



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 all-stainless-steel sensors are maintenance-free
- » Easy installation keeps downtime brief when installing our products
- » 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 sensors' magnetorestrictive measurement is more precise and more resistant to malfunction than many other measurement methods on the market

Versatile solutions for all applications

- » A 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 VPN connection, data are transferred with encryption

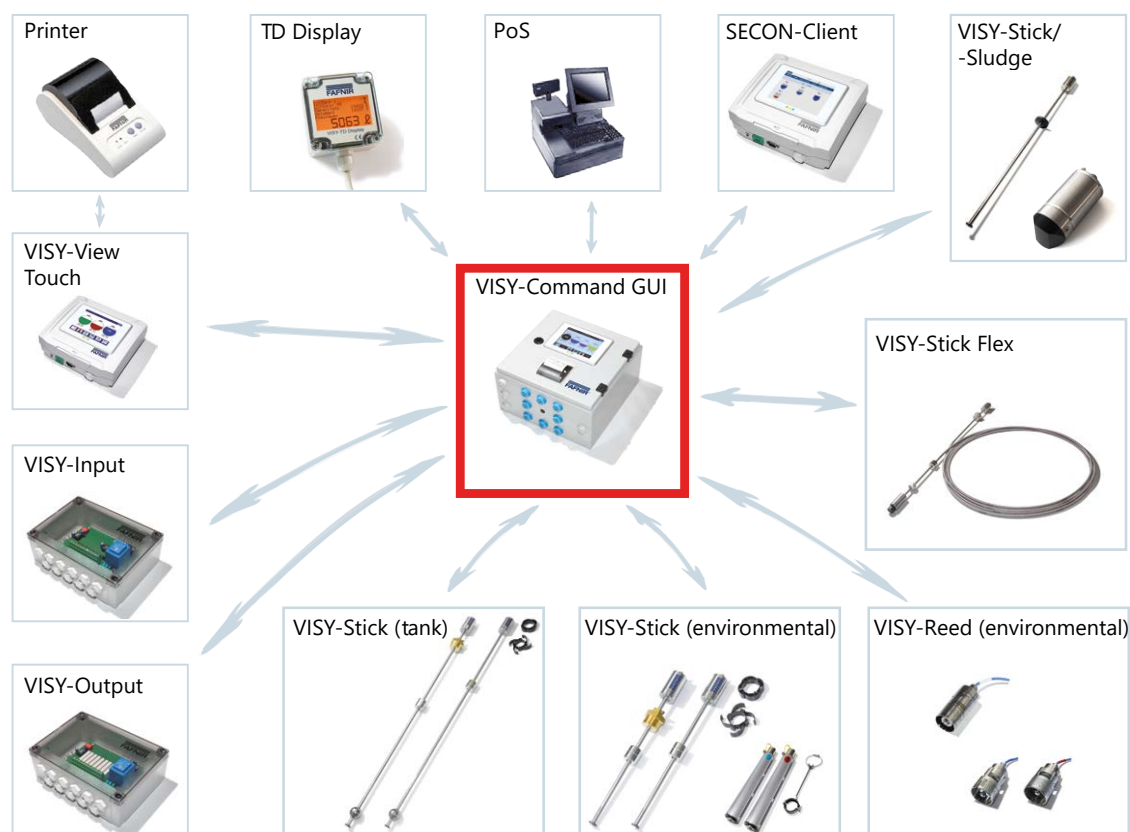
Easy integration into existing operating and ERP systems

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

Our products are approved worldwide

- » ATEX, NEPSI, IECEx, CCoE, EAC-Ex, CPA and OIML

VISY-X system architecture



Modular: Choose only the products you need.

Further system components can be added with a software upgrade, if necessary.

SECON

More efficient petrol station management in the cloud (hosting)
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 further processing on all current operating and ERP systems
- Remote access through Internet tunnel with 1024-bit VPN encryption ≡ High 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.



The measurement
evaluation unit
VISY-Command Web

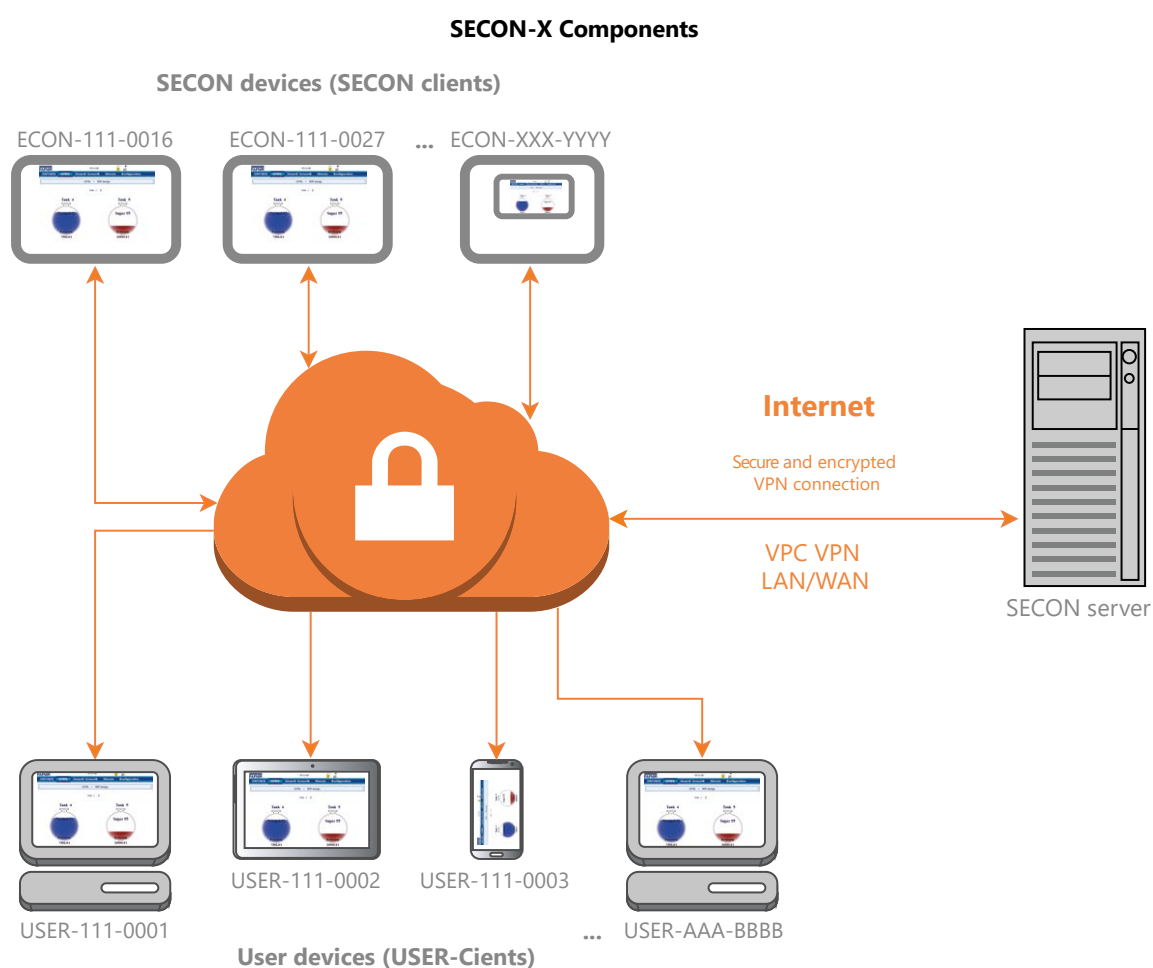


SECON-Client

The SECON-X Cloud

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



VISY-Stick

Precise sensor for continuous monitoring of liquid levels and 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 (5 pcs PT1000) 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 by 5 pcs PT1000 units ≡ Best determination of temperature-compensated volume
- 4-wire, unshielded data cable ≡ Simple installation and connection of up to 4 different probes in parallel possible
- Continuous function monitoring ≡ Immediate alarm for tampering or malfunction
- Worldwide approvals for Ex Zone 0, ATEX, IECEx, NEPSI, EAC-Ex and CCoE ≡ Can be used internationally
- 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 utmost accuracy \equiv Four measured values with a single probe:
product fill level
product temperature
water level
density
- Water determination \equiv Especially for ethanol
- Compact design \equiv Needs just a 2" opening
- Precision better than ± 2 g/l \equiv Meets all requirements



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

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 functions in a single device:
fuel
water
temperature
density (density module required)



VISY-Stick Flex is a level sensor specially designed for bulk storage tanks and density modules

LPG

Specially developed for precise LPG fill level measurement

Product features and the advantages of FAFNIR technology

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



VISY-Stick LPG for direct installation in the tank

VISY-Stick oil separator + VISY-Sludge

The pair that monitors the oil separator

Product features and the advantages of FAFNIR technology

- | | | |
|---|---|---|
| Continuous measurement of the oil layer thickness and sludge height | ≡ | Seamless operating log per DIN 1999-10:
Intelligent recording interval
Password-protected
Data export in XML format
Data storage for at least 5 years |
| Alert management | ≡ | Acoustic and visual alarm with acknowledgement and e-mail notification of:
Maximum oil level
Maximum sludge height
High level |



VISY-Stick
oil separator



VISY-Sludge

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 ≡ Parallel connection eliminates additional cable costs
- Configurable alarm area ≡ Can be custom adapted to an existing system



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

VISY-Stick Sump Sensor

For liquid monitoring 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 = call to service company
- Continuous self-monitoring ≡ Immediate alarm upon tampering with the installation conditions or when a sensor malfunctions



VISY-Stick Sump: blue for manhole sump,
red for dispenser sump. Right: Installation kit

VISY-Reed Interstitial

Very robust sensor for cost-effective 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 fluid detection ≡ Low cost
- Continuous self-monitoring of sensor functionality ≡ Immediate alarm in the event of malfunction
- Suitable for riser installation with opening of 1" or more ≡ Minimized installation cost



VISY-Reed Interstitial Dry

VISY-Reed Sump

For liquid monitoring 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 sensor functionality ≡ Immediate alarm in the event of malfunction



VISY-Reed Sump

VISY-Command

Versatile, cost-effective measurement evaluation 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 cable 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 + VISY-View Touch = VISY-Command GUI

VISY-Command GUI

Direct access to measurement evaluation unit through touchscreen or printer

Product features and the advantages of FAFNIR technology

- Colour display with touchscreen ≡ Information at a glance
- Audible alarm must be confirmed by 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 report ≡ Message to the station manager every 24 hours
- Oil separator monitoring ≡ Operating log maintained in system
- Static leakage detection ≡ Theft monitoring - alarm by e-mail



VISY-View Touch



VISY-Command GUI
with printer

VISY-RF

Allows connection to VISY probes through WiFi and a VISY-Command RF

Product features and the advantages of FAFNIR technology

- Compatible with all VISY components ≡ Standard components can be used
- Battery life up to 4 years ≡ Low maintenance cost
- Easy to install and configure ≡ Minimizes downtime
- Indicates battery status and field strength ≡ Optimized service and maintenance
- A market-proven system ≡ Best, most reliable functionality

VISY-Command GUI RF
External antenna
VISY-RFT transmitter unit



2 attachable antennas



VISY-Input

Integration of external alarms in the VISY system

Product features and the advantages of FAFNIR technology

External alarms centrally processed by the VISY system ≡ Simple monitoring of external alarms

Easy to install and configure ≡ Low installation cost

VISY-Output

Triggers external alarm systems

Product features and the advantages of FAFNIR technology

All alarms can be freely assigned to relays ≡ Clear alarm structure

Easy to install and configure ≡ Low installation cost



VISY-Output 8



The input module VISY-Input
External component for
complex alarm systems
8 connections



VISY-Output 1

VISY-TD Display

Immediate visual information on ullage in tank

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

VISY-Power Interface

Product features and the advantages of FAFNIR technology

- | | | |
|--|---|--|
| Parallel connection of 4 different sensors to one connection channel possible | ⇒ | Reduced installation cost — less cable 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 Protokol (UDP)
» H-Protocol |
| Delivers raw sensor data | ⇒ | Free configuration of application and display |
| FAFNIR VPI-Supply power supply unit supplies up to two VPIs | ⇒ | One's own power supply unit can optionally be used |



VPI + power supply unit



VPI

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

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.



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 consists of 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, filling safety devices, overfill prevention 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, trusting relationship with our customers is a key factor in our practical 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 9001:2008 (EN 29001). Our expertise in developing and manufacturing explosion-proof equipment is independently certified. 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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