

VEGAPULS series 60 with electronics 4...20mA/HART

For hardware versions > 2.0.0

Version available since	Description	Device Rev.
4.0.0, 10/2009	<p>First software version for HW version 2.0.0</p> <p>New functions:</p> <ul style="list-style-type: none"> – Signal processing: <ul style="list-style-type: none"> – increased accuracy – increased repetition rate – extended application parameters – Instrument software, in general: <ul style="list-style-type: none"> – lower supply voltages possible – device status acc. to NE 107 – event memory added – extended function for the measured value memory – real time clock added – PLICSCOM operation: <ul style="list-style-type: none"> – modification of the menu structure – modification of the layout for value changes – HART communication: <ul style="list-style-type: none"> – HART Revision 7 – HART measured values can be configured 	2
4.0.1, 11/2009	<p>Error correction of the first production version</p> <p>New functions:</p> <ul style="list-style-type: none"> – Signal processing: <ul style="list-style-type: none"> – running time optimization when calculating the false signal suppression – Instrument software, in general <ul style="list-style-type: none"> – antenna type for high temperature version added <p>Error corrections:</p> <ul style="list-style-type: none"> – Signal processing: <ul style="list-style-type: none"> – fault rectification with fast measured value changes: <ul style="list-style-type: none"> – new decision for a smaller echo was delayed by 10 min. – measured value filter was too slow for comprehensive modifications – wrong calculation of the focusing range with small vessel heights – echo decision for one false echo if only false echoes are available – false echo rating did not function for echoes which are not tracked – echo detection detected no echoes in the bulk solids mode if there was one echo in front of the zero point of the instrument 	3

Version available since	Description	Device Rev.
	<ul style="list-style-type: none"> – status F265 was displayed during the sensor start instead of F013 if there was no echo in the concentric curve – First large echo can be changed again with DTM version 10/2009 – Instrument software, in general: <ul style="list-style-type: none"> – software update was not possible when the sensor was powered by a VEGAMET – electronics temperature and error in the linearization signalled error instead of maintenance requirement – error correction if EEPROM cannot be read – reason for F080/1016 removed – error F260/1004 was set with switched off reference pulse control – PLICSCOM operation: <ul style="list-style-type: none"> – change start behaviour (F105 will be suppressed) – simulation did not switch off automatically after one hour – after a reset jump to the measured value image – HART communication: <ul style="list-style-type: none"> – adjustment with an EDD was not possible – device status corrected with activated simulation – HART UpperTransducerLimit (Cmd#14) corrected 	
4.1.0, 04/2010	<p>Extended functions and error correction of the sensor software for HART sensors</p> <p>New functions and modifications:</p> <ul style="list-style-type: none"> – Signal processing: <ul style="list-style-type: none"> – application in open air added – determination of the mobility probability of all echoes added – update false signal suppression depending on the increase of the system noise – depending on the special parameter of the application "Liquid" "Transportable plastic tank" modified – when modifying the application setting, a restart of the signal processing will be carried out – special parameter "Function measured value filter" only active for PS60HS electronics – Error handling for echo curve scanning refined – Instrument software, in general: <ul style="list-style-type: none"> – parameter changes in the event memory added – echo curve memory added – echo curve of the setup added – import/export false signal suppression for DTM added – diagnosis: increase of the system noise added – NAMUR status maintenance requirements when reliability is too low added – error handling on the parameter sector extended 	4

Version available since	Description	Device Rev.
	<ul style="list-style-type: none"> – automatic recognition of the USB serial converter on the terminals – PLICSCOM operation: <ul style="list-style-type: none"> – language Chinese added – change start behaviour (no longer show error 105 when starting) – measurement in the open air and increased system noise added – scaling units adapted to DTM version 1.62.0 – with a reset via PLICSCOM jump to the measured value image – enable parameter access for PLICSCOM during parameter reset – text changes – HART communication: <ul style="list-style-type: none"> – HART communication can now be switched off – modification of the SW and Device Revision – HART commands 50 and 51 added Error corrections: <ul style="list-style-type: none"> – Signal processing: <ul style="list-style-type: none"> – accuracy problems with PS60HS electronics and small echoes – measured value jumps with PS60HS electronics and measuring range > 40m remote, mainly without noise suppression – behaviour in case of failure: "Last valid value as error current" faulty – focusing range was not calculated correctly – special parameter "Function measured value filter" filter constants for small and large measured value changes were exchanged – during a warm start of the instrument, the last measured value was briefly outputted before the programmed error current was outputted – unit conversion m/ft in laboratory parameters EchoDetectionGeneral and MeasurementValueElectronicOffset faulty – Instrument software, in general: <ul style="list-style-type: none"> – measured value memory stop condition "Memory full" faulty – read out measured value memory blocked sometimes – "starting" was displayed with a sensor start after a software update – failure 261 was displayed during the sensor start after a software update – a voltage failure was entered into the event memory after a software update – electronics temperature and linearization error signal failure instead of maintenance requirement – device status remains on function control after automatic switching off of the simulation after one hour – Single Shot Events were stored in the event memory as Set Events – Fehlerkorrektur Schnittstelle Sensor und PLICSRADIO – Beim Lesen der Bestelltexte lieferte der Sensor nach dem Einschalten Status 128 und keine Daten – error correction interface sensor and PLICSRADIO 	

Version available since	Description	Device Rev.
	<ul style="list-style-type: none"> – when reading the order texts, the sensor delivered status 128 and no data after switching on – PLICSCOM operation: <ul style="list-style-type: none"> – In the Russian document an “i” was displayed instead of the superscript "3" – HART communication: <ul style="list-style-type: none"> – VVO3 parameter instrument identification - and HART-DeviceRevision did not match – HART command 3: SV (secondary value) was the same as TV (third value) – unit code for nA was changed to 1015 – Upper/Lower Range Value were not dependent on the current output characteristics – HART DynVarMapping: values were not like in HART specification – simulation current value was no longer switched off in HART Multidrop mode – HART enquiries were not always answered – HART sensor answered with wrong data after timeout of a previous command – HART timeout when writing parameter reset after software update 	
4.2.0, 06/2010	First version for 4-wire HART New functions and modifications: <ul style="list-style-type: none"> – instrument software, in general: <ul style="list-style-type: none"> – support of the 4-wire additional electronics added – HART communication: <ul style="list-style-type: none"> – parameter for deactivation of the HART commands added 	4
4.4.0, 10/2010	Extended functions and error correction of the sensor software New functions and modifications: <ul style="list-style-type: none"> – Signal processing <ul style="list-style-type: none"> – New function overflow protection – Instrument software, in general <ul style="list-style-type: none"> – allow new instruments VEGAPULS SR 68 and VEGAPULS WL 61 for software update Error corrections: <ul style="list-style-type: none"> – Signal processing <ul style="list-style-type: none"> – an individually programmable linearization curve with negative incline could not be processed – the simulation of the physical value could only be carried out up to 35 m – error in the spreading correction when measuring in a tube – time up to the fault signal after an echo loss for WHG and SIL fix 	4

Version available since	Description	Device Rev.
	<ul style="list-style-type: none"> adjusted to 60 seconds – several error messages F080 checked and corrected – Instrument software, in general <ul style="list-style-type: none"> – on site communication with the sensor no longer possible after interruption of the USB connection to the VEGACONNECT 4 – the false echo memory curve was not updated in the DTM after the change of a distance offset – the false echo memory curve was cut in the DTM without high-resolution echo curve presentation – distance values in the echo curves on the DTM were presented in the wrong way with sensor distance unit “ft” – measured value simulation was not reset after a parameter reset – parameter for current adjustment could be modified despite the blocked sensor – wrong device status with defective real time clock (F 261) – PLICSCOM operation <ul style="list-style-type: none"> – the “standpipe versions“ are deleted with the menu item Medium and selection Liquid/Bulk solid – corrections with language “Russian“ – HART communication <p>error during the measured value transmission to VEGASCAN</p>	
4.4.1, 02/2011	<p>Error correction measured value presentation in unit ”ft“</p> <p>Error corrections:</p> <ul style="list-style-type: none"> – PLICSCOM operation – Sign missing with negative levels in unit “ft“ – Indication of the sixteenths missing with levels in unit “ft“ 	4
4.5.0, 06/2011	<p>Short description of the version</p> <p>New functions and changes:</p> <ul style="list-style-type: none"> – Signal processing <ul style="list-style-type: none"> – Gating out of false signals improved – Algorithm of the mobility determination optimized – Instrument software in general <ul style="list-style-type: none"> – Limitation of the sensor and scaling units for Japan added – Adjustable current consumption of the sensor electronics with 4-wire operation – PLICSCOM operation <ul style="list-style-type: none"> – Language Japanese added – HART communication <ul style="list-style-type: none"> – Device Revision increased from 4 to 5 – HART SW Revision increased from 4 to 5 – Burst Mode command can be activated by means of parameters 	5

Version available since	Description	Device Rev.
	<p>Error corrections:</p> <ul style="list-style-type: none"> - Signal processing <ul style="list-style-type: none"> - Assignment of the echo ID corrected - Instrument software in general <ul style="list-style-type: none"> - The function overfill safety could not be switched off - Peak value showed to high negative values - Error in the threshold value curve presentation with high detection offset - PLICSCOM operation <ul style="list-style-type: none"> - Echo curve presentation only up to vessel height + safety - HART communication <ul style="list-style-type: none"> - Transmission problems with cyclical change of the linearization curve via HART - Error corrections for HART certification 	
<p>4.5.1, 08/2011</p>	<p>Error corrections:</p> <ul style="list-style-type: none"> - Instrument software in general <ul style="list-style-type: none"> - Error correction according to SW update with instruments produced by VEGA Americas - PLICSCOM operation <ul style="list-style-type: none"> - Error correction with scaling units for the Japanese market 	

Legend:

Name	Description
Version	Compatibility version.Extended functions.Error correction version
Available since	Month/Year
Device Rev.	Version number of the instrument defined by HART. Consecutive whole number. If increased when modifications are made in the "Application Layer". E.g. new commands, changes of the data structure in a command.