KNX® (EN)

Irrigation System
Jardana

Article number 70309

elsner

Installation, setting, operation

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This manual is amended periodically and will be brought into line with new software releases. The change status (software version and date) can be found in the contents footer. If you have a device with a later software version, please check **www.elsner-elektronik.de** in the menu area "Service" to find out whether a more up-to-date version of the manual is available.

Clarification of signs used in this manual

⚠️	Safety advice.
⚡	Safety advice for working on electrical connections, components, etc.
DANGER!	... indicates an immediately hazardous situation which will lead to death or severe injuries if it is not avoided.
WARNING!	... indicates a potentially hazardous situation which may lead to death or severe injuries if it is not avoided.
CAUTION!	... indicates a potentially hazardous situation which may lead to trivial or minor injuries if it is not avoided.
🛑 **ATTENTION!**	... indicates a situation which may lead to damage to property if it is not avoided.
❑	"Control unit" The symbol is followed by a menu path. In this menu the settings just described can be changed.
📖	"Manual" The symbol is followed by chapter information with a page number. In this chapter you will find additional information about the setting just described.
ETS	In the ETS tables, the parameter default settings are marked by underlining.

1. Description

1.1. Area of use

Up to four zones can be watered with the irrigation system. Up to four watering timers with individual durations can be specified for each zone. As a result of the optional use of ground moisture sensors, watering can be controlled depending on the moisture of the ground.

Operation is performed
- with the Jardana App via a WLAN-capable mobile device (iOS 15-16 / Android 6.0-14),
- with a browser via a WLAN-capable device (Chrome, Edge, Safari) or
- via the KNX building bus system.

Functions and properties
- **Automatic watering** of up to **4 zones**
- **4 watering timers** per zone
- Watering on specific days of the week for water-free days
- Use of **ground moisture sensors** possible. Watering can
  • react to ground moisture in the individual zones if a ground moisture sensor is positioned in each zone
  • react to rain if a sensor is positioned outside the watering zone.
- Connection via WLAN. Two connection modes possible:
  Access Point mode generates a separate WLAN.
  Station mode connects to an existing 2.4 GHz-WLAN
- Connection to a **KNX** system possible

Scope of delivery

- Control and valve unit
- Power pack for 230 V/50 Hz domestic socket CEE 7/3. Cable length 190 cm
- Allen key 4 mm for screwing the cover (2x cylinder head screw DIN 912 M5x16 A2)
- 4× crosshead screws WN56, 4.5×40 for wall fastening
- 4× anchors SX8×40 for concrete, brick, etc.
- 4× insulation anchors FID 50 K (L = 50 mm) for insulated building walls
- 4× washer DIN125, 5.3x10x1 A2
- 6× cable ties 100×2.5mm white
- Cable gland M16 for optional connection of the KNX cable

Optional accessories available

- Ground moisture sensor TMi (Art. no. 70313), maximum 4 (one per irrigation zone)

Watering possibilities

The **Jardana Irrigation System** offers 3 irrigation options:
1. Time controls (without ground moisture sensor)
2. Control by time and rain with a ground moisture sensor

3. Control by time and ground moisture in the four irrigation zones with four ground moisture sensors

Control by time

Watering is time-controlled: Watering is performed for the specified period at the set times. Watering is performed irrespective of rain and ground moisture.

Control by rain

Automatic watering is time-controlled and takes into account precipitation: The ground moisture sensor is installed outside the irrigation zones in an area of soil representative for rain. Time-controlled watering only starts if the ground is drier than the set threshold value, i.e. if it has not rained for a long time or not enough.
The ground moisture sensor is connected to socket 1 (with raindrop symbol).

Control according to ground moisture in the irrigation zones

Automatic watering is time-controlled and takes into account ground moisture: The ground moisture sensors are inside the respective irrigation zones and time-controlled watering only starts if the ground is drier than the set threshold value. In addition, you can specify whether watering is stopped after the end of a time period or if the specified maximum ground moisture is exceeded.

Prerequisites

The irrigation system can only be used in connection with a WLAN-capable device. The setting is made either in the Jardana App or in the browser (Chrome, Edge, Safari).

The App requires one of the following operating systems:
- iOS 15 to 16
- Android 6.0 to 14

A 2.4 GHz-WLAN must be available for use of the irrigation system.

Alternatively, the system can also be operated without a WLAN-capable device exclusively via KNX. Then rain-dependent watering is not available.
The irrigation controls can also be used and set in parallel via KNX *and* WLAN.

1.1.1. Technical data

Housing:	Wall bracket: Metal Cover: Plastic, white
Assembly	Surface mounted
Protection class	IP44
Size	590 × 270 × 145 (W × H × D, mm),
Weight	≈ 1.2 kg
Ambient temperature	Operating 5...+50°C, storage -30…+60 °C

Water pressure	1.5...10 bar
Water temperature	≤ 40 °C
Power supply	via power pack Primary: 230 V AC, 50 Hz, 15 VA Secondary: 24 V AC, max. 10.5 VA
Power consumption	≤ 10.5 W During irrigation: ≤ 6 W Ready for use: ≤ 0.8 W
Data output	Wifi 2.4 GHz, KNX

The product conforms to the conditions of the EU Directives.

2. Installation

2.1.   Note

The device is designed exclusively for use outside in order to control irrigation and watering equipment. Note the operating instructions. Incorrect use, changes to the device or non-observance of the operating instructions lead to warranty and guarantee claims becoming void.

The device may only be operated as a fixed-site installation, i.e. only when assembled and after conclusion of all installation and operational start-up tasks and only in the surroundings designated for it.

Elsner Elektronik is not liable for any changes in norms and standards which may occur after publication of these operating instructions.

2.2.   Installation without KNX

Follow the installation instructions. They describe the assembly and initial commissioning. Thereafter you are guided by the App.

2.3.   Installation with KNX

2.3.1. Installation

Assemble the irrigation controls as described in steps 1-5 of the installation instructions.

Then connect the control unit to the KNX bus. This may only be done by an electrician!

Installation, testing, commissioning and fault repair may only be carried out by a qualified electrician.

BEWARE!
**Electric voltage!**
There are unprotected live electric components inside.
• Before installation, check the device for damage. Only operate devices if they are free from damage.
• Comply with local directives, provisions and conditions for electrical installation.
• Immediately switch off the device or system and secure it against accidental activation if safe operating is no longer guaranteed.

Remove the covers over the screws at the corners of the electronics unit. Loosen these 4 screws. Remove the lid.
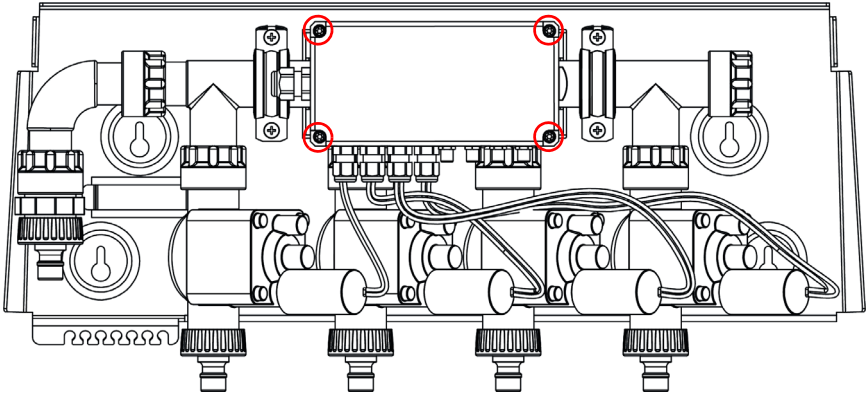
Irrigation controls without cover

Remove the blank plugs from the right side of the casing. Insert the cable gland provided here.
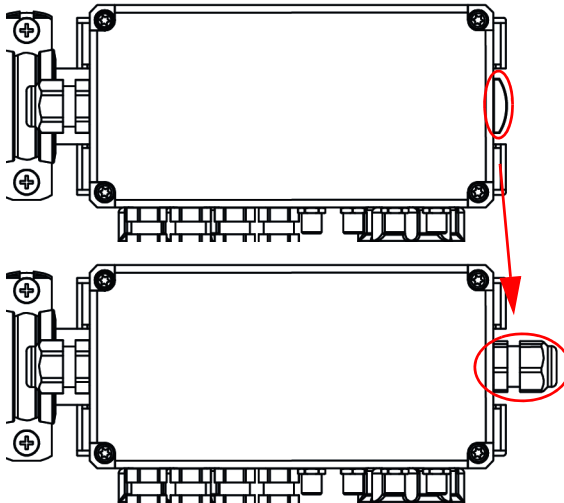
Replace blank plugs

Pass a UV-resistant KNX-TP cable through the cable gland. Connect it to the KNX plug terminal inside the electronics unit.

1   KNX plug terminal
2   Programming LED
3   Programming buttons
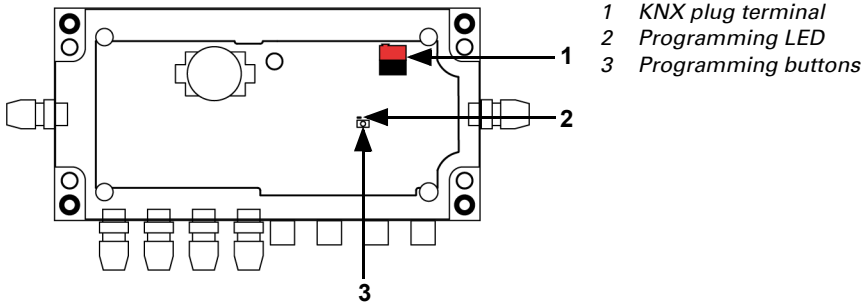
Opened electronics unit with circuit board

Connect the sensors and water as described in steps 6-8 of the installation instructions.

Plug the power cable to the power pack and screw it on both sides.

Plug the power pack into a 230 V socket.

The irrigation controls can now be operated directly using a WLAN-capable device.
📖 3. Bedienung, Page 13

2.3.2. Addressing the equipment

The equipment is delivered with the bus address 15.15.255. A different address can be programmed using the ETS.

The programming button is located on the circuit board in the electronics unit (see illustration above, No. 3).

3. Operation

3.1.   Operation by App or browser

This section describes the operation of the irrigation system by App and via a browser. The two operating types merely differ in establishing a connection to the irrigation system controls. The user interface is identical.

3.1.1. Operation via App

The **Jardana App** is available for Android and for iOS free of charge in the respective App stores. Install the App on the mobile device.

In the WLAN settings, activate the Jardana WLAN:
Name: JardanaWifi
Password: Jardana!

As soon as your mobile device is in the Jardana WLAN, the irrigation system can be controlled using the App.

First login

When you connect the App to the irrigation system for the first time, the Jardana App carries out the first setting steps. Select the desired language, set the time and date and select the irrigation option.

3.1.2. Operation via browser

In the WLAN settings of your device, activate the Jardana WLAN:
Name: JardanaWifi
Password: Jardana!

As soon as your device is in the Jardana WLAN, the irrigation system can be controlled via a browser:
• Chrome
• Edge
• Safari

For this, enter the IP address of the irrigation system into the address line of your browser. In Access Point mode, this is **192.168.2.1** (delivery setting).

3.1.3. Other information

Up to 6 mobile devices can be connected to the irrigation system at the same time.

The WLAN of the irrigation system is password-protected. For security reasons, please replace the standard password with your own password, which must have at least 8 characters.
❏ General menu > WLAN > New WLAN password
📖 WLAN, Page 22

The irrigation system can also be operated remotely. For this, set up a secure VPN connection on your local network. Jardana has to be used in Station mode and must have been used first in the internal WLAN before the access via VPN works.

📖 Station mode, Page 22

Operating multiple irrigation systems

Station mode

Assign a static IP address to each irrigation system and use the web browser in order to access the various Jardanas.
App control is not possible in this mode.

Access Point mode

Assign a separate WLAN name to each irrigation system, with which you can connect and control the corresponding Jardana.

Password forgotten?

Use the restore access in order to assign a new password:
1. Unplug the power pack of the irrigation controls and plug it in again after 5 seconds.
2. Within 60 seconds, select the WLAN "JardanaWifi", password "Jardana!" on the mobile device.
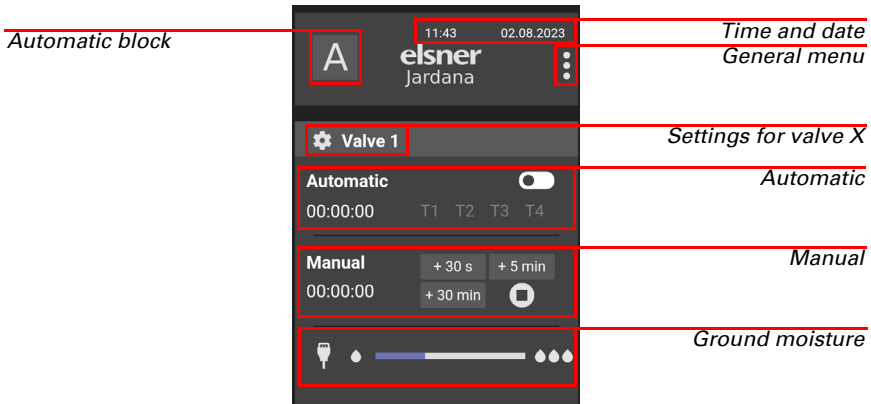3. Start the App and assign a new password.

3.2.   User interface

3.2.1. Operating menu

The operating menu is displayed when you open the App or the IP address 192.168.2.1 in the browser. The menu guide in the App is only different for the first commissioning.

Automatic block —————————————— | Time and date
                           | General menu

Settings for valve X

Automatic

Manual

Ground moisture

Automatic block

Activate or deactivate all automatic watering via all valves here. The setting remains after a restart of the irrigation controls.

Time and date

The time and date setting, and the summertime rule (factory setting: summertime rule for Europe) and the time zone (factory setting: UTC +1) can be changed in the general menu.

General menu

The other setting menus are reached via this button.
☐ General menu
📖 3.2.2. General menu, Page 18

Settings for valve X

Settings menu for the respective valves.
☐ Settings for valve X
📖 3.2.3. Settings for valve X, Page 24

Automatic

All the information about automatic watering in the respective irrigation zone is summarised here.

If automatic mode is interrupted (block, moisture, automatic mode off), watering is not performed until all the conditions are met again.

Deactivate / activate automatic mode (currently deactivated). Setting is retained after a restart.

⚙ Valve 1

Automatic

Remaining duration of the automatic watering (currently no automatic watering)

00:00:00   T1 **T2** T3 T4

Automatic timer T1...T4 (only T2 is used here)

Manual

If necessary, manual watering of the zone is started here.

Start manual watering and extend it with multiple clicks (the duration can be adjusted in the setting menu for valves)

Manual   + 30 s   + 5 min

Remaining duration of the manual watering (currently no manual watering)

00:00:00   + 30 min   ⏹

End manual watering

⚙ Valve 2 ⏳

Wait until the end of current automatic watering. Then manual watering is performed. Automatic mode has priority before manual mode, valves are activated in ascending order.
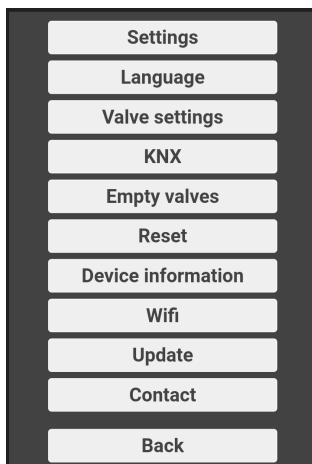
Ground moisture (optional)

If a ground moisture sensor is used, the ground moisture and any set threshold values are shown here. The ground moisture is shown in 10 steps between low (1 drop) and high (3 drops). The moisture threshold value can also be used for automatic watering.
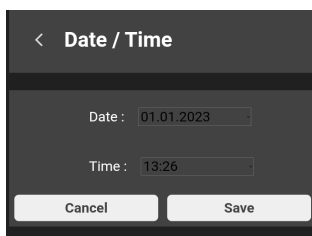
3.2.2. General menu

This is where you can make the basic settings and access special functions such as draining the valves.

Settings
Language
Valve settings
KNX
Empty valves
Reset
Device information
Wifi
Update
Contact
Back

Settings

Via this menu you can access the "Date /time" and "Time zone", where you can also specify the summertime rule. In Station mode, i.e. if the irrigation system is connected to an external WLAN, these can be synchronised via the internet instead.

< Settings

Date / Time
Time zone
Back

< Date / Time

Date :　01.01.2023

Time :　13:26

| Cancel | Save |

Time zone

Summer time :

Europe

Time synchronisation with internet

Time zone :

UTC +01:00 (Berlin, Paris, Brussels ...)
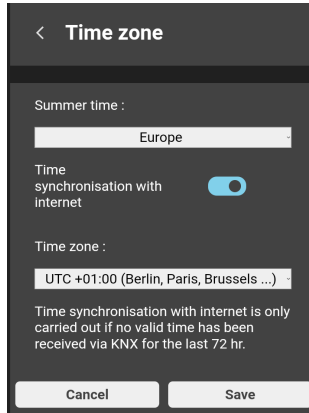
Time synchronisation with internet is only carried out if no valid time has been received via KNX for the last 72 hr.

Cancel   Save
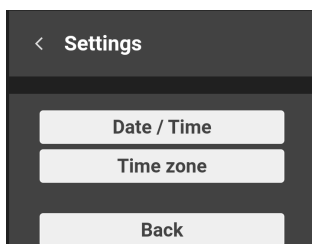
If the irrigation system is connected to a KNX system, in which the date and time are available, these data are used.

Date and time are saved here, with assistance from the installed battery.

📖 5.4. Batterie, Page 42

Language

Select the language in this menu. German, English, Spanish, French and Italian are available.

Language

Select the wanted language.

FRANÇAIS

ENGLISH

DEUTSCH

ESPAÑOL

ITALIANO

Back
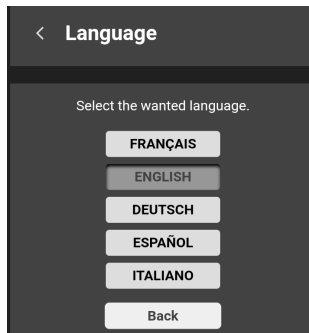
Valve settings

The irrigation options are selected here.
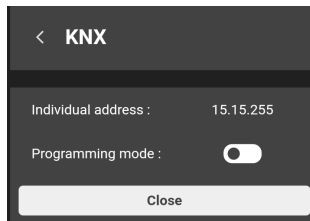
📖 Bewässerungsmöglichkeiten, Page 6
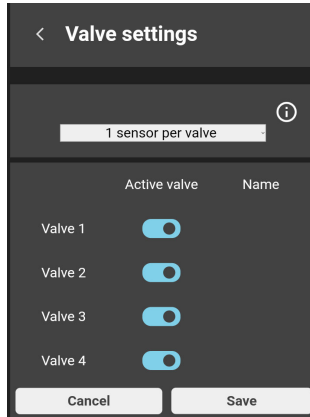
In addition, the valves can be activated and deactivated. A deactivated valve is not shown in the operating menu and no watering is performed!

KNX

This menu is only available if the irrigation system is connected to KNX.

The physical address is displayed and the programming mode can be activated here.

Drain valves

> **ATTENTION**
> **Frost damage to water installations!**
> Drain before the first frost and only use again
> when the risk of frost is over.

Use "Drain valves" to open all 4 values for 30 seconds, one after the other, thereby draining them. To do this, all hoses and the water supply must be removed!

Drain the valves every year before the first frost. Water-filled pipes and hoses can burst if there is a frost and the irrigation system or connected systems can be damaged.

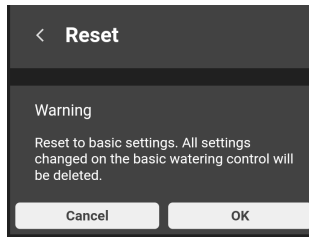This function has priority over automatic mode, but can be interrupted by manual watering.
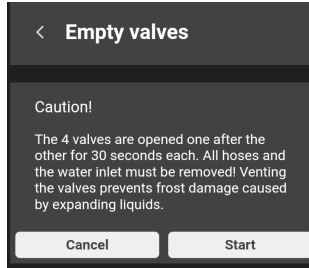
Reset

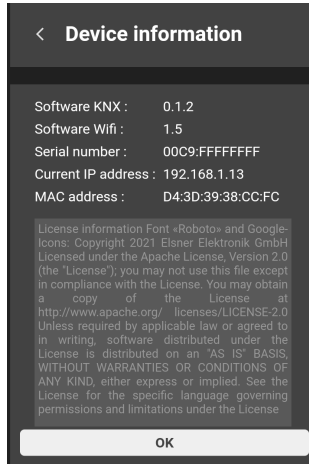The irrigation system is reset to factory settings with this function. All settings are deleted.

Device information

Information, which may be relevant to service queries, is displayed here.
- Software KNX
- Software Wifi
- Serial number
- Current IP address
- MAC address
- Licence information

WLAN

Select the appropriate connection mode in this menu.

Access Point mode

No router is required for this type of connection. Communication takes place directly between your operating device and the irrigation controller.

So that the irrigation control unit establishes a separate WLAN, enter the requested data. Then select the new WLAN name for the irrigation controller in the system menu of your operating device, and enter the password.

You can specify a separate WLAN name and password. This is particularly practical if you are using multiple irrigation control units.
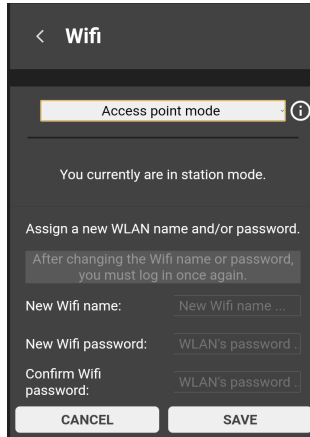
Station mode

A router is required for this type of connection. Communication is handled via the router, to which both the irrigation controller and your operating device must be connected.

Enter the name of the WLAN router you want to use, the password and the other WLAN settings.

You can find more information about the connection modes in
chapter Verbindungsmodi, Page 41

Update

The menu is only available in Station mode if there is internet access via the external WLAN. You can also look for and install updates.

Contact

You can find the Elsner Elektronik GmbH contact details here. We are happy to help if you have questions and suggestions.

‹ Contact

Firm name:	Elsner Elektronik GmbH
Address:	Sohlengrund 16 75395 Ostelsheim
Tel:	+49 (0) 703330945-0
E-Mail:	Info@elsner-elektronik.de

OK
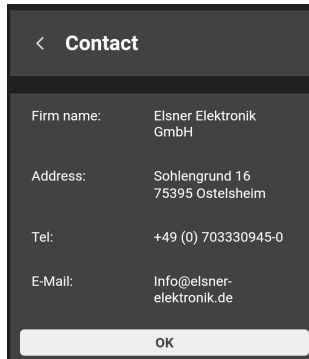
3.2.3. Settings for valve X

The menu for the valves' settings is divided into four sections.

‹ Settings valve 1

General

Automatic

Sensor

Info

Back
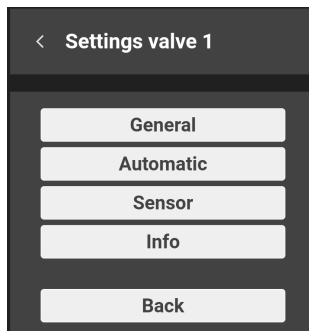
General settings

Give the valve a name and configure the buttons, with which manual watering is activated. You can assign different time periods to the three buttons. If one of the buttons is subsequently clicked, the manual watering period increases by this value.

```
‹   General settings for valve
    1

        Name for valve 1
              Name ...

      Duration of manual irrigation :

      Button 1 :  30      s   -

      Button 2 :  5      min -

      Button 3 :  30     min -

      Cancel              Save
```

Automatic

Here, you can specify which watering timer you want to use for the automatic watering. The days when watering takes place, the start time and the duration, are set here.

• Only one valve can be opened at a time.
• Automatic watering is only performed if all conditions are met, e.g. automatic blocks deactivated and ground moisture, if applicable, is undercut.
• Automatic watering has priority over manual watering.

To ensure healthy roots, we recommend not irrigating on a daily basis. Two consecutive days without irrigation helps plants to build stronger, healthier roots.

Irrigation timer 1 active

In the example, watering takes place every Tuesday at 00:00 for 30 minutes, unless the ground moisture is exceeded.

```
‹   Automatic 1           ⓘ


   Irrigation timer 1       ⬤

   Mo  Tu  We  Th  Fr  Sa  Sun

   Start time :        15:43
   Duration (min) :     30


   Irrigation timer 2      ◯
```

Sensor

Watering depending on ground moisture can be controlled with one or more ground sensors. The current moisture can be displayed in the operating menu.

If no sensors are connected or if there is a fault, the moisture-dependent watering settings are ignored. Only time-controlled watering is performed. If the ground moisture is shown in the operating menu, an error message is displayed here.

Readings

When measuring ground moisture, factors such as quality of the soil and the depth of the ground sensor play a role. As a result, the ground moisture readings may vary in specific cases.
In practice, very low and high ground moisture readings are not reached. Jardana therefore uses its own, practical scale with 10 steps, which corresponds to this.

	Ground moisture < 10 %: Very dry ground	Ground moisture > 50 %: Ground is saturated with water (puddles on the surface)
App		
KNX	0 %	100 %

Threshold values

When setting the threshold limits, consider the needs of the plants as well.

Activate moisture-dependent watering (currently activated)

Set upper threshold value: If this is exceeded, watering ends.

Set the highest possible value (3 drops) if watering should not be ended depending on moisture.
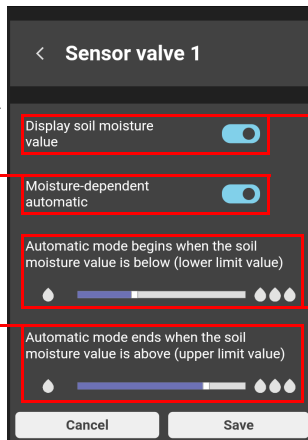
Activate display of the ground moisture in the operating menu (currently activated)

Set lower threshold value: Watering is performed automatically if the lower threshold value is undercut and a time for automatic watering is active.

Info

The colour codes for the watering times are explained in the Info menu.

Field highlighted green: Irrigation is currently active. During automatic irrigation, the active irrigation timer will also be highlighted green.

Field highlighted red: Automatic irrigation is not currently active, since the soil moisture is too high or the block is active. The active watering timer is also highlighted red.
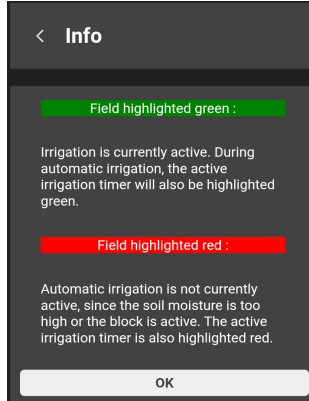
4. KNX

4.1. Tips for use with KNX

When using the irrigation system via KNX, parallel operation via App/browser is possible and sensible without mutual interference, as it simplifies the possibility of manual intervention.

Settings made via the App or a browser are also retained if Jardana is controlled via KNX.

Both automatic and manual watering is controlled via communication objects. As a result, another KNX participant with a time switch is needed for time-controlled watering (for example the weather station Suntracer KNX sl).

4.2. Transmission protocol

Units:

Measurement values and threshold values in %

4.2.1. List of all communication objects

Abbreviations Flags:

C   Communication
R   Read
W   Write
T   Transmit
U   Update

No	Text	Function	Flags	DPT type	Size
0	Software version	Output	R-CT-	[217.1] DPT_Version	2 Bytes
1	Time	Input	-WC--	[10.1] DPT_TimeOfDay	3 Bytes
2	Date	Input	-WC--	[11.1] DPT_Date	3 Bytes
3	Date/time	Input	-WC--	[19.1] DPT_DateTime	8 Bytes
4	Deactivate / activate automatic lock (0=Off / 1=On)	Input	-WC--	[1.1] DPT_Switch	1 Bit
5	Automatic lock status (0=Inactive / 1=Active)	Output	R-CT-	[1.11] DPT_State	1 Bit
6	Valve 1: Status open/closed (0=closed / 1=open)	Output	R-CT-	[1.19] DPT_Window_Door	1 Bit
7	Valve 1: Start/stop manual watering (0=Stop / 1=Start)	Input	-WC--	"[1.1] DPT_Switch, [1.10] DPT_Start"	1 Bit

No	Text	Func-tion	Flags	DPT type	Size
8	Valve 1: Start/stop automatic watering (0=Stop / 1=Start)	Input	-WC--	"[1.1] DPT_Switch, [1.10] DPT_Start"	1 Bit
9	Valve 1: Status activated (0=Inactive / 1=Active)	Output	R-CT-	[1.11] DPT_State	1 Bit
10	Valve 1: Maximum manual watering time [min]	Input / Output	RWCT-	[7.6] DPT_Time-PeriodMin	2 Bytes
11	Valve 1: Maximum automatic watering time [min]	Input / Output	RWCT-	[7.6] DPT_Time-PeriodMin	2 Bytes
12	Valve 1: Deactivate / activate automatic (0=Off / 1=On)	Input	-WC--	[1.1] DPT_Switch	1 Bit
13	Valve 1: Automatic status (0=Inactive / 1=Active)	Output	R-CT-	[1.11] DPT_State	1 Bit
14	Ground moisture sensor 1: Measurement	Output	R-CT-	[5.1] DPT_Scaling	1 Byte
15	Ground moisture sensor 1: Threshold value	Input / Output	RWCT-	[5.1] DPT_Scaling	1 Byte
16	Valve 2: Status open/closed (0=closed / 1=open)	Output	R-CT-	[1.19] DPT_Window_Door	1 Bit
17	Valve 2: Start/stop manual watering (0=Stop / 1=Start)	Input	-WC--	"[1.1] DPT_Switch, [1.10] DPT_Start"	1 Bit
18	Valve 2: Start/stop automatic watering (0=Stop / 1=Start)	Input	-WC--	"[1.1] DPT_Switch, [1.10] DPT_Start"	1 Bit
19	Valve 2: Status activated (0=Inactive / 1=Active)	Output	R-CT-	[1.11] DPT_State	1 Bit
20	Valve 2: Maximum manual watering time [min]	Input / Output	RWCT-	[7.6] DPT_Time-PeriodMin	2 Bytes
21	Valve 2: Maximum automatic watering time [min]	Input / Output	RWCT-	[7.6] DPT_Time-PeriodMin	2 Bytes
22	Valve 2: Deactivate / activate automatic (0=Off / 1=On)	Input	-WC--	[1.1] DPT_Switch	1 Bit
23	Valve 2: Automatic status (0=Inactive / 1=Active)	Output	R-CT-	[1.11] DPT_State	1 Bit
24	Ground moisture sensor 2: Measurement	Output	R-CT-	[5.1] DPT_Scaling	1 Byte
25	Ground moisture sensor 2: Threshold value	Input / Output	RWCT-	[5.1] DPT_Scaling	1 Byte
26	Valve 3: Status open/closed (0=closed / 1=open)	Output	R-CT-	[1.19] DPT_Window_Door	1 Bit

No	Text	Func-tion	Flags	DPT type	Size
27	Valve 3: Start/stop manual water-ing (0=Stop / 1=Start)	Input	-WC--	"[1.1] DPT_Switch, [1.10] DPT_Start"	1 Bit
28	Valve 3: Start/stop automatic watering (0=Stop / 1=Start))	Input	-WC--	"[1.1] DPT_Switch, [1.10] DPT_Start"	1 Bit
29	Valve 3: Status activated (0=Inac-tive / 1=Active)	Output	R-CT-	[1.11] DPT_State	1 Bit
30	Valve 3: Maximum manual water-ing time [min]	Input / Output	RWC T-	[7.6] DPT_Time-PeriodMin	2 Bytes
31	Valve 3: Maximum automatic watering time [min]	Input / Output	RWC T-	[7.6] DPT_Time-PeriodMin	2 Bytes
32	Valve 3: Deactivate / activate auto-matic (0=Off / 1=On)	Input	-WC--	[1.1] DPT_Switch	1 Bit
33	Valve 3: Automatic status (0=Inac-tive / 1=Active)	Output	R-CT-	[1.11] DPT_State	1 Bit
34	Ground moisture sensor 3: Meas-urement	Output	R-CT-	[5.1] DPT_Scal-ing	1 Byte
35	Ground moisture sensor 3: Threshold value	Input / Output	RWC T-	[5.1] DPT_Scal-ing	1 Byte
36	Valve 4: Status open/closed (0=closed / 1=open)	Output	R-CT-	[1.19] DPT_Win-dow_Door	1 Bit
37	Valve 4: Start/stop manual water-ing (0=Stop / 1=Start)	Input	-WC--	"[1.1] DPT_Switch, [1.10] DPT_Start"	1 Bit
38	Valve 4: Start/stop automatic watering (0=Stop / 1=Start)	Input	-WC--	"[1.1] DPT_Switch, [1.10] DPT_Start"	1 Bit
39	Valve 4: Status activated (0=Inac-tive / 1=Active)	Output	R-CT-	[1.11] DPT_State	1 Bit
40	Valve 4: Maximum manual water-ing time [min]	Input / Output	RWC T-	[7.6] DPT_Time-PeriodMin	2 Bytes
41	Valve 4: Maximum automatic watering time [min]	Input / Output	RWC T-	[7.6] DPT_Time-PeriodMin	2 Bytes
42	Valve 4: Deactivate / activate auto-matic (0=Off / 1=On)	Input	-WC--	[1.1] DPT_Switch	1 Bit

No	Text	Function	Flags	DPT type	Size
43	Valve 4: Automatic status (0=Inactive / 1=Active)	Output	R-CT-	[1.11] DPT_State	1 Bit
44	Ground moisture sensor 4: Measurement	Output	R-CT-	[5.1] DPT_Scaling	1 Byte
45	Ground moisture sensor 4: Threshold value	Input / Output	RWCT-	[5.1] DPT_Scaling	1 Byte

4.3.   Setting of the parameters

4.3.1. Behaviour in case of power failure/restore of power

Behaviour following a failure of the bus power supply:

The device sends nothing.

Behaviour on bus restore of power and following programming or reset:

The device transmits as set in the transmission behaviour parameter block. Delays set here are also observed.

4.3.2. General settings

Date and time

If the date and time are available in the KNX bus system, these are used for the automatic watering.

Select the object type, depending on how the date and time are managed in the KNX system:

Object type	• two separate objects • one common object

Set the summertime rule to be used.

Summertime rule	• None
	• Europe
	• Australia
	• North America
	• Chile
	• Iran
	• Jordan
	• Mexico
	• New Zeeland
	• Paraguay
	• Morocco
	• Israel
	• Fiji
	• Palestine
	• Cuba
	• Lord Howe Island
	• Moldavia
	• Lebanon
	• Syria

Bus capacity

First, set the send delay after bus voltage recovery and programming.

This delay should be coordinated with the entire KNX-system, i.e. in a KNX system with many participants, care should be taken that the bus is not overloaded after a KNX-bus reset. The messages sent to the individual participants should be staggered.

Transmission delay after reset/bus restore	5 s • ... • 2 h

The bus load is limited with the aid of the maximum message rate. Many messages per second put a strain on the bus but ensure faster data transmission.

Maximum telegram rate	• 1 message per second
	• ...
	• 5 messages per second
	• ...
	• 50 messages per second

4.3.3. Valves

Activate the valves you want to use for your watering.

Use valve 1 / 2 / 3 / 4	No • Yes

Valve 1 / 2 / 3 / 4

Watering time

Automatic and manual watering is performed for a period specified in advance, which is set here. The watering times can also be set via communication objects, i.e. from another KNX device.

Before you set the watering times, first specify what should happen after restore of the power supply/programming:

Select "not retained" if amended watering times should not be saved.
Select "retain after power has been restored" or after "restore or power and programming" if you want to control the times via the bus and permanently save these changes. The values set here shall then only apply until the first change using the communication objects "Valve X: Maximum manual watering time [min]" or "Valve X: Maximum automatic watering time [min]".

The times received by communication object should be retained	• never • <u>after power restore</u> • after power restore and programming

Set the duration for **manual watering**. Manual watering starts as soon as communication object "Valve X: Start/stop manual watering (0=Stop / 1=Start)" receives a 1 <u>and</u> no other watering is being performed. If a 0 is received (or the Stop button in the App is pressed, watering ends, even if the time has not yet lapsed.

Set the duration for manual watering.

The duration of manual watering can be changed via the communication object "Valve X: Maximum manual watering time [min]".

Manual watering [min]:	1...1440; <u>30</u>

Set the duration for **automatic watering**. Automatic watering starts as soon as communication object "Valve X: Start/stop automatic (0=Stop / 1=Start)" receives a 1 and no other automatic watering is being performed. If command from KNX and the App overlap during automatic watering, then both commands are performed in parallel.

Even if the time has not yet expired, automatic watering ends if
• the communication object "Valve X: Start/stop automatic watering (0=Stop / 1=Start)" receives a 0
• the communication object "Valve X: Deactivate/activate automatic mode (0=off / 1=on)" receives a 0
• Automatic mode is deactivated via the user interface (slider)
• For moisture-dependent irrigation, the upper ground moisture threshold value is exceeded (this can be set via the user interface and the factory setting is 100 %).

Automatic watering is paused as long as the automatic block is activated in the user interface (uppercase "A"), although the time continues to run.

Set the duration for automatic watering.

The duration of manual watering can be changed via the communication object "Valve X: Maximum automatic watering time [min]".

Automatic watering [min]:	1...1440; 30

Ground moisture sensor

Make these settings if ground sensors are connected. In this way you adjust the moisture-dependent irrigation. If you do not have ground moisture sensors, ignore this setting.

Use ground moisture sensor	No • Yes

Make this setting if the ground moisture value is transmitted to the bus.

Send pattern measurement	• do not send • periodically • upon changes • upon change and periodically

With cyclical transmitting, the ground moisture measurement value is sent to the bus at regular intervals.

Cycle	5 s ... 2 h; 10 min

If the ground moisture measurement value is sent to the bus when it changes, the telegram is transmitted as soon as the value deviates by 5 %.

from a change of	5 %

The **ground moisture threshold value**, which is set below, can also be set via a communication object, i.e. from another KNX device.

Before you set the ground moisture threshold value, first specify what should happen after restore of the power supply/programming.

Select "not retained" if the amended threshold value should not be saved.

Select "retain after power has been restored" or after "restore or power and programming" if you want to control the threshold value via the bus and permanently save this change. The value set here shall then only apply until the first change using the communication objects "Ground moisture sensor X: threshold value".

The threshold value received via communication object should be retained	• never • after power restore • after power restore and programming

Automatic watering starts if the ground moisture value set here is undercut. Select "Always" if automatic watering should take place irrespective of the ground moisture.
If the threshold value is amended via KNX and via a WLAN-capable device, the last change is accepted.

The threshold value is set here in 10 %-steps. If the threshold value is received via the KNX bus (communication object: "Ground moisture X: Threshold value"), then the value is rounded up:
　0 %...10 % -> 10 %
\>10 %...20 % -> 20 %
...
\>80 %...90 % -> 90 %
\>90 %...100 % -> always

Only start automatic watering if ground moisture is less than	• 10 % ... 90 % • <u>always</u>

5. Other information

5.1. Maintenance and care

🛑 **STOP** **ATTENTION**
Frost damage to water installations!
Drain before the first frost and only use again
when the risk of frost is over.

Drain the valves every year before the first frost. Water-filled pipes and hoses can burst if there is a frost and the irrigation system or connected systems can be damaged. Use the function "Drain valves".

📖 Ventile entleeren, Page 21.

Check the device for leaks at least twice a year. If necessary, tighten the screw connections for the water connections by hand.

Clean the device as needed. Abrasive / detergent cleaning agents and aggressive care products must not be used for cleaning. Use a cloth or microfibre cloth moistened with water.

🛑 **STOP** **ATTENTION**
The device may be damaged if water penetrates the electronic units.
• Do not clean with high pressure cleaners or steam jets.

5.2. Troubleshooting

If a connection cannot be established, use the troubleshooting in the Jardana App. The App helps you identify the problem. You are asked to enter the colours of the two LEDs on the top of the electronics unit. Then you will see what you have to do.

LEDs during commissioning

During commissioning, the two LEDs on the top of the electronics unit show the device status and connection mode of the irrigation control unit.

	⚙️
	Left LED – connection mode
green	**Access point mode**: Device generates its own WLAN
blue	**Station mode**: Device is a participant in an external WLAN
red	**Restore access** (60 s)

	📶
	Right LED – device status
green	ready for use. Flashes if at least one device is connected in Access Point mode
blue	Software loading or device is busy
red	Error

Connection modes

The irrigation control unit has three connection modes, with restore access only being intended for device set up or troubleshooting.

Access Point mode

The irrigation control unit generates its own WLAN and consequently works independently.

Use this mode
- for initial commissioning
- if the signal strength of your home WLAN does not reach the control unit
- if you do not want to connect the control unit to the internet.

Station mode

The irrigation control unit integrates into an existing 2.4 GHz-WLAN. You need a WLAN router.

Use this mode
- if you want to connect your mobile device simultaneously to the internet and the control unit
- if you want to use time synchronisation from the internet
- if you want to install updates
- if you want to access your irrigation system via VPN when away from home.

📖 3.1.3. Weitere Hinweise, Page 14

Restore time window

In the first 60 seconds after the start you can connect directly to the device irrespective of other settings by using the WLAN "JardanaWifi" and the password "Jardana!". If a connection is not established in this time window, the control unit changes to the set mode (either Access Point mode or Station mode).

Use this restore time window after restart
- if you have forgotten your access data
- if in Station mode your WLAN router is no longer working or if the access data have changed.

First start

Loading   Restore access time
                           window (60 s)   Access   Point
                                                                            mode

🔴 🔵   ➡️   🔴 🟢   ➡️   🟢 🟢

⚙️ 📶   ⚙️ 📶   ⚙️ 📶
                                        No connection is es-
                                        tablished   during   the
                                        first start

Other starts

                                                            Access   Point
                                                            mode

                                                            🟢 🟢

Loading   Restore access time   ⚙️ 📶
                           window (60 s)

🔴 🔵   ➡️   🔴 🟢   depending   on   the

                                                            Station mode
⚙️ 📶   ⚙️ 📶
                                                            🔵 🟢

                                                            ⚙️ 📶
                                        A connection is not es-
                                        tablished   during   the
                                        restore time window
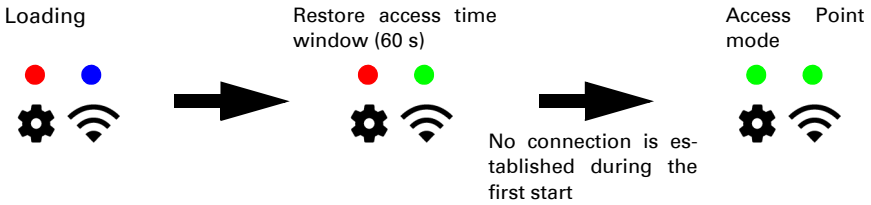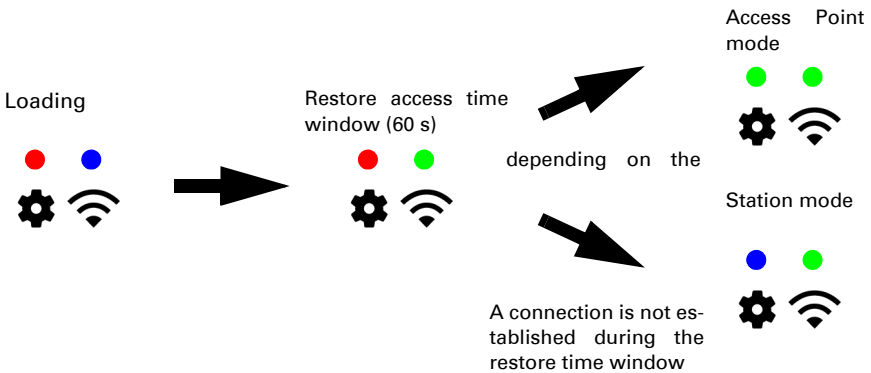
5.3.   Power outage

If the power fails while watering manually, these settings are lost. All other input data are also saved if there is a power outage. A battery is not required for this.

The Jardana's clock also runs if there is a power outage thanks to the integrated battery.

5.4.   Battery

The battery is used exclusively to power the clock. If the clock is not synchronised by the internet or the KNX bus, the battery should be replaced every 5 years.

> ⚠ **BEWARE!**
> **Low electrical voltage!**
> The grey plastic casing contains the electronics for the controls.
> It may only be opened:
> • by a qualified electrician
> • if the device is voltage-free (power pack unplugged,
>   KNX bus voltage-free, if relevant).

1. Remove the cover (see installation instructions).

2. Loosen the 4 crosshead screws from the electronics unit.

3. Pry the drained battery from the holder carefully.
   Mind the clips when inserting the new battery.
   CR2032 type battery, 3 V.

4. Tighten the 4 crosshead screws on the electronics
   unit.

5. Fit the cover.
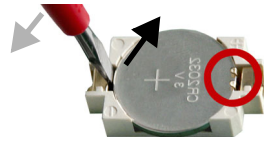
Dispose of the used battery correctly – empty batteries should not be thrown away in household refuse.

5.5.   Disposal

The device must not be disposed of with domestic waste and therefore is labelled with the "crossed-out dustbin" icon.

End users are statutorily required by s. 18 Battery Act to return old batteries. After use, the batteries can be returned to Elsner Elektronik free of charge or they can be recycled via a public-law waste management provider.

Questions about the product?

You can reach the technical service of Elsner Elektronik under **Tel. +49 (0) 70 33 / 30 945-250** or **service@elsner-elektronik.de**

We need the following information to process your service request:

- Type of appliance (model name or item number)
- Description of the problem
- Serial number or software version
- Source of supply (dealer/installer who bought the device from Elsner Elektronik)

For questions about KNX functions:

- Version of the device application
- ETS version used for the project