

Temperature & Process Controller Selection Guide

Controller	4080	40 Series 4040, 8040, 6040	2110	3204	ETR-3400
Description	Controller	Controller	Controller	Controller	Controller
Control Loops	Single	Single	Single	Single	Single
Indication/Display	Graphical/Text LCD	Dual 4-Digit	Single 4-Digit	Single 4-Digit	Single 4-Digit
Panel Cutout (DIN)	1/4	1/4, 1/18, 1/16	1/4	1/32	1/32
Inputs Thermocouple	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
RTD	3 wire PT100, NI120	3 wire PT100	PT100	PT100	PT100
Current, Voltage	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 Ω 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
Digital	2	1	N		1
Outputs (Maximum)	9	3/5	2	3	3
Relay	Y	Y	Y (20 Amps)	Y	Y
SSR Drive	Y	Y	Y	Y	Y
Triac/SSR	Y	Y	Y (10 Amps)	Y	Y
4-20mA	Y	Y	N	Y	Y
Number of Controls	2	2	1	2	2
Number of Alarms	5	3	1	1	2 (1 out Vdc)
Number of Events¹	5	3			
Agency Approvals	UL, cUL, CE	UL, cUL, CE	UL, CUL	UL, cUL, CE	UL, CSA, CE
Operating Environment	NEMA 4X, IP66 (IP65 with USB)	NEMA 4X / IP66		NEMA 4X	NEMA 4X
Control Modes Limit	N	N		Y	
ON/OFF	Y	Y	Y	Y	Y
Proportional (w. manual reset)	Y	Y	Y (PI Only)	Y	Y
PID	Y	Y		Y	Y
Auto Tune PID	Y	Y		Y	Y
Valve Drive w/Feedback	Y	Y	N		
Ramp and Soak	Y	N	N	Y	Y
Intervals	255			2	2
Ramp to Set Point	Y	Y		Y	Y
Control Action	Heat, Cool Heat/Cool, Valve Actuator	Heat, Cool, Heat/Cool	Heat	Heat, Cool Heat/Cool	Heat, Cool Heat/Cool
Other	Loop Break Alarm	Valve Motor Drive, Heater Break Alarm	High Current Output		Differential Input Heater Break
Remote Setpoint	Y	Y	N		
Retransmit Output	Y	Y	N	Y	Y
Communications RS-232, RS-485	RS-485 & Ethernet	Y (RS-485)	N	Y	Y
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¹ Some outputs are field selectable as Alarms or Events.

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Controller	300D/300B	3340	3380	CX224	50 Series 4050, 6050	LIMIT
Description	Controller	Controller	Controller	Monitor	High/Low Limit	High Limit
Control Loops	Single	Four	Eight	Twelve	Single	Single
Indication/Display	Set Point Dial Non-Indicating	Dual 4-Digit	Dual 4-Digit	LED	Dual 4-Digit	Set Point Dial Non-Indicating
Panel Cutout (DIN)	DIN Rail	1/4	1/4	Special Panel Cutout	1/4 & 1/16	Back Panel Mount
Inputs Thermocouple	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
RTD	PT100	PT100	PT100	Pt, Ni, Cu	3 wire PT100	PT100
Current, Voltage		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
Digital		Up to 5	Up to 5	0	1	Reset
Outputs (Maximum)	1	11	11	5	3	1
Relay	Y	Y	Y	N	Y	Y
SSR Drive	N	Y	Y	N	Y	N
Triac/SSR	N	Y	Y	N	Y	N
4-20mA	N	Y	Y	N	Y	N
Number of Controls	1	4	8	0	1	0
Number of Alarms	N	Up to 7	Up to 3	12	3	1
Number of Events¹	0			0	1	0
Agency Approvals	UL, CUL	UL, cUL, CE	UL, cUL, CE	UL	UL, cUL, CE	UL, CUL, FM
Operating Environment		IP65	IP65		NEMA 4X, IP66	
Control Modes Limit	N	N	N	N	Y	Y
ON/OFF	Y	Y	Y	N	N	N
Proportional (w. manual reset)	Y	Y	Y	N	N	N
PID	N	Y	Y	N	N	N
Auto Tune PID	N	Y	Y	N	N	N
Valve Drive w/Feedback	N	N	N	N	N	N
Ramp and Soak	N	N	N	N	N	N
Intervals				N	N	N
Ramp to Set Point		Y		N	N	N
Control Action	Heat	Heat, Cool, Heat/Cool	Alarm	Limit/Alarm	Limit/Alarm	
Other		3PH/Heater Break Memory Area	Differential Input Heater Break	Differential Input Heater Break		3PH/Heater Break Memory Area
Remote Setpoint		N			N	
Retransmit Output		N	N	N	Y	
Communications RS-232, RS-485		Y	Y	Y	Y (RS-485)	N
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¹ Some outputs are field selectable as Alarms or Events.