TECHNICAL DATA SHEET

Ikos Controller Vinea

Vineyard Package

Description

Advanced measurement system for open-field vineyards, designed to work wirelessly and autonomously thanks to its rechargeable battery and solar panel. It provides complete crop monitoring with high-precision sensors to optimise irrigation, yield and vine health. It consists of: Ikos Controller, two Ikos Multisensor (installed at 15 and 30 cm), the multi-connector for channel 5 and Ikos DPV externo.

Features

- Multiple communications module (UNB or GPRS) for efficient connectivity.
- Several sensors can be connected to each device, for complete crop monitoring.
- Powered by a rechargeable battery and solar panel, for continuous and sustainable operation.
- Easy to install and move, suitable for different crops and layouts.

What the package includes

NO.	PART	QTY	MATERIAL
1	**Ikos Controller**	1	Grey ABS housing, IP65; electronic board; Li-ion battery; solar panel
2	**Ikos Multisensor**	2	ABS encapsulation, IP68; steel rods
3	**Ikos DPV externo**	1	Anti-radiation ABS probe BGT-BYX; painted metal bracket
4	**Multi-connector (splitter)**	1	
5	**Installation kit · Controller bracket**	1	ABS
6	**Installation kit · Antenna**	1	
7	**Installation kit · Dripper anchor stakes**	2	Plastic (PVC)
8	**Installation kit · Cable ties**	9	Nylon

Technical specifications



Ikos Controller

Power supply	Li-ion battery 3.7 V, 5000 mAh
Solar panel	Pmp 3.5 W · Vmp 6.6 V
Microprocessor	ARM Cortex-M0+ 32 bit
Communications	Dual Ultra-Narrow Band (UNB) or GPRS
Output signal	3 analogue inputs, 1 RS485 input, 1 I2C
Number of sensor inputs	5
Connectors	4 × 4-pin M12
Dimensions	161 × 161 × 80 mm
Weight	600 g
Button	ON-OFF with LED switch
Accessory	Mounting anchor (bracket)
Material	**Grey ABS housing, IP65; electronic board; Li-ion battery; solar panel**



Ikos Multisensor × 2

Moisture range	0 – 100 %
Temperature range	−30 ~ +70 °C
Conductivity range	0 – 20 mS/cm
Output signal	RS485
Response time	< 1 s
Power supply	5 V
Effective measuring area	Ø 70 mm × 70 mm high
Operating temperature	−40 ~ +80 °C
Protection	IP68
Storage	10 – 60 °C · 20 – 90 % RH
Material	**ABS encapsulation, IP68; steel rods**

Both connect to channel 5 (RS485) through the multi-connector.



Ikos DPV externo

Voltage	5 V
Output signal	I2C
Working range	Temperature −40 ~ +85 °C · Humidity 0 – 100 % · Pressure 300 – 1100 hPa
Resolution	VPD 0 – 10 kPa · Temperature 0.01 °C · Humidity 0.008 %
Accuracy	Pressure 0.18 Pa · Temperature ±1 °C · Humidity ±3 %
Material	**Anti-radiation ABS probe BGT-BYX; painted metal bracket**

Channel 3. Fixed to the mast with its bracket, at crop height.

Multi-connector (splitter)



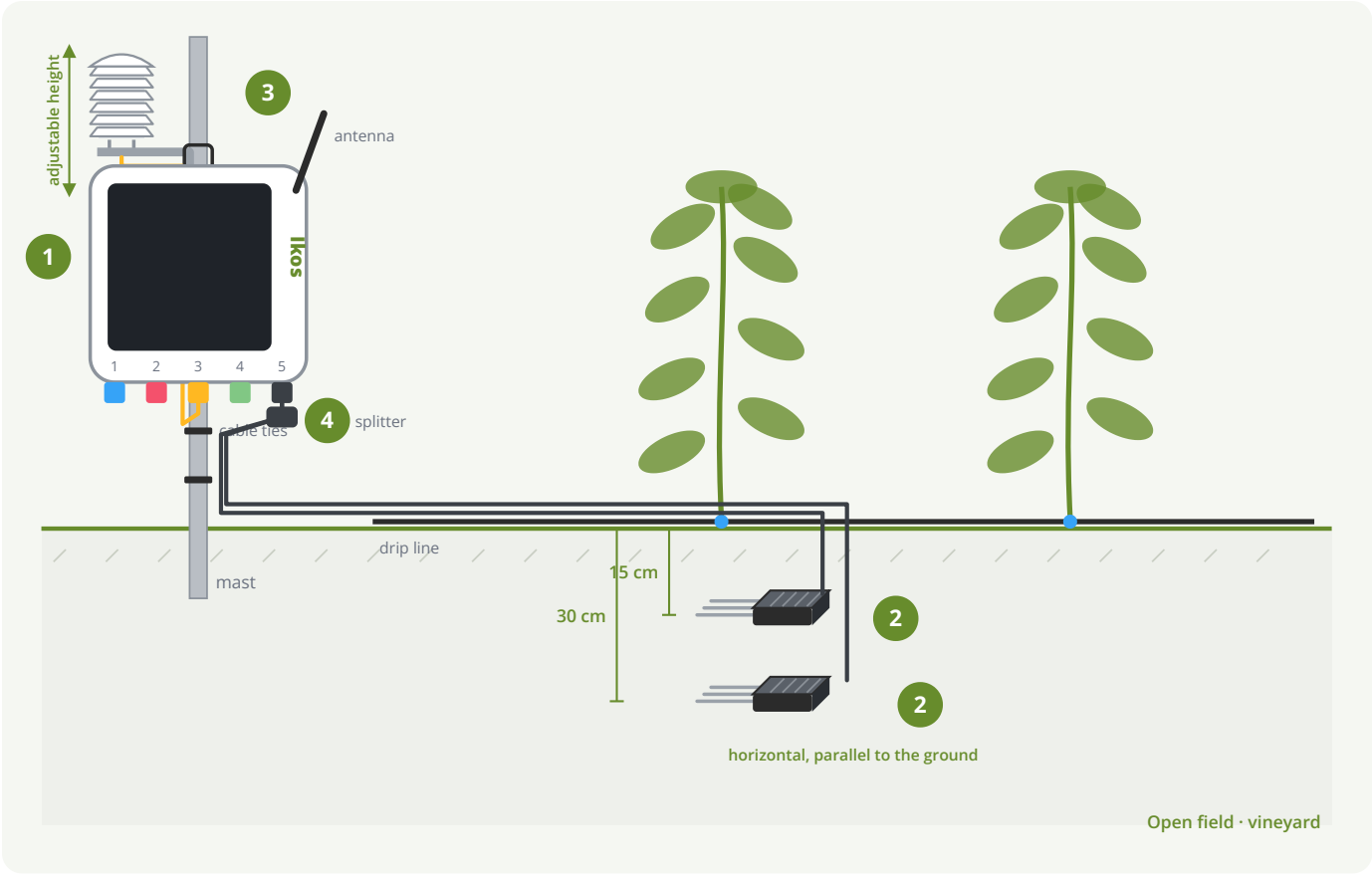
Connection	Controller channel 5 (RS485)
Function	Extends channel 5 to connect extra sensors

Installation kit



Controller bracket	1 pc · White bracket tied to the mast with a cable tie; the Controller clips into it.
Antenna	1 pc · Screws onto the side of the Controller.
Dripper anchor stakes	2 pcs · Hold the drip line to the ground next to the tensiometers.
Cable ties	9 pcs · To fix the bracket and cables to the mast.
Material	**Controller bracket: ABS; Dripper anchor stakes: Plastic (PVC); Cable ties: Nylon**

Installation



Channel colours: 1 shallow tensiometer (blue) · 2 deep tensiometer (red) · 3 DPV (yellow) · 4 PAR (green) · 5 Multisensor (black).

Assembly steps

1. Screw the antenna onto the side of the Controller.
2. Tie the bracket to a mast in an open area with a large cable tie and clip in the Controller (1), facing south.
3. Bury the two Multisensors horizontally, parallel to the ground, next to the same plant: one at 15 cm and the other at 30 cm, like the tensiometers.
4. Fix the DPV externo to the mast with its bracket, above or below the Controller depending on the current plant height.
5. Connect the cables by channel (3 DPV, 5 both Multisensors through the splitter), fix them to the mast with cable ties and switch on with the ON-OFF button.