INFICON

XTC/3
Thin Film Deposition Controller

ADVANCED, AFFORDABLE RATE CONTROL FOR SINGLE OR MULTIPLE LAYERS

Now get everything you want in a thin film deposition controller for single and multiple-layer processes. XTC/3 with patented ModeLock provides proven mode-hop prevention for consistent quality. With the XTC/3 Thin Film Deposition Controller, you get highly accurate control of deposition rate and thickness, the capacity for virtually any number of layers, easy installation, and extremely high reliability to ensure productivity.

INFICON, the global leader in thin film deposition control, now offers an instrument with a remarkably low cost of ownership for unprecedented value.

Whether your control needs reflect production or research and development use, you will find a precise match in the INFICON XTC/3.
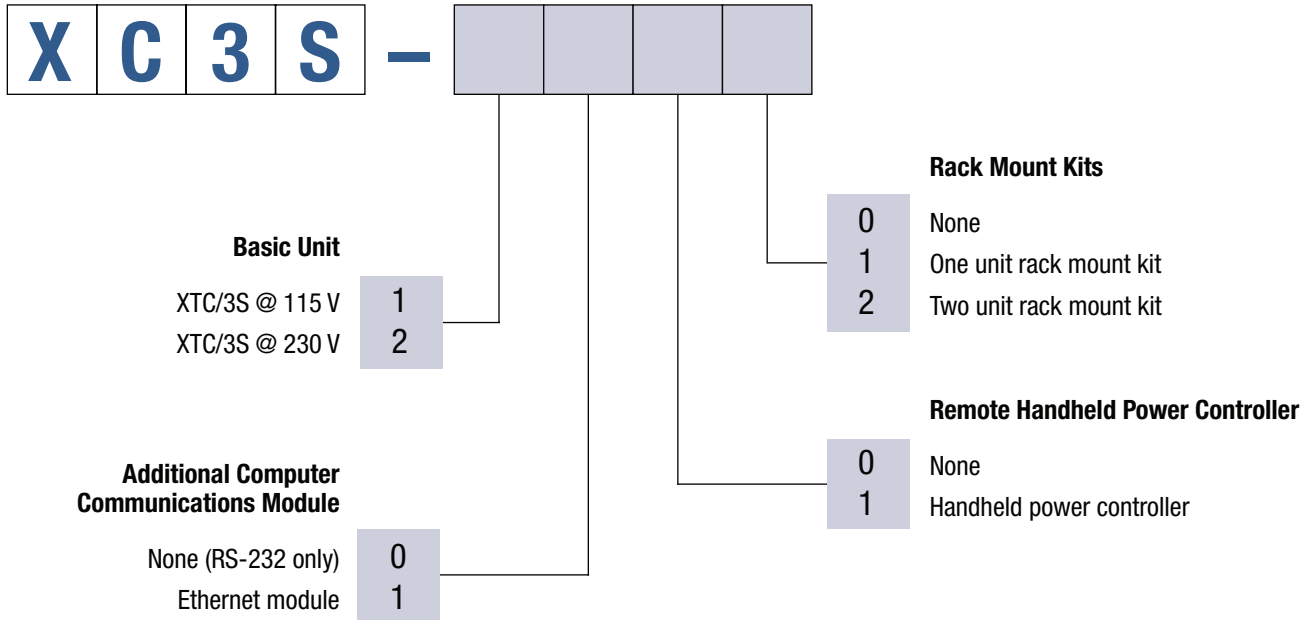
WORLDWIDE INFICON SUPPORT

No matter where you are, you get fast answers, attentive service, and maximum uptime. With offices around the world, INFICON is the only manufacturer of thin film deposition controllers to offer you local service and technical support around the world.
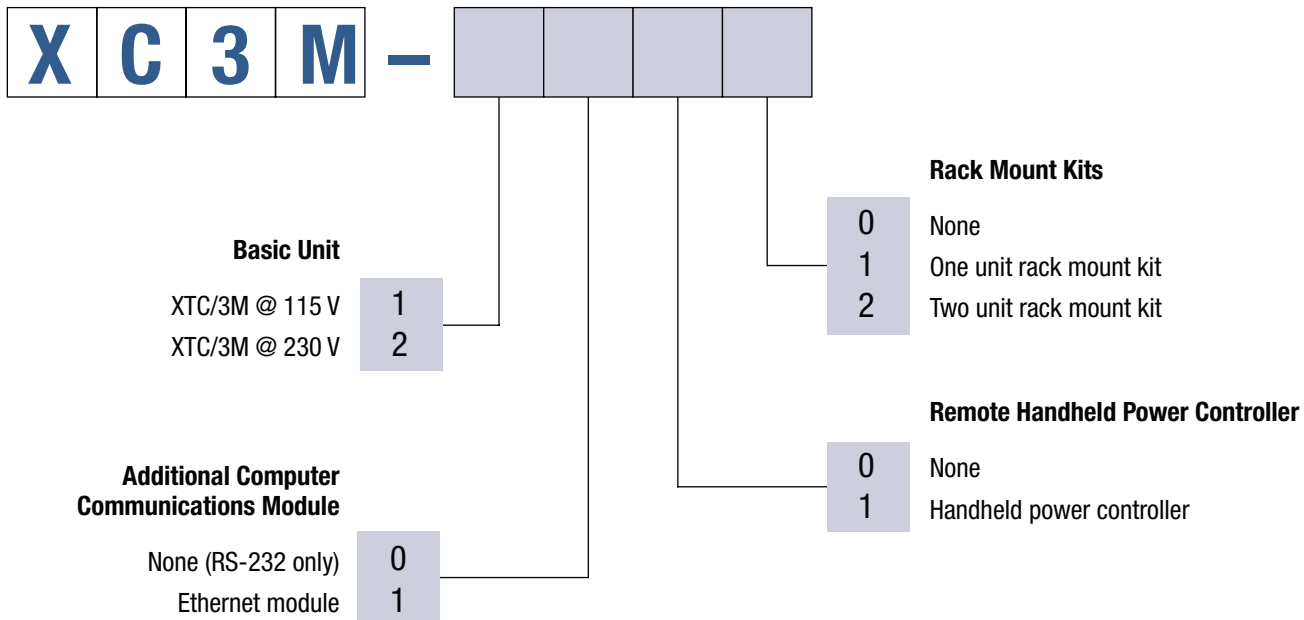
FEATURES AT A GLANCE

- Available in single-layer and multiple-layer models
- Patented ModeLock technology prevents film thickness errors caused by mode-hopping
- Supports INFICON Crystal 12,® CrystalSix,® and dual sensor automatic crystal switching for maximum productivity
- XTC/3M multiple-layer model supports up to 99 processes, 999 layers, 32 films, two sensors, and two sources
- XTC/3S single-layer model supports up to nine films, two sensors, and two sources
- Easy-to-read TFT LCD graphics display
- Films and processes can be assigned unique, descriptive names for easy retrieval
- Ethernet connection available
- Free-standing (no computer necessary) or optional Windows® software for computer operation
- Plug-and-play replacement for INFICON XTC/2 controllers (limited to XTC/2 features and command set)

ORDERING INFORMATION

XTC/3S – Single-Layer Controller

| X | C | 3 | S | – | | | | |

Rack Mount Kits

0	None
1	One unit rack mount kit
2	Two unit rack mount kit

Basic Unit

| XTC/3S @ 115 V | 1 |
| XTC/3S @ 230 V | 2 |

Remote Handheld Power Controller

| 0 | None |
| 1 | Handheld power controller |

Additional Computer Communications Module

| None (RS-232 only) | 0 |
| Ethernet module | 1 |

XTC/3M – Multiple-Layer Controller

| X | C | 3 | M | – | | | | |

Rack Mount Kits

0	None
1	One unit rack mount kit
2	Two unit rack mount kit

Basic Unit

| XTC/3M @ 115 V | 1 |
| XTC/3M @ 230 V | 2 |

Remote Handheld Power Controller

| 0 | None |
| 1 | Handheld power controller |

Additional Computer Communications Module

| None (RS-232 only) | 0 |
| Ethernet module | 1 |

SPECIFICATIONS

Feature, Parameter, or Specification	XTC/3S Single Layer	XTC/3M Multiple Layer
Frequency resolution	±0.028 Hz @ 6 MHz	±0.028 Hz @ 6 MHz
Measurement frequency range	6.0 to 5.0 MHz (fixed)	6.0 to 5.0 MHz (fixed)
Measurement interval	0.25 s	0.25 s
Thickness and rate resolution / measurement[1]	±0.034 Å	±0.034 Å
Measurement technology	ModeLock	ModeLock
Number of processes	One	99
Number of layers	One	999
Number of material programs (or films)	Nine	32
Number of sensor inputs	Two	Two
CrystalSix / Crystal 12 sensor support	Yes	Yes
Support XTAL2 switch	Yes	Yes
Number of source outputs	Two	Two
Computer communications	RS-232 standard, Ethernet TCP/IP optional	RS-232 standard, Ethernet TCP/IP optional
Maximum RS-232 baud rate	115.2 kbps	115.2 kbps
Automatic crystal switch	Yes	Yes
Number of relays	12, not event assignable	12, event assignable
Number of programmable relay functions	One	One
Functions per relay	One	One
Relay voltage rating	30 V (dc) or 30 V (ac) RMS or 42 V peak at 2.5 A	30 V (dc) or 30 V (ac) RMS or 42 V peak at 2.5 A
Number of inputs	Eight TTL, 24 V (dc) max	Eight TTL, 24 V (dc) max
Number of programmable input functions	One, not event assignable	One, event assignable
Number of recorder outputs	One	One
Manual power / hand held controller	Yes	Yes
Exhaust fan	No exhaust fan	No exhaust fan
Test mode	Yes	Yes
Shutter delay	Yes	Yes
Secondary tooling	Yes	Yes
Case dimensions	Half rack, 2U high	Half rack, 2U high
Rate and thickness display resolution	0.1 Å/s for 0.0 to 99.9 Å/s, 1 Å/s for 100 to 999 Å/s, display thickness resolution = 1 Å	0.1 Å/s for 0.0 to 99.9 Å/s, 1 Å/s for 100 to 999 Å/s, display thickness resolution = 1 Å
Film select via inputs	Yes	No
User guide languages	English, Chinese	English, Chinese
Control loops	PID	PID
Software to operate from PC	Yes	Yes
Data logging	Yes	Yes
Quality and stability function	Yes	Yes
Sample and hold (RateWatcher™)	Yes	Yes
Crucible selection	Yes	Yes
Crucible feedback input	Yes	Yes
Select control voltage polarity	Yes, ±2.5, 5, 10 V (dc); 15-bit resolution	Yes, ±2.5, 5, 10 V (dc); 15-bit resolution
Program lock code	Yes	Yes
Display with graphics	Yes	Yes
User labeled processes (cell phone style alphanumeric entry)	No	Yes
User labeled films (cell phone style alphanumeric entry)	No	Yes
Transfer sensor control	Yes	Yes
XTC/2 RS-232 communications compatibility	Yes (limited)	Yes (limited)

[1] Tooling/density = 100/1, fundamental frequency = 6 MHz

INFICON Instruments for Intelligent Control®