



7 Spanner Rd / PO Box 467  
Olifantsfontein  
1665

Tel: +27 (11) 316 4601  
Fax: +27 (11) 316 5670

E-mail: [admin-mgr@explolabs.co.za](mailto:admin-mgr@explolabs.co.za)

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

## Date Issued:

\*Expiry date:

13 Sep 2024

13 Sep 2027

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Issue: 7

Certificate Number:

S-XPL/10.0384 X

**Equipment:**

## Vibrating level switch VEGASWING

Model / Type:

SWING61(\*).D\*\*\*\*\* and SWING63(\*).D\*\*\*\*\*

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/10.0384 X

And as described in the Explolabs file number **XPL/11181/10.0384** 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**

## Explosive atmospheres Part 0: Equipment — General requirements

**SANS 60079-1: 2015 Ed 5**

## Explosive atmospheres Part 1: Equipment protection by flameproof enclosures "d"

IEC 60079-1: 2014 Ed 7

Explosive atmospheres – Part 26: Equipment with equipment protection level (EPL) Ga

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	Ga Group II	Two independent means of protection or safe even when two faults occur independently of each other	Equipment remains functioning in zones 0, 1 and 2	T6 (85°C) ... T2 (300°C)
High	Gb Group II	Suitable for normal operation and frequently occurring disturbances or equipment where faults are normally taken into account	Equipment remains functioning in zones 1 and 2	T6 (85°C) ... T2 (300°C)

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## 1. GENERAL

The marking of the Vibrating level switch VEGASWING shall include the following:

**Ex db IIC T6...T2 Ga/Gb or**

**Ex db IIC T6...T2 Gb**

Vibrating level switch VEGASWING, type code SWING61(\*)..D\*\*\*\*\* and SWING63(\*)..D\*\*\*\*\* are used for detection or control of a fluid level.

Ambient temperature range -40°C to +70°C.

**Nomenclature**

SWING61/63 (\*) . D\* \*\*\* \* \* \* \*  
A B C D E F G H I

Designation	Explanation	Value	Explanation
A	Basic Model	SWING61/63	Vibrating level switches series
B	OEM	(*) <sup>1)</sup>	Code reserved for OEM customers
C	Type of Approval	X	II 1/2 G, 2 G Ex db IIC T6...T2 Ga/Gb, Gb (ATEX)
		A <sup>1)</sup>	II 1/2 G, 2 G Ex db IIC T6...T2 Ga/Gb, Gb (ATEX + WHG)
		M1)	II 1/2 G, 2G Ex db IIC T6...T2 Ga/Gb, Gb (ATEX + Ship approval)
		I	Ex db IIC T6...T2 Ga/Gb, Gb (IECEx CoC)
D	Process fitting / Material	GBV	Thread G3.4
		NBV	Thread 3/4 NPT
		KAN	Cone
		CCN	Clamp 1"
		REN	Slotted nut
		LAV	Hygienic fitting
		TAN	Variant
		DAV	DRD flange
		RRP	SMS
		RSV	Swagelok VCR fitting
		SBP	For NEUMO Bio control
		RUP	SUDMO W500
		SMP	Small flange
		RIP	In gold connection
		RNP	Safety In gold dia. 25X46 mm, G1 1/4
		LGP	DB50L
		DBP	RJT fitting
		STP	Collar flange
E	Process temperature	***	Further process fittings acc. (to industry standard)
		X	Without temperature adapter / -40 °C to +150 °C
		T	With temperature adapter / -40 °C to +193 °C
F	Housing (Material) / Cable entry size		With temperature adapter / -40 °C to +250 °C
		M	Aluminium single housing / M20 X 1.5
		7	Aluminium single housing with special color / M20 X 1.5
		U	Aluminium single housing / 1/2 NPT
G	Electronics	4	Aluminium single housing with special color / 1/2 NPT
		Z	Electronics Z, for details see Electrical data
		C	Electronics C, for details see Electrical data
		R	Electronics R, for details see Electrical data
		T	Electronics T, for details see Electrical data
		V	Electronics V, for details see Electrical data
		N	Electronics N, for details see Electrical data
		W	Electronics W, for details see Electrical data

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Designation	Explanation	Value	Explanation
H	Switching point <sup>1)</sup>	X	Standard
		L	With extended switching point
I	Measurement loop designation label material	V	Stainless steel
		F	Foil
		(*)	Without label

<sup>1)</sup>: means that it is not relevant for type of protection

#### Thermal data

Process temperature range: -40 °C to +150 °C without temperature adapter  
-40 °C to +193 °C with a temperature adapter of 119 mm  
-40 °C to +250 °C with a temperature adapter of 156 mm

The temperature class depends on the ambient temperature and maximum process temperature as shown in the table below.

Maximum Process temperature	Temperature class	Ambient temperature
-40 °C to +78 °C	T6	-40 °C to +70 °C
-40 °C to +93 °C	T5	-40 °C to +70 °C
-40 °C to +128 °C	T4	-40 °C to +50 °C
-40 °C to +150 °C	T3	-40 °C to +40 °C
-40 °C to +193 °C	T3	-40 °C to +70 °C
-40 °C to +250 °C	T2	-40 °C to +70 °C

#### Electrical data

VEGASWING SWING6\*(\*)D\*\*\*\*\*Z\*\* (Electronics Z)

Supply: 12 to 36 Vdc, max 0.6 W

Output: 1.8 to 16 mA

VEGASWING SWING6\*(\*)D\*\*\*\*\*C\*\* (Electronics C)

Supply: 20 to 253 Vdc or 20 to 253 Vac 50/60 Hz, max. 1 W

Output: max. 400 mA

VEGASWING SWING6\*(\*)D\*\*\*\*\*R\*\* (Electronics R)

Supply: 20 to 72 Vdc or 20 to 253 Vac 50/60 Hz, max. 1.3 W

Output: 2 change-over contacts, floating max. 5 A

VEGASWING SWING6\*(\*)D\*\*\*\*\*T\*\* (Electronics T)

Supply: 10 to 55 Vdc, max. 1 W

Output: Transistor, max. 400 mA

VEGASWING SWING6\*(\*)D\*\*\*\*\*V\*\* (Electronics V)

Supply: 10 to 55 Vdc, max. 1 W

Output: Transistor, max. 400 mA (Response time 250 ms)

VEGASWING SWING6\*(\*)D\*\*\*\*\*N\*\* (Electronics N)

Supply: NAMUR, max. 30 mW

VEGASWING SWING6\*(\*)D\*\*\*\*\*W\*\* (Electronics W)

Supply: NAMUR, max. 30 mW (Response time 250 ms)

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**IECEx Details of certificate changes**

- Assessed IEC 60079-0 Ed. 7 and IEC 60079-26 Ed. 4
- Extension with Gb versions
- Change of equipment type code
- Minor constructional changes

**ATEX Details of certificate changes**

- Issue 1 – 200594300 initial certificate  
Issue 2 – 210033700 reassessment to updated standards  
Issue 3 – 211439200 reassessment to updated standards  
Issue 4 – 510005200 reassessment to updated standards, electronics type “V” and “W” added, revision of the electrical data and thermal data.  
Issue 5 – 225610400 assessment per IEC 60079-0: 2018 and IEC 60079-26: 2021, extension with Gb version, change of equipment type code, minor constructional changes.

Based on the following documentation:

IECEx KEM 08.0031X Issue No.: 2 and/or KEMA 01 ATEX 2026 Issue No.: 5

**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.

The instructions provided with the product shall be followed in detail to assure safe operation.

**3. SPECIAL CONDITIONS FOR SAFE USE** *(denoted by “X” after certificate number)*

Sensors and electronic housing covered with a non-conductive material are only allowed when electrostatic charging is avoided, see instructions.

For thermal data see clause 1 of this certificate.

The flameproof joints are not intended to be repaired.

Measured capacitance of the unearthed stainless steel measuring point identification plate:

- Plate dimensions 45 mm x 23 mm (standard): 21 pF
- Plate dimensions 100 mm x 30 mm: 52 pF
- Plate dimensions 73 mm x 47 mm: 61 pF

**4. SCHEDULE OF LIMITATIONS** *(denoted by “U” after certificate number)*

None.

**5. CONDITIONS OF CERTIFICATION**

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

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**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 VEGASWING  
Model/Type : SWING61(\*).D\*\*\*\*\* and SWING63(\*).D\*\*\*\*\*  
Serial No. : ---  
Ex Rating : Ex db IIC T6...T2 Ga/Gb or  
Ex db IIC T6...T2 Gb  
IA Certificate No : S-XPL/10.0384 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**

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