TECSON

Competence in tank and level measurement technology

Product Catalog

Company profile

TECSON develops and produces electronic measuring and indication systems for level measurement, tank content detection and remote signalling. Self-developed electronic display and indication systems as well as high-quality level and filling level probes are used. Production and quality control are carried out at the headquarters in Felde (near Kiel). The first premise at TECSON is competent customer advice as well as first-class technical support - even after the purchase.

TECSON sees itself as a partner of the technical specialized trade. Through this channel, but also through direct sales to consumers, we offer sophisticated, reliable tank measuring technology for commercial applications as well as for the home sector (own heating oil tank).

TECSON operates with a strong Internet presence and offers an oil market info portal with daily market commentary. A heating oil price calculator is available for consumers.

TECSON's expertise lies in the field of electronic tank gauges as well as in solutions for monitoring and remote supervision. Our products are based on state-of-the-art measurement and data transmission technology.

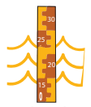
The LX device series is one of the leading tank gauge systems on the market. This professional series has a modular design and offers a solution for almost every requirement profile. Due to the modular design principle, various analog, digital and communicative device interfaces are available according to customer requirements.

Further options, device designs and areas of application can also be realized on request.

Table of contents

Standard sets for tank content measurement

Tank content indicator for professional users
- Commercial tanks / plant monitoring-

	WITHOUT REMOTE LOGIN			WITH REMOTE LOGIN				
				LAN	GSM	IoT		
								
	LX-2	LX-2-R	LX-Q	LX-NET / LX-Q-NET	LX-GSM / LX-Q-GSM	LX-Edge / LX-Q-Edge	Tankspion-IoT PRO	Tankspion-IoT GPS
 building tank	P. 04	P. 06		P. 10 P. 12	P. 18 P. 20	P. 14 P. 16	P. 22	P. 24
 Battery tanks							P. 22	P. 24
 underground Large tank	P. 04	P. 06		P. 10 P. 12	P. 18 P. 20	P. 14 P. 16	P. 22	P. 24
 outdoor large tank	P. 04	P. 06	P. 08	P. 10 P. 12	P. 18 P. 20	P. 14 P. 16	P. 22	P. 24
 multiple outdoortanks			P. 08	P. 12	P. 20	S. 18		
 Alarm-notifications				P. 10 P. 12	P. 18 P. 20	P. 14 P. 16	P. 22	P. 24
 Mobile Tanks					P. 18	P. 16	P. 22	P. 24
 EX-area	P. 04	P. 06	P. 08	P. 10 P. 12	P. 18 P. 20	P. 14 P. 16		
 level river /sea							P. 22	P. 24

PROFESSIONAL INDICATOR / LX SERIES

Professional tank gauges without remote sensing

Proessional tank gauges with remote sensing

The following components are required for PROFI tank content measurement with the LX series:

LX evaluation unit | Level probe | Accessories as neededf

Proessional tank indicator

Tank-Spion LX-2

Electronic oil tank indicator

Professional Oil Tank Indicator

Tankspion Digital LX-2 is a professional electronic level indicator for oil tanks and other containers. The device consists of a level measuring probe combined with a digital display unit for wall mounting.

The LX-2 set provides reliable oil tank level indication for commercial tanks or consumer tanks. The level in the tank is permanently measured, monitored and displayed. The electronic display unit is set once to the tank and the liquid via menu keys during installation.

Typical applications:

- Fuel oil tanks and disel tanks
- Large liquid tanks and basins
- underground tanks and basement tanks
- Steel tanks and plastic tanks (battery tanks)

Liquids / immersion probe:

Water, fuel oil, diesel, biodiesel, rapeseed oil, vegetable oils, lubricating oils, liquid fertilizer, AdBlue.

Other media depending on the type of measuring probe.

Adapted to the height of the tank or the measuring level, the level probe can be supplied with different measuring ranges. The standard probe in the equipment set has the measuring range 0 - 200 mbar. This corresponds to 0 - 2.0 m water column or 0 - 2.50 m oil column.

LX-2 Evaluation unit

Display: Liters + Clearance + %

Probe + fitting from the set

Digital fuel gauge of the current stock:

The fuel level is displayed electronically on the LCD display.

Display by:

- Current stock in liters
- Level in cm
- Content in percent or filling free space in liters

The tank designation can be freely set, e.g. "Diesel" or "Tank 2".

Technical data

Supply voltage:	AC-variant:	230 V 50 Hz
	DC-variant:	12 V oder 24 V
Measurement input:	4 - 20 mA ; U_0 = 20 V ; 12 Bit resolution	
Power consumption:	≤ 2 VA	
Dimensions L x B x H:	145 x 120 x 50 [mm]	
Case:	ABS, protection class: IP65	

Technical data

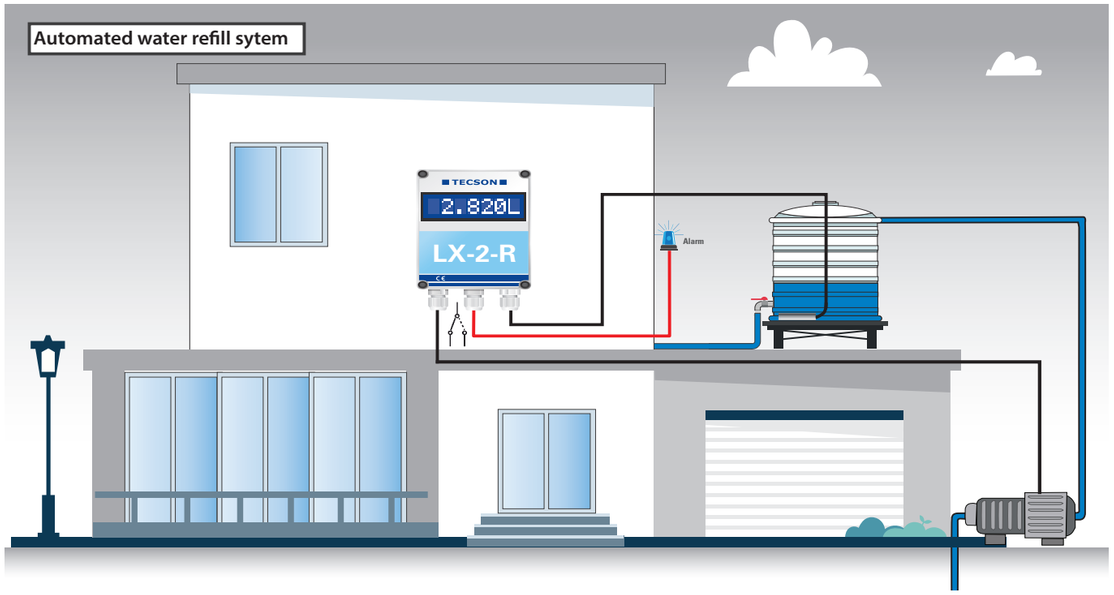
Complete equipment set:	*LX-2*	Item no.: 12032
Included in the set:	- Indicator *LX-2* - standard probe TDS-61-200-P6 - Tank fitting 1" + 1,5" ring	
Indicator without probe:	*LX-2* o.S.	Item no.: 11032
Suitable measuring probes:	Level probes: EX-probes:	see P.28 see P.35
Accessories: (optional)	- External terminal box - Analog adapter 4-20mA - BMS adapter 0-5V - M-Bus adapter - Temperature monitoring - WLAN adapter wifi-SmartLink - H-protocol box - GSM Messenger A+	

TO WEBSITE

Professional tank indicator

Tank-Spion LX-2-R

Tank indicator with switching function



Professional tank gauge with relay function

The LX-2-R is a professional electronic tank level indicator with two integrated control relays. With this, level-dependent switch-on and switch-off processes can be realized without any problems.

For applications with two separate tanks the LX-2-R device can be used to implement tank switching controlled by solenoid valves as well as priority and reserve switching. The device set consists of a probe for measuring the current tank content, combined with a digital evaluation unit.

The LX-2-R display unit is set once by menu keys during installation. The display shows the following values depending on the setting.

Liters + % + cm level + fillable free space

The basic functions of the device are described in the LX-2 basic device.

Switching functions:

In addition to the measuring and display functions, the LX-2-R also offers switching functions via two output relays.

The switching points and the holding range of the relays can be individually set independently of each other. Solenoid valves, for example, can be switched over. This makes it easy to implement automatic withdrawal switching between two or more individual tanks.

In cisterns, inflow and outflow can be controlled based on the level, or pump protection against running dry can be implemented. Additionally, circuits can be switched based on specific threshold levels being exceeded or undershot.

TO WEBSITE

LX-2-R evaluation unit

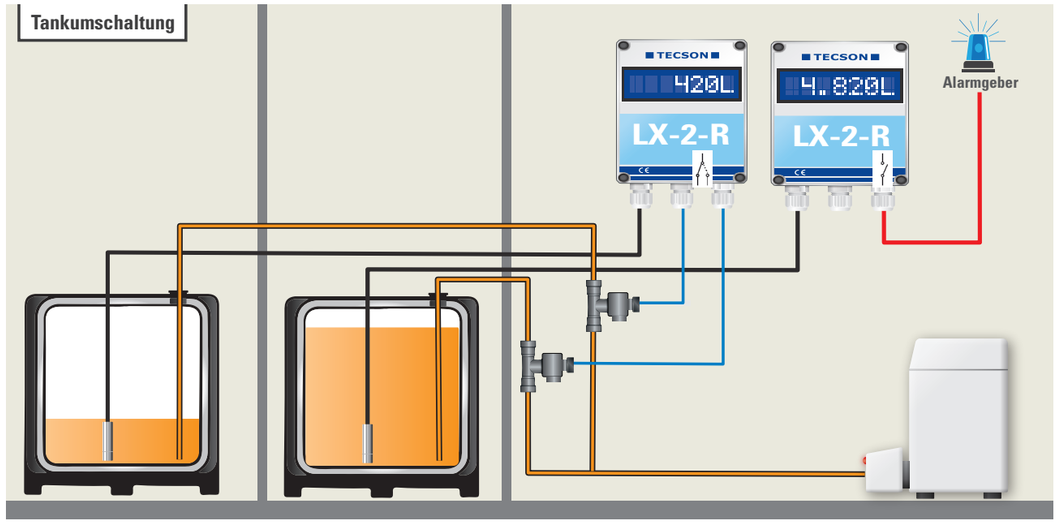
Probe + fitting from the set

Technical data

Supply voltage:	AC-variant:	230 V 50 Hz
	DC-variant:	12 V oder 24 V
Measurement input:	4 - 20 mA ; U_0 = 20 V ; 12 Bit resolution	
Power consumption:	≤ 3 VA	
Dimensions L x B x H:	145 x 120 x 50 [mm]	
Case:	ABS, protection class: IP65	
2 Output relay:	Switching voltage:	max. 230 V AC
	Switching current:	max. 3,5 A

Scope of delivery & accessories

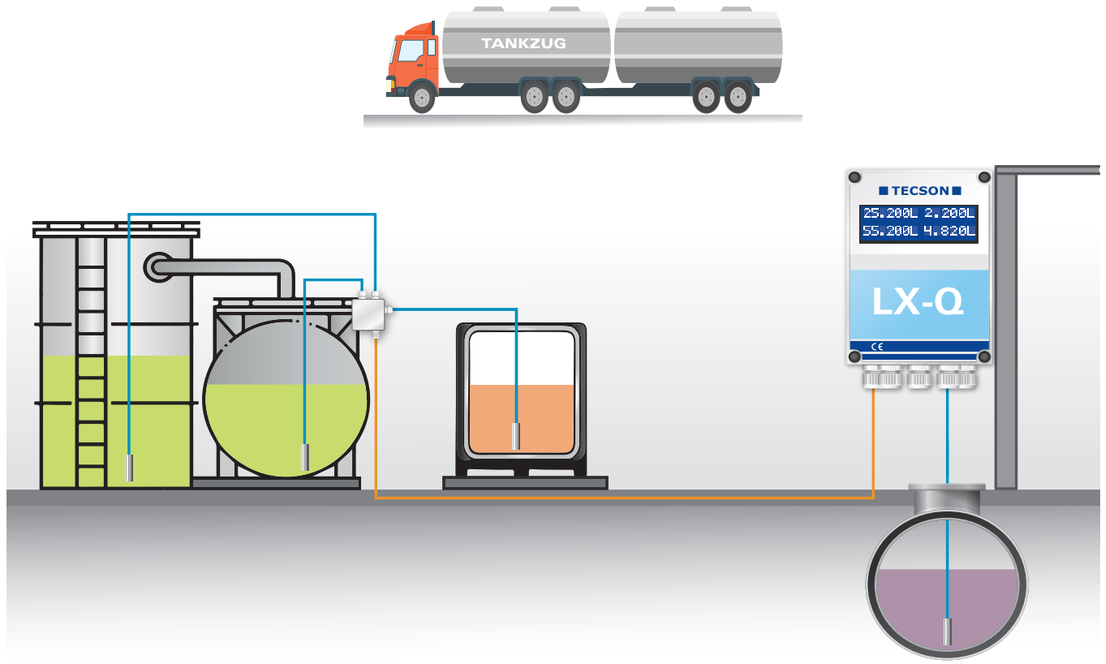
Complete equipment set:	*LX-2*-R	Item no.: 12033
Included in the set:	- Indicator *LX-2* - standard probe TDS-61-200-P6 - Tank fitting 1" + 1,5" ring	
Indicator without probe:	*LX-2*-R o.S.	Item no.: 11033
Suitable measuring probes:	Level probes: EX-probes:	see P.28 see P.35
Accessories: (optional)	- External terminal box - Analog adapter 4-20mA - BMS adapter 0-5V - M-Bus adapter - Temperature monitoring - WLAN adapter wifi-SmartLink - H-protocol box - GSM Messenger A+	



Multi tank indicator

Tank-Spion LX-Q

Multi-tank gauge



Professional oil tank gauges for multiple tanks

The LX-Q (Q = quadro) instrument version is a multiple tank gauge. Up to four tank measuring probes can be connected directly. The current level measurements are converted into liter and percentage displays for each tank based on the tank geometry.

The LCD display shows the tanks in sequence. Optionally, the total level can also be displayed or all four tank content values simultaneously. It is also possible to activate/deactivate the fading of the displays.

The LX-Q has four measuring inputs for 1, 2, 3 or 4 level probes. The geometry of each of the four tanks can be set separately, i.e. differently. The tank parameters are set once via an intuitively simple menu operation.

The device can pass on its measured values via an output link adapter, e.g. to the H-Box or the GSM Messenger A+.

Installation / Mounting:

The LX-Q device has case protection class IP65 (weatherproof) and is suitable for outdoor installation. Appropriate technical knowledge is required for the installation of the tank measuring probe. Country-specific installation regulations must be observed.

Anschlüsse / Eingänge:

- 4 measuring inputs for 1 - 4 tank measuring probes
- 1 alarm contact input (fault sensor)
- 230 V AC power supply

Alternative version: 24 V or 12 V DC.

The "Q" unit has no control relay.

Desired display:

The device display is selectable. It is possible to statically display the current liter counts of the existing probes or to select another display type, e.g. total inventory and % of individual tanks.

LX-Q evaluation unit

Display type: 4 tanks in liters

Technical data LX-Q

Supply voltage:	AC-variant: 230 V 50 Hz DC-variant: 12 V oder 24 V
Measurement input:	4 - 20 mA ; U_0 = 20 V ; 12 Bit resolution
Power consumption:	≤ 2,5 VA
Dimensions L x B x H:	208 x 120 x 60 [mm]
Case:	ABS, protection class: IP65
Accessories: (optional)	- WLAN adapter wifi-SmartLink - H-protocol box - GSM Messenger A+

Scope of delivery & accessories

Indicator without probes::	*LX-Q* o.S.	Item no. : 11504
Suitable measuring probes: (1 - 4 probes connectable)	Level Probes: EX-probes:	see P.28 see P.35

OPTIONAL

H-Protocol Box

wifi-SmartLink

Optional connections:

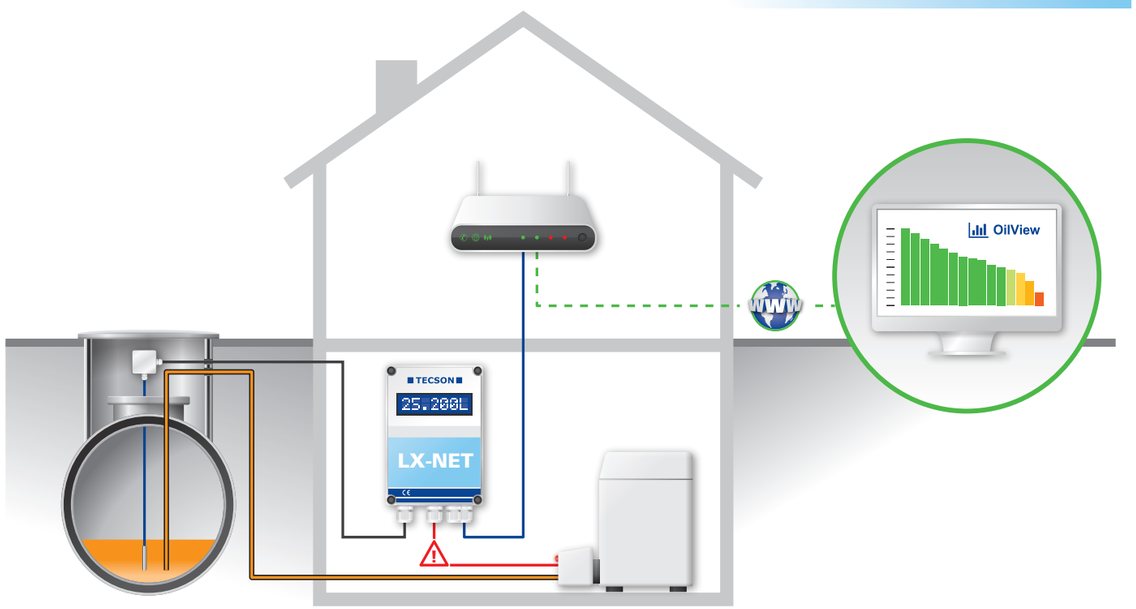
H-protocol Box	for filling station systems see P.37
wifi-SmartLink	for network integration via WLAN see P.38

TO WEBSITE

Professional tank gauges with remote

Tank-Spion LX-NET

Professional oil tank gauge with Network connection



Professional oil tank gauge with LAN connection

Digital tank gauge as well as remote data retrieval via browser. The device set consists of a hydrostatic tank probe for precise level measurement, combined with the digital display unit. In the backlit LCD display, the device shows the current values in liters, percent and cm.

In addition, a network adapter is integrated. The LX-NET is connected directly to the local network (LAN) via a network cable. During device configuration, the device is assigned an IP address in the site network. This allows the current tank content to be queried directly remotely via a web browser. With appropriate router forwarding, cross-site remote inquiry via Internet line can also be set up.

Typical applications:

- Heating oil tanks / diesel tanks / water storage tanks or various other liquids.
- Unterground tanks, outdoor tanks and basement tanks.

Remote query:

Device query via browser in LAN/intranet: Use the browser to directly address the IP device address. The device HTML page with the liter measurement data appears in the browser.

Remote query via Internet line:

Using the browser, address the device via the IP address (fixed) or domain address at the remote site, if OilView is not connected.

Inventory management / monitoring

OilView (portal with browser access):
For inventory management of multiple properties, connection to the OilView portal is optional. See p.62 .

oil-SmartView (evaluation via app):

The oil-SmartView app presents the current tank measurement data and evaluations on your smartphone. See p.62.

TO WEBSITE

LX-NET evaluation unit

Probe + fitting from the set

Display: Liters + Clearance + %

Display: liters + free space + level heighte

INTERFACE:

Fault input:
The LX-NET device has an alarm input/fault input for direct connection of a potential-free fault contact. The contact input can be parameterized as a normally closed or normally open contact and leads to the corresponding alarm message situation for the device.

Serial data input:
The LX-NET device has a serial input for the connection of further LX-2 tank gauges. The liter values of these tanks are then also reported remotely.

Relay control function:
The LX-NET unit has an output relay that switches depending on the level or picks up when the level falls below a limit level. This allows remote control of a solenoid valve or other circuit.

Remote control / remote switching:
The built-in relay can also be remotely controlled. Via web browser it can be switched over and switch corresponding control circuits.

Technical data

Supply voltage:	AC-variant:	230 V 50 Hz
	DC-variant:	12 V oder 24 V
Measurement input:	4 - 20 mA ; U_0 = 20 V ; 12 Bit resolution	
Power consumption:	≤ 3,5 VA	
Dimensions L x B x H:	208 x 120 x 60 [mm]	
Case:	ABS, protection class: IP65	
Output relay:	Switching voltage:	max. 230 V AC
	Switching current:	max. 3,5 A

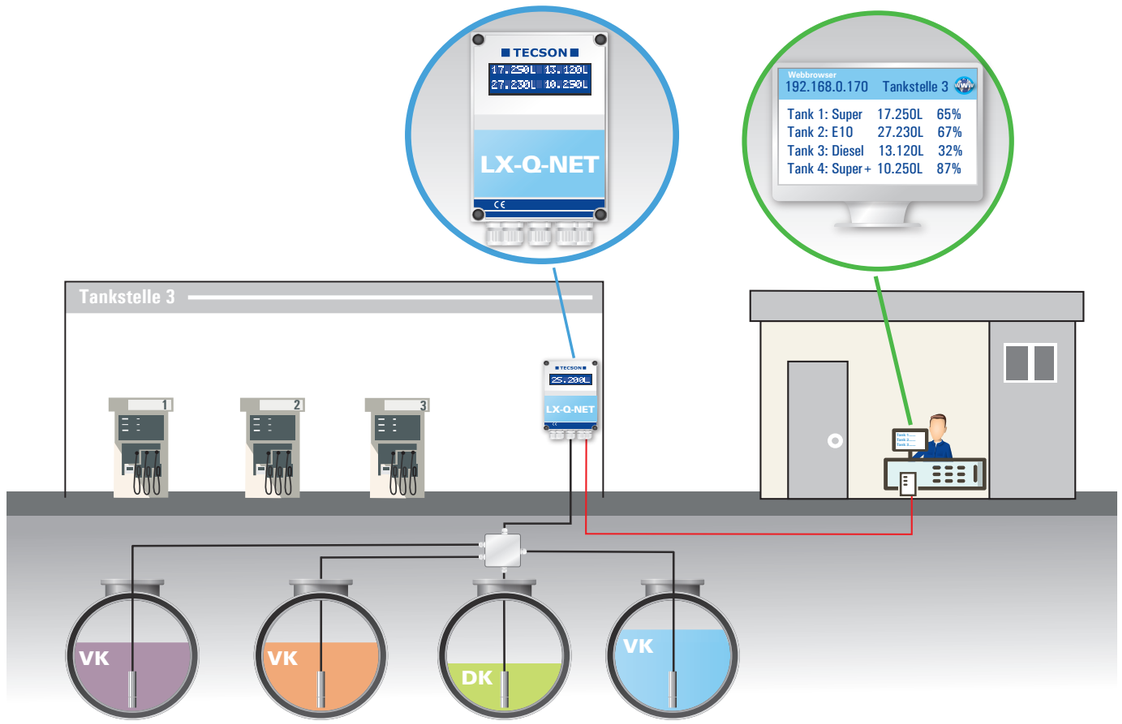
Scope of delivery & accessories

Complete equipment set:	*LX-NET*	Item no.: 12701
Included in the set:	- Display unit LX-NET - Standard probe TDS-61-200-P6 - Tank fitting 1" + 1.5" ring	
Indicator without probe:	*LX-NET* o.S	Item no.: 11701
Suitable measuring probes:	Level probes: EX-probes:	see P.28 see P.35
Accessories: (optional)	- External terminal box - Temperature monitoring	
Data analysis: (optional)	About the OilView server - via web browser - via *oil-SmartView* App	 P.46 P.48

Multi tank gauge with remote

Tank-Spion LX-Q-NET

Multi tank gauge with Network connection



Multi tank gauges with LAN connection

In contrast to the LX-NET, the LX-Q-NET (Q = quadro) version is a multiple tank gauge. Up to four tank measuring probes can be connected directly. This makes the LX-Q-NET device solution predestined for filling stations and for larger tank farms with several individual tanks.

The measured liter numbers of the tanks are shown in the LCD display. Percentage values and inventory totals can also be displayed as an option. Remote reporting of the data, e.g. via browser query, is done via direct connection to the local network (Ethernet or LAN with TCP-IP protocol). Connection via network cable to RJ45 socket.

The device can work with 1, 2, 3 or 4 level probes. Each of these four tanks can be parameterized separately in geometry. The tank parameters are set once via an intuitively simple menu operation. For details on measuring probes and applications, see basic device LX-NET.

Desired display:

The device display is selectable. You can statically display the current number of liters of the existing probes or you can select another type of display, e.g. total inventory and % of individual tanks.

Connections / Inputs:

- 4 measuring inputs for 1-4 tank measuring probes
- 1 alarm contact input (fault probe)
- 230 V AC power supply

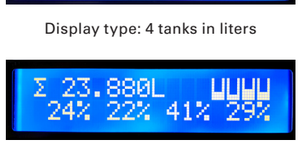
Alternative version: 24 V or 12 V DC. The "Q" unit has no control relay.

Installation / Mounting:

Appropriate technical knowledge is required for installation of the tank probe. Country-specific installation regulations must be observed.

LX-Q-NET evaluation unit

Display type: 4 tanks in liters



Display type: Total stock + 4 tanks in %.

1-4 tank measuring probes can be connected

Remote query

Device query via browser in LAN / Intranet:
With the browser, you directly address the IP device address. The device HTML page appears with the current liter-Measured values.

Remote query via internet line:
By browser, you talk about the IP address (fix) or domainad-. ress the device at the remote location.

Inventory management / monitoring

OilView (portal with browser access):
For the inventory management of several properties, the an- optional connection to the OilView portal. See p.62.

oil-SmartView (evaluation via app):
The oil-SmartView app presents you with the current tank gauges. data and the evaluations on your smartphone. See p.64.

Technical data

Supply voltage:	AC-variant:	230 V 50 Hz
	DC-variant:	12 V oder 24 V
Measurement input:	4-20 mA ; U_0=20 V ; 12 Bit resolution	
Power consumption:	≤ 3,5 VA	
Dimensions L x B x H:	208 x 120 x 60 [mm]	
Case:	ABS, protection class: IP65	

Scope of delivery & accessories

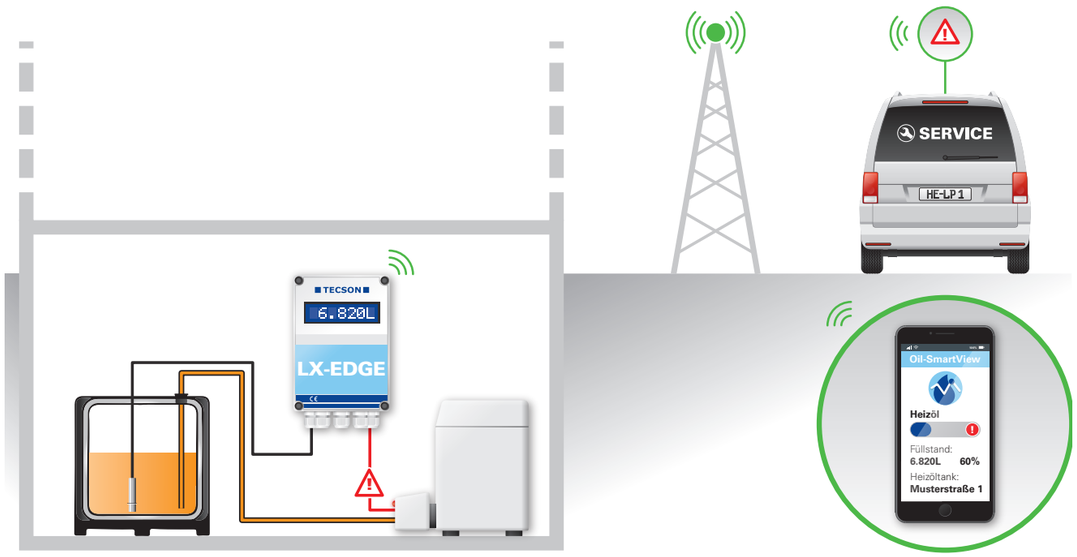
Indicator without probe	*LX-Q-NET* o.S.	Item no.: 11704
Suitable measuring probes: (1-4 probes connectable)	Level probes:	see P.28
	EX-probes:	see P.24
Accessories: (optional)	- External terminal box - Temperature monitoring	
Data analysis: (optional)	About the OilView server - via Webbrowser - via *oil-SmartView* App	P.46 P.48

TO WEBSITE

Professional tank gauges with remote

Tank-Spion LX-Edge

NEU



Oil tank gauge with remote message

Professional tank gauge with NB-IoT remote reporting

The LX-Edge tank gauge defines a new era in electronic tank monitoring. With state-of-the-art technology, this electronic tank gauge provides precise monitoring of the level in the tank and enables efficient remote monitoring via the NB-IoT network.

The electronic tank gauge provides accurate measurements in liters and % on the 2-line display. Thanks to the integrated NB-IoT modem, the LX-Edge can report inventory data remotely via the Narrowband IoT network much more frequently than our other LX devices and is very cost-efficient. In the event of a malfunction or when the tank is empty, an immediate event message is sent to the predefined coverage. The measurement data runs via the secure OilView cloud server. The OilView portal offers a user-friendly front end via desktop and app. This enables convenient inventory monitoring with alarms for immediate action.

The device set consists of a high-quality hydrostatic immersion probe for precise level measurement. A radio modem is also integrated, which uses the NB-IoT, 4G (LTE) and 2G fallback mobile networks.

Typical applications:

Underground tanks, outdoor tanks and cellar tanks (steel tanks, plastic tanks, cisterns) with inventories and content values that are to be reported remotely: Oil tanks and liquid tanks, water levels.

SIM-card:

The SIM card is already integrated and inserted.

OilView-connection:

The device is continuously in data connection with the OilView system and reports its status data. Device registration/login is required in all cases.

Integrated inputs / outputs::

Alarm input / fault input:
Input for potential-free contact. The burner fault is often connected here. In the event of an alarm status, the remote fault signal for this system is issued after 3 minutes.

Serial data input:
Serial input for connecting additional tank display devices for data reporting

Relay output:
The LX-Edge device has an output relay that switches when the level falls below a limit level.

LX-Edge evaluation unit

Probe + fitting from the set

Display: Liters + Clearance + %

Display: liters + free space + level

Relay switching functions:
Depending on the water level, the device can automatically switch its internal relay automatically. This enables switching functions such as tank removal switchover, switching off the heating, etc. are made possible.

Remote signaling via NB-IoT::
Remote signaling via NB-IoT enables efficient and reliable remote reliable remote monitoring of a system. The device can send inventory data more regularly and very cost-effectively via the narrowband mobile network (NB-IoT) and ensures fast event reporting in the event of faults or when the reserve level is reached.

Inventory management / monitoring

OilView ((Portal with browser Access):
The connection to the OilView portal is provided for inventory management of the tank, see p. 62

oil-SmartView (evaluation through app):
The oil-SmartView app presents you with the current tank measurement data and consumption evaluations on your smartphone, p.64

Technical data

Radio network:	NB-IoT / 4G (LTE) / 2G (as Fallback)	
Supply voltage:	AC-Variante:	230 V 50 Hz
	DC-Variante:	12 V oder 24 V
Measurement input:	4 - 20 mA ; U_0 = 20 V ; 12 Bit resolution	
Power consumption:	≤ 3,5 VA	
dimensions L x B x H:	208 x 120 x 60 [mm]	
Case:	ABS, protection class: IP65	
Output relay:	Switching voltage:	max. 230 V AC
	Switching current:	max. 3,5 A

Scope of delivery & accessories

Complete equipment set:	*LX-EDGE*	Item no.: 11801
Included in the set:	- Display unit LX-EDGE - Standard probe TDS-61-200-P6 - Tank fitting 1" + 1.5" ring	
Indicator without probe:	*LX-EDGE* o.S	Item no.: 11801
Suitable measuring probes:	Level probes:	see P.28
	EX-probes:	see P.24
Accessories: (optional)	- External terminal box - Temperature monitoring - External mobile network antenna	

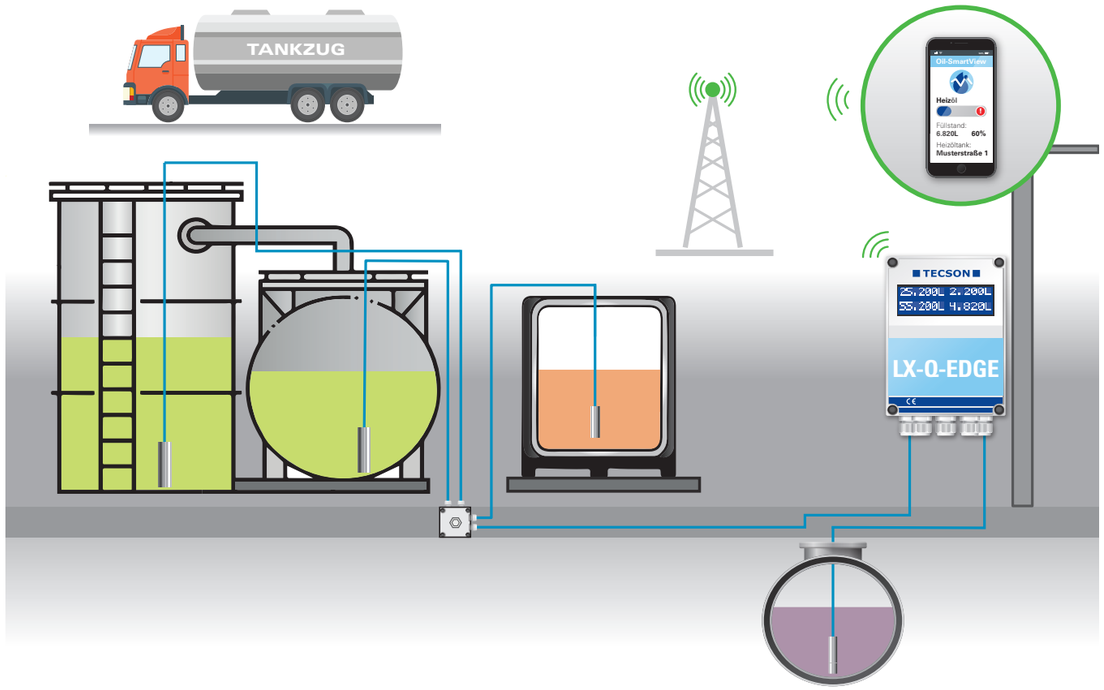
TO WEBSITE

Multi tank gauge with remote

Tank-Spion LX-Q-Edge

NEU

Professional oil tank gauge with NB-IoT connection



Multi-tank gauge with NB-IoT remote indication

In comparison to the LX-Edge, the device version LX-Q-Edge (Q = quadro) is a multiple tank gauge. Up to four level probes can be directly connected. The LX-Q-Edge is therefore recommended for filling stations or remote larger tank farms with several individual tanks.

The displayed liter values of the tanks are shown sequentially on the LCD display. Percentage and total stock can also be displayed as an option. Remote reporting or remote querying of the tank contents is carried out via mobile network. The measurement data is sent to the OilView portal via NB-IOT.

The device can work with 1, 2, 3 or 4 level probes. Each of these 4 tanks can be parameterized separately with regard to tank shape and volume. The tank parameters are set once during installation via the operating menu. For details on measuring probes and fields of application, see basic device LX-Edge (see page 16).

NB-IOT SIM-card:
Is already installed in the device and included.

The preferred display:

The device information can be selected. The current number of liters of the available probes can be displayed statically or another display type can be selected, e.g. total stock and % of individual tanks.

Connections / inputs:

- 4 measuring inputs for 1 - 4 tank probes
- 1 alarm contact input (fault contact transmitter)
- 230 V AC power supply

Alternative Ausführung: 24 V oder 12 V DC.
Das "Q"-Gerät hat kein Steuerrelais.

Installation / mounting:

Appropriate expertise and qualifications are required to install the tank probe.

OilView interface:

The device is continuously connected to the OilView system and reports its status data. status data. Device registration/login is required in all cases.

LX-Q-Edge evaluation unit

Display Type: 4 Tanks in Liters

Display Type: Total Stock + 4 Tanks in %

Connectable: 1 to 4 tank probes

Remote signaling via NB-IoT:

Remote signaling via NB-IoT enables efficient and reliable remote monitoring of the system. The device can regularly and cost-effectively transmit the inventory data via the narrow mobile network (NB-IoT) and ensures rapid event reporting in the event of faults or when the reserve level is reached.

Stock management / monitoring:

OilView (portal with browser access):
An optional connection to the OilView portal is provided for the inventory management of several properties. See page 62.

oil-SmartView (evaluation via app):
The oil-SmartView app provides you with the current tank measurement data and consumption evaluations on your smartphone, see p.64 .

Technical data

Radio network:	NB-IoT / 4G (LTE) / 2G (as Fallback)	
Supply voltage:	AC-Variante:	230 V 50 Hz
	DC-Variante:	12 V oder 24 V
Measurement input:	4 - 20 mA ; U_0 = 20 V ; 12 Bit resolution	
Power consumption:	≤ 3,5 VA	
dimensions L x B x H:	208 x 120 x 60 [mm]	
Case:	ABS, protection class: IP65	
Output relay:	Switching voltage:	max. 230 V AC
	Switching current:	max. 3,5 A

Scope of delivery & accessories

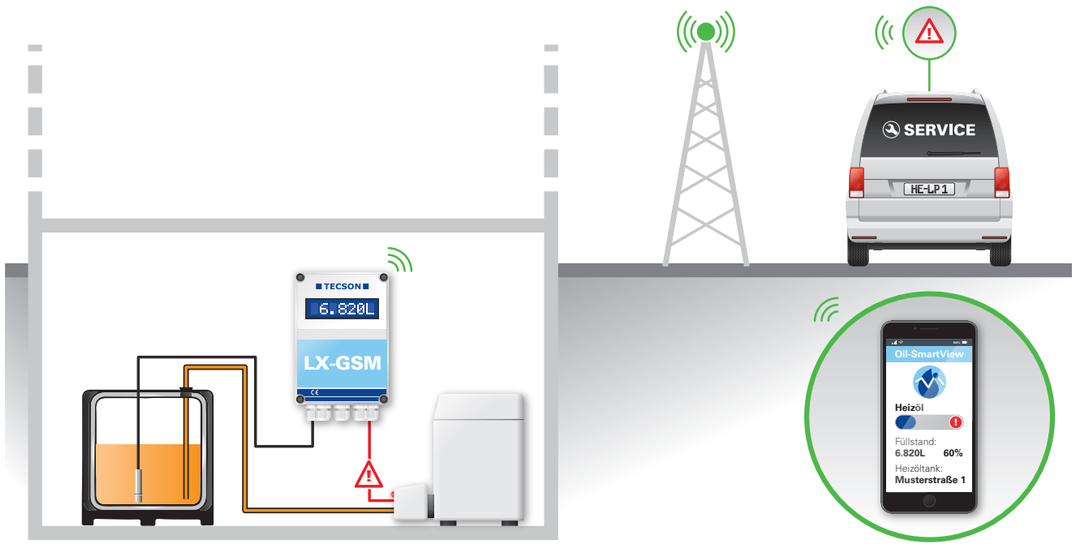
Indicator without probe:	*LX-Q-EDGE* o.S	Item no.: 11804
Suitable measuring probes:	Level probes:	see P.28
	EX-probes:	see P.35
Accessories: (optional)	- External terminal box - Temperature monitoring - External mobile network antenna	

TO WEBSITE

Professional tank gauge with remote sensing

Tank-Spion LX-GSM

Oil tank indicator with SMS remote message



Professional tank gauge with SMS remote messaging

The LX-GSM tank spy is an electronic tank gauge with integrated mobile modem. The electronic tank level indicator displays the level in the tank in liters and percent. A fault signal can be directly connected via a contact input.

The device periodically reports the levels by SMS remotely. In the event of a malfunction or the tank becoming empty, a spontaneous SMS event message is sent to the desired recipient. This can be a smartphone and/or the OilView portal.

The device set consists of a hydrostatic tank probe for precise level measurement, combined with the digital evaluation and display device. In addition, a GSM radio modem is integrated. This module requires a SIM card for a mobile network for operation (supported mobile networks: 4G (LTE) / 3G / 2G).

Typical applications:
Tanks with inventories and content values that are to be remotely reported or remotely controlled: Fuel oil tanks / diesel tanks / liquid tanks. For underground tanks, outdoor tanks and basement tanks (steel tanks, plastic tanks, cisterns).

Integrated inputs / outputs:
Alarm input / fault input:
Input for potential-free contact. Often the burner fault is switched on here. In the event of an alarm condition, the remote fault message for this system is issued after 3 minutes.

Serial data input:
Serial input for connection of further tank indicators. The liter values of the indicators of tanks 2 - 4 are thus also remotely reported by this device.

Relay output:
The LX-GSM unit has an output relay that switches when the level falls below a limit level.

LX-GSM evaluation unit

Probe + fitting from the set

Display: Liters + Clearance + %

Display: liters + free space + level

Remote control / remote switching:
By SMS command, the relay in the device can be remotely switched directly. This allows any control circuits to be remotely controlled: Switch tank, switch off heater, etc.

Mobile phone SIM card:
The device requires a cellular SIM card, similar to a smartphone, to send SMS messages. This can be a normal telephony card (contract or prepaid). M2M cards can also be used on request from TECSON.

Inventory management / monitoring

OilView (portal with browser access):
For inventory management of multiple properties, connection to the OilView portal is optional. See p.62.

oil-SmartView (evaluation via app):
The oil-SmartView app presents the current tank measurement data and evaluations on your smartphone. See p.64 .

Technical data

Radio network:	4G (LTE) / 3G / 2G	
Supply voltage:	AC-Variante:	230 V 50 Hz
	DC-Variante:	12 V oder 24 V
Measurement input:	4 - 20 mA ; U_0 = 20 V ; 12 Bit resolution	
Power consumption:	≤ 3,5 VA	
dimensions L x B x H:	208 x 120 x 60 [mm]	
Case:	ABS, protection class: IP65	
Output relay:	Switching voltage:	max. 230 V AC
	Switching current:	max. 3,5 A

Scope of delivery & accessories

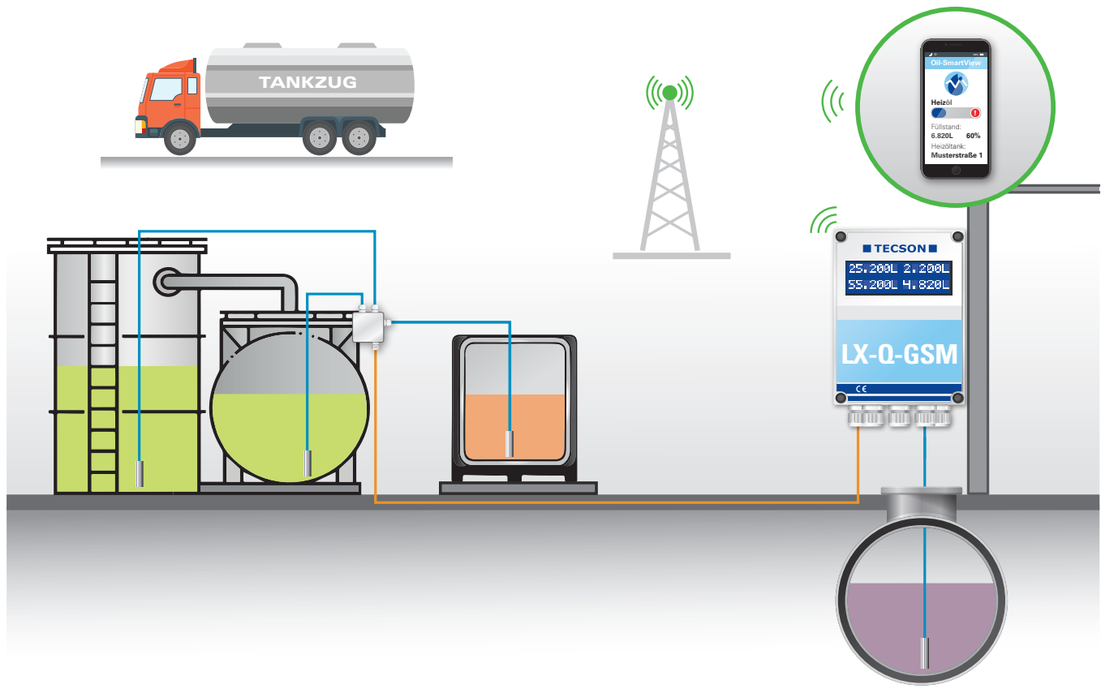
Complete equipment set:	*LX-GSM*	Item no.: 12601
Included in the set:	- Display unit LX-GSM - Standard probe TDS-61-200-P6 - Tank fitting 1" + 1.5" ring - sim-card included	
Indicator without probe:	*LX-GSM* o.S	Item no.: 11801
Suitable measuring probes:	Level probes:	see P.28
	EX-probes:	see P.35
Accessories: (optional)	- External terminal box - Temperature monitoring - External mobile network antenna	

TO WEBSITE

Multi tank gauge with remote

Tank-Spion LX-Q-GSM

Multi tank gauge with SMS remote message



Multi-oil tank gauges with SMS remote signalling

In contrast to the LX-GSM, the device version LX-Q-GSM (Q = quadro) is a multiple tank gauging device. Up to four level measuring probes can be connected directly. Thus, the LX-Q-GSM is recommended for filling stations or remote larger tank farms with several individual tanks.

The displayed liter values of the tanks are shown sequentially in the LCD display. Percentage and total inventory can optionally be displayed as well. Remote reporting or remote retrieval of tank contents is done via mobile radio and SIM card as SMS. Message destination can be a smartphone and/or the OilView portal.

The device can work with 1, 2, 3 or 4 level measuring probes. Each of these 4 tanks can be parameterized separately with regard to tank shape and volume. The tank parameters are set once during installation via the operating menu. For details on measuring probes and fields of application, see basic device LX-GSM.

Desired display:

The device display is selectable. You can statically display the current number of liters of the existing probes or you can select another type of display, e.g. total inventory and % of individual tanks..

Connections / Inputs:

- 4 measuring inputs for 1 - 4 tank measuring probes
- 1 alarm contact input (fault probe)
- 230 V AC power supply

Alternative version: 24 V or 12 V DC.
The "Q" unit has no control relay.

Installation / Mounting:

Appropriate technical knowledge is required for installation of the tank probe. Country-specific installation regulations must be observed.

LX-Q-GSM evaluation unit

Display Type: 4 Tanks in Liters

Display Type: Total Stock + 4 Tanks in %

Connectable: 1 to 4 tank probes

Remote inquiry & remote reporting of the stocks:

The device can automatically send the current stocks to your smartphone via SMS at regular intervals. In addition, the system status, e.g. "malfunction" or "reserve", as well as the current stock in liters can be queried at any time.

This also works if the device otherwise sends its messages to the OilView Portal. In this case, you will receive an OilView login to your protected data and data presentation (curves, charts, tables, history).

Mobile SIM card:
The device requires a cellular SIM card, similar to a smartphone. This is a normal telephony card, contract card or prepaid. The device uses this card purely for messages via SMS.

Inventory management / monitoring

OilView (portal with browser access):
For inventory management of multiple properties, connection to the OilView portal is optional. See p.62.

oil-SmartView (evaluation via app):
The oil-SmartView app presents the current tank measurement data and evaluations on your smartphone. See p.64 .

Technical data

Radio network:	4G (LTE) / 3G / 2G
Supply voltage:	AC-Variante: 230 V 50 Hz DC-Variante: 12 V oder 24 V
Measurement input:	4 - 20 mA ; U_0 = 20 V ; 12 Bit resolution
Power consumption:	≤ 3,5 VA
dimensions L x B x H:	208 x 120 x 60 [mm]
Case:	ABS, protection class: IP65

Scope of delivery & accessories

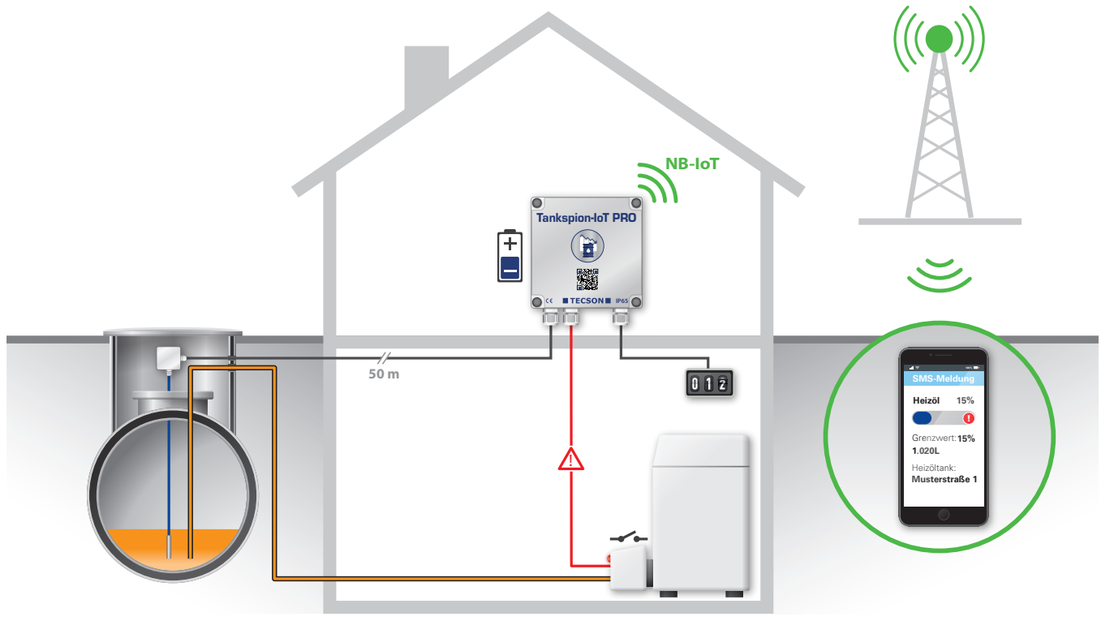
Indicator without probe	*LX-Q-GSM* o.S. Item no.: 11604
Suitable measuring probes: (1-4 probes connectable)	Level probes: see P.28 EX-probes: see P.35
Accessories: (optional)	- External terminal box - Temperature monitoring - External mobile network antenna (for weak mobile network coverage)

TO WEBSITE

Tank & plant measurement via cloud

Tankspion-IoT PRO

Remote inventory & event reporting.
Self-sufficient. Narrowband IoT.



- Remote tank and level measurement.
- Various measurement and alarm inputs.
- Self-sufficient, battery-powered device.

The Tankspion-IoT PRO device solution includes all the functions of the smaller Tankspion-IoT. The device is also battery-powered and reports measurement data and connected events to a secure measurement data server via the narrowband IoT radio network using an internal SIM card.

TO WEBSITE

Application areas

- Removes standing storage tanks or equipment.
- Plant locations without power and network.
- Heating mobiles, heating containers.
- Outdoor measuring points for water levels.
- Lake levels, watercourses, wells, manholes.

Features

- Battery operated (self-sufficient). Weatherproof device.
- No cable installation, no 230V connection.
- Can also be used for outdoor tanks, underground tanks, outdoor measuring points.
- Various inputs for measured values, alarms, events.
- Remote alarms to various receivers. Reliable, current status query, via app or browser or QR code.
- Low operating costs.

Tankspion-IoT PRO

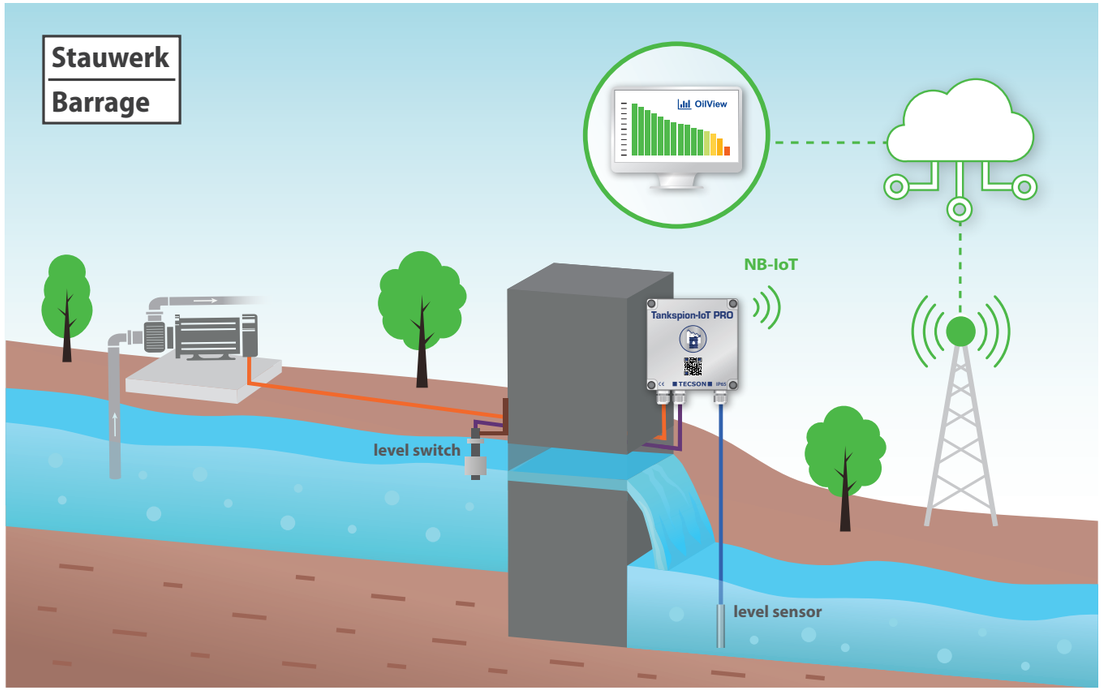
Technical data

Power supply:	via internal lithium battery
Measurement input:	4-20mA input, 12 bit Auflolution. PT1000 measurement input.
Mode:	Sleep Mode, with short transmissions
Dimensions L x B x H:	155 x 130 x 60 [mm]
Case:	Polystyrene , Protection class: IP65 , weatherproof

Scope of delivery & accessories

Device set:	Tank Spy IoT PR0; Art. no. 13920
Included in the set:	- Tank spy IoT PRO device, with - int. Battery, SIM and antenna. - Immersion probe TDS-61-250-P6 - Tankverschraubung 1" + 1,5"
Measuring range:	0-250mbar: 0-250cm water, 0-290cm oil column
Display:	via smartphone or browser

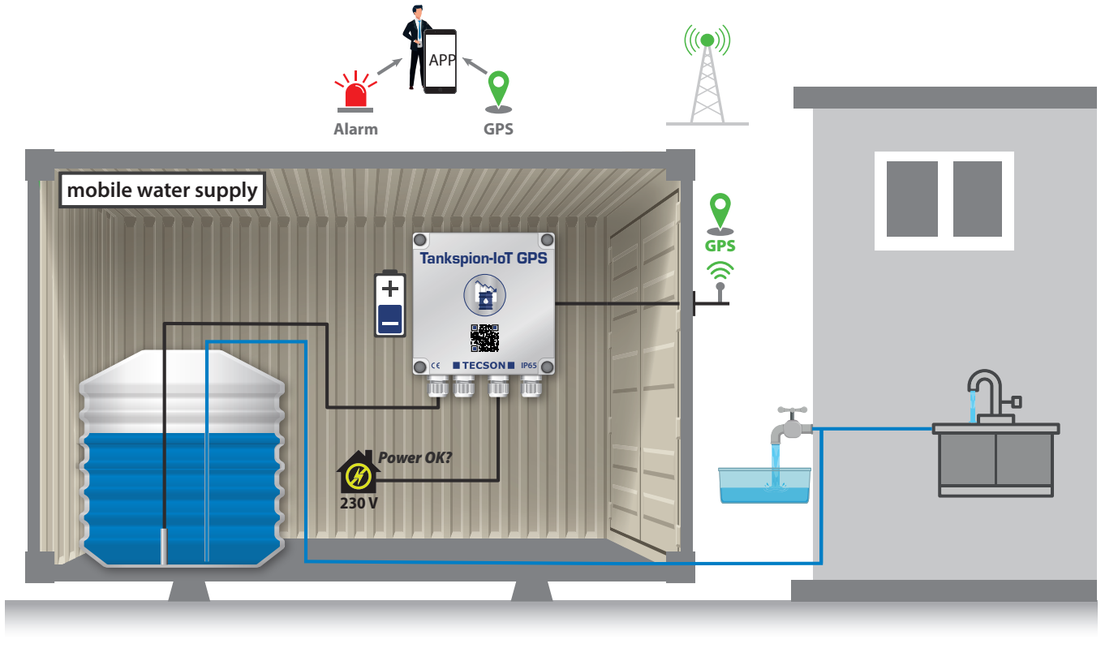
Example application hydraulic engineering / water level



Tank and level measurement via cloud

Tankspion-IoT GPS

Remote inventory & event reporting.
Self-sufficient. NB-IoT plus GPS tracking.



- Tank and level remote measurement, with location localization!
- Various measurement and alarm inputs.
- Self-sufficient, battery-powered device.

The Tankspion-IoT GPS device solution includes all functions of the Tankspion-IoT PRO, see p. 22. The device is also battery-powered. It reports measurement data and connected events to a secure measurement data server via an internal SIM card using the narrowband IoT

ZUR WEBSITE

Application areas

- Non-fixed storage tanks or facilities, as well as sites without street names/numbers.
- Plant locations without power and network.
- Mobile heating units, heating containers.
- Outdoor water level measurement sites.
- Lake levels, watercourses, wells, manholes.

Features

- Battery operated (self-sufficient). Weatherproof device.
- No cable installation, no 230V connection.
- Can also be used for outdoor tanks and measuring points.
- Various inputs for measured values, alarms, events.
- Remote alarms to different receivers. Reliable, current status request, via app or browser or QR code.
- Low operating costs.

Tankspion-IoT GPS

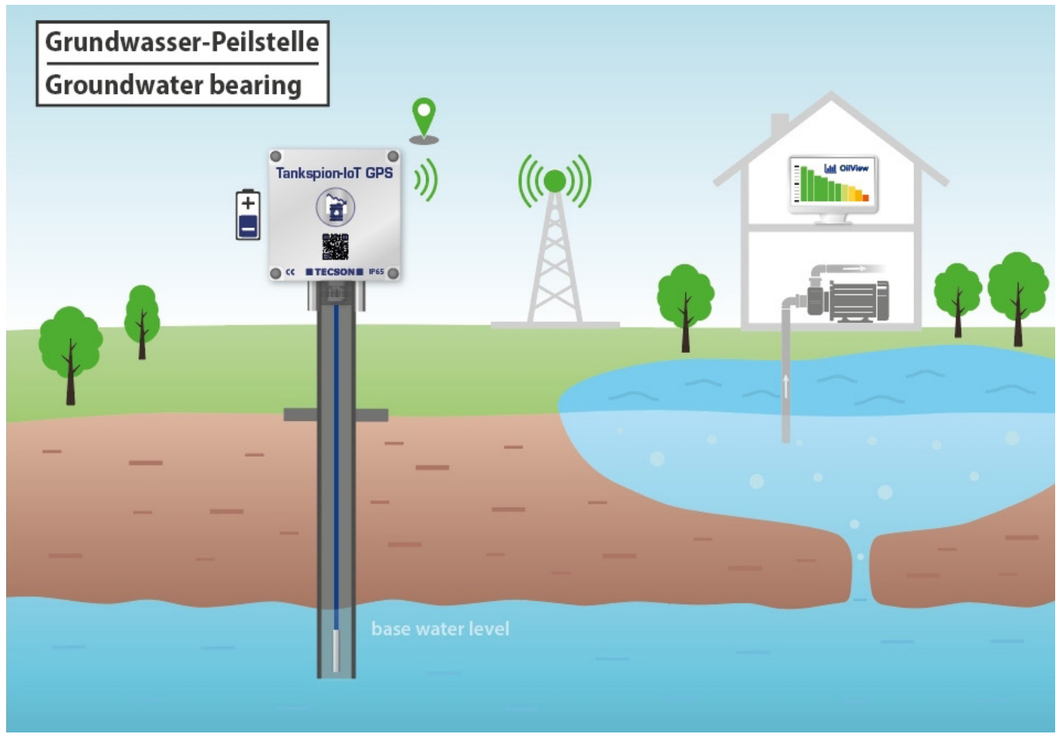
Technical data

Power supply:	via internal lithium battery
Measurement input:	4-20mA input, 12 bit Auflolution. PT1000 measurement input.
Mode:	Sleep Mode, with short transmissions
Dimensions L x B x H:	155 x 130 x 60 [mm]
Case:	Polystyrene , Protection class: IP65 , weatherproof

Scope of delivery & accessories

Device set:	Tank Spy IoT GPS; Art. no. 13940
Included in the set:	- Tank spy IoT GPS device, with int. Battery, SIM card and GPS dual antennal - Immersion probe TDS-61-250-P6 - Tank screw connection 1" + 1,5"
Measuring range:	0-250mbar: 0-250cm water, 0-290cm oil column
Display:	via smartphone or browser

Example application groundwater level / lake level



Level probes

Level probes for professional application

The professional evaluation units of the LX series must always be combined with one of the following level probes:

	Probe series					
	61xx	71xx	89xx	80xx	52xx	42xx
Diameter						
22 mm	X	X			X	
27 mm						X
40 mm			X	X		
Measurement accuracy						
standard	X				X	
high		X				
very high			X	X		X
Smallest possible measuring range						
from 0 - 50 mbar		(X)	X	X		
from 0 - 200 mbar	X				X	X
Measuring media						
Water	X	X	X	X	X	X
Oil / Diesel	X	X	X	X		X
Gasoline						X
Aggressive media						X
Electrical protection						
EX/ ATEX				(X)		(X)
Induction protection		(X)		X		(X)

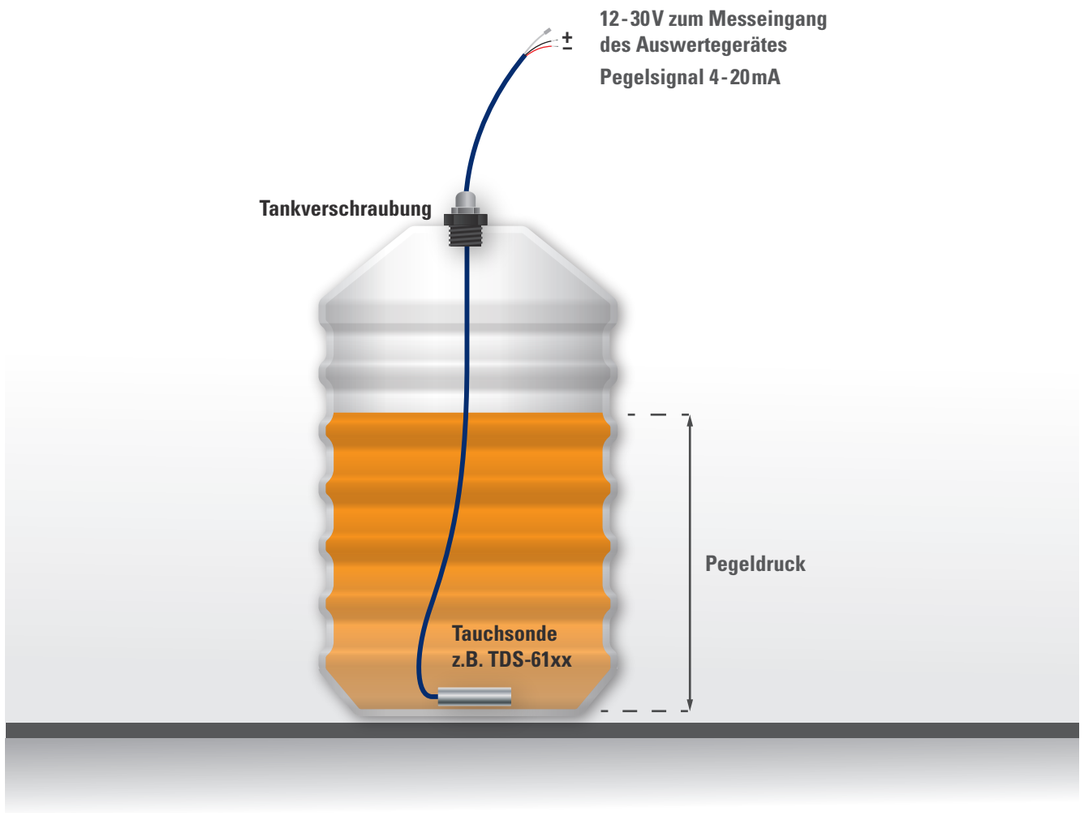
(X) = on request

LEVEL PROBES

IMMERSION PROBE / LEVEL PROBES

Level probes

Installation example of a level probe in the heating oil tank



Measuring principle of hydrostatic level probes:

Level probes are equipped with a pressure sensor that measures the pressure relative to the atmospheric pressure and provides a linear electrical signal proportional to the pressure. The electronics in the probe convert the measured variable into a 4 - 20 mA output signal. If the liquid level, and therefore the pressure, changes, the signal changes accordingly.

The level probes have a submersible cable that leads into the probe body with an elaborate seal. The measuring range of the level probe is determined by the maximum level or vessel height and the specific gravity (density) of the liquid. Level probes measure precisely and reliably. They are highly fail-safe and their measurement signal is not susceptible to interference.

Immersion probe TDS-61xx

hydrostatic, relative pressure, ceramic measuring cell

Technical data

Measuring ranges:	Available from: 0-200mbar to 0-3bar (0 - 20 kPa to 0 - 300 kPa) Standard measuring anges: 0-200, 250, 400, 500, 1000, 3000mbar Standard version: 0-200mbar
Output signal:	4 - 20 mA, 2-wire principle
Supply voltage:	10 ... 30 V DC
Measuring cell:	Ceramic Al 0 , strain gauge measuring bridge
Response time:	50 ms
Deviation: Temperature drift:	< 1 % vME < 0,05 % / K zero point < 0,05 % / K span
Case:	Stainless steel 1.4404 (316 L, V4A) Probe body: Ø = 22 mm
Protective cap:	- made of POM, black - to protect the measuring cell
Immersion cable:	- PUR black, oil resistant with pressure compensation capillary & filter - Standard length = 6m, Ø = 8mm Other lengths: 10m, 15m, 20m, etc.
Fields of application:	heating oil, diesel, biodiesel, AdBlue, water, Lubricating oils, liquid fertilizers and others. Not for gasoline, kerosene or petroleum. Not for use in EX zone.

Low-cost tank measuring probe (level probe) for level measurement. The relative pressure probe of the TDS-61xx series is suspended as an immersion probe, e.g. on the bottom of a tank, preferably lying down. Via the hydrostatic pressure of the liquid, the probe measures the current level of the liquid, e.g. in the heating oil tank.

The PUR connection cable of the tank probe contains a thin air hose capillary for backside atmospheric pressure compensation for the measuring cell. This automatically compensates for air pressure fluctuations and does not lead to measurement deviations.

For oil tanks it is the most frequently installed hydrostatic level probe. This further developed type TDS-61xx is maintenance-free, very fail-safe and durable. In the low-price market segment, the TDS-61xx has an extremely good price-performance ratio compared to its competitors.

TO WEBSITE

Level probes

Immersion probe TDS-71xx

hydrostatic, relative pressure, capacitive pressure transducer

Technical data

Measuring ranges:	Available from: 0-50mbar to 0-10bar (0 - 5 kPa to 0 - 1000 kPa) Standard version: 0-200mbar
Output signal:	4-20 mA, 2-wire principle
Supply voltage:	10 ... 30 V DC
Measuring cell:	Ceramic Al203 , capacitive
Response time	50 ms
Deviation: Temperature drift:	< 0,5 % vME < 0,03 % / K Zero point < 0.03% / K span
Case:	stainless steel 1.4404 (316 L, V4A) Probe body: Ø = 22 mm
Immersion cable:	- PUR black, oil resistant with pressure compensation capillary & filter - standard length = 6 m, Ø = 8 mm
Fields of application:	Heating oil, diesel, bio-diesel, water. Other oils and liquids on request. Also available with EX approval, e.g. type TDS-75xx-EX for A1 area.

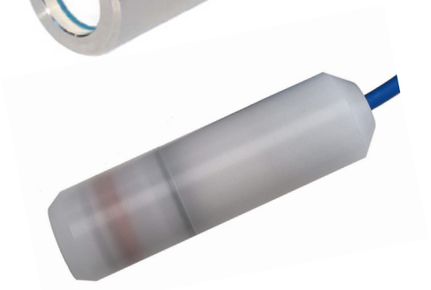
This pressure probe measures the level of liquids via the pressure level. The level probe of the TDS-71xx series is a high-quality hydrostatic level probe for level and tank content measurement. With a diameter of Ø = 22 mm, the immersion probe has a very slim design and is therefore also suitable for dip tube installation. The PUR connection cable of the level probe contains an air capillary for pressure compensation of the measuring cell (relative pressure measurement).

The measuring cell sits largely front-flush in the head of the level probe, which is also an advantage for liquids with high viscosity and, if necessary, for cleaning. Sophisticated process seals ensure a long operating life for this probe. The ceramic measuring cell offers high media resistance and a wide range of applications. In addition, the measuring cell has effective, active temperature compensation.

TO WEBSITE

Immersion probe TDS-89xx

hydrostatic, relative pressure, capacitive pressure transducer



Technical data

Measuring ranges:	Available from: 0-50mbar to 0-10bar (0 - 5 kPa to 0 - 1000 kPa) Standard version: 0-200mbar
Output signal:	4-20 mA, 2-wire principle
Supply voltage:	10 ... 30 V DC
Measuring cell:	Ceramic Al 0 , capacitive
Response time	200 ms
Deviation: Temperature drift:	< 0,5 % vME < 0,03 % / K Zero point < 0.03% / K span
Case:	stainless steel 1.4404 (316 L, V4A) Probe body: Ø = 40 mm Plastic PP (Polypropylene)
Immersion cable:	- PUR black, oil resistant with pressure compensation capillary & filter - standard length = 6 m, Ø = 8 mm
Fields of application:	Heating oil, diesel, bio-diesel, water. Other oils and liquids on request. For EX version and induction protection see TDS-80xx and TDS-42xx.

This level probe is recommended for high-precision level measurement. The level probe of the TDS-89xx series has a high-quality capacitive ceramic measuring cell. Accordingly, this tank level probe provides precise measured values with high long-term stability.

The probe is robustly designed for high reliability and durability. It is the first choice for use in large oil tanks, chemical tanks, industrial tanks and transfer tanks, outdoors or indoors.

For applications with viscous, highly viscous media, a level probe with a large open measuring cell is required, which may be easy to clean. The TDS-89xx can optionally be supplied without a protective cap, i.e. with open measuring access, and is thus optimally suited for these application areas.

TO WEBSITE

Level probes

Immersion probe TDS-80xx

hydrostatic, capacitive, with induction protection

Technical data

Induction protection:	Integrated surge protection, Lightning protection
Measuring ranges:	Available from: 0-40mbar to 0-10bar (0 - 4 kPa to 0 - 1000 kPa) Standard version: 0-200mbar
Output signal:	4-20 mA, 2-wire principle
Supply voltage:	10 ... 30 V DC (Non-EX)
Measuring cell:	Capacitive measuring cell, ceramic Al203 , standard with protective cap in front of the measuring cell.
Response time	200 ms
Deviation: Temperature drift:	< 0,33 % vME < 0,02 % / K Zero point
Case:	stainless steel 1.4404 (316 L, V4A) Probe body: Ø = 40 mm Plastic PP (Polypropylene)
Protective cap:	- made of POM, black - to protect the measuring cell
Immersion cable:	- PE blue with drinking water certificate or PUR black for oils, Ø = 8 mm - with capillary for air pressure compensation - if necessary with Serto gland for immersion cable protection tube (Ø = 12 mm)
Fields of application:	Large tanks, wells, hydraulic engineering, hydropower, outdoor use, drinking water, etc. (Salt water only on request). Optionally with EX approval for use at gas stations, chemical storage facilities and explosive environments.

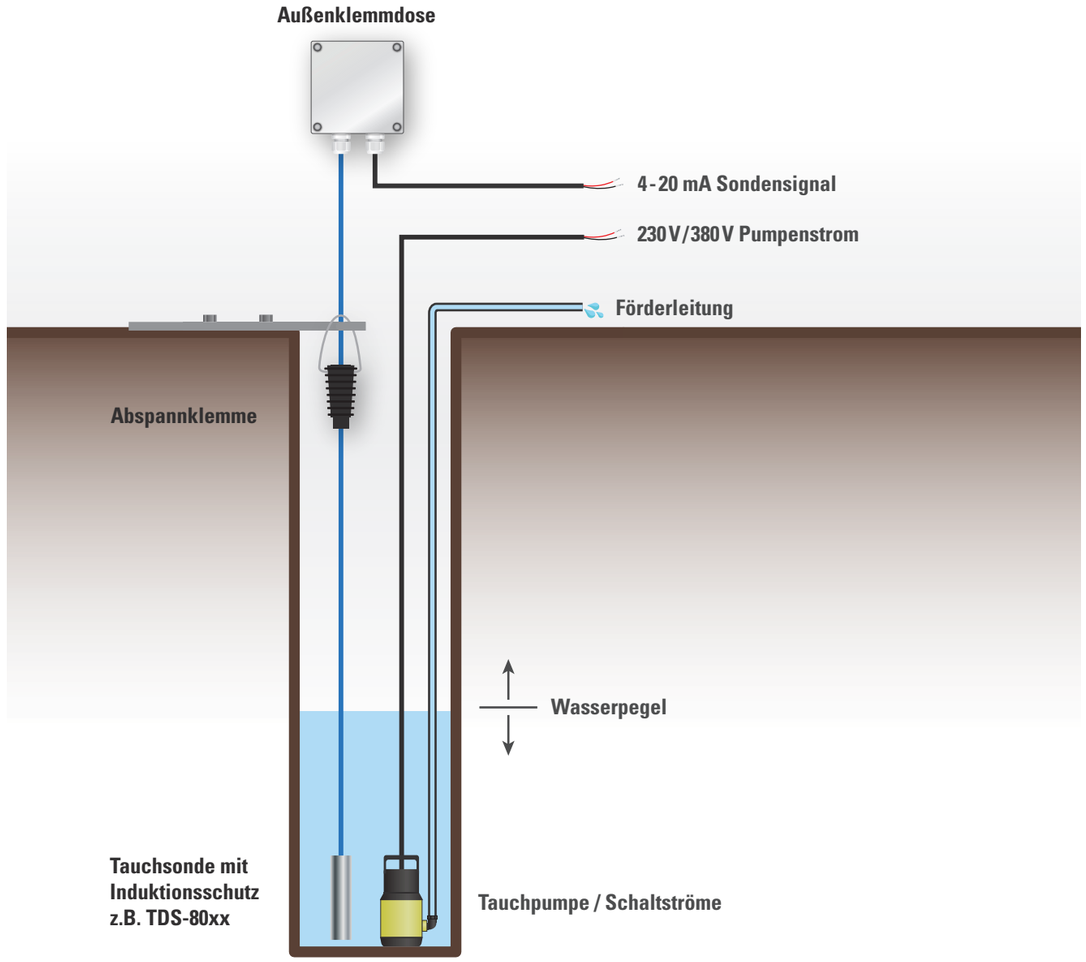
This high-quality hydrostatic relative pressure probe of the TDS-80xx series has a large, high-resolution, capacitive ceramic measuring cell. Accordingly, this level probe delivers precise measured values with best long-term stability.

The probe has an integrated induction protection (overvoltage protection). The blue immersion cable is shielded and made of PE. Due to the robust design and a variety of design options, this submersible probe has a wide field of application.

With the EX/ATEX option, this level probe is also suitable for use in EX zones, e.g. at filling stations or industrial tanks with highly flammable substances.

TO WEBSITE

Installation example of a level probe in fountains



For outdoor use in stagnant or flowing water, the level probe should have an integrated induction protection (overvoltage protection, lightning protection). The same applies to deeper fountains or shafts, if a submersible pump is used in parallel.

In this case, the types TDS-80xx or TDS-42xx are recommended.

TO WEBSITE

Level probes

Cistern probe TDS-52xx

hydrostatic, relative pressure, ceramic measuring cell

Technical data

Measuring ranges:	Available from: 0-200 mbar to 0-400mbar (0 - 20 kPa to 0 - 40 kPa)
Output signal:	4-20 mA, 2-wire principle
Supply voltage:	10 ... 30 V DC
Measuring cell:	Ceramic Al203, DMS measuring bridge
Response time	50 ms
Deviation: Temperature drift:	< 1 % vME < 0,05 % / K Zero point < 0.05% / K span
Case:	stainless steel 1.4404 (316 L, V4A) Probe body: Ø = 22 mm
Immersion cable:	- PUR black, Ø = 8 mm with pressure compensation capillary & filter - Length: 3 m (at 200 mbar) or 10 m (at 400 mbar)
Fields of application:	Cisterns, water reservoirs, catch basins for rainwater, ponds, water shafts and others. Not suitable for use in oils or other creeping or aggressive liquids!

This level probe of the TDS-52xx series represents a reliable long-term solution for cistern measurement, with a good price-performance ratio. The housing of the probe body is made of stainless steel (V4A) and thus suitable for long-term use in water. The immersion cable of the level probe is made of PUR plastic and contains an air capillary for the pressure compensation of the measuring cell, which is necessary for the measuring principle. This means that there is no distortion of the measured value in the event of air pressure fluctuations.

Other measuring methods, such as float solutions or ultrasound, may be more cost-effective in some cases, but they have disadvantages in terms of installation and reliability. Ultrasonic measurement, for example, is in principle not an inventory measurement but a free-space measurement.

Attention! The probe is not laser-welded and therefore not suitable for use in oils or other creeping or aggressive liquids.

TO WEBSITE

Immersion probe TDS-42xx (-EX)

capacitive stainless steel measuring cell, hydrostatic

Technical data

EX-Version:	Optionally with EX (ATEX), induction protection included
Measuring ranges:	Available from: 0-200 mbar to 0-20bar (0 - 20 kPa to 0 - 2000 kPa)
Output signal:	4-20 mA, 2-wire principle Hart-protocol
Supply voltage:	10 ... 30 V DC (Non-EX) 20 ... 32 V DC (EX version) With EX, a voltage barrier must usually be connected in between.
Measuring cell:	metal diaphragm, capacitive measuring cell, laser-welded, with protective cap
Response time	<200 ms
Deviation: Temperature drift:	< 0,25% vME < 0,02 % / K Zero point
Case:	stainless steel 1.4404 (316 L, V4A) Probe body: Ø = 27 mm
Immersion cable:	- double sheathed cable made of FEP/ Teflon, black, shielded, Ø = 8 mm - highly resistant also to gasoline and industrial fluids, long-term resistant in oils - with pressure compensation capillary and filter
Fields of application:	Petrol station tanks, industrial tanks with aggressive liquids, EX zone. Hydraulic engineering, water power, wells, outdoor use, drinking water, and many more. (Salt water only on request).

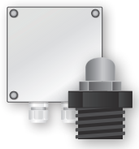
The immersion probe of the TDS-42xx series is a precise relative pressure probe for level and tank content measurement. The high-precision measuring cell with stainless steel pressure diaphragm sits protected in the probe body and is metallically welded to the stainless steel housing by laser. Thus, this level probe has no usual O-ring process seal, which is a weak point with aggressive liquids. Therefore, this level probe offers an exceptionally high media resistance and a very wide range of applications for level measurement.

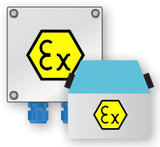
The connection cable of the immersion probe contains an air capillary for the necessary pressure compensation of the measuring cell. The special FEP immersion cable in double sheathing is based on Teflon. This achieves the best media resistance and longest service life.

Important advantage for gasoline tanks:
Installation without cable protection tube. The FEP cable is resistant to gasoline.

TO WEBSITE

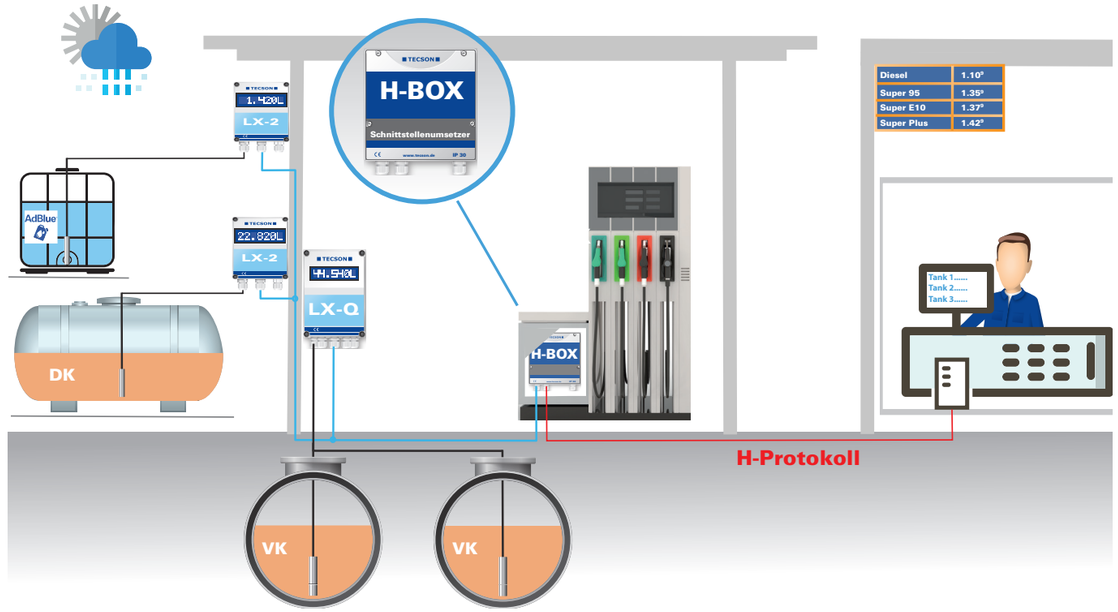
ACCESSORIES + DATA EVALUATION





OilView

H-protocol box



Interface converter H-Box

This adapter box converts the signals of the TECSON oil tank gauges into the H-protocol of the filling station system or POS system.

The H-protocol box has a serial data input to which one or more tank gauges of the LX-2, LX-Q or Smartbox series can be connected in parallel.

Furthermore, the H-Box has a data output, which is connected to the H-protocol connection of the fuel terminal for remote inquiry.

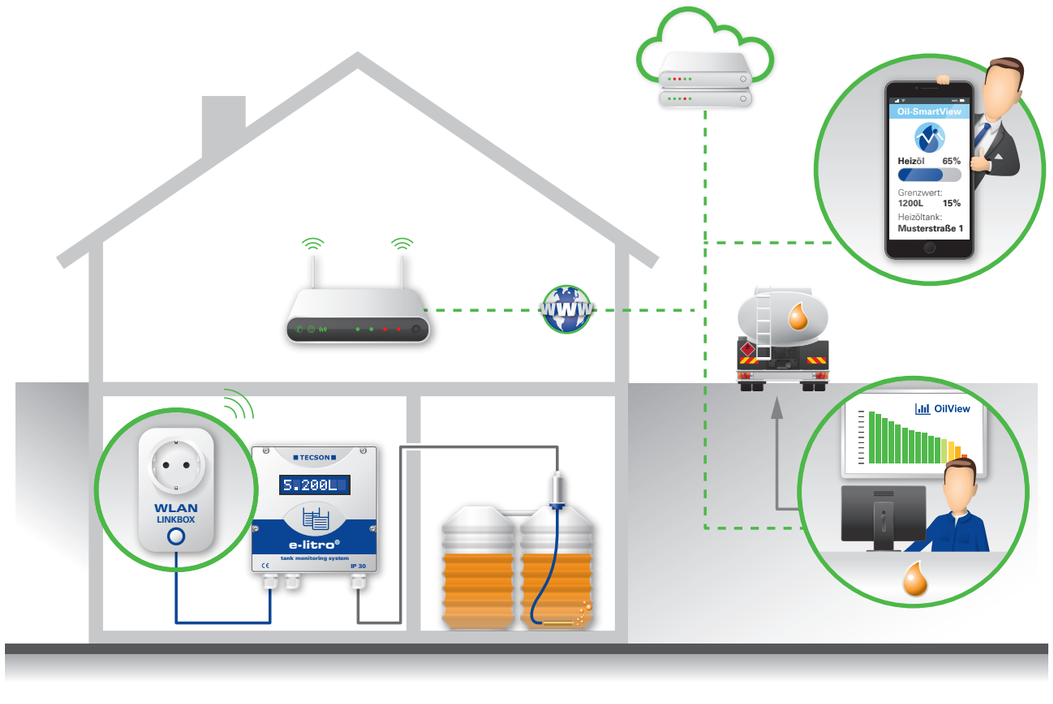
Technical data

H-Box *H-Box PRO*	1 - 4 Tanks Item no.: 12170 up to 16 Tanks no.:12270 Item
Power consumption:	≤ 1 VA
Dimensions L x B x H:	125 x 120 x 50 [mm]
Case:	Polystyrene + acrylic glass, protection class: IP30
Supply voltage:	230 V AC 50 Hz

TO WEBSITE

Accessories for display units

wifi-SmartLink



WLAN integration via wifi-SmartLink

The wifi-SmartLink connects the electronic oil tank gauges from TECSON with the WLAN router and thus brings them into the network.

The current measurement data is thus transmitted to the associated smartphone app oil-SmartView and displayed. The oil tank data can also be called up in the OilView web portal, if desired, e.g. if several properties are to be managed centrally.

Connection:
The data output of your oil tank indicator is connected to the data input of the wifi-SmartLink (+ and -). With this solution, the oil tank gauges of the LX as well as the e-litro device series can also be easily accessed and queried with the browser.

Item no.: 13800

TO WEBSITE

External cellular antenna

The antenna set shown serves to improve the GSM reception signal of the TECSON devices with remote data transmission via mobile radio. Although the devices have an internal small antenna, this may not be sufficient if the mobile radio field strength is weak.

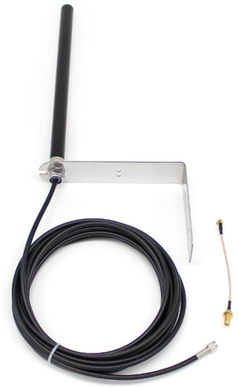
With this external antenna, the signal can be improved in many cases. It is usually advantageous to install it as high as possible. In reinforced basement rooms, it makes sense to install this antenna as high as possible in the light well and, if possible, also above the floor line on the outside.

Scope of delivery of the antenna set: Item no.: 12069

- Antenna for mobile network systems 2G, 3G, 4G (LTE)
- 5 m RF signal cable on the antenna
- Connection adapter, suitable for GSM device modem
- Wall mount with wall plugs and screws

Additional extension: Item no.: 12071

- 5 m RF cable with plug and coupling



TO WEBSITE

Temperature monitoring with PT1000 sensor and measuring adapter

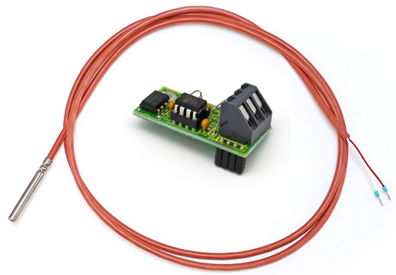
The PT1000 sensor is used for temperature monitoring of storage liquids, heating flows and room temperatures. In order to combine the temperature sensor with the TECSON evaluation units, an additional plug-in adapter with a temperature measuring input is required.

The PT1000 sensor can either be connected separately, e.g. as a contact sensor to the flow, or alternatively integrated directly into the tank measuring probe.

The co-sensing of the liquid temperature is a frequent application in co-generation plants using palm oil as fuel.

Available components:

- PT1000 sensor with 3 m cable (PVC sheathed) Item no.: 12058
- Measuring adapter for TECSON evaluation units Item no.: 12066



TO WEBSITE

Accessories for display units

BMS adapter 0 - 5 V

This output adapter is used to transmit the liter values as a standardized 0 - 5 V signal and can be used in LX devices. The adapter is plugged into the designated slot in the display unit.

The output signal 0 - 5 V is linearized to "liter tank capacity". The tank design, tank size and tank geometry are taken into account.

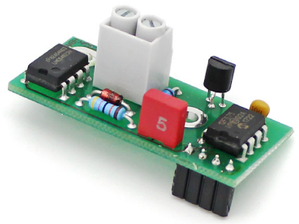
The following linear relationship applies:

0 V = 0 % Tank capacity (empty)

5 V = 100 % Tank capacity (full)

All voltage values in between are proportional to the liter display of the indicator.

Item no.: 12064



TO WEBSITE

Analog adapter 4 - 20 mA

This output adapter is used to transmit the liter values as a standardized 4 - 20 mA signal and can be used in all LX devices. The adapter is plugged into the designated slot in the indicator.

The 2-pole output terminal provides a current signal output, with galvanic isolation. The output operates according to the 2-wire principle, passively.

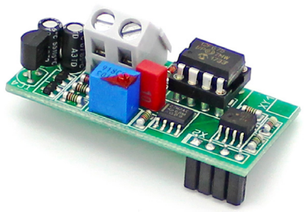
The following linear relationship applies:

4 mA = 0 % Tank capacity (empty)

20 mA = 100 % Tank capacity (full)

All voltage values in between are proportional to the liter display of the indicator.

Item no.: 12065



TO WEBSITE

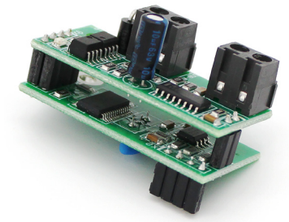
M-Bus adapter

This adapter forms the M-Bus interface for the TECSON oil tank gauges LX device series.

The adapter is plugged into the designated slot in the display unit. The two-pole output terminal represents the M-Bus connection.

Zusätzlich hat der Adapter einen Temperatur-Messeingang, der optional genutzt werden kann. Entsprechend kann dort eine Pegelmesssonde mit PT1000 Sensor oder z.B. ein entsprechender Anlegefühler für Temperaturmesswerte aufgeschaltet werden.

Item no.: 12171



TO WEBSITE

Accessories for probe installation

Tank screw for probe cable

For the installation of tank measuring probes in oil tanks or in other vessels, TECSON offers this cable gland. The screw-in plug is UV-resistant and has a PGV passage for the submersible cable of the level probe.

When ordering a complete set of the LX device series, a 1" and a 1.5" tank fitting are always included in the scope of delivery together with the level probe.

Versions / sets:

Cable gland for oil tank, 1" : Item no.: 12087

Cable gland for oil tank, 1.5" : Item no.: 12086

Cable gland for oil tank, 2" : Item no.: 12085

TO WEBSITE

T-sleeve for probe installation in sounding pipe

T-sleeve for installation of the tank measuring probe in a dip pipe (for underground tank) or vent pipe (for aboveground external tank). If the oil tank does not have a free blind plug into which the immersion probe can be installed, it is possible to install a slim level probe in the dip tube with the aid of this T-sleeve.

The cable of the measuring probe is led out of the T-branch of the socket. The dipstick cap can be screwed back onto the upper outlet. For a check bearing, the dipstick can still be led down parallel to the probe cable.

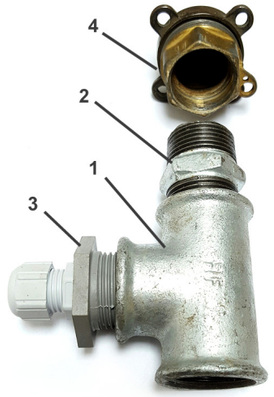
See illustration:

1. t-sleeve, with 3 x 1" thread
2. double nipple 1", for thread conversion
3. screw-in plug 1", for cable removal
4. dip tube cap (not included in delivery)

The gland parts can alternatively be supplied with 1.5" thread.

T-joint 1" thread, incl. double nipple 1.0" Item no.: 11087

T-sleeve 1.5" thread, incl. double nipple 1.5" Item no.: 11088



TO WEBSITE

External junction box (special) - also for underground tanks

Special external junction box for extending the connection cable of a level probe (relative pressure probe). This terminal box is also particularly suitable for use in the dome shaft of underground tanks or for mounting on outdoor tanks.

- 1 PG gland as access for the probe cable
- 1 PG gland as outlet for the signal cable leading to the evaluation unit, e.g. 2 x 0.4 mm².

The junction box has housing protection class IP65 and is thus tight against water and moisture. At the same time, the box is ventilated by a hygroscopic filter. This provides the measuring cell of the connected relative pressure probe with the important air pressure compensation via the capillary in the immersion cable.

Versions:

Junction box for 1 probe (2 PGVs) Item no.: 12080

Junction box for 2 probes (3 PGVs) Item no.: 12078

Junction box for 3 probes (4 PGVs) Item no.: 12077

TO WEBSITE

Tension clamp for suspension cable

This tension clamp provides a safer way of suspending TECSON level probes in fountains, deep basins or cisterns.

The suspension cable of the level probe carries the probe body and the weight of the submersible cable. The support clamp permanently holds the tensile weight of the probe cable passing through the clamp. The cable sheath is not damaged by the tensile forces.

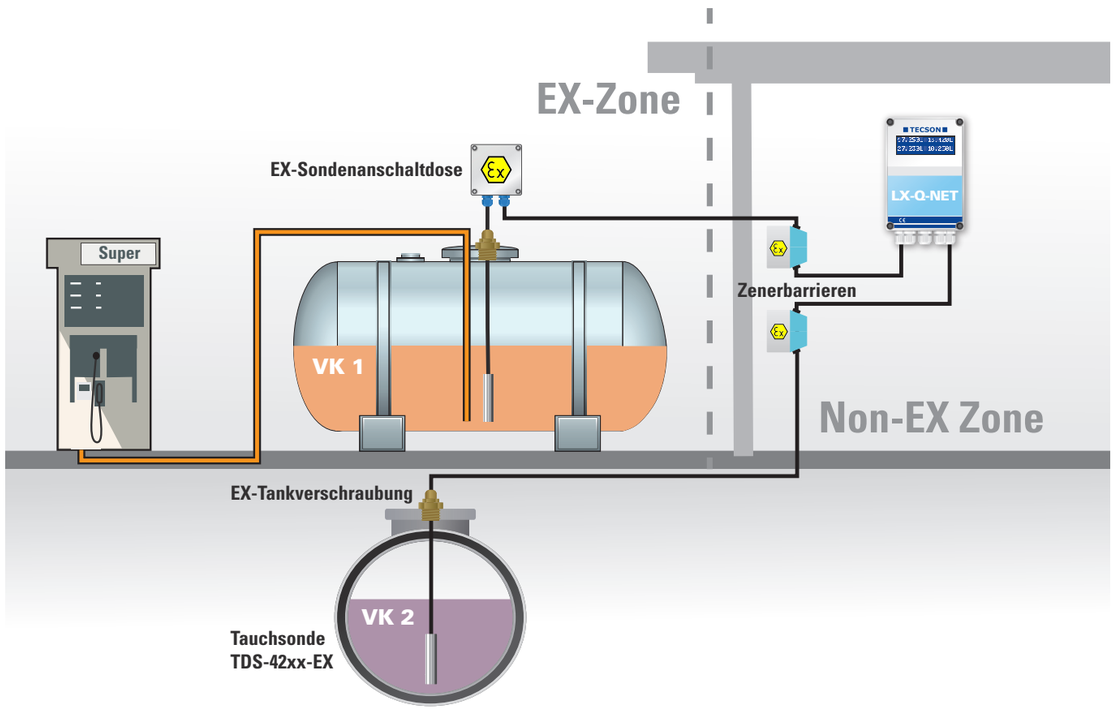
This special support clamp has a retaining clip which is hooked onto a suitable hook, pull ring or chain.

Item no.: 10011

TO WEBSITE

Accessories for EX zones

Application example EX components



Zener surge barrier for EX area

The Zener barrier prevents excessive energies from occurring in the hazardous area when the maximum permissible voltage is exceeded and explosive gases or vapors could ignite.

Several diodes are installed in the overvoltage barrier, which are connected in the reverse direction. If the maximum permissible voltage for these diodes is exceeded in the event of a fault in the non-EX zone, the diodes begin to conduct and thus trigger the fuse in the barrier. A transfer of impermissibly high energies into the EX zone is thus prevented.

Item no.: 12070

TO WEBSITE

Probe junction box for EX area

Special terminal box with protection class IP65 for extending the connection cable of an EX level probe in EX zone 1.

This probe connection box is tight against water and humidity. At the same time, the box is ventilated by a hygroscopic filter. Thus, the measuring cell of the connected relative pressure probe receives the important air pressure compensation via the capillary in the immersion cable.

Connections:

- 1 PG gland as access for the probe cable
- 1 PG gland as outlet for the signal cable leading to the evaluation unit, e.g. 2 x 0.4 mm².

The junction box is also particularly suitable for use in the manhole of underground tanks or for mounting on outdoor tanks. It is characteristic with regard to the explosive storage medium, for example in VK tanks.

Item no.: 12081

TO WEBSITE

Tank screw connection for probe cable in EX area

Tank fitting for the installation of level measuring probes in the EX area, for example in VK tanks at gas stations or on industrial tanks.

This screw-in plug has a PG-V cable gland with ATEX approval.

Features:

- Screw-in thread 1 inch, right (G 1 A-r)
- For cable diameter 5 - 10 mm

Item no.: 11081

TO WEBSITE

Data evaluation

OilView

The modern oil tank management system

OilView is a centralized management system for the oil tanks of your property(ies).

The OilView inventory management system presents you with the current and historical content data of your oil tanks, which are remotely connected to the web server portal. You can access your protected asset data via password login at www.OilView.de.

- multiple user levels
- assignable access rights

- Consumption and inventory curves
- Time evaluation and data export

- password protected log-in
- high data security, HTTPS

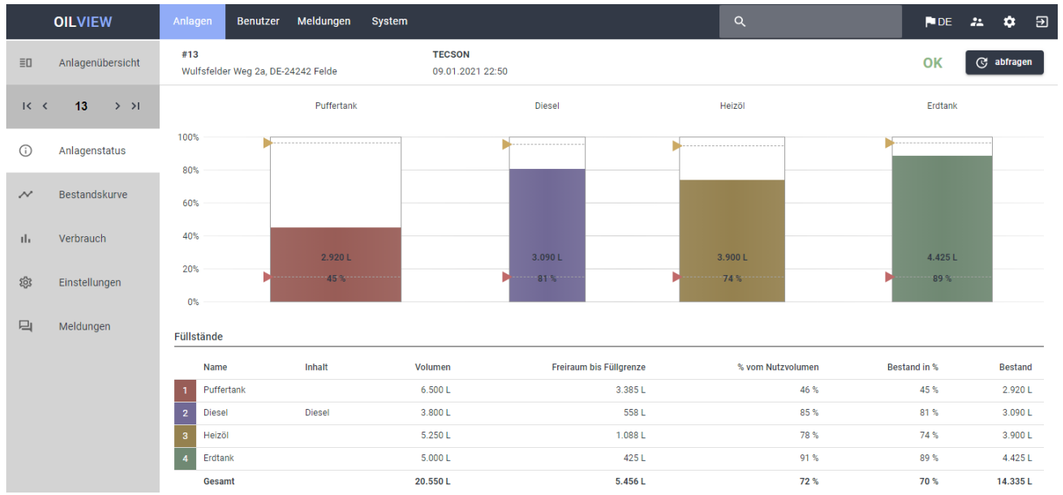
- clear representations
- individually customizable

OilView has several user levels. Different users can be assigned different operating rights and administrative rights in the system. The managed assets are assigned to one or more users and thus only visible and accessible to them. OilView offers high data security and data protection according to the latest IT technology. No data access is possible without a login and without correspondingly entered rights. Your plant data is safe in OilView!

TO WEBSITE

Plant status

Clear representation of all tank contents of a property

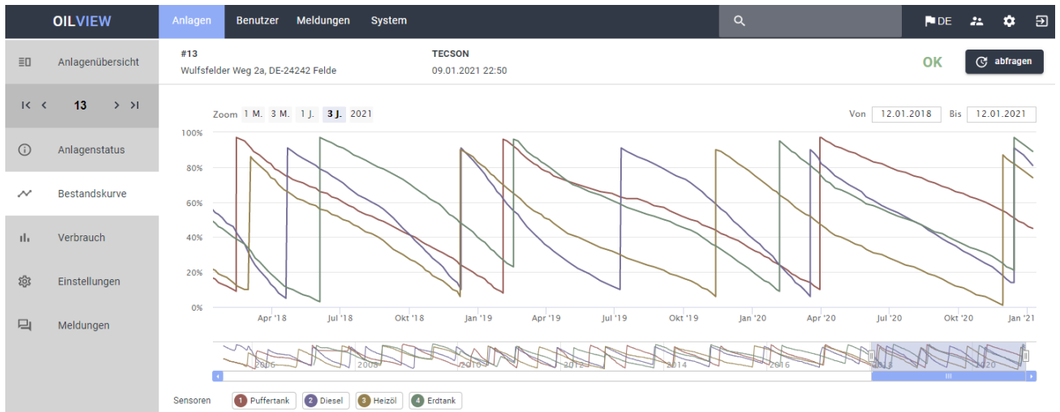


Füllstände

	Name	Inhalt	Volumen	Freiraum bis Füllgrenze	% vom Nutzvolumen	Bestand in %	Bestand
1	Puffertank		6.500 L	3.385 L	46 %	45 %	2.920 L
2	Diesel	Diesel	3.800 L	558 L	85 %	81 %	3.090 L
3	Heizöl		5.250 L	1.088 L	78 %	74 %	3.900 L
4	Erdtank		5.000 L	425 L	91 %	89 %	4.425 L
	Gesamt		**20.550 L**	**5.456 L**	**72 %**	**70 %**	**14.335 L**

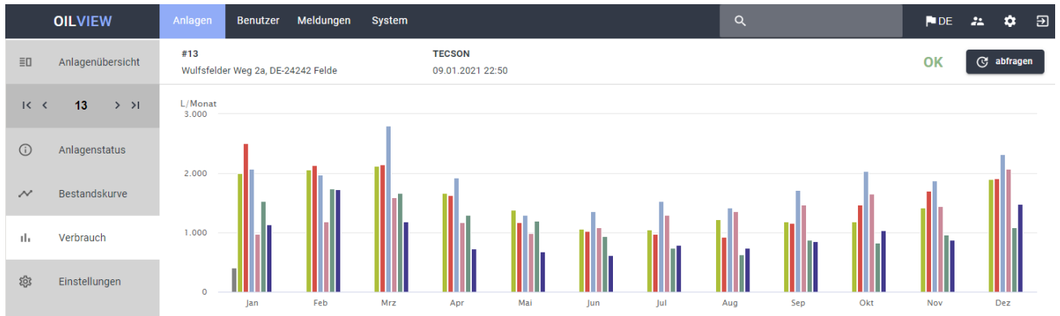
Stock curve

Display of all tank levels over time



Consumption

Consumption per oil tank and total consumption of the plant in the month and in the year



Jahr	Jan	Feb	Mrz	Apr	Mai	Jun	Jul	Aug	Sep	Okt	Nov	Dez	Total
2021	403												403
2020	2.003	2.057	2.123	1.670	1.388	1.067	1.052	1.228	1.184	1.182	1.419	1.907	18.280
2019	2.503	2.136	2.149	1.633	1.170	1.020	979	926	1.155	1.463	1.704	1.909	18.747
2018	2.070	1.977	2.799	1.930	1.293	1.354	1.536	1.416	1.722	2.031	1.880	2.320	22.328
2017	972	1.186	1.594	1.176	986	1.092	1.291	1.352	1.467	1.653	1.439	2.077	16.285
2016	1.533	1.742	1.666	1.292	1.203	938	738	634	881	829	965	1.084	13.505
2015	1.138	1.732	1.191	730	683	612	796	736	848	1.031	880	1.482	11.859
	10.622	**10.830**	**11.522**	**8.431**	**6.723**	**6.083**	**6.392**	**6.292**	**7.257**	**8.189**	**8.287**	**10.779**	**101.407**

Data evaluation

oil-SmartView

Smartphone app to manage your oil tanks

The oil-SmartView app presents the tank data of the OilView portal clearly on your smartphone.

This allows you to determine the heating oil level, consumption, range and the sensible heating oil reorder quantity at any time and from any location. If the heating oil tank is approaching the reserve level, you receive a warning message in the app. The same applies in the event of an alarm or malfunction. The times when orders were forgotten are now a thing of the past.

The functions of the app:

- Detailed live view of the tank
- Display of liters, percent, free space

- Alarm message in the app
- When falling below reserve level

- Price information heating oil / Recent price development

Optional: Offer from your heating oil dealer, at a favorable time of purchase

- Stock curve with withdrawal history
- Consumption evaluation: year, month, day

Download and registration:

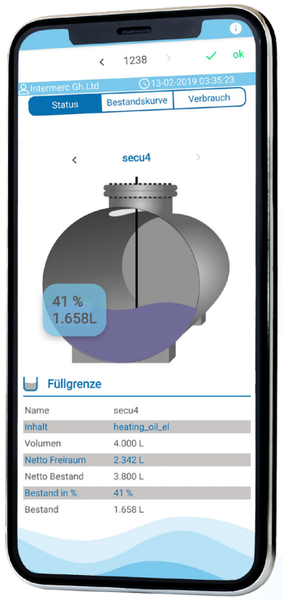
The oil-SmartView app is downloadable from the App Store (for iPhone) and the Google Play Store (for Android).

Then call up the registration function in the app to link up with your oil tank gauge via the OilView data server.

Download on the App Store

GET IT ON Google Play

Representations in the smartphone app



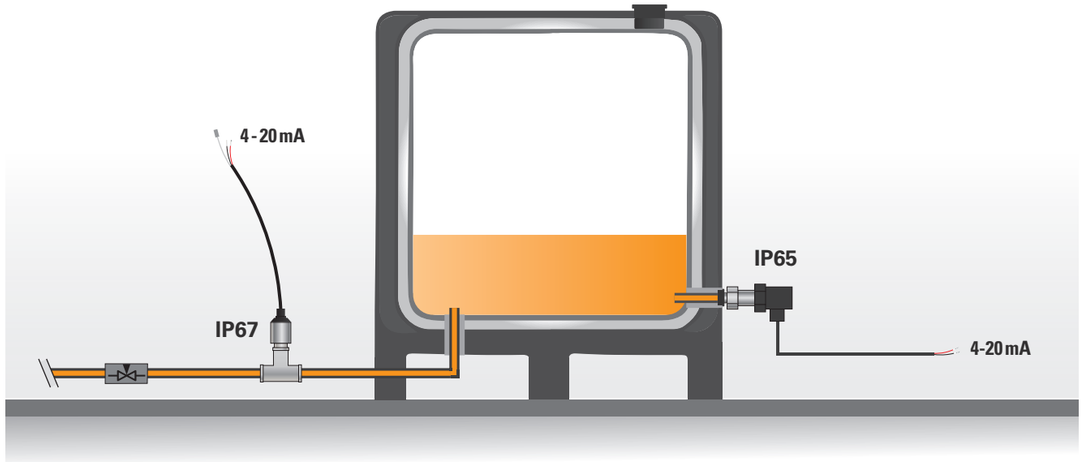
Live view of the tank
Display of liters, percent, free space

Stock curve
with withdrawal history for each individual tank

Consumption evaluation
for each individual tank by year, month, day

TO WEBSITE

Functionality of pressure transmitters



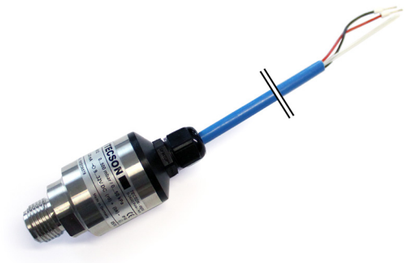
Measure hydrostatic pressure or process pressure

Pressure transmitters measure the process pressure of pipes and vessels, usually relative to ambient pressure. The measuring principle is hydrostatic pressure measurement. Subsequently, the pressure transmitters convert the pressure signal into a 4 - 20 mA measuring signal, for display and further processing.

The pressure measuring range should be adapted to the maximum process pressure, with versions from 0 - 40 mbar to 0 - 100 bar available in the standard program. It should be noted that pressure peaks can often occur.

The pressure transmitters are screwed onto the system by means of a screw-in thread. The transmitters can be assembled with different connection threads. Different electrical connections can also be selected, e.g. terminal plug (IP65) or alternatively with 2 m cable tail (IP67), see illustration.

Version with terminal plug (IP65)



Version with cable tail (IP67)

PRESSURE TRANSMITTER

PRESSURE TRANSMITTER

Pressure probes

P-121 Pressure transmitter

- The P121 is a screw-on probe for the precise acquisition of pressure measurements.
- Wide field of application. Industry proven.
- High measuring accuracy, even with small measuring range.
- Robust and high overpressure resistance.
- Screw-in probe with threaded connection 1/2 inch (G 1/2 A) or 1/4 inch (G 1/4 A).
- Large measuring cell access, also for viscous liquids.
- Alternatively with pressure gauge connection for compressed air measurement.

Optionally in EX version (with ATEX certificate).

TO WEBSITE

Technical data

Measuring ranges:	0 - 40 mbar to 0 - 40 bar, relative (0 - 4 kPa to 0 - 4 000 kPa)
Output signal:	4 - 20 mA, 2-wire principle
Auxiliary voltage:	10 ... 30 V DC
Measuring cell:	capacitive, ceramic (Al2O3)
Response time:	< 200 ms
Deviation: Temperature drift:	< 0,25 % v ME < 0,02 % / K Zero point
Case:	Stainless steel 1.4404 (316 L, V4A) Plastic PP (Polypropylene)
Process connection:	- G ¼ A , DIN 3852 - G ½ A , 11,8 mm bore - G ½ B , DIN EN 83, pressure gauge connection
Electrical connection:	- terminal plug EN 175301-803A (IP65) - alternatively 2 m cable tail (IP67)
Process seal:	FPM (Viton), others on request

P-131 Pressure transmitter

- Screw-on probe for precise pressure measurement.
- High measuring resolution with low measuring deviation.
- Available with small pressure measuring range.
- Large front-flush measuring cell.
- Food approval. Easy to clean.
- Wide field of application. Industry proven.
- Available with pure ceramic measuring cell for aggressive media.

Optionally available in EX version (with ATEX certificate).

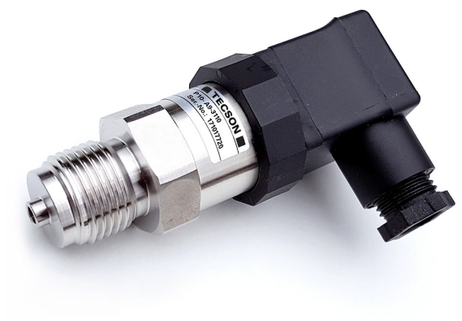
TO WEBSITE

Technical data

Measuring ranges:	0 - 40 mbar to 0 - 40 bar, relative (0 - 4 kPa to 0 - 4 000 kPa)
Output signal:	4 - 20 mA, 2-wire principle
Auxiliary voltage:	10 ... 30 V DC
Measuring cell:	capacitive, ceramic (Al2O3)
Response time:	< 200 ms
Deviation: Temperature drift:	< 0,25 % v ME < 0,02 % / K Zero point
Case:	Stainless steel 1.4404 (316 L, V4A) Plastic PP (Polypropylene)
Process connection:	- G 1 A (pure ceramic not possible) - G 1.5 A
Electrical connection:	- terminal plug EN 175301-803A (IP65) - alternatively 2 m cable tail (IP67)
Process seal:	FPM (Viton), others on request

Pressure probes

DT-10 Pressure transmitter



- Transducer for reliable pressure measurement.
- Compact design, lower price range.
- Insensitive ceramic measuring cell. Stainless steel case..
- Can also be designed for high measuring pressures.
- Connection: terminal plug EN 175301-803A (IP65).

TO WEBSITE

Technical data

Measuring ranges:	0 - 250 mbar to 0 - 100 bar, relative (0 - 25kPa to 0 - 10 000 kPa)
Output signal:	4 - 20 mA, 2-wire principle
Auxiliary voltage:	10 ... 30 V DC
Measuring cell:	capacitive, ceramic (Al2O3)
Response time:	< 200 ms
Deviation: Temperature drift:	< 0,5 % v ME < 0,04 % / K Zero point
Case:	Stainless steel 1.4404 (316 L, V4A)
Process connection:	- G ¼ A , DIN 3852 - G ½ A , 11,8 mm bore - G ½ B , DIN EN 837-1 pressure gauge connection
Electrical connection:	- terminal plug EN 175301-803A (IP65)
Process seal:	FPM (Viton), others on request

DT-12 Pressure transmitter

- Screw-on probe for reliable pressure measurement.
- Compact design, wide pressure ranges from 100 mbar.
- Medium price range with good accuracy.
- Process connection G 1/2 A (or G 1/4 A).
- Connection plug EN 175301-803A (IP65).

TO WEBSITE

Technical data

Measuring ranges:	0 - 100 mbar to 0 - 60 bar, relative (0 - 10kPa to 0 - 6 000 kPa)
Output signal:	4 - 20 mA, 2-wire principle
Auxiliary voltage:	10 ... 30 V DC
Measuring cell:	capacitive, ceramic (Al2O3)
Response time:	< 200 ms
Deviation: Temperature drift:	< 0,5 % v ME < 0,04 % / K Zero point
Case:	Stainless steel 1.4404 (316 L, V4A)
Process connection:	- G ¼ A , DIN 3852 - G ½ A , 11,6 mm bore - G ½ B , DIN EN 837-1 pressure gauge connection
Electrical connection:	- Connector EN 175301-803A (IP65)
Process seal:	FPM (Viton), others on request

Pressure probes

PD-81 / PD-82 Differential pressure sensor

- Pressure transmitter for differential pressure measurement via two pressure line connections.
- Measures the difference in pressure between two connection points of a pressure system. For example, upstream and downstream of a valve or pressure reducer.
- Can also be used for level measurement in unvented tanks, with static pressure level if necessary.

TO WEBSITE

- High overpressure resistance, depending on measuring range/pressure range.

Technical data

Measuring ranges:	0 - 100 mbar to 0 - 20bar, relative (0 - 10kPa to 0 - 2 000 kPa)
Output signal:	4 - 20 mA, 3-wire principle
Auxiliary voltage:	10 ... 30 V DC
Measuring cell:	capacitive, ceramic (Al2O3)
Response time:	< 200 ms
Deviation: Temperature drift:	< 0,5 % v ME < 0,02% / K Zero point
Case:	Stainless steel 1.4404 (316 L, V4A)
Process connection:	- 2x G ¼ A , inside
Electrical connection:	- terminal plug EN 175301-803A (IP65)
Process seal:	FPM (Viton), others on request

PM-82 Pressure gauge

- Digital pressure gauge for measuring and displaying the process pressure.
- 3-digit large digital display.
- Robust metal housing with G 1/2 B connection thread.
- Switching functions and control functions, pressure-dependent switching signals and 4 - 20 mA output.
- Wide field of application. Industry proven. Overload resistant.

TO WEBSITE

Technical data

Measuring ranges:	0 - 500 mbar to 0 - 250bar, relative (0 - 50kPa to 0 - 25 000 kPa)
Output signal:	4 - 20 mA, 2-wire principle
Auxiliary voltage:	10 ... 30 V DC
Measuring cell:	capacitive, ceramic (Al2O3)
Response time:	< 200 ms
Deviation: Temperature drift:	< 0,5 % v ME < 0,04% / K Zero point
Case:	Stainless steel 1.4404 (316 L, V4A), Ø = 80 mm
Process connection:	- G ½ B, DIN 16288 (pressure gauge connection)
Electrical connection:	- M12 round plug, 5-pin
Process seal:	FPM (Viton), others on request

Pressure probes

PM40 Pressure Switch with digital display

- Pressure switch with a digital display, possibility for individual adjustment on site.
- High overload capability compensates for pressure peaks, Ideal for drinking water applications with solenoid valves, Front-flush process connections prevent clogging.
- Display visible from a great distance arge, upper part of the sensor can be rotated, analog output with 2 adjustable switching outputs.
- Modular design for a variety of products, Customizations available upon request

Technical data

Measuring ranges:	0 - 40 mbar to 0 - 40bar, relative (0 - 10kPa to 0 - 2 000 kPa)
Output signal:	4 - 20 mA, 3-wire principle 2x DC PNP, max. 100 mA
Auxiliary voltage:	10 ... 30 V DC
Measuring cell:	capacitive, ceramic (AI2O3)
Response time:	60 ms
Deviation: Temperature drift:	< 0,3 % v ME < 0,01% / K Zero point
Case:	Stainless steel 1.4404 (316 L, V4A)
Process connection:	- G ¼ A,B| , inside G 1 A, similar to DIN EN ISO 1179-2 G ½ A, DIN EN ISO 1179-2
Electrical connection:	- terminal plug EN 175301-803A (IP65)
Process seal:	FPM (Viton), FFKM (Chemraz) others on request

TECSON

Competence in tank measuring technology

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