

## Temperature & Process Controller Selection Guide

Controller	4080	40 Series 4040, 8040, 6040	2110	3204	ETR-3400
<b>Description</b>	Controller	Controller	Controller	Controller	Controller
<b>Control Loops</b>	Single	Single	Single	Single	Single
<b>Indication/Display</b>	Graphical/Text LCD	Dual 4-Digit	Single 4-Digit	Single 4-Digit	Single 4-Digit
<b>Panel Cutout (DIN)</b>	1/4	1/4, 1/18, 1/16	1/4	1/32	1/32
<b>Inputs Thermocouple</b>	J,K,R,S,T,B,C,D,E,L,N, Pt RH 20%:40%	J,K,C,L,N,T,R,S,B & Pt RH 20% vs 40%	J,K	J,K,T,E,B,R,S,N	J,K,T,E,B,R,S,N
<b>RTD</b>	3 wire PT100, NI120	3 wire PT100	PT100	PT100	PT100
<b>Current, Voltage</b>	0-20 mA, 4-20 mA, 0-50 mV, 10 to 50 mV, 0-5 V, 1-5 V, 0-10 V, 2-10 V (0-100 mV and 2K $\Omega$ pot also on aux-B input), scaling -1999 to +9999	0-20 mA, 4-20 mA, 0-50 mV, 10 to 50 mV, 0-5 V, 1-5 V, 0-10 V, 2-10 V, scaling -1999 to +9999		4-20 mA, 0-20 mA, 4-20 mV, 0-20 mV	4-20 mA, 0-20 mA 0-1, 0-5, 1-5 or 0-10 Vdc
<b>Digital</b>	2	1	N		1
<b>Outputs (Maximum)</b>	9	3/5	2	3	3
<b>Relay</b>	Y	Y	Y (20 Amps)	Y	Y
<b>SSR Drive</b>	Y	Y	Y	Y	Y
<b>Triac/SSR</b>	Y	Y	Y (10 Amps)	Y	Y
<b>4-20mA</b>	Y	Y	N	Y	Y
<b>Number of Controls</b>	2	2	1	2	2
<b>Number of Alarms</b>	5	3	1	1	2 (1 out Vdc)
<b>Number of Events<sup>1</sup></b>	5	3			
<b>Agency Approvals</b>	UL, cUL, CE	UL, cUL, CE	UL, CUL	UL, cUL, CE	UL, CSA, CE
<b>Operating Environment</b>	NEMA 4X, IP66 (IP65 with USB)	NEMA 4X / IP66		NEMA 4X	NEMA 4X
<b>Control Modes Limit</b>	N	N		Y	
<b>ON/OFF</b>	Y	Y	Y	Y	Y
<b>Proportional (w. manual reset)</b>	Y	Y	Y (PI Only)	Y	Y
<b>PID</b>	Y	Y		Y	Y
<b>Auto Tune PID</b>	Y	Y		Y	Y
<b>Valve Drive w/Feedback</b>	Y	Y	N		
<b>Ramp and Soak</b>	Y	N	N	Y	Y
<b>Intervals</b>	255			2	2
<b>Ramp to Set Point</b>	Y	Y		Y	Y
<b>Control Action</b>	Heat, Cool Heat/Cool, Valve Actuator	Heat, Cool, Heat/Cool	Heat	Heat, Cool Heat/Cool	Heat, Cool Heat/Cool
<b>Other</b>	Loop Break Alarm	Valve Motor Drive, Heater Break Alarm	High Current Output		Differential Input Heater Break
<b>Remote Setpoint</b>	Y	Y	N		
<b>Retransmit Output</b>	Y	Y	N	Y	Y
<b>Communications RS-232, RS-485</b>	RS-485 & Ethernet	Y (RS-485)	N	Y	Y
<b>See Page</b>	H-6	H-10	H-13	H-15	H-18

<sup>1</sup> Some outputs are field selectable as Alarms or Events.

## Temperature & Process Controller Selection Guide

Controller	300D/300B	3340	3380	CX224	50 Series 4050, 6050	LIMIT
<b>Description</b>	Controller	Controller	Controller	Monitor	High/Low Limit	High Limit
<b>Control Loops</b>	Single	Four	Eight	Twelve	Single	Single
<b>Indication/Display</b>	Set Point Dial Non-Indicating	Dual 4-Digit	Dual 4-Digit	LED	Dual 4-Digit	Set Point Dial Non-Indicating
<b>Panel Cutout (DIN)</b>	DIN Rail	1/4	1/4	Special Panel Cutout	1/4 & 1/16	Back Panel Mount
<b>Inputs Thermocouple</b>	J,K	J,K,E,T,R,S,B,N,PLII,U, LW5Re/W26Re	J,K,E,T,R,S,B,N,PLII,U, LW5Re/W26Re	J,K,E,T	J,K,C,L,N,T,R,S,B & Pt RH 20% vs 40%	J,K
<b>RTD</b>	PT100	PT100	PT100	Pt, Ni, Cu	3 wire PT100	PT100
<b>Current, Voltage</b>		0-5, 0-10, 1-5Vdc	0-5, 0-10, 1-5Vdc	4-20mA, 1-5V	0-20 mA, 4-20 mA, 0-50 mV, 10 to 50 mV, 0-5 V, 1-5 V, 0-10 V, 2-10 V, scaling 1999 to +9999	0-20mA, 4-20mA, 0-5V, 1-5V, 2-10V, 0-10V
<b>Digital</b>		Up to 5	Up to 5	0	1	Reset
<b>Outputs (Maximum)</b>	1	11	11	5	3	1
<b>Relay</b>	Y	Y	Y	N	Y	Y
<b>SSR Drive</b>	N	Y	Y	N	Y	N
<b>Triac/SSR</b>	N	Y	Y	N	Y	N
<b>4-20mA</b>	N	Y	Y	N	Y	N
<b>Number of Controls</b>	1	4	8	0	1	0
<b>Number of Alarms</b>	N	Up to 7	Up to 3	12	3	1
<b>Number of Events<sup>1</sup></b>	0			0	1	0
<b>Agency Approvals</b>	UL, CUL	UL, cUL, CE	UL, cUL, CE	UL	UL, cUL, CE	UL, CUL, FM
<b>Operating Environment</b>		IP65	IP65		NEMA 4X, IP66	
<b>Control Modes Limit</b>	N	N	N	N	Y	Y
<b>ON/OFF</b>	Y	Y	Y	N	N	N
<b>Proportional (w. manual reset)</b>	Y	Y	Y	N	N	N
<b>PID</b>	N	Y	Y	N	N	N
<b>Auto Tune PID</b>	N	Y	Y	N	N	N
<b>Valve Drive w/Feedback</b>	N	N	N	N	N	N
<b>Ramp and Soak</b>	N	N	N	N	N	N
<b>Intervals</b>				N	N	N
<b>Ramp to Set Point</b>		Y		N	N	N
<b>Control Action</b>	Heat	Heat, Cool, Heat/Cool	Alarm	Limit/Alarm	Limit/Alarm	
<b>Other</b>		3PH/Heater Break Memory Area	Differential Input Heater Break	Differential Input Heater Break		3PH/Heater Break Memory Area
<b>Remote Setpoint</b>		N			N	
<b>Retransmit Output</b>		N	N	N	Y	
<b>Communications RS-232, RS-485</b>		Y	Y	Y	Y (RS-485)	N
<b>See Page</b>	H-21	H-22	H-25	H-26	H-28	H-31

<sup>1</sup> Some outputs are field selectable as Alarms or Events.