS ❖	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
4n078	Input Filter Band Value	0	250	10	Read/Write	1 = 1 display unit
4n079	Max (HI) Capture Delay Time	0	9999	0	Read/Write	0 = Max Update Rate, 1 = 0.1Sec
4n080	Min (LO) Capture Delay Time	0	9999	0	Read/Write	0 = Max Update Rate, 1 = 0.1Sec
4n081	Display Input Units	0	1	0	Read/Write	0 = OFF, 1 = ON
4n082	Input Units Character 1	0	57	0	Read/Write	Label Mnemonic Characters 0 =    9 = I    18 = Q    27 = Z    36 = 8    45 = m(r)    54 = ] 1 = A   10 = J    19 = R    28 = 0    37 = 9    46 = o    55 = / 2 = b   11 = K    20 = S    29 = 1    38 = a    47 = q    56 = ° 3 = C   12 = L    21 = t    30 = 2    39 = c    48 = r    57 = _ 4 = d   13 = M(l)   22 = U    31 = 3    40 = e    49 = u 5 = E   14 = M(r)   23 = V    32 = 4    41 = g    50 = w(r) 6 = F   15 = N    24 = W(l)   33 = 5    42 = h    51 = - 7 = G   16 = O    25 = W(r)   34 = 6    43 = i    52 = = 8 = H   17 = P    26 = Y    35 = 7    44 = n    53 = [
4n083	Input Units Character 2	0	57	0	Read/Write	See Input Units Character 1
4n084	Input Units Character 3	0	57	0	Read/Write	See Input Units Character 1
<b>Input Scaling Point Parameters</b>						
4n101	Number of Scaling Points	2	15	2	Read/Write	Number of Linearization Scaling Points
4n102	Reserved	N/A	N/A	N/A	N/A	Reserved for future use
4n103	Scaling Pt.1 Input Value (Hi word)	0	9999	0	Read/Write	1 = 0.001
4n104	Scaling Pt.1 Input Value (Lo word)					
4n105	Scaling Pt.1 Display Value (Hi word)	-1999	9999	0	Read/Write	1 = 1 Display Unit
4n106	Scaling Pt.1 Display Value (Lo word)					
4n107	Scaling Pt.2 Input Value (Hi word)	0	9999	1000	Read/Write	1 = 0.001
4n108	Scaling Pt.2 Input Value (Lo word)					
4n109	Scaling Pt.2 Display Value (Hi word)	-1999	9999	1000	Read/Write	1 = 1 Display Unit
4n110	Scaling Pt.2 Display Value (Lo word)					
4n111 thru 4n162	Scaling Pts. 3 thru 15 Values	0 (input) -1999 (dsp)	9999	0	Read/Write	Registers 40111-40162 hold values for Scaling Points 3 thru 15, and follow the same ordering as Scaling Points 1 and 2.
<b>DISPLAY CONFIGURATION PARAMETERS</b>						
<b>Line 2 Input LOCS Parameters</b>						
4n201	Line 2 Input (PV) Display Access	0	21	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 2 = PrEd, Bit4 = HrEd; Other bits N/A
4n202	Line 2 Maximum (Hi) Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
4n203	Line 2 Minimum (Lo) Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
<b>Line 2 PID LOCS Parameters</b>						
4n211	Line 2 Actual Setpoint Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
4n212	Line 2 Setpoint Value Access	0	40	0	Read/Write	0 = LOC; Bit 3 = PEnt, Bit5 = HEnt; Other bits N/A
4n213	Line 2 Remote Setpoint Value Access	0	21	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 2 = PrEd, Bit4 = HrEd; Other bits N/A
4n214	Line 2 Output Power Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 2 = PrEd, Bit4 = HrEd; Other bits N/A
4n215	Line 2 Deviation Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 2 = PrEd, Bit4 = HrEd; Other bits N/A
4n216	Line 2 Setpoint Ramping Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
4n217	Line 2 Remote Setpoint Ratio	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
4n218	Line 2 Remote Setpoint Bias	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
4n219	Line 2 Active Output Power Offset Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt

❖: n = 1 + FlexCard Address

REGISTER ADDRESS ❖	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
4n220	Line 2 Active Proportional Band Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
4n221	Line 2 Active Integral Time Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
4n222	Line 2 Active Derivative Time Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
4n223	Line 2 PID Set Selection	0	40	0	Read/Write	0 = LOC; Bit 3 = PEnt, Bit5 = HEnt; Other bits N/A
<b>Line 2 Function LOCS Parameters</b>						
4n231	Line 2 Reset Max Display Access	0	42	0	Read/Write	0 = LOC; Bit 1 = dEnt, Bit 3 = PEnt, Bit5 = HEnt; Other bits N/A
4n232	Line 2 Reset Min Display Access	0	42	0	Read/Write	0 = LOC; Bit 1 = dEnt, Bit 3 = PEnt, Bit5 = HEnt; Other bits N/A
4n233	Line 2 Reset Max and Min Access	0	42	0	Read/Write	0 = LOC; Bit 1 = dEnt, Bit 3 = PEnt, Bit5 = HEnt; Other bits N/A
4n234	Line 2 Setpoint Selection Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
4n235	Line 2 Local / Remote Transfer Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
4n236	Line 2 Setpoint Ramping Disable	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
4n237	Line 2 Integral Lock Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
4n238	Line 2 Auto/Manual Mode Selection Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
4n239	Line 2 Run/Stop Selection Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
4n240	Line 2 PID Bank Selection Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
4n241	Line 2 Tune Selection Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
<b>Hardware Label Mnemonic</b>						Replaces "FCx" in main, parameter, and hidden display loops when programmed
4n246	Hardware Label Character 1	0	57	0	Read/Write	Label Mnemonic Characters 0 =    9 = I    18 = Q    27 = Z    36 = 8    45 = m(r)    54 = ] 1 = A    10 = J    19 = R    28 = 0    37 = 9    46 = o    55 = / 2 = b    11 = K    20 = S    29 = 1    38 = a    47 = q    56 = ° 3 = C    12 = L    21 = t    30 = 2    39 = c    48 = r    57 = _ 4 = d    13 = M(l)    22 = U    31 = 3    40 = e    49 = u 5 = E    14 = M(r)    23 = V    32 = 4    41 = g    50 = w(r) 6 = F    15 = N    24 = W(l)    33 = 5    42 = h    51 = - 7 = G    16 = O    25 = W(r)    34 = 6    43 = i    52 = = 8 = H    17 = P    26 = Y    35 = 7    44 = n    53 = [
4n247	Hardware Label Character 2	0	57	0	Read/Write	See Hardware Label Character 1
4n248	Hardware Label Character 3	0	57	0	Read/Write	See Hardware Label Character 1
<b>OUTPUT PARAMETERS</b>						
4n251	Output 1 Assignment	0	◆	0	Read/Write	Assignments dependent on PAX2 model in which a FlexCard is installed. Output Assignment List order = Px2, FC1, FC2, FC3 Number of PX2FCA0 Output Assignments = 0
4n252	Output 1 Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
4n253	Output 1 Alarm Mask	0	65535	0	Read/Write	Bit 0 = A1    Bit 4 = A5    Bit 8 = A9    Bit 12 = A13 Bit 1 = A2    Bit 5 = A6    Bit 9 = A10    Bit 13 = A14 Bit 2 = A3    Bit 6 = A7    Bit 10 = A11    Bit 14 = A15 Bit 3 = A4    Bit 7 = A8    Bit 11 = A12    Bit 15 = A16
4n254	Output 1 Cycle Time	0	600	20	Read/Write	1 = 0.1 Second

❖: n = 1 + FlexCard Address

◆ PAX2 Unit and FlexCard dependent

REGISTER ADDRESS ❖	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
4n255	Output 2 Assignment	0	◆	0	Read/Write	Same as Output 1 Assignment
4n256	Output 2 Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
4n257	Output 2 Alarm Mask	0	65535	0	Read/Write	Same as Output 1 Alarm Mask
4n258	Output 2 Cycle Time	0	600	20	Read/Write	1 = 0.1 Second
4n259	Output 3 Assignment	0	◆	0	Read/Write	Same as Output 1 Assignment
4n260	Output 3 Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
4n261	Output 3 Alarm Mask	0	65535	0	Read/Write	Same as Output 1 Alarm Mask
4n262	Output 3 Cycle Time	0	600	20	Read/Write	1 = 0.1 Second
4n263	Output 4 Assignment	0	◆	0	Read/Write	Same as Output 1 Assignment
4n264	Output 4 Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
4n265	Output 4 Alarm Mask	0	65535	0	Read/Write	Same as Output 1 Alarm Mask
4n266	Output 4 Cycle Time	0	600	20	Read/Write	1 = 0.1 Second
<b>PID CONFIGURATION PARAMETERS</b>						
<b>Control Parameters</b>						
4n301	Assign	0	1*	0	Read/Write	0 = NONE, 1 = P2C Process Value, 2+ = Flex Card Assignments; FCn Input
4n302	Control Type	0	2	0	Read/Write	0 = Heat, 1 = Cool, 2 = Both
4n303	Control Mode	0	1	0	Read/Write	0 = Automatic, 1 = Manual
4n304	Manual Power	-1999	2000	0	Read/Write	Output Power: Heat/Cool; 1 = 0.1%; *-writeable only in manual mode
<b>Remote Setpoint Parameters</b>						
4n306	Remote SP Assignment	0	1*	0	Read/Write	0 = NONE, 1 = P2C SP, 2 = P2C PV, 3 = P2C OP, 4 = P2C ScSP, 5+ = Flex Card Assignments ; FCn SP, FCn PV, FCn OP
4n307	Reserved Register	-32768	-32768	N/A		
4n308	Ratio	1	9999	1000	Read/Write	1 = 0.1
4n309	Bias	-1999	9999	0	Read/Write	1 = 1 Display Unit
4n310	Select Local / Remote SP	0	1	0	Read/Write	
<b>Setpoint Parameters</b>						
4n311	Setpoint Selection	0	1	0	Read/Write	0 = Setpoint 1, 1 = Setpoint 2
4n312	Setpoint 1 Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
4n313	Setpoint 2 Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
4n314	Setpoint Lo Limit Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
4n315	Setpoint Hi Limit Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
4n316	Ramp Timebase	0	3	0	Read/Write	0 = Off, 1 = Seconds, 2 = Minutes, 3 = Hours
4n317	Ramp Rate	0	9999	0	Read/Write	1 = 0.1 Ramp Timebase unit
<b>PID Parameters</b>						
4n321	PID Parameter Selection	0	1	0	Read/Write	0 = PS1, 1 = PS2, 2 = PS3, 3 = PS4, 4 = PS5, 5 = PS6, 6 = SPSL, 7 = Auto
4n322	PS1 Proportional Band	0	9999	40	Read/Write	1 = 1 Display Unit
4n323	PS1 Integral Time	0	65000	120	Read/Write	1 = 0.1 Second
4n324	PS1 Derivative Time	0	9999	30	Read/Write	1 = 0.1 Second
4n325	PS1 Power Filter Value	0	600	10	Read/Write	1 = 0.1 Second
4n326	PS1 Output Power Offset	-1000	1000	0	Read/Write	1 = 0.1 %; Applicable when PS1 Integral Time is 0
4n327	PS2 Proportional Band	0	9999	40	Read/Write	1 = 1 Display Unit
4n328	PS2 Integral Time	0	65000	120	Read/Write	1 = 0.1 Second
4n329	PS2 Derivative Time	0	9999	30	Read/Write	1 = 0.1 Second
4n330	PS2 Power Filter Value	0	600	10	Read/Write	1 = 0.1 Second
4n331	PS2 Output Power Offset	-1000	1000	0	Read/Write	1 = 0.1 %; Applicable when PS2 Integral Time is 0
<b>Power Transfer Parameters</b>						
4n341	Input Fault Power Value	-1999	2000	0	Read/Write	1 = 0.1 %
4n342	Output Deadband	-1000	1000	0	Read/Write	1 = 0.1 %
4n343	Output Heat Gain	0	5000	1000	Read/Write	1 = 0.1 %

❖: n = 1 + FlexCard Address

◆: PAX2 Unit and FlexCard dependent



REGISTER ADDRESS ❖	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
4n344	Heat Low Limit	0	2000	0	Read/Write	1 = 0.1 %
4n345	Heat High Limit	0	2000	1000	Read/Write	1 = 0.1 %
4n346	Output Cool Gain	0	5000	1000	Read/Write	1 = 0.1 %
4n347	Cool Low Limit	0	2000	0	Read/Write	1 = 0.1 %
4n348	Cool High Limit	0	2000	1000	Read/Write	1 = 0.1 %
<b>ON/OFF Control Parameters</b>						
4n371	On-Off Hysteresis	0	500	0	Read/Write	1 = 1 Display Unit
4n372	On-Off Deadband	-1999	9999	0	Read/Write	1 = 1 Display Unit
<b>Tuning Parameters</b>						
4n381	Tuning Code	0	4	2	Read/Write	0 = Very Aggressive, 1 = Aggressive, 2 = Default, 3 = Conservative, 4 = Very Conservative
4n382	Auto-Tune Start	0	1	0	Read/Write	0 = NO, 1 = YES
<b>Setpoints (SPn)</b>						
4n391	Setpoint 1 Value	-1999	9999	0	Read/Write	1 = 1 Display Unit (Mirrors Register 312)
4n392	Setpoint 2 Value	-1999	9999	0	Read/Write	1 = 1 Display Unit (Mirrors Register 313)
4n393	Setpoint 3 Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
4n394	Setpoint 4 Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
4n395	Setpoint 5 Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
4n396	Setpoint 6 Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
4n397	Setpoint SPu Value	-1999	9999	0	Read/Write	1 = 1 Display Unit
<b>PID Constants Sets (PSn)</b>						
4n401-4n408	PID Set PS1 Constants					
4n401	Setpoint 1	-1999	9999	0	Read/Write	1 = 1 Display Unit
4n402	PS1 Proportional Band	0	9999	700	Read/Write	1 = 1 Display Unit
4n403	PS1 Integral Time	0	65000	120	Read/Write	1 = 0.1 Second
4n404	PS1 Derivative Time	0	9999	30	Read/Write	1 = 0.1 Second
4n405	PS1 Power Filter Value	0	600	10	Read/Write	1 = 0.1 Second
4n406	PS1 Output Power Offset	-1000	1000	0	Read/Write	1 = 0.1 %; Applicable when PS1 Integral Time is 0
4n407	PS1 Heat Gain	0	5000	1000	Read/Write	1 = 0.1 %
4n408	PS1 Cool Gain	0	5000	1000	Read/Write	1 = 0.1 %
4n411-4n418	PID Set PS2 Constants					Same order as SP1 /PID Set PS1 Constants (Register 401-408)
4n421-4n428	PID Set PS3 Constants					
4n431-4n438	PID Set PS4 Constants					
4n441-4n448	PID Set PS5 Constants					
4n451-4n458	PID Set PS6 Constants					
<b>PX2 USER INPUT / FUNCTION KEYS PARAMETERS</b>				<b>REFER TO PAX2 MANUAL FOR STARTING LOCATION OF FLEXCARD FUNCTIONS (NUMBER OF PAX2 FUNCTIONS + 1)</b>		
**	User Input Selection	0	"FlexCard Dependent"	0	Read/Write	n+1 = ILOC n+4 = SPSt n+7 = RSpt n+10 = d-Lo n+13 = NA-1 n+2 = trnF n+5 = PSEL n+8 = d-HI n+11 = r-Lo n+3 = RnSt n+6 = SPPr n+9 = r-HI n+12 = r-HL n = Starting location for FlexCard Function List order = PAX2, FC1, FC2, FC3 Number of PX2FCA00 User Functions = 13
**	User Key Selection	0	"FlexCard Dependent"	0	Read/Write	n+1 = ILOC n+4 = SPSt n+7 = SPPr n+10 = r-HL n+2 = trnF n+5 = RSpt n+8 = r-HI n+11 = NA-1 n+3 = RnSt n+6 = PSEL n+9 = r-Lo n = Starting location for Flex Card Function List order = PAX2, FC1, FC2, FC3 Number of PX2FCA00 Key Functions = 11

❖: n = 1 + FlexCard Address

\*\* - See Modbus Table for PAX2 unit (FlexBus model) in which card is being installed

PX2FCA1 Modbus Register Table

REVISED 2017-02-27

REGISTER ADDRESS ❖	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
<b>FREQUENTLY USED REGISTERS</b>						
4n001	Input Process Value (Hi word)	-1999	9999	N/A	Read Only	1 = 1 Display Unit ADC Overage Value = 1048576, Underrange Value = -1048576
4n002	Input Process Value (Lo word)					
4n003	Input Process Maximum (Hi word)	-1999	9999	N/A	Read Only	1 = 1 Display Unit
4n004	Input Process Maximum (Lo word)					
4n005	Input Process Minimum (Hi word)	-1999	9999	N/A	Read Only	1 = 1 Display Unit
4n006	Input Process Minimum (Lo word)					
4n007	Input Process Status Flags	0	255	N/A	Read Only	Bit 3 Set = ADC Underrange, Bit 2 Set = ADC Overage.
4n008	Output Status Register	0	15	0	Read/Write	Status of Solid-State Outputs. Bit State: 0=OFF, 1=ON. Bit 3 = O4, Bit 2 = O3, Bit 1 = O2, Bit 0 = O1 * only outputs configured for ASGN=NONE are writeable; otherwise writes are ignored
<b>INPUT PARAMETERS</b>						
<b>SEE INPUT MODULE FOR PARAMETER DESCRIPTIONS</b>						
<b>Analog Input Parameters</b>						
4n071	Heater Current Monitor	0	4*	1	Read/Write	0 = None, 1 = P2C Out1, 2 = P2C Out2, 3 = P2C Out3, 4=P2C Out4, 5+ = FlexCard Outputs
4n072	Input Square Root Linearization	0	1	0	Read/Write	0 = No, 1 = Yes
4n073	Input Decimal Point	0	3	1	Read/Write	0 = 0, 1 = 0.0, 2 = 0.00, 3 = 0.000
4n074	Input Rounding	0	6	0	Read/Write	0 = 1, 1 = 2, 2 = 5, 3 = 10, 4 = 20, 5 = 50, 6 = 100
4n075	Input Offset Value (Hi word)	-1999	9999	0	Read/Write	1 = 1 Display Unit
4n076	Input Offset Value (Lo word)					
4n077	Input Filter Value	0	250	10	Read/Write	1 = 0.1 Second
4n078	Input Filter Band Value	0	250	10	Read/Write	1 = 1 display unit
4n079	Max (HI) Capture Delay Time	0	9999	0	Read/Write	0 = Max Update Rate, 1 = 0.1Sec
4n080	Min (LO) Capture Delay Time	0	9999	0	Read/Write	0 = Max Update Rate, 1 = 0.1Sec
4n081	Display Input Units	0	1	0	Read/Write	0 = OFF, 1 = ON
4n082	Input Units Character 1	0	57	0	Read/Write	Label Mnemonic Characters 0 =    9 = I    18 = Q    27 = Z    36 = 8    45 = m(r)    54 = ] 1 = A    10 = J    19 = R    28 = 0    37 = 9    46 = o    55 = / 2 = b    11 = K    20 = S    29 = 1    38 = a    47 = q    56 = ° 3 = C    12 = L    21 = t    30 = 2    39 = c    48 = r    57 = _ 4 = d    13 = M(l)    22 = U    31 = 3    40 = e    49 = u 5 = E    14 = M(r)    23 = V    32 = 4    41 = g    50 = w(r) 6 = F    15 = N    24 = W(l)    33 = 5    42 = h    51 = - 7 = G    16 = O    25 = W(r)    34 = 6    43 = i    52 = = 8 = H    17 = P    26 = Y    35 = 7    44 = n    53 = [
4n083	Input Units Character 2	0	57	0	Read/Write	See Input Units Character 1
4n084	Input Units Character 3	0	57	0	Read/Write	See Input Units Character 1
<b>Input Scaling Point Parameters</b>						
4n101	Number of Scaling Points	2	15	2	Read/Write	Number of Linearization Scaling Points
4n102	Reserved	N/A	N/A	N/A	N/A	Reserved for future use
4n103	Scaling Pt.1 Input Value (Hi word)	0	9999	0	Read/Write	1 = 0.001
4n104	Scaling Pt.1 Input Value (Lo word)					
4n105	Scaling Pt.1 Display Value (Hi word)	-1999	9999	0	Read/Write	1 = 1 Display Unit
4n106	Scaling Pt.1 Display Value (Lo word)					
4n107	Scaling Pt.2 Input Value (Hi word)	0	9999	1000	Read/Write	1 = 0.001
4n108	Scaling Pt.2 Input Value (Lo word)					
4n109	Scaling Pt.2 Display Value (Hi word)	-1999	9999	1000	Read/Write	1 = 1 Display Unit
4n110	Scaling Pt.2 Display Value (Lo word)					

❖: n = 1 + FlexCard Address

REGISTER ADDRESS ❖	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
4n111 thru 4n162	Scaling Pts. 3 thru 15 Values	0 (input) -1999 (dsp)	9999	0	Read/Write	Registers 40111-40162 hold values for Scaling Points 3 thru 15, and follow the same ordering as Scaling Points 1 and 2.
<b>DISPLAY CONFIGURATION PARAMETERS</b>						
<b>Line 2 Input LOCS Parameters</b>						
4n201	Line 2 Input (PV) Display Access	0	21	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 2 = PrEd, Bit4 = HrEd; Other bits N/A
4n202	Line 2 Maximum (Hi) Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
4n203	Line 2 Minimum (Lo) Value Access	0	42	0	Read/Write	0 = LOC; Bit 0 = drEd, Bit 1 = dEnt, Bit 2 = PrEd, Bit 3 = PEnt, Bit4 = HrEd, Bit5 = HEnt
<b>Line 2 Function LOCS Parameters</b>						
4n231	Line 2 Reset Max Display Access	0	42	0	Read/Write	0 = LOC; Bit 1 = dEnt, Bit 3 = PEnt, Bit5 = HEnt; Other bits N/A
4n232	Line 2 Reset Min Display Access	0	42	0	Read/Write	0 = LOC; Bit 1 = dEnt, Bit 3 = PEnt, Bit5 = HEnt; Other bits N/A
4n233	Line 2 Reset Max and Min Access	0	42	0	Read/Write	0 = LOC; Bit 1 = dEnt, Bit 3 = PEnt, Bit5 = HEnt; Other bits N/A
<b>Hardware Label Mnemonic</b>						Replaces "FCx" in main, parameter, and hidden display loops when programmed
4n246	Hardware Label Character 1	0	57	0	Read/Write	Label Mnemonic Characters 0 = 9 = I 18 = Q 27 = Z 36 = 8 45 = m(r) 54 = ] 1 = A 10 = J 19 = R 28 = 0 37 = 9 46 = o 55 = / 2 = b 11 = K 20 = S 29 = 1 38 = a 47 = q 56 = ° 3 = C 12 = L 21 = t 30 = 2 39 = c 48 = r 57 = _ 4 = d 13 = M(l) 22 = U 31 = 3 40 = e 49 = u 5 = E 14 = M(r) 23 = V 32 = 4 41 = g 50 = w(r) 6 = F 15 = N 24 = W(l) 33 = 5 42 = h 51 = - 7 = G 16 = O 25 = W(r) 34 = 6 43 = i 52 = = 8 = H 17 = P 26 = Y 35 = 7 44 = n 53 = [
4n247	Hardware Label Character 2	0	57	0	Read/Write	See Hardware Label Character 1
4n248	Hardware Label Character 3	0	57	0	Read/Write	See Hardware Label Character 1
<b>OUTPUT PARAMETERS</b>						
4n251	Output 1 Assignment	0	PAX2 Unit and FlexCard dependent	0	Read/Write	Assignments dependent on PAX2 model in which FlexCard is installed. Output Assignment List order = PX2, FC1, FC2, FC3 Number of PX2FCA1 Output Assignments = 0
4n252	Output 1 Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
4n253	Output 1 Alarm Mask	0	65535	0	Read/Write	Bit 0 = A1 Bit 4 = A5 Bit 8 = A9 Bit 12 = A13 Bit 1 = A2 Bit 5 = A6 Bit 9 = A10 Bit 13 = A14 Bit 2 = A3 Bit 6 = A7 Bit 10 = A11 Bit 14 = A15 Bit 3 = A4 Bit 7 = A8 Bit 11 = A12 Bit 15 = A16
4n254	Output 1 Cycle Time	0	600	20	Read/Write	1 = 0.1 Second
4n255	Output 2 Assignment	0	6	0	Read/Write	Same as Output 1 Assignment
4n256	Output 2 Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
4n257	Output 2 Alarm Mask	0	65535	0	Read/Write	Same as Output 1 Alarm Mask
4n258	Output 2 Cycle Time	0	600	20	Read/Write	1 = 0.1 Second
4n259	Output 3 Assignment	0	6	0	Read/Write	Same as Output 1 Assignment
4n260	Output 3 Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
4n261	Output 3 Alarm Mask	0	65535	0	Read/Write	Same as Output 1 Alarm Mask
4n262	Output 3 Cycle Time	0	600	20	Read/Write	1 = 0.1 Second
4n263	Output 4 Assignment	0	6	0	Read/Write	Same as Output 1 Assignment
4n264	Output 4 Alarm Logic Mode	0	2	0	Read/Write	0 = SINGLE, 1 = AND, 2 = OR
4n265	Output 4 Alarm Mask	0	65535	0	Read/Write	Same as Output 1 Alarm Mask
4n266	Output 4 Cycle Time	0	600	20	Read/Write	1 = 0.1 Second

❖: n = 1 + FlexCard Address

REGISTER ADDRESS ❖	REGISTER NAME	LOW LIMIT	HIGH LIMIT	FACTORY SETTING	ACCESS	COMMENTS
<b>PX2 USER INPUT / FUNCTION KEYS PARAMETERS</b>			<b>REFER TO PAX2 MANUAL FOR STARTING LOCATION OF FLEXCARD FUNCTIONS (NUMBER OF PAX2 FUNCTIONS + 1)</b>			
**	User Input Selection	0	FlexCard Dependent	0	Read/Write	n+1 = d-HI    n+3 = d-Lo    n+5 = r-HL n+2 = r-HI    n+4 = r-Lo    n+6 = NA-1 n = Starting location for Flex Card Function List order = PAX2, FC1, FC2, FC3 Number of PX2FCA01 User Functions = 6
**	User Key Selection	0	FlexCard Dependent	0	Read/Write	n+1 = r-HI    n+2 = r-Lo    n+3 = r-HL    n+4 = NA-1 n = Starting location for Flex Card Function List order = PAX2, FC1, FC2, FC3 Number of PX2FCA01 Key Functions = 4

❖: n = 1 + FlexCard Address

\*\* - See Modbus Table for PAX2 unit (FlexBus model) in which card is being installed