Prot

User Manual SIRRAH





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1 Foreword

1.1 Introduction

Many congratulations on the acquisition of your new **Perrot Sirrah Irrigation Management System**. You now have at your disposal a highly modern, modular system that leaves nothing to be desired when it comes to automatic monitoring and control of all key irrigation facilities functions.



Please carefully read all the way through this user manual and take note of its advice. Use this manual to familiarise yourself with the irrigation management system, the correct way to use it and the safety instructions.



For safety reasons the irrigation management system may not be used by

children, anyone aged under 16 or anyone who has not read this user manual.

→ Please keep this manual safe!

If you have any questions about the programming or about any specific functions, please do not hesitate to contact your specialist dealer or our technical support team. How to contact us:

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1.2 Basic information about this user manual

This manual is consciously directed both at new and advanced users and we will therefore jointly familiarise ourselves bit by bit with the complex world of irrigation management. Initially we present some common basic principles, definitions and an example set-up in order to make starting to use the system and entering data easier.

Using the data and information that we have, we will then move on into the programme and configure it step by step. In this way you will get to know the interrelationships that make it easier for you to configure your irrigation management system using your own data and to adapt/manage it in the way you wish. And completely by the by you will also learn a great deal about the fundamental way in which your PERROT irrigation system works.

For advanced users the next list of content is important. Listed here with page numbers are the individual topics and terms, which can then be referred to directly.

Symbols at the side of the page highlight specific information and instructions:



Here we provide *information* that could prove useful for you in this section.



Here we give you an **important instruction** that you must follow without fail!

Let's proceed as follows:



2 System functions

2.1 How does the irrigation system work?

For 'Irrigate on demand' the following function groups are required:



2.2 Actuators

In order for a recessed sprinkler to water an area of grass, a pump has to pump water to it via a system of pipes. As you would not want every sprinkler to start watering the ground at the same time, valves are installed between pump and sprinkler. The pump and valve are connected to the control system via a decoder.

2.3 Control unit / Logic

All entered items of data, signals via sensors and management data get logically processed and from this actions are derived. The SIRRAH bridge PC sends commands via the valve control unit (VCU) and data cables to the decoder of the pump or valve and in the case of bidirectional decoders receives feedback via the same system (bidirectional).

2.4 Sensor system

Pressure and flow rate sensors check the effectiveness of the commands issued by the control unit and using any error messages it is thus possible to look immediately for the cause.

In the event of rain or strong wind any scheduled watering can be stopped. The control unit receives relevant signals from the rain monitor and/or wind sensor.

3 VCU and decoder installation

3.1 Installation of the VCU's hardware and power supply

On-site preparation for the installation of the valve control unit (VCU)

- ✓ For the power supply you need a Schuko socket.
 You disconnect the green-and-yellow protective earth conductor from this socket.
 The earthing is done via the VCU.
- ✓ Plug the mains protection adapter supplied with the system into the socket.
- Mount the VCU in a suitable place on the wall. Connect the decoder cable to terminal 34/35.
 If multiple decoder cables have been laid (up to 3), please use in addition terminals 36/37 and 38/39 (see cabling diagram in section 3.4)

Then connect any sensors, e.g. a MiniClik rain sensor, to the terminal provided for this purpose.

3.2 VCU power connection and earthing

- Earthing is done as per the sketch using an earth strip. The earth strip (at least 20 metres long) is laid as per the sketch in a trench at least 70 centimetres deep. The earth resistance should be less than 10 Ohms. In ground with poor conductivity (gravel or sand) two 20-metre strips should be laid. On an inside wall mount an equipotential bonding bar. Connect the earth strip to the bonding bar. The bonding bar is connected to the VCU by means of a 1 x 16mm² (green-and-yellow) earthing cable. Connect the earthing cable to the VCU's earth bar and the equipotential bonding bar.
 Order number for earthing kit: SB50001.
- ✓ On the right side of the VCU there are 2 Schuko sockets.
 Please plug the connection cable of your SIRRAH bridge PC into one of these or into any other socket.
- ✓ Install the required router near to your SIRRAH bridge PC.
 If you set up your PC/laptop near to your SIRRAH bridge PC, you will need another power supply for it.
- Now plug the VCU's mains plug into the mains protection adapter, which is already plugged into the power supply's Schuko socket.
 Now connect the VCU to your SIRRAH bridge PC's COM 1 serial interface.
 If your SIRRAH bridge PC has two identical sockets, please use the one marked Port 1, COM 1, Ser. 1, A or similar.



 \checkmark Now switch on the power supply.

The VCU will confirm this with a beep.

The green LED on the VCU glows steadily.

The **yellow LED flashes** briefly at relatively long intervals whenever:

- ☆ the VCU is communicating by means of the serial interface with the SIRRAH bridge PC &
- Perrot Sirrah has been started up &

the VCU is **NOT** set to passive on Installation Data / Control Unit menu (see section 5.2.2).

The **red LED** must be **off**.

If the red LED is on, there is a fault in the decoder cable.

Please check all cable and decoder connections.





3.3 Control units' cabling

It is possible with the VCU to control up to 250 stations. If you need to control more stations, you can connect up to 7 extension units to the VCU. This results in a capacity of up to 2,000 stations. In the case of such interconnection you must pay attention to the following points:

In the case of such interconnection you must pay attention to the followin

A) Power supply and earthing

🕸 Earthing

If VCU and extension unit are installed directly next to each other, the earthing can be connected through from the VCU to the extension unit.

If the distance between them is too big, both the VCU and the extension unit have to get a separate earthing as described in section 2.2.

b) Communication

The control commands are given from the SIRRAH bridge PC to the VCU and from the VCU to extension unit 1 and from extension unit 1 to extension unit 2, etc.



For this purpose the VCU and the extension units need to be connected by a communication cable. In relation to this you must pay attention to the following points:

- The type of cable you need is a 2-core shielded cable with twisted wires (e.g. NYCY 2 x 1.5/1.5mm²)
- ☆ Min. CABLE CROSS-SECTION at:
- ☆ 1000m distance: 1.5mm²
- ☆ 2500m distance: 2.5mm²

Setting the DIP switches (extension units only)

- ☆ extension unit 1: Switch 2 set to 1, remaining switches set to 0
- extension unit 2: Switch 1 set to 1, switch 2 set to 1, remaining switches set to 0
- ☆ extension unit 3:etc.

See also sketch below

Wiring diagram for RS 485 communication connection



P

3.4 Wiring diagram for VCU



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- ☆ Per VCU a maximum of 250 decoders may be connected.
- Each VCU has a stand-alone decoder cable system and must NOT

be connected via the decoder cable with any other VCU.

A) Wiring of decoders for controlling one solenoid



B) Wiring of decoders for controlling 2 solenoids

Cable installation to pop-up sprinklers connected in series



Wiring of decoders for controlling 2 solenoids (in series)





The solenoids get connected to the decoder in series. This results in the solenoids' optimum force of attraction being achieved.

4 Irrigation system structure

4.1 Explanation of the structuring options

Perrot Sirrah's variable programme structure facilitates a custom configuration when setting up the system data, also known as installation data. The division into areas can be oriented on game-based aspects or also on workflows. It is thus left to the user whether they want to combine the whole system as one area or whether splitting it into multiple areas would make it clearer.

Perrot Sirrah gives users the opportunity to split the system data into up to 10 areas and 10 pump stations, regardless of whether the irrigation programmes are to run in parallel or in succession.

As the division into areas is of elementary significance for the operation of the irrigation system and for the creation and running of the irrigation programmes, we would like to use the following examples to illustrate to you the advantages and/or also disadvantages that the individual variants bring with them.

For you as the user it is important that you have a clear vision before you begin with data entry and thus also with the structuring.

Variant 1



- ✓ All valve data assigned to only one area
- ✓ All valves are served from one pump station
- ✓ Irrigation programmes can run only in succession
- ✓ Example: 9 or 8 hole system with one pump station
- ✓ Simplest variant

Variant 2



- ✓ Valves are split into 2 areas
- ✓ Each area is served from its own pump station
- ✓ Both areas' irrigation programmes can run in parallel
- ✓ Example: A self-sufficient (hydraulically separated) 9/18 hole system is added to an existing 9/18 hole system.



- ✓ Valves are split into 2 areas
- ✓ Both areas are served from the same pump station
- ✓ Both areas' irrigation programmes can run only in succession
- Example: Existing 9/18 hole system is expanded.
 Existing pump station potentially enlarged.
 <u>Advantage:</u> Valve data clear in relation to system
 <u>Disadvantage:</u> One system's pipe run lies idle -> Pressure losses greater
- ✓ Each area has to have a pump station assigned to it
- ✓ When using more than c. 300 valves (decoders), you should for the sake of keeping a good overview sub-divide into a new area wherever possible.
- ✓ A pump system can be notionally split into 2 systems in order in this way to obtain smaller and more clearly arranged areas.
- ✓ When using hydraulically separated systems, you should always sub-divide into areas, as that is the only way in which the systems can be operated simultaneously.

The number of areas is completely independent of the number of VCUs.



4.2 Entering the irrigation system's installation data

4.2.1 Irrigation cycle

Based on the data entered, the programme calculates the required irrigation cycle and time. The necessary commands are sent via the PC's serial interface to the valve control unit (VCU). The VCU passes on these commands via the decoders to the pumps and valves whenever an irrigation programme is being launched. The VCU receives signals via sensors and passes the signals on to the control system for processing.



How the individual components work is explained in greater detail in the next section.

4.2.2 What data do I need for the programme?

In order to be able to start an irrigation programme all of the individual components' required data must have been saved. For this purpose please use the individual manufacturer data sheets and system layout.



Use only original data from the manufacturer!

Component	Parameters	Base value	Comments
Pump	Flow rate in m ³ /h		Take from the pump data sheet
	Resource ID		Pump name
	Decoder no.		To which decoder is the pump connected?
	Bidirectional data transfer?		Can the pump's decoder send signals back?
	Control unit no.		To which VCU is the pump connected?
	Efficiency in %		What level of strain should be put on the pump?
Valve	Flow rate in m ³ /h		Take from the connected sprinkler's data sheet
	Area watered in m ²		Work out using the area watered by the sprinklers.
	Resource ID		Station name
	Decoder no.		To which decoder is the station connected?
	Control unit no.		To which VCU is the valve connected?
	Bidirectional data transfer?		When using bidirectional decoders.
	Pressure sensor?		Is the valve's flow rate monitored by a pressure sensor?

The following data is needed from the individual components:

Sensors

Component	Parameters	Base value	Comments
Sensor			

Here is an example for creating an equipment parts list:

Item	Name	Unit	Manufact urer- Standard	Model	Technical data - Order number	Associated decoder	Associated control unit	Associated pump	Comment

4.2.3 Our example system

In order to have a basis for entering data, let us present to you a 1-hole golf course as an example course.



1-hole golf practice ground

The following components are installed:

Item	Name	Unit	Manufact urer-	Model	Technical data - Order number	Associated decoder	Associated control unit	Associated pump	Comment
Tee 1/1 1	Solenoid valve	1	Standard Perrot	MVR 1"	1" to 12m³/h SG50305	1	1 (VCU)	L flow zone M flow zone Pump	
11	Part circle recessed sprinkler	4	Perrot	LVZA22WH	Nozzle 4.5mm 500m² WW=14m Q=1.6m³/h P=5bar	1	1 (VCU)		
3	Full circle recessed sprinkler	1	Perrot	Triton-L VCID	Nozzle 12mm 1200m ² WW=28m Q=14m ³ /h P=5bar	3	1 (VCU)	Flow zone L M flow zone Pump	
4	Full circle recessed sprinkler	1	Perrot	Triton-L VCID	Nozzle 12mm 1200m ² WW=28m Q=14m ³ /h P=5bar	4	1 (VCU)	L flow zone M flow zone Pump	
5	Full circle recessed sprinkler	1	Perrot	Triton-L VCID	Nozzle 12mm 1200m ² WW=28m Q=14m ³ /h P=5bar	5	1 (VCU)	L flow zone M flow zone Pump	
6	Full circle recessed sprinkler	1	Perrot	Triton-L VCID	Nozzle 12mm 1200m ² WW=28m Q=14m ³ /h P=5bar	6	1 (VCU)	L flow zone M flow zone Pump	
7	Part circle recessed sprinkler	1	Perrot	Triton-M WD- VCID	Nozzle 6mm 150m ² WW=18m Q=5m ³ /h P=5bar	7	1 (VCU)	L flow zone M flow zone Pump	
8	Part circle recessed sprinkler	1	Perrot	Triton-M WD- VCID	Nozzle 6mm 150m ² WW=18m Q=5m ³ /h P=5bar	8	1 (VCU)	L flow zone M flow zone Pump	
9	Part circle recessed sprinkler	1	Perrot	Triton-M WD- VCID	Nozzle 6mm 150m ² WW=18m Q=5m ³ /h P=5bar	9	1 (VCU)	L flow zone M flow zone Pump	
10	Part circle recessed sprinkler	1	Perrot	Triton-M WD- VCID	Nozzle 6mm 150m² WW=18m Q=5m³/h P=5bar	10	1 (VCU)	L flow zone M flow zone Pump	
13	Pump CR16-10	1	Grundfos	CR16-10	16m³/h	246	1 (VCU)		Bidirectional
14	Pump CR8-10	1	Grundtos	CK8-10	8m²/h	247	1 (VCU)		

4.2.4 Incorporating the flow zones

As the irrigation is performed, the software causes as many valves to open as the pump capacity permits. This occurs based on a set algorithm that takes account only of the flow rate of the individual valves, not however of how the run of pipes is arranged.

For the irrigation calculation it is therefore important to split the pipe network up into hydraulic flow zones. Using this information the software is able to make optimum utilisation of the pipe network and pump capacities.



So using this data, let's now get started with the Perrot Sirrah software!

4.3 Creating areas

Different facilities, such as sports grounds, parks or golf courses, etc., can be controlled with just one SIRRAH bridge PC. As mentioned above (section 5.2.1), one facility can also be sub-divided into different areas.





To create a new area you need administrator rights.



5 Getting started with Perrot Sirrah

Perrot Sirrah is a web-based irrigation programme, which can be operated best via Google Chrome. You are provided with the relevant link when you make your purchase.

Here is a link for access to a demo version: <u>https://perrottest.sirrah.cloud</u>

Either save the link as one of your favourites in Google Chrome or create a short cut on your desktop.

As it is web-based, the Perrot Sirrah irrigation programme can be operated via the Internet from any other computer as long as the access path has been appropriately saved.

The Perrot Sirrah is the actual irrigation programme, in which:

- ✓ All data is documented
- ✓ The irrigation programmes are created
- ✓ The irrigation programmes are worked out and executed.

For this reason this part of the programme must always be active whenever the irrigation is being run.



We recommend:

Perrot Sirrah should remain in operation throughout the entire irrigation season.



5.1 Launch user programme

In order to be able to work with Perrot Sirrah you have to open the corresponding link via Google Chrome. The link will have been provided to you when you made your purchase.

Following initial installation the user is given administrator rights with:

- ✓ User name: Perrot
- ✓ Password: Perrot

After logging on, the user can then work with Perrot Sirrah with no limitations.



The Main Menu is split into different menu categories, a status indicator and the main switch (active/inactive)

The Main Menu is structured in a way that enables intuitive operation. The starting point is always the Main Menu, from which you can get directly to the different menus.



Whenever you are on any menu, you can always return directly to this Main Menu via the Main Menu button (top right).



5.2 Installation Data menu category



5.2.1 Areas & Graphics

Saved in this menu category are all necessary items of data for enabling efficient operation of the irrigation system.

Installation data Each r

Each menu is separately explained in the following sections.

Areas & Graphics



Areas & Graphics			1	Choose g	raphic
New course					
Name	Choose graphic	Graphic			
Golf Club Perrot Town	Choose graphic	None available <u>m</u>			
€ Offnen ← = - ↑ ■ + DescrPC + Organisteren + Neuer Ordner		v (ð) "Videor" durchsuchen ≅ ▼ □	•	Select im	age file
Cosobie Cosob			2	Click Ope	n
Upload	9	Contract (radio arrays a	1	Click	s on Yes
Dieses Bild hochlade	n?				
Kurs: Golfclub Perrot	-Hausen			J	Wait until the file has been uploaded
Upload: 0%		1/			
Ster 1	No				

Areas & Graphics			1	Now you can have the graphic displayed
Name	Choose graphic	Graphic		
Golf Club Perrot Town	Choose graphic	Show 1		
Bild			1	By clicking OK, leave the display again
			Ŵ	To delete an area, click on the waste-paper basket
Georde Earth			Lain Menu	Back to Main Menu



5.2.2 Control Unit



The control unit (valve control unit, VCU for short) passes the commands on from the SIRRAH bridge PC to the connected actuators. It also, however, receives data from the connected sensors and decoders. It is the interface between SIRRAH bridge PC, actuators and sensors.

A system can consist of up to 8 control units (VCUs).





If the VCU is not connected to the PC, the control unit is set to Passive. To transfer new software to the VCU (i.e. to do an update) the Passive field must be ticked.

Control	t unit				
No.	Control unit name	No. of decoders	Aktiv/Passive		ŵ
1	VCU1	0		Ŵ	W

To change the name/number of the control unit, click on the text field, edit the text and click on another field or confirm by clicking Enter.





Back to Main Menu

5.2.3 Pump Station



Each area has to have a pump station assigned to it.

Each pump station can consist of up to 9 pumps, which can be controlled as needed by Perrot Sirrah.



programme.

Pump station Pump systems	For the next pump proceed as described above
Hexplormpsation	Ensure that the correct pump system and correct pump are selected (change if necessary) and complete the pump data.
Pump station Pump systems Del:Ipumpstation	 For the next pump proceed as described above You can tell that a pump system is active by the black border around the field
Decoder no. Name Plow m/h Control unit Active/Passive Peedback 246 SP46-10 25 VCUI * # # # 247 SP30-10 25 VCUI * # #	If you have created multiple <i>pump</i> <i>systems</i> , make sure that you have created the individual pumps in the right one.
Pump station Pump systems	For the next pump proceed as described above
Behäpumpstation	To delete a pump, click on the waste- paper basket
Decoder no. Name Flow m*h Control unit Active/Passive Feedback 246 SP46-10 35 VCU1 * * * 247 SP30-10 25 VCU1 * *	Back to Main Menu
	 To print out the overview of the pumps, click on the printer A PDF now gets automatically produced. Click on it, then the PDF opens

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President Joseph Call		Magnagergenerations		The file can be downloaded	
			:		
SIRRAH	×€	Pumpstationen_Hauptpumpsta	* + fm 1	Close the tab in order to return to	
\leftrightarrow \rightarrow C (1) Datei	C:/Users/	/Downloads/Pumpstatio	nen_Hauptpuz	the Pump Station menu	
			Main Menu	Back to Main Menu	

5.2.4 Flow Zones





When performing irrigation, Perrot Sirrah tries to open as many valves as the pump capacity permits.

If the valves are not assigned to a flow zone, this takes place based on a set algorithm, which takes into account only the flow rate of the individual valves, not however the arrangement of the pipe run or its dimensions.

As it can, however, be very disadvantageous for the efficiency of the irrigation if, for example, the simultaneously working valves are being fed from the same pipe run (pressure loss), it is necessary to give the Perrot Sirrah software information about which valves are being fed from which pipe run and the pipe runs' maximum permitted flow rates.

By dividing the pipe network into flow zones, it is possible for Perrot Sirrah to make optimum use of the network and to achieve optimum pressure conditions at the irrigation stations concerned.

Work out the maximum flow rate, taking into account the pipe dimension and length.



Flow zones Pump system Hauppumpsation L flow zone Bereich1 - 35 mith Bereich1 Bereic	1 2 3	Give the M flow zone a name Enter flow rate Click
telugungstation Thurspation Thurspation Thurspation Thurspation Thetacone L Benedit Smalth Tretaone L Gmalth		Create further M flow zones as described above
Pump system Hauptpumpstation	1	Open the flow zone overview
L flow zone Bereich1 - 35 m³h Bereich1 35 Pumpstation Pumpstation Pumpstation Pumpstation PietRoore L 35 m3h PietRoore M 25 m3h 25 m3h		



Input range: 0 - 999 m³/h

The water consumption of a flow zone can never be greater than the capacity of the pump(s).



The L flow zones are the top-level flow zones and can each be further divided into M flow zones. An M flow zone is always subordinate to an L flow zone!



The flow rate of an M flow zone is dependent on the flow rate of the L flow zone and can never be greater than the total pump capacity or flow rate of the latter.

Input range: 0 - 999 m³

It is also possible for multiple M flow zones to be assigned to one L flow zone. The actual assignment does not occur until entry of the valve data.



5.2.5 Sort Name



Each valve/station can be (but doesn't have to be) assigned to a sort name and to holes as a search and sort criterion. This name helps on other menus when creating irrigation programmes or searching for a valve. Especially where you have a large number of valves this is indispensable.



The sort name should be an umbrella term for multiple valves




5.2.6 Station Data



On the Valves menu each valve gets assigned to a pump system, a valve control unit responsible for it, one or more hydraulic flow zones and its decoder number. It is also given a valve name. The figures for the irrigated area and the flow rate are also entered for each valve.



These figures are defined at the time of installation by the installer. The more accurate the figures are, the better the result of the irrigation will be.

Input ranges: Flow rate: $0 \div 999 \text{m}^3/\text{h}$ Irrigated area: $0 \div 99999 \text{m}^2$

Suggested valve abbreviations:

Т	=	Тее
В	=	Bunker
D	=	Driving range
FW	=	Fairway
G	=	Green
Р	=	Pitching green
R	=	Practice area
WW	=	Walkway

Example:

•			
G	01	-	1
\checkmark	\checkmark		\checkmark
Green	Hole no.		Serial valve
			number

The valves are listed in the irrigation programmes in alphabetical order. You can influence this order by how you name the valves.

Bad naming:	Optimal naming:
G1	G01
G10	G02
G11	:
G12	G09
:	G10
:	G11
G18	:
G2	:
G3	G18



- Use decoder numbers 1 245 for controlling the valves
- Use decoder numbers 246 250 for controlling the pumps.
- Decoder numbers 251 255 should be left unused as reserves.

Station data													
Area Golfclub Perrot-Hausen													
Control unit De	Station name	Sort name	Hole	Pump system	L flow zone	M flow zone	Ar	Flo	Rai	Se	Fe	Pr	
vcu1 • 2	Abschlag 1	Tee 🎍	Bahn 1	Hauptpur	Bereich1 🎍	Default Default FW Green Tee	500	6	0	0			1 H
					2		Sele Give Sele Sele Sele defa Ente Feed (cha Pres (cha ck Sa	Press ct cor e the s ct sor ct hol ct L fl ct M bult er are er flow dback inge b sure sure ve	ntrol static t nar le ow z flow a v rate : • Y v clic senso y clic	unit on a r me one zone e cking or: : • cking	name • or le • No) • Ye:)	e eave : D S S S S S S	set to No

Create further stations as described above

The valve property *Feedback* gets highlighted with a green tick if the decoder installed is a bidirectional one.



It sends information back to the VCU.

The valve property *Pressure Sensor* gets highlighted with a green tick if the valve installed is a solenoid valve with a pressure sensor that is controlled by a bidirectional decoder.

This function is for reporting the valve status back to the VCU and can be used only in combination with the Feedback field.

SIRRAH MANUAL

	B Diam Di	Maximu A. F. M. B. T. P. 0 <t< th=""><th>America 1</th><th>1</th><th>To print the overview of the station data click on the printer. A PDF now gets automatically produced. Click on it, then the PDF opens</th></t<>	America 1	1	To print the overview of the station data click on the printer. A PDF now gets automatically produced. Click on it, then the PDF opens
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SIRRAH	×	Stationsdaten_Golfclub Perrot-H	+ 1	1 Main Menu	Close the tab to return to the Station Data menu Back to Main Menu

5.2.7 Sensors



Sensors

With the Perrot Sirrah software the irrigation can be influenced with the help of sensors, e.g. a rain detector connected to the system or individually connected sensors for flow rate, pressure or wind strength.



System Data and Sensors

SIRRAH MANUAL

S3 Closer:	This connection is used for a rain detector. (Digital input)				
S4 Opener:	This connection is used for a rain detector. (Digital input)				
S5 Q/I:	This connection is used for a flow-rate sensor. (Analogue input. Range: 0-20mA)				
S6 P/I:	This connection is used for a pressure sensor. (Analogue input. Range: 0-20mA)				
S7 V/I:	This connection is used for a wind gauge. (Analogue input. Range: 0-20mA)				
S8 XY/I:	This connection can be used for another sensor. (Analogue input. Range: 0-20mA)				
S9 Frequency 1:	This connection is used for a sensor with frequency output				
	(Frequency range must be greater then 5-10 Hz. Input range: 0-1000 Hz)				
S10 Frequency 2:	This connection is used for a sensor with frequency output				
	(Frequency range must be greater then 5-10 Hz. Input range: 0-1000 Hz)				
Connection Types:	Here you give the sensor an appropriate name (e.g. what is being measured). A maximum of 8 characters is allowed.				

Working with sensors



At the VCU's connections S5 to S8 the current from the respective sensor gets measured and passed on to the software as a current value. At the VCU's connections S9 and S10 the frequency gets measured and passed on to the software as a frequency value. Using these values, the software calculates the scale and offset, the pressure or the speed of the respective sensor and then shows this value in the report or on the Installation Data / Sensors menu.

Scale

As the control unit (VCU) can only measure values in mA or Hz, it is possible with the help of a scale to output a corresponding pressure or speed in the up-to-date report.

Calculation:	1 Hz = ?m/s	Scale x Measured value in Hz = Displayed measurement in m/s					
	1 mA = ?bar	Scale x Measured value in mA = Displo	ayed measurement in bar				
	1 mA = ?m/s	Scale x Measured value in mA = Displo	ayed measurement in m/s				
Example 1:	mple 1: With one rotation a wind gauge generates 4.4 pulses per second (4.4Hz)						
	One rotation e	quates to wind speed of 1m/s.					
	? m/s = 1Hz:	⇔ 1m/s: 4.4Hz = 0.22m/s at 1Hz	⇒ Scale = 0.22				
Example 2:	With a measur signal of 4-20n	urement range of 0-25 bar, a pressure sensor generates a linear r ImA.					
	? bar = 1mA:	😅 25bar : (20-4)mA = 1.56 bar at 1mA	⇔ Scale = 1.56				





As at 4mA the sensor has a pressure value of 0 bar but the software would now display 4x 1.56bar = 6.24 bar, the value displayed must now be corrected by an offset value.

Offset

This is a corrective value and relates only to the scale value of the analogue and frequency inputs. The corrective value gets subtracted from or accordingly added to the scale value. Using this corrected scale the calculation is now done.

Input range: -999.9 – 999.9

Example:	With a measurement range of 0-25 bar, a pressure sensor generates a linear							
	measured sign	measured signal of 4-20mA. Scale = 1.56 (see example 2 above)						
	Calculation:	⇔ 4mA x 1.56bar/mA = 6.24bar (displayed measurement)						
	Offset value:	Displayed measurement – Offset value = 0bar ⇔ Offset value = -6.24						



The result of measured value and scale gets corrected by the offset value with a minus sign (-) in front of it and the actual value gets output.

Connecting a rain detector

When it rains, a rain detector functions like a switch that is directly connected to the control unit (VCU). If the rain detector reports a sufficiently high level of precipitation, the Perrot Sirrah software stops the irrigation. If it stops raining and within a user-definable time the rain detector gives the OK to restart irrigation, the irrigation programme continues from the point at which it was stopped.



Please pay attention to the rain detector manufacturer's instructions for installation and operation. Do not activate any sensors that have not been installed!



Do not install the rain detector inside the irrigation area itself!



The rain detector does NOT have any effect on manually opened valves or on manually started programmes!

Depending on make and model, a rain detector can be connected to the digital input of the control unit (VCU) as an opener or closer.



Connection diagram

Closer

Opener





Recommended rain detector module: MiniClik rain sensor

Sensors							1	To a this	ctivate the rain sensor click in field
VCU1	•	8					2	Give	the sensor a unique name
Active	Name	Connection type	Scale	Offset	Limit	Curent value			
	S3 Closer	Connection type	N/A	N/A	N/A	N/A			
	S4 Opener	Rainsensor	N/A	N/A	N/A	N/A	• .	1	Wait until the green tick
1	S5 Q1	Flow 2	0	0	N/A	NA),	appears
	S6 P/I	Pressure	0	0	N/A	N/A		- /	
	S7 V/I	Wind speed	0	0	0	N/A			
	58 XY/I	-	0	0	0	N/A	×	Ac	tive
	S9 Frequency 1	-	0	0	0	N/A			
	S10 Frequency 2	-	0	0	0	N/A			
Pump system Befullpumpst	n Lation	8							
Active	Name Conne	ction type Limit	Curent value					Pa Pa	ssive
	S5 Q1 Flow	•	N/A						
	S6 P/I Pressu	re 0	NA						



Make sure you know what type of connection you have installed: an opener or closer!

Connecting a flow-rate sensor

The flow-rate sensor displays on the

Installation Data / Sensors menu the currently measured flow-rate figure.

On the *Reports / Programme Reports*

menu the system documents the flow-rate figure measured at the specified time.

This indication of the flow rate can be used to check and optimise the theoretically calculated levels. It can also serve as a safeguard so that if the flow rate exceeds or drops below any critical levels the pump station gets switched off for its own protection. This can be the case, for instance, in the event of a burst pipe or if the pump is pumping against a closed valve.



Please pay attention to the manufacturer's instructions for installation and operation! Do not activate any sensors that have not been installed!

Connection diagram



Connection example:

Flow-rate meter models:	Kobold turbine wheel flow meter with integrated transducer
	Model TUR 2
	Option A, output 0-20mA
Measurement data logging:	The flow-rate meter's stated measurement range, e.g. 2-80m ³ /h, is logged on a linear basis from the 0-20mA measured signal, i.e.: 1mA = 4m ³ /h
Scale:	The scale value is 4.0



At the maximum flow rate (here 80m³/h) the voltage drops from 24V to around 17V. Between the earthing and pin 20 the voltage goes up by the same amount.



It is also possible to check that the transducer is working correctly by measuring the voltage between terminals 19 and 20 on the VCU.

tiol Linit							
VCU1		8					
Active	Name	Connection type	Scale	Offset	Limit	Curent value	
	S3 Closer	Connection type	N/A	N/A	N/A	N/A	
*	S4 Opener	Rainsensor	NA	NA	N/A	NA	
	S5 Q1	Flow	1 Am	0	N/A	N/A	•
	S6 P/I	Pressure		0	N/A	N/A	
*	S7 V/I	Wind speed	0	0	0	NA	
	S8 XY/I		0	0	0	N/A	
*	S9 Frequency 1		0	0	0	N/A	
*	S10 Frequency 2	-	0	0	0	NA	
ump syster Befüllpumpst	n ation	0					
Active	Name Conne	ction type Limit	Curent value				
	S5 Q1 Flow	0	N/A	16			
-			-				

Enter the previously calculated value for the scale.

Connecting a pressure sensor

On the *Installation Data / Sensors* menu the pressure sensor indicates the currently measured pressure.

On the *Reports / Programme Reports* menu the system documents the pressure level that was measured at the stated time. Using these figures, you are able to determine whether any unwanted pressure peaks have arisen when starting the irrigation or when switching values on or off. You are also able to check whether the system pressure is too high or too low. You can conclude from this whether you should if anything increase or reduce the flow rates.

They can also serve as a safeguard so that if the flow rate exceeds or drops below any critical levels the pump station gets switched off for its own protection. This can be the case, for instance, in the event of a burst pipe or if the pump is pumping against a closed valve.



Please pay attention to the manufacturer's instructions for installation and operation! Do not activate any sensors that have not been installed!





а

Connection example: Pressure sensor models:

Pressure sensor models:	Kobold model 3373.078.092
	Output 4-20mA
	Measurement range 0-25bar
Measurement data logging:	The pressure sensor's stated measurement range of 0-25bar is logged on
	linear basis from the 4-20mA measured signal, i.e.: 1mA = 1.56bar
Scale:	The scale value is 1.56
Offset:	The offset value is -6.24



After the pressure sensor has been connected, it is best to check that it is working correctly via the 'Installation Data / Sensors' menu. In the left-hand column you will find the display for the analogue outputs' current levels. If the pressure sensor has been connected as per the sketch above, the measurements are displayed at 'Analogue 2'. If there is no pressure at the pressure sensor, what is displayed at Analogue 2 ought to be: 4mA. If no value is displayed, please check that the polarity is not the wrong way round. Also please check whether when the pressure levels change the current levels displayed likewise experience changes. If they do, the pressure sensor is correctly connected.

Sensors								1	Enter the previously calculated value for the scale.
VCU1	•	0						2	Enter the previously calculated figure
Active	Name	Connection type	Scale	Offset	Limit	Curent value			for the offset value.
	S3 Closer	Connection type	N/A	N/A	N/A	NA			
	S4 Opener	Rainsensor	N/A	N/A	N/A	NA			
	S5 Q1	Flow	0	0	N/A	N/A			
	S6 P/I	Pressure	h	0 Am	N/A	N/A	۲		
	S7 V/I	Wind speed		2	0	N/A			
	S8 XY/I		0	0	0	N/A			
	S9 Frequency 1	-	0	0	0	N/A			
	S10 Frequency 2	-	0	0	0	N/A			
Pump system Befüllpumpst	n tation 🛛 💐	R							
Active	Name Conne	ction type Limit	Curent value					- 1	Note that it is possible that an
	S5 Q1 Flow	0	NA	l.					arithmetic sign will need to be
	S6 P/I Pressu	re 0	N/A	0					[-]6.24

Connecting a wind sensor

Using a wind sensor it is possible to work out whether the programmed irrigation needs to be interrupted because strong wind is going to cause excessive water loss.



Please pay attention to the manufacturer's instructions for installation and operation! Do not activate any sensors that have not been installed!

Connection diagram



Connection example:						
Wind sensor models:	Thies - Clima					
	Wind Sensor – compact; order no.: 4.3519.00,141					
	E. output: 4-20mA					
	Measurement range: 0-50m/s					
Measurement data logging:	The wind meter's stated measurement range of					
	0 – 50 m/s is logged on a linear basis from the measured signal of 4 – 20ma					
Scale:	Determined from this is the scale, which is entered at S7 on the 'Installation					
	Data > Sensors' menu.					
	50m/s m					
	Scale: $(20-4)ma = 3.125 \ mas$					
	Resulting from this also is the offset, which is likewise entered at S7 on the					
	'Installation Data > Sensors' menu.					
	m					

Offset: 4ma x 3.125 *mas* = - 12.5

Sensors Control Unit VCU1		8						To activate the wind meter click in this field
Active	Name	Connection type	Scale	Offset	Limit	Curent value		
	S3 Closer	Connection type	N/A	N/A	N/A	N/A		
	S4 Opener	Rainsensor	N/A	N/A	N/A	N/A		Wait until the green or red tick
	S5 Q1	Flow	0	0	N/A	N/A		appears
	S6 P/I	Pressure	0	0	N/A	N/A	2	Enter the previously calculated
	\$7 V/I	Wind speed	0	0,	00	NA		scale for the wind sensor.
7	S8 XY/I			3	4	NA	3	Enter the previously calculated
-	S9 Frequency 1		0	0	0	NA		offset value for the wind sensor.
	S10 Frequency 2		0	0	0	N/A	4	limit for the wind sensor.
Pump syster	n							
Befullpumpst	ation	8						Active
Active	Name Conne	ection type Limit	Curent value					Bassivo
	S5 Q/1 Flow	0	N/A	D				Fassive
	S6 P/I Press	ire 0	N/A	0				

All required figures have now been entered. Perrot Sirrah constantly determines the measured wind levels and documents them.

Controlling the irrigation by the sensor system

In passive state the purpose served by the sensors is to display the measured weather and system data, such as:

- ✓ Precipitation
- ✓ Wind speed
- ✓ Pump pressure
- ✓ Flow rate
- ✓ User-definable measurements

If the sensors are activated, then in the event of the level exceeding or dropping below the specified limit, the irrigation process can be interrupted and/or terminated.



- Please ensure that when the sensors are activated the label, scale and offset values have been previously entered
- ✓ and that the limits entered are realistic, as otherwise the irrigation will get terminated for no reason.

Sensors for the weather station

Sensors S3, S4, S7, S8, S9 and S10 are intended for weather data. S3 and S4: are digital inputs, which are suited to rain detectors

S7 and S8: are analogue inputs, which are suited to wind sensors

S9 and S10: are frequency inputs, which can optionally also be used for wind sensors.





The values measured in the case of the analogue and frequency inputs are averaged by Perrot Sirrah so that, for example, any brief overstepping of the limits does not instantly lead to the irrigation being stopped. If in the case of any previously mentioned activated sensor a limit is exceeded, any irrigation programme running automatically then gets interrupted.

The irrigation status indicates: 'Interrupted by weather station' for the rain detector and the wind sensor. For the period of time entered in the 'Weather station interruption' field, Perrot Sirrah then continuously checks whether, as a result of the level falling back below the limit, irrigation is cleared to resume: If so, irrigation resumes as long as the delay does not lead to any overlapping with the next programme. If there would be an overlap, the programme gets terminated and the system does not restart until the next programme.

If not, the programme gets terminated and the next programme only started when the level falls below the limit.



The weather station does taken into account any manually opened valves or any manually started programmes. Do not activate any sensors that have not been installed!



System-monitoring sensors (S5/S6)

S5 and S6 are analogue inputs to be used for pressure and flow-rate sensors

Sensors Control Unit		Ð					To activate pressure and flow-rate sensors click in this field
Active	Name	Connection type	Scale	Offset	Limit	Curent value	1 ()
	S3 Closer	Connection type	N/A	N/A	N/A	N/A	
	S4 Opener	Rainsensor	N/A	N/A	N/A	N/A	Wait until the green or red tick
	S5 Q/I	Flow	0	0	N/A	NA	appears
	S6 P/I	Pressure	0	0	N/A	N/A	Enter limit for the flow rate
	S7 V/I	Wind speed	0	0	0	N/A	
	S8 XY/I	-	0	0	0	N/A	Bnter limit for the pressure
	89 Frequency 1		0	0	0	N/A	Activo
	S10 Frequency 2		0	0	0	NA	Active
Pumo suste	~						Passive
Befülpump: Active	tation Name Conne S5 Q1 Flow S6 PI Pressu	re Limit	Curent value N/A N/A				 Please make sure that for the activated sensors the label, scale value and offset value have already been entered and that the limits entered are realistic, as otherwise the irrigation will get terminated for no reason.

If the limit is exceeded for sensors S5 and S6 the assumption is that there is a system defect (burst pipe, closed valves, broken valves, etc.). To protect the system and the pump station the irrigation gets terminated.

The irrigation status indicates: 'Fault S5/S6'



The irrigation does not get terminated until the limit has been exceeded for over 60 seconds.



The only way to reset the fault is to click the 'Confirm all' button on the Support / Error Messages menu. The VCU then gets restarted and the fault deleted.



You should naturally satisfy yourself before doing this that the fault in the system has been rectified.







5.2.8 Pump Management



Switching the pumps on and off at the start/end of programmes

If multiple pumps or decoders are connected to the control system, it is possible via the pump management function to use valves to control the

- switching on and off
- connecting and disconnecting

of the pumps for optimum utilisation within the irrigation programme and when programmes are started manually



To make the necessary entries you need administrator rights.

Example process using pump management





After all pumps are started, a valve does not get opened until the **lead-in time** has elapsed.



The **interval time** is the time between two pump starts or stops.



After the valves are closed, the first pump does not get stopped until the **run-on time** has elapsed.



The interval, lead-in and run-on time are delay periods that have a beneficial effect on the irrigation system hardware. These values are specific to each system and should be set such that no pressure surges arise.

Default values:

Interval time:	5 seconds	(no pumping	⇒ short interva	l time)
Lead-in time:	20 seconds	(lots of valves /	long pipeline	\Rightarrow long lead-in time)
Run-on time:	20 seconds	(lots of valves /	long pipeline	\Rightarrow long run-on time)

Pump manager for automatic operation:

Fump management			Automatic		Manual	Man Menu
Pump system	Control unit	Lead-in (sec)	Run-on (sec)	Interval (sec)	Run-on (sec)	Interval (sec)
Befullpumpstation	VCU1	• 0	0	0	0	0
Hauptpumpstation	VCUI	kj●	h o Ahn) C • M	0	
			3	4		



Select the control unit

Enter the relevant values

During irrigation you should keep an eye on how the pressure changes in order, if necessary, to adjust the levels.

In order to shorten the waiting time, it is advisable to enter shorter times here.

Pump manager for manual operation:

Manually the valves can be started from:

- ✓ Graphic
- ✓ Support / Control unit status
- ✓ Transmitter TM1 or WTM
- ✓ Smart phone

Pump management						Main Mere
Pump system	Control unit	Lead-in (sec)	Automatic Run-on (sec)	interval (sec)	Manual Run-on (sec)	interval (sec)
Befullpumpstation	VCU1	• 0	0	0	0	0
Hauptpumpstation	vcui 1	0	0	0	2	3 0 0



Select the control unit



Enter the relevant values

During irrigation you should keep an eye on how the pressure changes in order, if necessary, to adjust the levels.

In order to shorten the waiting time, it is advisable to enter shorter times here.

Connecting and disconnecting the pumps while irrigation programmes are running

For when all pumps are being controlled via pump decoders Perrot Sirrah's pump management system has been developed in such a way that the activated pumps deliver the required flow rate as accurately as possible.

Pump management during irrigation programmes

During irrigation the pump manager checks the required pump capacity at the intervals (interval time) set on the Installation Data / Pump Management menu.

The pump manager then calculates the optimum configuration.

By connecting and disconnecting the pumps as required, it configures the set-up in the optimum way.

Connection always takes priority here over disconnection.

At each interval a maximum of 1 pump is connected or disconnected.

Pro

5.2.9 Options



Settings for the irrigation process

Options			Man Maru
Irrigation control		•	
Weather station interruption (min.)	60	1	
Pump efficiency for subsequently created programmes (50-100%)	100	0	
Valve overlap/delay (sec.)	• 🚽	4	
Valve overlap/delay manual programmes (sec)	0 2	3	
Pump control	2	V	
Interval for calculating flow capacity (sec.)	30		
Interval for updating pump capacity (sec.)	30		
Feedback decoder settings			
Number of wrongly open valves (0-255)	25	Solenoid test from (hh:mm)	00.00
Query delay when opening valves (15-250 sec.)	30	Solenoid test to (hh:mm)	00.00
Query delay when closing valves (15-250 sec.)	1		
Alarm notification			
Send alert to e-mail inbox			
Geographic coordinates			
Latitude	48.7791877		
Longitude	9.1070047		
Maintenance	Start		

If the irrigation gets interrupted by the weather station, the station checks throughout the time entered here whether the irrigation can be resumed.

If the weather station does not give the all-clear for resuming irrigation within the timeentered here, the system ends the programme. It will no longer start up automatically.Input range:0 - 999 min.Default:60 min.



Recommended rain detector: MiniClik rain detector

This field is for an overlap pause time in the single valve and sector programmes.

+ means a pause time between closing and opening the valves.

means an overlap time between closing and opening the valves
 Input range: -30 to +30 seconds
 Default: 0 seconds



In this field you enter the overlap delay time for prescribed
programmes (manual programme process).Input range:0 - 30 seconds.Input pattern:3 seconds

Pump control

Options			Hair Mere
Irrigation control			
Weather station interruption (min.)	60		
Pump efficiency for subsequently created programmes (50-100%)	100		
Valve overlap/delay (sec.)	0		
Valve overlap/delay manual programmes (sec)	0		
Pump control			
Interval for calculating flow capacity (sec.)	30 🛃		
Interval for updating pump capacity (sec.)	30		
Feedback decoder settings	-	24	
Number of wrongly open valves (0-255)	25	Solenoid test from (hh:mm)	00.00
Query delay when opening valves (15-250 sec.)	30	Solenoid test to (hh.mm)	00:00
Query delay when closing valves (15-250 sec.)	1		
Alarm notification			
Send alert to e-mail inbox			
Geographic coordinates			
Latitude	48.7791877		
Longitude	9.1070047		
Maintenance	Start		



Interval for calculating flow capacity: (SPECIAL FUNCTION)

While an irrigation programme is running, the optimum pump sequence gets determined here related to the latest calculated valve flow rate. During the irrigation process the effects of flow rate fluctuations thus get reduced and you have an optimum pump sequence determined by the integrated average calculation function.

Here you enter how often during the irrigation process you want the system to calculate the average in relation to the current valve flow rate. The 30 seconds of valve flow rate are the determining factor for the optimum pump sequence related to the average value of the last 30 seconds. The input value indicates the calculation's interval. Default: 30 seconds

	100	-
1	1	1
	÷.,	/
	1	4

Interval for updating pump capacity

This field is of interest only if multiple pumps are being controlled via pump decoders. In this case Perrot Sirrah takes over pump management. The programme tries to adapt the pump capacity to current consumption in the optimum manner.

In this field you set the interval at which you want the pumps to be connected or disconnected. What you enter in this field applies for all irrigation programmes.

Input range:0 – 9999 secondsDefault:30 seconds



If you enter '0' seconds for the interval for updating pump capacity, pump management is disabled and all pumps run throughout the entire irrigation programme.

Feedback decoder settings

Options						Canal Main Menu
Irrigation control						
Weather station interruption (min.)	60					
Pump efficiency for subsequently created programmes (50-100%)	100					
Valve overlap/delay (sec.)	0					
Valve overlap/delay manual programmes (sec)	0					
Pump control						
Interval for calculating flow capacity (sec.)	30					
Interval for updating pump capacity (sec.)	30	Ent				
Feedback decoder settings						
Number of wrongly open valves (0-255)	25		Solenoid test from (hh:mm)	00.00	0	
Query delay when opening valves (15-250 sec.)	30		Solenoid test to (hh:mm)	00.00	0	
Query delay when closing valves (15-250 sec.)	1					
Alarm notification						
Send aled to e-mail inhox						
Geographic coordinates						
Latitude	48.7791877					
Longitude	9.1070047					
Maintenance	Start					

1

Number of wrongly open valves

If the number of the 'Valve won't close' error messages is above the limit entered here, the entire irrigation gets terminated. Every active programme gets stopped and all manually opened valves get closed. The irrigation status changes to 'Error'. The irrigation cannot be restarted until the error has been reset on the Support / Error Messages menu.

Input range:0- 255Default setting:0 (function not activated)

Query delay when opening valves

This time indicates for how many seconds the system accepts the 'Valve closed' status before giving out an error message.

Input range:15 – 250 secondsDefault:30 seconds

After entering the time you want to use, click 'Save' to accept that figure.



In order to avoid any unnecessary error messages, this time should be set to 150 seconds.

Query delay when closing valves

This time indicates for how many seconds the system accepts the 'Valve open' status before giving out an error message

Input range:15 – 250 secondsDefault:30 seconds

After entering the time you want to use, click 'Save' to accept that figure.

In the 'Feedback Decoder Settings' field

The bidirectional decoder gives a short current pulse (5 milliseconds) to the solenoid at intervals of c. 1 minute. This current pulse is used to test the solenoid resistance and check that solenoid and decoder are correctly connected. Some valves react so quickly that as a result of the solenoid being briefly actuated the valve could be momentarily opened. In order to avoid these irritations at an unwanted moment, the time for the test to be done can be set in the 'Feedback Decoder Settings' field.

Example

From 01:30 to 03:00	
From 22:30 to 01:00	
From 00:00 to 00:00	
From 00:00 to 23:59	

1h 30 min. test duration 2h 30 min. test duration Function passive - no test 23h 59 min. test duration



It is advisable to opt for a test time of c. 60 minutes during the night.

Alarm notification

Options			tan Mary
Irrigation control			
Weather station interruption (min.)	60		
Pump efficiency for subsequently created programmes (50-100%)	100		
Valve overlap/delay (sec.)	0		
Valve overlap/delay manual programmes (sec)	0		
Pump control			
Interval for calculating flow capacity (sec.)	30		
Interval for updating pump capacity (sec.)	30		
Feedback decoder settings			
Number of wrongly open valves (0-255)	25	Solenoid test from (hh:mm)	00.00
Query delay when opening valves (15-250 sec.)	30	Solenoid test to (hh:mm)	00.00
Query delay when closing valves (15-250 sec.)	1		
Alarm notification	= 1		
Send alert to e-mail inbox	Ev		
Geographic coordinates			
Latrude	48.7791877		
Longitude	9.1070047		
Maintenance	Start		

You can have the system alert you via the alarm notification function if any pump fault occurs.

Enter your e-mail address

- The e-mail connection can be established only if the PC is connected to the Internet.
- The participant receives only one e-mail.

Geographic coordinates

Options			an Menu
Irrigation control			
Weather station interruption (min.)	60		
Pump efficiency for subsequently created programmes (50-100%)	100		
Valve overlap/delay (sec.)	0		
Valve overlap/delay manual programmes (sec)	0		
Pump control			
Interval for calculating flow capacity (sec.)	30		
Interval for updating pump capacity (sec.)	30		
Feedback decoder settings			
Number of wrongly open valves (0-255)	25	Solenoid test from (hh:mm) 00 00	
Query delay when opening valves (15-250 sec.)	30	Solenoid test to (hh mm) 00:00	
Query delay when closing valves (15-250 sec.)	1		
Alarm notification			
Send alert to e-mail inbox		an Matana and a second a second and a second a s	
Geographic coordinates			
Latitude	48 7791877		
Longitude	9.1070047		
Maintenance	Start		

To find out your course's correct latitude and longitude go on the Internet to https://www.google.de/maps





Enter the address you are looking for



Click on any clear place on the map

The latitude and longitude of your address then get displayed. Please enter these under Options/Coordinates

Language

Options			
Irrigation control			
Weather station interruption (min.)	60		
Pump efficiency for subsequently created programmes (50-100%)	100		
Valve overlap/delay (sec.)	0		
Valve overlap/delay manual programmes (sec)	0		
Pump control			
Interval for calculating flow capacity (sec.)	30		
Interval for updating pump capacity (sec.)	30		
Feedback decoder settings			
Number of wrongly open valves (0-255)	25	Solenoid test from (hh:mm)	00.00
Query delay when opening valves (15-250 sec.)	30	Solenoid test to (hh:mm)	00.00
Query delay when closing valves (15-250 sec.)	1		
Alarm notification			
Send alert to e-mail inbox			
Geographic coordinates			
Latitude	48.7791877		
Longitude	9.1070047		
Maintenance	Start		



Here you are able to set the language you want to use for the Perrot Sirrah system

Port

5.2.10 Users

Users				
Users				Main Menu
1				
User name	Password	Permission		
Greenkeeper	GKoor	Benutzer 🗳	·	
perrot	periot	Administrator		
	9	4	9	
1	Create a new user			
2	Enter a user name			
3	Issue a password			
4	Select the user's authorisation level			
5	Save			
Main Menu	Back to Main Menu			
	Only the administrator is able to creat	e a new user.		

The following table gives an overview of the menus to which the different users obtain access.

Main Menu	Sub-menu	Dropdown menu	User	Admin
	Aroos and Craphics	Areas		Х
	Areas and Graphics	Graphics Selection		Х
	Control Unit	Control Unit		Х
	Dump Station	Pump Systems		Х
	Pump Station	Pumps		Х
	Flow Zonos	L flow zone		Х
	Flow Zolles	M flow zone		Х
Installation Data	Sort Namo	Sort Name		Х
	Soft Name	Holes		Х
	Station Data	Station Data		Х
	Soncore	Control Unit		Х
	Sensors	Pump Station		Х
	Pump Management	Pump Management		Х
	Ontions	Options		Х
	Options	Language		Х
	Users	Users		Х
Support	Control Unit Status	Overview	Х	Х

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		Activato /	V	v
		Activate/ Deactivate Decodor	Λ	^
		Brogramma Docodor	v	v
	Error Mossagos	Confirm	×	X
	Decodor Tost		×	X
	Decoder Test	Soloct	×	×
		Stort Tort	<u> </u>	×
	Tastlag	Start rest	<u>х</u>	<u>х</u>
	Test Log	Control Unit	XX	X
	Control Unit Update		X	X
		Selection	V	N N
		Software Version	X	Х
		Selection		
		Start Update	X	X
	Info	'PERROT' Website	Х	Х
		E-mail 'PERROT'	Х	Х
		Operating Guide	Х	Х
Reports	Programmes Reports	Data Export	Х	Х
		Print	Х	Х
	Sirrah's Diary	Print	Х	Х
Irrigation	Create Automatic	Create	Х	Х
Programmes	Programmes			
		Simulate	Х	Х
		Print	Х	Х
	Create Manual	Create	Х	Х
	Programmes			
		Simulate	Х	Х
		Print	Х	Х
Irrigation	Irrigation Calendar	Select Programmes	Х	Х
		Start/Stop	Х	Х
		Pause	Х	Х
		Simulate	Х	Х
	Manual irrigation	Select Programmes		Х
		Start/Stop	Х	Х
		Pause	Х	Х
		Simulate	Х	Х
	Edit graphic	Edit	Х	Х
		Open	Х	Х
		Close	Х	Х



5.3 Irrigation Programmes menu category



Using the *Perrot Sirrah* software you create optimal irrigation programmes. These irrigation programmes get tested by running an internal simulation. In this test the *Pump Flow Manager* integrated in the programme uses the master data to calculate the optimum cycle.

Based on the prescribed conditions, the cycle gets calculated such that the available pump capacity gets utilised to the greatest extent possible, but not overloaded. In this way the shortest possible irrigation time is achieved and the available facilities, such as pump and pipe network, are optimally utilised.

Automatic programmes Select an area. 0 Area test Golfo Automatic program Enter a programme Sort names name Fairwa Gree • then click Time (min) After that you are able to add your valves to the programme via the sort names that have been set up

5.3.1 Automatic Programmes

Runtime Total hh:mm

00:00

Water of Total m?

0.00



	0	Area	Programm	test		
Auto	matic programmes	Golfclub Perrot-Hau	usen 🔷 🛛 test 🔶	Lest lest		
Sor Fa	t names Inway ×					
Set	density 🗣 for selec	cted programmes to	Okay			
	Station name	Order	Density (mm)	Time (many	Consumption (m ^a)	Active
	FW1/1	0	3	16	4	
	FW1/2	•	3	16	4	
	FW1/3	0	3	16	4	
	FW1/4	0	3	16	4	8

You can also edit a valve's individual parameters.



You do this by clicking in the desired field and adjusting the parameter.

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State Boyer Activities Irrigation Sequence State Meather Meather Meather Meather Construction Co	Pagetiling 5 10 23 23 23	F 1 American	Static Mad PPU1 0.00 PPU2 000 Gen 10 000 PPU3 000 Gen 11 003 Gen 12 003 Gen 12 003	B0p Effectivy Flow 014 23 14 037 47 28 019 61 23 019 65 23 019 62 24 024 23 10 025 22 10 0254 22 10
Simulation warm				Ale souger X
	1 5	Click to return to th	ne automatic prog	rammes
	2 🚍	Click to print the ov	verview of the sim	ulation
	3 A PDF g	gets automatically pr	oduced. Click on i	t and the PDF opens.
	3			
Les 18844 X ← → ⑦ ② Doos Dickhered Simulation, Automatik, Programme, Ø	Structure, Antenatic, Fregnan	Goldalrh20firms Havenpelf		· · · × · · · ·
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1	Click to print the overview of the simulation
2	A PDF gets automatically produced. Click on it and the PDF opens.
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 → C O Dalis CAbe Automatik Programme_Golfchd 	Construction (Construction
1	The file can be downloaded
2	or printed out.
3	Close tab to return to the Automatic Programmes menu

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5.3.2 Manual Programmes



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State Stoped Activities Irrigation Branton Transfor Teaching Branton B	Free efforts 5: 197 - 75 - 86 -	DDDD Restore to	to yang	333000 331 FW171 00 FW122 00 FW134 00 </th <th>art 300p 00 00 03 00 00 00 03 00 00 03 00 00 03 00 00 03 00 00 05 00 00 00 03 00 00 05 00 00 00 00 05 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00</th> <th>20 20 20 20 20 20 20 20 20 20 20 20 20 2</th> <th>Plane 40 40 40 40 40 40 40</th>	art 300p 00 00 03 00 00 00 03 00 00 03 00 00 03 00 00 03 00 00 05 00 00 00 03 00 00 05 00 00 00 00 05 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	20 20 20 20 20 20 20 20 20 20 20 20 20 2	Plane 40 40 40 40 40 40 40
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3	1 1	Click to ret	urn to th	ne Manual	l Prograi	mmes	
	2	Click to pri	nt the ov	verview of	f the sim	ulation	
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5.4 Irrigation menu category



The irrigation programmes created either get automatically started at a set time using the irrigation calendar or manually run via the manual start function. The vales can be individually activated via the 'Graphics' menu item

5.4.1 Irrigation Calendar



Using the irrigation calendar you can schedule irrigation of your course at a custom time. The irrigation calendar shows you an overview of irrigation programme, day of the week and start time of the irrigation.

15 Irrigation calendar											Simulations	Man Mer
Area	Programmes	On/Off Mo	Tu	We	Th Fr	2	Su	Budget %	Start time	Water cons	Prio 5	
Golfclub Perrot-Hausen	Green	M	T	W	T F	s	s	100	00:00	0.00	A	
Golfclub Perrot-Hausen	test	🕐 🛯		w		5	8	100	10.00	19.37	A 🔹	
Befüllpumpstation	Total runtim Total water consum	e hh.mm 00.0 option m ^a 0.00	00.00	00.00 00	0.00 00.00	00:00	00:00					2
Hauptpumpstation	Total runtim Total water consum	e hh.mm 00.2 option m ^a 6.83	0 00.20	00.20 00 6.83 6	0.20 00.20	00:20 6.83	00:20 6.83					5
1	Activate an auto	matic pr	ograr	nme	≭ ⇒	V						
2	Select the irrigation	on's da	y of th	ne we	eek							
3	Enter a budget for your irrigation programme. The budget enables you to adjust your irrigation programme's duration. Example: At 100% budget your irrigation programme normally goes on for 10 minutes. If you were to reduce the budget to 50%, the time reduces to 5 minutes.											
4	Enter a start time	2										
5	You can use 'Pric 'A' is the highest	' to cha priority	nge tł	ne or	der of	the	irriga	ation pro	grammes			
6	He He	re you a	are ab	le to	simul	ate y	our i	irrigation	ı calendar			

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SIRRAH	Inigation calendar				S and a second	Prot Main Menu
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State Stopped Activities Irrigation Wrgation Team Team Team Team Team Team Team Team	Participandian State Sta	Station Peuse FW13 FW12 FW12 FW14 Peuse	Start 0000 1000 1020 1031 1048	Stop 09.59 10.20 10.31 10.36 10.47 23.59	Efficiency 0 46 23 46 45 45 0	Flow 0 28 14 28 28 28 0
Simulation RowOpdf						Alle anzeigen X
1	Select the pump system.					
2	Select the relevant day of the week					
3	Click to return to the irrigation calen	dar				
4	Click to print the overview of the sim	nulation				
5	A PDF gets automatically produced. Click on it	and the	PDF o	pens.		

Pro

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or printed out.

Close tab to return to the Irrigation Calendar menu

Pro

5.4.2 Manual Irrigation


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Single program - test Status Stopped	ons are currently deactival	ed					
Manual Imgation							Man Menu
Golfclub Perrot-Hausen	•						
Programmes	Budget % Num Repe	oer Pause (min.) V	Inter consumption m ⁴				
			1 2 4 4				
Total m ⁴ Total bh.mm 19.37 00:47			Pane Stop				Semilation
1	Here yo	u can pause t it.	he irrigation progr	ramme			
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SIRRAH	Manual Impation		Area Programme Goldub Pernt Hausen Hest	Station S PV101 PV102	start Stop 0.00 00.16 0.00 00.31	Efficiency Flow 23 14 47 28	Atain Menu:
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SIRRAH	Manual Imgation		Area Programme Goldub Perrot Hausen Het	Station S PVD1 PVD2 PVD2 PVD4	Stop Stop 0:00 00:15 0:00 00:31 0:16 00:36 0:31 00:47	23 4 47 28 47 28	
SIRRAH	Manual Imgation		Area Programme Goldub Perrot Hausen Het	Station S Pritin Prinz 0 Prinz 0 Prinz 0	Rart Stop co 00 16 0 00 00 15 0 16 00 31 0 16 00 36 0 31 00 47	23 4 47 28 47 28	
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State Raming Activities Phys 3 blin Irrigation Region Tosy Region Tosy Weather Mar 13,0° Weather Mar 13,2° Mar 12,2°	Manual Imgation		Area Programme Golfslik Peret Hausen Het	Station S Pritrin Prinz 0 Prinz 0 Prinz 0	Rart Stop coc 00 16 0 00 00 11 0 16 0 00 00 31 0 00 47	Image Image <th< td=""><td></td></th<>	
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STRRAH	Manual Impation Purge efficiency % 100 - 25 - 25 -		Area Programme Goldob Perrol Hausen Het Soldob Perrol Hausen 00.17 Bantino bit new	Station S FIFUA FIFTA (FIFTA)	Rat Stop 0 00 00 16 0 00 00 31 0 16 00 32 0 00 47	Emcency For 23 I4 47 28 47 28 47 28 47 28	
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	Station	Start (Mrmm)	Stop (M-mar)	Efficiency (%)	Flow mith	
	PWN	00-00	00.16	25	54	+
	FW12	00.00	00.31	47	28	
	PW13	00.16	00.36	47	28	



Close tab to return to the Irrigation Manual Start menu

Prot

5.4.3 Edit graphic



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You can close the selected valves individually

or close them all at the same time





- Here you see the opened valves' water consumption

and the efficiency of the pump system

The valves' remaining runtime is shown under Activities.



5.5 Reports menu category



All irrigation processes get logged and saved by the Perrot SIRRAH software. These processes are made available by SIRRAH as reports.

Two different reports are provided:

5.5.1 Programmes Reports



SIRRAH	× +							- 0
	eview sirrah.cloud/rep Reports p	orts/programs	Area	From: 01.01.20	2 (m) D	To: 06 10 2020	3	e e e
Ċ	No 1 2 3 4 5	Abschlag 1 Abschlag 1 Abschlag 1 Abschlag 1 Abschlag 1 Abschlag 1	Density 0.00 0.00 0.00 0.00 0.00	Time (min.) 0.09 0.06 0.08 0.08 0.08	Consumption (m*) 0.51 0.49 0.48 0.46 0.44		Flow \$5	Flow S6
Stopped	6 7 8	Abschlag 1 NEW FW1/1 FW1/1	0.00 0.00 0.00	0.07 0.00 0.09	0.39 0.04 1.19			
Activities auditg 1 14r. Irrigation Today Today Weather	9 10 11 12 13 14 14 16 16 16 17 17 18 19 20 21 21 22 22 22 24 24 22 22 22 24 24 25 26 25 29 29 29 31 11 33 31 33 33	PWH1 PWH1 PW11 PW11 PW12 PW12 PW12 PW12 PW12 PW1		0.08 0.09 0.27 0.28 0.08 0.08 0.08 0.08 0.45 0.08 0.08 0.09 0.09 0.09 0.09 0.09 0.09	1.07 1.12 1.21 3.74 1.21 1.74 1.74 1.74 1.72 1.74 6.35 1.71 1.74 6.35 1.71 1.74 6.35 1.71 1.74 1.75 1.71 1.74 0.35 1.71 1.71 1.72 1.74 1.72 1.74 1.72 1.74 1.72 1.74 1.72 1.74 1.72 1.74 1.72 1.74 1.72 1.74 1.72 1.74 1.72 1.74 1.72 1.74 1.72 1.74 1.72 1.74 1.72 1.74 1.72 1.74 1.72 1.74 1.75 1.71 1.70 1.71 1.70 1.71 1.70 1.71 1.70 1.71 1.70 1.71 1.70 1.71 1.70 1.71 1.70 1.71 1.70 1.40 0.40			
4gen 1 mm								Comma- anning () Semicolon- anning () Data and Alle anzeigen
1	Select	your area.						
2	You ar You se	e able to cur elect the star	tail the time pe t time using 'Fro	riod of the i om'	eport.			
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	Area name - Go	olfclub Perrot-Hauser	1			
	Time period - 0	1.01.2020 - 06.10.20	20			
	Valve name	Density (mm)	Consumption (m*)	Tame (min.)		
	Abuchtag 1	0	8.55	0.09		
	Abachtag 1	8	0.49	0.08		
	Abschlag 1	0	0.48	0.08		
	Abschlag 1	0	0.46	0.08		
	Abschlag 1	0	0.44	0.07		
	Abschlag 1 – NEW	0	0.39	0.07		
	FWS1	0	0.54	0		
	FW11	0	1.11	0.09		
	PWM	0	1.07	0.08		
	PW51	0	1.12	0.08		
	PWsh	0	un.	0.09		
	PWSh	0	3.74	0.27		<u></u>
	FW12	0	1.14	0.08		
	FW12	0	1.14	0.08		
	FW12	0	1.12	0.08		+
	PW12	0	1.14	0.08		
	FW12	0.01	6.35	0.45		-
	FW10	0	1.11	0.08		
	Person Person		114	9.08		

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or printed out.

The file can be downloaded

Close tab to return to the Reports menu

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No.	Valve name	Density	Time (min.)	Consumption (m [*])	Flow \$5	Flow S6
3	Abschlag 1	0,00	0.09	0.51		
2	Abschlag 1	0.00	0.08	0,49		
3	Abschlag 1	0,00	0.08	0.48		
4	Abschlag 1	0.00	0.08	0,46		
5	Abschlag 1	0,00	0.07	0.44		
6	Abschlag 1 NEW	0,00	0,07	0.39		
7	FW1/1	0.00	0.00	0,04		
8	FW1/1	0.00	0.09	1.19		
9	FW1/1	0,00	0.08	1.07		
10	FW1/1	0,00	0,08	1,12		
11	FW1/1	0,00	0.09	1.21		
12	FW1/1	0,00	0,27	3,74		
13	FW1/2	0.00	0.08	1,14		
14	FW1/2	0,00	0,08	1,14		
15	FW1/2	0,00	0,08	1,12		
16	FW1/2	0.00	0,08	1,14		
17	FW1/2	0,01	0,45	6,35		
18	FW1/3	0,00	0,08	1,11		1
19	FW1/3	0,00	0,08	1,14		
	and a second second	0.00	0.00	4.40		
	No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	No. Valve name 1 Abschlag 1 2 Abschlag 1 3 Abschlag 1 4 Abschlag 1 5 Abschlag 1 6 Abschlag 1 6 Abschlag 1 7 PW11 9 PW11 10 PW11 12 PW11 13 PW12 14 PW12 15 PW12 16 PW12 17 PW13 19 PW13	No. Valve name Density 1 Abschlag 1 0.00 2 Abschlag 1 0.00 3 Abschlag 1 0.00 4 Abschlag 1 0.00 5 Abschlag 1 0.00 6 Abschlag 1 0.00 7 FW1/1 0.00 8 FW1/1 0.00 9 FW1/1 0.00 10 FW1/1 0.00 11 FW1/1 0.00 12 FW1/1 0.00 13 FW1/2 0.00 14 FW1/2 0.00 15 FW1/2 0.00 16 FW1/2 0.00 17 FW1/2 0.01 18 FW1/3 0.00 19 FW1/3 0.00	No. Valve name Density Time (min.) 1 Abschlag 1 0.00 0.09 2 Abschlag 1 0.00 0.08 3 Abschlag 1 0.00 0.08 4 Abschlag 1 0.00 0.08 5 Abschlag 1 0.00 0.07 6 Abschlag 1 0.00 0.07 7 FW1/1 0.00 0.07 7 FW1/1 0.00 0.08 10 FW1/1 0.00 0.08 11 FW1/1 0.00 0.08 12 FW1/1 0.00 0.08 10 FW1/1 0.00 0.08 11 FW1/1 0.00 0.08 12 FW1/1 0.00 0.08 13 FW1/2 0.00 0.08 14 FW1/2 0.00 0.08 15 FW1/2 0.01 0.45 16 FW1/2 0.01 0.45	No. Valve name Density Time (min.) Consumption (m') 1 Abschlag 1 0.00 0.09 0.61 2 Abschlag 1 0.00 0.08 0.49 3 Abschlag 1 0.00 0.08 0.49 4 Abschlag 1 0.00 0.08 0.44 5 Abschlag 1 0.00 0.07 0.44 6 Abschlag 1 0.00 0.07 0.44 7 FW1/1 0.00 0.07 0.39 7 FW1/1 0.00 0.06 1.17 9 FW1/1 0.00 0.08 1.12 10 FW1/1 0.00 0.08 1.12 11 FW1/1 0.00 0.08 1.14 12 FW1/1 0.00 0.27 3.74 13 FW1/2 0.00 0.08 1.14 14 FW1/2 0.00 0.08 1.14 15 FW1/2 0.00	No. Valve name Density Time (min.) Consumption (m*) Flow 55 1 Abschlag 1 0.00 0.09 0.51 2 Abschlag 1 0.00 0.08 0.49 3 Abschlag 1 0.00 0.06 0.44 4 Abschlag 1 0.00 0.06 0.44 5 Abschlag 1 0.00 0.07 0.44 6 Abschlag 1 0.00 0.07 0.39 7 FW1/1 0.00 0.06 1.19 9 FW1/1 0.00 0.06 1.17 10 FW1/1 0.00 0.08 1.12 11 FW1/1 0.00 0.08 1.12 12 FW1/1 0.00 0.08 1.12 13 FW1/2 0.00 0.08 1.14 14 FW1/2 0.00 0.08 1.14 15 FW1/2 0.01 0.04 1.14 15 FW1/2

You can export the report. Using the 'Comma-limited (,)' button, the data gets exported with a comma.

To start

To start the data export, click 📿 'Data Export'

<u>3</u>

An Excel table gets automatically produced. Click on the Excel table and it opens.

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atei Start Einfügen Settingvout Formeln Daten	Überprüfe	n Ans	icht	Hilfe A	nodesk Vau	t 13	an
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1 * I × ✓ & ValveName,Density,Consump	tion, Activ	eTime					- 0
A	8	c		D	E	F	
ValveName, Density, Consumption, ActiveTime							
GG01,0.032911111111111,4.9366666666666666667,0.4113888888888888							_
GG01,0.0328,4.92,0.41							_
GG02,0.032911111111111,4.93666666666666667,0.411388888888888							-
GG02,0.02904444444444444444444444444444444444							-
GG03,0.033,4.95,0.4125							-
GG03,0.01942222223,2.91333333333,0.24277777777777							-
GG04,0.0528,4.92,0.41							-
GG04,0.02000000000000,4.3,0.33033333333334							-
GG05.0.0320000000000007/4.7333333333333333333,0.411111111111111							-
GG06 n 023 4 95 n 4125							
GG06 0 077866666666666 1 43 0 285833113333333							
T01.0.0351736111111111.2.8138888888889.0.281388888888889							
T01.0.0210416666666667.1.68333333333333.0.16833333333333							
T02.0.034375.2.75.0.275							
T02.0.020625.1.65.0.165							
T03,0.034615055555556,2.76944444444444,0.27694444444444							
T03,0.020625,1.65,0.165							
T04,0.03166666666666666666,2.533333333333334,0.2533333333333334							
T04,0.02010416666666667,1.608333333333333.0.16083333333333							
T05,0.0204861111111111,1.6388888888888889,0.163888888888889							
T06,0.0204861111111111,1.63888888888888889,0.16388888888888							
VG01,0.0102037037037037,3.0611111111111,0.1530555555555							
							-
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		L. Progr	_				

The individual records are presented there in one cell and are separated with a comma.



You can save the Excel table

and then close it again.

SIRRAH MANUAL

Толиу Тологон 10 00 Май Weather == 12,85 С = 3 мак. 3 0 = 3 мак. 3	14 FW12 15 FW12 16 FW12 17 FW12 18 FW13 19 FW13 20 FW13	0,00 0,08 0,00 0,08 0,00 0,08 0,01 0,45 0,00 0,08 0,00 0,08 0,00 0,08	1.14 1.12 1.14 6.35 1.11 1.14 1.10 Current Current Curr
e generated cu V ^	Another option Using the 'Semi To start the dat	for exporting the report colon-limited (;)' button a export, click 'Dat	 Alteracetyre × , the data gets exported with a semicolon. a Export'
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G10 * 8 1 ValveName Density 2 G601 0.0329111111111 3 G601 0.0328 4 G602 0.0329111111111 5 G602 0.03291111111111 6 G603 0.033	6 C D Consumption ActiveTime 1 493.666.666.666.666.70.41136888888888 4 435.666.666.667.041138888888888 4 435.666.66.667.04138888888888	е <u>ғ б</u> н	and then close it again.

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5.5.2 Sirrah's Diary



On the 'Sirrah's Diary' menu all command data that the Perrot SIRRAH software generates gets listed and saved.



SIRRAH MANUAL

Can SIRRAH X 🔇 Tagebuch.pdf	a* +		- D X
← → C ① Datei C/Users/deesskx/Downloads/Tageb	puch part		× O :
Tagebuch.pdf		1 / 3	° 🛔 🛱
			strin strin
	Cirroble diar		
	Sirran's diar	у	
	Time	Test	
	06.10.2020 14.38	[VCU1] decoder: 247 inactive	
	06.10.2020.14.38	Pump: \$P30-18 OFF	
	06.10.2020 14.38	(VCU1) decoder: 347 deactiveting	
	06.10.2020 14.38	(VCUT) decoder: 1 inactive	
	06.10.2020.14.36	Valve: Abeching 1 closed	
	06 10 2020 14 38	CvCrU (decoder 1 decideration)	
	00 10,000 14,00	Value Absorbing 1 county	
	06.10.2020 14.37	MOUT decoder 2 Pactive	
	06.10.2020 14.57	[VCU1] decoder: 2 deactivating	
	06.10.2020.14.37	Valve: Abschlag 1 – NEW dosing	
	06 10 2020 14 33	(VCU1) decoder: 247 active	
	06.10.2020 14.33	Pump: SP30-10 ON	
	06 10 2020 14 33	Valve: Abschlag 1 - NEW open	
	06.10.2020 14:33	(VCU1) decoder: 2 active	
	06.10.2020 14.33	Valve: Abschlag 1 open	
	06.10.2020 14.33	[VICU1] decoder: 1 active	
	08.10.2020.14.33	(MCU1) decoder: 247 activating	
	06.10.2020.14.33	(VCUV) decoder: 1 activating	
	06 10 2020 14 33	Value: Absorbing 1 spanning	
	06.10.202014.00	(VLUT) Becook: 2 advesting	
	00 10 2020 14 25	Party SPIG-10 OFF	
	06.10.202014.23	(VCU1) denoter 247 martine	
	05 10 2020 14 25	(VCU1) decoder 247 deactiveting	
	06.10.2020 14:23	(VCU1) decoder: 1 inactive	(+)
	06.10.2020.14.23	Velve: Abschlag 1 closed	
	06.10.2020 14.18	Pump: SP30-10 ON	
	06.10.2020.14.18	(VCU1) decoder: 247 active	
	06.10.2020 14.18	Valve: Absulting 1 open	



The file can be downloaded

or printed out.



Close tab to return to the Sirrah's Diary menu

P

5.6 Support menu category



5.6.1 Control Unit Status



Activate/deactivate decoder

Control unit status	Selected control unit	1			Digital LED 1 LED 2	Analogue Earth current (mA) 0.0 Load current (mA) 56.0 Voit A (V)) 28.1 Voit B (V) 26.3	Main Menu
• 9.1 •	0 2 🔵 0 3	• O 4 • O 5	• 0 6 • 0 7 • 0 1	8 😐 O 9 😐 O 10	© 0 11	● O 12	
0 0 13 0	O 14 🔘 O 15	Image: Omega of the second	© 0 18 © 0 19 © 0 2	0 0 21 0 0 22	O 23	0 0 24	
• · 2. 4 •	O 26 🕘 O 27	● ○ 28 ● O 29	© O 30 © O 31 © O 3	2 0 0 33 0 0 34	O 38	6 0 36	Activate
0 0 37 0	 ○ 38 ● ○ 39 	O 40 O 41 O	© 0 42 © 0 43 © 0 4	4 0 0 45 0 0 46	0 0 47	· · · 48	
0 0 49 0	O 50 🔘 O 51	0 0 52 0 0 53	0 0 54 0 0 55 0 0 S	5 🛞 🔿 57 🛞 🔿 58	Si	0 0 60	-1
0 0 61 0	O 62 (O) 63	0 0 64 0 0 65	0 0 66 0 0 67 0 0 6	B 0 69 0 0 70	. 0 71	0 O 72	4 5
0 0 73 0	O 74 🕘 O 75	● ○ 76 ● ○ 77	© ○ 75 © ○ 79 © ○ 8	0 0 51 0 52	O 83 O	0 0 54	Deactivate
0 0 85 0	O 86 🕘 O 87	© O 55 © O 59	© 0 0 0 0 91 0 0 9	2 0 0 93 0 0 94	O 95	6 O 95	
0 0 97 0	O 95 🛞 O 99	0 100 0 0 101 0	● • 102 ● • 103 ● • 10	4 0 0 105 0 0 106	0 0 10	7 🔘 🔿 105	Not installed
⊕ O 109 ⊕	O 110 @ O 111	⊕ ○ 112 ⊕ ○ 113	0 O 114 0 O 115 0 O 11	5 © O 117 © O 110		9 🛞 🔿 120	Open 🧿
@ O 121 @	O 122 🔘 O 123	@ O 124 @ O 125	● ○ 126 ● ○ 127 ● ○ 12	0 0 129 0 O 130	@ O 13	I 🐵 🔿 132	Open O
◎ ○ 133 ◎	O 134 🕘 O 135	◎ ○ 136 ◎ ○ 137	● ○ 138 ● ○ 139 ● ○ 14	0 0 141 0 0 142	0 14 14 1	8 🛞 🔿 144	Closed 🗧
0 0 145 0	O 146 @ O 147	O 145 O 149 O	● ○ 150 ● ○ 151 ● ○ 15	2 0 0 153 0 0 154	0 0 15	5 🔘 🔿 156	
⊕ ○ 157 ⊕	 158 159 	O 160 O 161 O	● ○ 162 ● ○ 163 ● ○ 16	4 0 0 165 0 0 166	O 167	7 🛞 🔿 168	
@ <u>0</u> 169 @	O 170 @ O 171	IT2 IT3	0 0 174 0 0 175 0 0 17	5 0 0 177 0 0 178	0 0 17	9 180	Pull-in current
⊕ ○ 181 ⊕	162 163	⊕ ○ 184 ⊕ ○ 185	● ○ 185 ● ○ 187 ● ○ 18	5 159 150 150	© 0 19	I 🔘 🔿 192	Standard 🔶
⊕ ○ 193 ⊕	O 194 🔘 O 195	● ○ 195 ● ○ 197	● ○ 198 ● ○ 199 ● ○ 20	0 0 0 201 0 0 202	0 0 203	3 🔘 🔿 204	Holding current
0 205 0	O 206 🔘 O 207	O 205 O 209 O	0 0 210 0 0 211 0 0 21	2 0 0 213 0 0 214	O 219 O	5 🔘 🔿 216	Standard 🔶
© 217 ©	O 218 🔘 O 219	O 220 O 221 O	• • 222 • • 223 • • 22	4 0 0 225 0 0 226	O 22 O	7 🔘 🔿 225	
0 0 229 0	○ 230	O 232 O 233 O 233 O	0 O 234 0 O 235 0 O 23	6 0 237 0 236	O 23 O	9 📾 🔿 240	lene .
● ○ 241 ●	O 242 (0) O 245	◎ ○ 244 ◎ ○ 245	● ○ 246 ● ○ 247 ● ○ 24	5 © O 249 © O 250	0 0 25	0 252	Prog
0 0 253 0	O 254 @ O 255						Decoder



Select the control unit (VCU)



Select a decoder



To activate the decoder click on The decoder's colour changes.

To deactivate the decoder again click



Programming decoders



Before a new decoder is fitted it first has to be programmed to the corresponding address (number).

With Perrot Sirrah the numbers of the decoders for valves, pump decoders and pump monitoring can be selected at will. For a better overview we recommend basing your numbering on the following system:

Decoder number	1245	for valves
Decoder number	246 250	for pumps

Available decoder models:

Description	Model name	Identifying feature	Use	
Standard docodor		Square casing,	For controlling one station	
	PD5/AC-1	4 connection cables		
A way deceder		Rectangular casing,	For controlling 4 stations	
4-way decoder	PD5/AC-4	10 connection cables		
6 way decedar		Rectangular casing,	For controlling 6 stations	
b-way decoder	PD5/AC-0	14 connection cables		
		Round casing	For controlling one station	
CID decoder	CID	2 connection cables	For controlling one station	
		Plack rootangular casing	For controlling 1 station with	
Bidirectional decoder	PDF/-1	A connection cobles	feedback of status diagnoses	
		4 connection cables	at the valve	



All decoders can be programmed any number of times.

To programme a decoder you need the following components

- ✓ Bridge PC with Sirrah programme installed and a VCU
- ✓ DPG programming device Feedback (part no. ZH90022) or DPK programming cable (part no. SG50032)
- ✓ Decoder

Preparing for programming the decoder

Open the VCU's casing door.

Connect the programming unit's plug to socket **34 / 35** of the VCU terminal block. To do this you have to unplug the decoder cable (6-pin plug).



Programming Unit

This menu enables you to define the decoder numbers.

Control unit stat	Selecter VCU1 us	d control unit	•							Digital LED 1 LED 2	Analogue Earth current (mA) 0,0 Load current (mA) 57,0 Volt A (V) 28,4 Volt B (V) 28,6	Main Menu
• • 1	• 0 2	● O 3	• • 4	• 0 5	0 6	• • 7	• • 8	• • •	O 10	• • 1	1 🕘 🔿 12	
O 13	0 14	0 15	O 16	0 17	O 18	O 19	O 20	O 21	0 0 22	• • 2	3 🕘 🔿 24	
O 25	O 26	O 27	O 28	O 29	O 30	O 31	32	33	34	O 3	5 🔘 🔿 36	Activate
O 37	0 0 38	39		O 41	0 42		O 44 O			• • 4	7 🕘 🔿 48	
• • 49	O 50	O 51 O	O 52	O 53 O	O 54	O 55 O				5	9 🕘 🔿 60	
O 61	O 62 O	63	O 64 O	O 65 O	O 66 O	O 67	O 68 O		• • 70	• • 7	1 🔍 🔿 72	
O 73	0 74	0 75	0 76	• • 77	0 78	O 79	0 0 80	O 81 O	0 0 82		3 🔘 🔿 84	Deactivate
O 85	8 0 86	O 87	O 88 O	O 89 O	Ø O 90	91	Ø 0 92	Ø 0 93	94	• • •	5 🔘 🔿 96	
O 97	98 〇	99	O 100	I01	0 102	103	O 104	0 105	0 106	• • 10	7 🕘 🔿 108	Not installed
IO9	International Optimization (1998)	In the second	I12	III3	International	I15	I16	III7	118	. 0 11	9 🕘 🔿 120	Open 🔾
O 121	I22	I23	O 124	O 125	I26	O 127	O 128	O 129	I30	• • 13	1 🔍 🔿 132	Open
I33	I34	I35	I36	I37	I38	O 139	O 140	O 141	0 142	• • 14	3 🕘 🔿 144	Closed
O 145	I46	I47	I48	I49	ISO 150	O 151	152	O 153 O	O 154	O 15 O	5 🕘 🔿 156	
O 157	0 158	O 159 O	O 160 O	O 161 O	0 162	163	0 164 164	0 165 165	166	• • 16	7 🕘 🔿 168	
I69	ITO	IT1	O 172 O	I73	I74	175	I76	ITT	178	• • 17	9 🕘 🔿 180	Pull-in current
O 181	0 182	183	0 184	O 185	0 186	187 187	0 188	O 189	ISO 190	• • 19	1 🔍 🔿 192	Standard 🔶
O 193	International	Interpretation 195	I96	IPT	International	O 199	O 200	O 201	O 202	• • 20	3 🕘 🔿 204	Holding current
O 205	O 206	O 207	O 208	O 209	③ ○ 210	O 211	O 212	O 213	O 214 O	O 21	5 🕘 🔿 216	Standard 🔸
O 217	O 218	O 219	O 220	O 221	0 0 222	O 223	• • 224	O 225	226	• • 22	7 🕘 🔿 228	
O 229	O 230 O	O 231 O	O 232 O	O 233 O	O 234	O 235	O 236	O 237	38	• • 23	9 🕘 🔿 240	
O 241	0 242	O 243	O 244	O 245	0 246	• • 247	O 248	O 249	O 250	• • 25	1 0 252	Prog.
O 253	O 254	O 255										Decoder

Explanation

- ✓ Each dot stands for the decoder number to the right of it. The meaning of the different colours is explained in the legend on the right-hand side of the menu.
- ✓ Select control unit: using the pull-down menu, select the control unit to which the programming unit is connected.
- ✓ Activate/Deactivate: clicking the button enables/disables the selected decoder.
- ✓ Pull-in/holding current: depending on the characteristics of the solenoid(s) to be pulled in by the decoder, a higher or lower level of pull-in current is needed to ensure that the solenoid switches reliably.
- ✓ The current can be set at 4 levels: High, Standard, Medium or Low. Based on the level set when it is programmed, the decoder gives more or less pull-in and holding current to the solenoid.
- ✓ When doing the programming you should keep to the recommended working ranges in the table called 'Variable Current Levels with Standard Decoders'.
- Function key for programming the decoders



Programming using DPG programming device (part no. ZH90022)

- Connect the new decoder to the programming unit.
 Red cable into red terminal
 Blue cable into blue terminal
 In each case 1 black cable into the black terminals.
- Set the programming box switch to 'Mid-Position'.
- Click on the decoder number you want By doing so, you have selected the corresponding decoder number. The white circle gets highlighted with a dot.
- Click once on the 'Prog. Decoder'

The decoder's LED will now glow continuously.



• After no more than 2 seconds push the switch up to position 'Programme' and keep it held pressed for 2 seconds.

You have now saved the address to the decoder.

The decoder's LED should now give 5 short flashes.



Programming successfully performed

If this is not the case, repeat the programming from "Click once on the 'Prog. Decoder' button."

To now test the programmed decoder, please move the programming box switch down to the **'Test'** position.

Now click the 'Activate' button.

The decoder now gets enabled. If the LED (SOLENOID ON) on the programming device is glowing, the decoder flashes in the following rhythm:



Decoder active

To end, click on the 'Deactivate' button

The decoder is now ready for fitting.

Using a permanent marker pen, write the relevant number on the decoder type plate! To programme further decoders repeat the whole process.



If a decoder is connected to a power supply for more than 5 minutes, it goes automatically into programming protection mode. The decoder cannot then be programmed again until it has been disconnected for some time.

Programming with DPK programming cable (part no. SG50032)

- Connect each programme cable terminal to 1 of the decoder's black cables.
- Click on the desired decoder number By so doing you have selected the corresponding decoder number. The white circle gets highlighted with a dot.
- Click once on the 'Prog. Decoder'

The decoder's LED will now glow continuously.

	Read	dy fo	or pr	ogra	amm	ing	

• After waiting at least 2 seconds, you must short circuit the decoder's red and blue cables with each other.

You have now saved the address to the decoder.

The decoder's LED should now give 5 short flashes.

Pro	ograi	mmi	ing s	ucce	essfu	, Illy	perf	orm	ed

If this is not the case, repeat the programming.



It is not possible to use the programming cable to carry out any function checks. If you want to do this, you have to connect a solenoid to the blue decoder cable and to the red one.

To programme further decoders repeat the whole process. Write the relevant number on the decoder!!

Programming bidirectional decoders

The bidirectional decoders are programmed using the same procedure as for the standard decoders. The programming should then be done very quickly on the programming unit, as otherwise the cyclical fault scanning identifies that no solenoid is attached and as a result the programming process gets into a muddle.



Decoder list

The decoder list is used for conceptual recording of the installation data.

Decoder No.	Playing area Name	Number and models of sprinklers in the network	Water consumption m ³ /h	Irrig. Area m²	Flow Zone
		•			

Variable current levels with standard decoders

		Hi	1 igh	2 Stan	dard	Med	3 lium	4 Low		5 PD/AC-1	
		Holding		Holding		Holding		Holding		Holding	
	Current setting	power	I [ma]	power	I [ma]	power	I [ma]	power	I [ma]	power	I [ma]
1.	Perrot coil 30 W										
	1 coil (70m 2x1,5 ²)	1	8	1	7	1	5,5	1	4	1	5,7
	2 coils in series (70m 2x1,5 ²)	1	7	1	6,3	1	5	2	3,2	1	6
	3 coils in series (70m 2x1,5 ²)	1	6,3	1	5,7	1	4,4	2	2,7	1	6,5
2.	WM coils 30 W										
	1 coil (70m 2x1,5 ²)	1	11	1	10,5	2	8,5	3	6,5	1	7,5
	2 coils in series (70m 2x1,5 ²)	1	10	1	9	2-3	7,4	4	-	2	6
3.	Rain Bird coil 30 W										
	1 coil (70m 2x1,5 ²)	1	9	1	7,8	2	6,3	3-4	4,5	1	7
	2 coils in series (70m 2x1,5 ²)	3	8	4	7	4	6,5	3-4	4,2	4	6
4.	Toro coil 25 W										
	1 coil (70m 2x1,5 ²)	1	10,5	1	10	2	8	4	~	1	8,2
	2 coils in series (70m 2x1,5 ²)										
	1 coil (160m (90m 2x1,5 ² /										
	70m 2x1,0 ²))	1-2	13,5	3	11,5						
5.	Bürckert coil DC 50 W										
	1 coil (70m 2x1,5 ²)	1	8,5	1	7,2	1	5,5	3	3,5	1	5,5
6.	Richdel 811 coils 30 W										
	1 coil (70m 2x1,5 ²)	1	11,5	1	9,2	2	9	2	7,5		
	2 coils in series (70m 2x1,5 ²)	1	10	2	8	2	7,7	3	6,5		
	<u>Remarks:</u>										
		1. Current va	lues maesure	d on coil cabl	e with currer	t clamp					
		2. Holding p	ower: 1 very	good, 2 ok, 3	poor, 4 bad						
		3. Current S	settings:	0000/1100				_	(
			High:	800/110 ma					= suggested	values	
			Standard:	700/100ma							
			Medium:	600/80ma							
			Low:	400/50ma							

Control Unit Status

Via the 'Control Unit Status' menu the user receives a summary of current levels measured by the VCU.

Control unit stat	Selecte VCU1 us	d control unit	٠							Digital LED 1 LED 2	Analogue Earth current (mA) 0,0 Load current (mA) 57,0 Volt A (V) 28,4 Volt B (V) 28,6	Main Menu
• • 1	• • 2	• • 3	• • 4	• • 5	. 0 6	• 0 7	• • 8	. 0 9	O 10	O 11	I2	
O 13	0 14	O 15	0 16	O 17	0 18	O 19	O 20	O 21	0 0 22	O 23	O 24	
O 25	O 26	O 27	O 28	O 29	O 30	O 31	32	O 33	O 34	O 35	36	Activate
37	0 38	39		O 41				O 45	0 0 46	• • 47	48	
0 49	O 50	O 51	O 52	O 53 O	O 54	O 55 O	O 56	O 57	0 58	• • 59	O 60 O	
O 61	O 62	O 63 O	O 64	O 65	O 66 O	O 67	O 68 O	O 69	• • 70	• • 71	• • 72	Desetivate
0 73	0 74	0 75	O 76	0 77	0 78	Ø O 79	0 0 80	O 81 O	0 0 82	O 83 O	O 84	Deactivate
O 85	O 86	87	88	O 89 O	Ø O 90	Ø 0 91	Ø 0 92	Ø O 93	94	95	O 96	
Ø O 97	0 98	99	O 100	ID1	0 0 102	O 103	0 104	0 105	0 106	0 107	O 108 O	Not installed
O 109	I10	IN O 111	I12	III3	III4	I15	I16	III7	I18	I19	O 120	Open 🔾
O 121	I22	O 123	O 124	O 125	O 126	O 127	O 128	O 129	I30	I31	• • 132	Open Upen
O 133	O 134	0 135	O 136	0 137	O 138	O 139	O 140	O 141	0 0 142	• • 143	• • 144	Closed ●
O 145	I46	O 147	I48	I49	ISO 0 150	IS1	O 152	IS3	O 154 O	IS5	156	
O 157	0 158	O 159	O 160	0 161	0 162	O 163	0 164	0 165	0 166	O 167	O 168 O	
I69	I70	IT1	I72	IT3	I74	I75	I76	ITT	I78	I79	180 180	Pull-in current
O 181	0 182	0 183	O 184	O 185	0 186	O 187	O 188 O	O 189	International Optimization (1990)	In the second	• • 192	Standard 🔶
O 193	International Optimization (1994)	Interpretation (195)	O 196	Interpretation	International Optimization (1988)	International (199)	O 200	O 201	O 202	O 203	• • 204	Holding current
O 205	O 206	O 207	O 208 O	O 209	O 210	O 211	O 212	O 213	O 214	O 215	O 216	Standard 🔶
O 217	0 218	O 219	O 220	O 221	0 0 222	O 223	0 224	O 225	0 226	• • 227	• • 228	
O 229	O 230 O	O 231 O	32	33	O 234	O 235	O 236	O 237	0 238	39	O 240	
O 241	0 242	O 243	O 244	O 245	0 246	0 247	O 248	O 249	0 0 250	O 251	• • 252	Prog.
O 253	O 254	O 255										Decoder

Description of the measurements:

Earth current:	The decoder line's leakage current The leakage current must not exceed the following levels: More than 0.7A for 8 seconds More than 1.0A for 4 seconds More than 1.4A for 2 seconds More than 2.0A for 1 seconds
Load current:	Current loading of the decoder line in amps The decoder line's current draw is too high. The following limits must not be exceeded: More than 2.8A for 32 seconds More than 4.0A for 16 seconds The optimum load current is calculated from the VCU's current consumption (50ma) plus current consumption per connected decoder *** is 1mA. <u>Example:</u> You want a system with 100 decoders to have a load current of 150mA in stand-by mode.
Volt A: Volt B:	Output voltage (volts) of decoder line A Output voltage (volts) of decoder line B Level has gone below the voltage limit. Less than 20.0 volts for 32 seconds

LED 1 (yellow):	Status for irrigation programmes
ON:	Irrigation programme is currently running
FLASHING:	Irrigation programme has been stopped by the weather station.
SHORT FLASHES:	A running irrigation programme has been stopped.
LONG FLASHES:	VCU is in a waiting loop.
OFF:	A fault has occurred in the VCU.
<u>LED 2 (red):</u>	Status of 2-conductor cable
Contractor:	Fault in the 2-conductor cable (see VCU status)
FLASHING:	No fault, or the earth current is more than 0.25A. Operation being continued.
SHORT FLASHES:	Initialising the 2-conductor cable, connection of the decoders being established.
OFF:	Normal status. No faults.
Selected valves:	Indicates the selected decoder number / the valve. For opening, closing or programming.



5.6.2 Error Messages



On the 'Error Messages' menu all error messages get listed and saved. The error messages are saved until they are acknowledged.



5.6.3 Decoder Test



Decoder test	Select contro VCU1	ol unit	٠									Main Menu
. 0.1	• 0 2	• 0 3	• 0 4			.07	• • •		 10 	. 11	0 12	
0 0 13	0 0 14	0 15	0 16	0 17	0 1 15	0 19	0 1 20	0 1 21	0 0 22	0 7 23	0 24	
0 0 25	0 0 26	0 7 27	0 21	0 0 29	0 30	0 1 31	0 0 32	0 0 33	0 0 34	0 0 35	0 35	Alt
0 0 37	0 0 35	0 39	0 40	0 1 41	0 0 42	0 0 43	0 1 4	0 1 45	0 1 40	0 47	0 45	
0 49	0 50	0 51	0 52	0 53	0 54	0 55	0 56	0 57	0 55	0 59	. 60	
0 0 41	0 0 0	0 0 61	0 0 4	0 0 45	0.0.4	0 0 47	0 0 45	0 0 49	0 70	0 71	0 7	Installed
0 73	0 74	0 75	0 76	0 77	0 0 78	@ [] 79	0 0 00	0 0 01	0 0 02	0 0 03		
0 0 05	0 0 6	0 0 57	0 05		0 0 9	0 0 91	0 0 92	0 9	6 94	0 95	0 95	News
0 0 97	0 98	0 99	. 100	0 101	0 102	0 103	0 104	0 105	0 106	0 107	0 0 108	
0 109	0 110	8 111	0 112	0 113	0 114	0 115	0 116	0 117	0 118	0 119		Not installed
0 121	122	0 123	0 124	0 125	0 126	0 127	0 125	0 129	0 130	0 1 131	0 132	Open O
0 133	0 134	O 135	0 136	0 137	0 135	0 139	0 140	0 141	0 142	0 143	0 144	Closing
0 145	0 145	@ . 147	0 145	0 149	0 150	0 151	0 152	0 153	0 154	0 155	0 156	Closed .
0 157	0 0 155	C 159		0 161	B [] 162	0 163	0 154	0 165	0 165	0 167	0 155	Test time (sec.)
0 169	0 170	0 171	0 172	0 173	0 174	0 175	0 175	@ 177	6 175	0 179	0 150	32
0 111	0 182	0 183	0 154	0 105	0 106	0 187	0 155	0 139	0 190	0 191	0 192	
0 193	194	0 195	196	Image: 197	195	0 199	0 200	0 201	0 202	0 203	. 204	
0 205	0 206	0 207	0 205	0 209	0 210	0 0 211	0 212	0 213	0 214	0 215	0 216	
0 217	0 218	0 219	220	0 0 221	0 222		0 224	0 225	0 226	0 227	• 228	
0 229	0 230	0 231	0 232	0 233	0 234	0 235	0 236	0 237	0 238	0 239	0 240	-
0 241	0 242	0 0 243		0 245	246	247	0 245		0 250	0 251	0 252	The second second
0 253	0 0 254	0 255										

On the Support / Decoder Test menu you are able to carry out a passive decoder test.

This test only gives quantitative information about the functioning of the decoder. It is therefore imperative to check the functioning or defect in situ.

Around one minute after the decoder test is started the decoder line's current draw gets measured. This measurement is used as a reference value.

Now the first decoder to be tested gets enabled for the set test time.

At set intervals the current draw of the decoder line gets measured again and the average value established. The average value gets subtracted from the reference value.

The value calculated is the decoder's current draw.

The measuring is then continued with the next identified decoder.



With an intact decoder unit and solenoid unit the current draw is between 10 and 50mA. Where values are above or below this, an in-situ check should be carried out at the station.



As when current draw levels are outside of the tolerance the measurement gets repeated twice,

the entire measuring process can take a long time.



Performing a decoder test

- For selecting the decoders to be tested there are 3 possibilities
 - ✓ Click the 'All' button. All decoders then get tested.
 - ✓ Click the 'Installed' button. Only the entered decoders (red dot) get marked and tested.
 - ✓ Click on the decoder number you want.



Clicking the 'None' button deletes your selection.

- Select test time. Open the pull-down menu and select one of the preset times. The longer the test time, the more accurate the values obtained.
- Click on the 'Test' button to start the test.



While the test is running do not leave the menu.



As the test runs the red LED on the VCU flashes.



During the decoder test the pump decoder does not get started, however the valves do get physically opened. Please take appropriate measures (e.g. close main valve) if you do not want any flow of water.

For test results see 'Test Log'

5.6.4 Test Log



The individual decoders' current draw is shown via the following menu:

B	Select control unit		
Test log		Print	Main Menu
		<u>^</u>	
1	0.06.20 14:38 Set Auto Dec/state:247 000	- 11	Line
1	0.06.20 14:38 Man Dec timeout:001	- 11	
1	0.06.20 14:37 Man Dec timeout:002	- 11	
1	0.06.20 14:33 Set Auto Dec/state:247 001	- 11	
1	0.06.20 14:33 Set Man Dec/time:001 005	- 11	Decoder
1	0.06.20 14:33 Set Man Dec/time:002 005	- 11	
1	0.06.20 14:33 Set Man Dec/time:001 005	- 11	
1	0.06.20 14:23 Set Auto Dec/state:247 000	- 11	Transmitter
1	0.06.20 14:23 Man Dec timeout:001	- 11	
1	0.06.20 14:18 Set Man Dec/time:001 005	- 11	
1	0.06.20 14:18 Set Auto Dec/state:247 001	- 11	Curley
1	0.06.20 14:18 Set Man Dec/time:001 005	- 11	System
1	0.06.20 14:18 Set Auto Dec/state:247 000	- 11	
1	0.06.20 14:17 Set Auto Dec/state:246 000	- 11	
1	0.06.20 14:17 Set Auto Dec/state:247 001	- 11	Originator
1	0.06.20 14:17 Set Auto Dec/state:005 000	- 11	
1	0.06.20 14:17 Irrigation status: NOT ACTIV		
1	0.06.20 14:17 Irrigation status: WAITING	- 11	Decoder in
1	0.06.20 14:17 Irrigation status: WAITING	- 11	uetaii
1	0.06.20 14:17 Set Auto Dec/state:004 000	- 11	
1	0.06.20 14:17 Irrigation status: WAITING	- 11	
1	0.06.20 14:06 Set Auto Dec/state:003 000	- 11	Decoder test
1	0.06.20 14:06 Set Auto Dec/state:005 001	- 11	
1	0.06.20 13:50 Set Auto Dec/state:004 001	- 11	
1	0.06.20 13:50 Set Auto Dec/state:003 001	- 11	Programme debug
1	0.06.20 13:49 Set Auto Dec/state:246 001	- 11	
1	0.06.20 13:49 Irrigation status: WAITING	- 11	
1	0.06.20 13:49 Irrigation status: WAITING	- 11	Unknown
1	0.06.20 13:49 Irrigation status: ACTIVE	- 11	UIKIIOMI
1	0.06.20 13:49 Irrigation status: WAITING		
1	0.06.20 13:49 Irrigation status: WAITING		
1	0.06.20 13:49 Irrigation status: WAITING		
1	0.06.20 13:49 Irrigation status: WAITING		
1	0.06.20 13:49 Irrigation status: WAITING		
1	0.06.20 13:49 Irrigation status: WAITING		
1	0.06.20 13:49 Irrigation status: WAITING		
1	0.06.20 13:49 Irrigation status: WAITING		
1	0.06.20 13:49 Irrigation status: WAITING	*	

- ✓ select the control unit (VCU) you want.
- ✓ Select filters (right-hand button bar) such that only **'Decoder Test'** is checked.



If the current value shown is outside of the tolerance limit, the line gets highlighted with an asterisk '*'. If after 2 further tests the result is unchanged, the decoder number then gets highlighted with 'ERROR'.

The print preview at the end of the list indicates the number of decoders that are outside of the tolerance limit.

The tolerance range for a decoder's current draw is set at 10mA to 50mA

P

Test-Log

Control Unit: VCU1

06.10.2020 14:38:46	Set Auto Dec/state:247 000	
06.10.2020 14:38:09	Man Dec timeout:001	
06.10.2020 14:37:08	Man Dec timeout:002	
06.10.2020 14:33:14	Set Auto Dec/state:247 001	
06.10.2020 14:33:14	Set Man Dec/time:001 005	
06.10.2020 14:33:06	Set Man Dec/time:002 005	
06.10.2020 14:33:06	Set Man Dec/time:001 005	
06.10.2020 14:23:47	Set Auto Dec/state:247 000	
06.10.2020 14:23:08	Man Dec timeout:001	
06.10.2020 14:18:39	Set Man Dec/time:001 005	
06.10.2020 14:18:35	Set Auto Dec/state:247 001	
06.10.2020 14:18:28	Set Man Dec/time:001 005	

You can download the Testlog.pdf file or print it out.



If the decoder line has a short circuit, this test delivers results of only limited quality.



5.6.5 Update Control Unit





5.6.6 Info



Shown via this menu item are the Sirrah version number and the Regnerbau Calw GmbH address.





Für weitere Informationen stehen wir Ihnen gerne zur Verfügung! We remain at your full disposal for any further information you may require!

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