VEGAFLEX 80
Two-wire 4 … 20 mA/HART with SIL qualification

Version, available since	Description	Device Rev.
1.2.1 **12/2022**	**Error corrections:** – Instrument software, in general: – Due to an initialization error of a 1-wire module, it could happen that the sensors did not start and output the error E036	**3**
1.2.0 **03/2017**	**Function extensions** **New functions and modifications:** – Measurement function: – Bulk solids applications o Sensitivity with Medium/Dielectric constant "Granules, powder, cement/1.5 … 3“ in the close range reduced by 5 mV – Optimizations for applications with short measuring ranges/probes ≤ 0.4 m o New option "False signal suppresion with uncovered probe“ o Optimization of the measuring cycle time o Reduction of the track number – Optimization of the overfill recognition so that overfillings above the sensor reference point are apparent – To avoid errors during setting up an interface application, the possibility of a common adjustment or scaling was deleted – Instrument function in general: – Optimization of the start behaviour PLICSCOM: During the sensor start and with operating sensor, the sensor TAG and the version information are no longer displayed on PLICSCOM. Due to this, the measured value is displayed approx. 10 s earlier. The version information is available in the menu item "Info" – Current output can be set via HART CMD 6 to "Fix current(4 mA)“, as soon as the sensor is SIL locked , the fault message F261/5003 will be set – Adaptation of the adjustment structure to the standardized VEGA adjustment structure – Variable positions after the decimal point for the display value – HART communication: – Introdcution of additional Common Practice Commands o CMD 33 ‘Write Device Variable‘ o CMD 36 ‘Set Primary Variable Upper Range Value‘ o CMD 37 ‘Set Primary Variable Lower Range Value‘ o CMD 40 ‘Enter/Exit Fixed Current Mode‘ o CMD 42 ‘Perform Device Reset‘ o CMD 45 ‘Trim Loop Current Zero‘ o CMD 46 ‘Trim Loop Current Gain‘ o CDM 47 ‘Write Primary Variable Transfer Function‘ o CMD 50 ‘Read Dynamic Variable Assignements‘	**3**

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	○ CMD 51 ‘Write Dynamic Variable Assignements‘ ○ CMD 53 ‘Write Device Variable Units‘ ○ CMD 54 ‘Read Device Variable Information‘ ○ CMD 79 ‘Write Device Variable‘ – Additional Device Variables are now supported by the following Common Practice Commands ○ CMD 34 ‘Write PV Damping Value‘ ○ CMD 43 ‘Set PV Zero‘ **Error corrections:** – Measurement function: – In level applications where the dielectric constant cannot be determined, the entered dielectric value (special parameter 24) is outputted during that time – Instrument software, in general: – When reset "Delivery status" is executed, the "Echo curve of the setup" was not deleted – With instruments with customer-specific instrument setting it sometimes happened that after a reset "Delivery status" the parameters depending on the application setting were not disintegrated correctly and remained in a status as after a reset "Basic adjustment" – The selection of the time format 24/12 hours was not translated correctly in the Spanish language – Wrong presentation of the sensor name in Russian language – The first operation of the instrument via PLICSCOM caused the entry "Plicscom_VU8.FirstContactEnable“ in the parameter modification memory – Brief deactivation of PLICSCOM with hardware version ≥ 1.11.0 corrected while starting the sensor – Deactivation of the echo curve memory with a terminal voltage < 12 V, for a higher stability with lower supply voltage – EMC optimization of the communication to PLICSCOM – Error message F261/4004 is set during the sensor start when min. and max. adjustment are identical – When allocating the scaled value for the current output, wrong values could be generated while converting distance units of the adjustment which caused a faulty loop current – Verification text "1.23+4.56-789.0" during locking the sensor was outputted as text and not as bitmap – When executing the proof test, the coupling was not checked on penetrating medium – With SIL universal electronics integrated in a sensor with reference distance (length 500 mm and 750 mm) not all necessary values were programmed in the replacement electronics during an electronics exchange whereby the the compensation of the steam atmosphere was inactive – Documentation of the SIL device setting revised ○ Missing data completed ○ PIN removed ○ Wrong data removed – HART communication: – CMD01 returns now UpdateFailure as long as the previous changes	

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	have no effect in the sensor – CMD 35 and CMD 44 generated entries in the parameter modification memory, even if there were no changes – While executing the reset "Basic adjustment" not all HART enquiries were answered – Faulty ‘Global Status‘ with active simulation/‘Fixed Current Mode‘ and parallel HART communication was corrected	
1.1.2 **12/2015**	**Error corrections:** – Measurement function: – Linearization level measurement: When using the following linearizations: o Cylindrical tank o Spherical tank o Venturi, trapezoidal weir, rectangular weir o Palmer-Bowlus-Flume o V-Notch o User-programmable In combination with an adjustment from the basic settings, a measured value deviation iof the linearized percentage value is caused after a restart. Due to this, there is a wrong current if the linearized percentage value was assigned to the current output as output variable. – Linearization interface: When using the following linearizations: o Cylindrical tank o Spherical tank o Venturi, trapezoidal weir, rectangular weir o Palmer-Bowlus-Flume o V-Notch o User-programmable In combination with two separate adjustments for level and interface, the linearized level value of the instrument is wrong after a restart, the lin. interface value is correct. During operation, always the output value is wrong which was not modified. – Instrument software, in general: – At instruments with customer-specific device setting it can haüüen that after a reset Delivery status, the parameters depending on the application setting were not disintegrated correctly and the values have the status like after a reset Basic adjustment. – When using the PLICSCOM function "Copy device settings", the special parameters 37 and 38 were not copied. – HART communication: – While enquiring unsupported Device Variables via HART Command 9, the sensor answered with error status "Invalid Selection“ instead delivering the special value "Not-A-Number“. – While reading out the dynamic variables via HART Command 9, the delivered codes of the measured values do not correspond to the dynamic variables but to the Device Variables	**2**

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1.1.1, 10/2015	**Error corrections:** – Measurement function: – For the application "Interface without gas phase (vessel and bypass/standpipe)", a device offset was not taken into account which caused a wrong measured value while correcting through the dielectric constant. – Instrument software, in general: – Error corrected when loading a corrupt delivery status	**2**
1.1.0, 07/2015	**Function extensions** **New functions and modifications:** – Measurement function: – Optimization of the interface measurement o Easier adaptation to the application o Selection of the next, larger or last echo as interface – Unit change of the reliability from % to unit mV – Introduction of new probe types: o 4 mm cable probe o Coax probe 21 x 6 mm for 250 °C applications – Assistant to determine the dielectric value in bulk solids applications with dust/powder/wood chips – Detection threshold for bypass/standpipe applications increased – Treatment of the freely suspended gravity weight echo o Sensor outputs probe length and not gravity weight begin – Optimization of high temperature probes with reference o Temperature offset reference to product cannot be configured – Instrument software, in general: – Introduction of the sensor unit "inch" – PLICSCOM operation: – Adaptation of the adjustment structure to the standardized VEGA adjustment structure – Additional menu languages: Turkish, Czech and Polish – Lighting on as default setting – Enquiry of the language setting when switching on the sensor for the first time – HART communication: – Optimization of the transmission times (e.g. of echo curves) – Introdcution of additional Common Practice Commands o CMD 34 Write Primary Variable Damping Value o CMD 35 Write Primary Variable Range Values o CMD43 Set Primary Variable Zero o CMD44 Write Primary Variable Units – Introduction Burst Mode acc. to HART 5 – Multidrop mode permitted as long as the instrument is not SIL locked **Error corrections:** – Measurement function: – Regulation device offset in case of moisture optimized on the coupling or	**2**

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	deactivated in case of couplings with PEEK material – Basic setting "Demonstration" adapted for tests and presentations o Open focussing range o Reduced noise suppression – Focussing range interface on the probe end completely open backwards – Calculation of the reference line adapted – Threshold detection probe end with high temperature probes with reference reduced – Instrument software, in general: – Error while storing switching off times removed – PLICSCOM adjustment: Various fault rectifications:	
1.0.1, 09/2014	**Error corrections:** – Measurement function: – Optimization of the signal processing with: – Level measurement statically and dynamically o Adaptation of the detection thresholds for different probes and applications, for example interface o Process SIL and NON-SIL measurement function standardized o Improvement of the measurement accuracy of negative echoes o Function first large echo with interface can be activated o Determination of the dielectric figure value also possible without movement o Safeties on the probe end with high temperature probes with reference optimized o Reduction of the threshold for the cancellation of the limited decision range – Automatic probe length determination o Improved accuracy o Probe length determination with positive probe end – Fault signal echo loss was not effective with probe end tracking – Sensor does not indicate empty with empty vessel and active probe end measurement – Ceramic spacers with high temperature coax probes caused a slope error and the accuracy was not maintained, spacers are now compensated – Empty signal with freely suspended cable – Min. amplitude introduced for water sump – Limitation of the measured value to the probe length – Reduction of the safety when creating a gating out of false signals – Dielectric figure value was not taken over into the sensor after calculation through the assistant – Dielectric figure value could not be edited with locked aplication – Adaptation of the application settings for probes with centering weight – Simulation is now also possible when the instrument is in failure mode – Message 811 "Automatic profile was updated“ filled the event memory during operation. Message will no longer be entered – Output of the echo information for test certificates was provided in the unit "dB" without positions after the comma, now in the unit mV available – Search range for cable breakage/probe loss could be invalid with short	**1**

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	probes – After the probe length determination, a previously activated measuring range limitation became inactive – Focussing range did not stop at the probe end and did not open backwards – Total level could be behind the interface with interface measurement – Probes with centering weight were only available in the bypass – When restarting with an integration time unequal 0 s, the current value corresponded to the level or interface value only after the integration time – Error in the compensation of the spreading speed (concerns only instruments with reference distance). The error caused a considerable measurement error as well as an appropriate diagnosis message. – Instrument software, in general: – Current value remained with an application change from interface to level when the interface value was assigned to the current output; now fault meassage F264 is outputted – Interference current "> 21 mA“ increased from 21.5 mA to 21.7 mA – With little energy, now the external enquiries are delayed so that the sensor does not crash – Adjusted units were not taken into account for the configuration of the echo curve memory recordings – After a rest Basic settings in the application Interface, the device identification remains on Interface (although the application was reset to Level); this caused problems in the PLICSCOM menu as well as with VEGAMET – PLICSCOM adjustment: – Various fault rectifications: – HART communication: – After a restart when HART Secondary Value was assigned to the electronics temperature or the measurement reliability, the sensor switched the fault F261/12017 The flag "Non PV Out of Limits" must only refer to the dynamic variables SV, TV and QV beziehen (instead to all Device variables)	
1.0.0, 06/2013	**First version** **New functions and modifications relating to VEGAFLEX 60:** – Measurement function: – Increased accuracy – Increased repetition rate – Increased sensitivity by probe end tracking – Extension with application parameter adjustment – Probe loss detection added – Measured values can be configured for the current output – Running time correction with steam boiler application – Instrument software, in general: – Lower supply voltages possible – Support of the second current output added – Device status according to NE 107	**1**

Version, available since	Description	Device Rev.
	– 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 – The following languages are available: – German – English – French – Spanish – Russian – Italian – Dutch – Portuguese – Japanese – Chinese – – HART communication: – HART Revision 7 – HART measured values can be configured	

Legend:

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.