

## Total Control Series Controller

### Bidding Specifications

Automatic Controller(s) shall be model Total Control TC Series with stations (6, 9, or 12) in the indoor (IN-B) or outdoor (EX-B) model or stations (15, 18 or 24) in the outdoor (EX-B) model as manufactured under the brand name of Irritrol Systems to be installed or wired in accordance with manufacturer's published instructions.

**Operation:** Controller shall be electronically controlled and have 4 independent watering programs that can run concurrently with each station's watering time independently variable from 1 minute to 10 hours in 1-minute increments. Controller shall also have programmable watering calendar options of 7-day specific, odd/even or day interval options of 1 to 30 days. Clock shall have 365-day calendar for true unattended odd/even day programming with automatic leap year compensation. Controller shall have 16 total start times assignable to any program(s). Controller shall have a water budgeting feature that changes all stations within a program by a percentage from 10 to 200% in 10% increments without permanently altering the program. Controller shall have a "Valve Test" terminal. Controller shall have a programmable "Rain Off" up to 7 days. Programs shall be held in non-volatile memory throughout power failures of any duration. Controller shall have real-time battery (alkaline) backup capable of keeping accurate time during power failures up to 90 continuous days. Controller shall have a self-diagnostic electronic circuit breaker with valve-short detection that identifies and overrides an electrical malfunction. Programming shall be available in automatic, semi-automatic, single station timed manual and true manual operation. All programming shall be accomplished by use of a simple programming dial and selection buttons with a large LCD for ease of programming. Controller shall have start time stacking within each program, a pump start, programmable master valve and sensor hook up. Controller shall have modular design/enclosed electronics.

**Construction:** Outdoor controllers shall be enclosed in a weather-resistant plastic case with lock and key. Indoor models shall be enclosed in a plastic cabinet with a 24-volt plug-in transformer.

**Electric:** TC-6EX-B, TC-9EX-B, TC-12EX-B, TC-15EX-B, TC-18EX-B, and TC-24EX-B transformer input shall be 120 V ac, 60Hz (220/240 V ac, 50Hz). Transformer output shall be 24 V ac, 1.67 amps. TC-6IN-B, TC-9IN-B and TC-12IN-B transformer input shall be 120 V ac, 60Hz (220/240 V ac, 50Hz). Transformer output shall be 24 V ac, 1.25 amps. Electronic circuit breaker shall be 1.25 amps minimum holding. Maximum output per station shall be 24 V ac, .5 amp. Maximum operating output to all valves shall be 24 V ac, 1.25 amp (including master valve). Controller shall have, two-stage primary and secondary surge protection to resist damage from power surges and electrical storms.