TITAN™ᴹᶜ

TRITON™ᴹᶜ

SUBSTRATE SENSOR

Product #HGC702601

Instruction Manual

ᶜ(ETL)ᵁˢ
LISTED
Intertek

ATTENTION INSTALLING PERSONNEL

Prior to installation, thoroughly familiarize yourself with this Installation Manual.
Observe all safety warnings. During installation or repair, caution is to be observed.
It is your responsibility to install the product safely and to educate the customer on its safe use.

⚠ RECOGNIZE THIS SYMBOL AS A SAFETY PRECAUTION.
CE SYMBOLE DÉNOTE UNE MESURE DE PRÉCAUTION.

✿ H A W T H O R N E™

titancontrols.net

Triton™ Substrate Sensor Overview

Thank you for choosing the Titan Controls™ Triton™ Substrate Sensor – Standard

The HGC702601 Titan Controls™ Triton™ Substrate Sensor – Standard can monitor the volumetric water content (VWC) of various substrates as well as the electrical conductivity (EC) and substrate temperature. This sensor is recommended to be used with stonewool or Cocopro substrates, but will work with most substrates used for growing plants i.e. rockwool, coconut fiber, peat, soilless mixes, etc. For best results for irrigation monitoring, the substrate sensor should be used in conjunction with a tensiometer, a device that measures soil water tension of the substrate.

Installation

1. Install sensor(s) into desired substrate following the recommended methods (see installation methods)

2. Once the sensor has been put into position, connect the sensor cable to the controller (see connecting to EL3)

3. After your sensor(s) have been connected to the EL3, you will be able to locate them on the "Sensor List" screen

4. All sensors will default to the "Zone A" grouping. This can be changed by selecting a sensor and tapping on the ⋮ icon. From here you can switch between "Zone A" and "Zone B"

5. You can also select which sensor you want to be the "default" sensor that is shown on the home screen, by tapping on the sensor card and check "Home page display"

⚠️ **WARNING:** This product is an electrical product. Safety precautions should be observed to avoid accidents. Please read this before use and use this product safely. After reading, please keep it in a safe place.

AVERTISSEMENT : Ce produit est un appareil électrique. Respecter les mesures de précaution afin d'éviter les accidents. Veuillez lire ce feuillet avant l'emploi et utiliser ce produit prudemment. Après avoir lu ce feuillet, veuillez le conserver en lieu sûr.

⚠️ **WARNING:** This product contains very sharp points. Safety precautions should be observed to avoid accidents. Please read this before use and use this product safely. After reading, please keep it in a safe place.

AVERTISSEMENT : Ce produit contient des éléments très pointus. Respecter les mesures de précaution afin d'éviter les accidents. Veuillez lire ce feuillet avant l'emploi et utiliser ce produit prudemment. Après avoir lu ce feuillet, veuillez le conserver en lieu sûr.
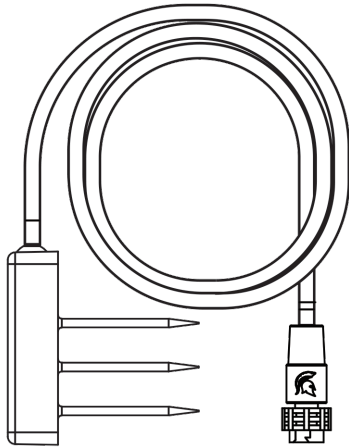

⚠️ **WARNING:** Misuse or improper installation may damage the sensor and may invalidate the manufacturer's warranty.

AVERTISSEMENT : L'utilisation non conforme ou l'installation inadéquate peut endommager le capteur et peut annuler la garantie du fabricant.
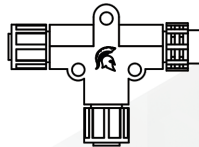
Packing List

Triton™ Substrate Sensor

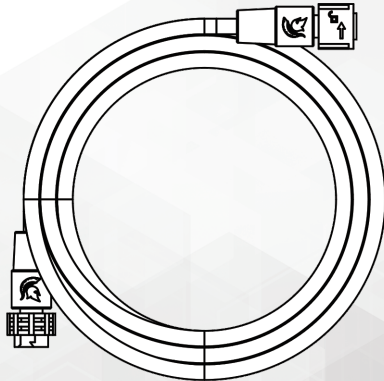The cable length is 2.5 meters with a male connector

T-connector

Two female connectors and one male connector
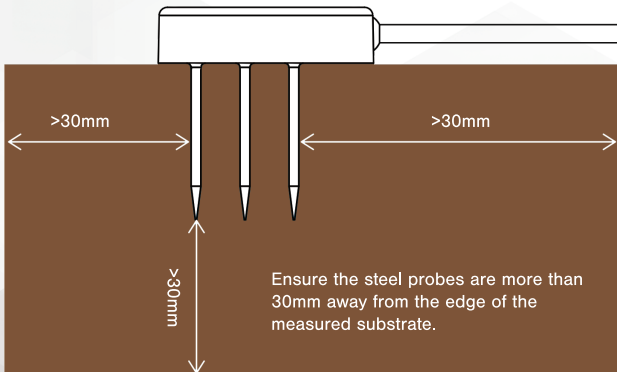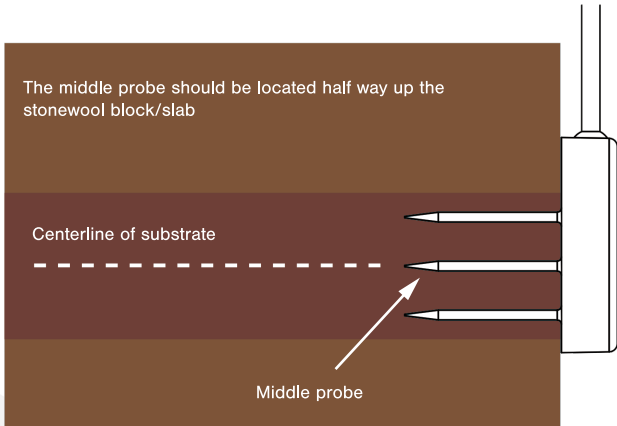
Connector cable

The cable length is 5 meters with male and female connectors

Installation Method

Stonewool and Cocopro™ substrate sensor installation method:

Place the sensor on the side of the substrate with the middle probe located halfway up the substrate.

The middle probe should be located half way up the stonewool block/slab

Centerline of substrate

Middle probe

>30mm

>30mm

>30mm

Ensure the steel probes are more than 30mm away from the edge of the measured substrate.

Installation Method

Up to 16 substrate sensors can be connected to the Gavita™ EL3

GAVITA EL3

EL3

T-Connector   T-Connector   T-Connector   ≤16

Substrate
Sensor

Dimensions

Connector
(male)

Titan LOGO

Soil sensor size : 77mm (L) x 47mm (W) x 20mm (H)
Steel needle size : 3.5mm (Diameter) x 56mm (L)

2500mm

Cable

56mm

Steel needle

Bi-color LED

Sensor

φ3.5mm

77mm

20mm

47mm

Side

Front size

Needle size

Product Parameter

Titan LOGO

VCC   CAN_L
GND   CAN_H
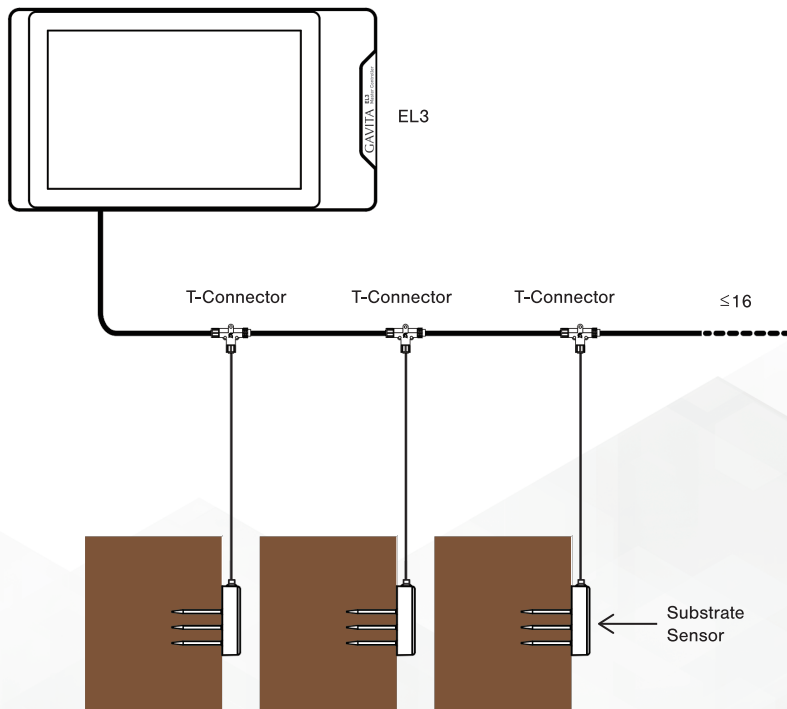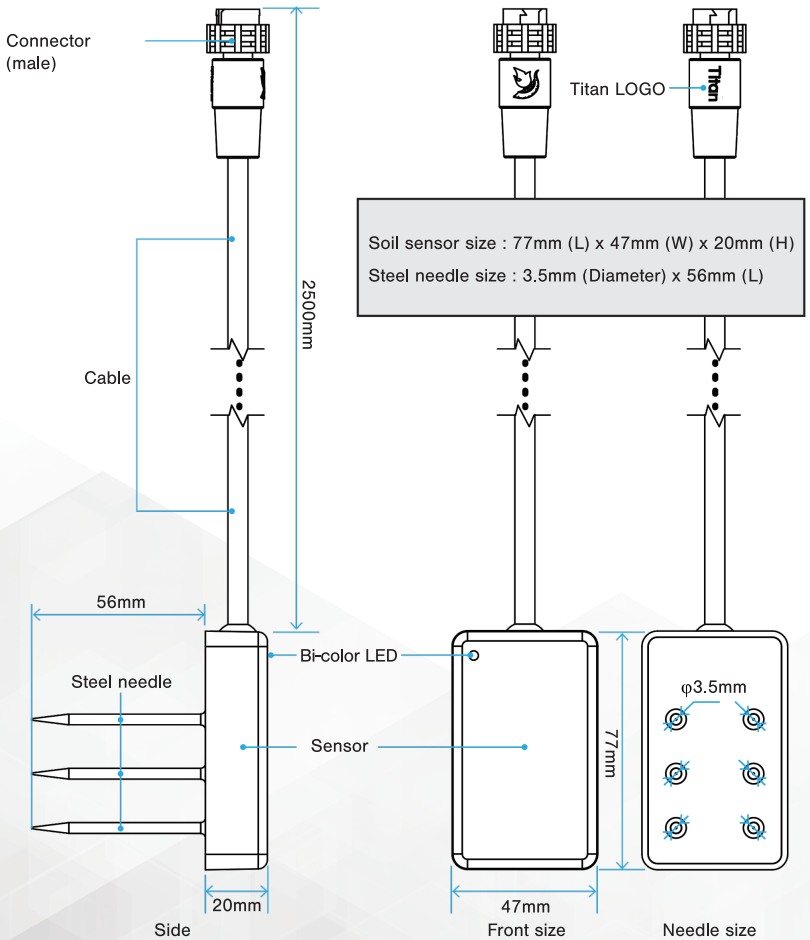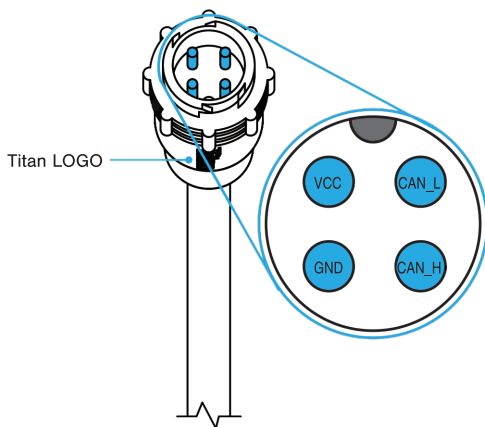
Material description	
Cover material	PC
PCB	FR-4
Filler material	Epoxy resin
Cable sheath	PVC
Cable inner core	Oxygen-free copper
Steel needle material	316 strainless steel

Product Parameter

Function parameter		
Interface protocol	CANBus	
Bi-color indicator	Red	Unbinding ID
	Green	Binding ID
Support substrate	Stonewool	
	Cocopro	

Performance parameter	
Power	≤0.6W
Power supply	6 - 24V DC
Operation temperature range	-40° C - 50° C
Operation humidity range	≤100%RH
Minimum time interval for data reporting	<8S
Interface protocol	CANBus
Communication rate	50Kbps
IP level	IP68

Accuracy		
Sensor Specification	Measuring Range	Accuracy
Temperature	0° C ~ 50° C	±0.5° C
VWC	0% ~ 100%RH	±8%
EC	0 ~ 10000 us/cm	±8%

ETL Listed to UL 61010-1 and CSA C22.2 No. 61010-1-12

Notes

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_____

_____

_____

_____

_____

_____

_____

1 Square = _____ Foot / Feet

WARRANTY SERVICE: Please read warranty information first

If after reviewing the troubleshooting tips the unit will still not work, you should return it to the Dealer where you purchased it. They will be able to further evaluate the unit, test various components and possibly identify and/or fix issues. If the Dealer is unable to fix the unit, they will return it to us for factory repair.

If there are no Dealers in your area, you may contact us directly for technical support. If we cannot help you resolve the problem over the phone, we will issue you a RMA # (return merchandise authorization) authorizing you to return the unit to us for factory reconditioning (if the unit is under warranty). Contact the number below for a RMA and shipping address. Complete the form below and include it with your unit. Also, please write the RMA # on the outside of the box.

Please package the unit in its original packaging. If damaged in shipment, we are not responsible for the unit.

Once we receive the unit, we will repair it within 48 hours (business days) and return it to you as freight prepaid via UPS ground shipment.

Include the following if returning directly to Titan Controls

• Proof of purchase   • This completed form   • RMA # on the outside of the box

Return Merchandise Authorization Number (Required)

Company Name: _____

Contact Name: _____

Address: _____

Phone #: _____

Email address: _____

What is the nature of the problem? _____

_____

_____

_____

_____

Shipping address will be given when the RMA # is issued:

www.titancontrols.net

For technical assistance, call us at 1-888-80-Titan or 1-888-808-4826.
Representative available Monday – Friday, 8 a.m. – 5 p.m. PST.

Warranty Information

When purchased from an authorized Hawthorne dealer, this product is covered by a LIMITED WARRANTY available at: hawthornegc.com/warranties. You can also obtain the Terms of Sale and Limited Warranty by calling Hawthorne toll-free at: 1-888-478-6544 or writing Hawthorne at: Hawthorne Hydroponics LLC, 3204 NW 38th Circle, Vancouver, WA 98660, Attn: Customer Service.

Service and Repair Program

- For all service and repairs, please contact one of our Technical Service Representatives for a Return Merchandise Authorization (RMA) number.

- Titan Controls™ will, at its discretion, repair or replace the sensor.

- Factory calibration services are available for all Titan Controls™.

- Returning Units: Please contact your retail store for returns.

FC C

This device complies with Part 18 of the FCC Rules.

This product may cause interference to radio equipment and should not be installed near maritime safety communications equipment or other critical navigation or communication equipment operating between 0.45-30 MHz. A simple measure to correct interference is to add ferrites to the ends of lengths of communication cables.

Scan for the most up-to-date instructions.

HAWTHORNE GARDENING™
CO

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