Technical Documentation

FAFNIR™

SECON-X

SECON-Client

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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 with web interface with SECON clients (SECON)
- Remote diagnostics
- Remote display, evaluation and data storage
- Universal data format
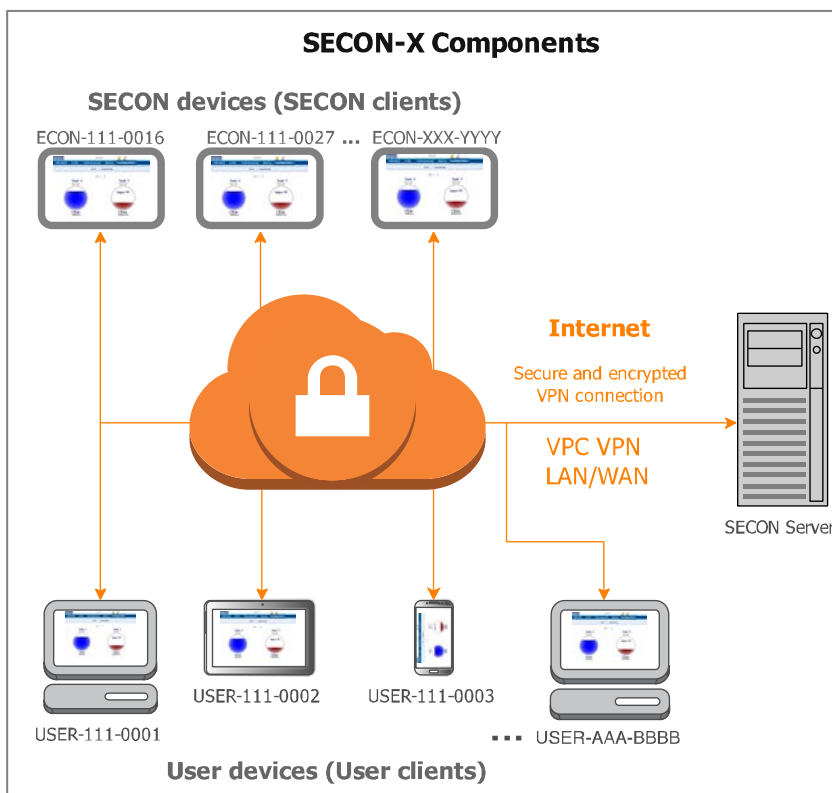
Figure 1: SECON-X system and components

1.2 SECON clients (SECON)

SECON clients are devices installed for the petrol station. They can be used for the central recording and long-term storage of petrol station data from VISY-X and the VAPORIX systems. The data is then available both locally and remotely via a network connection. For local display, the SECON comes equipped with a colour touch screen. Alarms detected are signalled via the display and an integrated speaker.

The SECON can be operated with the following software:

- SECON-Vap (with connection to the VAPORIX system) and/or
- SECON-Lev (with connection to the VISY-X system)

1.3   SECON-Vap (Software)

SECON-Vap is an optional component of the VAPORIX automatic monitoring device which monitors and evaluates vapour recovery at petrol pumps. As a central signalling device, the SECON-Vap is used to display the functional status of vapour recovery and of the VA-PORIX system.

SECON-Vap is connected to the evaluation units for the VAPORIX system for all petrol pumps (16 evaluation units = 32 fuelling points) and can signal both optically and audibly if a fuelling point has a fault. This means that the responsible technical service can be informed immediately, and that the cause of the disturbance can be resolved.

If the vapour recovery or VAPORIX system is not functioning properly, and the error is not remedied in time, the evaluation unit automatically switches the affected fuelling point off. The system can display all the relevant service information in addition to displaying faults. With the SECON, alarms are signalled audibly by a buzzer as well as visually.

1.4   SECON-Lev (Software)

SECON-Lev is an optional component of the VISY-X volume information system.

With the VISY-X system, highly precise, continuous level measurements in up to 16 tanks are carried out directly at the petrol station. The product temperature and the water level are gauged simultaneously. As an extension, other environmental sensors can be connected.

The SECON can be used as a supplementary device or as an alternative to a petrol station computer for displaying tank data. The SECON is also ideal as a display for tank truck drivers for reading out the fill volumes in the individual tanks before supplying the petrol station. The SECON obtains all the tank and product data and alarms from the VISY Command evaluation unit. The evaluation unit must be configured for the use of SECON using the VISY-Setup configuration program, see the technical documentation:

📖   VISY-Setup V4…, art. no. 207158

1.5   About this document

This documentation describes the installation of the SECON, including the preinstalled software. Depending on the order placed, you can use either SECON-Vap application, SECON-Lev application or both applications.

To use and configure the SECON software, see the technical documentation:

📖   SECON-Vap user guide, art. no.: 350113

📖   SECON-Lev user guide, art. no.: 350111

📖   SECON-Vap administrator, art. no.: 350134

📖   SECON-Lev administrator, art. no.: 350136

1.6 Safety instructions

SECON is intended for use in petrol stations. The device 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 has been developed, manufactured and tested in accordance with the latest good engineering practices and generally accepted safety standards. Nevertheless, hazards may arise from its use. Please observe and follow all product safety notes and operating instructions:

Do not change or modify the system or add any equipment without the prior consent of the manufacturer.

- To connect the SECON to the power supply, only the AC/DC adapter included in the scope of delivery may be used.

- Only use original spare parts. These comply with the technical requirements specified by the manufacturer.

- The installation, operation and maintenance of SECON must be carried out by expert personnel only.

- Operators, installers and service technicians must observe all applicable safety regulations. This also applies to any local safety and accident prevention regulations which are not specified in these operating instructions.

- The SECON is not designed for installation outdoors. It is exclusively intended for use in buildings and must at all times be kept in an undamaged and clean condition.

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

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

2 Design and function

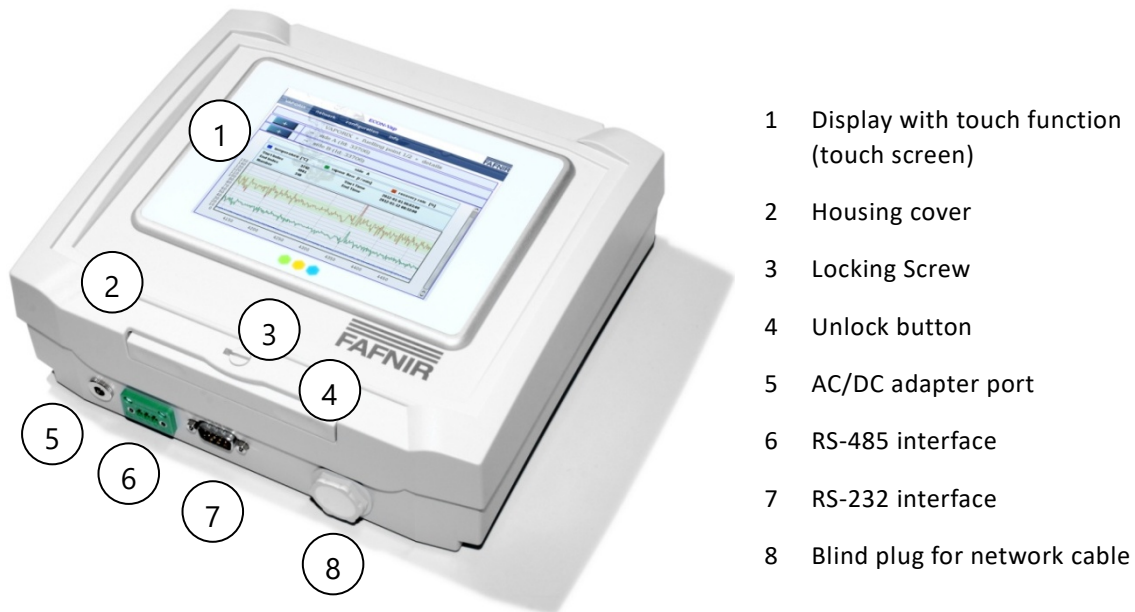|	
1	Display with touch function (touch screen)
2	Housing cover
3	Locking Screw
4	Unlock button
5	AC/DC adapter port
6	RS-485 interface
7	RS-232 interface
8	Blind plug for network cable

Figure 2: The SECON from the front

2.1 Display

The display is a TFT colour screen with touch function (touch screen). The program functions are triggered by touching the screen.

⚠️ *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.*

2.2 Interfaces

The SECON is equipped with the following interfaces (see Figure 2):

- Connection for the AC/DC adapter included in the scope of delivery
- RS-485 interface
- RS-232 Interface (D-Sub 9-pin)
- Network

3 Installation

The SECON is suitable for wall mounting and also intended to use as a desktop unit.

3.1 Wall mounting

For wall mounting, open the housing cover and mark the mounting points on the intended position on the wall. Drill the holes and mount the device.

☞ *To open the housing cover loose the locking screw by turning it counterclockwise and press the unlock button.*

3.2 Mounting bracket (optional)

For wall mounting an optional mounting bracket is available. Attach the mounting bracket according to the following drawing.
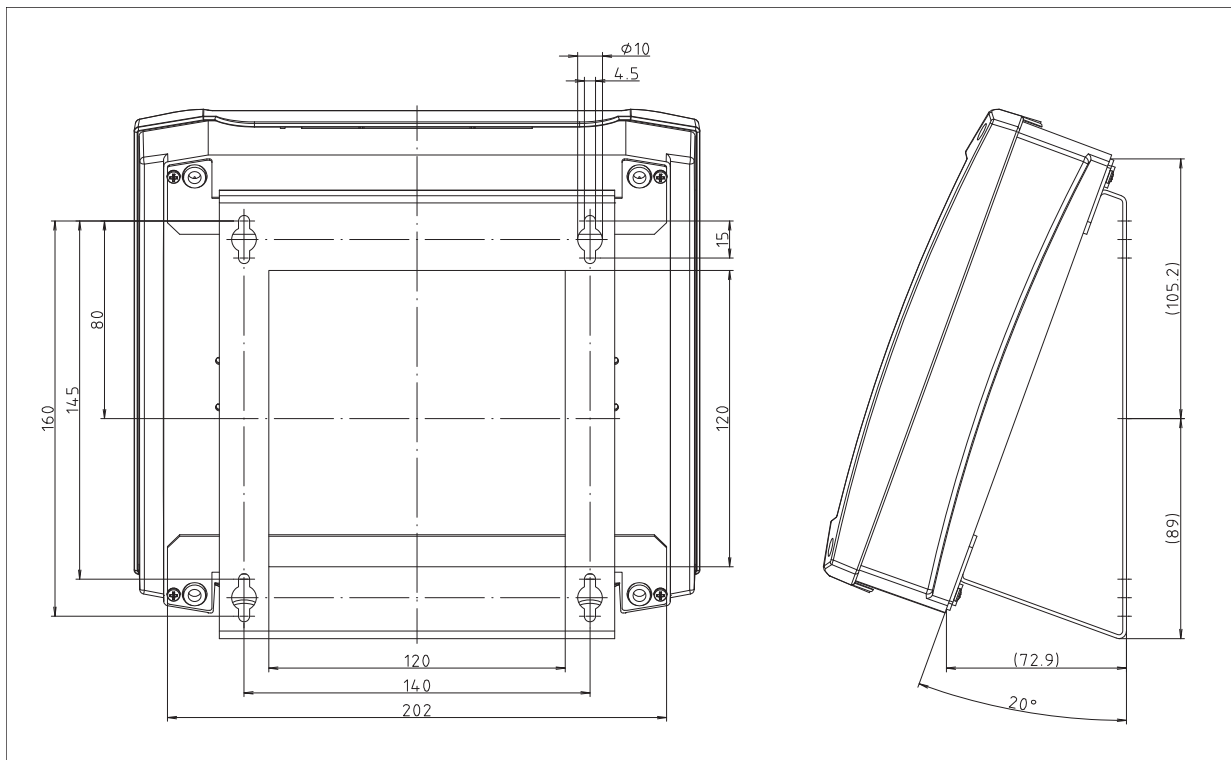

Figure 3: Mounting bracket dimensions (option)

3.3   Installation angle (option)

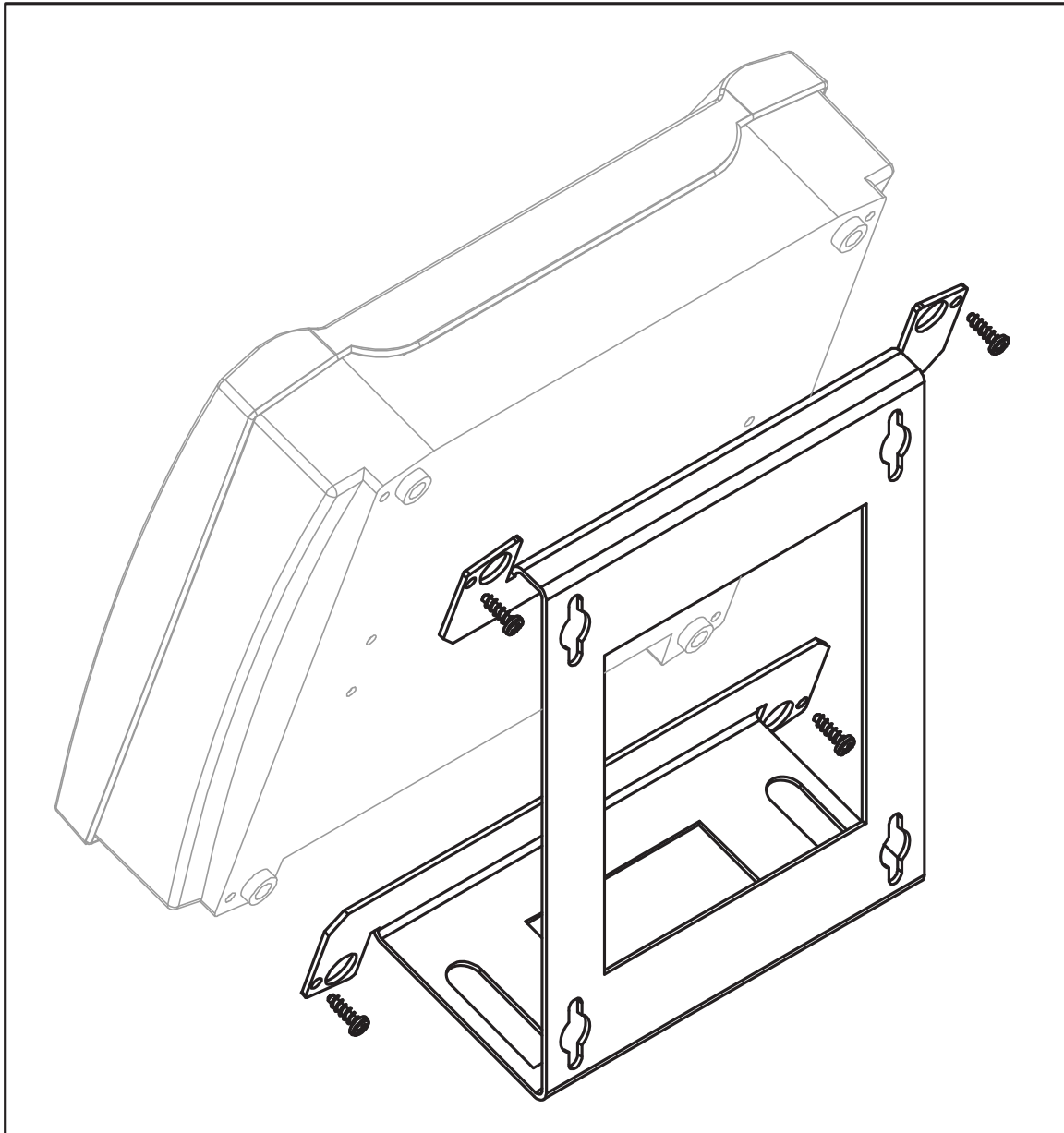For use as a desktop unit, the SECON can be equipped with an optional installation angle.

Figure 4: Installation angle (option)

4 Commissioning

Depending on the use of the SECON, various installation steps are required for setup.

4.1 RS-485 connection to the VAPORIX system

The SECON, including the SECON-Vap software, is connected to the VAPORIX system as follows:

(1)   Connect the SECON's RS-485 interface with the RS-485 interfaces of all VAPORIX-Controls installed for the petrol station in accordance with the following table:

SECON RS-485	VAPORIX-Control RS-485	Signal
1	A	A+
2	(G)	GND
3	B	B-

Table 1: RS-485 connection of the SECON and the VAPORIX-Control

To connect the SECON use the 3-pin connector supplied (see Figure 5) and the associated connector housing.

The connector housing comprises a base body on which the connector sits, and the cover that snaps on the base body.

The cable tie provides strain relief. It is designed to secure the cable to the base body of the connector housing.

Use the side screws of the connector housing to securely fix the connector to the SECON.
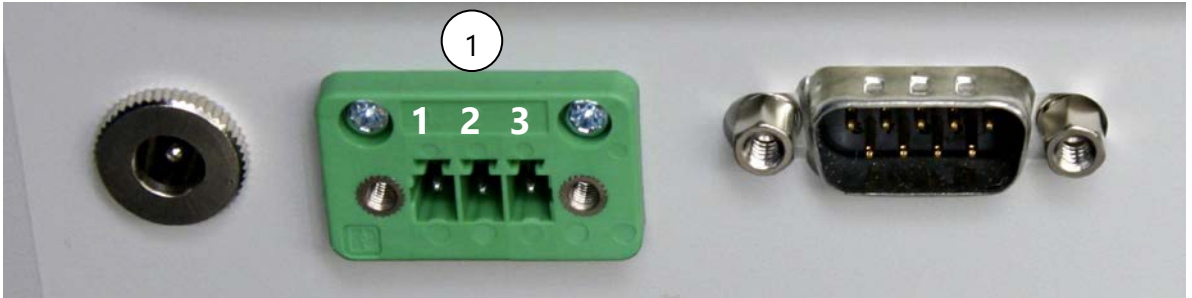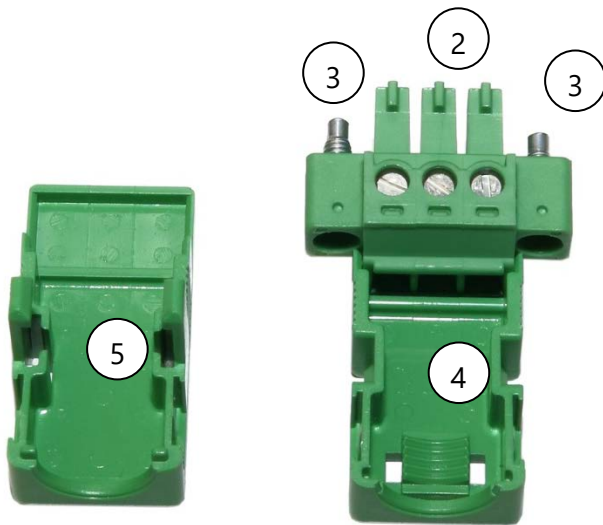
Figure 5: RS-485 interface of the SECON

1 RS-485 interface
  with numbering of the contacts

2 Connector (3 pin)

3 Side screws

4 Connector housing (base body)

5 Connector housing (cover)

Figure 6: Connector (3 pin)

4.2 RS-232 connection to the VISY-X system

If the host interface in the VISY-Command is not being used elsewhere (e.g. by a cash system) the connection between the SECON, including the SECON-Lev software, and the VISY-Command should be set up as follows:

(1) Disconnect the VISY-Command from the power supply

(2) Connect the SECON's RS-232 interface to the RS-232 host interface of the VISY-Command in accordance with the following table:

SECON RS-232	VISY-Command RS-232 host interface
3 (TxD)	1 (RxD)
2 (RxD)	2 (TxD)
5 (GND)	3 (GND)

Table 2: RS-232 connection of the SECON and the VISY-Command host interface

Figure 7: RS-232 interface of the SECON

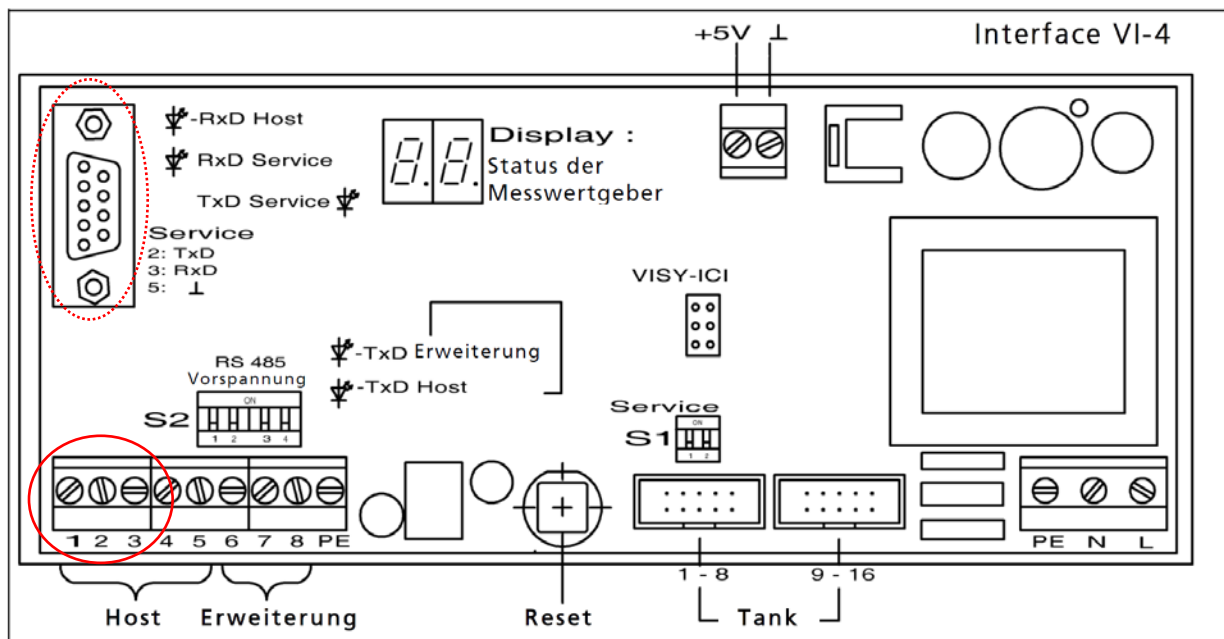
Figure 8: RS-232 host interface and VISY-Command service interface

(3)   Using VISY-Setup, change the Board VI host code on "host code 108"

(4)   Secure the connector to the SECON using the side screws

(5)   Reconnect the VISY-Command to the power supply

For further details on connecting the VISY-Command, see the technical documentation:

   📖   VISY-Command, art. no.: 207184

4.3   Alternative RS-232 connection to the VISY-X system

The SECON, including the SECON-Lev software, can also be connected to the VISY-Command as follows:

(1)   Disconnect the VISY-Command from the power supply

(2)   Connect the SECON's RS-232 interface to the service interface of the VISY-Command in accordance with the following table:

SECON RS-232	VISY-Command RS-232 service interface
2 (RxD)	2 (TxD)
3 (TxD)	3 (RxD)
5 (GND)	5 (GND)

Table 3: RS-232 connection of the SECON and the VISY-Command service interface

(3)   Set the VISY-Command DIP switch S1 to the OFF and ON position in order to activate the VISY-Quick protocol

(4)   Secure the connector to the SECON using the side screws

(5)   Reconnect the VISY-Command to the power supply

For further connection and configuration details, see the technical documentation:

   📖   VISY-Command, art. no.: 207184

   📖   VISY-Setup V4..., art. no. 207158

![FAFNIR logo]

4.4 Connection to the network

1 RJ-45 network cable

2 Blind plug

3 RJ-45 connector

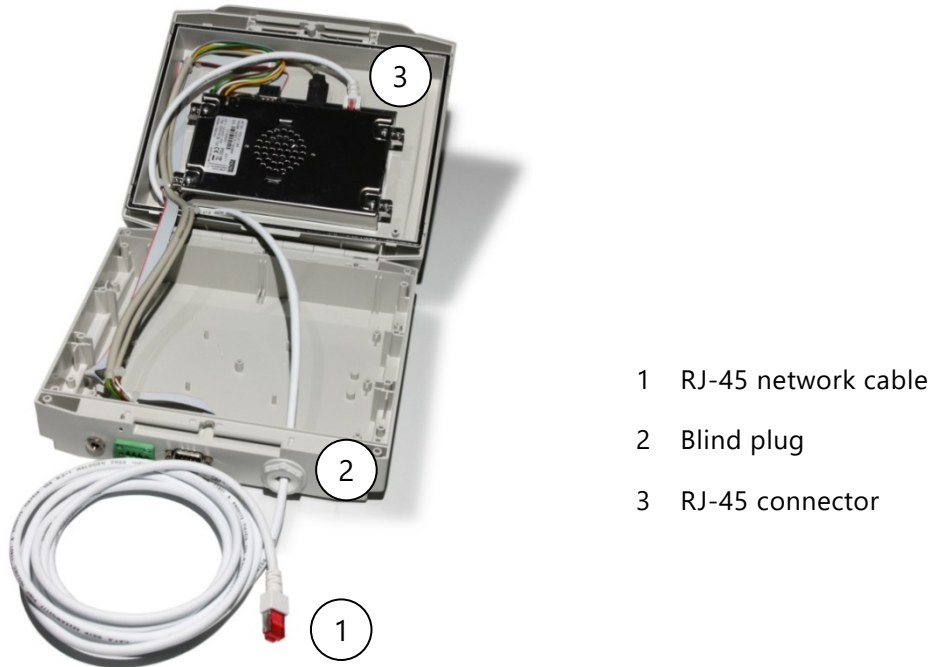Figure 9: Network connection

(1) Open the SECON

(2) Pierce the blind plug with a sharp object which is the size of the RJ-45 plug

(3) Pass the plug through the blind plug

(4) Insert the RJ-45 plug into the corresponding RJ-45 connector of the SECON

(5) Connect the network cable with your network

For further information on network setup, please see the technical documentation:

📖 SECON-Vap administrator, art. no.: 350134

📖 SECON-Lev administrator, art. no.: 350136

(6) Connect the AC/DC adapter supplied to the AC/DC adapter connector of the SECON (see Figure 2) and to the mains.

⚠️ *To connect the SECON to the power supply, only the AC/DC adapter included in the scope of delivery may be used.*

(7) The SECON is now operational.

5 Operation:

The SECON is operated using the SECON-VAP and/or the SECON-LEV software, see the technical documentation:

📖 SECON-Vap user guide, art. no.: 350113

📖 SECON-Lev user guide, art. no.: 350111

6 Technical data

Display:	5.7" colour display with touch-screen
Alarm signalling:	Display and buzzer
Power supply:	13.2 V / 750 mA DC, adapter included
Ambient temperature:	0 °C ... +60 °C
RS-485 interface	3-pin
RS-232 interface	9-pin, D-Sub male connector
Dimensions [mm]:	H 205 x W 230 x D 80

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EU–Konformitätserklärung
EU Declaration of Conformity
Déclaration UE de Conformité
Dichiarazione di Conformità UE

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Anzeigen / Displays / Affichages / Display

SECON-... & VISY-View Touch

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comply with the regulations of the European directives
sont conformes aux réglementations des directives européennes suivantes
rispetta i regolamenti delle direttive europee

2011/65/EU	Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten	RoHS
2011/65/EU	Restriction of the use of certain hazardous substances in electrical and electronic equipment	RoHS
2011/65/UE	Limitation de l'utilisation de certaines substances dangereuses dans les équipements électriques et électroniques	RoHS
2011/65/UE	Restrizione dell'uso di determinate sostanze pericolose nelle apparecchiature elettriche ed elettroniche	RoHS
2014/30/EU	Elektromagnetische Verträglichkeit	EMV
2014/30/EU	Electromagnetic compatibility	EMC
2014/30/UE	Compatibilité électromagnétique	CEM
2014/30/UE	Compatibilità elettromagnetica	CEM

durch die Anwendung folgender harmonisierter Normen entsprechen
by applying the harmonised standards
par l'application des normes
applicando le norme armonizzate

RoHS / RoHS / RoHS / RoHS   EN IEC 63000:2018
EMV / EMC / CEM / CEM   EN 61326-1:2013

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Les produits sont déterminés comme des équipements électriques et électroniques de RoHS
I prodotti sono determinati come apparecchiature elettriche ed elettroniche della RoHS

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Industrial Monitoring and Control Instruments /
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Die Produkte entsprechen den EMV-Anforderungen
The products comply with the EMC requirements
Les produits sont conformes aux exigences CEM
I prodotti sono conformi ai requisiti CEM

**Störaussendung / Emission / Émission / L'emissione
Störfestigkeit / Immunity / D'immunité / Immunità**

**Klasse B / Class B / Classe B / Classe B
Industrielle elektromagnetische Umgebung /
Industrial electromagnetic environment /
Environnement électromagnétique industriel /
Ambiente elettromagnetico industriale**

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Ort, Datum / Place, Date / Lieu, Date / Luogo, data

Geschäftsführer / Managing Director / Gérant / Direttore Generale: René Albrecht

9.2 Station data protocol

Stationsdaten	
Stations-ID	
Gesellschaft	
Name (Pächter)	
Straße/Nr.	
PLZ	
Ort	
Land	
Breitengrad	
Längengrad	

SECON-Daten	
Geräte-Name	ECON- . . . - . . . .
Serien-Nr.	
MAC-Adresse	
IP-Adresse	
TUN-IP	
Softw.version VAP	
Softw.version LEV	

VISY-Stick Daten

Tank-Nr.	Kapazität	Produkt-Name	Serien-Nr.
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			

VAPORIX-Control Daten

ID	Serien-Nr.	Zapfp.
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		

Installations-Firma:	
Name:	
Datum der Installation:	
Unterschrift:	