08-2020Setup and Operation

of ðTANK SPION LXé ô tank monitoring devices

LX-2 / LX-2-R	software version V7.1 +
LX-Q	software version V7.1 +
LX-NET / LX-Q-NET	software version V7.1 +
LX-GSM / LX-Q-GSM	software version V7.1 +

Content: Page:

Device setup and probe mounting

Concerning installation and mounting as well as regulations and operation please check the corresponding device documentation.
The initial setup is to be performed after completed mounting.

The monitoring devices of the LX-series are to be used for tank content measurement and if applicable for data forwarding or transmission.

For programming of the device the subsequent description is to be followed.
Determine the tank data beforehand and enter it in the menu input steps.

To enter the menu mode from the displaying mode press the [Enter] push button.
Confirm the ‚Exit' menu item in step 0 or 7 or 8 to exit the programming mode and return to the general displaying mode.

This tank content measuring system is not a safety device.
The device can support the safety device of the tank but cannot replace it.

Control elements and display

Pushbuttons

The device setting is to be performed via three little blue pushbuttons: [+] [Enter] [-]
They are located on the electronic PCB between the connecting clamps.

Language

The menu operating language is selectable via menu item 18 by pressing the buttons
[Enter] [+] [+] [+] . . . 18. Language/Sprache [Enter] . . .
The setup of the device has to be completed once during the initial setup. After the initial setup the device operates in the displaying mode with closed cover.

Display panel

The LCD-display consists of 2 rows of 16 characters.
The display has a background lighting for the best readability at all lighting conditions.
Depending on the number of connected measuring probes the following display will be shown:

One tank:

```
T1 Name    Content/L
Fillspace/L    cm/%
```

Two or more tanks, paging forward :

```
    Tank 2: =>    ...
```

```
T2 Name    Content/L
Fillspace/L    cm/%
```

In case of more than one tank the displaying of the single tanks shown above can be extended by showing the total inventory and the percent values of the single tanks.
At menue item ‚6. View' select ‚Percent = YES (/ No)

```
Liters T1   Liters T2
Liters T3   Liters T4
```

(paging forward to)

```
Total invent. ∑ Liters
% values:  T1 T2 T3 T4
```

Choose the displaying mode:

In menu step ó6. Viewóthe favored displaying mode has to be selected.
Therefore the menu steps 1 to 5b need to be setup.

The upper display line shows the name of the tank/fluid.
The tank can be renamed in ó18. Language+Nameó

The lower display line can show the fillable free space in the tank and /or the inventory volume in percent up to the filling limiter or the present cm level.

Setup: View tanks óSingle/Detailsô

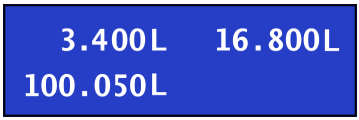
In line 2: Fillable space (-) L + Vol. percent:
(bottom left) (bottom right)

In line 2: Fillable space (-) L + Level in cm:

In line 2: Volume percent + Level in cm:

RECOMMENDATION:
Choose displaying of fillable space + % or cm.
In case of tank filling the person has to determine the fillable free space in the tank before start fueling.
Another benefit:
In the graphic above the left value in the lower line shows ï **x.xxxL**
That is the fillable free space as well as the consumed amount since last time the tank has been fueled up to the filling limit.

ALTERNATIVE In case of a **LX-Q-xxx device** with 2 or 3 or 4 measuring probes (3 tanks in example) the displaying may be setup to ócommon/togetheró (Shows only the Liter values, without paging forward.)



Additionally the **total inventory** ∑ can be displayed, showing the Liter sum and the single % values of each tank: Select óPercent values = YESô

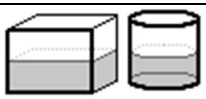
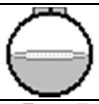
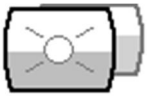
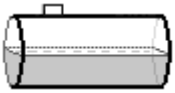
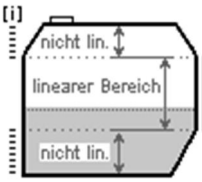
Setup / Programming

To enter the setup menu press the [Enter] pushbutton.
The setup menu consists of the basic menu items 1 to 7.
The specific menu items 9 to 24 contain extra adjustments.

The device types LX-Q, LX-Q-NET and LX-Q-GSM are compatible to link and display more than one measuring probe. In this case the number of the tanks is requested before the menu is entered.
Press [Enter] one time and then select the number of the tank by pressing [+] / [-].
The following parameter adjustments refer to that tank number.

Press [+] to navigate to a particular menu item. Enter the parameterization of a particular menu item by pressing [Enter] and confirm the selected value.

Input function: ***Menu main item***	***Description***	***For which device***
Preselection of **tank number i**	For more than one linked tank / measuring probe: select „Tank number 1" ... up to „Tank number 4"	LX-Q-GSM LX-Q-NET LX-Q
0. Exit	Entering the programming mode. **Use [+] to go further.** Also leaving the programming. Leave with [OK].	all
1. Measure probe	Setup range of the level probe: Range: **Max.height of oil tank** Water column 100 mbar 1,25 m 1,00 m 150 mbar 1,85 m 1,50 m **200 mbar 2,50 m** 2,00 m **250 mbar 3,00 m** 2,50 m 400 mbar 4,90 m 4,00 m 500 mbar 6,00 m 5,00 m 1000 mbar 12,0 m 10,0 m 2000 mbar 20,0 m 5000 mbar 50,0 m Or „Set mbar" for specific measuring range of the probe. „By calibration" is displayed when „Trim height" has been executed in menu item 10. (Probe range is not relevant then.)	(all) **Select the pressure range of the measure probe.** **Do not enter the liquid level here.**
2. Liquid	Selection of measuring liquid (specific weight of the liquid): Heating oil, water, diesel oil , bio diesel oil, AdBlue, motor oil, RME/FAME, rapeseed oil, palm oil*, gasoline*, ... Or enter the „Density value" in xxx kg / m^3. Use [+] [-]. If the density value of the liquid is unknown calibrate the device via menu item „10.Trim height" „By calibration" is displayed when „Trim height" has been executed in menu item 10. In that case the parameter „Liquid" (resp. density) is not relevant.	all * = with special type of probe

3. Tank shape		Selection of the shape of the holding tank: **Alternatively** just 1 special tank geometry can be setup by a ôBearing chartô for liter conversion.	all
	Linear	Default: Linear tank. Rectangular tank; vertical cylinder; steel cellar tank.	
	Cylindric horizontal lying	Lying cylindric tank with arched ends Horizontal lying steel tank. Typical tank shape for outdoor and buried tanks.	
	Ball-shaped	Spherical tank. Ball-shaped subgrounded tank; common buried plastic tanks (GRP).	
	Oval	Oval cellar tank. Typical shape of GRP plastic tanks	
	Convex	Convex plastic tank, mostly as a battery. Slightly bellied tank shape	
	Concave	Concave plastic tank, mostly as a battery. Concaved tank shape.	
	Holed plastic	Plastic tank with large cavity. Hollow in the middle of the tankôs body. (No ring bandages)	
	Tube with flat ends	Lying cylindric tank with flat ends, Tube segment with straight end plates. Typical tank shape for smaller Diesel tanks.	
	Steel tanks	Steel tank or battery tanks group, mostly single-walled tanks: Linear side panels, w. hemicycles at top a. bottom.	
	Bearing chart (input of 1 special chart) Value input from an existing bearing chart for the tank	Reference table: Basic value table with up to 15 pairs of values ócm => literô for the non-linear regions of the tank. Step 4 (Tank volume) and Step 5 (Tank height) have to be set up beforehand. Value pairs for 0% (0.0 cm => 0 L) and 100% (tank height => volume) are already set and do not have to be entered again. Index [1] xxx.x cm => xxxx L Index [2] . . . . . cm => . . . . L Index [n] . . . . . cm => . . . . L Non-linear region: Enter several value pairs. Linear region: Enter only begin and end pairs.	Unsymmetrical or other tank shape.  Individual tank shape

Input function: ***Menu main item***	***Description***	***For which device***
4. Tank volume	Enter the tank volume by [+] [-]. (100% value) Preadjustment is 0 L . The value must be entered. In case of tanks > 1.000.000 units see menu item 12 too. Attention: If a bearing chart is available, please utilize total value. For a buried tank of ~100 m^3 it may be e.g. 100600 liters.	all
5. Tank height **5b. Filling limit**	Enter the interior height of the tank in cm: e.g. 249.0 cm Attention: If a bearing chart is available it is recommended to take the max. value pair out of the chart. E.g. in case of a 100 m^3 buried tank (subgrounded) the exact value could be 288.6 cm. Enter the filling limit of the tank: Oil tanks mostly have a filling limiter which defines the filling stop point. The default value is **95%**. If for example a large water tank can be filled to its upper rim then enter 99%. e.g. Filling limit: `95%=190cm` Change value by + / -	all

6. View	The upper display line shows the tank name and inventory in Liters (depending on selection in menu item 12).
	Select the displaying in display line 2:
	`View details: a) Fillspace+Percent`
	`b) Fillspace+Level (cm)`
	`c) Percent+Level (% + cm)`
	For oil tanks a) or b) is recommended to show the fillable free space up to the limiter.
	- collective - Displaying tanks without shifting over. Liters of tank 1 to tank n will be displayed together, see page 2.
	- **single/detailed** - All connected tanks are shown in detail by shifting over one by one. L + % (+ temperature) are displayed.
	- **total sum Σ: Y/N** Displays whole inventory of all tanks beside the single tanks details, see p.2
		All
		
		Only for
		LX-Q
		LX-(Q)-GSM
		LX-(Q)-NET

7. Relay or Exit	Switching function of relay 1: **Inactive** / Active / On / Off - Inactive Effect: The relay does not operate depending on the contents. No relay state is displayed or comes with the messages. - Active Effect: The relay operates depending on the contents level. - On Makes the relay operate (fix ON, closed). - Off Makes the relay release (fix OFF). Example: Switching point setup for „Active“ (with hysteresis): On 10% - Enter relay's operating point by + / - Off 15% - Enter relay's releasing point by + / -	LX-2-R LX-GSM LX-NET

	On +35°C - Enter relayís operating point by + / - Off +45°C - Enter relayís releasing point by + / - The relay is without switching function if both values are set to 0% and the temperature switching points are set to 0°C.	LX-2-R LX-GSM LX-NET
	In case of LX-2-R also setup the switching points for **relay 2**.	LX-2-R
8. Exit	Press [Enter] to leave the setup mode (parameter input).	all
Menu items 9 ï 24	Steps 9 ï 24 contain special settings.	all

After setting up step 1 to 7 the standard programming is completed. The device automatically returns to the usual displaying mode by confirming the ñExitôstep. The display shows the present tank content. Mount the deviceís cover after completing the initial setup!

Programming examples

Example 1 Cellar welded heating oil tank for 6000 L of heating oil, linear steel tank.
Interior height 165 cm, (current level: 125 cm) level probe 0 - **200 mbar**
Device **LX-2-R**: Relay 1 has to operate when liquid level is at 500 liters (8%):

Menu item	Input
1. Measuring probe	200 mbar
2. Liquid	Heating oil
3. Tank shape	Linear
4. Tank volume	6000 Liters
5. Tank height	165.0 cm
5b. Filling limit	95%=157cm
6. View	Fillspace + cm Level (displayed in line 2)
7. Relay 1	Active => On = 8% ; Off = 10%
Relay 2	Deactive
8. Exit [Enter]	Displaying mode => ... 4550 L ... 76 %

Example 2 Buried tank, cylindric horizontal, for 100600 liter of diesel oil,
Interior height 2.88 m, (current level 54 cm), level probe 0 - **250 mbar**
Device **LX-GSM** with SIM card:

Menu item	Input
1. Measuring probe	250 mbar
2. Liquid	Diesel oil
3. Tank shape	Cyl. horizontal > 50 000 L
4. Tank volume	100600 L (exact value of bearing chart)
5. Tank height	288.0 cm (exact value of bearing chart)
6. View	Fillspace + Percent (displayed in line 2)
7. Relay	Deactive
8. (Exit)	Jump to the next step by pressing [+]
. . .	...
15. Modem	PIN: xxxx - Enter the PIN code of the SIM-card.
. . .	...
19. Exit [Enter]	Displaying mode => ... 12 800 L ... 13 %

Example 3 Fountain, 7.50 m max. water level from ground (present level 4.20 m)
Probe TDS-6131 (measuring range 0-1000 mbar), **display in m of water level**.
Device LX-2-R. Relay 1 has to protect the pump against running dry (switch off):

Menu item	Input
1. Measuring probe	1000 mbar
2. Liquid	Water
3. Tank shape	Linear
4. *Tank volume*	(Volume) Alternatively max. level 7.50 m 7500 [ ] (enter by +/-)
5. *Tank height*	(Max.level) 750.0 cm (enter by +/-)
5b. Fillspace	99%=7.50m
6. View	View details: Percent + Level
7. Relay 1	Active => ôOnôat 99 % ; ôOffôat 10 % of the level.
Relay 2	Deactive
8. (Exit)	Jump to the next step by pressing [+]
. . .	
12. Unit	Set display unit to ômô
13. Rounding	Automatically (default).
14. Exit [Enter]	Displaying mode => ... e.g. ô4.20 m 56 %ô

Tank with interior mantle

In case of tank with interior mantle (e.g. horizontal cylindric or cellar steel tank) correct the input values.

Example: Mantle thickness ~ 0.5 cm to 1 cm

=> Reduce ô5. Interior heightô by ~ 2 cm

=> Reduce ô4. Volumeô

Volume up to 10 m³ => reduce volume by 3.0%
Volume up to 20 m³ => reduce volume by 2.5%
Volume up to 50 m³ => reduce volume by 2.0%
Volume up to 100 m³ => reduce volume by 1.5%

Special parameters

Additional input functions:	***Description***	***For which device***
Menu items 1 to 7	The menu items 1 to 7 contain the basic setup of the devices. Some special settings like language or network parameters or others have to be set up via menu items 9 to 24.	all
9. Offset probe	Sub-menu a. ó**Offset calibration**ó(electrical zero point) b. ó Probe bottom gapô (position over ground) c. ó Bottom dead stockô(shall not be displayed) - ESC Exit this sub-menu. - Offset calibration: Stores signal value of probeôs zero point. Probe must not be plunged. - Probe bottom gap: Distance: x cm Standard is x = **0 cm**, max = 99 cm - Bottom dead stock: Sucking position over ground: y cm Standard is **0 cm**, means total content. y > 0 cm means dead stock height which doesnôt occur in the liter displaying - **Default values**: Resets all values back to standard 0.	all
10. Trim height	Input option for the reference height for calibration of probe and measurement device. It is useful in case of unknown specific weight of the fluid. Enter the beared liquid level: **xx.x** cm (+ / - / Enter). Confirm with ó Calibrate: Yesô If this is done at a low tank filling level it is recommend to repeat this later again at a higher filling level. Also refer to 11.	all
11. Exit	Jump further with [+] or Exit with [Enter]	all
12. Unit	Selectable units are: **L** (Liters), %, m, kg, t (Tons), IG (Imp.gallons), UG (US gallons). (+ / - / Enter). Displaying mbar or kPa is also selectable. ó%ôor ómôvalues are displayed with two decimal numbers.	all
13. Rounding	**Automatically** - Default setting for autom. rounding Without rounding - No rounding means highest resolution. Maybe wobbling values. A certain rounding is recommended => sedation. Or 2 / 5 / 10 / 20 / 50 / 100 [L] is selectable.	all
14. Exit.	Jump further with [+] or Exit with [Enter]	all

15. Network or	**LX-(Q)-NET** :	- DHCP . . . Sub-menu for network parameter setup like IP addresses, message destination and communication test. Please coordinate these settings with your network admin. See additional documentation ônetwork device connectionô See additional documentation ônetwork device connectionô	Only for LX-NET LX-Q-NET since V7.0 with **email** function!
15. Modem	**LX-(Q)-GSM:**	- Modem 'Active: YES / NO' In case of YES, then radio network is selectable: ôautomaticó / 2G / 3G / 4G é - Send SMS: ôNo / Yesó At this point is no SIM card PIN editing necessary. The device will ask for the PIN when needed.	Only for LX-GSM LX-Q-GSM
16. Sort tanks / Clear tank	ôESCô/ ôTank nô	Deletion of a registered tank: If the LX-Q-xxx device detects a measure probe signal at the next input then this tank becomes registered at the next tank number (tank n). Here you may re-sort or delete the registered tank numbers.	Only for LX-Q LX-(Q)-GSM LX-(Q)-NET
17. Input/Output	**Alarm-In :** . . .	Choose the function of the alarm contact input: - **Deactive** Defines the alarm input to not operating. - Opening If input contact opens for > 2 min. then the alert will be triggered. - Closing If input contact closes for > 2 min. then the alert will be triggered.	LX-GSM LX-NET
	Data-Out : . . .	Defines the data output at the adaptor slot. Choices are: - Output of single tank data T1 o.T2 o.T3 o T4 => Applicable for analogue adaptor. - Output of all tanks T1 ï T4 => Data of all tanks sequentially go to the serial link output, - e.g. via the óserial output adaptorô to PC-LINK or to H-Protocol-Box - or for the MBus Adaptor.	LX-Q LX-GSM LX-Q-GSM LX-NET LX-Q-NET
17b. H protocol	Data output:	- Deactive - Data: Liters - Data: Level.	Data output óSerial link outô

Additional input functions:	***Description***		***For which device***
18. Language	**Language :** . . .	"**German**" / "English" / "French" / "Spanish" + / - / Enter	all
	Names : . . .	Name and characters are overwriteable. Characters changeable by + / - / Enter - Tank 1: *abcabc* - Tank n: *xyzxyz* - Alarm name: *Alarm A*	all
19. Exit	Press [Enter] for returning to the displaying mode.		all
20. LCD display	By factory setup the contrast of the LCD display is a hexadecimal value of e.g. 24 . Contrast: xx		all
21. Device info	Shows Software version : V6.00 (+) (e.g.) Serial no. : Tank i: SN=1234 (i = tank no.) Offset + Gain : X0=2980 B=1268 (for tank i)		all
22. Test current	Testing function for the current **mA signal** of the measuring probe: e.g. ADC = 28A1 = 4.01 mA In case of unplunged measuring probe the value should be close to 4 mA. Tolerance range is 3.7 ... 4.3 mA. If out of tolerance range, see menu item 9.Offset probe.		all
23.Test relay	Testing function for relay switching: Relay 1 = **Off** / On + / - / Enter Same for Relay 2 at device type LX-2-R. + / - / Enter		LX-2-R LX-GSM LX-NET
24. Reset	Resetting the device software: - ESC : Leaves this sub-menu without execution. - Restart : New initialization of the device software, but parameter setup is left unchanged. - Reset Password: Password resetting to default "tank" (only with LX-NET / LX-Q-NET). - Factory setting: Complete reset of all parameters back to the original factory settings.		all since V7.00
25. Configuration	Internal controlling parameters. Sensitive! Don't change them. Exit with "Cfg:0" [Enter]		all
26. Exit	Return to displaying mode		all

Error codes / error display

Message	*Meaning*
Error **E 1**	Invalid input value.
Error **E 2**	Measuring value of the probe is too small ! If current is less than 3.7 mA => Probe error.
Error **E 3**	Measuring value is too high for zero-point calibration or offset calibration. The probe must not be plunged ! A probe current higher than 4.3 mA indicates a defective probe.
Error **E 4**	Call step 09.Offset probe and perform the calibration once. Then retry settings.
Error **E 5**	Height input is larger than tank height. (Wrong input.)
Error **E 6**	The measuring value is too small for reference. Make sure the probe is plunged. Settled height is too large (or means the measuring value is too small for setting). Execute step 09. Offset. If it doesn't work check the probe current (mA) !
Error **E 7**	The current measuring value is too small for the corresponding tank height or the volume input value. Make sure the probe is plunged.
Error **E 8**	The current measuring value (mA) is too high. Check electrical connection and check the measuring range of the probe. Switch 230V supply off and on. Check input steps 1 to 5. Execute the zero-point calibration again (=> 09.Offset probe) and check step 22.Test current. Otherwise replace the measuring probe.
Error **E 9**	The current value is 0 mA. The probe's connection could be broken. Check probe connection (polarity) and extension. Measure the voltage at the probe (red to black).
Error **E10**	Calibration error. Switch off and on the 230V supply voltage and retry. Otherwise the probe is working not properly.
Error **E11**	Warning ! The liquid level in the tank is too low for an exact calibration. (Press [Enter] to continue anyway.)
Error **E12**	No measurement data is received from the external tanks 2 ... 4 yet.

For device type LX-NET / LX-Q-NET:

Info/Error-Messages at network communication

Error **N 1**	No network communication. A problem at the internal network module. The device automatically executes a ôResetôfor the internal network module and retrys initial communications. Try disconnection of network plug, waité and remount the network plug.
Error **N 2**	Error at the network communication. Check the connections at the device and at the network router... Check parameter setup at menu item ô15.Networkô.. Check the function ô15.Network > Test > Ping: Yesôé Try to connect another network device at this network cable, e.g. a Laptop. If it does not work please contact your network admin. Error N2 only occurs in case of a domain like www.oilview.de is entered for destination. In case of entering an individual dest-IP, no Error N2 messages will be shown. Important: The destination adress must be a <u>fixed</u> IP address. Otherwise the device retries sending again and again. If ôSending...ôis displayed periodically it is caused by an unreachable IP address destination.
Sending ...	ôSendingôis shown in the display in case of current sending of a data message. The message destination can be setup as an IP address at menu item ô15.Network => Dest. ...ô If ôSending...ôis displayed periodically it is caused by an unreachable IP address destination. The destination should be a fixed IP address. IP + Port should be setup in correct manner.

XML-Data:	Call the device with command ***ip-address* / xml** via browser or program.

Remote controlling of the relay:

The LX-NET device supports a remote control function for the relay.

The output relay can be operated by remote commands from a browser at the ôCONFIGôpage of the LX-NET device.

Deactive = No switching
Active = State depends on level.
On = Makes the relay operate (fix).
Off = Makes the relay release (fix).

For device type LX-GSM / LX-Q-GSM:

Error messages of GSM module / SIM card / Mobile network

Error **M 0**	The GSM modem is deactivated. See device menu step 15 . If necessary activate the GSM modem there.
Error **M 1**	Internal communication error. The device automatically executes an internal RESET and retries communication with the internal modem again.
Error **M 2**	SIM card is not inserted or is not readable or is defective. Please check the SIM card in a mobile phone.
Error **M 3**	PUK code must be entered. Wrong PIN has been entered 3 times, so the SIM card is locked. Insert that SIM card in a mobile phone and enter PUK code to unlock it.
Error **M 4**	In case of a prepaid SIM card check the credit. Otherwise disturbance or network error during sending procedure. Check parameter setup of destined mobile number.
Error **M 5**	No mobile network available for this SIM card. (An external antenna could help.) Check the SIM card with a mobile phone by sending a test SMS to its own number.
Error **M 6**	In case of a prepaid SIM card check the credit. Otherwise disturbance or network error during sending procedure. Check the SIM card with a mobile phone by sending a test SMS to its own number.
Error **M 7**	Mobile network logon failed or has been rejected. Check the SIM card. If the mobile signal (field intensity) is low an external antenna could help.
Error **M 8**	Interlock is active! In case of too many failed network logon tries the device will retry logon only once a day. This mode operates for 255 days. By pushing the [Enter] button the device does one logon trail to mobile network again. In case of successfully sending an SMS the interlock is cleared.
Error **M 9**	No mobile number destination has been set up. #T command has not been sent or OilView connection has not yet been linked.

Relay remote control:	The **LX-GSM device** supports a remote control function for the relay. The output relay can be operated by the #S remote commands sent via SMS. See the additional documentation for GSM device parameter setup.

Order numbers:		
Device sets <u>including</u> level meas. probe :	**No.**	**Description**
LX-2	12032	Monitoring device, with level probe TDS-6120-P6
LX-2-R	12033	Monitoring device with 2 relays, with level probe TDS-6120-P6
LX-GSM	12601	Monitoring device with data transmission via SMS, with level probe TDS-6120-P6
LX-NET	12701	Monitoring device with data transmission via internet, with level probe TDS-6120-P6
Monitoring device <u>without</u> level measuring probe :		
LX-2	11032	Monitoring device, <u>without</u> level probe
LX-2-R	11033	Monitoring device with 2 relays, <u>without</u> level probe
LX-GSM	11601	Monitoring device with data transmission via SMS, <u>without</u> level probe
LX-NET	11701	Monitoring device with data transmission via internet, <u>without</u> level probe
LX-Q	11504	Monitoring device without data transmission, with 4 measuring inputs for up to 4 level probes
LX-Q-GSM	11604	Monitoring device with data transmission via SMS, with 4 measuring inputs for up to 4 level probes
LX-Q-NET	11704	Monitoring device with data transmission via internet with 4 measuring inputs for up to 4 level probes
Level measuring probes (submersible) :		
TDS-61xx-P6 Tol.class 1%	61200 61250	Level meas. probe for up to 2.5 m oil level or 2.0 m water. Level meas. probe for up to 3.0 m oil level or 2.5 m water.
TDS-71xx-P6 Tol.class 0,5%	71200 71250	Level meas. probe for up to 2.5 m oil level or 2.0 m water. Level meas. probe for up to 3.0 m oil level or 2.5 m water.
TDS-42xx-F5 Tol.class 0,25%	42200 42250	Level meas. probe for up to 2.5 m oil level or 2.0 m water. Level meas. probe for up to 3.0 m oil level or 2.5 m water.
Other types or other ranges, e.g. 0 - 40 cm to 0 - 40 m		we can offer
Mounting supplies and other accessories :		
		Refer to **www.tecson.de**

Maintenance:	It is recommended to check once a year if the displayed values are correct. Two practical check options are: - Lift the probe above the liquid level. Then check if ~ 0 L is displayed. - Check the cm value displayed in Step ó10.Trim heightô (without trimming!). In case of deviation it is recommended to recalibrate the measuring probe via menu step 9 or 10. If the problem cannot be fixed the level probe might be defective. In this case please directly contact Tecson. **New measuring probe (level sensor):** In case of replacement of the level probe it is recommended to call menu item ó9.Probe offsetôand execute the item ó1Default valuesô

You find the online documentation for the TECSON devices at:

http://www.tecson.de/geraete-dokumentation.html

LABELING

CE	The manufacturer TECSON declares the compliance with the valid safety and test guidelines (CE Declaration). For Conformity Declaration refer to website www.tecson.de at menu item ó1Documentationô

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