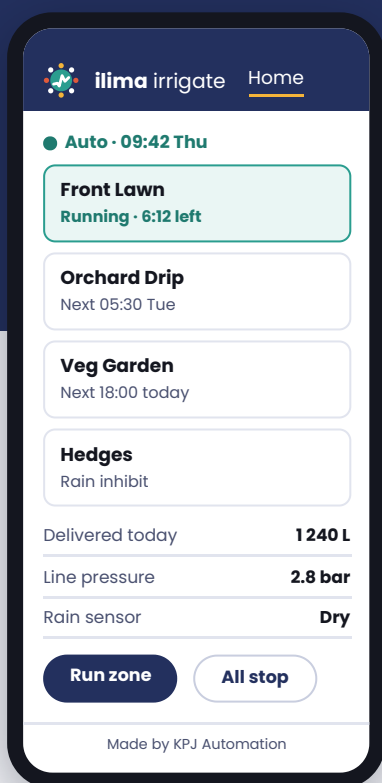


SMART CONTROLLERS · PRODUCT INFORMATION

ilima irrigate

Four zones, eight schedules each, and a rain sensor that stops the whole thing watering in a downpour — set from your phone, not a dial in a box.

**4**

named zones, one valve per relay

32

schedules: eight per zone, any weekdays

Litres

of water delivered, totalised per zone

WHAT IT IS

Irrigation you can actually adjust, and actually see

Most irrigation controllers are a dial and a set of tiny buttons in a plastic box on a wall. Changing a schedule means standing at the box with the manual. Nothing tells you a valve failed to open, and nothing stops it running through a thunderstorm.

ilima irrigate runs four zones with eight schedules each, tracks the water actually delivered per zone, and takes a rain sensor, a tank float, a pressure switch and a flow meter as inputs. It is set up and monitored from a web page — from the house, the office, or anywhere on the network.

Signs you need one

Nobody adjusts the schedule because nobody wants to fight the box on the wall. The system waters in the rain, or through a water restriction. A zone stopped working weeks ago and nobody noticed until the plants did. You have no idea how much water the irrigation actually uses.

BENEFITS

What it changes

◆ Schedules you will actually adjust

Eight per zone, each with a start time, a duration and the weekdays it runs — set from a browser in seconds.

◆ You see the water

Flow metering totalises litres per zone and across the system, so a leak or a blocked line shows up as a number that has changed.

◆ Zones have names

Front Lawn and Orchard Drip, not Zone 1 and Zone 3 — so whoever adjusts it next knows what they are changing.

◆ It stops for rain

A rain sensor input inhibits the schedule, so you are not watering during a storm or the morning after one.

◆ It protects the pump

A float or tank-empty input stops watering rather than running the supply pump dry.

◆ Inputs that fit the site

Each of the four digital inputs is given a job in software, so one controller suits a garden, a nursery or a smallholding.

ZONES, SCHEDULES AND INPUTS

Set from a browser, kept through a power cut

Zones & schedules

- ◆ Four zones, each driving a valve on its own relay
- ◆ Named zones — the name follows through every screen
- ◆ Eight schedules per zone, start time, duration and weekdays
- ◆ Rain inhibit suspends runs without deleting them
- ◆ Only one zone runs at a time, so supply pressure holds
- ◆ Lifetime volume totalised per zone

Manual control & time

- ◆ Run any zone now, for a chosen duration
- ◆ One-tap presets — 1, 5, 10 and 30 minutes
- ◆ Live countdown of time remaining
- ◆ All-stop button that drops every valve
- ◆ Clock synchronised over the network (NTP), manual set as fallback

Configurable inputs

- ◆ Flow meter — pulse input totalised to litres
- ◆ Float / stop switch — tank empty or full
- ◆ Rain sensor — inhibits the schedule
- ◆ Pressure switch — low-pressure stop or alarm
- ◆ Manual button, fault input or master flow
- ◆ Disabled, where an input is not used

Bigger than four zones? The standard unit runs four. More zones, pump interlocking or fertigation dosing move the job into a small PLC panel — we will tell you when that line has been crossed rather than stretching the controller past what it does well.

SPECIFICATION

Technical specification

ITEM	DETAIL
Controller	Industrial ESP32 I/O board, DIN-rail mounted, with KPJ firmware
Relay outputs	4 × volt-free relay contacts, 10 A rated
Digital inputs	4 × NPN opto-isolated inputs
Analogue inputs	2 × 0–10 V and 2 × 4–20 mA
Analogue outputs	2 × 0–10 V or 4–20 mA, DIP-switch selectable
Serial	RS-485 bus
Supply	12 V or 24 V DC
Interface	Built-in web dashboard — any browser on the same network, no app to install
Network	Wi-Fi, with access-point fallback if the network is unavailable
Settings	Held in non-volatile memory — they survive a power failure
Remote	MQTT and Blynk cloud options; over-the-air firmware update
Zones	4, each on a relay output, valve rated to the relay contact
Schedules	8 per zone with start time, duration and weekday selection
Digital inputs (use)	4, each assigned a function in software
Analogue inputs (use)	Soil moisture and line pressure on 0–10 V or 4–20 mA
Metering	Per-zone and master flow totalising, litres, non-volatile
Clock	NTP with manual set fallback

One board, several jobs. Every ilima controller runs on the same industrial ESP32 I/O board — DIN-rail mounted, 12/24 V DC, with four relay outputs, four opto-isolated inputs, analogue in and out, and an RS-485 port. What changes is the firmware written for it. That means a common spares holding, one wiring standard across your site, and a unit that can be re-tasked instead of replaced.

THE ILIMA RANGE

Start with one unit. Grow the whole plant.

ilima count

Counts, rates, batches and lots on one machine

ilima gateway

Puts RS-485 PLCs and drives on the network

ilima pump

Pressure and supply control for one pump

ilima irrigate

Four zones, schedules and rain inhibit

ilima scada

The whole plant on one screen, with alarms

ilima master count

Orders, stock, recipes and lot traceability

ilima maint

Job cards, machine files, spares and shifts

by KPJ

Designed, built and supported in La Mercy, KwaZulu-Natal

WHERE IT FITS

Typical applications

Estate, complex and commercial landscaping

Nurseries and greenhouses

Smallholdings and orchards

Sports fields and grounds

Municipal and office park grounds

Rainwater and borehole fed systems

HOW IT IS SUPPLIED

Configured, wired and commissioned

- ◆ Supplied configured for your application, not as a blank board
- ◆ Wired into an enclosure with terminals, fusing and isolator where required
- ◆ Field wiring terminated and labelled to a drawing
- ◆ Commissioned on the real process, with setpoints proven under load
- ◆ Operator walkthrough and a written record of the configuration

What we need to quote it

- ◆ How many zones, and what valve each one drives — 24 V AC solenoid, latching, or a contactor to a pump
- ◆ Where the water comes from, and whether a supply pump needs to start with a zone
- ◆ Whether there is a flow meter fitted, or room to fit one
- ◆ Whether you want rain, tank-level or pressure inputs used
- ◆ Whether the controller can reach your Wi-Fi where it will be mounted

Watering in the rain?

We will look at the system you have, the water it uses, and what it would take to control it properly.

067 630 5732 · kpjmachines@gmail.com



About KPJ Automation

KPJ Automation is an independent industrial controls and automation house in La Mercy, KwaZulu-Natal, and the maker of the ilima range. Stephan Roets brings more than ten years of hands-on plant experience to every job: design, panel build, installation, commissioning and breakdown support. KPJ designs, builds and supports every ilima product itself, so the person who wrote the firmware is the person who answers the phone.

ilima is a product range made and distributed by KPJ Automation (Pty) Ltd · Reg. 2022/646768/07 · La Mercy, KwaZulu-Natal, South Africa. Interface images are representative renders using demonstration data. Specifications are indicative and are confirmed per application at quotation stage. Issued for information; does not form part of a contract. Formerly sold as KPJ Irrigation Controller.