VEGAPULS series 60 with electronics 4-wire Modbus

For hardware versions > 2.0.0

Version, available since	Description	Device Rev.
4.5.3, 11/2018	**Error corrections:** – Instrument Software, in general – Correction of an error while writing data into the EEPROM	**5**
4.5.2, 08/2016	**Error corrections:** – Instrument Software, in general – Error message F080 in conjunction with PLICSCOM removed I²C bus speed adapted	**5**
4.5.1, 08/2011	**Error corrections:** – Instrument Software, in general – Error correction after SW update with instruments produced at VEGA Americas – PLICSCOM adjustment – Error correction with scaling units for the Japanese market	**5**
4.5.0, 06/2011	**Short description of the version** **New functions and modifications:** – Signal processing – Gating out of false signals increased when creating – Algorithm with mobility detection optimized – Instrument Software, in general – Limitation of the sensor and scaling units for Japan added – Adjustable current consumption of the sensor electronics with 4-wire operation – PLICSCOM adjustment – Language Japanese added – HART communication – Device Revision increased from 4 to 5 – HART SW Revision increased from 4 to 5 – Burst Mode commands can be activated by means of parameters **Error corrections:** – Signal processing – Assignment of the Echo ID corrected – Instrument Software, in general	**5**

Version, available since	Description	Device Rev.
	– The function overfill protection could not be switched off – The pointer displayed too high negative values – Error in the threshold value presentation with large detection offset – PLICSCOM adjustment – Echo curve presentation only up to vessel height + safety – HART communication – Transmission problems with cyclical changes of the linearization curve via HART – Error correction for HART certification	
4.4.1, 02/2011	**Error correction measured value presentation in unit "ft“** **Error corrections:** – PLICSCOM adjustment – Sign missing with negative filling heights in unit "ft" – Indication of the semiquaver was missing with filling heights in unit "ft"	**4**
4.4.0, 10/2010	**Function extension and error correction of the sensor software** **New functions and modifications:** – Signal processing – New function overfill protection – Instrument Software, in general – Approve new instruments VEGAPULS SR 68 and VEGAPULS WL 61 for software update **Error corrections:** – Signal processing – An individually programmable linearization curve with negative gradient could not be processed – The simulation of the physical value could only be carried out up to 35 m – Error in the spreading correction with measurements in the tube – Time up to the fault message after an echo loss fixed set to 60 seconds for WHG and SIL. – Several error messages F080 checked and corrected – Instrument Software, in general – On site communication with the sensor no longer possible after interruption of the USB connection to VEGACONNECT 4 – The false echo memory curve was not updated in the DTM after changing a distance offset – The false echo memory curve was not cut in the DTM with high resolution echo curve presentation – The presentation of the distance values in the echo curves on the DTM were wrong with sensor distance unit "ft"	**4**

Version, available since	Description	Device Rev.
	– Measured value simulation was not reset after a parameter reset – Parameters for current adjustment were writable with blocked sensor – Wrong instrument status with defective real time clock (F 261) – PLICSCOM adjustment – "Standpipe versions" are deleted with the menu item medium and selection Liquid/Bulk solid – Corrections with language "Russian" – With HART 4-wire with device status F113 no error text was displayed on PLICSCOM – Message Adjustment blocked. 2. PLICSCOM active with a connected PLICSCOM was outputted – HART communication – Error during the measured value transmission to VEGASCAN	
4.2.0, 06/2010	**First version for 4-wire HART** **New functions and modifications:** – Instrument software, in general: – Support of the 4-wire supplementary electronics added – HART communication: – Parameter for deactivating the HART commands added	**4**
4.1.0, 04/2010	**Function extension and error correction of the sensor software** **New functions and modifications:** – Signal processing: – Application free field added – Determination of the mobility probability of all echoes added – Update false signal suppression dependent on the system noise increase – Dependency of the special parameters from the application "Liquid", "Transportable plastic tank" changed – When changing the application setting, the signal processing will be restarted – Special parameter "Function measured value filter“ only active for the PS60HS electronics – Error handling for the echo curve scanning improved – Instrument software, in general: – 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 system noise added – NAMUR status maintenance requirement with too low reliability added	**4**

Version, available since	Description	Device Rev.
	– Error handling in the parameterization added – Automatic recognition of the USB standard converter on the terminals – PLICSCOM adjustment: – Language Chinese added – Changeover start behaviour (do not show failure 105 during start) – Measurement in the free field and increase system noise added – Scaling units adapted to an DTM Version 1.62.0 – With a reset through PLICSCOM, it jumps into the measured value image – Enable parameter access during the parameter reset for PLICSOM – Text changes – HART communication: – HART communication can now be switched off – Change of the SW and Device Revision – HART commands 50 and 51 added **Error corrections:** – Signal processing: – Accuracy problems with PS60HS electronics and small echoes – Measured value jumps with PS60HS electronics and measuring range >40 m distance, mainly without noise suppression – Behaviour in case of fault: "Last valid value as interference current" faulty – Focussing range was calculated in the wrong way – Special parameter "Function measured value filter": Filter constants for small and large measured value changes were exchanged – During a warm start of the instrument briefly the last measured value was outputted before the programmed interference current was outputted – Unit conversion m/ft in laboratory parameters EchoDetectionGeneral and MeasurementValueElectronicOffset faulty – Instrument software, in general: – Measured value memory stop condition "Memory full" faulty – Read out measured value memory blocked sometimes – "Starting“ was displayed during a sensor start after a software update – Failure 261 was displayed during a sensor start after a software update – After a software update, a power failure was entered in the event memory – Electronics temperature and linearity error signal failure instead of maintenance requirement – Device status remained on function control after switching off the	

Version, available since	Description	Device Rev.
	simulation automatically after one hour – Single Shot Events were stored as Set Events in the event memory – Error correction interface sensor and PLICSRADIO – When reading the order texts, the sensor delivered Status 128 and no data after switching on – PLICSCOM adjustment: – In the Russian typeset "i" was displayed instead of superscript "3" – HART communication: – VVO 3 parameter device 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 did not depend on the current output characteristics – HART DynVarMapping: Values not like in HART specification – Simulation current value was no more switched off in HART Multidrop mode – HART enquiry was not always answered – HART sensor answered with wrong data after a timeout of the previous command – HART timeout while writing parameter resets after a software update	
4.0.1, 11/2009	**Error correction of the first production version** **New functions:** – Signal processing: – Running time optimization while calculating the false signal suppression – Instrument Software, in general – Antenna type for high temperature version added **Error corrections:** – Signal processing: – Error removal with quick measured value changes – New decision for a smaller echo delayed by 10 min. – Measured value filter was too slow for large changes – Focussing range was calculated in a wrong way for small vessel heights – Echo decision was made for a false echo if only false echoes were available – False echo assessment failed with echoes which are not tracked – In bulk solid mode, the echo detection detected no echoes when there was an echo in front of the zero point of the instrument – Status F265 was displayed instead of F013 during the sensor start when no echo was available in the envelope curve.	**3**

Version, available since	Description	Device Rev.
	– First large echo with DTM Version 10/2009 can now be changed again – Instrument software, in general: – Software update was not possible with supply of the sensor through a VEGAMET – Electronics temperature and error in the linearization signalled failure instead of maintenance requirement – Error correction when EEPROM was not readable – Cause for F080/1016 eliminated – Error F260/1004 with switched off reference pulse regulation – PLICSCOM adjustment: – Change over start behaviour (F105 is suppressed) – Simulation did not switch off automatically after one hour – After a reset, jump to the measured value image – HART communication: – Adjustment with an EDD was not possible – Device status with active simulation corrected – HART UpperTransducerLimit (Cmd#14) corrected	
4.0.0, 10/2009	**First Software version for HW Version 2.0.0** **New functions:** – Signal processing: – Increased accuracy – Increased repetition rate – Extensions in the application parameterisation – Instrument software, in general: – Lower supply voltages possible – Device status according to NE 107 – Event memory added – Function extension for the measured value memory – Real time clock added – PLICSCOM adjustment: – Modification of the menu structure – modification of the layout with value changes – HART communication: – HART Revision 7 – HART measured values can be configured	**2**

Legend:

Name	Description

Service info plics® software versions

Name	Description
Version	Compatibility version.Function extension version.Error correction version
available since	Month/Year
Device Rev.	Version number of the instrument defined by HART. Consecutive integral number. Will be increased if in the "Application Layer" modifications were carried out. E.g. new commands, modifications in the data structure in a command.