

Technical Documentation



VISY-X

IFSF LON Interface Converter

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1 Safety instructions

The VISY-X system serves the purpose of measuring and evaluating the filling levels in filling station tanks for mineral oil fuels. Use the system for this purpose only. The manufacturer shall not be liable for any form of damage resulting from improper use of this system!

The measurement value sensor, the measurement evaluation system and the interface converter were developed, manufactured and inspected in accordance with state-of-the-art technology and with recognised safety rules and regulations. Nevertheless, hazards may arise from the use of these devices. Therefore, observe the following safety instructions.

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

Use original replacement parts only. These comply with the technical requirements specified by the manufacturer.

The installation, operation and maintenance of the measurement value sensor, the measurement evaluation system and the interface converter is only allowed to be carried out by expert, authorised personnel. The measurement evaluation system is only allowed to be installed and serviced by experienced electricians in accordance with ElexV specifications. Specialised knowledge must be obtained by undergoing regular training.

Operators, installers and service personnel must observe all applicable safety regulations. This also applies to the local safety regulations and accident prevention regulations not mentioned in these operating instructions.

The interface converter and the measurement evaluation system VISY-Command are not suitable for outdoor installation and not for use in areas subject to explosion hazards. It is intended for use within the VISY-X system only.

The measuring transducers, type VP-1, and the interface, type VI-... and the IFSF LON interface converter included in the measurement evaluation system VISY-Command must always be undamaged and clean.

During normal operation, the cabinet of the measurement system VISY-Command must be closed.

2 IFSF LON Interface Converter

2.1 Structure and mode of operation

The IFSF interface converter serves the purpose of integrating the system VISY-X with the IFSF LON standard (International Forecourt Standards Forum).

The interface converter is a module that is connected to the host interface of the measurement evaluation system VISY-Command. The interface converter collects the current tank content data from there and converts this data in accordance with the IFSF LON standard.

The interface converter is already completely wired by the factory and installed in the measurement evaluation system VISY-Command so that no additional device-internal installation tasks are required.

2.2 Preparatory tasks

It must be assumed that the installer is properly trained in the use of the IFSF LON standard.

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

Prior to the configuration, the manufacturer of the filling station control system in each case must be contacted in order to determine whether any required tank tables must be stored in the filling station control system or in the system VISY-X. The programming of tank tables in VISY-X is also carried out using the program VISY-Setup.

Ideally, personnel properly in the use of the filling station control system should be present on site during the commissioning procedure. If this is not the case, the manufacturer of the filling station control system or the service company in charge must be contacted in advance in order to determine which address must be set so that the IFSF LON can recognise the system VISY-X.

2.3 Setting the user address

The setting of the user address (Node-ID) is carried out via the coding switches and must be made prior to the commissioning procedure. The value of the address to be set is defined by the filling station control system and must be discussed with the manufacturer of the filling station control system or with the service company in charge.

The switch positions for the individual addresses are included in the following diagram.



Fig. 1: Switch positions – Node-Ids



The user address (Node-ID) 0 is not permissible. Switch 1 is responsible for the reset mode (see Reset)

2.4 Connection, indicating and operating elements

The interface converter is delivered from the factory pre-installed in the VISY-Command switch cabinet. Prior to the commissioning procedure, only the LON integration must be made according to the following terminal connection plan.

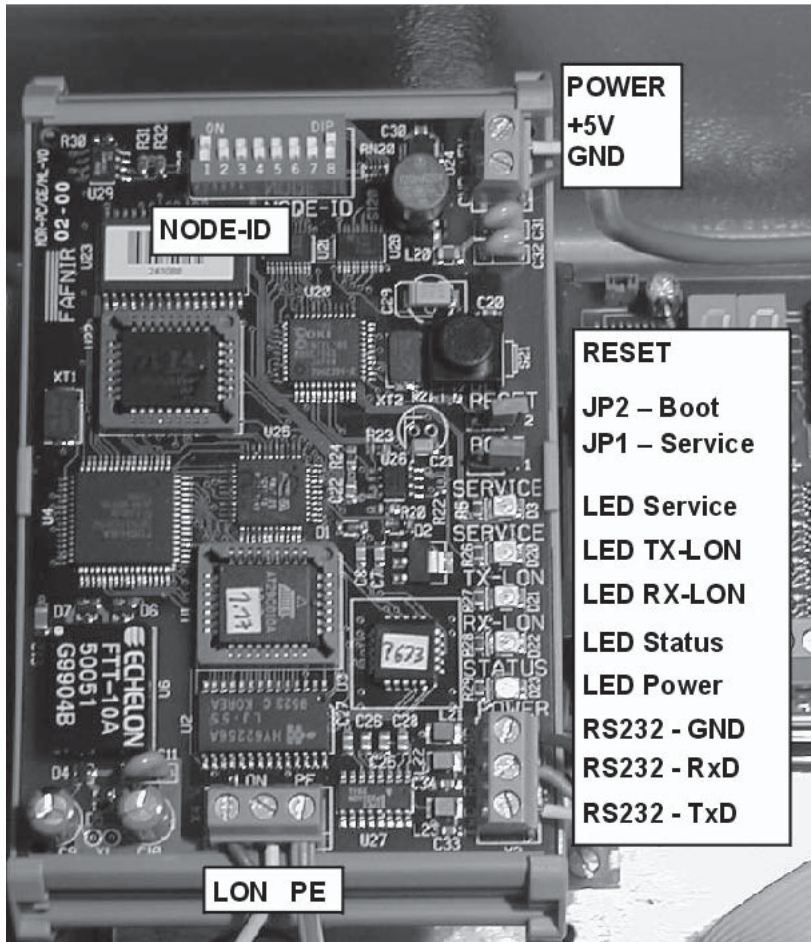


Fig. 2: Connection plan – LON integration

Node-ID

Setting the user address (NODE-ID) and reset mode

S1: Reset mode

S2...S8: user address (Node-ID)

Power

Power supply, + 5 V

Reset

Reset button

Coding switch S1 = ON: master reset (following commissioning)

Coding switch S1 = OFF: normal reset (during normal operation)

JP2-Boot

For manufacturing purposes only; during normal operation, the jumper must be open

JP1-Service

For testing purposes only; during normal operation, the jumper must be open

LED Service

LED OFF: trouble-free operation

LED flashing: defect on the interface converter

LED TX-LON

Lights up when the interface converter sends a message via the LON bus.

LED RX-LON

Lights up when the interface converter receives a message sent to it via the LON bus.

LED Status

LED OFF: trouble-free operation

LED flashes once: disturbed communication of the interface converter with the interface card VI-..., may occur:

- after switching on the converter (max. 30 seconds)
- in case of short-time disturbance of data traffic operations

LED flashes twice: response time of the interface card VI-... exceeds two seconds, may occur during commissioning/ configuration procedures

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

- in case of incorrect host code (107) in the interface card VI-...
- in case of defective interface card VI-... or defective interface converter
- in case of faulty cable connection to the interface card VI-...

LED flashes four times: error when writing into the IFSF database

LED illuminated: the impermissible Node-ID 0 has been set

2.5 Reset

Following the complete configuration procedure using the VISY-Setup program, the setting of the user address (Node-ID) and the connecting of the interface converter to the LON bus, a master reset operation must be carried out. Unlike a normal reset operation, a master reset operation results in the transfer of new settings (e.g. Node-ID) into the Neuron-chip, which controls the communication via the LON bus.

In order to carry out a master reset operation, switch 1 of the coding switch must be turned to the position ON. The reset button must then be pressed once. After the master reset has been carried out, switch 1 of the coding switch must be turned back to the position OFF.

2.6 Technical data

Transmission rate:	9,600 bits/sec.
Address setting:	manually via coding switch
Number of supported tanks:	16
Connection:	screw-type terminals
Power supply:	5 V, stabilised
Current consumption:	200 mA
Permissible ambient temperature:	0 °C-70 °C
Installation:	DIN mounting rail
Dimensions:	112 mm x 81 mm x 53 mm

3 Writing/reading rights for 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

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

* This database entry can also have a write-enable according to the IFSF standard.

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

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: TP error code database

* This database entry can also have a write-enabled according to the IFSF standard.

**This database entry is treated as being not implemented when no volume values are available.