

## The KLARO WebMonitor<sup>®</sup> The intelligent remote control

We provide clear water





Direct access to plant data



Operational security for wastewater treatment systems



GSM, CSD, GPRS, LAN, WLAN, dLAN



# **KLARO** WebMonitor

#### ...the intelligent remote control for:

- Maintenance companies
- Caretakers
- Operators of KLARO sewage treatment plants
- Water boards
- Municipalities (e.g. local authority associations)
- Authorities (e.g. environmental agencies, water conservation agencies)
- · Commercial enterprises, hotels, campsites, holiday homes
- etc.



### KLARO WebMonitor. Remote control for more security!

The small sewage treatment plant is queried everyday and reports automatically when something isn't right - definitely!

GSM, CSD, GPRS

LAN, WLAN, dLAN

## Many support GSM, CSD and GPRS, but KLARO also supports LAN, WLAN and dLAN.

The KLARO WebMonitor is an internet portal that gives maintenance companies and operators the option to monitor small wastewater treatment plants online, regardless of where they are.

#### The KLARO WebMonitor saves time and work

The KLARO WebMonitor takes over the legally stipulated daily controls and automatically saves the plant data once a month. This means that the operator is relieved of its monitoring duties. The KLARO WebMonitor performs this task on the operator's behalf by calling the plant on a daily basis to check its operational status. In the event of errors in the plant the KLARO WebMonitor sends an error notification to the address stored in the system by SMS or Email.

The partner can then act upon this immediately in the plant. Errors can be acknowledged and settings can be changed.

Travelling time and costs no longer apply and the operator receives direct and fast assistance. All events are automatically saved in the KLARO WebMonitor and made available to download.

#### The right connection for all

The plant is monitored remotely via mobile radio or internet connection. The LANadapter required for the internet connection is connected between the control system and the router. For mobile radio connection via the GSM network, a modem with a M2M card is used. We possess both CSD and GPRS transmission technology.

#### Advantages for the operator

- Relief from daily and monthly monitoring
- Automatic log book management
- Monitoring of operational functions by professionals via the internet
- Monitoring when absent
- Monitoring of remote plants

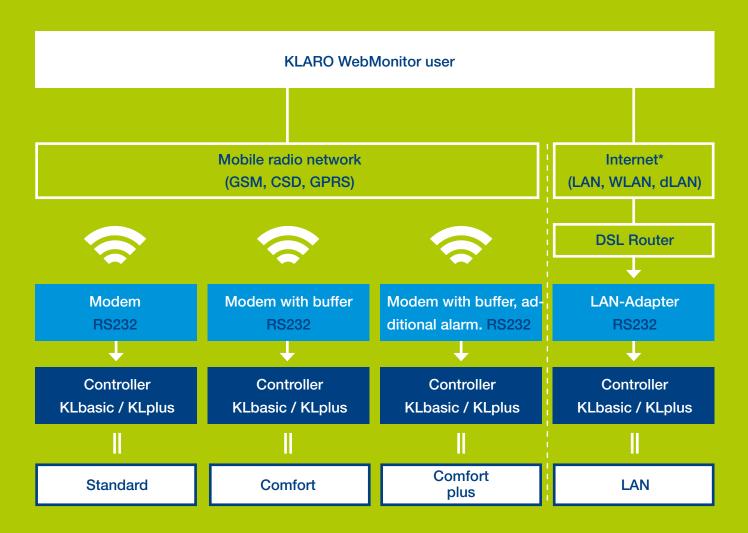
#### Advantages for our partners

- Monitoring and error management can be provided as a service
- Overview of all plants in own portfolio (table and chart)
- Continuous automatic monitoring of the plants
- Email or SMS notification in the event of an error
- Direct access to the plant data (GSM, LAN)
- Operation of the control system
- Automatic saving of monthly data

## The functional principal of the KLARO WebMonitor!

Quite simple in principle.

The KLARO WebMonitor offers a variety of possibilities for monitoring wastewater treatment plants.





## The different versions of the KLARO WebMonitors!

Standard, Comfort, Comfort Plus or LAN.

## The KLARO WebMonitor communicates with the wastewater treatment plant via mobile radio or direct internet access.

For the communication between the wastewater treatment plant and the KLARO WebMonitor via mobile radio network, the operator requires an M2M card, which is integrated into the modem. In Germany, this card is already included. Outside Germany, we can look together for the right provider for applications.

The user of the internet connection can choose between LAN, WLAN and dLAN. A private internet connection is required for this. The necessary LAN-adapter is connected between the user's router and the control system.

#### The individual KLARO WebMonitor versions

With the "**Standard**" package the plant is monitored using a modem. If an error occurs, notification of this is sent to the address stored in the KLARO WebMonitor immediately via SMS or email.

The **"Comfort**" package also includes a "battery pack". In the event of loss of power, there is enough power to transmit an error message.

The **"Comfort plus**" package is equipped with an additional alarm. This means that external devices can be monitored, e.g. the filling level of precipitant canisters in plants with phosphate precipitation.

The **"LAN**" package offers the easiest option for remote monitoring. The necessary LAN-adapter is self-configuring. As with the mobile radio solution, in the event of an error an email or SMS is sent by the KLARO WebMonitor to the stored address. Either an additional access point or dLAN-adapter is required for the WLAN and dLAN versions.







### Hardware overview!

The KLARO WebMonitor product range.

#### Achieve a great deal with minimal technology.



#### KLARO Modem KM12

- Quadband GSM /GPRS
- Incl. power supply, antenna, data cable
- 8 30 V DC
- 65 mm x 74 mm x 33 mm



#### **KLARO Adhesive Antenna**

- Frequency range (824-894, 880-960, 1.710-1.880, 1.850-1.990, 1.920-2.170)
- Cable length 2.50 m
- Emitter height 115 mm



#### **KLARO Battery Pack KP12**

- enables transmission of power failure messages
- 8.2 V, 2.000mAh
- 11 30 V DC
- 60 mm x 125 mm x 25 mm



#### **KLARO** Magnet Antenna

- Frequency range (824-960, 710-1.990, 2.150-2.250)
- Cable length 3.0 m
- Emitter height 115 mm



#### **KLARO Alarm KA12**

- additional error message input (e.g. for empty notifications of the precipitant container)
- 11.8 V DC / 20 mA DC
- 2 inputs
- 48 mm x 75 mm x 17 mm



#### KLARO LAN-Adapter KL12

- 5 V DC
- 2 digital and 1 analogue input
- 2 digital outputs (e.g. for empty notifications of the precipitant container)
- incl. power supply and data cable
- 64mm x 114mm x 33mm



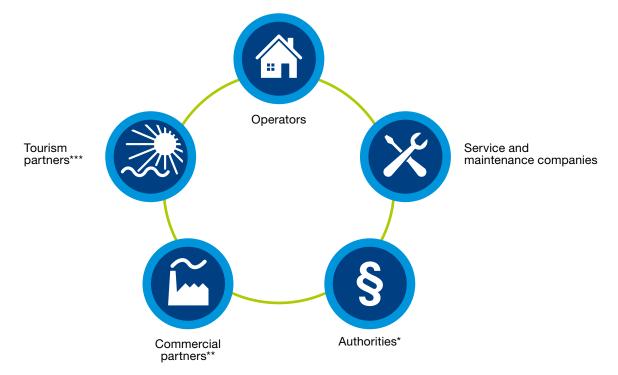
## KLARO WebMonitor management system!

The management system is designed based on the needs of the customer and the security of the plant.

#### Optimised access rights for the user.

The KLARO WebMonitor is suitable for many different users - maintenance companies, operators, authorities, companies, hotels, and many more. The different users obtain different access rights depending on the classification. In general, each person who would like to use the KLARO WebMonitor needs a license that can be purchased from KLARO. More information on this can be obtained upon request.

KLARO WebMonitor user groups:



\* local authorities, water conservation agencies

\*\* businesses, companies, planning offices

\*\*\* hotels, holiday apartments, campsites

## From log-in to firmware update. The KLARO WebMonitor in pictures!

Access and overview.

#### **Getting started!**

#### **Registration / Log-in**

Registration for the portal takes place under www.klaro-webmonitor. de. After verification of the data and assignment of a user profile, the KLARO WebMonitor is usually operational within 24 hours (excluding weekends and public holidays).

It is then possible to log in at any time using the access data that the user has created themself.

#### Map overview

The plants in an individual portfolio are displayed on a map on the homepage. The size of the map automatically adjusts depending on the number and position of plants. The individual plants can be selected by clicking them or entering them into the fields "Search plant" and "Select plant".

Furthermore, the error messages are displayed on the homepage in more precise detail (date, time, plant, message).





#### 

KLARO WebMonitor





#### An overview of plants!

#### **Plant overview**

All plants registered in a portfolio are listed in the plant overview. New plants can be added and existing plants can be deleted. Likewise you can perform status requests and synchronisations here. The location and name of the plant, type of connection (incl. telephone number/email) and operator data is listed under heading "Edit data".

#### Master and operational data

Information about the type and location of the plant, as well as contact details of the operator are listed under "Master data".

The total hours operational by listed by calendar week under the menu option "Operational data". This can also be commented on. The data can be saved as an Excel or PDF file on individual PCs.

DASHBOARD		RD	PLANTS	ACCO	UNT				
P	lants ove	rview	Master datas Operati	onal datas	Settings	Errors	Remote control	LAN-clie	int
ÁSHĐO	ARD :								
Planta	overview								
O Hin	zufügen								
Altiv	Status	10	Anlage	Anlage				Protokol	Altionen
10	٠	39	KLARO Eigenheim, Spitzwegstras	KLARO Eigenheim, Spitzwegstrasse 63, 95447 Bayreuth				CSD	5/10
	•	-	PLACO Demonster mehellis 1 55	112 Texatilitation	me i	20.000	salestat3.	SAME	-/ 10
10	0	45	KLARO Hotel, Seestrate 52, 8243	32 Walchensee		nut	11391020	CSD	3/10
10		47	KLARO Dorf, Bahmveg, 94239 Tri	LARO Dorf, Bahnweg, 94239 Triefenned				CSD	5/10
	112	71	KLARO Ferlenhäuser, Calbe, Soa	Contraction of the second		ZX plus	24071477	CSD	5/10

DASHBOARD	PLANTS	ACCOUNT			
Plant overview	Master datas Operati	onal datas Settings	Errors	Remote control	LAN-client

#### DASHBOARD : Operational datas

-

								PDF Expo		100000
Isonen	Altionen	Kommeitar	Verdichter	UV-Lampe	Kompressor	Ventil 4	Ventil 3	Ventil 2	Ventil 1	Woche
2	usgeschaftet 🗢	Verdichter ausgeschi	0.00	0.00	0.00	0.25	2.30	43.32	2.36	8/2012
2	Q	Start	0.00	0.00	0.00	0.06	0.36	10.00	0.36	9/2012
2	Ø	-	0.00	0.00	0.00	0.03	0.30	7.11	0.45	12/2912
		Testing State	0.00	0.00	2.48	0.08	0.20	1.49	0.30	13/2012
	and the second se	-	0.00	0.00	0.03	0.00	0.00	0.02	0.00	14/2012
			0.00	0.00	0.01	0.21	2.03	35.28	2.10	15/2012
			0.00	0.00	0.00	0.02	0.12	2.56	0.12	16/2012
Englist	Full Eng version col in July!	Ver								15/2012

### From log-in to firmware update. The KLARO WebMonitor in pictures!

Error management and remote control.

#### **Error management!**

#### **Settings**

This menu option gives an overview of all relevant settings in the control system. This includes:

- basic settings (PE, filtration level)
- cycle times
- underload detection
- telephone numbers
- etc.

DASHBOARD	PLANTS		ACCOUNT			
Plant overview	Master datas	Operational datas	Settings	Errors	Remote control	LAN-client
ASHEGARD : Settings						
Einstellungen						
Auspolesen am:	2012-04-	12 00:03:22				
Aktuelle Tabelle	KLARO SE	WD				
Anzahi Startzeiten	4					
Software Jumper:	0000001	5				
Kompressor EIN/AUS	0000					
Startzeiten						
Startzeit 1	01 30 00					
Startzeit 2	07:30:00					

#### **Errors**

The error messages accrue in this area and are logged precisely. The error messages can be saved as Excel files or PDF files on individual PCs. If a new error is reported, an eye appears in the last column, which disappears again once the error message has been read. This means that no error goes undetected.

Furthermore, there is the option to comment on error messages.

12

ERR\_DRUCK

2012-04-11

13:30:32

DASH	BOARD	PLANTS		ACCOUNT	<b>.</b>			
Plant	overview	Master datas	Operational	datas Settings		ote control	LAN-client	
ASHBOAR	D : Errors							
Störunge	n							
to Als gel	esen markieren	CSV Export	PDF Export					
Fettler-No	Fetter-Code	Datum	Unroet	Fettermeldung	Kommentar	Gelesen	Aldonen	
18	ERR_POWER_ON	2012-03-3	11 53 59	Power On	nut	nen	Q @	
1	ERR_POWER_FA	L 2012-03-3	11 52 33	Stromausfall	nut	nein	() (D)	
18	ERR_POWER_ON	2012-63-2	17:26.37	Power On	nut	34	φ	
.1	ERR_POWER_FA	L 2012-03-3	13 13 13 52	Stromausfail.	nut		Ø	
11	ERR_HAND	2012-03-3	10.33.00	Handbebleb	nut.	14	(U)	
55	ERR_HAND	2012-03-2	18 18 32 28	Handbetrieb	null		0	
11	ERR_HAND	2012-03-2	28 08:19:43	Handbetrieb	nut	(A.	φ;	
11	ERR_HAND	2012-03-3	17:01:17	Handbetneb	nut		¢	
11	ERR_HAND	2012-04-1	10 17:12:53	Handbetrieb	nut		Q.	
**	ERR_HAND	2012-04-0	15:57:07	Handbetrieb	nuti	34	(Q)	
11	ERR_HAND	2012-04-0	15 53,18	Handbetrieb	nuit	ja .	(C)	
3	ERR_POWER_FA	L 2012-03-3	10:31:08	Stromausfall	null	(A.	¢.	
11	ERR_HAND	2012-03-3	10 10 24 31	Handbetrieb	null		Ø	
12	ERR_DRUCK	2012-04-1	19 30:33	Min. Füllstand	null		0	

Mrs. Fulletand



#### Hands-on access!

#### **Remote control**

The plants can be actively accessed via the menu option "Remote control". The front view of the control is broadcast live with the current LCD display. The buttons are operated with the mouse. You have full access to all menu functions (even at service level). So error messages can be acknowledged and settings can be changed.

#### LAN-Client / Firmware-Update

Regular updates and software expansions ensure that the KLARO plants are always at state-of-theart. The transmission and exchange operations of the control system are no longer necessary. In the future, updates can be performed online.

Naturally, our customers will be informed when a new update is available.



DASHBOARD	PLANTS	ACCO	UNT		
Plant overview	Master datas	Operational datas	Settings Error		Remote control LAN-client
ASHBOARD : LAN-client					
Einstellungen					Alle Werte abfragen Alle Werte speichern
FIRMWARE, VERSION					98
PROTOCOL_VERSION					9B
MAC_ADDRESS					68
NET_USE_DHCP					SP
NET_STATIC_IP					
NET_STATIC_SUBNET	1				
NET_STATIC_GATEWAY	17				Fine
NET_STATIC_NAMESERVER	t		1	/	Verai Engli
UART_BAUDRATE	1			65	Full English version coming in July!
UART_PARITY					In Jun Mina
UART_DATABITS					<u> </u>
UART_STOPEITS					

KLARO GmbH Spitzwegstraße 63 95447 Bayreuth

Telephone: +49(0)921 16279-0 Fax: +49(0)921 16279-100 info@klaro.eu

More information at www.klaro.eu



Technical hotline +49(0)921 16279-330





Your KLARO specialist partner



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