

# VISY-X

## IFSF LON interface converter



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## 1 Overview

The VISY-X system is intended for use in petrol stations and is compatible with all commercially available fuels and liquefied petroleum gas. It serves to measure and evaluate the fill levels and environmental data in the tanks.

The IFSF LON interface converter is for connecting the VISY-X system to the IFSF LON standard (International Forecourt Standards Forum). The interface converter is a module that is connected to the host interface of the VISY-Command measurement evaluation unit. From there, the interface converter retrieves the current tank data and correspondingly implements the IFSF LON standard.

The interface converter is wired at the factory and installed in the VISY-Command measurement evaluation unit so that no further device-internal installation work is needed.

### 1.1 Safety instructions

The interface converter and the VISY-Command measurement evaluation unit are not suitable for external installation and are not for use in potentially explosive environments. They are intended for use within the VISY-X system. The system must be used exclusively for this purpose.

The VP-... measuring transducer, the VI-... interface and the IFSF LON interface converter inside the VISY-Command measurement evaluation unit must always be undamaged and clean.

In normal operation, the VISY-Command measurement evaluation unit's cabinet must be closed.

Observe and follow all product safety notes and operating instructions. The manufacturer accepts no liability for any form of damage resulting from improper use.

All components have been developed, manufactured and tested in accordance with state-of-the-art technology and accepted safety standards. Nevertheless, hazards may arise from their use.

The safety instructions in this manual are marked as follows:



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



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

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 sensors and the VISY-Command must solely be carried out by expert personnel.
- The product may be powered only via the permissible auxiliary power supply.



*For installation, maintenance and servicing of explosion-protected devices, it is vital to follow the rules and regulations in the relevant operating instructions in the appendix.*



*Observe also the local safety and accident prevention regulations, which are not stated in these operating instructions.*



*All installation and maintenance work, with the exception of functional testing, must be carried out with the power disconnected.*

## 2 IFSF LON interface converter

### 2.1 Preparations

It is assumed that the installer is trained in how to work with IFSF LON.

Before the interface converter is connected to the IFSF LON, the VISY-X system must be configured using the VISY-Setup program. The procedure for VISY-X configuration can be found in the technical documentation of the VISY-Setup program and the configuration table supplied with each VISY-Command. 107 must be set as the host code for the IFSF LON interface converter.

For further details, see:

- Technical documentation VISY-Command VI-4, art. no. 207184
- Technical documentation VISY-Setup, art. no. 207158


Before configuration, it must be clarified with the manufacturer of the relevant petrol station controller whether any required tank tables should be saved in the petrol station controller or in the VISY-X system. Tank tables in VISY-X are also programmed in the VISY-Setup program. Ideally, personnel trained in how to work with the petrol station controller should be on site during commissioning. If that is not the case, you must check with the manufacturer of the petrol station controller or the responsible service company which address should be configured on the interface converter so that the IFSF LON is able to recognize the VISY-X system.

### 2.2 Configuring the subscriber address

The subscriber address (node ID) is configured using the coding switch and must be done prior to commissioning. The value of the address to be configured is determined by the petrol station controller and must be clarified with the manufacturer of the petrol station controller or with the responsible service company. The switch positions for the individual addresses can be found in the following illustration:



Figure 1: Switch positions - Node IDs

 *The subscriber address (node ID) 0 is not allowed. Switch 1 is for reset mode (see reset).*

## 2.3 Connection, display and controls

The interface converter is delivered pre-installed in the VISY-Command housing. Prior to commissioning, only the LON connection has to be established, as shown in the following connection diagram.

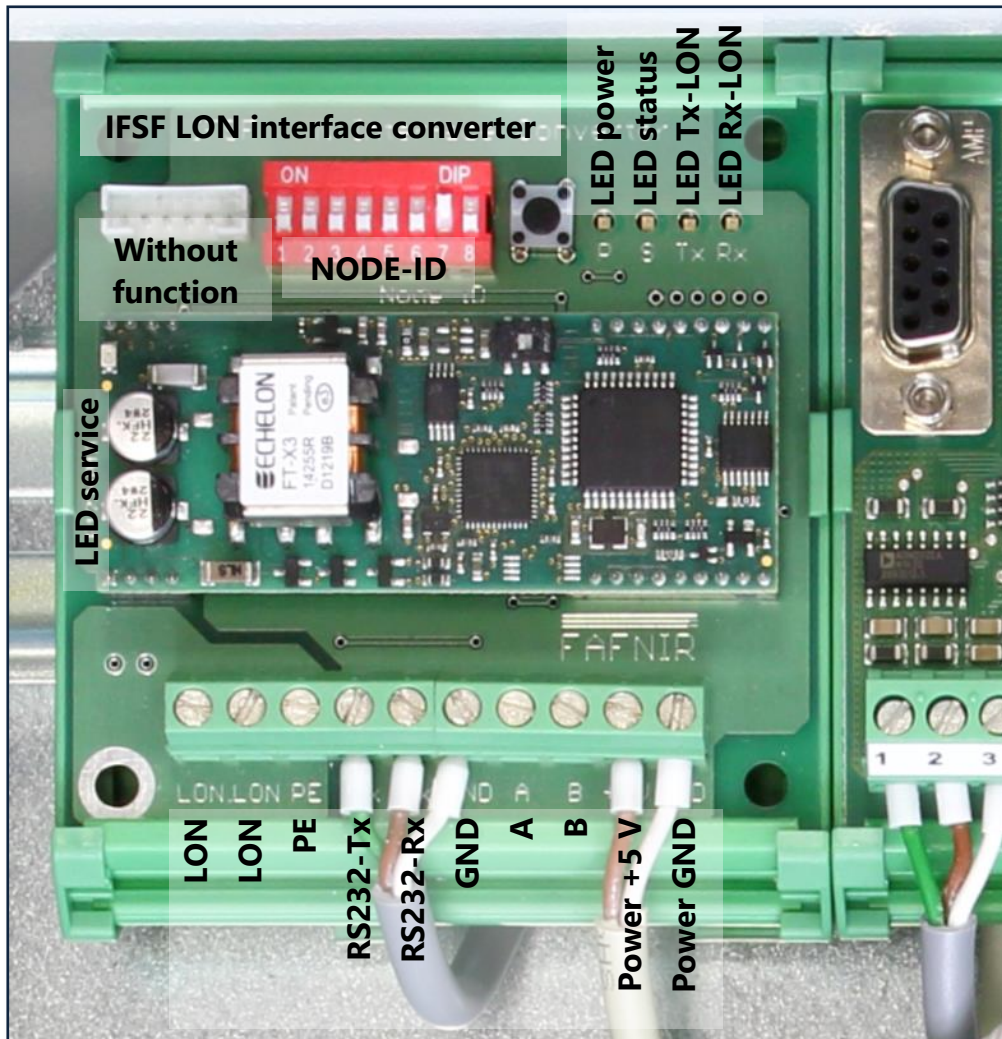


Figure 2: Connection diagram – LON connection

### Node ID

Configuring the subscriber address (node ID) and reset mode

S1: Reset mode

S2...S8: Subscriber address (node ID)

### Power

Supply, +5 V

## Reset

Reset button

Coding switch S1 = ON: Master reset (after commissioning)

Coding switch S1 = OFF: Normal reset (in operation)

## LED service

LED off: flawless operation

LED flashes: Error on the interface converter

## LED TX-LON

Illuminates when the interface converter sends a message via the LON bus

## LED RX-LON

Illuminates when the interface converter has received a message addressed to it via the LON bus

## LED status

LED off: flawless operation

LED blinks once: interface converter's communication with the VI-... interface card has been disrupted  
may occur:

- after switching on (max. 30 seconds)
- during brief disruption of data traffic

LED blinks twice: Response time of VI-... interface card exceeds two seconds, may occur during commissioning or configuration

LED blinks three times: no communication possible with the VI-... interface card for longer than 60 seconds,  
may occur:

- if the host code (107) in the VI-... interface card is wrong
- if the VI-... interface card or the interface converter is defective
- if the cable connection to the VI-... interface card is faulty

LED blinks four times: Error when writing to the IFSF database

LED illuminates: the impermissible node ID 0 has been set



## 2.4 Reset

After performing complete configuration using VISY-Setup, configuring the subscriber address (node ID) and connecting the interface converter to the LON bus, a master reset must be performed. In contrast to a normal reset, a master reset causes new settings (e.g. node ID) to be accepted into the the neuron chip that controls communication via the LON bus.

To perform a master reset, switch 1 of the coding switch must be moved to ON position. After that, press the reset button once. After master reset has been performed, return switch 1 of the coding switch to the OFF position.

### 3 Read/write permissions to the database entries

#### 3.1 TLG

Data_Id	INOPERAT.	OPERATIVE	MAINT.
1	R	R	R*
6	R	R	R/W
7	W	W	W
50	R	R	R
51	R	R	R
52	R	R	R
53	R	R	R
54	R	R	R
58	R	R	R
59	R/W	R/W	R/W
60	R/W	R/W	R/W
61	R	R	R
70	W	W	–
71	–	–	W

Table 1: TLG database

\* According to the IFSF standard, this database entry may also have write permission.

#### 3.2 TLG error

Data_Id	INOPERAT.	OPERATIVE	MAINT.
1	R	R	R
3	R	R	R/W
100	–	–	–

Table 2: TLG error code database

### 3.3 TP

Data_Id	INOPERAT.	OPERATIVE	MAINT.
1	R	R	R
2	R	R	R*
3	R	R	R*
4	R	R	R*
5	R	R	R
10	R**	R**	R*/**
11	R**	R**	R*/**
32	R	R	R
33	R	R	R
64	–	R	–
65	_**	R**	_**
67	–	R	–
68	–	R	–
70	–	R	–
71	–	R	–
100	–	–	–

Table 3: TP database

\* According to the IFSF standard, this database entry may also have write permission.

\*\* This database entry is treated as unimplemented if no volume values are available.

### 3.4 TP error

Data_Id	INOPERAT.	OPERATIVE	MAINT.
1	R	R	R
3	R	R	R/W
5	R	R	R
100	–	–	–

Table 4: TLG error code database

## 4 Maintenance and repair

### 4.1 Maintenance

The IFSF LON interface converter is maintenance free.

### 4.2 Return shipment

Before returning any FAFNIR equipment, a returned goods authorization from FAFNIR customer service is required. Please contact your account manager or customer service for instructions on how to return goods.



*The return of FAFNIR equipment is possible only a returned goods authorization from FAFNIR customer service.*

## 5 Technical data

Transfer rate:	9600 bits/s
Address setting:	Manual, via coding switch
Number of tanks supported:	16
Connection:	Screw terminals
Power supply:	5 V, stabilized
Power consumption:	65 mA
Perm. ambient temp.:	0 ... +70°C
Installation:	DIN mounting rail
Dimensions:	90 mm x 74 mm x 55 mm

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**EU-Konformitätserklärung  
EU Declaration of Conformity  
Déclaration UE de Conformité**

**FAFNIR GmbH  
Bahrenfelder Straße 19  
22765 Hamburg / Germany**

erklärt als Hersteller in alleiniger Verantwortung, dass das Produkt  
declares as manufacturer under sole responsibility that the product  
déclare sous sa seule responsabilité en qualité de fabricant que le produit

**IFSF LON-Schnittstellenwandler  
IFSF LON Interface Converter  
Convertisseur d'interface IFSF LON  
VISY-IFSF LON**

den Vorschriften der europäischen Richtlinien  
complies with the regulations of the European directives  
est conforme aux réglementations des directives européennes suivantes

<b>2011/65/EU</b>	<b>Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten</b>	<b>RoHS</b>
<b>2011/65/EU</b>	<b>Restriction of the use of certain hazardous substances in electrical and electronic equipment</b>	<b>RoHS</b>
<b>2011/65/UE</b>	<b>Limitation de l'utilisation de certaines substances dangereuses dans les équipements électriques et électroniques</b>	<b>RoHS</b>
<b>2014/30/EU</b>	<b>Elektromagnetische Verträglichkeit</b>	<b>EMV</b>
<b>2014/30/EU</b>	<b>Electromagnetic compatibility</b>	<b>EMC</b>
<b>2014/30/UE</b>	<b>Compatibilité électromagnétique</b>	<b>CEM</b>

durch die Anwendung folgender harmonisierter Normen entspricht  
by applying the harmonised standards  
par l'application des normes

**RoHS / RoHS / RoHS  
EMV / EMC / CEM**

**EN 50581:2012  
EN 61326-1:2013**

Das Produkt ist bestimmt als Elektro- und Elektronikgerät der RoHS-  
The product is determined as electrical and electronic equipment of RoHS  
Le produit est déterminés comme des équipements électriques et électroniques de RoHS

**Kategorie / Category / Catégorie**

**Überwachungs- und Kontrollinstrumenten in der Industrie /  
Industrial Monitoring and Control Instruments /  
Instruments de contrôle et de surveillance industriels**

Das Produkt entspricht den EMV-Anforderungen  
The product complies with the EMC requirements  
Le produit est conforme aux exigences CEM

**Störaussendung / Emission / Émission  
Störfestigkeit / Immunity / D'immunité**

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

Hamburg, 20.04.2016  
Ort, Datum / Place, Date / Lieu, Date

  
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