

microFLEX M2T Controller

Single Cooling Tower Controller



The **ProMinent® microFLEX** is a cooling tower controller that combines the latest technology with an economical solution. Our breakthrough design offers a worry-free thermal flow switch that does not require any user adjustments or calibration.

Standard Features

- Tower conductivity and temperature input
- Flow switch status input
- 5 Key universal keypad
- 2 Line, 16 character backlit display
- Single water meter input

Benefits

- **Selectable Inhibitor Feed:** Provides 4 feed modes; bleed and feed, bleed then feed, proportional to makeup water volume and percentage time.
- **Water Meter Input:** Allows for chemical to be fed based on water volume versus timed pump control methods generally found on comparably priced controllers.
- **Single Point Calibration:** For ease of start up and operation. Warning message immediately detects fouled or faulty sensors.
- **What and Why Information:** On the controller display is a valuable troubleshooting tool. Solenoid and chemical pump relays show complete status. Shows WHY the relay is on/off.
- **Controller Run Time:** Gives total hours per day and total operating days since initial installation.
- **Robust Diagnostics:** Provide complete 24-hour history of bleed valve operation, relay run times and minimum/maximum temperatures.
- **Keypad Password:** Eliminates unauthorized adjustments.
- **Communication Options:** Include Ethernet networking, dry contact alarm relay or 4-20mA output on conductivity.
- **Optional Web Browser User Interface with Networking Capabilities:** Provides ability to direct connect to the controller from a portable workstation, such as a laptop computer. Can also view critical processes remotely through the use of a LAN. View our live demo: <http://controller.prominent.us:1004>

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Specifications

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	Rating - Detail	Notes
Analog-Digital I/O		
Conductivity Sensor	Auto ranging from 100uS to 10,000uS	Single point calibration, temperature compensated
Temperature Sensor	32 °F to 125 °F (0 °C to 50 °C)	Displayed as F or C
Thermal Flow Switch	1 GPM trip within 30 seconds	Typically 10 second trip within FLOW/NO FLOW
Water Meter Input	400Hz, 0.5mA @ 5VDC measurement current	Accepts paddlewheel or contacting head
Relay Outputs	1 SPST (Inhibitor), 1 SPDT (Bleed)	Single controller fuse
4-20 mA Output (optional)	Single DC isolated, loop powered	User definable span, alarms on open loop
Alarm Relay (optional)	500 mA @ 24 VDC Dry contact set, unfused	Normally closed contact, open on alarm
Communications User Interface		
Keypad-LCD	5 Key tactile feedback, Universal Characters 2 line x 16 Character, Backlit	Scan rate 100 mS nominal User adjustable contrast
10 Base T, TCP/IP Ethernet LAN (optional)	HTML micro web server with user definable IP address	User definable static IP Remote Monitoring & Programming
Controls		
Relay ON/OFF	ON/OFF control	Relay 1 chemical feed, Relay 2 bleed valve
Volumetric Feed	User set, measure volume & pump on time	Sequential control, measures make-up volume then bleeds for user set volume
Interlocking	Flow switch contact set input	Relays OFF when contact set opens
Blocking	inhibitor feed may be set to block on bleed	
Alarms - Feed Limit Timers	Minutes per day	Auto-reset @ Midnight
System		
Units of Measurement	US/Metric selectable	Option to use US or Metric units of measurement
Electrical	120/240 VAC, 50/60 Hz, Single Phase	Factory setting
Internal Fusing	5 Amps @ 120VAC	
Surge Suppression	Relays 2 NO (bleed) Contacts snubbed @ 0.1 uF, 150 ohm	Varistor on AC line input
Accessory Power	15-22 VDC, Unregulated, thermally fused @ 50 mA	
Enclosure	Non-metallic, NEMA 4X	5.9"W x 5.9"H x 3.5"D (150mmW x 150mmH x 90mmD)
Certifications		
CSA, CE, UL	CSA tested to comply with UL (Pending)	