RESOURCE-EFFICENT AUTOMATIC IRRIGATION

with or without KNX – Jardana Irrigation Control

Bastian Elsner | 14.05.2025

I am your speaker today

Bastian Elsner

- Managing Partner at
  Elsner Elektronik GmbH
- Responsibility: marketing, sales, development, production, purchasing, logistics, service

Jardana

Short advertising video

Watch the Jardana video and many others on our YouTube channel!

► To the Jardana video

Watering in the evening is wrong!

| Thesis

Is this statement true?
What do you think?

- ✓ Yes, it is true. When the soil is hot, the water evaporates and does not reach the roots

When do you water your garden or what do you think is the best time to water?

Possible answers:

1. between 3:00 and 4:00 a.m.
2. between 3:00 and 5:00 p.m.
3. between 6:00 and 8.00 p.m.

Solution:

1. between 3:00 and 4:00 a.m. is the best time

Learning goals

| After this webinar you will be able to:

- ✓ Optimise the watering of different plant zones
- ✓ Utilise the optimal watering time
- ✓ Save on water costs
- ✓ Optimally configure the functions of the Jardana

AGENDA

1. Functions of the Jardana
2. Installation and connection
3. Irrigation systems, optimal irrigation
4. Jardana Mobile App
5. KNX application, parameters
6. Application examples

01 | FUNCTIONS OF THE IRRIGATION SYSTEM

Irrigation control Jardana

| Item Number: 70309

- Irrigation of four zones according to timer or measured soil moisture value
- Connection options for soil moisture sensors
- Can be used with app or KNX control
- Supply voltage via power supply unit (included in the scope of delivery)

DESIGN AWARD 2023

Soil Moisture Sensor

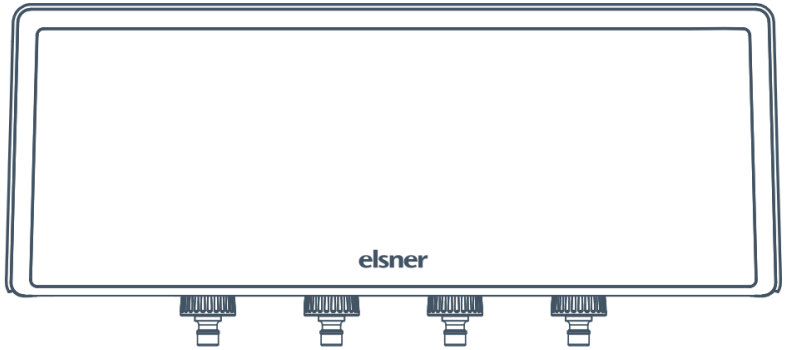
| Item Number: 70313

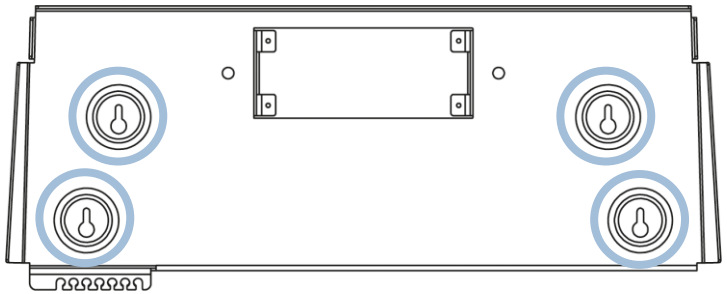
- Up to four soil moisture sensors can be connected to one Jardana
- The soil moisture sensors are optionally available

02 | INSTALLATION AND CONNECTION

Mounting the Jardana control unit

| Explanation

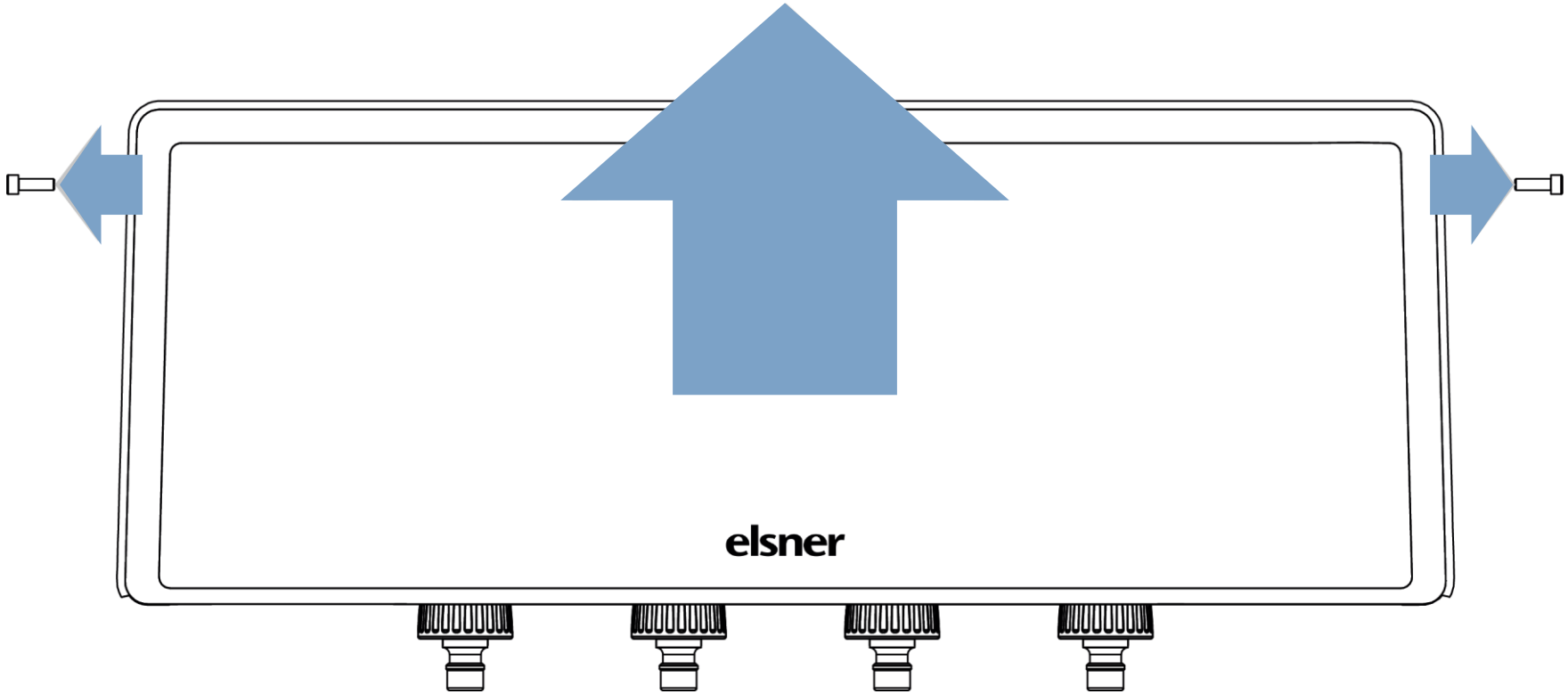




- The Jardana is attached to the wall with 4 screws
- Recommended mounting height: at least 50cm above the floor

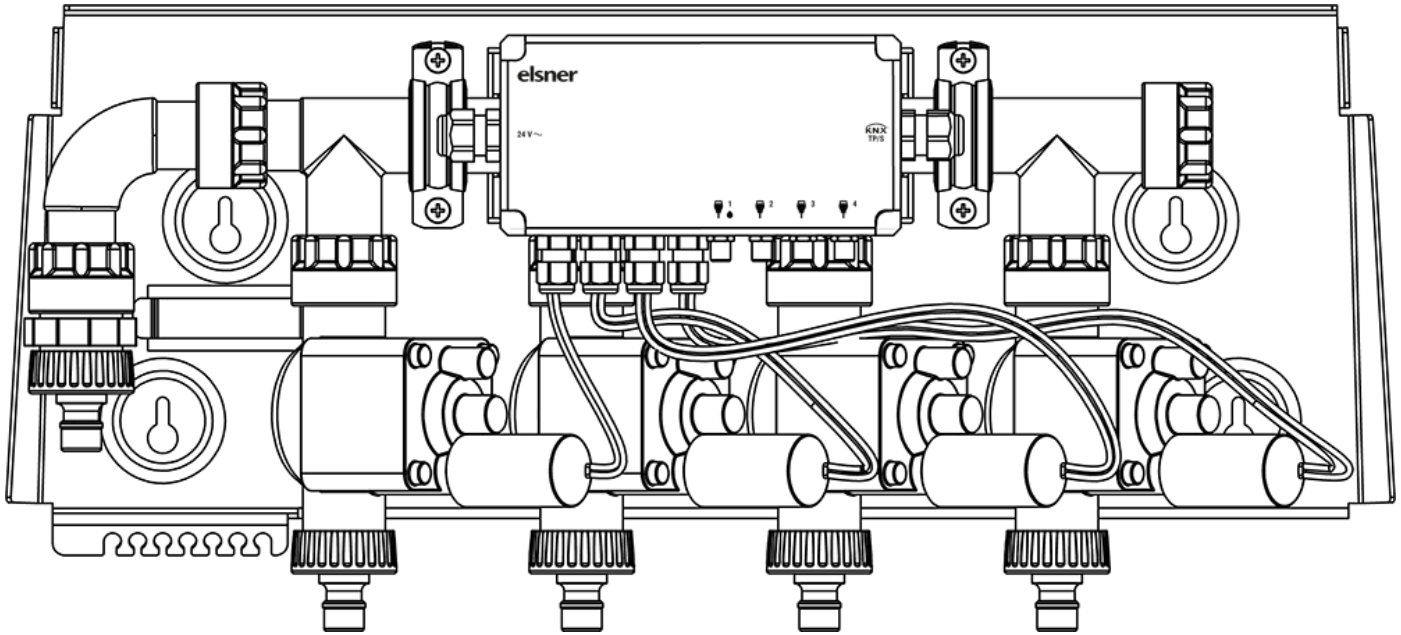
Mounting the Jardana control unit

| Explanation



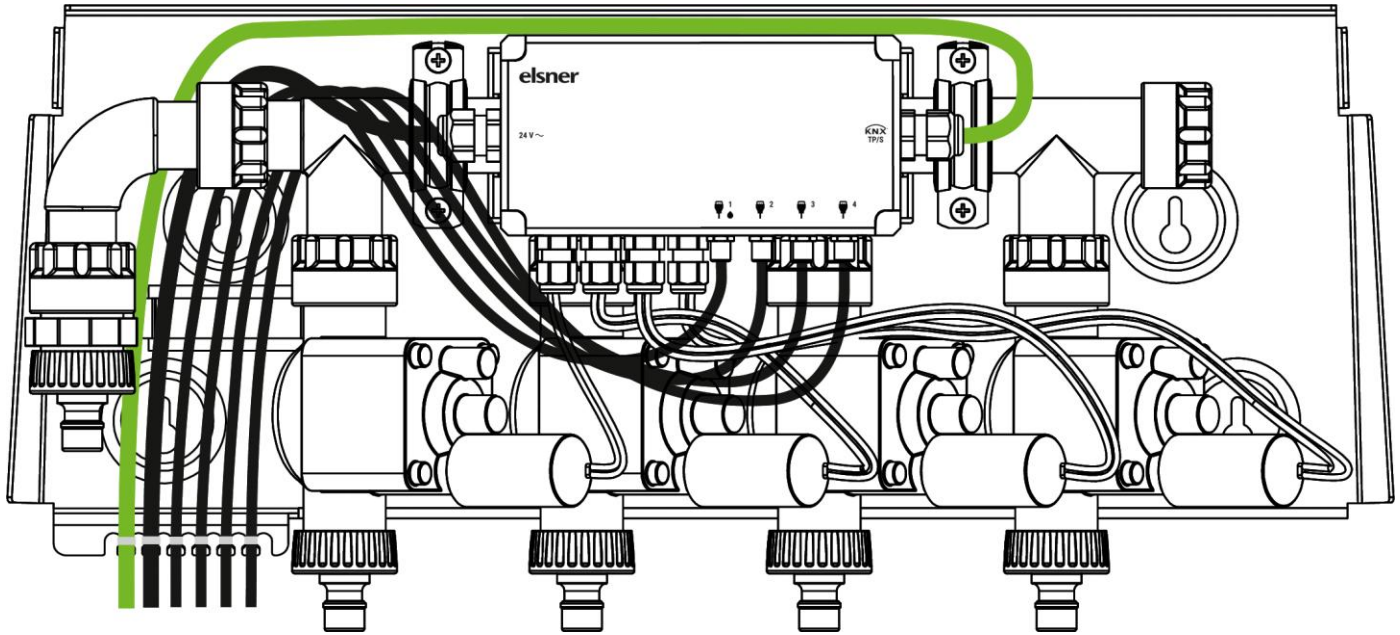
Mounting the Jardana control unit

| Explanation



Connection

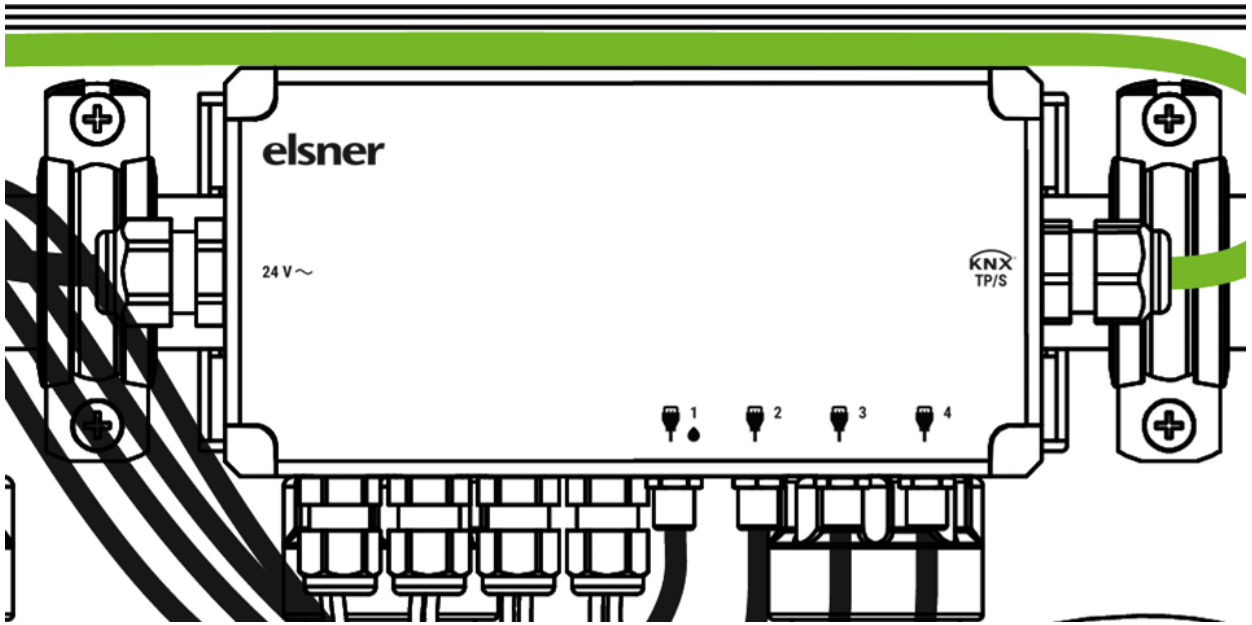
Overview



KNX bus connection

Overview

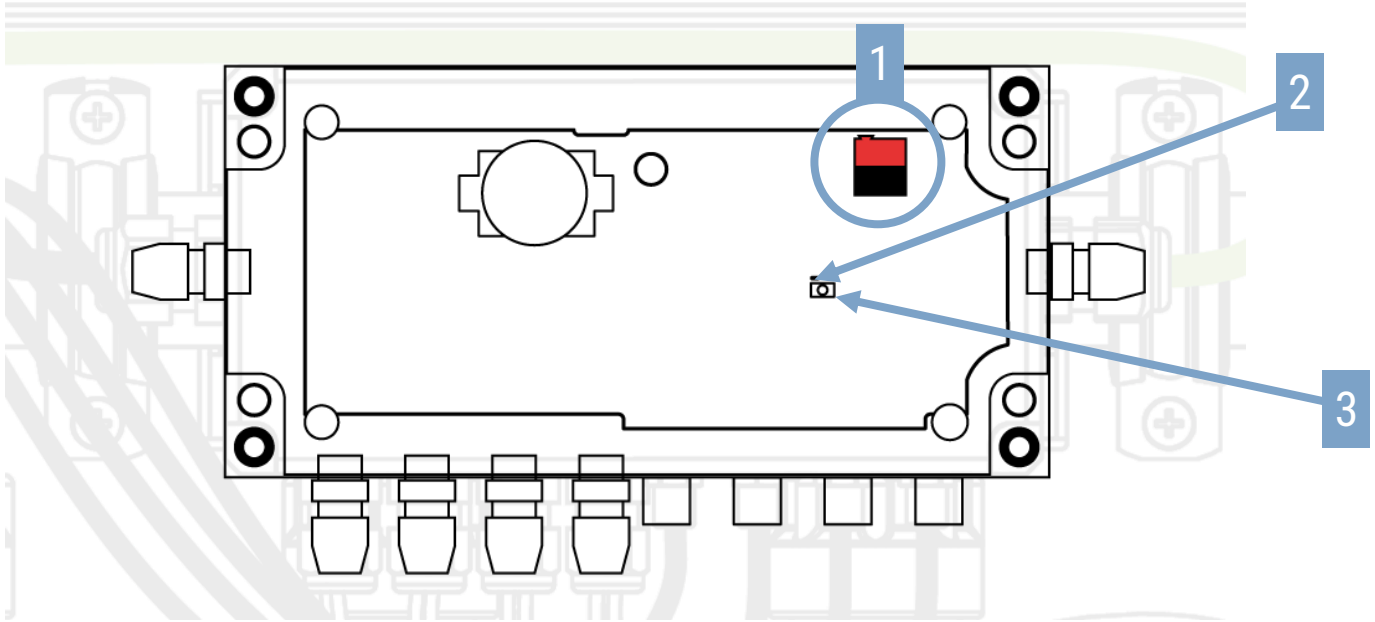
- Open the electronics unit
- Remove the dummy plug
- Insert the supplied cable gland
- Run KNX-TP cable



KNX bus connection

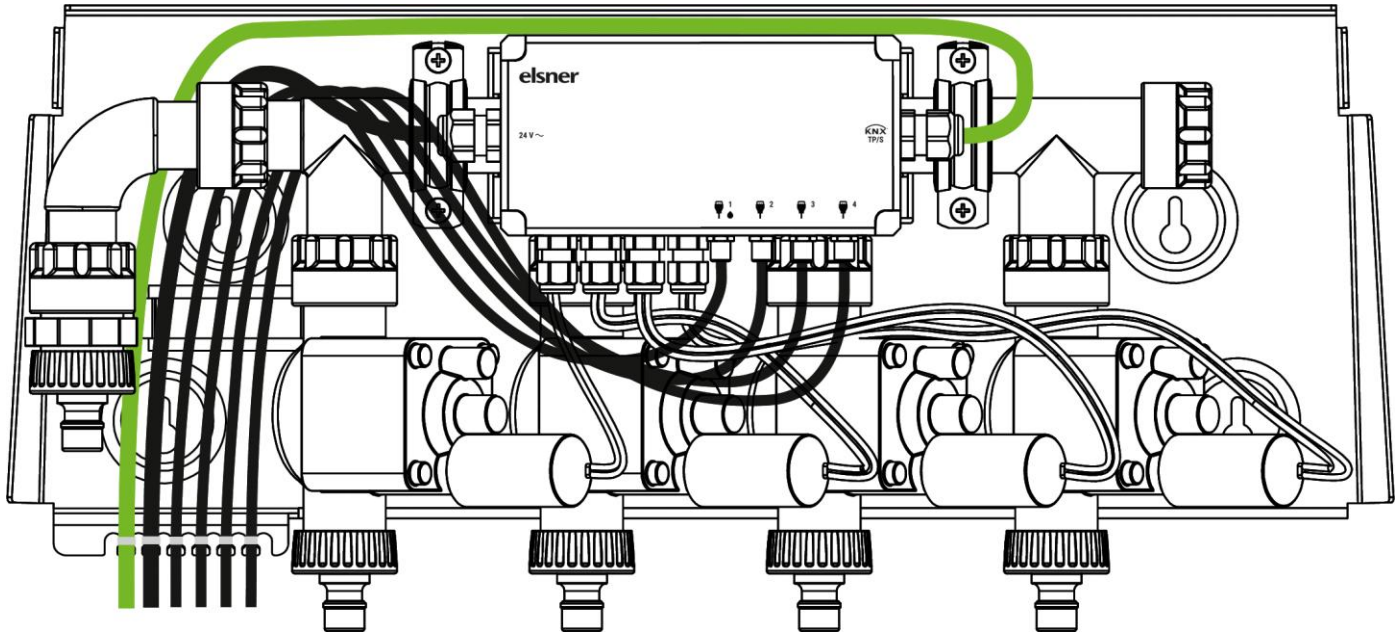
Overview

1. KNX plug terminal
2. Programming LED
3. Programming button



Connection: organising cables

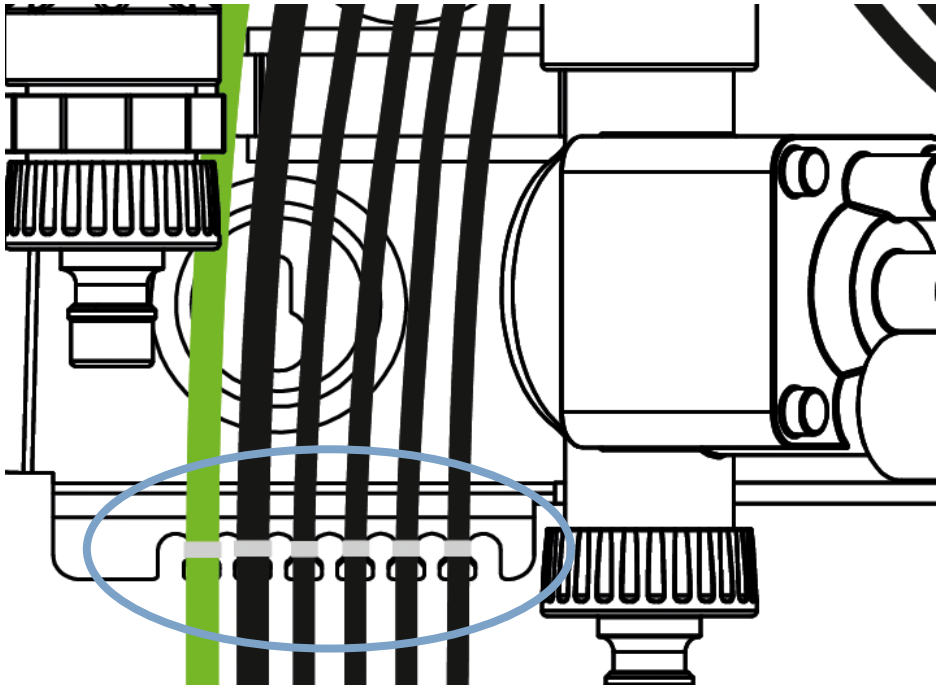
| Overview



Connection: Leitungen ordnen

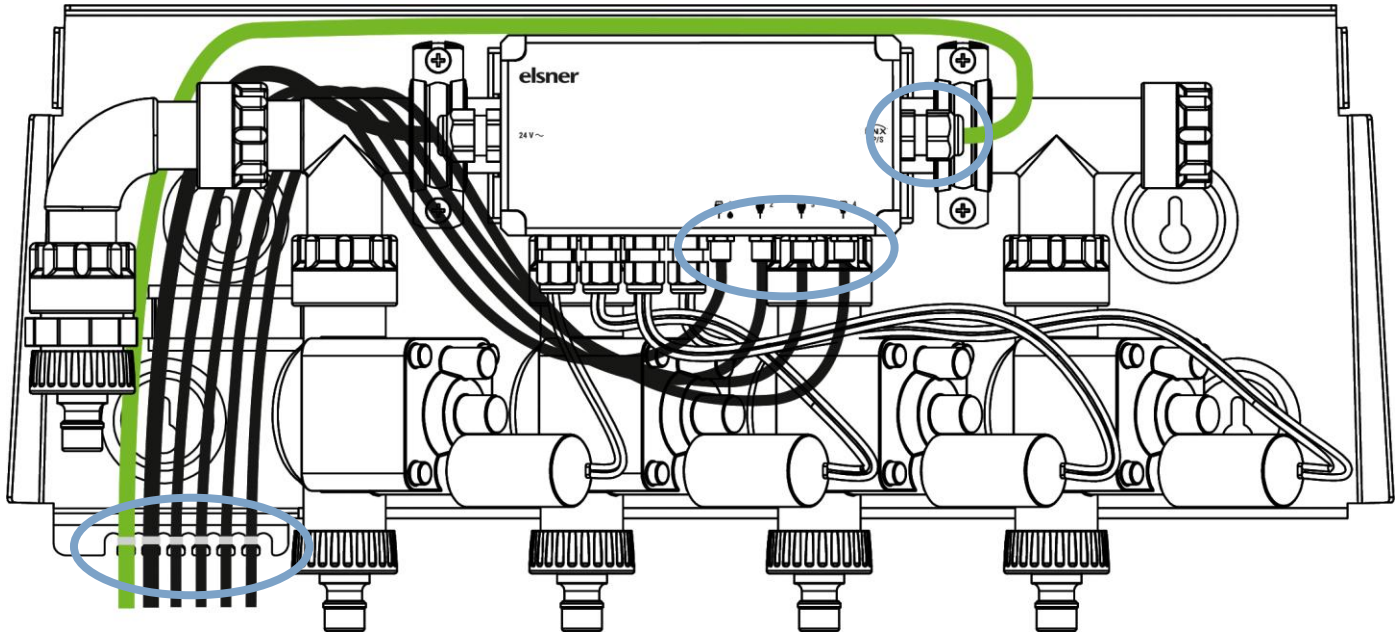
| Overview

Organise the cables and fasten them to the wall bracket with the cable ties.



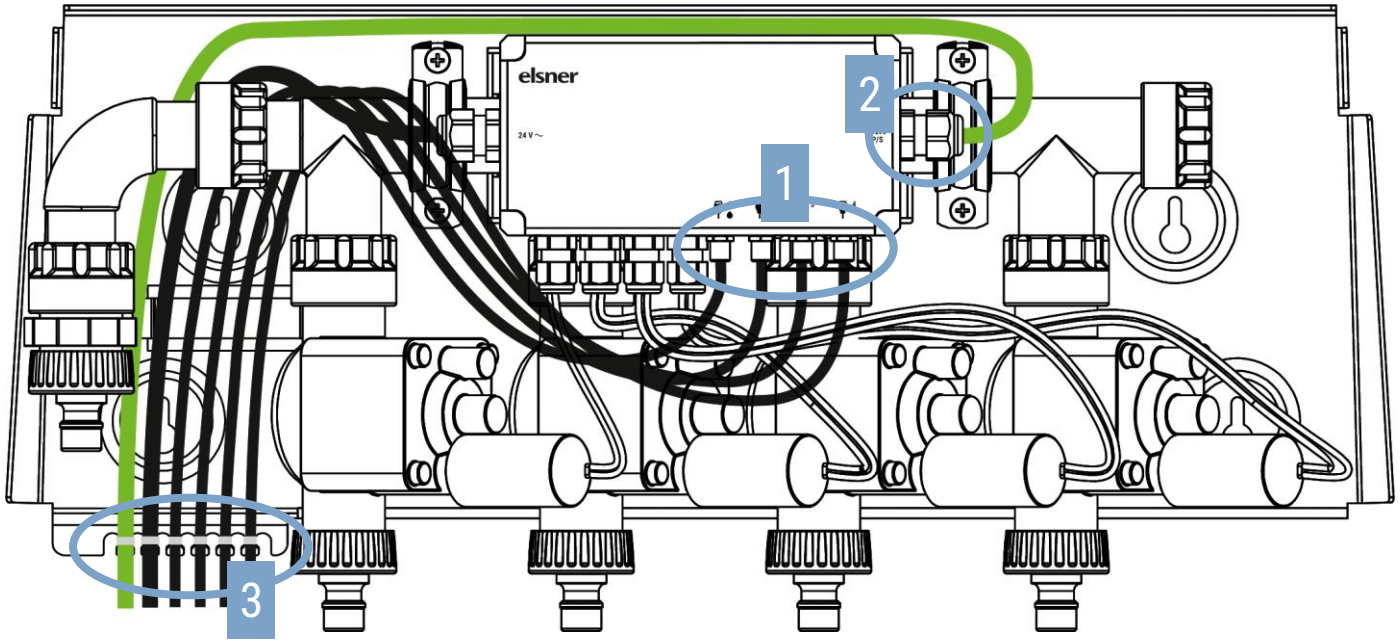
Connection

Overview



Connection

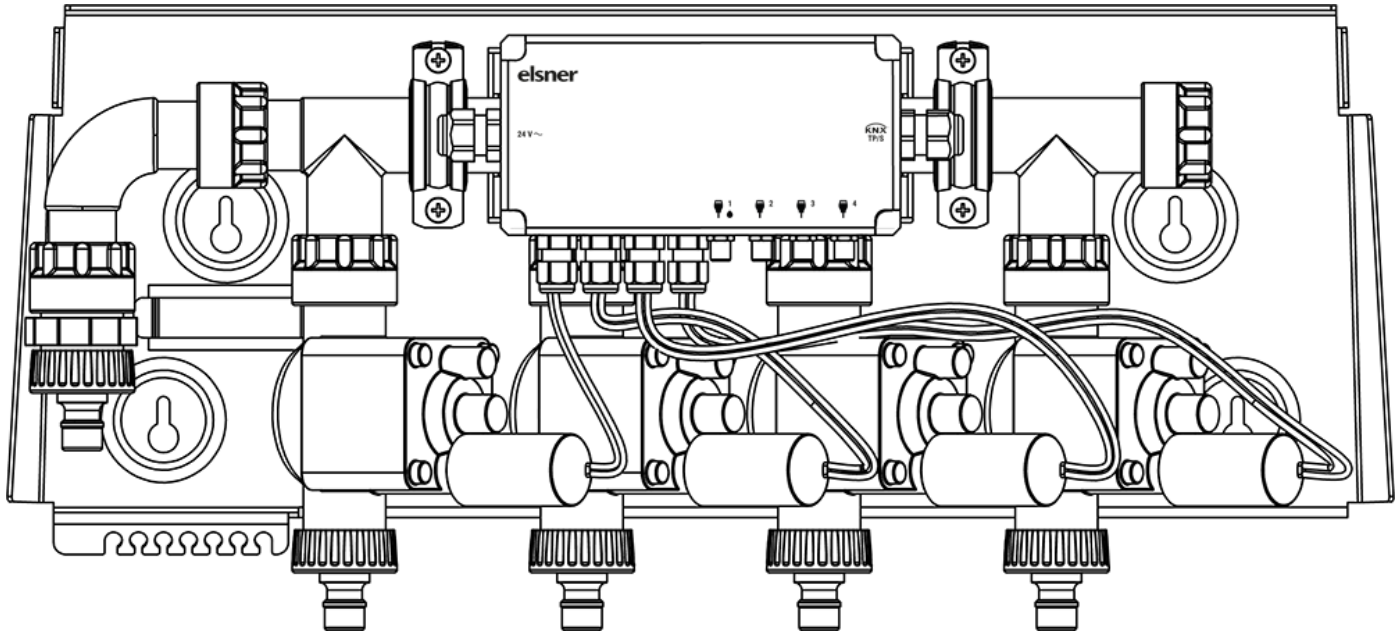
Overview



1. TMi soil moisture sensors (optional)
2. KNX bus (optional)
3. Arrange and fasten cables

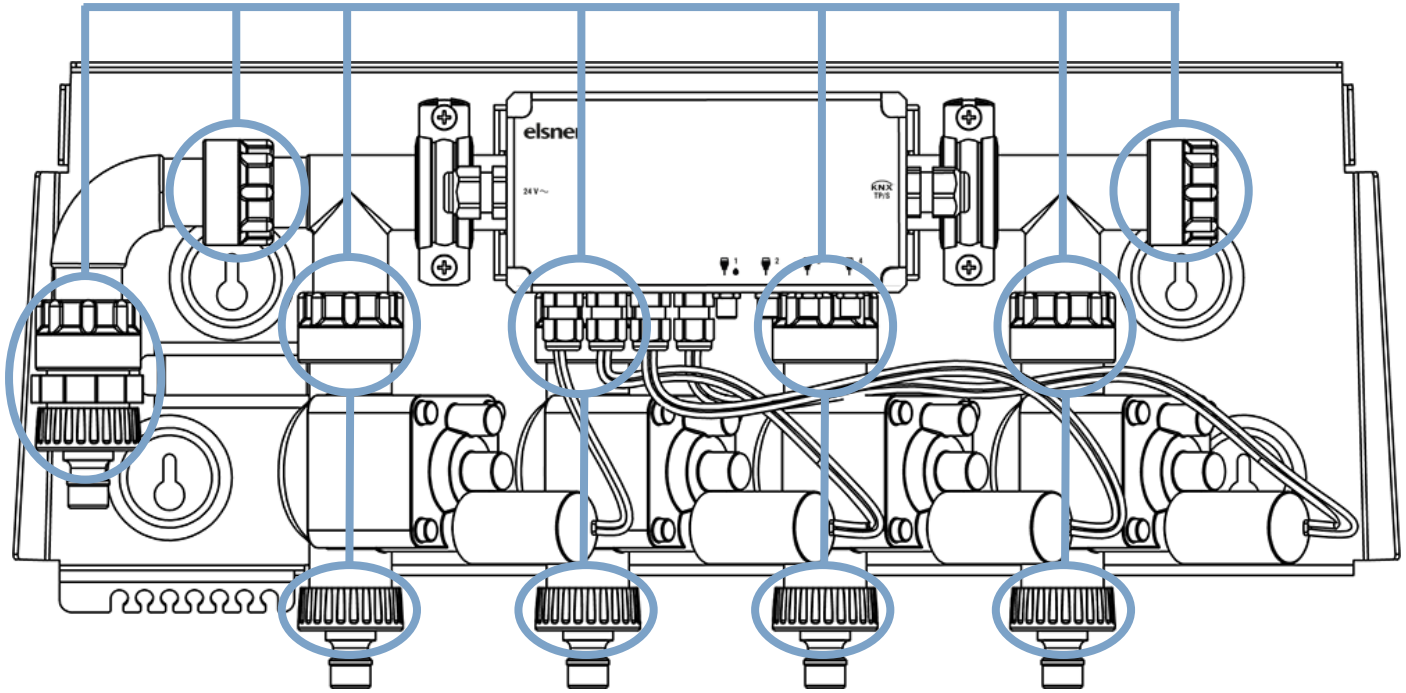
Water connection

| Explanation



Water connection

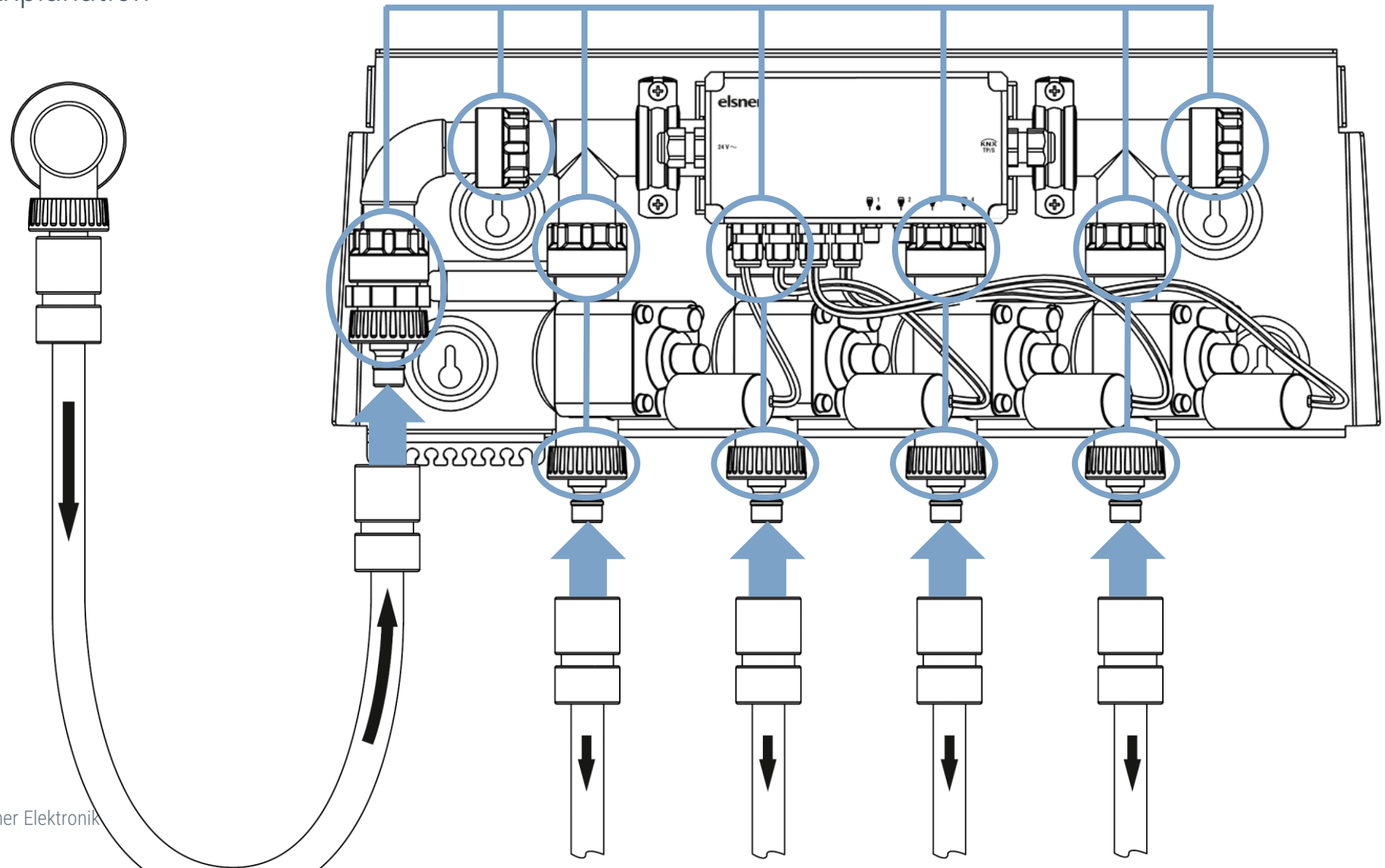
| Explanation



Check all the screw connections of the watersupply. They must be hand-tight.

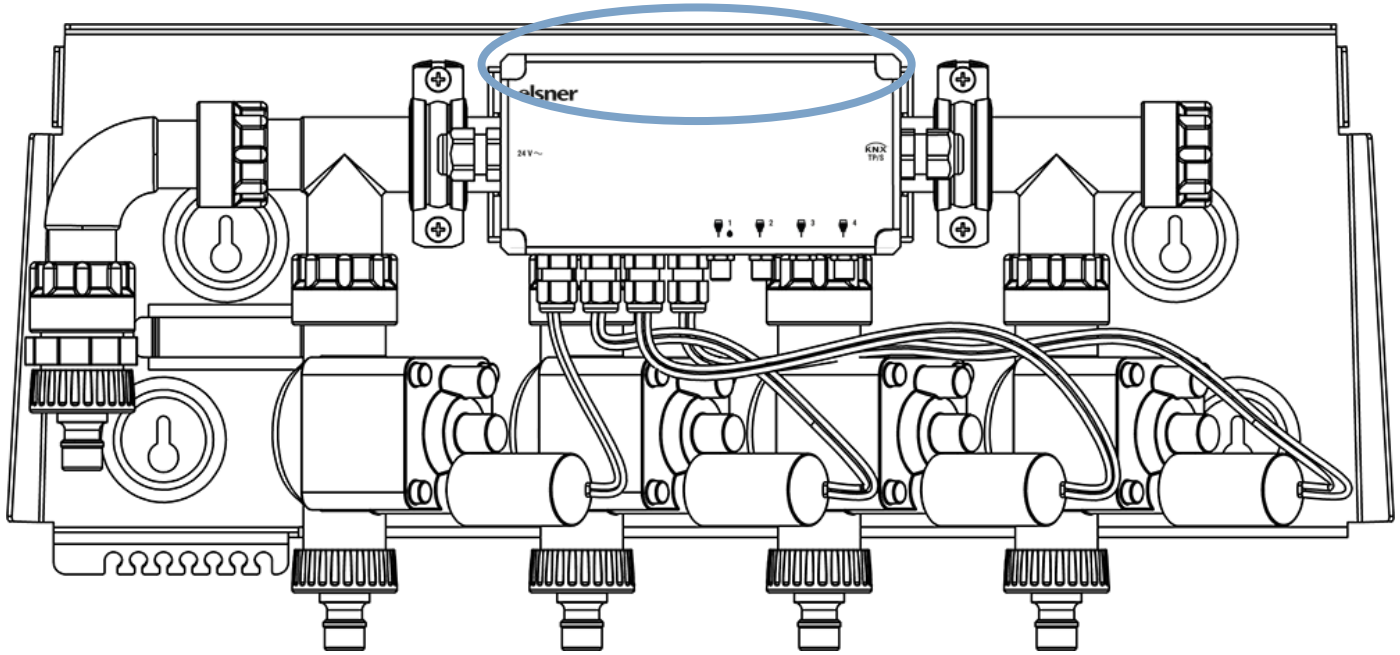
Water connection

Explanation



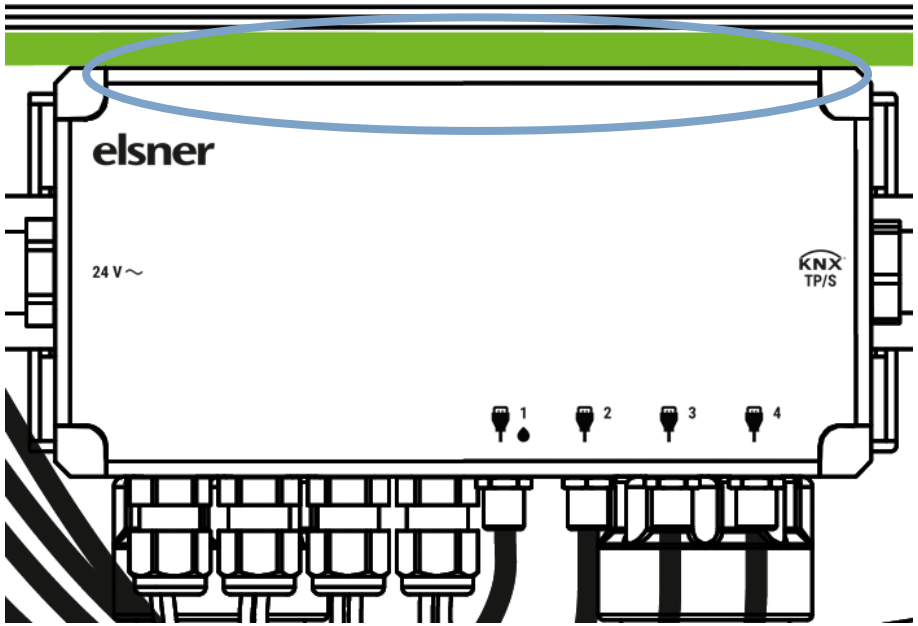
Commissioning

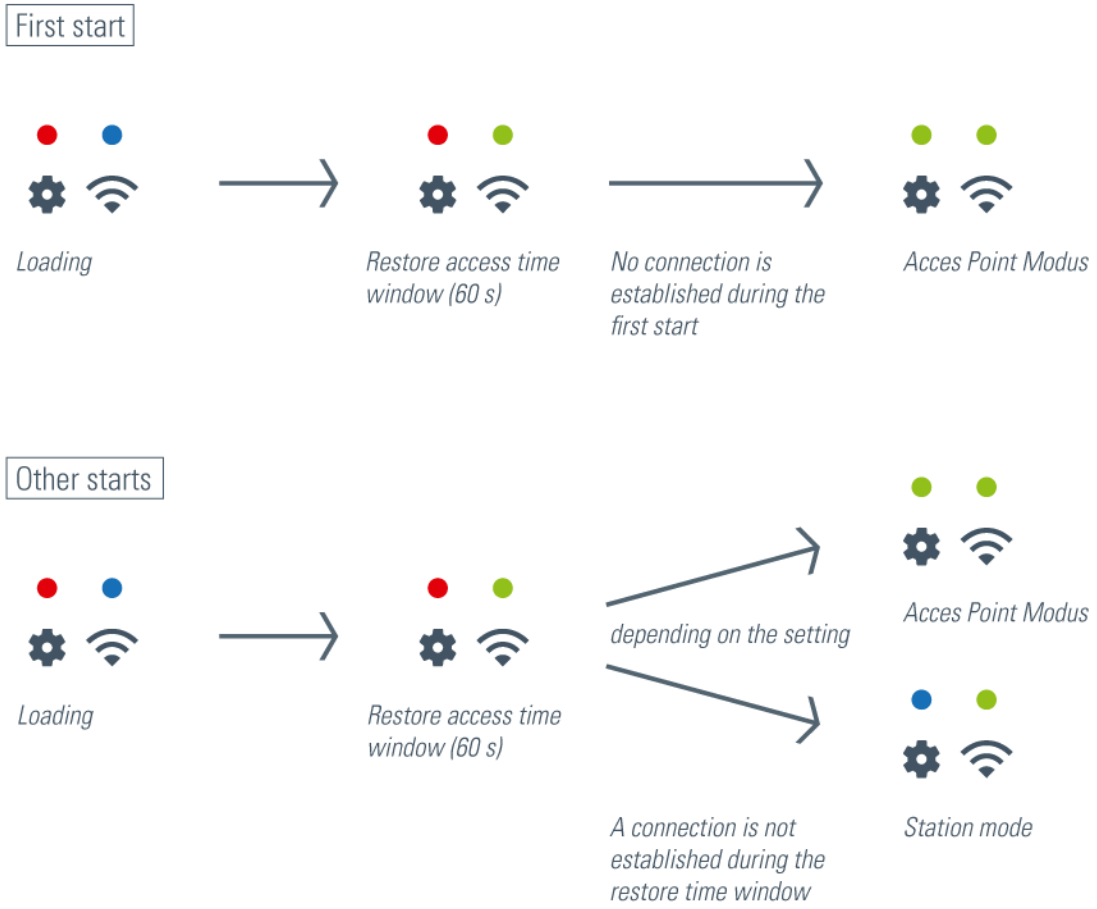
| Explanation



Commissioning

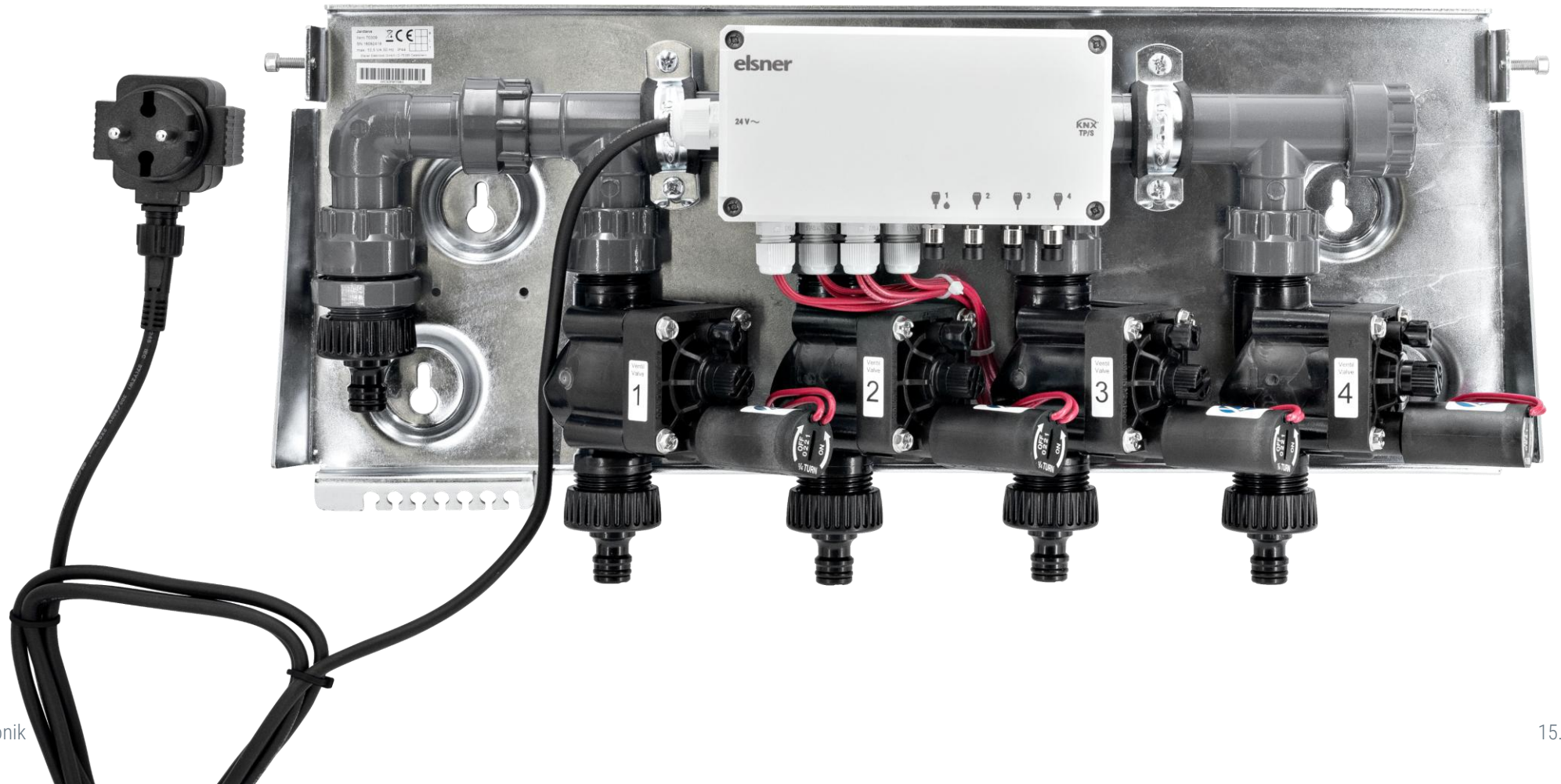
| Status LEDs





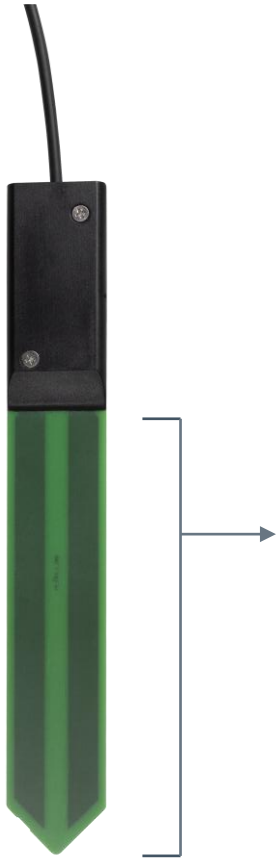
View inside

| Jardana



Installation of TMi soil moisture sensors

| Correct placement



Moisture sensor (green area with conductive tracks)

Well placed

Fig.1

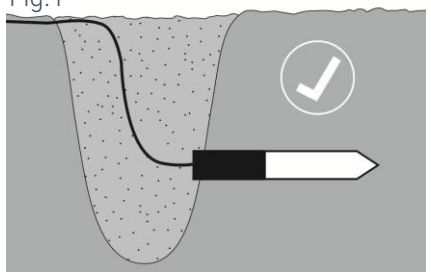
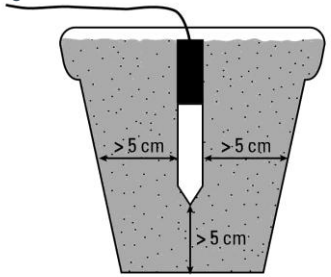


Fig.2



Unfavorably placed

Fig.3

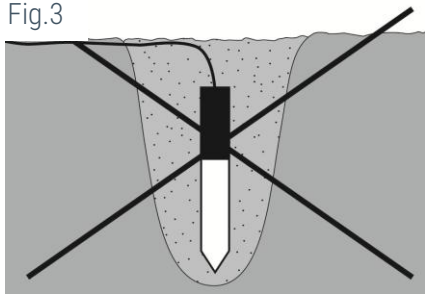
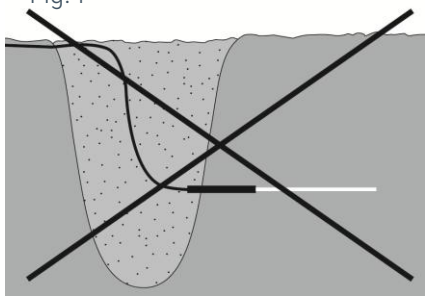


Fig.4



Do you have any questions about the functions or installation?

03 | OPTIMAL IRRIGATION

Areas of application Irrigation

| Examples

- Garden at the house
- Garden plot
- Balcony
- Vegetable garden or greenhouse

Jardana can help everywhere

Irrigation Systems

| Typical types of irrigation in the garden

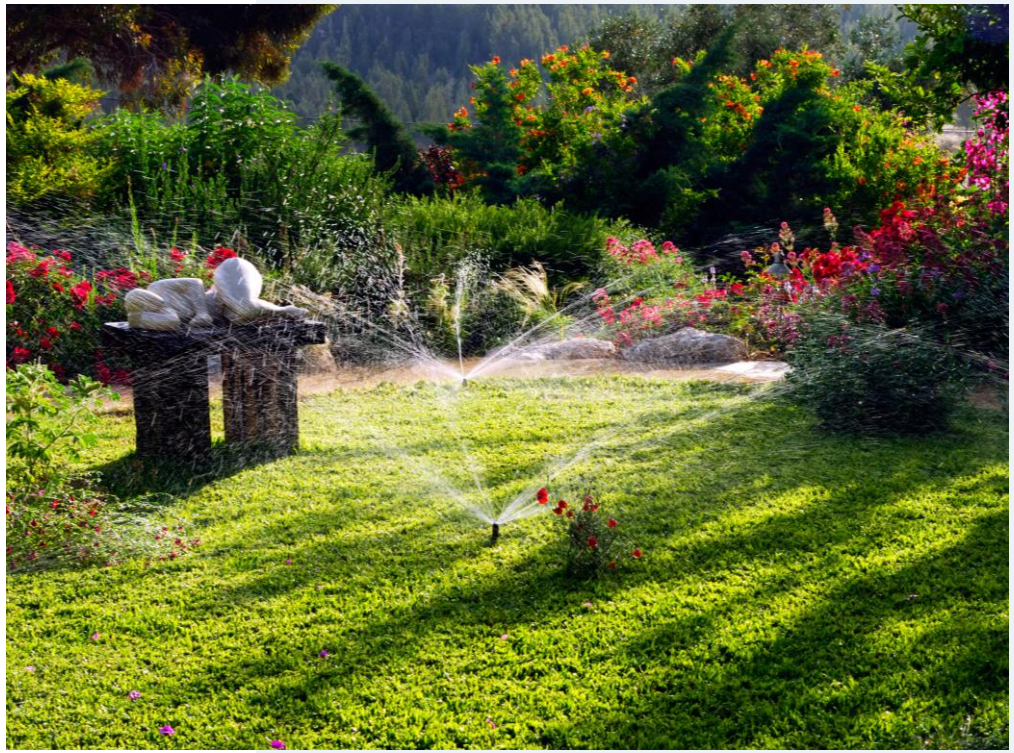
- Drip irrigation
- Sprinkler systems
- Spray irrigation systems
- Retractable irrigation systems

Jardana can control all types of irrigation.

When watering from a rainwater tank, ensure sufficient water pressure/pumping capacity :

- Minimum pressure for Jardana valves: 1.5 bar
- Lawn sprinklers often require 2 or even 4 bar

Only 1 valve is ever opened for watering.

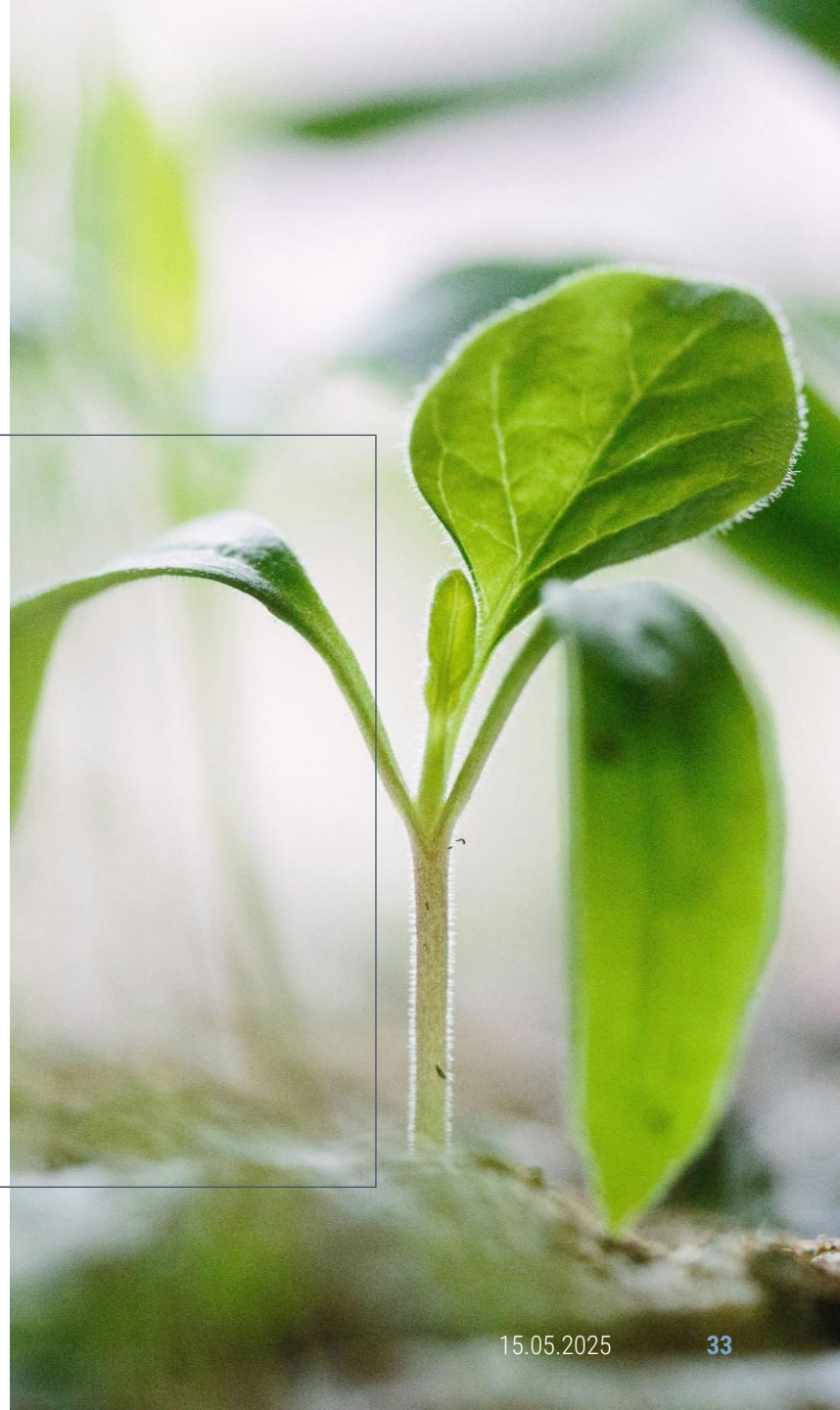


Optimum irrigation

| Tips

Water requirement

- Varies depending on the species and location.
- In general: Plants in sunny places need more water than shade plants



Optimum irrigation

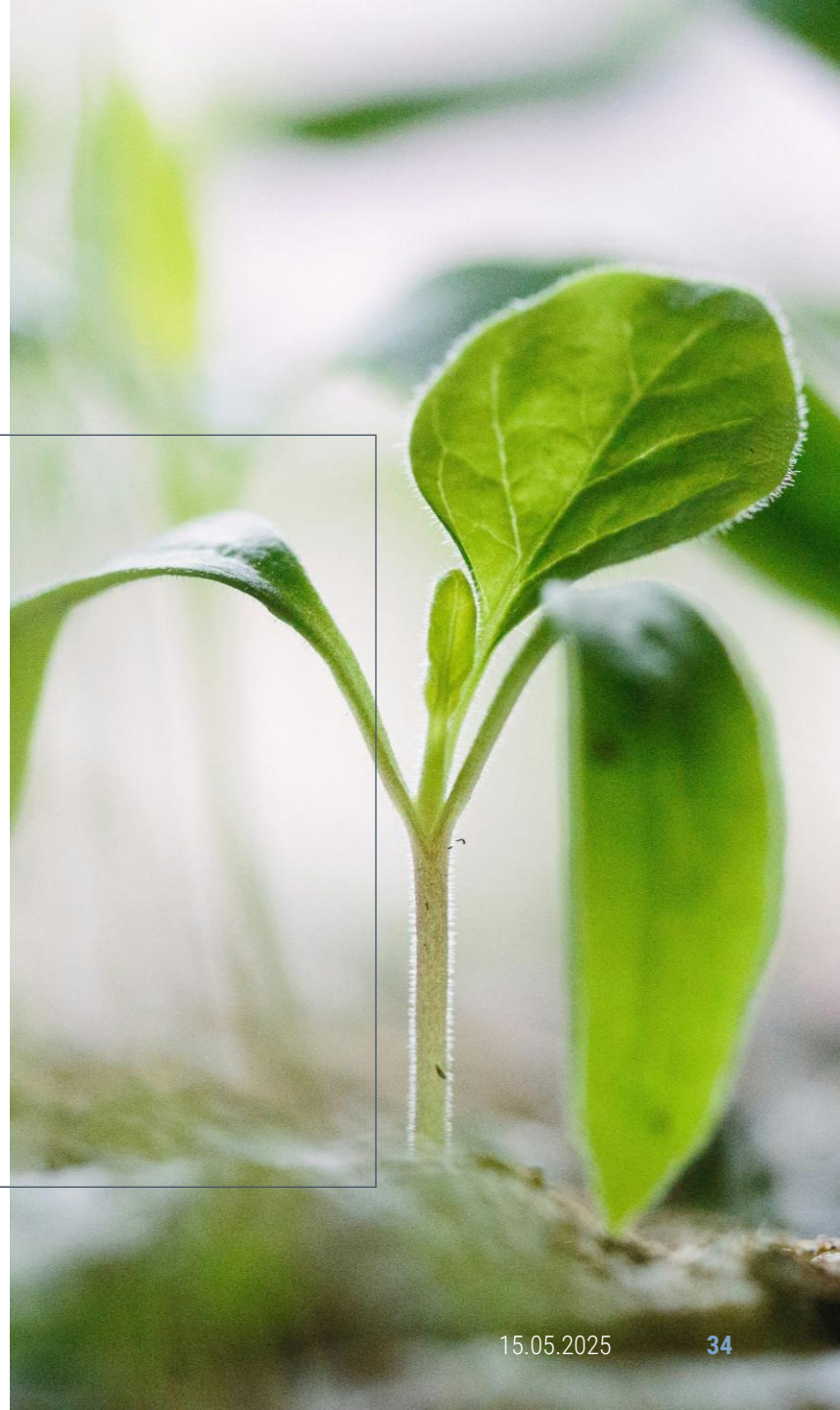
| Tips

Irrigation time

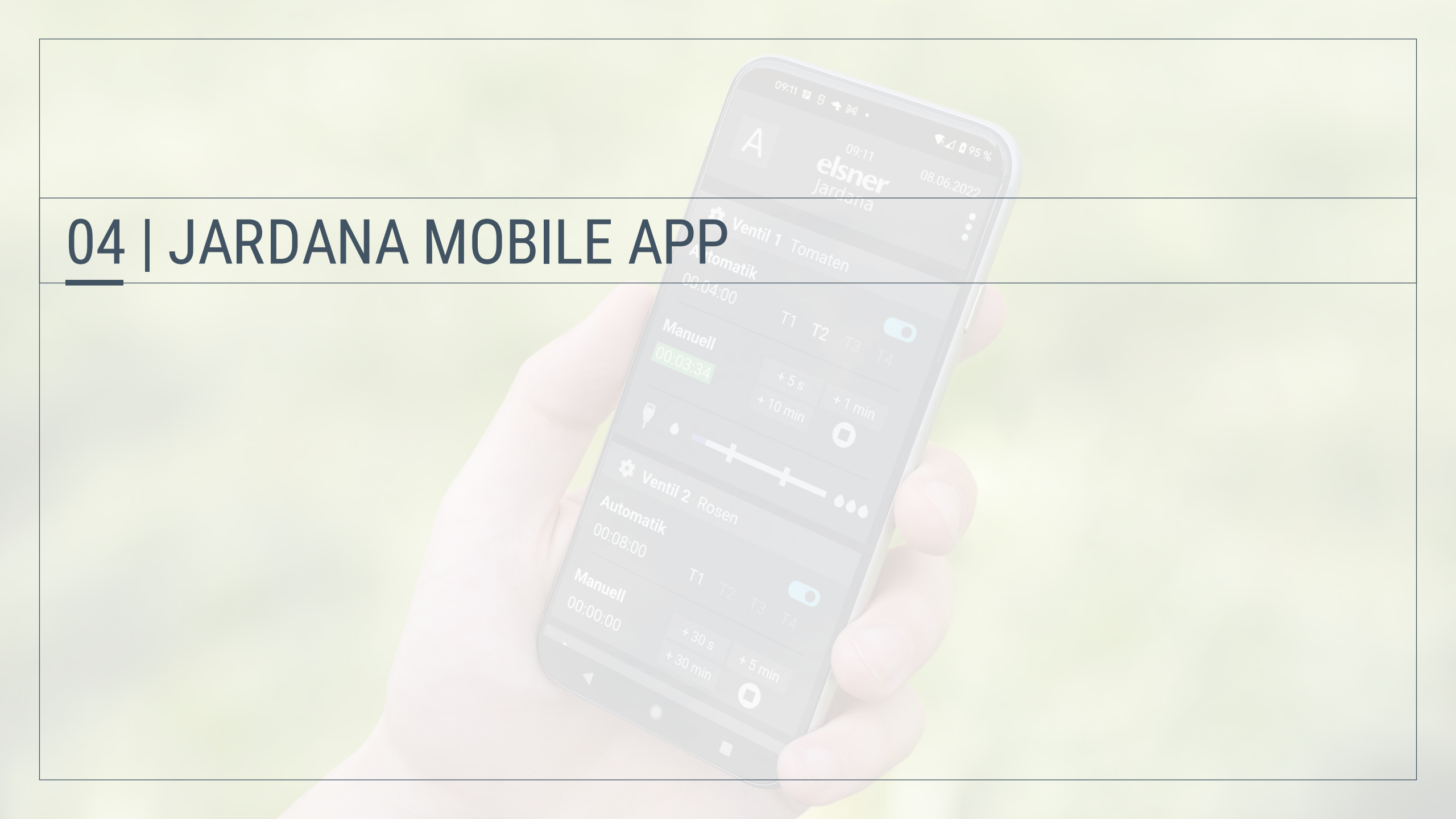
- Water by 6 a.m. at the latest.
- In the evening, the moisture evaporates through the heated floor and cannot be absorbed.

Tip:

- Covering the soil (e.g. with mulch) reduces evaporation and thus helps to save water



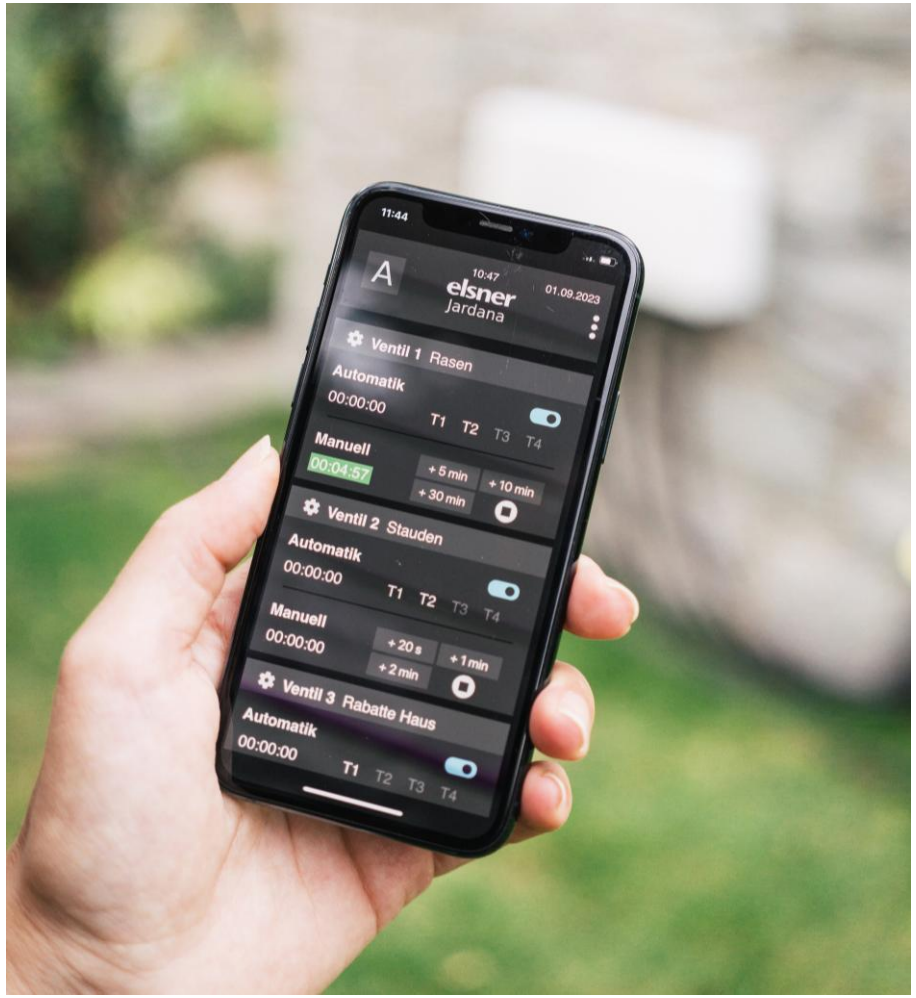
04 | JARDANA MOBILE APP



Jardana Mobile App

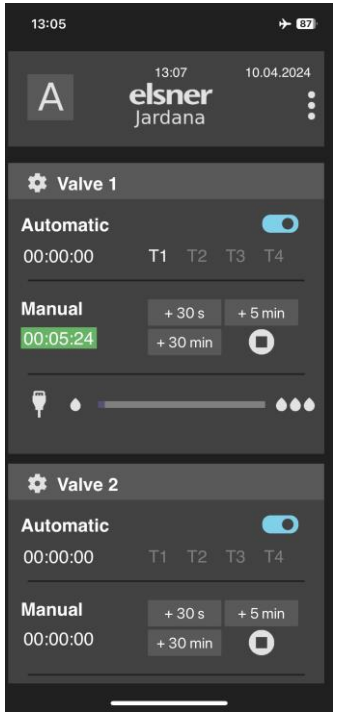
| For Apple iOS and Android

- Four timers can be set per valve
- Manual irrigation with automatic switch-off
- Automatic irrigation according to soil moisture



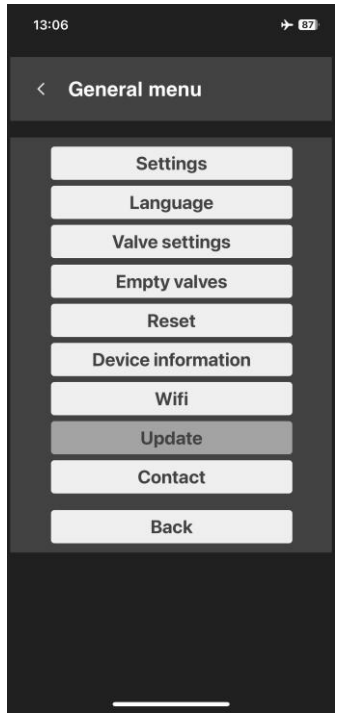
Homepage

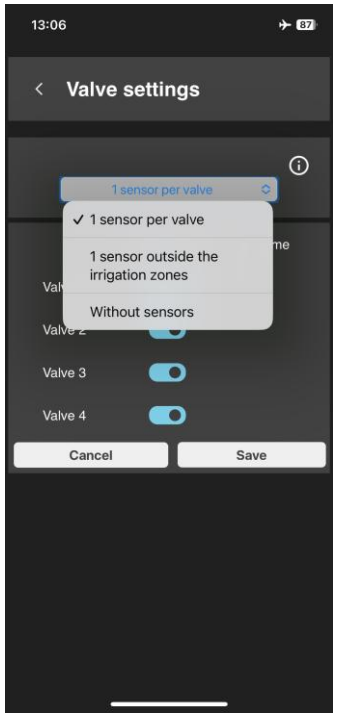
| Jardana Mobile App



General settings / irrigation variant

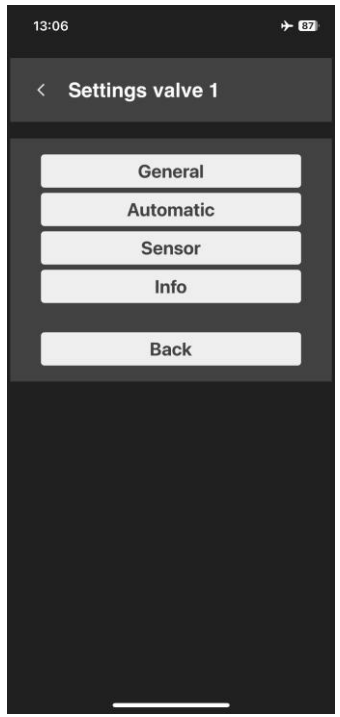
| Jardana Mobile App

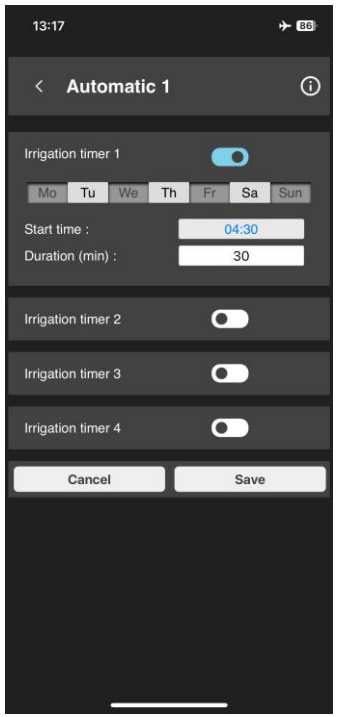


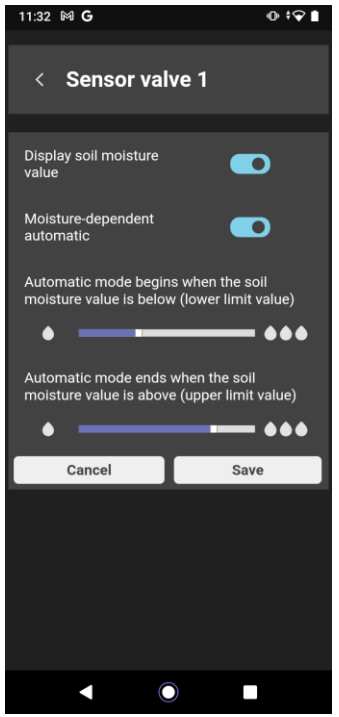


Adjust valves

| Jardana Mobile App





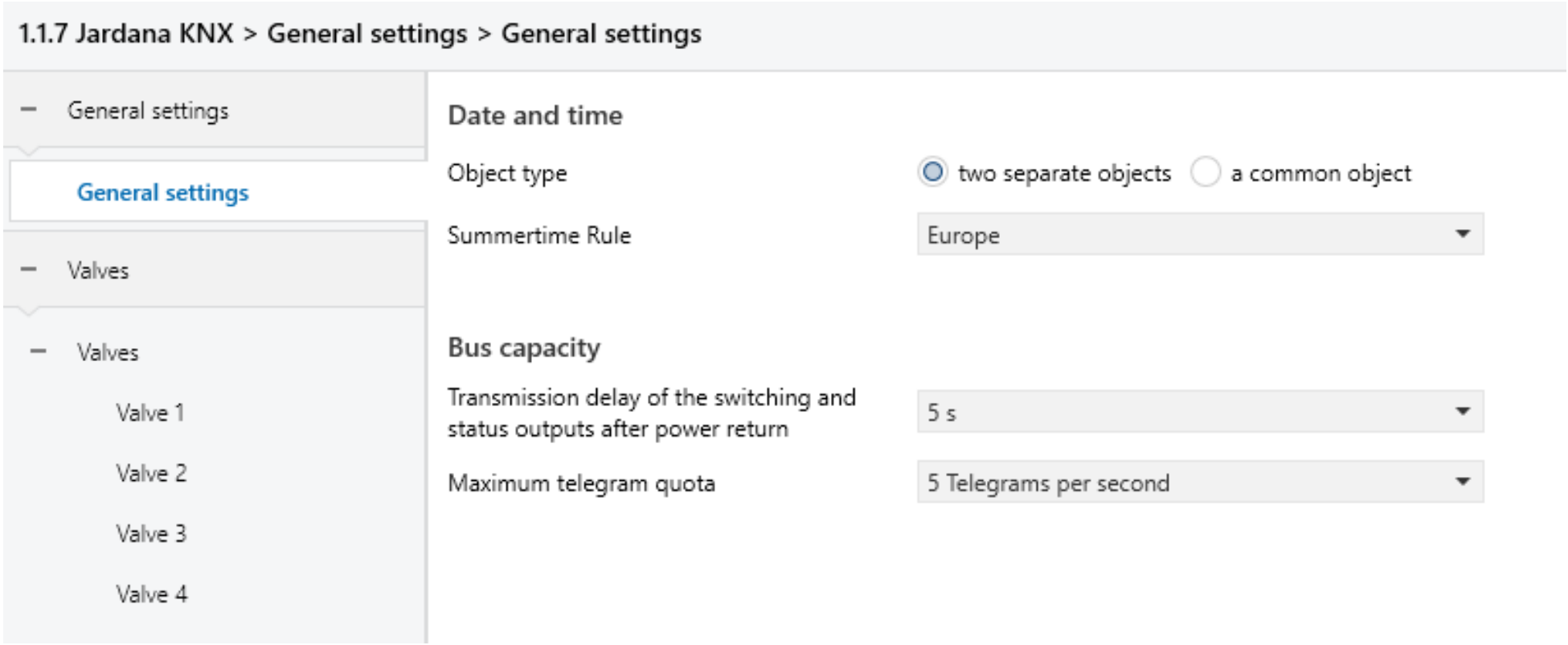


Valve 1 corresponds to irrigation zone 1

05 | KNX PARAMETER

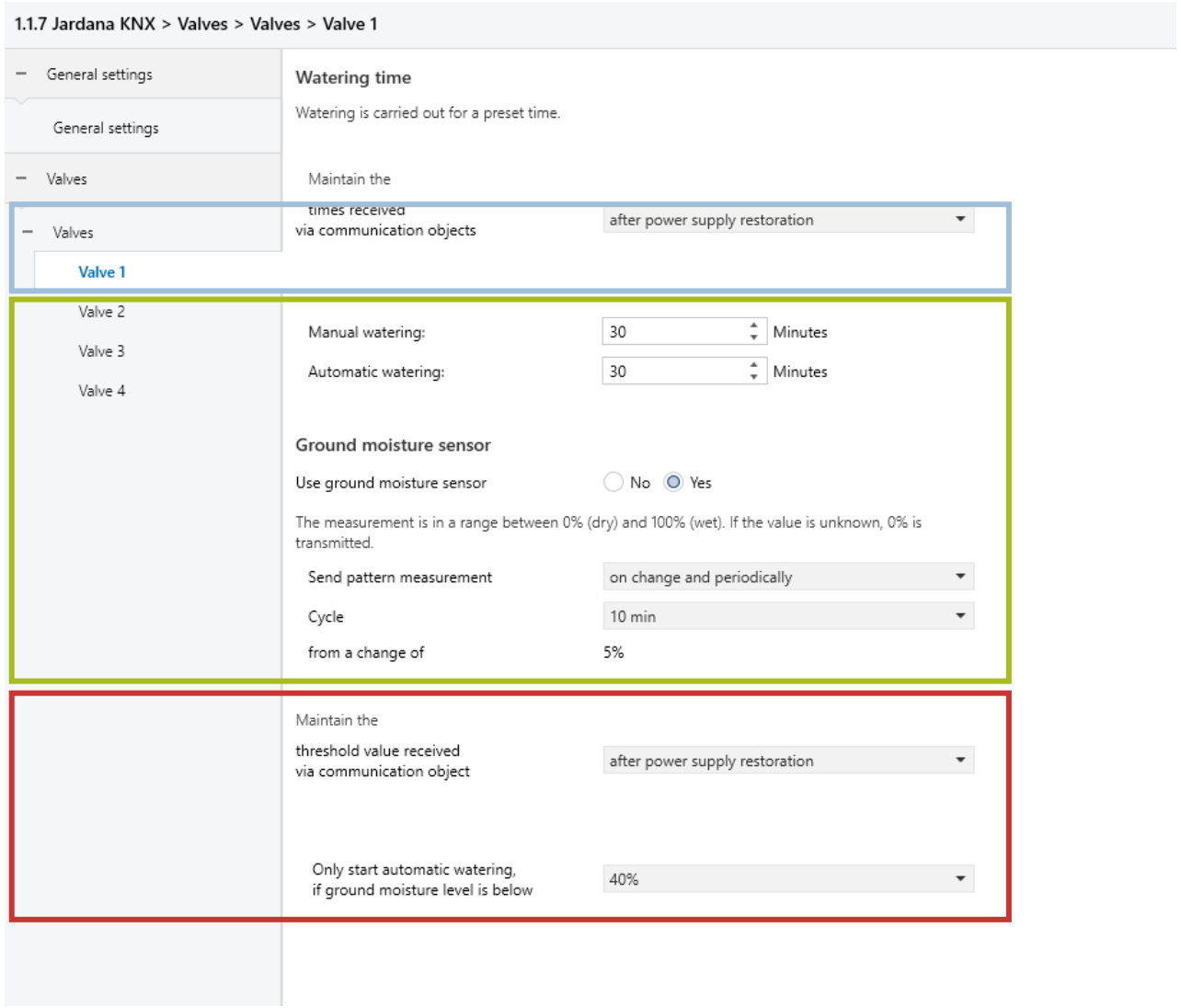
KNX application: General settings

| ETS



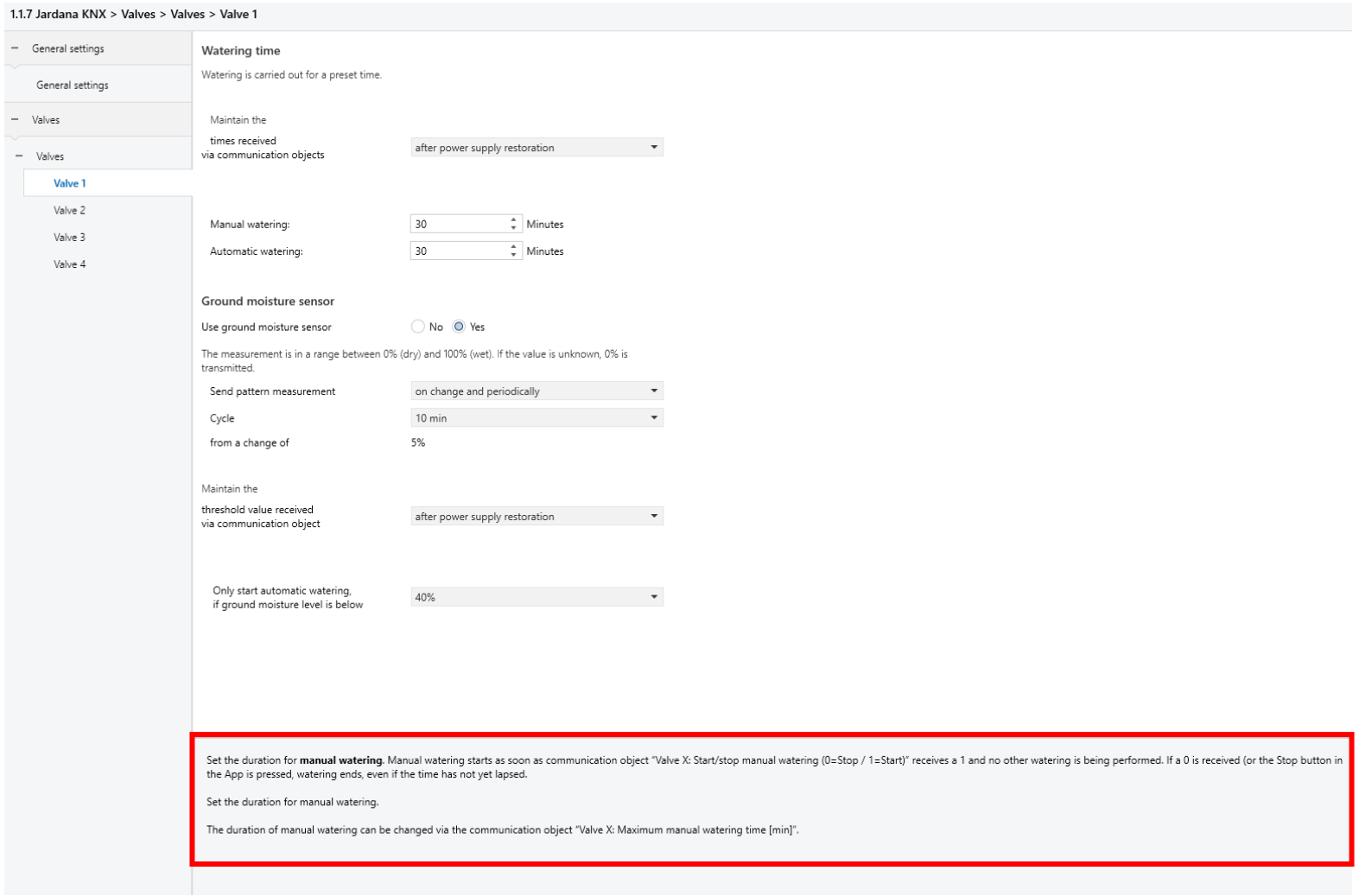
KNX application: Valve settings

ETS



KNX application: Valve settings

| ETS



Do you still have questions about the KNX parameters??

06 | APPLICATION EXAMPLES

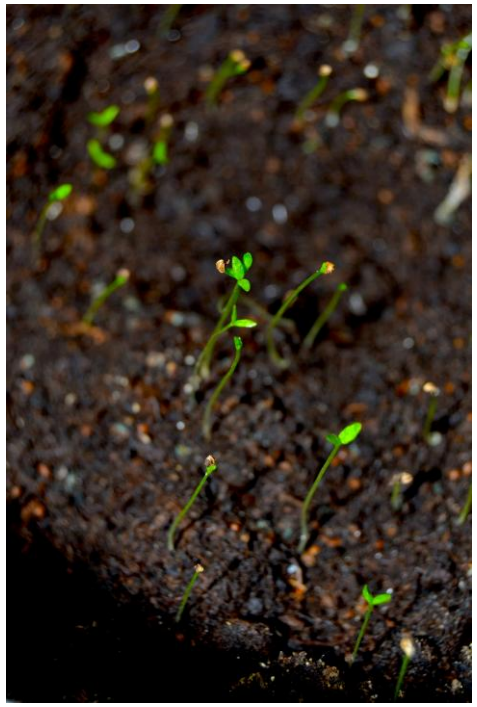
Irrigation according to a time programme

| Application example 01

- Four zones with different irrigation systems/water requirements
- Irrigation at set times, independent of soil moisture
- Manual control via app possible (stop irrigation, extend irrigation)

Irrigation according to time programme with rain detection

| Application example 02



- Four zones with different irrigation systems/water requirements
- Irrigation at set times
- A soil moisture sensor at input 1 detects rain
- Irrigation for all zones is blocked when the soil at the sensor is moist enough
- Manual control via app possible (stop irrigation, extend irrigation)

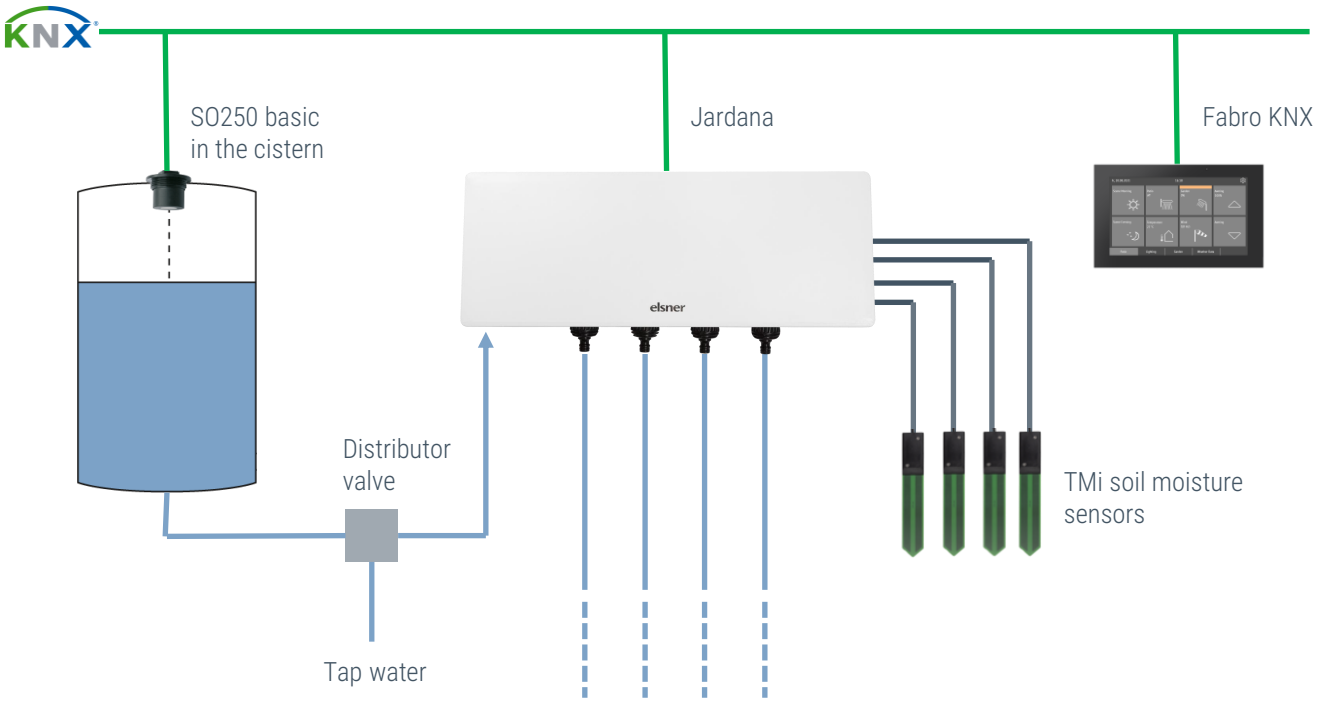
Irrigation according to time programme & soil moisture in the zones

| Application example 03

- Four zones with different irrigation systems/water requirements
- Irrigation at set times
- Four soil moisture sensors measure in the four zones
- If the soil in a zone is moist enough, irrigation is blocked there
- Manual control via app possible (stop irrigation, extend irrigation)

Irrigation according to time programme & soil moisture with KNX logic

| Application example 04



- Four zones
- Irrigation according to time programme and soil moisture in the zones (4 sensors)
- KNX controls water source
- Manual control via app possible
- Operation also via Fabro KNX display

WISHES, SUGGESTIONS & FEEDBACK

You can find more webinars & recordings here

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