



**Operating Instructions
for
Dual-Magnet Float Switch**

Model: NGS



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Manufactured and sold by:

Kobold Messring GmbH
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E-Mail: info.de@kobold.com
Internet: www.kobold.com

Edition: November 2016 (Revision 1)

2. Note

Please read these operating instructions before unpacking and putting the unit into operation. Follow the instructions precisely as described herein.

The instruction manuals on our website www.kobold.com are always for currently manufactured version of our products. Due to technical changes, the instruction manuals available online may not always correspond to the product version you have purchased. If you need an instruction manual that corresponds to the purchased product version, you can request it from us free of charge by email (info.de@kobold.com) in PDF format, specifying the relevant invoice number and serial number. If you wish, the operating instructions can also be sent to you by post in paper form against an applicable postage fee.

Operating instructions, data sheet, approvals and further information via the QR code on the device or via www.kobold.com

The devices are only to be used, maintained and serviced by persons familiar with these operating instructions and in accordance with local regulations applying to Health & Safety and prevention of accidents.

When used in machines, the measuring unit should be used only when the machines fulfil the EC-machine guidelines.

3. Instrument Inspection

All Instruments are inspected before shipping and sent out in perfect condition. Should damage to a device be visible, we recommend a thorough inspection of the delivery packaging. In case of damage, please inform your parcel service / forwarding agent immediately, since they are responsible for damages during transit.

Scope of delivery:

The standard delivery includes:

- Dual-Magnet Float Switchmodel: NGS

4. Regulation Use

Any use of the Dual-Magnet Float Switches, model: NGS, which exceeds the manufacturer's specification, may invalidate its warranty. Therefore, any resulting damage is not the responsibility of the manufacturer. The user assumes all risk for such usage.

5. Operating Principle

As the level rises and falls, the inclination of the float is changed causing a permanent magnet in the float to be deflected. This repels a rotatable opposing magnet. This forced snap-action-contact effect operates a microswitch with a plunger. Even very small changes in level can be switched in this way.

6. ATEX-Marking

The marking in ATEX for the Dual-Magnet Float Switch is as follows:

⊕ II 1/2 G Ex d e mb IIC T6...T2 Ga/Gb

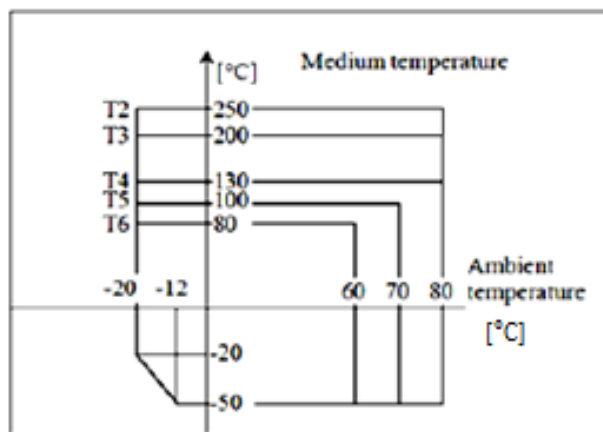
7. Indications for the Safe EX-use

- Ambient and medium temperature

Temperature class	Ambient temperature	Max. medium temperature
T6	-20 °C ... +60 °C	+80 °C
T5	-20 °C ... +70 °C	+95 °C
T4	-20 °C ... +80 °C	+130 °C
T3	-20 °C ... +80 °C	+200 °C
T2	-20 °C ... +80 °C	+250 °C

Except: NGS-51* $T_{\text{medium}}: 0\text{ °C} \dots +100\text{ °C}$
 NGS-61* $T_{\text{medium}}: 0\text{ °C} \dots +200\text{ °C}$

The applicable medium temperature range limited by next diagram:



- For Ex (with integrated cable) a suitable junctionbox shall be used. installation of version NGS-4
- The NGS float switch shall be connected to the local EP circuit.
- The NGS float switch has to be provided in series with a 'T' marked 2.5 A circuit breaker as a short-circuit protection
- For $T_{\text{amb}} > 60\text{ °C}$, a suitable cable shall be used.

Electrical parameters

For connection to an electrical circuit with following maximum values:

UN = 250 V AC12 2.5 A

UN = 220 V DC13 0.3 A

Cable: Cable diameter depends on the mounted cable gland,
Max. 5x2,5mm² cross section

Electric safety: Class I

Ingress protection:
See technical details

8. Installation

The float switch is to be installed in such a way that the float is able to move entirely free without touching the walls, the vessels top, or base. Avoid installation in turbulent positions: such as inlet valves and agitators.

Please also protect from suspended and ferrite particles that could gather around the float and disturb the switching process. When installing float switches in separate housings, suitable valves should be provided since dirty particles must be drained out from time to time.

For purposes of installation and maintenance, the switch should be installed in an easily accessible position.

The float switch must be installed with a connecting flange. A seal is enclosed separately. (Gasket Klingersil C 4500).

For corrosive media, the customer should install an appropriate seal compatible with the medium being used.

For vertical type NGS-23, the balance of the arms with differential length is provided by the shifting of counter weight to the proper point. Hysteresis of switching points can be adjusted on the vertical stick with fitting rings.

11. Technical Information

Operating instructions, data sheet, approvals and further information via the QR code on the device or via www.kobold.com

12. Order Codes

Operating instructions, data sheet, approvals and further information via the QR code on the device or via www.kobold.com

13. Dimensions

Operating instructions, data sheet, approvals and further information via the QR code on the device or via www.kobold.com

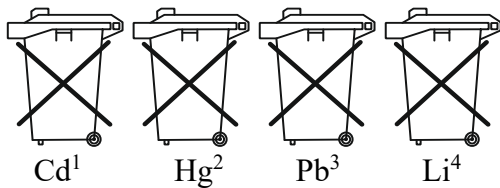
14. Disposal

Note!

- Avoid environmental damage caused by media-contaminated parts
- Dispose of the device and packaging in an environmentally friendly manner
- Comply with applicable national and international disposal regulations and environmental regulations.

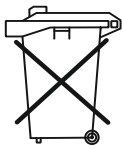
Batteries

Batteries containing pollutants are marked with a sign consisting of a crossed-out garbage can and the chemical symbol (Cd, Hg, Li or Pb) of the heavy metal that is decisive for the classification as containing pollutants:



1. „Cd" stands for cadmium
2. „Hg" stands for mercury
3. „Pb" stands for lead
4. „Li" stands for lithium

Electrical and electronic equipment



15. EU Declaration of Conformance

We, KOBOLD Messring GmbH, Hofheim-Ts, Germany, declare under our sole responsibility that the product:

Dual-Magnet Float Switches Model: NGS-... (without ATEX)

to which this declaration relates is in conformity with the standards noted below:

EN 61010-1:2011 Safety requirements for electrical equipment for measurement, control and laboratory use - Part 1: General requirements

EN 61326-1:2013 Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements

EN 61326-2-3:2013 Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-3: Particular requirements - Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning

Also, the following EU guidelines are fulfilled:

2014/30/EU EMC Directive

2011/65/EU RoHS

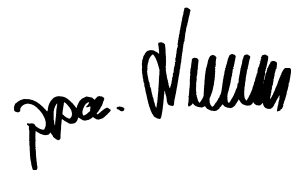
2015/863/EU Delegated Directive (RoHS III)

Furthermore, for equipment with supply voltage <48 V:

2014/35/EU LVD



H. Peters
General Manager



M. Wenzel
Proxy Holder

Hofheim, 11 Sept. 2019

16. EU ATEX Declaration of Conformance

We, KOBOLD Messring GmbH, Hofheim-Ts, Germany, declare under our sole responsibility that the product:

Dual-Magnet Float Switches Model: NGS-... (with ATEX)

to which this declaration relates is in conformity with the standards noted below:

EN 61010-1:2011 Safety requirements for electrical equipment for measurement, control and laboratory use - Part 1: General requirements

EN 61326-1:2013 Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements

EN 60079-0:2013
EN 60079-0:2013/A11:2014
Explosive atmospheres - Part 0: Equipment - General requirements

EN 60079-1:2015 Flameproof enclosures (Ex D)
EN 60079-7:2007 Increased safety (Ex e)
EN 60079-18:2015 Encapsulation (Ex m)
EN 60079-26:2015 Requirements for II 1 G

Also the following EU guidelines are fulfilled:

2014/30/EU EMC Directive
2011/65/EU RoHS
2014/34/EU ATEX
Quality Management Production
Certificate number: BVS 18 ATEX ZQS/E110
Notified body: DEKRA Exam GmbH
Identification number: 0158









Hofheim, 15. Nov. 2018

H. Peters
General Manager

M. Wenzel
Proxy Holder

17. ATEX Certificate

 	 Ex	
(1)	<p><i>EU-Típus Vizsgálati Tanúsítvány</i> <i>EU-Type Examination Certificate</i></p>	
(2)	<p>A potenciálisan robbanásveszélyes környezetben történő alkalmazásra szánt berendezések, védelmi rendszerek 2014/34/EU Direktiva / Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU</p>	
(3)	<p>EU-Típus Vizsgálati Tanúsítvány száma / EU-Type Examination Certificate Number:</p>	<p>BKI16ATEX0034 X</p>
(4)	<p>A gyártmány / Product: Mágneses billenőúszós szintkapcsoló család / Magnetic dumping float level switch family</p> <p>Típusa / Type: NGS-****Ex</p>	
(5)	<p>Gyártó / Manufacturer: KOBOLD Messring GmbH</p>	
(6)	<p>Cím / Address: Nordring 22-24, 65719, Hofheim am Taunus Germany</p>	
(7)	<p>A gyártmány és annak változatai a jelen tanúsítvány vonatkozó pontjában vannak feltüntetve. / This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.</p>	
(8)	<p>A ExVÁ Robbanásbiztos Berendezések Vizsgáló Állomása Kft., 1418 sz. kijelölt testület, a 2014. február 26-i Európai Parlament és Tanács 2014/34/EU Direktívájának 17. cikkelye szerint tanúsítja, hogy a gyártmány megfelel az Alapvető Egészségügyi és Biztonsági Követelményeknek a Direktíva II. számú Mellékletében a potenciálisan robbanásveszélyes térben alkalmazásra szánt gyártmányok tervezése és gyártása szerint. / ExVÁ Testing Station for Explosion Proof Equipment Company Limited, notified body number 1418 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.</p>	
	<p>A vizsgálat eredményeit az alábbi nyilvántartási számú bizalmas vizsgálati dokumentáció tartalmazza: / The examination and test results are recorded in confidential report No.:</p>	<p>R-060-16</p>
	<p>Ez a tanúsítvány csak a maga egészében és változatlan formában használható fel, mellékleteivel együtt. / This certificate may only be reproduced in its entirety and without any changes, schedule included.</p>	
		<p>Lapszám / Page: 1/5</p>
		



BKI16ATEX0034 X
EU-Típus Vizsgálati Tanúsítvány/
EU-Type Examination Certificate

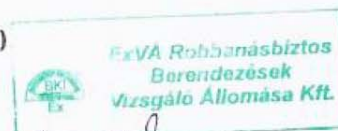


- (9) Az alapvető egészségügyi és biztonsági követelményeknek való megfelelést a következők biztosítják: /
Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- EN 60079-0:2012 (=MSZ EN 60079-0:2013)**
EN 60079-0:2012 / A11:2013 (=MSZ EN 60079-0:2013 / A11:2014)
EN 60079-1:2014 (=MSZ EN 60079-1:2015)
EN 60079-7:2007 (=MSZ EN 60079-7:2007)
EN 60079-18:2015 (=MSZ EN 60079-18:2015)
EN 60079-26:2015 (=MSZ EN 60079-26:2015)
- kivéve a 18. pontban felsorolt követelményekre vonatkozóan.
except in respect of those requirements listed at item 18 of the Schedule.
- (10) A tanúsítvány száma után álló „X” jel azt mutatja, hogy a gyártmány speciális feltételek megtartása mellett felel meg a jelen tanúsítvány vonatkozó pontjában feltüntetett biztonságos alkalmazás feltételeinek. /
If the sign „X” is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.
- (11) Jelen EU-TÍPUS VIZSGÁLATI TANÚSÍTVÁNY csak a megjelölt gyártmány tervezésére és kivitelezésére vonatkozik. A jelen Direktíva további követelményei vonatkoznak a gyártmány gyártási folyamatára és szállítására. Ezek nem tartoznak e tanúsítvány alá /
This EU-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of this Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- (12) A gyártmány jele a következő /
The marking of the product shall include the following:

II 1/2 G Ex d e mb IIC T6...T2 Ga/Gb

(T_{körny} = táblázat szerint / T_{amb} = according to table)

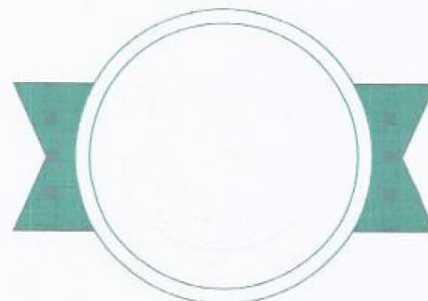
ExVÁ Robbanásbiztos Berendezések
Vizsgáló Állomása Kft.
ExVÁ Testing Station for Explosion Proof
Equipment Ltd.
Hungary, 1037 Budapest, Mikoviny u. 2-4.
Tel.: 36 1 250 1720
E-mail: bkiex@bki.hu



Müllner János

Ügyvezető igazgató / Managing director

Budapest, 2016. december / December 1.



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EU-Type Examination Certificate

(13) Melléklet / Schedule

(14) EU-TÍPUSVIZSGÁLATI TANÚSÍTVÁNY szám /
EU-TYPE EXAMINATION CERTIFICATE N^o
BKI16ATEX0034 X

(15) Gyártmány leírása / Description of Product

A NGS-****Ex típusú mágneses úszós szintkapcsoló kapcsolója nyomásálló tokozás „d” és légmentes lezárás kiöntéssel „mb” védelmi módú, a tokozása fokozott biztonság „e” védelmi móddal készített közvetlen kábelbevezetésű gyártmány.

A szintváltás hatására elmozduló mágnes egy mikrokapcsolót működtet.

A csatlakozó kábel gumigyűrűvel tömített kábelbevezetőn lép be a fejrészben lévő csatlakozótérbe. A vezetékerek a mikrokapcsoló testébe ágyazott kapcsokra csavaros rögzítéssel csatlakoztathatók.

A fejrészt menetes illeszkedésű fedél zárja le. /

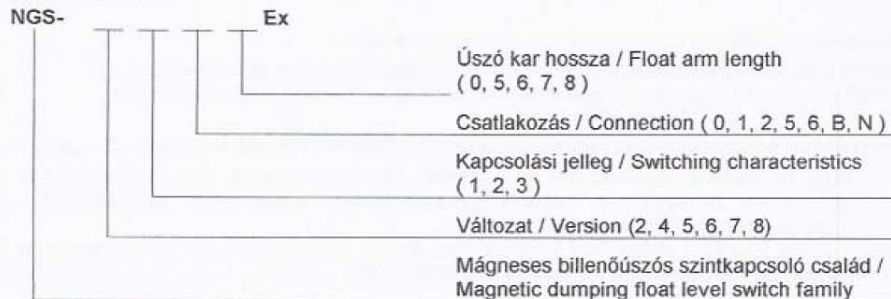
The switch of NGS-****Ex level switch type made covers products of the protection type flameproof enclosure „d”, and encapsulation „mb” – the enclosure has increased safety „e” with direct cable entry.

The magnet, moving off as the result of level change, operates a microswitch.

The connecting cable enters the connecting area in the head part through a cable entry sealed by means of a rubber ring. The wires can be connected onto the terminals of microswitch, embedded into the insulator body, by screwed fixing.

The head part is closed by a threaded cover.

15.1 Típusjel / Type mark



15.2 Műszaki adatok / Technical data

Villamos adatok / Electrical data

Beépített kapcsoló kapcsolási jellemzői: /
Parameters of built-in switch : 250 VAC / 2,5 A / AC12
220 VDC / 0,3 A / DC 13

Védettség / Ingress protection:

NGS-2*, NGS-51*, NGS-61* típusváltozatok esetén /
In case of types NGS-2*, NGS-51*, NGS-61*:

IP 65

NGS-4*, NGS-7*, NGS-8* típusváltozatok esetén /
In case of types NGS-4*, NGS-7*, NGS-8*:

IP 68

Érintésvédelem / Electric shock protection:

I. év. osztály MSZ 171/1-84 /
I. e.s. class according to MSZ 171/1-84

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(19) Rajzok és dokumentációk / Drawings and Documents

Szám / Number	Lap / Sheet	Kiadás / Issue	Dátum / Date	Leírás / Description
NGS K04/1116 (sheet 16)	1	-	2016.11.23.	EU-Megfelelőségi Nyilatkozat / EU-Declaration of Conformity
NGS-2100 Ex.	1	0	2016.11.03.	Adattábla / Ex data plate
NGS K04/1116	16	1	2016 November	Használati utasítás / Operating instructions
303.004	1	2	2016.11.30	rendelési jelölés / cross reference codes
-	1	-	2016.07.13	Jóváhagyó levél / Letter of Consent

Müllner János
Ügyvezető igazgató /
Managing director



Molnár Edit
Tanúsító Szervezet Vezető /
Head of Certification Body

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