

## Controllers

*Now you're talking seriously smart irrigation!* Using the latest ET-based technology, Toro® Intelli-Sense Series controllers ensure landscapes receive the right amount of water – no more, no less. First, the proprietary WeatherTRAK® scheduling engine automatically calculates the optimum watering schedule based on factors specific to the installation. Next, Intelli-Sense controllers wirelessly receive weather data delivered via the ET Everywhere™ data service. Based on daily updates, irrigation schedules are automatically adjusted in response to weather conditions. There is no need for unsightly weather stations or time-consuming maintenance. The exclusive WeatherTRAK technology is part of the controller system which provides all you need. For precision irrigation, Intelli-Sense controllers are a water-savings solution for every day.



### Features & Benefits

#### Daily, ET-Driven, Self-Adjusting Runtimes

Complies with most municipal and smart controller rebate programs.

#### Patented WeatherTRAK® Scheduling Engine

Determines optimum schedule for your landscaping, taking into account:

- Sprinkler type, precipitation rate and efficiency
- Plant type and root depth
- Slope and sprinkler location on slope
- Soil type
- Micro-climate
- Usable rainfall



Rain  
Sensor  
Compatible



TMR-1  
Compatible



ET Adjust



Flow  
Sensor  
Compatible

#### ET Everywhere™ Data Service

Real-time sophisticated modeling system that provides weather data accurate to the square kilometer.

#### No Need for Unsightly Weather Stations

Accurate, real-time, ET-based irrigation without the need for unsightly weather stations or time-consuming and inconvenient sensor maintenance.

#### Irrigation Association (IA) SWAT™ Certified

Performance scores were 100% Adequacy and 0% Watering Excess.



## Specifications

### Dimensions

- Indoor models: 7½" H x 6½" W x 3¼" D (190 x 165 x 83mm)
- Outdoor models: 7½" H x 9½" W x 5¾" D (190 x 241 x 146mm)
- Weight:
  - Indoor models: 4 lbs. 8 oz. (2,0 kg)
  - Outdoor models: 5 lbs. 6 oz. (2,4 kg)

### Electrical Specifications

- Input power: 120 VAC, (60 Hz)
- Station output power:
  - 24 VAC (60 Hz)
  - 0.50 amps per station maximum
  - 0.375 amps pump/master valve
  - 1.0 amps total load (TIS-612)
- UL/CSA-listed transformer

### Specifications and Features

- Three independent programs with one start time per program, with optional second start time per program for high ET days
- Selectable water window
- Scheduling with 365-day calendar:
  - Optimized by WeatherTRAK® with day exclusion
  - Odd/Even
  - Interval (1-31 days)
  - Days of Week (1-7 days)
- Three runtime programming options: 1) Automated by WeatherTRAK; 2) User-set runtimes; 3) User-set runtimes with ET-adjustment
- Independent station adjust from -50% to +25% in 5% increments
- Program stacking or simultaneous operation of two programs
- Cycle-and-soak programming allows up to 20 cycles per start time
- 365-day calendar includes optional automatic adjustment for daylight savings
- Review mode shows schedule and programming for each valve
- Selectable maximum ET value
- Last downloaded ET values include time and date stamp
- Selectable crop coefficients (Kc values) for custom plant types
- Automatic short detection for faster troubleshooting
- Non-volatile memory maintains programming during a power outage for up to 10 years

### Optional Accessories

- TIS-ANT - Intelli-Sense Antenna
- TRS - Wired RainSensor
- 53853 - Wired Rain/Freeze Sensor
- TWRS/TWRFS - Wireless RainSensor or Wireless Rain/Freeze Sensor

### Warranty

- Five years

## Intelli-Sense™ Antennas

In some installations, an external Antenna will be required for proper ET Everywhere™ signal reception. In these locations, an antenna will need to be purchased and installed for TIS-612 Controllers. TIS-PRO controllers come with pre-installed pancake antennas. An optional antenna amplifier is also available. Contact WeatherTRAK Customer Support for help in identifying antenna needs.

### Specifying Information—TIS Antenna

TIS-ANT-XX	
Description	Model
TIS	ANTXX
TIS - Toro Intelli-Sense	ANT - Bowtie Antenna - For plastic wall mount TIS-612 controllers. ANT02 - Pancake Antenna for Metal Cabinet Mounting.
ANT-AMP-KIT - Optional Antenna Amplification Kit (powered).*	

\* Antenna Amplifier Kit is available only from WeatherTRAK Customer Support.

### TIS-612 Series Model List

Model	Description
• TIS-06-ID	6-station, Indoor Mount
• TIS-06-OD	6-station, Outdoor Mount
• TIS-09-ID	9-station, Indoor Mount
• TIS-09-OD	9-station, Outdoor Mount
• TIS-12-ID	12-station, Indoor Mount
• TIS-12-OD	12-station, Outdoor Mount

### Specifying Information—TIS-612

TIS-XX-XX			
Model	Type		Cabinet/Accessories
TIS	XX		XX
TIS—Toro Intelli-Sense	06—6-station Controller 12—12-station Controller	09—9-station Controller	ID—Indoor OD—Outdoor

Example: A 12-station, Intelli-Sense (TIS-612) Controller in an outdoor cabinet would be specified as: **TIS-12-OD**

# TIS-PRO Series

TORO



## Specifications

### Dimensions

- 10 3/4" W x 15 3/4" H x 5 3/4" D (273 x 400 x 146mm)
- Weight: 21 lbs. 8 Oz (9,8 kg)

### Electrical Specifications

- Input power:
  - 120 VAC, 50/60 Hz, 0.5A (24 W max.)
- Output (per station):
  - 24 VAC, 50/60 Hz, 0.5A (12 VA max.)
- Master Valve/Pump Start Relay Output:
  - 24 VAC, 0.5A
- Output (total):
  - 24 VAC, 50/60 Hz, 1.5A (36 VA max.)
- UL, CUL-listed

### Operating Specifications

- Four independent programs with two start times and one 24-hour water window
- Scheduling with 365-day calendar:
  - Optimized by WeatherTRAK® with day exclusion
  - Odd/Even
  - Interval (1-31 days)
  - Days of Week (1-7 days)
  - Days of Week by Month (1-7 days)
- Three runtime programming options: 1) Automated by WeatherTRAK; 2) User-set runtimes; 3) User-set runtimes with ET-adjustment
- Independent station adjust from -50% to +25% in 5% increments
- Watering Day Frequency / Allowable Depletion Adjust
- Sequential stacking of programs or overlap up to four programs simultaneously
- Manual operation of individual valve stations or all stations from 1-99 minutes in 1-minute increments
- Compatible with normally closed rain, rain/freeze or wind sensors
- Compatible with normally open or normally closed master valves
- Non-volatile memory maintains program in case of power outage for up to 10 years.
- Dedicated rain sensor, flow sensor, and master valve terminals
- Review mode provides schedule and program for each individual station
- Built-in alerts for flow programming, hardware and communications
- Compatible with Toro Flow Sensors – TFS series
- Flow-monitoring capability for high flow, leak detection and no-flow conditions with ability to exclude station(s)

### Optional Accessories

- TIS-PED – Pedestal Mount
- TMR-1 – Toro Maintenance Remote
- TFS – Toro Flow Sensor
- TRS – Wired RainSensor
- 53853 – Wired Rain/Freeze Sensor
- TWRS/TWRFS – Wireless RainSensor or Wireless Rain/Freeze Sensor

### Warranty

- Five years



TMR-1  
Compatible



Flow  
Sensor  
Compatible

## Pedestal Option



The TIS-PRO units may be ordered with either a powder coat gray or stainless steel pedestal. To order please contact Toro EICON at 303-290-1881

### TIS-PRO Series Model List

Model	Description
TIS-12P-MW	12-station, Metal Wall Mount Cabinet
TIS-24P-MW	24-station, Metal Wall Mount Cabinet
TIS-36P-MW	36-station, Metal Wall Mount Cabinet
TIS-48P-MW	48-station, Metal Wall Mount Cabinet

### Specifying Information—TIS-PRO

#### TIS-**XX**P-**XXX**

Model	Type				Type	Cabinet	
TIS	XX				P	XXX	
TIS—Toro Intelli-Sense	12—12-Station	24—24 Station	36—36-Station	48—48-station	P - Professional	MW—Metal WallMount	PED—Pedestal Mount

Example: A 36-station Intelli-Sense Professional Controller in a Metal Wall Mount Cabinet would be specified as: **TIS-36P-MW**

Intelli-Sense uses WeatherTRAK® scheduling software to automatically calculate the optimum irrigation schedule—based on a series of self-prompting questions answered upon installation\*.



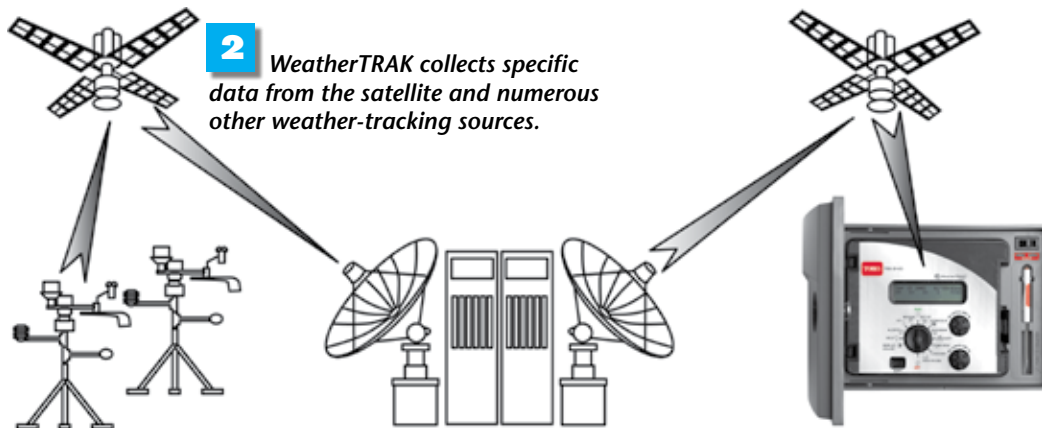
\* Variables include:

- Sprinkler type
- Plant type
- Precipitation rate
- Root depth
- Efficiency rate
- Micro climate
- Soil type
- Slope factor

Every day, site-specific information is gathered from weather stations, transmitted through satellites and delivered via ET Everywhere™ to the Intelli-Sense controller.



Based on the daily updates, irrigation schedules are updated automatically to ensure precise water amounts are delivered—every time.



**1** Across the US each day, a vast network of weather stations transmit weather data to the NOAA satellite

**2** WeatherTRAK collects specific data from the satellite and numerous other weather-tracking sources.

**3** This information is then analyzed and converted to location-specific evapotranspiration (ET) data (accurate to one square kilometer) and transmitted to the WeatherTRAK wireless network.

**4** Current ET data is then broadcast to Intelli-Sense controllers (with ET Everywhere service enabled) and adjusts irrigation schedules accordingly.

## Specifying Information—ET Everywhere™ Data Service

ETE-XXX-XY		
Model	Stations	Service
ETE	XX	XX
ETE—ET Everywhere	612—6, 9 or 12 stations PRO—12, 24, 36, 48 stations	1Y—One Year 2Y—Two Years 3Y—Three Years 5Y—Five Years

Contact WeatherTRAK Customer Service at 1-800-362-8774 for purchase and activation of ET Everywhere Data Service.

