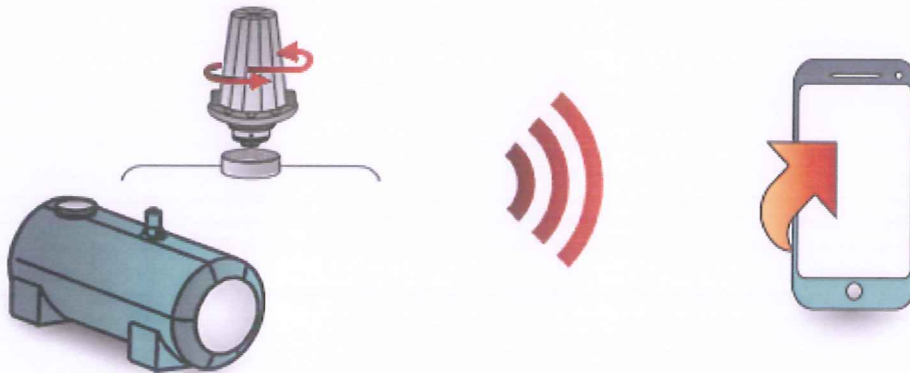## Wireless tank gauging, till your smartphone

- Property Administrators & Facility Managementa
- Second residences
- Facilities maintenance contractors
- Fuel suppliers

SMS Tankalert sends:

- Scheduled **SMS message** with **actual tank volume.**
- **Alarm SMS** for **threshold volume or low battery** levels reached.

SMS Tankalert is valid **for oil and other liquids tanks from 0,5 till 3 m height.**

Accurate ultrasonic measuring system like for Tankalert EcoOil

SMS Tankalert
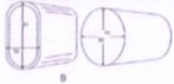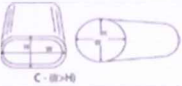

(*)

(*)
Magnet activation point or 'Hot-spot'

SMS Tankalert

INSTALLATION MANUAL

Command	Valid parameters	Default value
Help	REPORT TYPE VOLUME HEIGHT WIDTH GEOMETRY CONFIRM SCHEDULE ALARM DRAIN FILL OFFSET OUTLET PASSWORD TUBE WHITELIST	
Lang	? FR|EN|ES|DE	EN
Type	? A|B|C	A
Volume	? [100...65.535]	2000
Height	? [50..300]	200
Width	? [50..300]	-
Geometry		
Confirm	? ON|OFF	ON
Schedule	? 2H|1D|7D|15D|21D|30D	30D
Time	? HH:MM	
Alarm	? ON|OFF	ON
High	? [0..100]	95%
Low	? [0..100]	5%
Offset	? [0..30]	0
Outlet	? [0..30]	5
Whitelist	IMEI_LEN[17], PWD_LEN[1..7]	no
Tube	? ON|OFF	OFF
Whitelist	? 1..5 * <number> <Password>, 1..5 *<number>	OFF

Setup:

Your tank	Tank type	Height (H) cm	Width (W) cm	Volume (l.)
	A		X	
	B			
	C			

1.- Insert a **Pin free SIM card**

2.- Activate the device by holding a magnet at the activation point till you hear a long beep. The device will stay active only for 20 minutes, to save battery.

3.- Wait till device register at GSM network, and send an SMS command to set your Language, eg,
+Lang DE (Default is English EN)

4. Set your desired schedule, time. eg, +Confirm on, Schedule 1d,Time 14:00,Time?

5.- Set the volume and alarms according to your tank, and change any standard setting into your best value.

6.- The device is ready to run automatically as per your settings, by sending scheduled reports to last is always the "received from" number.

7. Regular reports are sent to the number of the last incoming text message with valid formatting.
If the whitelist activated, the reply number is validated by any one of up to 5 whitelist entries.

NOTE 1: If you receive an error message such as "liquid volume OL, 0%", send the following SMS messages (or one SMS with all values with "," as separator) to return to the default values, and then change their values one by one again according to your tank values:

Reset to default:

Type A	
Volume 2000	Lts
Height 200	cms
Outlet 5	cms
Offset 0	cms
TUBE OFF	

NOTE 2:

To make a spot check on your tank volume you can activate the gauge approaching the magnet to the activation point "hot spot" until you hear a long beep, and an SMS will be delivered with the content of the tank to the last phone sending a correct command.

EN

Feature	Text	Action	Reply Text	Reply
		SETUP		
Magnet Swipe	To activate unit	will reply to originating phone number after recieveing any valid command.		Acivated
Language	Notes that apply	See note 9		
	Field 1	{Lang} the command type		
	Field 2	Sets the language. EN (English) , DE (Deuchland), ES (Espania) , FR(France)		
	Default	EN		
	Examples			
	+Lang DE	Sets the Language to DE	Yes	Lang Set
	Lang?			Lang EN
		REPORTS		
Feature	Text	Action	Reply Text	Reply
Report	Description	The unit sends a report in response to the command Report.		
	Field 1	{Report} the command type		
	Example Report commands			
	Report	Sends a Report messageback to the originating phone number for the last ullage measurement made	Yes	Report
	Normal Report contents			
	Fluid Volume 396L, 30%	Fluid currently in the tank		
	15:03, 24 Apr 2012	The current controller time		
	Battery Good	The condition of the battery		
	Abnormal Report contents			
	Fluid Volume 0L, 0%	Bad fluid level		
	Ullage > Height?	Error indication		
	15:03, 24 Apr 2012	The current controller time		
Help	Description	Tells the controller to respond with the Help listing to the sender of the instruction		
	Field 1	{Help} the command type	Yes	Help
	Help contents			
	SAMPLE TEXTS	Default contents; cannot be changed Length of response is 154 characters. (must be < 160)		
	Help	HELP <COMMAND>: REPORT TYPE VOLUME HEIGHT WIDTH GEOMETRY CONFIRM SCHEDULE ALARM DRAIN FILL OFFSET OUTLET PASSWORD TUBE WHITELIST		

TANK SETTINGS COMMANDS				
Feature	Text	Action	Reply Text	Reply
Type	Description	Sets the Tank Type Type A - linear section tank (cross section is always the same) - requires height and volume to be specified Type B - oval and cylindrical tanks - requires height, width and volume to be specified Type C - low profile tank - requires height, width and volume to be specified		
	Notes that apply			
	Default	Type A		
	Field 1	{Type}		
	Field 2	{A,B,C} shape type		
	Examples of Type			
	Type A	Sets the Tank Type to Linear Section Tank	No	
	Type B	Sets the Tank Type to Oval or Cylindrical Tank	No	
	Type C	Sets the Tank Type to Low Profile Tank	No	
	+ Type A	Sets the Tank Type to Linear Section Tank	Yes	Se
Volume	Description	Sets the Tank Volume in Liters Define minimum and maximum values		
	Notes that apply			
	Deafult	2000 L		
	Field 1	{Volume} the command type		
	Field 2	{nnnn} the capacity of the tank in liters, where 100 <= nnnn < 65535		
	Examples			
	+Volume 1700	Set the tank volume to 1700 liters	Yes	Tan Volume Set
	Volume 1700		No	
Height	Description	Sets the Tank Height in Centimeters Define minimum and maximum values		
	Notes that apply			
	Deafult	200 cm		
	Field 1	{Height} the command type		
	Field 2	{nnn} the height of the tank in cm, where 50 <= nnn < 301		
	Examples			
	+Height 145	Set the tank height to 145 cm	Yes	Tank Height Set
	Height 145		No	
Width	Description	Sets the Tank Width in Centimeters Define minimum and maximum values		
	Notes that apply			
	Deafult	100 cm		
	Field 1	{Width} the command type		
	Field 2	{nnn} the width of the tank in cm, where 50 <= nnn < 301		
	Examples			
	+Width 80		Yes	Tank Width

				Set
	Width 80		No	
Outlet	Description	Sets the Tank Outlet. The Outlet is the height of the fuel take off point above the bottom of the tank. Fuel beneath this level is unusable		
	Notes that apply			
	Deafult	5 cm		
	Field 1	{Outlet} the command type		
	Field 2	{nnn} the Outlet of the tank in cm, where 0 <= n < 31		
	Examples			
	+Outlet 5		Yes	OUTLET Set
	Outlet 5		No	
Offset	Description	Sets the Tank Offset The "Offset" is the height above the top surface of the tank that the ultrasonic transducer sits when the sensor is mounted on the tank.		
	Notes that apply			
	Deafult	0 cm		
	Field 1	{Offset} the command type		
	Field 2	{nnn} the Offset of the tank in cm, where 0 <= n < 31		
	Examples			
	+Offset 5		Yes	OFFSET Set
	Offset 5		No	
Tube	Description	Sets Waveguide on or waveguide off. For normal installs, Kingspan setting: S17=0049351928 For WG mode, Kingspan setting: S17=0014FF3C3C		
	Notes that apply			
	Deafult	OFF		
	Field 1	{Tube} the command type		
	Field 2	{ON/OFF}		
	Examples			
	+Tube ON			TUBE ON
Geometry	Description	Queries the geometry settings of the tank		
	Note	The geometry command response is called in any query concerning the tank geometery, Eg, Width?		
	Field 1	{Geometry} the command type		
	Examples			
	Tank Shape A			
	Tank Volume 2000 Lts			
	Tank Height 200 cms			
	Tank Width 100 cms			
	OUTLET 5 cms			
	OFFSET 0 cms			

INFORMATION COMMANDS				
Feature	Text	Action	Reply Text	Reply
Confirm	Description	Sets the controller default response to commands which support confirmation. If Confirm is set to On, the default response is to sent a confirmation report to the sender of the instruction.		
	Notes that apply			
	Field 1	{Confirm} the command type		
	Field 2	{ON or OFF}		
	Default	OFF		
	Examples			
	Confirm on	Sets up the text confirmation service, ie a text will be sent to confirm every text command received, confirmation text sent. (This is Default ON)	No	
	Confirm off	Cancels the text confirmation service from the controller, ie no texts will be sent to confirm a command, confirmation text sent	no	
	Confirm?	Queries the text confirmation service	Yes	Confirm {ON|OFF}
	+ Confirm on	Sets up the text confirmation service from the controller, ie a text will be sent to confirm every text command received, no confirmation text sent	Yes	Confirm Set
SCHEDULE SETTINGS				
Feature	Text	Action	Reply Text	Reply
Schedule	Description	Sends the controller the report interval. The controller will use the time in the received message to set the time the report will be sent daily/weekly/monthly.		
	Notes that apply	1-3, 6-7		
	Field 1	{Schedule} the command type		
	Field 2	{schedule interval}, in days. Up to 30 days max. A 2 hourly schedule may also be set.		
	Default	3 days		
	Examples			
	+Schedule 1d	Sends report message every day	Yes	Schedule SET
	+Schedule 3d	Sendsreport message every 3 days	Yes	Schedule SET
	Schedule 2H	Sends report message every 2 Hours	No	
	Schedule?	Query the schedule interval	Yes	Schedule 1d
	Description	Sends the controller the report interval. The controller will use the time in the received message to set the time the report will be sent daily/weekly/monthly.		
	Notes that apply	1-3, 6-7		
	Field 1	{Schedule} the command type		
DIAGNOSTIC COMMANDS				
Feature	Text	Action	Reply Text	Reply
Time	Description	Command to determine what time of the day reports will be despatched.		
	Notes that apply			
	Field 1	{Time} the command type		

EN

Feature	Text	Action	Reply Text	Reply
	Field 2	{hh:mm} The desired time the report will be sent. 24h clock, formatted Hours:Minutes, separated by a colon :		
	Examples			
	+Time 08:30	Sets the report to be sent at 08:30	Yes	TIME Set
	Time?	Query the number of minutes for the next report to be sent	No	
	+Time 16:00,Time?	Sets the report to be sent at 16:00, and Query the number of minutes for the next report to be sent	Yes TIME Set. Next Contact in 60 minutes	
ALARM COMMANDS				
Feature	Text	Action	Reply Text	Reply
	Description	Turns on/off the global alarm feature of the unit. A text is directed to the to number of the last incoming text message with valid formatting. (see also whitelist)		
	Notes that apply			
	Field 1	{alarm} the command type		
	Field 2	{ON or OFF} the alarm instruction		
	Default	OFF		
	Examples			
Alarm	+Alarm ON	Turns the alarm monitor on, confirmation text sent to sending number with alarm destination phone number identified	Yes	Alarm Set
	Alarm OFF	Turns the alarm monitor off, no confirm	No	ALARMOFF
	Alarm?	Query the setting of the Alarm status	Yes	Alarm Set
	Description	Turns on/off the global alarm feature of the unit. A text is directed to the to number of the last incoming text message with valid formatting. (see also whitelist)		
	Description	Sets the alarm sensitivity drain/fill threshold - in some cases the fuel usage is higher - in other cases the tank si narrower Main purpose is to avoid setting off the alarm		
	Notes that apply	See also the Alarm command		
	Default	0 (Off)		
	Field 1	{Fill} the command type		
Fill	Field 2	{}rate of change in mm / min (between 0mm and 63mm)		
	Examples			
	+Fill 15	Sets the fill rate alarm to 15 mm/min; if the rate of fill is higher than 15mm/min an alarm will be generated	Yes	Fill Set
	Fill?	Query the rate of fill	Yes	
		ALARM HIGH 95%,low 10%, FILL 15, DRAIN10		
	Description	Sets the alarm sensitivity drain/fill threshold - in some cases the fuel usage is higher - in other cases the tank si narrower Main purpose is to avoid setting off the alarm		
Drain	Notes that apply	See also the Alarm command		
	Default	Drain 10mm/min		
	Field 1	{Drain} the command type		
	Field 2	{}rate of change in mm / min (between 0mm and		

		63mm)		
	Examples			
	+Drain 15	Sets the Drain alarm to 15 mm/min; if the rate of Drain is higher than 15mm/min an alarm will be generated	Yes	DRAIN Set
	Drain 35	Sets the drain rate alarm to 35 mm/min; if the rate of drain is higher than 35mm/min an alarm will be generated	No	DRAIN Set
	Drain?	Query the rate of Drain	Yes ALARM HIGH 95%,LOW 10%,Fill 15, drain 35	
High	Description	A text setting the high threshold volume level - upper Limit (during a fill or other event, depending on the tank).		
	Notes that apply	See note 11		
	Field 1	{High} the command type		
	Field 2	{threshold} High threshold level setting		
	Default	95%		
	Examples			
	+High 95	Sets the high threshold to 95% of the tank volume	Yes	High Set
	High 95		No	
	High?	Query the upper threshold value	Yes: ALARM HIGH 95%,LOW 10%,FILL 15, DRAIN 10	
Low	Description	A text setting the low threshold volume has been reached.		
	Notes that apply	See note 11. See also the Alarm command		
	Field 1	{Low} the command type		
	Field 2	{threshold} Low level setting		
	Default	5%		
	Examples			
	+Low 5	Sets the low threshold to 5% of the tank volume	Yes	Low Set
	Low 5		No	
	Low?	Query the lower threshold value	Yes: ALARM HIGH 95%,LOW 10%,FILL 15, DRAIN 10	
Alarm Report	Description	The unit sends an alarm report every time an alarm conditions has been reached. A text is directed to the to number of the last incoming text message with valid formatting. (see also whitelist)		
	Notes that apply	This is not a command - simply defines the alarm response		
	Examples			
	Alarm DRAIN 23 mm/Min Fluid Volume 1000L, ı	Drain alarm - drain rate higher than the rate set	ALARM,DRAIN detected - ang 11mm/Min	

EN

			Reply Text	Reply
50% Fluid Level 200 cm Battery OK 14:30, 9/5/16				REPORT Fluid Volume 840 Lts,45% 17:24 31/8/16, Battery Very Good
Alarm FILL 43 mm/Min Fluid Volume 1000L, 50% Fluid Level 200 cm Battery OK 14:30, 9/5/16	Fill alarm - Fill rate higher than the rate set			ALARM,FILL detected - 16mm/Min REPORT Fluid Volume 1010 Lts,55% 17:47 31/8/16, Battery Very Good
Alarm High threshold reached. Fluid Volume 1000L, 50% Fluid Level 200 cm Battery OK 14:30, 9/5/16	The fuel level has has reached the full threshold			ALARM,FILL detected 71MM/MIN, High Threshold reached, REPORT Fluid Volume 1870Lts,102% 17:49 31/8/16, Battery Very Good
Alarm Low threshold reached. Fluid Volume 1000L, 50% Fluid Level 200 cm Battery OK 14:30, 9/5/16	The fuel level has has reached the low threshold			ALARM,FILL detected 0MM/MIN, Low Threshold reached, REPORT Fluid Volume 0Lts,0% 8:30 1/9/16, Battery Very Good

SECURITY COMMAND				
Feature	Text	Action	Reply Text	Reply
Password	Description	A text setting the password for the unit whitelist; by default the unit has no password set; password is used to used to protect the setting of the whitelist		
	Notes that apply	Pasword must a maximum of 6 characters		
	Field 1	{Password} the command type		
	Field 2	{IMEI} IMEI of the unit		
	Field 3	{123456} password (it is not case sensitive) may contain characters and digits with a maximum length of 7 and a minimum length of 1		
	Default	none		
	Examples			
	+Password 862170011232731 123456	Sets the password to "123456"	Yes	PASSWO RD Set
	+Password 862170011232731 OFF	Turns off the password	Yes	PASSWO RD Set OFF
Whitelist	Description	The controller supports a whitelist of allowed numbers which are the only numbers that can legitimately issue text commands to that unit. (An exception is the whitelist command itself) Texts received from a non-listed number will not		

	be actioned - they are ignored with no error message. The whitelist command refreshes the entire whitelist so all required whitelist numbers must be sent each time the command is used. A maximum of 5 whitelist entries is allowed. It is recommended that whitelist numbers are entered in the international format		
Notes that apply	7,8		
Field 1	{whitelist} the command type		
Filed 2 {optional}	{password} if the password has been previously set, this field must contain the password; if the password does not match the stored password, the whitelist command is ignored if the password has not been set, this field is ignored and the whitelist is parsed		
Field 3	{phone numbers} The phone number(s) to be added to the whitelist. "Space" is separator. The word "OFF" disables Whitelist protection.		
Default	OFF		
Examples			
+Whitelist 123456 851234567 00353861234568 00353871234569	Add the following numbers to the whitelist 00353851234567, 00353861234568, 00353871234569 (Format to separate numbers is space).	Yes	Whitelist Set
+Whitelist 123456 OFF	Turns the whitelist off assuming the password is 123456, resulting in any number able to control the device via SMS, provided the command is valid.	Yes	Whitelist off

NOTES :

Notes	Note 1	Commands are not case sensitive Both UPPER and lower case characters are accepted.		
	Note 2	Commands are divided into fields, each field separated by the {space} character as the normal delimiter. Commands may be preceded by a space, but spaces will not appear within a message field. In the descriptions below the fields are defined as field 1, field 2, etc		
	Note 3	To concatenate commands in a single text use the comma sign (,). Up to 6 commands are allowed in 1 message up to the 160 character limit. The (,) sign is accepted with and without spaces, before and after the sign Tip !: It is a good idea to post-pend commands with a query, so that there is certainty the command is set as desired, eg, Volume 1200,Volume?		
	Note 4	The unit is factory set to CONFIRM OFF. It will not reply with a confirmation message unless the command is preceded by "+" per note 5.		
	Note 5	The unit can be forced to send a reply text for a single command by starting the command text with a plus sign "+". All commands support the "+" prefix. The instructions should recommend use of 'Delivery Reports' so users can have a degree of confidence that the command is delivered without incurring the cost of a confirmation SMS. Do bear in mind for a unit that reports in > once per week, Undelivered SMS messages may be deleted network messaging center.		
	Note 6	All controller reply texts will fit into a single 160 character message. Where reports, information would otherwise exceed 160 characters, they are truncated at 160 characters.		
	Note 7	The default "reply to" number (for a required response or a confirm message) is always the "received from" number. If the whitelist activated, the reply number is validated by any one of up to 5 whitelist entries.		
	Note 8	Regular reports are sent to the number of the last incoming text message with valid formatting. If the whitelist activated, the reply number is validated by any one of up to 5 whitelist entries.		
	Note 9	The real time clock and date of the unit is set automatically. The frequency of scheduled reports is set by the schedule command. (The timing of sheduled Reports is set by the Time command)		
	Note 10	The High / Low thresholds are set as the percentage of useable fuel in the tank. The Low threshold takes into account the outlet height. The High threshold takes into account the mandatory air space allowed for expansion (12cms)		

ÜBERSICHT DER BEFEHLE UND ANTWORTEN			
EN	DE	ES	FR

Command Keywords (All uppercase)

EN	DE	ES	FR
"ALARM"	"ALARM"	"ALARMA"	"ALARME"
"CONFIRM"	"BESTAETIGEN"	"CONFIRMACION"	"CONFIRMER"
"DRAIN"	"AUSLAUFEN"	"VACIADO"	"VIDANGE"
"FILL"	"FUELLEN"	"LLENADO"	"REMPLISSAGE"
"GEOMETRY"	"GEOMETRIE"	"GEOMETRIA"	"GÉOMÉTRIE"
"HEIGHT"	"HOEHE"	"ALTURA"	"HAUTEUR"
"HELP"	"HILFE"	"AYUDA"	"AIDE"
"HIGH"	"HOCH"	"ALTO"	"HAUT"
"LANG"	"LANG"	"LANG"	"LANG"
"LOW"	"NEIDRIG"	"BAJO"	"BAS"
"OFF"	"AUS"	"OFF"	"OFF"
"OFFSET"	"FREIRAUM FUELLSTAND"	"MARGEN VACIO"	"OFFSET LIQUIDE"
"ON"	"AN"	"ON"	"ON"
"OUTLET"	"UNTERER SAUG ANSCHLUSS"	"TOMA"	"SORTIE"
"PASSWORD"	"PASSWORT"	"CONTRASEÑA"	"MOT-DE-PASSE"
"REPORT"	"BERICHT"	"INFORME"	"RAPPORT"
"SCHEDULE"	"ZEITPLAN"	"PROGRAMACION"	"PLANNING"
"TIME"	"UHRZEIT"	"HORA"	"HEURE"
"TUBE"	"WAVEGUIDE ROHR"	"TUBO"	"TUBE"
"TYPE"	"TYP"	"TIPO"	"TYPE"
"ULLAGE"	"FREIRAUM"	"ESPACIO"	"DISTANCE"
"VOLUME"	"IHNHALT"	"VOLUMEN"	"VOLUME"
"WHITELIST"	"WHITELIST"	"NUMEROS-AUTORIZADOS"	"LISTE-BLANCHE"
"WIDTH"	"WEITE"	"ANCHURA"	"LARGEUR"
"2H"	"2STD"	"2H"	"2H"
"DAY"	"TAG"	"DIA"	"J"

Responses (mixed case)

EN	DE	ES	FR
"Battery "	"Batterie "	"Bateria "	"Pile "
"Weak"	"leer"	"baja"	"faible"
"OK"	"OK"	"OK"	"OK"
"Very Good"	"sehr gut"	"Muy bien"	"très bon état"
"detected"	"detektiert"	"detectado"	"détectée"
"Low threshold reached"	"Minimalwert erreicht"	"Nivel bajo alcanzado"	"seuil bas atteint"
"High threshold reached"	"Maximalwert erreicht"	"Nivel alto alcanzado"	"seuil élevé atteint"
" Set"	" Set\r\n"	" Ajustada\r\n"	" Fixer\r\n"
"Fluid Volume "	"Fuellvolumen "	"Volumen de Liquidos "	"Volume de liquide "
"Tank Height "	"Tank Hoehe "	"Altura del tanque "	"Hauteur de réservoir "
"Tank Shape "	"Tankform "	"Forma del tanque "	"Forme réservoir "
"Tank Width "	"TankBreite"	"Ancho del tanque "	"Largeur réservoir "
"Tank Ullage "	"Tankullage "	"espacio vacio del tanque "	"distance vide au réservoir "
"Tank Volume "	"Tankvolumen "	"el volumen del tanque "	"Volume réservoir "
" Error\r\n"	" Error\r\n"	" Error\r\n"	" Erreur\r\n"
"Next Contact in"	"Naechste Kontaktversuch in"	"Próximo contacto en"	"Prochain contact"

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