

THRIVE EVO™

BIDDING SPECS

INTRODUCTION

The following specifications have been prepared in accordance with the Construction Specification Institute (CSI) format.

The specifier may use all or portion of this document to include in other specifications as part of a larger product or a standalone specification.

02810

Landscape / Irrigation

PART 1 GENERAL

1.1 SUMMARY

- A. This Section includes:
 - a. Irrigation controllers and accessories
- B. Related Sections
 - a. Planting (not included in these specifications)

1.2 DEFINITIONS

- A. Definitions pertaining to sustainable development: As defined in ASTM E2114 and is specified herein
- B. Irrigation Controller Accessories, an accessory consisting of a transmitter and receiver for the purposes of providing two-way communication from a new or existing multi-wire irrigation controller as a suitable replacement for field wire.
- C. DC Latching Solenoids, compatible with the specified or existing manufacturers electrically actuated remote-control valve. This is intended to replace an existing AC solenoid. The DC Latching solenoid have a red and black wire or red with white stripe and black wire signifying a polarized circuit. The Irrigation industry has standardized on the black wire to signify a “valve common” and red wire to signify a pilot wire.

1.3 SUBMITTALS

- A. Product data. Unless otherwise indicated, submit the following for each type of product provided under this Section:
 - A. Recycled Content:
 - a. Indicate recycled content; indicate percentage of pre-consumer and post-consumer recycled content per unit of product.
 - b. Indicate relative dollar value of recycled content product to total dollar value of product included in project,
 - c. If recycled content product is part of an assembly, indicate the percentage of recycled content product in the assembly by weight.
 - d. If recycled content of product is part of an assembly, indicate relative dollar value of recycled content product to total dollar value of assembly.

- B. Local Regional Materials
 - a. Sourcing location(s) Indicate location of manufacturing facility; indicate distance between manufacturing facility and the project site.
 - c. Product Value: Indicate dollar value of product containing local/regional materials; include materials cost only.
 - d. Product Component(s) Value: Where product components are sourced or manufactured in separate locations, provide location information for each component. Indicate the percentage by weight of each component per unit of product.

- 3. Water Efficiency
 - a. Water efficiency is maintained as the existing or a new irrigation controller is used in conjunction with this product utilizing all of the available features and functions of the irrigation controller.

1.4 QUALITY ASSURANCE

- A. Water flow and consumption rates:
 - A. Water Budget: This product is subordinate to a new or existing irrigation controller's commands specific to watering schedules. Therefore, it has no direct impact of water flow or consumption rates.
- B. Installer Qualifications: Engage an experienced irrigation installer with a minimum of 3-year's field experience installing irrigation controllers and accessories. Some states and local jurisdictions may require Certified Irrigation Contractor (CIC) or licensed Landscape Contractor.
- C. Pre-Installation Meeting:
 - 1. The installation of this project shall be part of a larger pre-installation meeting specific to the installation or repair of an irrigation system.
 - 2. Review site conditions specific to the location of a new or existing irrigation controller in comparison of the proposed Receiver's location to confirm the manufacturer's recommended range is not exceeded.
- D. Post-Installation Audit – Conduct and confirm operation of any valves associated with this wireless accessory to confirm proper installation and operation.
- E. Operation and Maintenance Manual Submittals:
 - 1. Instructions indicating procedures for routine operation and maintenance of the irrigation system, including controllers and accessories.
 - a. During the first year and subsequent maintenance practices following completion of turn-over to a qualified maintenance contractor.

1.5 MAINTENANCE

- A. Provide regular maintenance for a minimum of one year from the date of acceptance or date of when a maintenance contract begins.
 - 1. Monitor remaining battery life and signal strength to confirm product is operating within stated performance.
 - 2. Replace 9-volt batteries on an as-needed basis typically during spring start-up.

PART 2 – PRODUCTS

1. ACCESSORIES

A. CONTROLLER ACCESSORIES

1. Controller accessory does not require any programming. It is subordinate to all new or existing irrigation programming features and functions.
2. Receives 24-VAC power from adjacent irrigation controller's auxiliary power output or from an external step-down transformer if one doesn't exist.
3. Has a range between the transmitter and receiver of not less than 200 yards, however some site conditions may reduce range dependent on site features and location of the irrigation controller to the Receiver.
4. Both devices have power On/Off switches independent of the irrigation controller
5. The devices have power "On" indication with an illuminated LED or multiple LED's during initial startup.
6. The device provides visual feedback of when a station is operating with an illuminated LED
7. The device provides continuous visual feedback of remaining battery life and signal strength.
8. The device has a built-in "fail-safe" feature to automatically actuate any valves operating during loss of AC power to the controller or controller accessory.
9. The Transmitter is capable of managing up to four remote-control valves as well as actuating four valves simultaneously if the irrigation controller has the programming capability.
10. The device also indicates continuous acknowledgement of two-way communication via illuminated LED.
11. The devices are constructed from virgin ABS plastic with less than 2% recycled regrind.
12. The PCB and components are all new and do not represent any recycled materials.
13. The transmitter device has a hinged door that can be secured with a key lock
14. The receiver device is IP67 rated.
15. The receive device contains a separate and detachable battery cassette resulting in battery removal and replacement separate from the receiver case.
16. The receiver battery compartment is protected from water intrusions from a perimeter gasket.
17. The receiver device has five quantities, 18" long, colored wire leads to be connected to electronic actuated irrigation remote-control valves. The color coding denotes the difference between "valve common" and pilot wires.
18. The devices include fasteners, two, 9-volt batteries and field wire connectors as part of the overall installation.
19. The products are to be assembled in the USA.

PART 3 – EXECUTION

3.1 PREPARATION

- A. The transmitter device is to be installed on a vertical surface in close proximity to a new or existing irrigation device. It is to be installed vertical and level with fasteners and plastic inserts supplied with the product.
 1. The installer is to provide seven-conductor, color-coded wire and conduit or a pair of wire restraints to secure the conductors at the irrigation controller, and transmitter. Two of the

conductors are to be connected the controller's auxiliary 24-VAC power supply. If the controller does have an auxiliary power output, then a sealed external transformer can be ordered and installed separately.

2. The remaining color-coded conductors are to be connected between the irrigation controller's station outputs and the Transmitter's station inputs including a wire connection between both products "valve-commons".
3. The Receiver is to be located within a valve box in close proximity to existing remote-control valves or new remote-control valves.
4. The AC solenoids on the remote-control valves are to be replaced with compatible DC latching solenoids of the same manufacturer of the valve(s).
5. The Receiver's field wire leads are to be connected to up to four new or existing remote-control valves. The black common wire is to be interconnected to all valves.
6. If one or more wire lead is not used, these are to be terminated with the provided wire connectors to avoid corrosion of the wire ends and potentially premature failure of the device.
7. Install the included 9-volt batteries into the battery cassette of the Receiver enclosure. Secure with two fasteners to make a water-tight seal.
8. Once both devices are installed, press the "Power" buttons to initialize both devices. Operate each station manually from the controller to confirm operation.
9. Verify signal strength and remaining battery life as part of this initial setup.
10. Batteries are to be replaced during spring startup and will generally last 1-2 seasons depending on use.

END OF SECTION