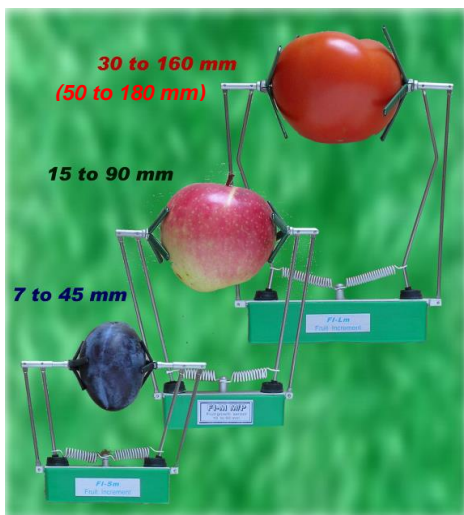




Bio Instruments S.R.L.

SENSORS AND SYSTEMS
FOR MONITORING GROWING PLANTS

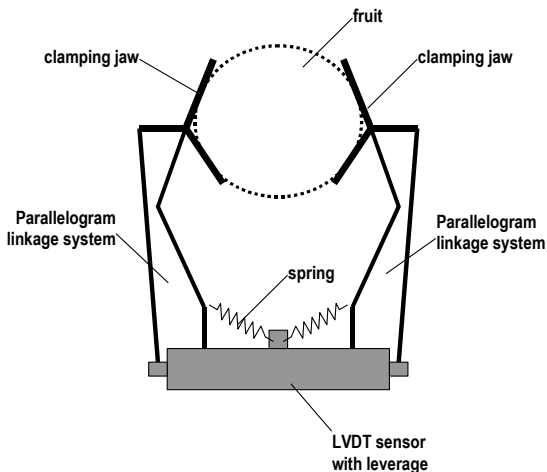
FI-S(M,L,XL)T-SDI12 Fruit Growth Sensors

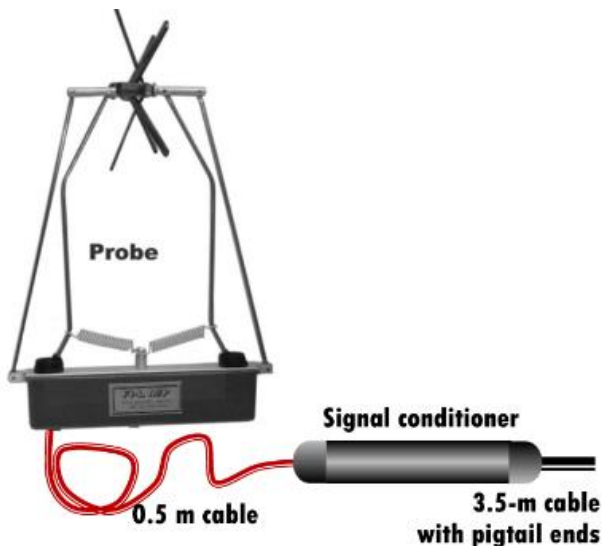


www.phyto-sensor.com

Introduction

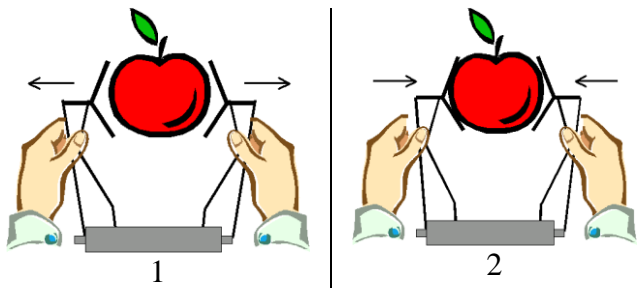
A series of absolute displacement sensors provides recording both size and growth rate of intact rounded (like tomato and apple) and oblong (like cucumber and banana) fruits in three diameter ranges within 7 to 160 mm. Original parallelogram design of moving arms provides firm and straight positioning of the sensor on a fruit under study. The FI-type sensor consists of an LVDT transducer mounted in a special clip, and a DC powered signal conditioner.





Installation

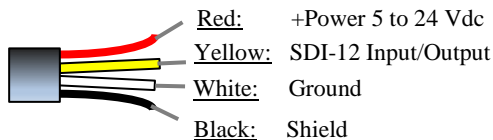
- Choose a fruit for attaching the sensor.
- Move clamping jaws apart so as the sensor can hold the fruit in the desired position.



- Check if the sensor holds the fruit firmly and cannot easily slide down with application of gentle force.
- Secure the sensor's cable on a stem near the fruit in order to prevent occasional movement of the sensor.
- Check the position of the sensor regularly.

Connection

The connection diagram is shown below. The shield shall be grounded at the data loggers side or connected to the 'minus' contact of the power source.



Data reading

SDI-12 :

In accordance with SDI-12 Standard (version 1.3)

Power

The FI-sensors are to be powered from an external regulated power supply with 5 to 24 Vdc output voltage.

Specifications

Model	FI-XLT	FI-LT	FI-MT	FI-ST
Measurement range	50-180 mm	30-160 mm	15 – 90 mm	7 – 45 mm
Resolution, mm	<0.1		<0.05	<0.02
Operating temperature	0 to 50°C			
Temperature effect	<200 ppm FS/°C			
Output	SDI12			
Supply voltage	5 to 24 Vdc@10mA max.			
Excitation time	0.3s			
Protection index	IP 64			
<u>Cable length:</u>	Customized (4 m total length standard)			

Customer Support

If you ever need assistance with your sensor, or if you just have questions or feedback, please e-mail at support@phyto-sensor.com. Please include as part of your message your name, address, phone, and fax number along with a description of your problem.



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