

**BIDDING SPECIFICATIONS**

**KD2 SERIES**

Automatic controller(s) shall be the KD2 Series with (4,6, or 9) stations in indoor (INT) or outdoor (EXT) model(s) as manufactured under the brand name of Irritrol to be installed or wired in accordance with manufacturer’s published instructions and applicable local codes.

**Operation:** Controller shall have automatic, semi-automatic and manual operation. Controller shall have a 365-day calendar and accommodate the following types of water day schedules: day-of-the-week watering, odd or even date watering and any day interval watering from daily (1-day interval) to as little as once every 31 days. In odd and even date watering modes, the controller shall allow specific weekdays to be set as non-watering days (i.e., water on all odd dates but not on Saturdays). The controller shall have 3 independent programs with a “program stacking” feature that stores programs for sequential operation to prevent overlapping program activation. Station capacity shall be one station valve plus a master valve on at the same time. Programs shall have 3 start times per day each for a total availability of 9 daily start times. Each station’s watering duration shall be settable, in 1-minute increments, from zero (station off) up to 240 minutes (4 hours). The water budgeting feature shall allow percentage adjustments per individual program from 0% program off up to 200% (double the runtime). Controller shall require neither a battery nor a fuse (to reduce servicing needs) and shall have a diagnostic circuit breaker to identify and override field wire faults. Controller shall have a built-in memory to provide a minimum of 24 hours of time keeping retention in the absence of AC power. Controller shall have optional 9-volt battery (user installed) for additional (beyond 24 hours) time keeping retention in the absence of AC power. Controller shall have nonvolatile memory to retain program information. Controller shall also have electrical surge protection for both input and output lines. Controller shall have manual operations capable of starting an “all stations” test run and of turning off the controller. Controller shall provide terminals for connection to a remotely located rain or soil moisture sensor system and shall have a means to bypass the sensor. Controller shall be compatible with an optional remote control systems under the same brand name. Controller shall be compatible with the Irritrol Climate Logic® Weather Sensing System and allow automatic watering adjustments based on the weather and is EPA WaterSense Certified when doing so. Controller shall be compatible with Irritrol SMRT Logic™ and allow for remote control of the controller through SMRTScape™ web and smart device applications. Controller shall have multi-language display capabilities (English, Spanish, and French). Controller shall be UL, CUL, CE and C-tick listed.

**Construction:** Outdoor models shall be enclosed in a weather-resistant case, with a keyed lock. Indoor and outdoor models shall have an internally mounted transformer that shall supply a 24 V ac output. Indoor models shall have a cord for connection to 120 V ac source.

**Electric:** Transformer input shall be 120 V ac, 60Hz (230/240 V ac, 50Hz for European and Australian models). Maximum output per station shall be 0.4 amp. Maximum total output to valves shall be 24 V ac, 0.80 amp (including master valve). Controller shall have a self-diagnosed electronic circuit breaker system with valve “short” detection that identifies and overrides an electrical malfunction of a valve. Controller shall have an electrical surge protection system to resist damage from power surges and electrical storms