LEITLINK® 4GF SOLAR POWERED CLOUD-BASED CENTRAL IRRIGATION CONTROLLER

HOW TO SPECIFY - TECHNICAL PRODUCT SPECIFICATION

1. GENERAL

1.1 Summary

The controller shall be a fixed-station, solar-powered, LTE-capable central irrigation controller capable of outdoor installation and operation in direct sunlight. The controller shall be designed for commercial irrigation applications and shall support remote monitoring, programming, and diagnostics via a web-based interface.

1.2 System Capacity

The controller shall be capable of managing up to 32 valves, depending on model configuration.

---

2. POWER AND ENCLOSURE

2.1 Power Supply

The controller shall be powered entirely by integrated solar power and shall not require external AC power or replaceable batteries. The controller shall maintain programmed settings indefinitely during acceptable solar conditions.

If extended periods of insufficient sunlight occur and the controller loses power, all programmed settings and a minimum of the previous year's operational history shall be retained via non-volatile memory.

2.2 Enclosure

The controller shall be housed in a commercial-grade, vandal-resistant polycarbonate enclosure with UV protection. The enclosure shall be suitable for outdoor installation and water-resistant for exposure to rain and irrigation spray.

The controller dimensions shall be 11.86 (H) × 9.00 (W) × 7.80 (D).

The enclosure shall meet applicable environmental and regulatory certifications including of the EPA WaterSense program and liquid and particle protection.

3. COMMUNICATION AND CONNECTIVITY

3.1 Wireless Communication

The controller shall include integrated LTE (4G) wireless communication for remote access, monitoring, and data transmission.

3.2 Cloud and Standalone Operation

The controller shall be capable of operating as: - A cloud-connected controller with centralized management, or - A standalone controller with local programming capability.

The controller shall include one (1), or upgradeable based on purchase, year of wireless service.

---

4. PROGRAMMING AND OPERATION

4.1 User Interface

Programming shall be accomplished using: - An onboard LCD display with five (5) programming buttons, and/or - A remote web-based interface accessible via any internet-capable device

4.2 Programs and Scheduling

The controller shall provide: - Four (4) independent irrigation programs - Eight (8) start times per program - A maximum of thirty-two (32) start times per valve

Scheduling options shall include: - Weekly calendar scheduling - Cyclical scheduling with intervals up to ninety-nine (99) days - Even-day and odd-day scheduling using a 365-day calendar

4.3 Run Time and Volume Control

Valve run times shall be programmable from one (1) minute up to 11:59 hours in one (1) minute increments.

When a flow sensor is installed, stations shall alternatively be programmable by volume from one (1) gallon up to 65,535 gallons in one (1) gallon increments.

4.4 Manual Operation

The controller shall allow manual operation of valves: - Individually - As a temporary program - As a stored program

Valves may be repeated a user-defined number of cycles.

5. SENSORS AND DIAGNOSTICS

5.1 Sensor Inputs

The controller shall support installation of up to six (6) sensors per valve. Supported sensor types shall include: - Flow sensors - Temperature sensors

Please see Flowlink™ Digital Flow Sensor for information on how to specify the flow sensor.

5.2 Sensor Functions

The controller shall: - Monitor sensor data per valve - Suspend irrigation based on user-defined sensor thresholds - Allow sensor override via programming

A normally-closed sensor input shall be provided and may be enabled or disabled through programming.

5.3 Diagnostics and Alerts

The controller shall detect and report: - Open circuit conditions - Short circuit conditions - High-flow and low-flow conditions

Alerts shall be transmitted to the user via email and/or text message.

---

6. WATER MANAGEMENT FEATURES

6.1 Rain Delay and Budgeting

The controller shall include: - Programmable rain delay up to ninety-nine (99) days - Monthly water budgeting from 0% to 200% in 5% increments

6.2 Event and Group Control

The controller shall provide: - Valve grouping for up to sixteen (16) groups - Event-off scheduling preventing irrigation on up to 9 dates per year

6.3 Master Valves and Injectors

The controller shall support: - Up to two (2) master valves - Up to two (2) fertilizer injector outputs

Assignment shall be configurable per program.

7. ET, AND WEATHER-BASED CONTROL

7.1 ET Capability

The controller shall support ET-based irrigation scheduling via LTE-acquired weather data.

ET parameters shall be programmable and include: - Plant maturity – Soil type – Plant type – Plant density – Slope – Microclimate – Irrigation method – Irrigation Efficacy – Precipitation rate

7.2 Location Data

The controller shall include GPS capability to determine geographic location for acquisition of local climate data.

Alternatively, local environmental data may be acquired through connected sensors where applicable.

---

8. HARDWARE AND SERVICEABILITY

8.1 Modular Design

The controller shall be modular in design. The following components shall be independently serviceable: - LCD / main control module - Solenoid terminal module

8.2 Electrical Protection

The controller shall include protection against wiring faults and electrical surges transmitted through field wiring.

---

9. MODELS

The controller shall be available in the following station configurations: - 8-station model - 16-station model - 24-station model - 32-station model

Model numbers shall be designated as – LEITLINK 4GF-08 – LEITLINK 4GF-16 – LEITLINK 4GF-24 – LEITLINK 4GF-32

10. INSTALLATION

The controller shall be installed in accordance with the manufacturer's written instructions.

The controller shall be mounted in an outdoor location exposed to ambient daylight conditions suitable for solar-powered operations with a minimum of 10,000 lux for two (2) or more hours per day. Installation in fully shaded, enclosed, or below-grade locations is not permitted.

The controller shall be securely mounted to an approved mounting surface or mounting column using manufacturer-approved hardware.

A minimum service clearance of 24 inches shall be provided in front of the controller enclosure.

Field wiring, sensors, solenoids, and accessories shall be installed and connected in accordance with manufacturer recommendations.

The installing contractor shall be responsible for final positioning and verification of adequate solar exposure and wireless signal strength.

---

11. WARRANTY

The controller shall be covered by a manufacturer's warranty for a period of four (4) years from the date of manufacture when installed in accordance with manufacturer requirements and purchased through an authorized distributor.