

CHOOSING THE UNIT PRECISELY RIGHT FOR YOU

	IC/5 CONTROLLER	XTC/2 & XTC/C CONTROLLERS	XTM/2 MONITOR
Measurement performance			
Resolution (? s/M) ¹	0.006	0.06	0.123
Max. crystal frequency shift	1.5 MHz	1.0 MHz	1.0 MHz
Crystal range & precision	6.0 to 4.5 MHz ? .0047 Hz (per 100-ms sample)	6.0 to 5.0 MHz ? .05 Hz (per 250-ms sample)	6.0 to 5.0 MHz ? .1 Hz (per 250-ms sample)
Thickness accuracy ²	0.5%	0.5%	0.5%
Measurement frequency	10 Hz	4 Hz	4 Hz
Design features			
Multiple sensor measurement	yes (up to 8)	no	no
Auto Z	yes	no	no
AutoTune	yes	no	no
Codeposition	yes (2 source)	no	no
Process recipe & data management			
Film programs	not applicable	9	9
Material programs	24	not applicable	not applicable
Process layers	250	3	not applicable
Processes	50	1	not applicable
Disk drive available	yes	no	no
Data logging	yes	yes	yes
Hardware features			
Sensors ³			
Single	8	2	1
Dual	4	1	0
Crystal Six	8	2	0
Source Controls			
Number of sources	up to 6 ⁴	2	
Source control voltage	0 to ? 0 V, 0 to ? V, or 0 to ? .5 V	0 to ? 0 V	not applicable
Output resolution	15 bits over full range (10 V)	15 bits over full range (10 V)	
Crucible positions	64	8	
Input/Output:			
Inputs	14 standard, up to 28 optional; TTL/CMOS logic compatible or closure to ground	9 pre-defined; TTL/CMOS logic compatible or closure to ground	5 pre-defined TTL
Outputs	8 standard, 16 or 24 optional programmable SPST relays rated @ 30 V(dc) or 30 V(ac) RMS or 42 V Peak @ 2.5 amps; 14 optional TTL outputs	12 SPST relays rated @ 30 V(dc) or 30 V(ac) RMS or 42 V Peak @ 2.5 amps	4 SPST relays rated @ 30 V(dc) or 30 V(ac) RMS or 42 V Peak @ 2.5 amps
Recorder output	0 to ? 0 V ⁴	0 to ? 0 V	0 to ? 0 V
Logic statements	100 fully programmable; up to 5 actions, 5 events per statement	not applicable	not applicable
Communications:			
Standard	RS232	RS232	RS232
Optional	IEEE488	IEEE488	IEEE488
Display			
Thickness resolution ⁵	1 ?	1 ?	0.1 ? or 1
Rate resolution ⁵	0.1 for 0 to 99.9 ? s; 1 for 100 to 999 ? s	0.1 for 0 to 99.9 ? s; 1 for 100 to 999 ? s	0.01, 0.02, 0.06 for 0 to 9.99 ? s (depending on averaging used); 0.1 for 10 to 99.9 ? s; 1 for 100 to 999 ? s
Operation			
Power requirements	100 + 10% - 15% V(ac) 50/60 Hz ? Hz unless otherwise noted)	90 to 132 V(ac) or 180 to 264 V(ac)	90 to 132 V(ac) or 180 to 264 V(ac)
Operating temperature	0°C to 50°C (32°F to 122°F)	0°C to 50°C (32°F to 122°F)	0°C to 50°C (32°F to 122°F)
Dimensions, excluding mounts (h x w x d)	5.25" x 17.63" x 18.5" (13.3 cm x 44.77 cm x 47 cm) full rack	3.5" x 8" x 12" (8.9 cm x 20.3 cm x 30.5 cm) half rack	3.5" x 8" x 12" (8.9 cm x 20.3 cm x 30.5 cm) half rack
Weight	29 lbs (13.2 kg)	6 lbs (2.7 kg)	6 lbs (2.7 kg)

¹Material density= 1.0; Z ratio = 1.0; crystal frequency=6 MHz. ? s/M = angstroms/second/measurement.

²Varies according to process; figures reflect typical accuracy.

³Maximum configuration of each type.

⁴The IC/5 has 6 DAC outputs that can be selected as source control voltages or recorder outputs.

⁵For the XTM/2 monitor, alternate measurement units appropriately scaled. Multiple measurement averaging enhances resolution.