

GOVERNMENT APPROVED TEST LABORATORY

IN TERMS OF ARP 0108: "REGULATORY REQUIREMENTS FOR EXPLOSION PROTECTED APPARATUS"

IA CERTIFICATE

Date Issued: **13 Sep 2024**

*Expiry date: **13 Sep 2027**

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Issue: 3

Ex – Type Examination Certificate

Certificate Number: **S-XPL/14.1870 X**

Equipment: **Vibrating Level Switch**

Model / Type: **VEGASWING 61/63(*)GI *******

Applicant: **Vega Instruments (Pty) Ltd**

PO Box 692
Wilgeheuwels
1736

Manufacturer: **VEGA Grieshaber KG**

Serial No: All serial numbers imported between issued- and expire date and all serial numbers covered by a valid report or acceptable product certification mark.

Supplied by
Vega Instruments (Pty) Ltd
Identified by Inspection Authority Number
S-XPL/14.1870 X

And as described in the Explolabs file number **XPL/15788/14.1870** is hereby certified "Explosion Protected (Refer to clause 1, for Ex Rating)", having been examined and inspected in accordance with the relevant requirements of the South African National Standards.

SANS 60079-0: 2019 Ed 6
IEC 60079-0: 2017 Ed 7

SANS 60079-26:2022 Ed 4
IEC 60079-26:2021 Ed 4

SANS 60079-31: 2014 Ed 2
IEC 60079-31: 2013 Ed 2

Explosive atmospheres Part 0: Equipment — General requirements

Explosive atmospheres - Part 26: Equipment with Separation Elements or combined Levels of Protection

Explosive atmospheres Part 31: Equipment dust ignition protection by enclosure "t"

Risk of ignition provided:

Protection afforded	Equipment Protection Level (EPL)	Performance of protection	Conditions of operation	T class or Max Surface Temp (°C)
	Group			
Very high	Da Group III	Two independent means of protection or safe even when two faults occur independently of each other	Equipment remains functioning in zones 20, 21 and 22	See manual
High	Db Group III	Suitable for normal operation and frequently occurring disturbances or equipment where faults are normally taken into account	Equipment remains functioning in zones 21 and 22	

This certificate supersedes all previous documents bearing the reference no XPL/15788/14.1870 Issue 2.

DOCUMENT No: XPL0213

RELEASE DATE: 30/01/2024

REV: 8

This document is an Explolabs Controlled Document – Responsibility falls on personnel to ensure correct revision is applied as noted in the electronic system.

1. GENERAL

The marking of the Vibrating Level Switch shall include the following:

Ex ta/tb IIIC T* see manual Da/Db

Ex tb IIIC T* see manual Db

Description

The Vibrating Level Switch type VEGASWING is used for level monitoring, controlling and regulating in silos with dust generating material.

The probe of the Vibrating Level Switch vibrates at its mechanical resonant frequency. In case the probe is covered with material, the vibration is damped and a switch signal is generated.

General product information:

Vibrating level switch type VEGASWING

61/63(*)..GI *** * * * *

Further criteria, without relevance for explosion protection

Switching point

X = standard

L = with prolonged switching point

Electronics

Z = two-wire

N = NAMUR-signal

W = NAMUR-signal (250 ms)

Enclosure / cable entry

M = aluminium enclosure plastic coated, IP66, M20x1.5

U = aluminium enclosure plastic coated, IP66, 1/2NPT

V = stainless steel 316L, IP66, M20x1.5

A = stainless steel 316L, IP66, 1/2NPT

* = special color

Adapter / process temperature

X = without / -40 °C...150 °C

T = with / -50 °C...250 °C

H = with / -50 °C...200 °C with enamel coating

G = without adapter, gas tight feedthrough / -50 °C...150 °C

D = with adapter, gas tight feedthrough / -50 °C...250 °C

Process connection/material

Without relevance for explosion protection

61 fixed length

63 variable length, max. 6 m

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General product information:

Vibrating level switch type VEGASWING

61/63(*) * * * * *

Further criteria, without relevance for explosion protection

Switching point

X = standard

L = with prolonged switching point

Electronics

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H = with / -50 °C...200 °C with enamel coating

G = without adapter, gas tight feedthrough / -50 °C...150 °C

D = with adapter, gas tight feedthrough / -50 °C...250 °C

Process connection/material

CK = ATEX II 1G, 1/2G, 2G Ex ia IIC T6¹

ATEX II 1/2D, 2D Ex ta/tb tb IIIC T... Da/Db Db IP66

CK = ATEX II 1G, 1/2G, 2G Ex ia IIC T6¹ATEX II 1/2D, 2D Ex ta/tb tb IIIC T... Da/Db Db IP66
+ WHG¹

GX = ATEX II 1/2D, 2D Ex ta/tb tb IIIC T... Da/Db Db IP66

Without relevance for explosion protection

61 fixed length

63 variable length, max. 6 m

¹ The assessment for use in explosive gas atmospheres and WHG is not part of this Test Report.

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Parameters

Electrical data

Type VEGASWING 61/63(*).GI *** * Z ** and/or VEGASWING 6*.GX/CK*** * Z **

with electronics insert SW E60ZEX built in
Supply and signal circuit

in type of protection Intrinsic Safety Ex ia IIC
only for connection to a certified intrinsically safe
circuit with the following maximum values:

Ui = 29 V Ui = 24 V
Ii = 116 mA or Ii = 131 mA
Pi = 841 mW Pi = 786 mW
effective internal capacitance

negligible
negligible

effective internal inductivity

Type VEGASWING 61/63(*).GI *** * N/W ** and/or VEGASWING 61/63(*).GX/CK *** * N/W **

with electronics insert SW E60NEX built in
Supply and signal circuit

in type of protection Intrinsic Safety Ex ia IIC
only for connection to a certified intrinsically safe
circuit with the following maximum values:

Ui = 20 V
Ii = 103 mA
Pi = 516 mW
effective internal capacitance

negligible
negligible

effective internal inductivity

Thermal data

Permitted process temperature at the probe (EPL Da or Db)

Type VEGASWING 61/63(*).GI *** X *** -40 °C...+ 150 °C
Type VEGASWING 61/63(*).GI *** T *** -50 °C...+ 250 °C
Type VEGASWING 61/63(*).GI *** H *** -50 °C...+ 200 °C
Type VEGASWING 61/63(*).GI *** G *** -50 °C...+ 150 °C
Type VEGASWING 61/63(*).GI *** D *** -50 °C...+ 250 °C
And/or
Type VEGASWING 61/63(*).GX *** X *** -40 °C...+ 150 °C
Type VEGASWING 61/63(*).GX *** T *** -50 °C...+ 250 °C
Type VEGASWING 61/63(*).GX *** H *** -50 °C...+ 200 °C
Type VEGASWING 61/63(*).GX *** G *** -50 °C...+ 150 °C
Type VEGASWING 61/63(*).GX *** D *** -50 °C...+ 250 °C

Max. surface temperature T at the probe

Process temperature + 6K

Permitted ambient temperature at the electronics enclosure

-40 °C...+ 60 °C

Maximum surface temperature at the electronics enclosure

Ambient temperature +13K

Degrees of protection according to IEC/SANS 60529

IP66

Details of Certificate Changes

Update to current standards incl. assessment according to IEC 60079-26 Ed. 4

Distinction between product name and type code

Minor adaptation of drawings and documents

Based on the following documentation:

IECEx BVS 08.0010X Issue No. 3 and/or BVS 04 ATEX E 205 X Supplement 4

2. INSTALLATION INSTRUCTIONS

It is the manufacturer's responsibility to supply installation instructions with each unit offered for sale
as required by IEC/SANS 60079-0 Clause 30.

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3. SPECIAL CONDITIONS FOR SAFE USE (denoted by "X" after certificate number)

Intensive electrostatic charging for instance by the process has to be avoided.

In case of extremely ignitable dusts (MIE < 3 mJ) the equipment must not be used in areas where intensive charging processes are to be expected.

4. SCHEDULE OF LIMITATIONS (denoted by "U" after certificate number)

Not applicable.

5. CONDITIONS OF CERTIFICATION

All production units must be covered by a QAN (Quality Assurance Notification), Product Mark Scheme or batch evaluation.

6. MARKING

The following (or similar) information have to be clearly and permanently marked on all units:

Supplier : Vega Instruments (Pty) Ltd
Manufacturer : VEGA Grieshaber KG
Equipment : Vibrating Level Switch
Model/Type : VEGASWING 61/63(*) GI * * * * *
Serial No. : ---
Ex Rating : Ex ta/tb IIIC T* see manual Da/Db
Ex tb IIIC T* see manual Db
IA Certificate No : S-XPL/14.1870 X

This certification indicates compliance with R10.1 of the Mines Health and Safety Act and/or EMR 9(2) of the Occupational Health and Safety Act, provided that the apparatus is used as relevant in accordance with:

- i) SANS 10086 and IEC/SANS 61241-14 requirements as applicable;
- ii) Any conditions mentioned in the above report;
- iii) Any relevant requirements and codes of practice enforced in terms of the Mine Health and Safety Act or Occupational Health and Safety Act; and
- iv) Any restrictions and conditions enforced by the Chief Inspector of Mines or the Principal Inspector or the Chief Inspector: Occupational Health and Safety.
- v) A revision certificate replaces all previous version of the certificate.
- vi) * - Only covers equipment imported between the "Issued" and "Expire" dates.
- vii) If and when your QAN (Quality Assurance Notification) Certificate for your equipment manufacturer expires during the valid period of the IA Certification (issued for your equipment) and a new certificate is not submitted the existing IA Certification will then be cancelled. It is thus the client's responsibility to always submit the updated and valid QAN certificate(s) to Explolabs (Pty) Ltd

Reviewed by:



C Lourens

Technical Specialist

EXPLOLABS EXPLOSION PREVENTION SERVICES

This report/certificate shall not be reproduced except in full without the written approval of the company Explolabs (Pty) Ltd shall not be liable for any losses or damages sustained on account of any failure or omission to properly perform our duties in terms of any contract undertaken by us. This disclaimer is immutable and automatically incorporated in any contract undertaken by us; notwithstanding anything to the contrary, save for the express written waiver of our managing director. By marking the equipment in accordance with the documentation/standard, the manufacturer attests on his own responsibility that the equipment has been constructed in accordance with the applicable requirements of the relevant standards and that the routine verifications and tests have been successfully completed and that the product complies with the documentation and standard(s). The contents of electronic reports/certificates cannot be guaranteed. Original certification documents will be kept on file at Explolabs (Pty) Ltd

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