

Precision sensors

for

smarter growing

Simple installation PLUG & PLAY

Most reliable DUTCH MADE

Wireless LoRaWAN



What's inside

From root to plant zone and microclimate measurements.

Explore one of the broadest ranges on the market below,
entirely Dutch made. Quality that lasts.

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Software & data services Q-InSight, API access and integrations.

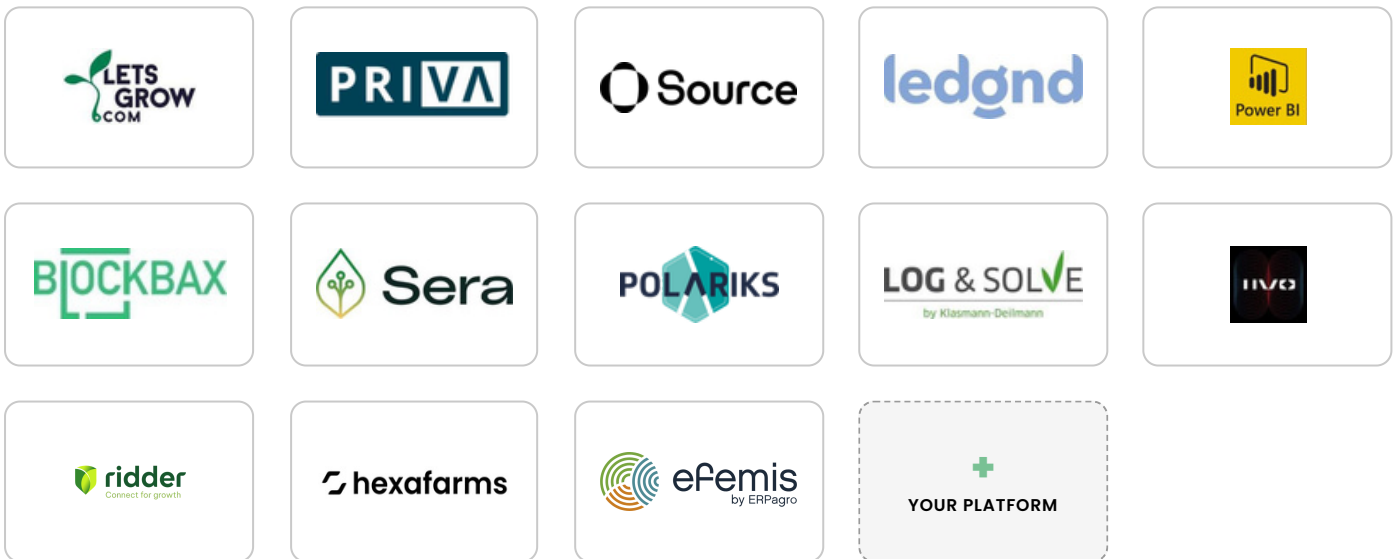
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How it all works

Quantified (sensor) nodes connect wirelessly and automatically to a gateway (LoRaWAN), the gateway forwards the encrypted data to the secure **cloud**. Data can be accessed via web based platforms (see below), and mobile phone



Connect to the platform you already use

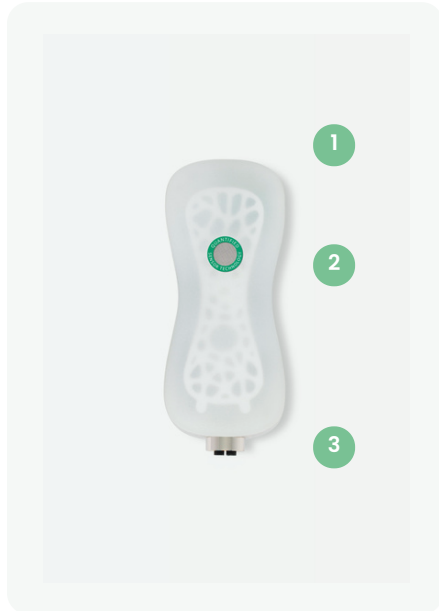


Sensor nodes

A node is the wireless measuring point in your greenhouse.

The **FireFly** is that node: it powers the sensor, reads it every 5 minutes

and sends the values over LoRa to the gateway. One node type carries the range.



1 Rugged housing

IP67 housing with a rechargeable battery inside. Built for greenhouse conditions, from fog and misting to full sun.

2 Measurement modules on board

Order the node with PAR, T/rH, T/rH/p or GPS built in, so the node itself already measures.

3 One sensor connector

The connector links the node to any external Quantified sensor: WET, scales, drain, dripper, CO₂ or weather station. The node recognises the sensor and applies the right calibration automatically.

Every 5 minutes, for over a year

The rechargeable battery lasts more than 12 months. LoRa carries the data through glass, concrete and screens, without cabling.

Up to 75 nodes per gateway

Grow from a single trial section to a full site without adding infrastructure.

One node, changing sensors

Unplug one sensor, plug in another. The same node keeps measuring somewhere else next season.

Mounted where the crop is

Clip the node to the wire, the gutter, a pot or a post. No control box, no drilling, no wiring.

SENSOR NODES · THE PRODUCT

FireFly sensor node

ARTICLE CODE: FF



Wireless base module with rechargeable battery and IP67 housing. The base FireFly is fully configurable: add measurement modules (PAR, T/rH, T/rH/p, GPS) and connect any external Quantified sensor through the connector.

DIMENSIONS

3.5 × 4.0 × 11.0 cm

WEIGHT

127 g

BATTERY

>12 months

PROTECTION RATING

IP67

[Read more](#)

DEPENDENCY

Gateway

HOW IT WORKS · START HERE

Starter Kit

ARTICLE CODE: FFSK



The simplest way to start with Quantified: a complete wireless sensor system, ready for use straight away. Two FireFly sensors, a gateway, mounting clips, a charger and a full year of software, data & connectivity.

SENSORS
2× FireFly FF02

GATEWAY
Gout (DLOS8)

SOFTWARE
1 yr Q-InSight Green

DATA
1 yr Insight-Connect

[Read more](#)

Root zone

Moisture, EC, temperature, weight and more

1 product

Poseidon WET Sensor

ARTICLE CODE: FFWETPos



Measures moisture, electrical conductivity (EC) and temperature in soil or substrate. Available with 1, 2 or 3 measuring heads.

EC RANGE
0–20 dS/m

EC ACCURACY
±3 %

PROBE LENGTH
7 cm

PROTECTION RATING
IP67

[Read more](#)

COMPATIBILITY



DEPENDENCY



Plant zone

Leaf and fruit temperature, crop weight and more.

6 products

Infrared Thermometer

ARTICLE CODE: FFIRT



Measures leaf (or fruit) temperature, the basis for calculating the plant's actual vapour pressure deficit (VPD). Detect heat or cold stress and validate your climate decisions in real time, before damage becomes visible.

RANGE
–70...+200 °C

ACCURACY
±0.3 °C (22–40 °C)

LENGTH
350 mm

PROTECTION RATING
IP51

[Read more](#)

COMPATIBILITY



DEPENDENCY



PLANT ZONE, CONTINUED

Crop Weight Monitor

 ARTICLE CODE: **FFCropMon**


Accurately weighs high-wire crops such as tomato, pepper and cucumber. Available as a 2-wire or 4-wire hanging scale; 1 to 8 wires per slab possible.

STANDARD LOAD	ACCURACY	LENGTH	PROTECTION RATING
40 kg	±0.04 %	1.35 m	IP61

[Read more](#)

COMPATIBILITY



DEPENDENCY



H-Frame Scale

 ARTICLE CODE: **FFHF**


Robust stainless steel scale for trays and small to medium pots. Optimises irrigation; tare remotely or manually through the FireFly. Available in a 4-point loadcell configuration. Other sizes on request.

CONFIGURATION	STANDARD LOAD	STANDARD DIM.	PROTECTION RATING
4-point	12, 40, 80 kg	614 × 524 mm	IP65

[Read more](#)

COMPATIBILITY



DEPENDENCY



T-Frame Scale

 ARTICLE CODE: **FFTF**


Robust stainless steel scale for trays and small to medium pots. Optimises irrigation; tare remotely or manually through the FireFly. Available in a 1-point loadcell configuration. Other sizes on request.

CONFIGURATION	STANDARD LOAD	STANDARD DIM.	PROTECTION RATING
1-point	12 kg	400 × 700 mm	IP65

[Read more](#)

COMPATIBILITY



DEPENDENCY



Standing Scale

 ARTICLE CODE: **FFSS**


For medium to large pots, supporting irrigation and biomass assessment. Available in a square (small) or round (large) version with remote tare through the FireFly.

SMALL (SQUARE)	LARGE (ROUND)	ACCURACY	PROTECTION RATING
250 × 250 × 50 mm	h 80 × Ø 300 mm	±0.04 %	IP65

[Read more](#)

COMPATIBILITY



DEPENDENCY



PLANT ZONE, CONTINUED



Hanging Scale

ARTICLE CODE: FF5H

Weights suspended objects such as growing gutters or crop wires. Wireless tare through a FireFly reset.

LOAD
30, 100 kg

PROTECTION RATING
IP65

[Read more](#)

COMPATIBILITY



FireFly

DEPENDENCY



Gateway

Fertigation

Dripper and drain volume, flow, EC, pressure and more

6 products



Smart Gutter

ARTICLE CODE: FFSG-mass

Optimises fertigation by measuring substrate weight, drain volume, drain EC and drain temperature: the data that reveals crop transpiration and the condition of the root zone. Options: mass only, drain volume, drain ec and temperature

STANDARD LOAD
40 kg

MAX. FLOW
2 ml/s

INNER DIMENSION
1,350 × 200 × 42 mm

PROTECTION RATING
IP61

[Read more](#)

COMPATIBILITY



FireFly

DEPENDENCY



Gateway



Smart Gutter, Single Pot

ARTICLE CODE: FFSGSP

Optimises fertigation for single pots up to 0.31 m in diameter. Measures substrate weight, drain volume, EC and drain temperature every 5 minutes, EC per 5 ml of drain (no dilution curve). Options: mass only, drain volume, drain ec and temperature

STANDARD LOAD
30 kg

MAX. FLOW
2 ml/s

DIMENSIONS
Ø 310 × h 450 mm

PROTECTION RATING
IP61

[Read more](#)

COMPATIBILITY



FireFly

DEPENDENCY



Gateway



Dripper Sensor

ARTICLE CODE: FFDS

Validates your fertigation, zone by zone. Flow measurement is standard; EC and temperature are available as options, so you always know whether every dripper delivered exactly what you programmed.

MAX. FLOW
2 ml/s

DIMENSIONS
40 × 125 × 120 mm

PROTECTION RATING
IP61

[Read more](#)

COMPATIBILITY



FireFly

DEPENDENCY



Gateway

FERTIGATION, CONTINUED



Drain XXL

ARTICLE CODE: FFDXXL

Large tipping bucket for drain volumes up to 25 l/min. Available with a 0.5 l or 1 l bucket option.

MAX. FLOW	RESOLUTION	DIMENSIONS	PROTECTION RATING
25 l/min	1,000 ml	400 × 200 × 360 mm	IP61

[Read more](#)

COMPATIBILITY



DEPENDENCY



Pulse Counter

ARTICLE CODE: FFPu1s

Pulse counter for connecting any flow meter with a pulse output. Flow meter not included.

CABLE	TEMP. RANGE	CONNECTS	PROTECTION RATING
0.5 m	0 – 50 °C	1 flow meter	IP67

[Read more](#)

COMPATIBILITY



DEPENDENCY



Fluid / gas Pressure Sensor

ARTICLE CODE: FFPS

Measures line pressure in CO₂, air or water pipes. Stainless steel housing, straight male thread (G ½ B).

RANGE	ACCURACY	CONNECTION	PROTECTION RATING
0–10 bar	±2 %	G ½ B	IP67

[Read more](#)

COMPATIBILITY



DEPENDENCY



Climate Air temperature, humidity, light, CO₂, weather and more.

6 products



FireFly sensor node

ARTICLE CODE: FF

Wireless base module with rechargeable battery and IP67 housing. The base FireFly is fully configurable: add measurement modules (PAR, T/rH, T/rH/p, GPS) and connect any external Quantified sensor to the connector.

DIMENSIONS	WEIGHT	BATTERY	PROTECTION RATING
3.5 × 4.0 × 11.0 cm	127 g	>12 months	IP67

[Read more](#)

DEPENDENCY



CLIMATE, CONTINUED



CO₂ Sensor

ARTICLE CODE: FFC02

Measures the CO₂ concentration in ambient air, compensated for changes in temperature and pressure. Available with an automatic (default) or manual calibration mode.

RANGE
0–5,000 ppm

ACCURACY
±50 ppm + 2.5%

DIMENSIONS
63 × 20 mm · 40 g

PROTECTION RATING
IP44

[Read more](#)

COMPATIBILITY



DEPENDENCY



Solar Chimney

ARTICLE CODE: MSC

Passively ventilated housing for the FireFly. Ensures accurate temperature and relative humidity measurement in high-radiation environments (direct sunlight or grow light).

DIMENSIONS
h × Ø: 350 × 125 mm

WEIGHT
250 g

MOUNTING
Cable tie

INSIDE
FireFly + FFSCMSC clip

[Read more](#)

COMPATIBILITY



Medusa, Microclimate T/rH

ARTICLE CODE: FFMedusa

The Medusa works as a microclimate sensor (T and rH) and, combined with our solar chimney, as a passively ventilated ambient climate sensor.

TEMP. RANGE
0–65 °C

RH ACCURACY
±1.5 %

LENGTH
48 cm

PROTECTION RATING
IP61

[Read more](#)

COMPATIBILITY



DEPENDENCY



Solar Chimney

ARTICLE CODE: Medusa SC

Passively ventilated solar chimney, designed for the Medusa microclimate sensor. Mounted with rope (option A) or rod/wire clip (option B, see Accessories).

FOR SENSOR
FFMedusa

VENTILATION
Passive (chimney effect)

OPTIONS
Rope or clip mounting

[Read more](#)

COMPATIBILITY



CLIMATE, CONTINUED



Weather Station

ARTICLE CODE: FFWs

Complete outdoor station: GPS, wind speed and direction, precipitation, air temperature, relative humidity and barometric pressure. FireFly included; without mast

WIND SPEED
up to 300 km/h

WIND DIRECTION
8 quadrants

DIAMETER
±30 cm

PROTECTION RATING
IP67

[Read more](#)

COMPATIBILITY



FireFly

DEPENDENCY



Gateway

Connectivity

Gateways that link your sensors and sensor data to the cloud.

3 products



Gateway Gout IP65

ARTICLE CODE: G65-4G

Outdoor LoRa gateway (IP65), receives messages from up to 100 FireFlies and sends data to the cloud over 4G and/or Ethernet. Mains powered at 230 V. Includes LoRa antenna, adapter and mast mounting set.

CAPACITY
up to 100 (sensor) nodes

NETWORK
LTE Cat 4 + HSPA+ + Ethernet

PROTECTION RATING
IP65

[Read more](#)



Gateway Gout IP67

ARTICLE CODE: RAK-4G

Industrial outdoor LoRa gateway (IP67). Receives LoRa messages from up to 100 FireFlies and sends the data to the cloud over 4G and/or Ethernet. Mains powered at 110–230 V. Includes LoRa antenna, adapter and mast mounting set.

CAPACITY
up to 100 (sensor) nodes

NETWORK
LTE Cat 4 (4G) + HSPA+ (3G)

PROTECTION RATING
IP67

[Read more](#)



GoutSolar, off-grid solar gateway

ARTICLE CODE: SG(45W) - 4G

Off-grid LoRa gateway with 45 W solar panels and a 25,000 mAh battery, enough energy for seasonal to year-round use without mains power (depending on latitude). 4G LTE Cat 1 + GSM with Nano-SIM.

CAPACITY
up to 75 (sensor) nodes

SOLAR PANEL
45 W

BATTERY
25,000 mAh

PROTECTION RATING
IP67

[Read more](#)

Accessories

Clips, holders, chargers and calibration extras.

10 products



Smart Clip, magnetic

ARTICLE CODE: CMagnetic

Attaches the FireFly to steel or iron objects with an integrated magnet.

USE

Mounting on steel/iron



Smart Clip, wire / stick

ARTICLE CODE: Cang

Mounts the FireFly on a wire (2–3.5 mm diameter) or stick (6–7 mm diameter).

WIRE DIA.

2–3.5 mm

STICK DIA.

6–7 mm



Smart Clip, vertical

ARTICLE CODE: CMSC

Mounts the FireFly vertically on a wire up to 6 mm. Also used to mount the FireFly inside the Macro Solar Chimney.

WIRE DIA.

up to 6 mm



Smart Clip, wall

ARTICLE CODE: Cwm

Mounts the FireFly on a vertical wall. Screw hole diameter 6 mm.

SCREW HOLE

6 mm



Tripod with spirit level

ARTICLE CODE: FFSTripod

Levels the FireFly for more accurate derived PAR light measurements.

LEVELLING

Spirit level

ACCESSORIES, CONTINUED


FireFly USB charger

ARTICLE CODE: FFCh

Charges the FireFly battery in ~7 hours through a USB adapter.

CHARGING TIME	CURRENT	TEMP. RANGE	PROTECTION RATING
~7 hours	<0,5 A	+10 ... +30 °C	IP50


Reset magnet (lanyard)

ARTICLE CODE: RP

Magnet on a Quantified lanyard for resetting the FireFly sensor.

USE

Resetting the FireFly

Footrest, fibreglass-rod base

ARTICLE CODE: FFPB

Plastic base (15 × 10 cm) for vertical mounting of a 6 mm fibreglass rod, including a 35 cm rod. Use with the FFSCang Smart Clip; rod position centre or end.

DIMENSIONS	ROD DIA.	ROD INCLUDED
15 × 10 cm	6 mm	35 cm


Fibreglass rod 75 cm

ARTICLE CODE: FGR75

White fibreglass rod for mounting the FireFly with an FFSCang Smart Clip. Length 0.75 m, diameter 6 mm.

LENGTH	DIAMETER
0.75 m	6 mm


Protection sleeve

ARTICLE CODE: Protflex

Protection sleeve for the Poseidon cable.

USE

Cable protection

Software & data services

Q-InSight visualisation, Insight-Connect data storage, API access and gateway SIM. Choose the subscriptions that suit your business and scale up whenever you want.

MOST CHOSEN

Q-InSight Basic

Entry level for pilots and small trials.

- ✓ Up to 5 FireFlies
- ✓ Up to 5 users
- ✓ Web + API + mobile app

Q-InSight Green

For smaller businesses and ongoing trials.

- ✓ Up to 100 FireFlies
- ✓ Up to 10 users
- ✓ 9 months of data storage
- ✓ Web + API + mobile app

Q-InSight Silver

Full roll-out for commercial growers.

- ✓ Up to 250 FireFlies
- ✓ Up to 25 users
- ✓ 24 months of data storage
- ✓ Up to 500 push notifications/day

API Basic

Raw data feed for pilots and small trials.

- ✓ API access only
- ✓ Max. 10 FireFlies
- ✓ 2 weeks of data storage

API Green

Raw feed for smaller businesses.

- ✓ API access only
- ✓ Max. 100 FireFlies
- ✓ 2 weeks of data storage

API Silver

Full raw data delivery.

- ✓ API access only
- ✓ Max. 250 FireFlies
- ✓ 2 weeks of data storage

Connect to the platform you already use

Quantified sensors integrate seamlessly with leading agri-tech and BI platforms through the open API – your data, in the system you already work in.





Let's grow with confidence

Tell us about your crop and your business and we will help you put together the right sensor setup, from a single FireFly to a company-wide roll-out.

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CATALOGUE

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