



VISY-X

Automatic Tank Gauging System for the best possible fill level monitoring

- Timely fuel reordering
- Early leak detection
- Identification of fuel theft
- Reliable quality assurance for stored fuels
- Coordinated service visits



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Measurable Advantages that count

VISY-X system advantages at a glance

Optimized efficiency in petrol station operation

- » No shutdown during sensor maintenance, because our stainless-steel sensors are maintenance-free
- » Simple assembly and commissioning
- » Leaks and theft identified immediately
- » Timely fuel reordering is assured

Continuous, reliable monitoring of fill level and fuel quality

- » Actual fill levels in real time
- » Personal, mobile access to all data
- » All data stored to your own server
- » Attractive graphic display of data

Precise fill level measurement

- » Our magnetostrictive measurement is more precise and more resistant to malfunction than many other measurement methods on the market

Versatile solutions for all applications

- » One single sensor for all fuel types
- » Optimal product solutions even for special or difficult applications

Optimal product price/performance ratio

- » More attractive acquisition costs than comparable systems
- » Utmost product precision and dependability

Low installation cost

- » Easy plug-and-play assembly
- » Proven radio transmission of data, no more expensive cabling on site

Data misuse is impossible

- » All data are stored on your server only
- » Secure HTTPS connection with authentication

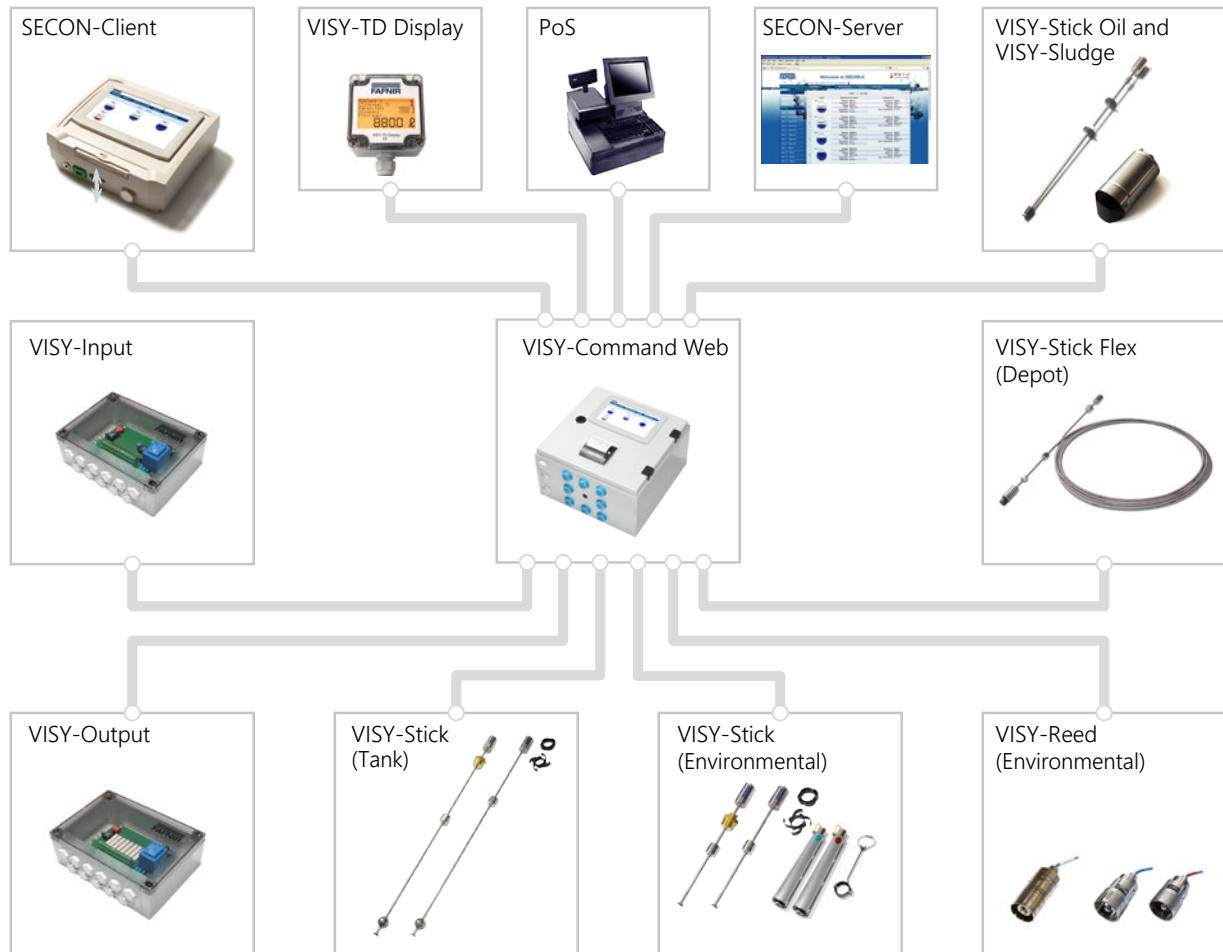
Easy integration into existing operating and ERP systems

- » Data are provided as generally readable XML files
- » VISY-X can be easily integrated into existing systems

Our products are approved worldwide

- » ATEX, IECEx, OIML, EPA, NEPSI, CCC, CPA, PESO, CCoE, Inmetro, EAC, and EAC-Ex

VISY-X System Architecture



Modular: Choose only the products you need.

Further system components can be added after software upgrades.

SECON-X

More efficient petrol station management
24/7 worldwide access to your data

Product features and the advantages of FAFNIR technology

Web-based interface	≡	Worldwide access to real-time data
Local client-side server	≡	Guaranteed strong data protection
Standardised data format (XML)	≡	Easy post processing on all current operating and ERP systems
Remote access via HTTPS connection with user and password authentication	≡	Highest data security
Remote diagnostics	≡	Optimized service interventions
Hierarchical data access	≡	Company-specific access rights
Minimum of 10 years data protection	≡	Thorough data analysis of warehouse inventories, deliveries, alarms, etc.
Auto calibration (optional)	≡	Calibration of the tanks to optimize the tank gauging
Reconciliation (optional)	≡	Data matching between stocks and sales



VISY-Command Web with printer



SECON-Client

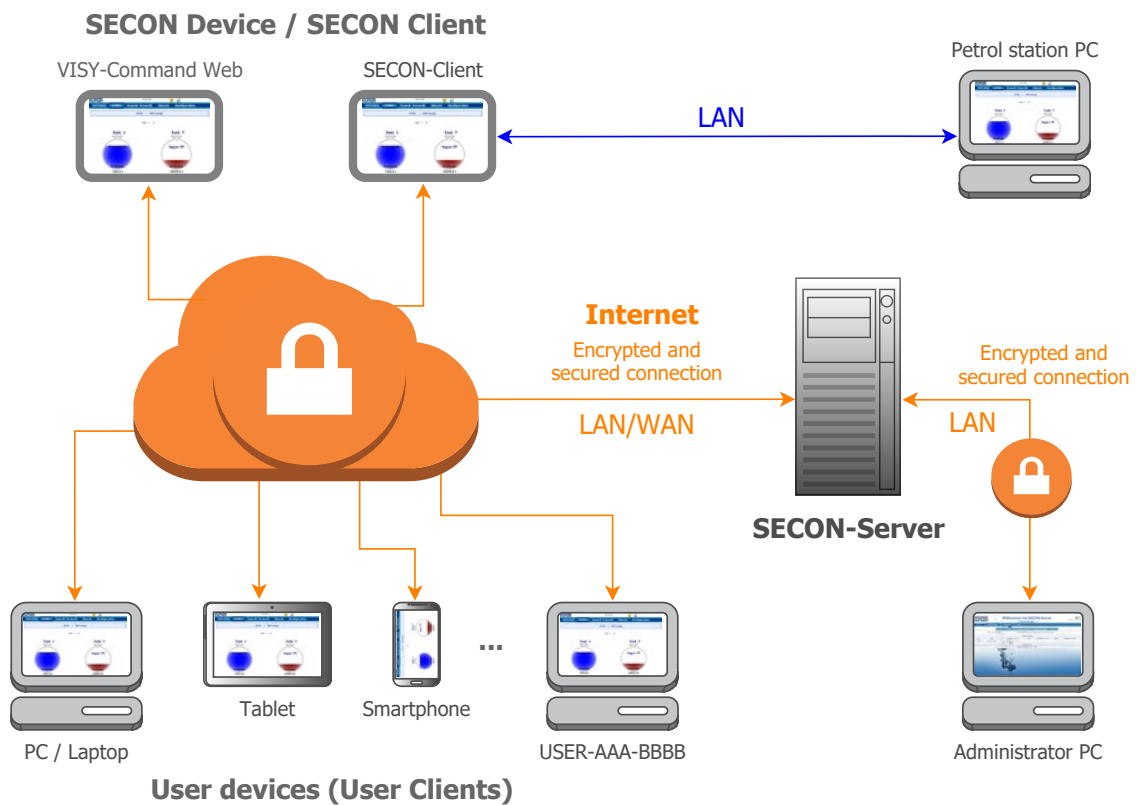
SECON-X System

Web-based system for data management and visualization, consisting of various hardware and software components

Product features and the advantages of FAFNIR technology

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

SECON-X Components



VISY-Stick

Precise sensor for continuous monitoring of liquid levels and possible leakages

Product features and the advantages of FAFNIR technology

- | | |
|---|---|
| Sensor and float made of premium stainless steel | ≡ Long-lasting and maintenance-free |
| Sensor for continuous high-precision measurement of product fill level, product temperature and water level | ≡ Precise and reliable real-time measurement every 12 ms |
| Calibrated and fully loaded | ≡ Easy plug-and-play installation |
| Suitable for all commercially available fuels | ≡ SUPER, E10, E85, Diesel, BioDiesel, LPG, AdBlue |
| High-precision temperature compensation through 5 x Pt1000 | ≡ Precise determination of the temperature-compensated volume |
| 4-wire unshielded data cable | ≡ Easy installation and connection of up to 4 different probes in parallel possible |
| Continuous function monitoring | ≡ Immediate alarm for tampering or malfunction |
| Approvals for Ex-Zone 0: ATEX, IECEx, OIML, NEPSI, PESO, CCoE, and EAC-Ex | ≡ Can be used worldwide |
| Requires just 1½" tank openings for installation (optional 1" float available) | ≡ Cost-efficient installation |



The magnetostrictive sensors VISY-Stick with screw-in unit (left) and for riser installation (right)

VISY-Density with VISY-Stick Advanced

Density measurement for continuous monitoring of fuel quality

Product features and the advantages of FAFNIR technology

- | | | |
|--|---|--|
| Continuous measurement with highest accuracy | ≡ | Four measured values with one single probe: <ul style="list-style-type: none">» Product fill level» Product temperature» Water level» Density |
| Water determination | ≡ | Especially for ethanol |
| Compact design | ≡ | Needs just 2" openings |
| Accuracy better than ± 1 g/l | ≡ | Meets all requirements |



The magnetostrictive sensors VISY-Stick Advanced Density with screw-in unit (left) and for riser installation (right)

VISY-Stick Flex

The economical solution for tall tanks

Product features and the advantages of FAFNIR technology

Compact packaging

≡ Low transport cost

Easy to install and configure

≡ Short installation time,
lowers installation cost

Meets all requirements

≡ Four measured values with one single probe:
 » Product fill level
 » Product temperature
 » Water level
 » Density (requires the density module)



VISY-Stick Flex
 The level sensor especially designed
 for bulk storage tanks (optionally
 with density module)

VISY-Stick Flex Temp

extends VISY-Stick Flex with high-precision temperature measurement

Product features and the advantages of FAFNIR technology

Temperature measurement

≡ up to 31 high-precision digital
temperature sensors

Standard version

≡ 1 temperature sensor per meter



VISY-Stick Flex Temp
 Flexible sensor especially designed
 for temperature measurement

VISY-Stick Oil + VISY-Sludge

Automatic monitoring of oil separators with the COMS system
(Continuous Oil Separator Monitoring System)

Product features and the advantages of FAFNIR technology

- Continuous monitoring system for oil separators (COMS) ≡ Fulfills the functions of an automatic warning system for separators of light liquids
- Continuous measurement of oil layer thickness and sludge height ≡ Seamless operating log per DIN 1999-100:
 - » Intelligent recording interval
 - » Password-protected
 - » Data export in XML format
 - » Data storage for at least 5 years
- Alarm management ≡ Acoustic and visual alarm with acknowledgement and e-mail notification for:
 - » Maximum oil level
 - » Maximum sludge height
 - » High level



VISY-Stick LPG

Especially designed for precise LPG fill level measurement

Product features and the advantages of FAFNIR technology

- | | |
|---|---|
| Installation kit available | ≡ Quick and easy installation without emptying the tank |
| Up to 6 m long | ≡ Suitable for all tank shapes and sizes |
| Requires just 1½" tank openings (optional 1" float available) | ≡ Cost-efficient installation |



VISY-Stick LPG for direct installation in the tank

VPS-L

Product mass determination of the liquefied gas in combination with VISY-Stick LPG and VISY-Density

Product features and the advantages of FAFNIR technology

- | | |
|---|---------------------------------|
| Supplement to the LPG level measurement | ≡ Product mass of liquefied gas |
| Existing evaluation unit | ≡ Low additional costs |
| Requires only a G½" thread to the gas space of the tank | ≡ Easy installation |



VPS-L for mounting on the gas space of LPG tanks

VISY-Stick Interstitial

Especially for leakage detection in double-walled tanks

Product features and the advantages of FAFNIR technology

Immediate alarm when a leak occurs

≡ Acoustic and visual alarm with acknowledgement and e-mail notification

Easy, cost-efficient installation and commissioning

≡ No additional cable costs due to parallel connection

Configurable alarm area

≡ Can individually be adapted to an existing system



VISY-Stick Interstitial with screw-in unit (left) and for riser installation (right)

VISY-Stick Sump

For monitoring liquids in manhole and dispenser sumps

Product features and the advantages of FAFNIR technology

Sensor distinguishes between water and fuel with different alarms

≡ Individual activities, such as:
 » Fuel alarm = Shut off dispenser
 » Water alarm = Report to service company

Continuous self-monitoring

≡ Immediate alarm upon tampering with the installation conditions or if a sensor malfunctions



VISY-Stick Sump: blue for the manhole sump, red for dispenser sump, installation kit (right)

VISY-Reed Interstitial

Robust sensor for low cost leakage detection in double-walled tanks

Product features and the advantages of FAFNIR technology

- Robust nickel-plated brass housing with stainless-steel float ≡ Long service life
- Efficient design for direct liquid detection ≡ Low cost
- Continuous self-monitoring of sensor function ≡ Immediate alarm in the event of a malfunction
- Suitable for riser installation with openings of 1" or more ≡ Minimized installation cost



VISY-Reed Interstitial Dry

VISY-Reed Sump

For monitoring liquids in manhole and dispenser sumps

Product features and the advantages of FAFNIR technology

- Robust nickel-plated brass housing with stainless-steel float ≡ Long service life
- Efficient design for direct liquid detection ≡ Low cost
- Continuous self-monitoring of the sensor function ≡ Immediate alarm in the event of a malfunction



VISY-Reed Sump Manhole



VISY-Reed Sump Dispenser

VISY-Command

Versatile, cost-effective central unit for connection to cash register systems

Product features and the advantages of FAFNIR technology

Parallel connection of 4 different sensors to one connection channel possible

≡ Reduced installation cost, less cables needed

Fully modular architecture

≡ Simple addition of sensors and extension of system architecture

Ethernet interface optional

≡ Remote access to tank and environmental data

Free firmware updates

≡ Always state of the art



The evaluation unit
VISY-Command

VISY-Command GUI

Direct access to the readings via touchscreen and optional printer

Product features and the advantages of FAFNIR technology

- | | |
|---|--|
| Colour display with touchscreen | ≡ Information at a glance |
| Audible alarm must be confirmed by the petrol station staff | ≡ Additional security |
| Data storage up to 5 years | ≡ Thorough inventory analysis |
| E-mail function | ≡ Alarm messages directly to the service partner or individual address |
| Daily Reports | ≡ Message to the station manager every 24 hours |
| Static leakage detection | ≡ Theft monitoring, alarm by e-mail |

**VISY-Command +
VISY-View Touch =
VISY-Command GUI**



VISY-View Touch



VISY-Command GUI
with printer

VISY-Command Web

Worldwide access to your data by the integrated SECON-X function

Product features and the advantages of FAFNIR technology

- | | | |
|---|---|--|
| Touch screen and printer | ≡ | Local access to the readings |
| Remote connection | ≡ | Remote access to the readings |
| SD / SDHC removable storage | ≡ | Flexible data backup |
| Integrated web server and SQL database server | ≡ | Web-based data transfer |
| Protected data transfer | ≡ | Remote access via HTTPS connection with user and password authentication |



VISY-Command Web
with printer

VISY-RF

Enables the connection of VISY probes via radio to VISY-Command RF

Product features and the advantages of FAFNIR technology

Compatible with all VISY components

Battery life up to 4 years

Easy to install and configure

Indicates battery status and field strength

A market-proven system

≡ Standard components can be used

≡ Low maintenance cost

≡ Minimizes downtime

≡ Optimized service and maintenance

≡ Functionality and reliability



VISY-Command GUI RF
with printer
(2 antennas attachable)



External antenna



VISY-RFT
transmitting
unit

VISY-Input

Integration of external alarms into the VISY-X system

Product features and the advantages of FAFNIR technology

External alarms are centrally processed by the VISY-X system

≡ Simple monitoring of external alarms

Easy to install and configure

≡ Low installation cost



VISY-Input
(input module for 8 connections of external alarms)

VISY-Output

Relays for activating external alarm systems

Product features and the advantages of FAFNIR technology

All alarms can be freely assigned to the relays

≡ Clear alarm structure

Easy to install and configure

≡ Low installation cost



VISY-Output 1



VISY-Output 8

VISY-TD Display

Field display for direct view of the tank level

Product features and the advantages of FAFNIR technology

Easy to install

≡ Low installation cost

Good display contrast

≡ Easy legible data



Tank truck driver display

VPI

Integration of VISY sensors into third-party systems

Product features and the advantages of FAFNIR technology

Parallel connection of 4 different sensors to one connection channel possible

≡ Reduced installation cost — less cables needed

Parallel connection of 32 VPIs possible, allows up to 256 tanks to be monitored and 1024 sensors to be connected

≡ Easy addition of sensors

Communication interface between the sensors and a higher-level system (host)

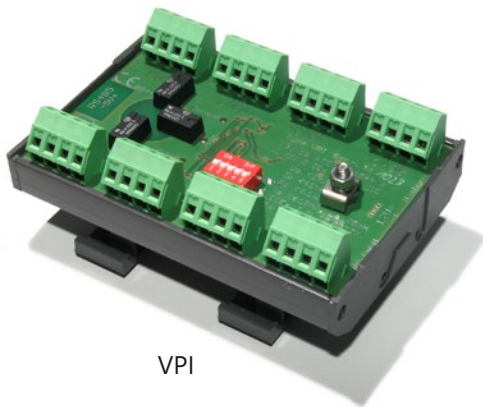
≡ Supports two protocols
» FAFNIR Universal Device Protocol (UDP)
» H-Protocol

Delivers raw sensor data

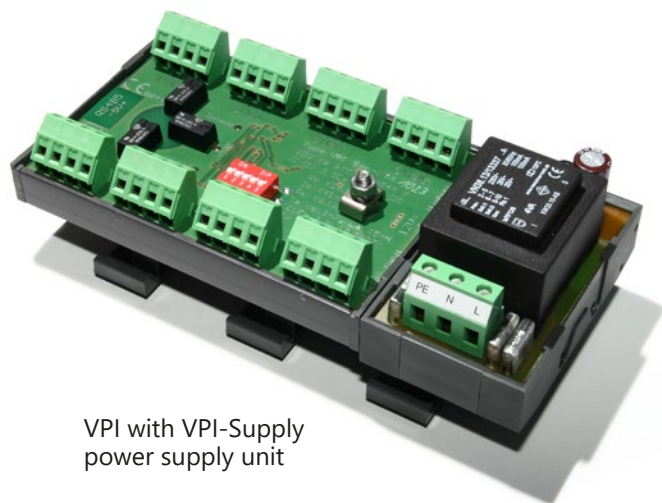
≡ Free configuration of application and display

FAFNIR VPI-Supply power supply unit supplies up to two VPIs

≡ Optionally, one's own power supply unit can be used



VPI



VPI with VPI-Supply power supply unit

Accessories

1" LPG float

Optionally available instead of the standard 1½" LPG float.



VISY-RFT installation kit

Installation kit for mounting a VISY-RFT transmitter module.



Cable connector (IP68)

The 5-pin cable coupler makes it quick and easy to establish the connection between the VISY-Stick and the cable to the VISY-Command.



Accessories

1" float set with screw-in unit

The optional installation kit comprises a product float, a water float and a screw-in unit. It makes it possible to install a VISY-Stick using a G 1 threaded coupler. The screw-in unit is also available in stainless steel.



Variable LPG installation kit

The variable LPG installation kit comprises a jacketed pipe with special LPG float and a cutting ring fitting with $\frac{3}{4}$ " NPT external thread.



FAFNIR GmbH

Innovation with tradition, quality and satisfaction

Company

Based in Hamburg, Germany, since 1965 FAFNIR GmbH has developed and produced continuous fill level measurement, overfill prevention devices, overfill protection devices and limit signal controls for fluids of all types.

Optimisation of process controls, improvements in cost efficiency, and the protection of people and the environment are at the heart of our business.

Our close and trusting relationship with our customers is a key factor in the practice-oriented implementation of innovative ideas and the functionality of our products.



Quality for your satisfaction

To provide all customers with devices of consistently high quality, years ago FAFNIR introduced an internationally recognised, comprehensive quality management system in accordance with ISO 9001 (EN 29001).

Our expertise in the development and manufacture of explosion-proof equipment is certified by an independent body.

All our products are subject to strict FAFNIR quality requirements. We are committed to meeting international standards and applicable EU directives.





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