**Technical Documentation** 



# **SECON-X**

### **SECON-Vap User Guide**

FAFNIR	ECON-803-0034 KIAU	Station, Street I	ne to S	SECO	N-X		Choose your language			
	VAPORIX	LEVEL	Environn	nental	History	Information				
VAPORIX				VAPORIX	» all FPs					
all EDs	ED.				VAF	PORIX	-			
	FP		side / Id	Status		Informatio	'n			
FP 1/2	1/2		A / 33966	OK		-				
FP 3/4	112		B / 33966	OK						
Pressure VPS-V			A / 33967	OK		-				
	3/4		B / 33967	OK		-				

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### 1 **Overview**

### **1.1 SECON-X system components**

SECON-X is a hardware-software-network system which comprises several components (see figure below) and performs the following tasks:

- Global data access to the SECON clients with web interface
- Remote diagnostics
- Remote display, evaluation and data storage
- Universal data format



Figure 1: SECON-X system and components

SECON-Vap... is the operating software of the SECON devices with connection to the VAPORIX System.



### 1.2 SECON-Vap and SECON-Vap+

**SECON-Vap** is the operating software of the SECON devices with connection to the VAPORIX System, which monitors and evaluates the vapour recovery at fuel dispensers. The SECON device serves as central signalling device for displaying the functional status of the vapour recovery and measured values of the VAPORIX system.

**SECON-Vap+** is an extension of the operating software of the SECON devices, which also allows the pressure sensors to be operated via the SECON device. The pressure sensors make it possible to monitor the gas pressure in Otto fuel tanks.

The measured values are displayed on a TFT colour screen. All functions are accessible using the touch screen user interface. Alarms are signalled visually by the display module and also audibly by a buzzer.

SECON-Vap... stores the measured values and the evaluations based on it locally in a database and in archive files. The data can be kept for 10 years+ and displayed on site. The measured values can be displayed locally on the SECON device as well as via a secure VPN connection (remote access). Stored values can also be called up via the secure VPN connection with Web-DAV. The synchronisation can be used to compare the locally stored data also with a server.

The SECON device is connected with the VAPORIX evaluation units (a maximum of 16 evaluations for 2 sensors / fuelling points each) as well as with VPS-V pressure sensors, see:



Technical Documentation, SECON client, art. no. 350076



Technical Documentation, VAPORIX Flow/Control, art. no. 207083

Technical Documentation, VPS pressure sensors, art. no. 350204

### 1.3 About this document

This documentation describes the function and operation of the SECON-Vap and SECON-Vap+ operating software as local application on the SECON devices (SECON clients), as well the remote access via a web browser (USER clients).

For the configuration of the SECON-Vap... software, see:

Technical Documentation SECON-Vap Administrator, art. no. 350134

For the installation and operation of the OpenVPN software for remote access, see:



Technical Documentation OpenVPN installation, art. no. 350199



### **1.4 Safety instructions**

The operating software SECON-Vap... is intended for SECON devices. The software must be used exclusively for this purpose. Please observe and follow all product safety notes and operating instructions. The manufacturer accepts no liability for any form of damage resulting from improper use!

The SECON-X system has been developed, manufactured and tested in accordance with stateof-the-art technology and recognised technical safety regulations. Nevertheless, the system may be a source of danger. The following safety precautions must be observed in order to reduce the risk of injury, electric shocks, fire or damage to the equipment:

- Do not change or modify the system or add any equipment without the prior consent of the manufacturer.
- Only use original parts. These comply with the technical requirements specified by the manufacturer.
- The installation, operation and maintenance of the SECON device, together with the SECON-Vap software, may only be carried out by expert personnel.
- Operators, fitters and service technicians must observe all applicable safety regulations. This also applies to any local safety and accident prevention regulations which are not stated in this manual.



If these safety instructions are not observed, it may result in the risk of accident or damage to the SECON-X system.



The SECON touch screen may only be operated using a finger or a stylus designed for this purpose. The use of pointed objects (e.g. screwdrivers, pens) may cause damage to the touch screen.



Useful tips and information in this manual that should be observed are written in italics and identified by this symbol.



### 2 SECON-Vap... as local application

Certain functions may be activated or deactivated depending on what the software is being used for. In the case of the SECON-VAP, for example, the "Level" function is deactivated.

The lock symbol indicates an existing VPN connection.

### 2.1 VAPORIX

#### 2.1.1 Fuelling points

FAFNIR		08	0		
VAPORIX	LEVEL	Environmental	History	Configuration	
all FPs		VAPOR	IX » all FF	0s	
FP 1/2					
FP 3/4		-		FP	
Pressure VI	PS-V			3/4	
III ok				č_	

Figure 2: VAPORIX main menu

The main view shows the status of the individual VAPORIX-Control fuelling points. When a fuel dispenser (e.g. FP 1/2) is selected, the window shown below is displayed:

AFNIR		08	14:35	0	
VAPORIX	LEVEL	Environmental	History	Configuration	
		VAPORIX » FP	1/2 » De	tails	
+	> side	e A (ld: 33966)			
+	> side	e B (ld: 33966)			

Figure 3: Fuelling point 1/2

If you click on the PLUS sign, the status, date and the measured values for an individual fuelling point are displayed (see figure below):



AFNIR			08:1	4:51					
VAPORIX	LEVEL	LEVEL Environmental History Configuration							
		VAPORIX	» FP	1/2 » Det	tails				
100	> side	A (ld: 33966)							
	Stat	us	Year-M	onth	Me	asurement val	ues		
	O	<	2016-07	~	graph	table	service		
+	> side	B (ld: 33966)	1						

Figure 4: Fuelling point 1/2 – Details

Status:

OK, Warning or Fail

Year-Month: Period for which measured values are displayed

Measured values:

- Graph: Graphic display of the recorded data (see Figure 5)
- Table: Tabular display of the recorded data (see Figure 6)
- Service: Tabular display of the services deployed (see Figure 7)



Figure 5: Fuelling point 1/2 – Details – Graph



	VAPORIX								~	
	sensor ID: 33966									
	Side:									
start time:					201	6-03-07 13	:53:00			
	end time:					6-03-07 16	:57:00			
			start ind	dex: 375						
			end ind	d index: 436						
			numb	er:	62					
No.	index	date	vapour flow	reco	overy ate	fuel flow	error counter	GK	temperature	
1	375	2016-03-07 13:53:00	39	9	95	41	0	38	13	
2	376	2016-03-07 13:56:00	40	1	02	39	0	50	13	
3	377	2016-03-07 13:59:00	39	9	94	41	0	42	12	
4	378	2016-03-07 14:02:00	41	1	00	41	0	57	10	
5	379	2016-03-07 14:05:00	39	1	02	38	0	58	13	
6	380	2016-03-07 14:08:00	38	9	97	39	0	61	11	V
7	381	2016-03-07 14:12:00	39	1	01	39	0	52	11	
<			••			••	-	•••	>	

Figure 6: Fuelling point 1/2 – Details – Table

side A » service history							
No.	date	dongle ID	event				
24	2016-03-29 08:49:00	404	10				
23	2016-03-29 08:38:00	404	0				
22	2016-03-29 08:36:00	404	10				
21	2016-03-29 08:26:00	404	0				
20	2016-03-29 08:25:00	404	10				
19	2016-03-29 08:15:00	404	1				
18	2016-03-29 08:15:00	404	0				
17	2016-03-29 08:12:00	404	9				
46	2016 02 20 09:09:00	404	0				

Figure 7: Fuelling point 1/2 – Details – Service



#### 2.1.2 Pressure sensors

Pressure sensors VPS-V are listed in the menu VAPORIX and can be displayed in detail.

AFNIR	08:23:09						
VAPORIX	LEVEL	Environmental	History	Configur	ation		
		VAPORIX » Pro	essure VPS-V	» Details	É.		
-	⇒ Pres	sure sensor 1 (Id: 60	24/0) FPs				
	Status	Select date	e Me		easurement values		
	OK	2016	6-07-19	graph	table	alerts	

Figure 8: VAPORIX – Pressure sensor

The view of a selected pressure sensor contains the following details:

- 1. Status: Sensor status
- 2. Select date: Selection of the date
- 3. Measured values: Display as graphic, as table, as warning/error table



Figure 9: Graphic display of measured values of pressure sensor



AFNIR			08:25	:02			
VAPORIX	LEVEL	Environmental	n	listory	Configura	ition	
		VAPORIX »	Press	ure VPS-V	» Details		
÷	⇒ Pre	ssure sensor 1 (Id	: 6024	/0) FPs			
		р	ressur	e data			^
		sensor	ID:	6024 / 0			
		start ti	me:	2016-07-1	13 00:00:00		
		end ti	me:	2016-07-1	13 23:59:59		
		num	ber:	1517			
index	di	ate	pressure [ hPa ] temperature [ °C		temperature [ °C ]		
1	2016-07-1	3 11:19:00		-99		-99	
2	2016-07-1	3 11:19:30		-99		-99	
3	2016-07-1	3 11:20:00		-99		-99	
4	2016-07-1	3 11:20:30	-99 -99				

Figure 10: Tabular display of measured values of pressure sensor

A touch of the *alerts* button displays the last WARNING and FAIL statuses with start and end date, current status and average value. During FAIL statuses the affected fuelling point IDs and the confirmation time are displayed in addition, see the following figure:

AF	NIR		10:25:0	2		$\Delta$	0	
VA	PORIX LEV	/EL Enviro	nmental Hi	story	Co	onfigurati	on	_
		VAPOR	RIX » Pressur	e VPS-V	*	Details		
	+ =	<ul> <li>Pressure sense</li> </ul>	or 1 (Id: 6024/0	) FPs				
			Pressure sensor (	ld: 6024 /	0)			
No.	Alarm type	Start date	Stop date	Average	FPs	Status	Activity	Confirmed
4	SYSTEM-ERROR	16-07-19 00:59:30	16-07-25 00:00:00	0.00		FAIL	Active	16-07-19 08:11:53
4	SYSTEM-ERROR SYSTEM-ERROR	16-07-19 00:59:30 16-07-18 09:06:00	16-07-25 00:00:00	0.00		FAIL	Active Active	16-07-19 08:11:53
4 3 2	SYSTEM-ERROR SYSTEM-ERROR SYSTEM-ERROR	16-07-19 00:59:30 16-07-18 09:06:00 16-07-15 00:59:00	16-07-25 00:00:00 16-07-21 00:00:00	0.00 0.00 0.00		FAIL WARNING FAIL	Active Active Active	16-07-19 08:11:53 16-07-15 08:27:15

Figure 11: Display of pressure sensor warnings and errors



### 2.2 LEVEL

The main menu "LEVEL" is another function of the SECON Software and will be displayed in case of the SECON-Lev application.

FAFNIR	08:26:33						
VAPORIX	LEVEL	Environmenta	al Histor	ry Con	figuration		
	not activ	ated	PORIX » á	all FPs			
-							

### 2.3 Environmental

The main menu "Environmental" is another function of the SECON Software and will be displayed for environmental sensors used with the SECON-Lev application.

FAFNIR	10	0:25:02	
VAPORIX LEV	EL Environmental	History Configurat	ion
	Environme	ntal » All Devices	
0 —	0 L—J	0	
Interstitial	Manhole Sump	Dispenser Sump	Oil Separator
0	0	0 —	0 —
INPUT	OUTPUT	- bar LPG	∦ <b>ĥPa</b> "
VISY-Input	VISY-Output	Pressure VPS-L	Pressure VPS-T
0 —		0 <b>1</b>	<sup>0</sup> اا
		LD	LD
LD Tank	LD Product Pipe	LD Delivery Pipe	LD Manhole Sump



#### 2.4 History

Depending on the installed application, under menu item "History" the VAPORIX alarms or also the pressure report are displayed.

FAFNIR		08::	27:52	
VAPORIX	LEVEL	Environmental	History	Configuration
		VAPOR	VAPORIX	(-Alarms
			Pressure	report
OK OK				FP 3/4 K

Figure 12: Histories

### 2.4.1 VAPORIX alarms

Alarms are displayed as follows:



1 The yellow alarm symbol indicates a warning.



The red alarm symbol indicates an error.

The grey alarm symbol indicates that the status cannot be requested.

For the meaning of the VAPORIX warnings and alarms, see technical documentation:



VAPORIX Flow and Control, art. no. 207083



Figure 13: VAPORIX error indication



In the menu a selection can be made between the active and inactive VAPORIX alarms or the error report of the pressure sensors:

- Active alarms are confirmed or unconfirmed alarms that are currently available.
- Inactive alarms are expired alarms that have been cancelled by the system.

			History » VAF	PORIX-Alarms » Active		
ſ	No.	FP	Alarm type	Start date	Confirmed	~
		· · · ·	No records/ala	arms in the database.		

Figure 14: Active alarms

		History » VAPO	ORIX-Alarms » Not active	9	
No	. FP	Alarm type	Start date	Stop date	~
4	4	VAPORIX-Flow not available	2016-07-25 13:55:43	2016-07-25 13:59:34	
3	2	VAPORIX-Flow not available	2016-07-25 13:55:42	2016-07-25 13:59:32	
2	3	VAPORIX-Flow not available	2016-07-25 13:55:42	2016-07-25 13:59:33	
1	1	VAPORIX-Flow not available	2016-07-25 13:55:41	2016-07-25 13:59:31	
		•	•		-

Figure 15: Inactive alarms



### 2.4.2 Pressure report

Here the respective pressure sensor is to be selected.

AF	NIR			10:25:02	Δ	0			
VAR	PORIX	LEVEL	Environm	ental Histor	y Configur	ation			
		His	tory » F	Pressure report	» Pressure sens	sor-0			
				Pressure report	t				~
			Pres	ssure sensor (Id: 6	5024 / 0 )				
No.	date	Status	Pressure [mBar]	Active Fails	Warning during day	Consecutive days of warnings	shutdown	FPs	
1	16-07-20	SHUT-DOWN	Min:0.00 Aver:0.00 Max:0.00	SYSTEM-ERROR	SYSTEM-ERROR	DEGRAD:0 GROSS::0 NO-TEST:0 VAP-LEAK:0 SYS-ERR:7			
2	16-07-19	SHUT-DOWN	Min:0.00 Aver:0.00 Max:0.00	SYSTEM-ERROR	SYSTEM-ERROR	DEGRAD:0 GROSS::0 NO-TEST:0 VAP-LEAK:0 SYS-ERR:6			
3	16-07-18	WARNING	Min:0.00 Aver:0.00	-	SYSTEM-ERROR	DEGRAD:0 GROSS.:0 NO-TEST:0			~

Figure 16: Pressure report

The list of the last daily reports includes date, daily status, maximum pressure, minimum and average value, WARNINGS with average value and the number on subsequent days during which a certain WARNING has occurred repeatedly. In case of a FAIL status, also the switch-off time and the affected fuelling point IDs are listed.



#### 2.4.3 Evaluation of pressure sensor data specific to countries (AU/IL)

#### Data

The data of connected pressure sensors are requested and stored at an interval of 30 seconds.

#### WARNINGS

The pressure sensor data are requested at an interval of 30 seconds. The data are continuously examined for an error condition. If such occurs, first a WARNING is generated which remains active until the values no longer correspond to the error condition.

Error type	Condition
DEGRADATION	Half of the measured pressure values of the last hour (60/120) must lie under -20 mbar or above 7.5 mbar.
GROSS	3 minutes of the measured pressure values of the last hour (6/120) must lie under -25 mbar or above 12.5 mbar.
NO-TEST	All measured pressure values of the last hours (except incorrect meas- urements) must lie within a range of +/- 0.5 mbar and the petrol station must not be operating (no refuelling).
VAPOUR LEAK	For 23 hours of the day the measured pressure values must lie within a range of +/- 0.5 mbar and the petrol station is in operation.
SYSTEM ERROR	The pressure sensor is not available for at least 1 hour of the day or supplies incorrect data.

Table 1: Error types WARNINGS (pressure evaluation AU/IL)

|--|

Information	Value format
Error type	DEGRADATION, GROSS, NO-TEST, VAPOUR LEAK, SYSTEM ER- ROR
Start of error state	YYYY-MM-DD hh:mm:ss
End of error state	YYYY-MM-DD hh:mm:ss
Average value	mbar

Table 2: Data structure WARNINGS (pressure evaluation AU/IL)



#### FAILS

While WARNINGS can occur individually they do not result in a switch-off. Only when a specific number of WARNINGS is exceeded within a specified time is a FAIL recognized and a switch-off of the monitored fuelling points initiated. Attention to a FAIL state is drawn with a visual and an acoustic alarm. This must be acknowledged manually.

The occurrence of a FAIL state requires maintenance of the system by a service technician, who can deactivate the FAIL state after rectifying the problem and reset the switch-off.

Error type	Condition
DEGRADATION	One DEGRADATION WARNING must have occurred during the last 7 consecutive days at least once a day. The switch-off occurs after 30 days.
GROSS	One GROSS WARNING must have occurred during the last 3 consecutive days at least once a day. The switch-off occurs on the 7th day after its first occurrence.
NO-TEST	No switch-off required.
VAPOUR LEAK	One VAPOUR LEAK WARNING must have occurred during the last 2 con- secutive days at least once a day. The switch-off occurs on the 7th day after its first occurrence.
SYSTEM ERROR	One SYSTEM ERROR WARNING must have occurred during the last 2 consecutive days at least once a day. The switch-off occurs on the 7th day after its first occurrence.

Table 3: Error types FAILS (pressure evaluation AU/IL)

#### FAILS are stored in the database with the following information:

Information	Value format
Error type	DEGRADATION, GROSS, VAPOUR LEAK, SYSTEM ERROR
Start of FAILS	YYYY-MM-DD hh:mm:ss
Time of switch-off	YYYY-MM-DD hh:mm:ss
Date of confirmation	YYYY-MM-DD hh:mm:ss
Average value	mbar
Fuelling points to be shut down	Logical numbers of the fuelling points, separated by semicolons

Table 4: Data structure FAILS (pressure evaluation AU/IL)



### **Daily reports**

At each change of day a summary of the events which occurred during the day and the measured values is created. This summary contains the following details:

Information	Value format	
Start of day	YYYY-MM-DD	) hh:mm:ss
End of day	YYYY-MM-DD	) hh:mm:ss
Status of the day	PASS:	No errors have occurred.
	WARNING:	At least one WARNING has occurred.
	FAIL:	A FAIL is active, there is the danger of a switch- off.
	SHUTDOWN:	At least one of the monitored fuelling points has been shut down and must be serviced and un- blocked by a service technician.
	NO-TEST:	The petrol station is not operating (no fuelling is being registered, pressure difference is balanced.
Average value	mbar	
Maximum pressure	mbar	
Minimum pressure	mbar	
The types of WARNINGS which have occurred	DEGRADATIO ROR	N, GROSS, NO-TEST, VAPOUR LEAK, SYSTEM ER-
The types of FAILS which have occurred	DEGRADATIO	N, GROSS, VAPOUR LEAK, SYSTEM ERROR
Time of switch-off	YYYY-MM-DD	hh:mm:ss (only when set)
Fuelling points to be shut down	Logical numb	er (only if FAIL is active)
Average value of DEGRA- DATION errors of the day	mbar	
Average value of the GROSS errors of the day	mbar	
Consecutive days on which a WARNING type has oc- curred.	n days each fo LEAK, SYSTEN	or DEGRADATION, GROSS, NO-TEST, VAPOUR 1 ERROR

Table 5: Data structure day reports (pressure evaluation AU/IL)



### 2.4.4 Alarms and switch-off by pressure monitoring

#### **Display of alarms**

The pressure evaluation is different in countries with legally prescribed monitoring between WARNINGS and FAILS. WARNINGS are temporary error states whose occurrences are registered and stored.

It is only when a certain defined limit is exceeded that a FAIL state occurs and an acoustic and visual alarm is being output. This contains information on the type of error and must be acknowledged. The date of the acknowledgement is stored.

Since a FAIL sets the state of the petrol station into an alarm condition due to the switch-off process of the fuelling points, this is also displayed in the web interface on the petrol station overview page of the SECON server, as well as the web interface of the individual SECON-Vap+ system.

	VPS_V 5023
	Description
8	Pressure Sensor #0 FAIL State GROSS
	SHUTDOWN SET TO 2013-05 04 00:00:00 Confirm

Figure 17: Alarms and switch-off of SECON-Vap+ (series of pictures)



#### Local display on the touch screen

An alarm window is displayed on the SECON-Vap+ and an acoustic alarm sounds. By touching Confirm all or Confirm, the alarm is closed.



#### Web interface

A warning symbol  $\triangle$  is displayed in the web interface. This remains as long as the error has not been rectified by a service technician. More detailed information is displayed if the mouse cursor is moved across the symbol.

		a 144	-0-			-
			Ihre Ob	jekte		
Nr.	_internalitio_		Adres		Status	Online
1	9005-66	Station AF, Sie	OK.			
2	22.9	PAURON	ACHOR, NOFAR	ST., PANANIA, ISPAEL	ox	connect
3	559	SIVM, S	T.SAM. PETHA	TIKSA, Tel Avis, Isreal	OK	comect
4	I	Pytrai Station	Street No. 1, D	12345, Hamburg, Germany	OK	~
5	A					
6				********		
7		121				
	used	Warning		245ww, Hamburgew, Germanywe	Variety	
5	129			007 123, Hamburg 123, Germany 123	CK.	Constants
		OK conne				

#### Switch-off

A FAIL state always sets a switch-off time that is dependent on the type of the error. This process follows analogous to the switch-off of the individual fuelling points by the VAPORIX-Control, yet it affects all monitored fuelling points.



The switch-off times are displayed on site and in the web interface under item VAPORIX on the overview page of the fuelling points.

The switch-off counter continues to run after the start independent of the SECON-Vap+ system. Exiting the error state or a switch-off of the SECON-Vap+ does not stop this process. A reset can only be performed by a service technician with a VAPORIX service dongle.

#### **Resetting the switch-off counter with the VAPORIX service dongle**

The reset of the switch-off counter in the event of been triggered by pressure monitoring is not carried out individually on the VAPORIX controls in the fuel dispensers but on the SECON-Vap+ for all devices. There is no reset of an individually triggered switch-off on the fuel dispenser.

A reset can only be carried out by service technicians who must use a VAPORIX service dongle licensed by FAFNIR.



For resetting, the VAPORIX service dongle must be connected to the SECON Vap+ via the adapter cable.

Figure 18: Resetting of FAIL conditions SECON-VAP+ (picture series)





The reset with the service dongle is performed only for a switch-off that was triggered as a result of exceeding the pressure limit values.

The dongle is recognized by the system and a message (1) is displayed.



Now the FAIL state can be cancelled and the switchoff terminated by turning the switch to position 5 and with a press of the button on the dongle. The reset is confirmed with a further message (2).

In the overview of the fuelling points on the screen of the SECON-Vap+ all fuel dispensers with status OK are displayed during the next status update (1 min. interval), unless further switch-offs have been directly initiated by the VAPORIX systems. These must be deactivated directly on the fuel dispensers.



### 2.5 Configuration

### 2.5.1 Info

The following sub-menus are displayed in the *Configuration* » Info menu option:

- Station data
- Software version
- Software licence
- Network IP address
- Route table
- VPN

11:52:43	· · · · · · · · · · · · · · · · · · ·	
Environmental His	tory Configuration	
Station	Information	
Software Version	Settings	
Software License	Tools	
current IP Address	3/4	
Route Table		
VPN		
	Environmental His Station Software Version Software License current IP Address Route Table VPN	Environmental History Configuration          Station       Information         Software Version       Settings         Software License       Tools         Outrent IP Address       3/4         Route Table       VPN

Figure 19: System info



#### **Station data**

The configured address, the geographical coordinates and the global status of the station are displayed in this table.

AFNIR	08:47:11	
VAPORIX LEVEL	Environmental History Configuration	
	Configuration » Information » Station	
	Device	
Designation	ECON-003-0034	
	Station	
Internal No.	0	
Designation	Klaus Station	
Street	Street No. 1	
Postal Code	D-12345	
City	Hamburg	
Country	Germany	
Status	Alarm (2016-07-14 11:08:38)	
Latitude	53.5686	
Longitude	10.0386	

Figure 20: Info – Station data

The "State" status is equivalent to the alarm messages and is displayed here in the colours green (OK), yellow (warning) and red (error).

#### Software version

AENIR 11		:55:29	0		
VAPORIX	LEVEL	Environmental	History	Configuration	
	C	onfiguration » Info	ormation »	Software Version	
	Designati	on		Software Version	
SECON			2.2.2.0		
	GUI		2.0.7.255		
	Translatio	on	1.0.5.0		
	Fafnir			1.2.0.0	
	Intern-At	g		1.0.5.7	
	Extern-A	tg		1.0.5.6	
Dispatcher			1.3.0.3		
	Alarm-Man	ager	1	1.0.5.0	
	Vaporix			1.4.2.255	

Figure 21: Info – Software version



#### Software licence

The menu option *Configuration »Info » Software licence* is not supported as yet.

AFNIR	10:25:02				
VAPORIX	LEVEL	Environmental	History	Configuration	
	С	onfiguration » Inf	formation »	Software License	
		Sof	tware License		

Figure 22: Info – Software licence

#### **Network IP address**

The current data and configurations for the local network connection are displayed here. The local connection and the VPN interface must be active in order to ensure that the system can be accessed externally.

AFNIR 20:39:02		
APORIX LEVEL	ORIX LEVEL Environmental History Configuration	
Conf	figuration » Information » current IP Address	
Name	Value	
Interface	eth0	
IP	192.40.50.30	
MAC	00:07:8E:04:14:A6	
Bcast	0.0.0.0	
Mask	255.255.255.0	
RX Bytes	456581016 (435.43 MiB)	
the second se		

Figure 23: Info – Network IP address

#### Route table

The routing IP addresses are listed here.

20:39:57				
APORIX LEVEL Environmental History Configuration		Configuration		
	Configuration » Informa	tion » Ro	ute Table	
destination	Gateway		Genmask	lface
COMPANY OF A DATA OF A DAT				
10.100.15.226	0.0.0.0		255.255.255.255	tun0
10.100.15.226 10.100.8.1	0.0.0.0 10.100.15.226		255.255.255.255 255.255.255.255	tun0 tun0
10.100.15.226 10.100.8.1 192.40.50.0	0.0.0.0 10.100.15.226 0.0.0.0		255.255.255.255 255.255.255.255 255.255.	tun0 tun0 eth0
10.100.15.226 10.100.8.1 192.40.50.0 10.100.8.0	0.0.0.0 10.100.15.226 0.0.0.0 10.100.15.226		255.255.255.255 255.255.255.255 255.255.	tun0 tun0 eth0 tun0

Figure 24: Info – Route table



#### VPN

The current data and configurations for the virtual private network (VPN) are displayed here. The interface must be active in order to ensure that the system can be accessed externally.

AFNIR 20:40:58		0		
VAPORIX LEVEL Environmental Hist		History	tory Configuration	
		Configuration » Int	formation »	VPN
Na	me		١	/alue
Inter	face	tun0		
I	P	10.100.15.225		
P-2	z-P		10.10	0.15.226
Ma	isk		255.25	5.255.255
RX Bytes			1802392 (1.72 MiB)	
TX B	lytes	2072680 (1.98 MiB)		

Figure 25: Info – VPN



3 Remote access

### 3.1 Connection to the SECON Server

#### 3.1.1 Requirements

Remote access from the user clients (PC/laptops) to the SECON server takes place via a secure VPN network connection. This requires the installation of the Open-VPN software on the PC used.



For remote access, "Mozilla Firefox" or "Opera" are the preferred browsers. Full functionality may be restricted with other browsers.

To install the OpenVPN software, see the technical documentation:

SECON-X OpenVPN installation, art. no. 350199

### 3.1.2 VPN connection

A secure VPN connection (TLS) is used for remote access, i.e. all the data is encrypted.

- (1) Start the program "OpenVPN GUI".
- (2) The VPN connection is created by right clicking on the "OpenVPN GUI" symbol on the Windows taskbar and selecting "Connect".



Figure 26: OpenVPN GUI

When a connection is successfully created, the colour of the OpenVPN icon in the Windows taskbar changes from red to green.

<sup>(</sup>P)



#### 3.1.3 Browser

The home page for the SECON server can now be called using the web browser. To do this, enter the allocated IP address in the address line of the browser.

#### 3.1.4 SECON Server home page

FAF	FAFNIR Welcome to SECON-Server			
View	History Configurat	on Information		
		Your Objects		
No.	Internal Id	Address	Status	Online
1	4 / 5000-40-800	AT TO BRD, Bassings' Brook Tot, 11277. Standal, Germany	ОК	connect
© FAFNIR Strengt In	G FAFNIR GrubH - Sensors & Systems   Bahr Hads G 102/65 Hamburg   Tel. +49 40 / 39 82 07-0			

Figure 27: SECON server home page

A table showing the configured petrol stations is displayed on the home page of the SECON server. Using Google Maps, the petrol station locations can also be displayed on a map.

#### **Table view**

In table view, all the petrol stations are displayed with their number, name, address, status and network connection:

No.:	Sequential number
Internal ID:	Internal petrol station number (see SECON-Vap configuration)
Address:	Petrol station address
Status:	Status of the SECON-Vap
	(if the user hovers over this with the mouse, a data table is displayed)
Online:	Then network connection is displayed with "–" (not connected) or " <i>connect</i> " (connected).

The connection to the individual petrol stations is created by clicking on "*connect*". To obtain access to the petrol stations, a password must be entered (see section "Verification").



#### **Google Maps / Full screen view**

In order to display the petrol station locations on a map, select the menu option "View – Google Maps" or "View – Full screen".

Each individual pin represents a petrol station. A jumping pin indicates that the petrol station is online and that it can be accessed by clicking on it.

The colour indicates the status:

- Green: OK
- Yellow: Warning
- Red: Error



Figure 28: Station locations

In order to obtain detailed information regarding the petrol stations, all the user needs to do is to point at the relevant pin with the mouse. This opens a pop-up window showing further details.

Double clicking (left mouse button) on a pin creates a direct connection to the selected petrol station. To do this, a password must be entered (see next section).

In full screen view, the Google map is displayed without any further SECON menu bars.

The normal view is restored by clicking the Back button in the address line of the browser.



### **3.2** Connection to the SECON device (SECON client)

The connection to a SECON device is established via the home page of the SECON server. To do this, select the SECON device of a petrol station with a click on the corresponding button "*connect*":

FAFNIR Welcome to SECON-Server				
View	History Configuration	Information		
		Your Objects		
No.	Internal Id	Address	Status	Online
1	9 / 00000-000-000	ATT TO BRE, discorps: Brease Tox, FTFT, Neurald, Germany	ОК	connect
S FAFAIR GmbH - Sensors & Systems ( Bahar Marde & 1993) Hamburg   Tel. +49 40 / 39 82 07-0 Sansage Lagression     Personale -				

Figure 29: SECON server home page

This is followed by a request for a password for the verification of the user:

Weiterleitung	usikawalajish wandan dijalan Cin bista bian
	vertergeleitet werden, klicken sie bitte hier.
Forwarding	
If your browser is not redirecte	ad automatically, please click here. <u>SECON</u>
Authentica	tion Required
0	A username and password are being requested by http://192.40.50.146. The site says: "SECON-X"
User Name:	<u> </u>
Password:	
	OK Cancel

Figure 30: Verification

User name:	fafnir
Password:	fafnir22766

If the verification is successful, you will go to the SECON device of the selected petrol station by remote access.





The data shown by remote access is identical to the data in the display of the SECON devices (see chapter2).

FAFNIR	0 ECON-00300	W 134, Klaus	elcoi Station, Street	<b>me to \$</b> t No. 1, D-12345, Ha	SECO	<b>N-X</b>		Choose your language
	VAPORD	K i	LEVEL	Environn	nental	History	Information	
VAPORIX		<b>Ja</b> <sub>1</sub>			VAPORIX	» all FPs		
all EDe	194					VAI	PORIX	
ul er s	100	FP		side / Id	Status		Informatio	'n
FP 1/2	in the second se	1/2		A / 33966	OK		-	
FP 3/4		112		B / 33966	ОК		-	
Pressure VPS-V	UNITED N			A / 33967	ОК		-	
		5/4		B / 33967	ОК		÷	
	-	-	-					

Figure 31: Remote access to the SECON device - VAPORIX Menu

#### 3.2.1 VAPORIX menu

#### **Fuelling points**

In main view, the status of the individual VAPORIX-Control / fuelling points is displayed.

When a fuelling point is selected, the relevant window, showing further details, is displayed (e.g. Figure 3: Fuelling point 1/2).

FAFNIR	D ECON-8030034 Kigu Station, Stre	et No. 1, D-12345, Hamburg, German	N-X DN-
	VAPORIX LEVEL	Environmental	History Information
VAPORIX		VAPORIX »	FP 1/2 » Details
	ide A (Id: 33966) ⇒ side A (Id: 33966)		
CD 4/2	Status	Year-Month	Measurement values
	ОК	(2016-07	show download service
FP 3/4	ide B (Id: 33966) ⇒ side B (Id: 33966)		
Pressure VPS-V			

Figure 32: VAPORIX – Fuelling point (FP) 1/2

If you click on the PLUS sign, the status and measured values for the fuelling point are displayed for the selected date:

Status:OK, Warning or FailYear-Month:Period for which measured values are displayedMeasured values:Show: Graphic and tabular display of the recorded data (see figure below)



Measuring values "show": The measured values are displayed in graphic and tabular form:



Figure 33: Fuelling point 1/2 - Details - Show



Measuring values "download":

If the user clicks on the required xml file, the data is displayed in tabular form (see figure below). If the user right clicks on the required xml file, a drop-down list is displayed and the file can be downloaded.

FAFNIR	Velo		CON-X	Choose your language						
2	VAPORIX LEV	EL Environmenta	History	Information						
VAPORIX		VAPORIX	» FP 1/2 » De	etails						
1	] 📑 ⇒ side A (ld: 33966	ide A (Id: 33966)								
	Status	Year-Month	i.	Measurement values						
FP 1/2	ок	(2016-07	Show	download service						
FP 3/4	⇒ side B (Id: 33966	5)								
Pressure VPS-V	Index of /Vaporix/3396	56/A/								
	Name Parent Directory/ 2015-04_33966 A.xml 2015-05_33966 A.xml 2015-06_33966 A.xml 2015-07_33966 A.xml	Last Modified 2015-Apr-30 16:38:31 2015-May-28 13:37:23 2015-Jun-01 12:13:54 2015-Jun-09 17:24:42	Size Type - Directory 1.2K text/xml 115.2K text/xml 1.2K text/xml 1.2K text/xml							

Figure 34: Fuelling point 1/2 – Details – Download

Measuring values "service":

Tabular display of service deployment (see figure below)

FAFNIR	1/ECON-0034034, Batro	station, Street No. 1, D-12345, Hamburg	CON-X	Choose your language	
	VAPORIX	LEVEL Environmente	l History I	nformation	
VAPORIX		VAPORI	( » FP 1/2 » Details		
	Stat	us Year-Mont	1	Measurement values	
FP 1/2	OF	(2016-07	Show	download service	
FP 3/4	$\Rightarrow$ side B (Id	: 33966)			
Pressure VPS-V		sic	e A » service history		
	No.	date	dongle ID	event	
	28	2013-06-26 09:58:00	250	9	
	27	2013-06-26 09:52:00	250	0	
	26	2013-06-25 17:07:00	250	10	
	25	2013-06-25 16:56:00	250	0	
	24	2012 06 25 16:49:00	250	10	

Figure 35: Fuelling point 1/2 – Details – Service



#### **Pressure sensors**

In the Pressure VPS-V menu all sensors are listed and can be viewed by clicking on the plus sign in detail.

FAFNIR	Welco	me to SECON-) 1 No. 1, D-12345, Hamburg, Germany.	K Sector Choose your language				
	VAPORIX LEVEL	Environmental Hist	ory Information				
VAPORIX	a ⇒ Pressure sensor 1 (	VAPORIX » Pressure VPS-V » Details ⇒ Pressure sensor 1 (Id: 6010 / 0) FPs					
	Status	Select date	Measurement values				
FP 1/2	ОК	2016-07-20	show download alerts				
FP 3/4 Pressure VPS-V	© FAFNIR Group Sensors & Systems Silemen Impresented of the Diche Him	I Bahrenfelder Straße 19 i 22765 Hamburg I veite	Tel. +49 40 / 39 82 07-0				

Figure 36: Environmental sensors - Pressure

The view of a selected pressure sensor contains the following details:

- 1. Status: Display of the sensor status
- 2. Select date: Selection of the date for the display of the measured values
- 3. Measured values: Display of the measured values in graphic or tabular form for the download, or as error table (alerts)



Figure 37: Measured pressure values, graphics and table

#### **Graphics and table**



#### Download

A list with the stored measured values of the individual days is displayed via Download. The format for saving is XML. The measured values are available for downloading.

FAFNIR	Wel			N-X		Choose	a your language			
	VAPORIX LI	VEL Environme	ental	History	Infor	mation				
VAPORIX		VAPORIX	» Pres	ssure VPS-V	» Details					
1	☐ ⇒ Pressure sens	Image: A state of the state								
	Status	Selec	t date			Measurement values				
FP 1/2	ок	10.00	2016-0	07-26	show	download	alerts			
Processo VDS V	Index of /Pressure/C	/2016-07/								
	Name Parent Directory/ 2016-07-13.xml 2016-07-15.xml 2016-07-15.xml 2016-07-18.xml	Last Modified 2016-Jul-14 00:00:08 2016-Jul-15 00:00:28 2016-Jul-15 14:20:00 2016-Jul-19 00:00:24	Size 217.0K 371.4K 240.9K 267.5K	Type Directory text/xml text/xml text/xml text/xml						

Figure 38: Measured pressure values, download

With a right click on a link and the selection of Save under... the selected data set can be saved locally

#### Alerts

After a click on the ALERTS button, a selection box of the pressure sensors is displayed. Select a pressure sensor and click on Display.

A list of the last daily reports appears. The list includes date, daily status, maximum pressure, minimum and average value, WARNINGS with average value and the number on subsequent days during which a certain WARNING has occurred repeatedly. In case of a FAIL status, also the switch-off time and the affected fuelling point IDs are listed. To display the values the mouse pointer must be set on values in the respective fields.

FAFNIR	1/ECON-90	Welc	ome to S Sireet No. 1, D-12345, Har	BECO	N-X			Choose	your language
	VAPO	RIX LEVE	E Environm	ental	History	Inf	ormation		
VAPORIX	⇒	Pressure sensor	VAPORIX	( » Press	ure VPS-V »	Detai	S		
(FP 02				Pressure sense	or (Id: 6010/0)				
FP 3/4	No.	Alarm type	Start date	Stop date	Average	FPs	Status	Activity	Confirmed
Pressure VPS-V	1	SYSTEM-ERROR	2016-07-25 14:57:30		0.00		WARNING	Active	

Figure 39: Measured pressure values, alerts



#### 3.2.2 LEVEL

The main menu "Level" is another feature of the SECON software and will be shown for the SECON-Lev application.

FAFNIR	1/ ECON-002-0034, Ept		ne to SECC	DN-X		Choose your language
	VAPORIX	LEVEL	Environmental	History	Information	
LEVEL			LEVEL	» not activated		
not activated	Information: this	option is not ac	<b>tive!</b> Sahrenfelder Straße 19 i 22765	Hamburg í Tel. +49 40	1 / 39 82 07-0	

#### 3.2.3 Environmental

The main menu "Environmental" " is another feature of the SECON software and will be shown for environmental sensors with the SECON-Lev application.

FAFNIR	1/EC0	ON-003-0034; Petro Sta	lcome to SE ation, Street No. 1, D-12345, Hamburg	CON-X	Chosse your language
	۷	APORIX	LEVEL Environment	al History	Information
Environmental			Enviro	nmental » All Devic	ces
		Device Type	Status / Configuration	1.	Information
All Devices	1	Đ.	Designation Interstitial Devices 0 Alarms 0	Object of meas	urement: Double-walled tanks
Manhole Sump	2		Designation Manhole Sun Devices 0 Alarms 0	Object of meas	urement; Manhole sump
Oil Separator	3	Ę.	Designation Dispenser St Devices 0 Alarms 0	Ump Object of meas	surement: Dispenser sump
VISY-Output	4		Designation Oil Separator Devices 0 Alarms 0	Device for mon layer.	itoring the height / thickness of the oil or light liquid
Pressure VPS-L Pressure VPS-T	5	INPUT	Designation VISY-Input Devices 0 Alarms 0	Digital 8-Chanr	nel Input Module
LD Tank	6	OUTPUT	Designation VISY-Output Devices 0 Alarms 0	8-Channel Rela	ay Output Module
LD Delivery Pipe	7	bar LPG	Designation Pressure VP Devices 0 Alarms 0	S-L Pressure sense hydrostatic pre	or VPS-L serves for monitoring the gas pressure, the ssure and product density in LPG tanks
LD Manhole Sump	8	hPa:	Designation Pressure VP Devices 0	S-T Pressure sense pressure and p	or VPS-T serves for monitoring the hydrostatic roduct density in tall tanks.



### 3.2.4 History

#### **Downloads**

This menu provides central access to history data for the activated services which can be downloaded in xml format for further processing. To do this, select your application (e.g. VA-PORIX) in order to obtain access to the history data of the SECON device. The data is identical to the history data of the SECON device.

FAFNIR	Wel	come to S on, Street No. 1, D-12345, Hami	EC(	ON-X		Choose your language
	VAPORIX LI	EVEL Environme	ntal	History	Information	1
History	Index of /Archive/Do	wmloads/	History	» Downloads		
VAPORIX-Alarms Pressure report	Name Parent Directory/ Level/ Pressure/ Vaporix/	Last Modified 2016-Jan-04 08:05:03 2015-Apr-10 02:00:35 2016-Feb-12 10:55:34	Size - - -	Type Directory Directory Directory Directory		

Figure 40: History – Downloads

#### **VAPORIX** alarms

With this menu option, the history of alarms is listed, sorted by date.

The type of display can be selected broken down by active, inactive or all alarms.

FAFNIR	1/ECON-0	09,0034,	Welcome to S	BECON-X		Choose your language
	VAP	ORIX	LEVEL Environm	ental History	Information	
History			H	istory » VAPORIX-Ala	rms	
			Select Options ( Alarm type )	All		
VAPORIX-Alarms Pressure report			Reset	sho	w	
	No.	FP	Alarm type	Start date	Confirmed	Stop date
	8	2	VAPORIX-Flow not available	2016-07-25 17:08:28	2016-07-25 17:08:46	
	7	1	VAPORIX-Flow not available	2016-07-25 17:08:27	2016-07-25 17:08:46	
	6	3	VAPORIX-Flow not available	2016-07-25 15:07:31	2016-07-25 15:10:01	
	5	4	VARORIX Flow not available	2016 07 25 15:07:21	2016 07 25 15:10:01	

Figure 41: History – VAPORIX alarms (all)



#### **Pressure report**

With this menu item, the history of the measured pressure sensor values is listed, sorted by date. The measured values and warnings/alarms are displayed in a pop-up window when the mouse is set on the corresponding field.

FAFNIR	ECON-90	We	ation, Street No. 1	<b>e to SI</b> 1, D-12345, Hambi	ECOI	N-X		Choose you	ur language
	VAPO	RIX	LEVEL	Environmen	ital	History	Information	1	
History	-			His	tory » F	Pressure report	t		
VAPORIX-Alarms Pressure report		Select Options	( Pressure ser Reset	nsor Id )	(	6010 / 0 show			
					Pressur	e report			
				Pr	essure senso	r (ld: 6010/0)			
	No.	date	Status	Pressure [mBar]	Active Fails	Warning during day	Consecutive days of warnings	shutdown	FPs
	1	2016-07-25	WARNING	values	÷	values	values		

Figure 42: History - Pressure report

#### 3.2.5 Info

The "Info" menu option in remote access is equivalent to the "Info" menu option of the SECON device (see section Info Info).



### 3.3 Data download via WebDAV

The data of the SECON-Vap+ can be integrated as drive into the operating system via the WebDAV protocol. Here you are using the option of the operating system which normally of-fers support for WebDAV. If this is not the case, or problems with connection occur, also external WebDAV clients can be used.

Address: http://IP.ADDRESS.OF.SECON/webdav

where IP.ADDRESS.OF.SECON must be replaced by the real IP address of the SECON.

Port: 80

User: webdav

Password: webdav22765

After the connection, a directory structure can be opened in the file manager of the operating system. Based on the basic directory the topology of the directory is displayed as follows.



onth.

Figure 43: Directory structure of WebDAV



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