

# PRODUCT CONFORMITY CERTIFICATE

This is to certify that the

**VEGAPULS WL61 radar level sensor with  
VEGAMET 391 flow computer**

**VEGAPULS 61B radar level sensor with  
VEGAMET 391 flow computer**

Manufactured by:

**VEGA Grieshaber KG**

Am Hohenstein 113  
77761 Schiltach  
Germany

has been assessed by Sira Certification Service  
and for the conditions stated on this certificate complies with:

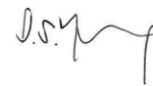
**MCERTS Performance Standards for Water Monitoring  
Equipment Part 3, Version 3 dated July 2018**

The combined performance characteristic ( $U_c$ , the expanded uncertainty) is **0.24%** (Class2)

Certification Ranges:

Depth            0 to 5m

Project No.:            70008997  
Certificate No:        Sira MC160312/02  
Initial Certification:   31 October 2016  
This Certificate issued: 17 March 2021  
Renewal Date:        30 October 2021



Andrew Young  
Environmental Project Engineer

MCERTS is operated on behalf of the Environment Agency by

**Sira Certification Service**

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**sira**  
CERTIFICATION

*The MCERTS certificate consists of this document in its entirety.  
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## Approved Site Application

*Any potential user should ensure, in consultation with the manufacturer, that the monitoring system is suitable for the intended application. For general guidance on monitoring techniques refer to the Environment Agency Monitoring Technical Guidance Notes available at [www.mcerts.net](http://www.mcerts.net)*

The product is suitable for use, where it is appropriate, for regulated applications such as abstraction, effluent discharge, ultraviolet disinfection and industrial processing.

## Basis of Certification

This certification is based on the following Test Report(s) and on Sira's assessment and ongoing surveillance of the product and the manufacturing process:

Sira Evaluation Report dated October 2016

## Product Certified

The VEGAPULS WL61 radar level sensor with VEGAMET 391 flow computer measuring system consists of the following parts:

- VEGAPULS WL61 : PSWL61. \*\* B \*\* H/D K \* X
- VEGAMET 391 : MET391. \*\* H \*\*

The VEGAPULS 61B radar level sensor with VEGAMET 391 flow computer measuring system consists of the following parts:

- VEGAPULS 61B : PS61. \*\* B \*\* H\* \*\*X
- VEGAMET 391 : MET391. \*\* H \*\*

\* Signifies allowable options in the product code for MCERTS

This certificate applies to all instruments fitted with software versions.

VEGAPULS WL61	Firmware version 4.5.0 onwards
VEGAPULS 61B	Firmware version 4.5.0 onwards
VEGAMET 391	Firmware version 1.60.0 onwards

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## Certified Performance

The instrument was evaluated for use under the following conditions:

Ambient Temperature Range: -20°C to +60°C  
 Instrument IP Rating sensors: VEGAPULS WL61 IP68, VEGAPULS 61B IP 66/67/68  
 Instrument IP Rating: VEGAMET 391 Flow Computer. Front panel IP65, Back of instrument IP20

Note: The VEGAMET 391 flow computers are panel mounted signal conditioning instruments that must be mounted with suitable ingress protection for the environment, please refer to operating instructions, For the purpose of testing, the flow computer was installed in an IP65 enclosure.

The instrument meets MCERTS Class 2 requirements for the combined performance characteristic as specified in Table 7 of the MCERTS performance standard. Details of individual performance characteristics are summarised below:

Results are expressed as error % of certification range, unless otherwise stated.

Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Protection against unauthorised access					Passcode required	Clause 3.1.2
Units of measurement					The flowmeter records in metric units	Clause 3.1.6
Indicating Device					The flowmeter incorporates an indicating device, analogue and digital output signal	Clause 3.1.3
<b>Combined performance characteristic</b>						
WL61					<b>0.22%</b>	Table 7 ≤0.5% <b>Class 2</b>
61B					<b>0.24%</b>	
Resolution					1mm	Clause 3.1.15 ≤2mm Class 1
Mean Error	0.06					Clause 6.3.2 ±0.1% Class 1 Note 1
Repeatability	0.02					Clause 6.3.2 0.05% Class 1
Supply Voltage	0.00					Clause 6.3.3 0.025% Class 1
Output impedance	0.00					Clause 6.3.4 0.025% Class 1
Ambient temperature						
WL61	0.16					Clause 6.3.6 0.25% Class 3
61B	0.13					

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Test	Results expressed as % of the certification range				Other results	MCERTS specification
	<0.5	<1	<2	<5		
Relative humidity WL61 61B	0.02 0.01					Clause 6.3.6 0.025% Class 1
Accuracy of computation	0.075				Note 2	Clause 6.3.11 0.075% Class 2
User defined stage-discharge equation	0.06				Note 2	Clause 6.3.12 0.075% Class 2
Response time					5 seconds	Clause 6.3.19 <30 seconds
Error under field test conditions	Max error 1.03% Min error -1.08% Mean error 0.44%  Proportion of errors ≤0.5% = 54.2% Proportion of errors ≤1.5% = 100%					Clause 7.3 1.5% Class 3
Up time					100%	Clause 7.4 >95%
Maintenance					None	Clause 7.5 to be reported

Note 1: Manufacturer recommends a minimum separation distance of 0.5m, although MCERTS requirements for mean error & repeatability were met at 0.3m.

Note 2: Results calculated as % of measured flow range.

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## Description

**VEGAPULS WL61** or **VEGAPULS 61B** smart radar level sensor (available with optional Bluetooth capabilities for sensor setup only) in combination with the **VEGAMET 391 flow computer** (signal conditioning instrument) provide a non-contact, radar based method to measure the flow in open channel flumes and weirs, as well as level in a wide variety of tanks.

The **VEGAPULS WL61** and **VEGAPULS 61B** smart radar level sensors are used to measure the liquid height upstream of the primary flow device (flume/weir) and can be mounted in various ways.

The **VEGAPULS WL61** or **VEGAPULS 61B** radar sensor communicates digitally with the **VEGAMET 391** using the industry standard HART protocol. Based on the set up, the **VEGAMET 391** converts the distance/height information of the **VEGAPULS** into flow rate in a selection of engineering units and totalizes the flow.

Flow curve calculations to ISO 4359, ISO 1438 and ISO 3846, as well as 32 point user programmable curves, are standard

The **VEGAMET 391** displays and re-transmits flow rate and total flow. Re-transmission can be with the analogue 4 to 20 mA signal and a relay pulse for remote totalization or digital communications via Ethernet or RS232. Protocols include MODBUS TCP & ASCII. The **VEGAMET 391** is also a data-logger and can be configured to send data and alerts via email and SMS.

The **VEGAMET 391** has six fully configurable relays.

The MCERTS certified range for the **VEGAMET 391 with VEGAPULS WL61** or the **VEGAMET 391 with VEGAPULS 61B** is 0 to 5 metres.

A simple set-up wizard within PACTware software is used to configure MCERTS applications.

## General Notes

1. This certificate is based upon the equipment tested. The Manufacturer is responsible for ensuring that on-going production complies with the standard(s) and performance criteria defined in this Certificate. The Manufacturer is required to maintain an approved quality management system controlling the manufacture of the certified product. Both the product and the quality management system shall be subject to regular surveillance according to 'Regulations Applicable to the Holders of Sira Certificates'. The design of the product certified is defined in the Sira Design Schedule V00 for certificate No. Sira MC160312/00
2. If certified product is found not to comply, Sira Certification Service should be notified immediately at the address shown on this certificate.
3. The Certification Marks that can be applied to the product or used in publicity material are defined in 'Regulations Applicable to the Holders of Sira Certificates'.
4. This document remains the property of Sira and shall be returned when requested by the company.

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