



**Operating Instructions**  
**For**  
**Rotating Vane Level**  
**Switch**  
**Model NIR-9 / NIR-E9**



Order from: **C A Briggs Company**  
622 Mary Street; Suite 101; Warminster, PA 18974  
Phone: 267-673-8117 - Fax: 267-673-8118  
[Sales@cabriggs.com](mailto:Sales@cabriggs.com) - [www.cabriggs.com](http://www.cabriggs.com)

## 1. Contents

---

1. Contents.....	2
2. Note .....	3
3. Instrument Inspection.....	3
4. Description .....	3
5. Operating Principle.....	3
6. Mechanical connection.....	4
7. Electrical connection .....	6
7.1 Signal Output.....	6
7.2 Sensitivity Adjustment.....	7
8. Technical Data .....	8
9. Dimensions .....	9
9.1 Side installation.....	9
9.2 High temperature design.....	10
9.3 Top installation. Flexible cable extension.....	10
9.4 Top installation. Rigid extension .....	11
10. Accessories/Spare parts .....	12
10.1 Vanes.....	12
10.2 Mechanical connections:.....	13
10.3 Extensions .....	14
11. Order Details.....	15
11.1 Spare parts/Accessories model NMZ .....	16
12. Safety Instructions (ATEX).....	17
12.1 Area of validity .....	17
12.2 Guidelines.....	17
12.3 Protection against E.S.D. ( Electro Static Discharge ) .....	18
12.4 Chemical resistance.....	18
12.5 Maintenance and repairs .....	18
12.6 Storage .....	18
13. Installation in hazardous zone.....	19
14. ATEX Label Description .....	19
15. Declaration of conformity ( ATEX ).....	20
16. Declaration of conformity .....	21
17. ATEX Certificate.....	22
18. Notes.....	29

### Manufactured by:

Kobold Mesura S.L.U  
Avda. Conflent 68 nave 15  
08915 Badalona  
Tel.: +34 93 460 38 83  
Fax: +34 93 460 38 76  
E-Mail: info.es@kobold.com  
Internet: www.kobold.com

Edition: sept. 2016

## **2. Note**

---

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

The devices have 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.

## **3. Instrument Inspection**

---

Instruments are inspected before shipping and sent out in perfect condition.

### **Scope of delivery:**

The standard delivery includes:

- Rotating level switch
- Operating instructions

## **4. Description**

---

This level switch instrument for solids NIR-9, has been designed to be used in all applications where the level of solids must be detected in tanks and silos.

Example: Grain, cereal, flour, granulated plastics, cement, sand, feed, perlite, etc.

## **5. Operating Principle**

---

A synchronous motor with a low revolution drives a rotating vane. When material reaches the rotating vane, its rotation is blocked. The restoring force moves the pivoted motor away from its original position, acting a micro-switch contact closure, which gives out an alarm signal. A second micro-switch turns off the motor.

When the filling level decrease from the rotating vane, a spring draws the motor back into operation position, the micro-switch returns to operating position, and the motor is switched back on.

A LED shows that the supply voltage is applied.

## 6. Mechanical connection

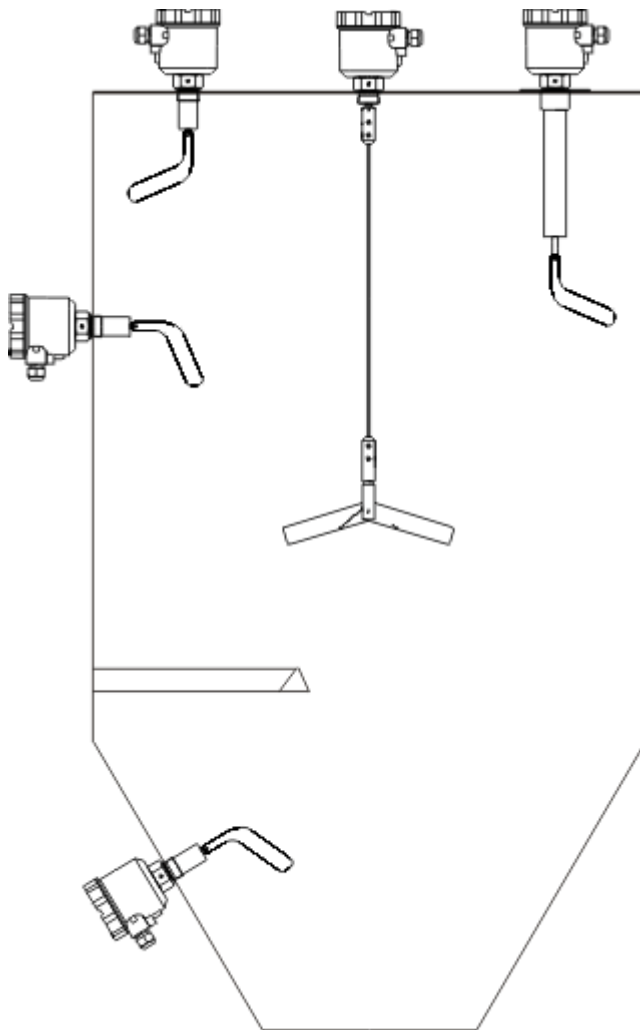
NIR is normally mounted into the tank top (full level) or through the tank wall (full, middle or empty level).

For side installation do not use NIR with mechanical extension (except NIR-96 / NIR-E96).

NIR can be installed through a standard G1", 1 1/4" G, G1 1/2", flange F1 Ø110 mm and flange F2 Ø200 mm. (Other connections under request).

Switch level with mechanical extension can only be placed in the top.

There is a reinforced model NIR-93 available to be mounted as empty level or middle level in big tanks and when the bulk density is superior to 1gr/cm<sup>3</sup>.

**Notes:**

Ensure cable gland faces downward to avoid water intrusion

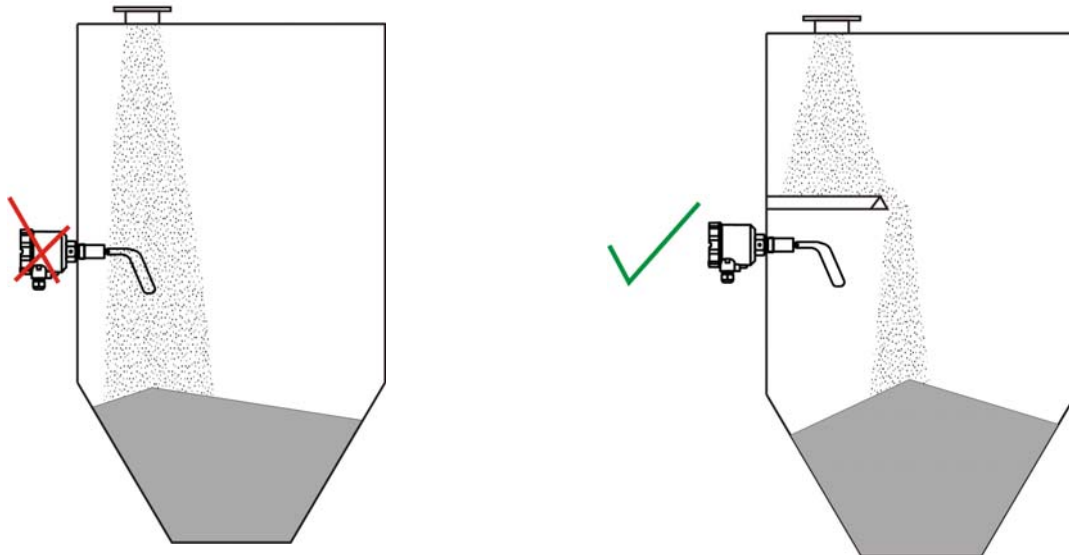
In case of heavy material loads and falling material provide angled protection

Ensure vane is out of any place where build-up may occur

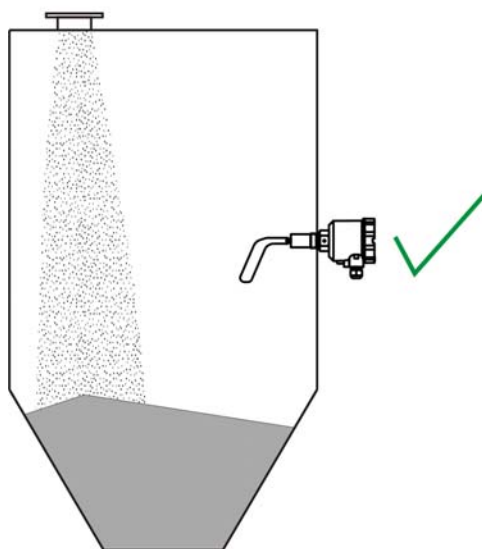
**Head 360° rotatable**

### 6.1 Installation

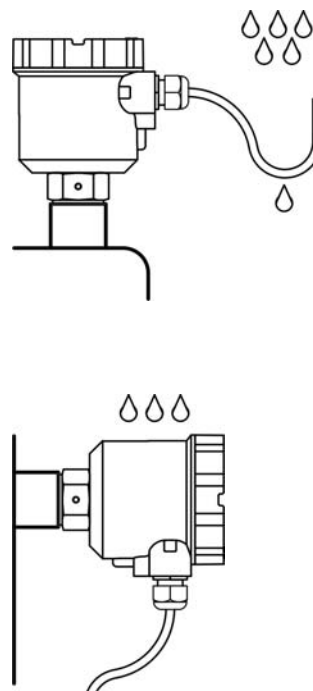
**Caution:** Never mount the instrument in region of falling material without an angled protection.



In this case NIR is mounted out of falling material.



**Caution:** Avoid water intrusion.



## 7. Electrical connection



**WARNING!** Be sure that power supply corresponds with the indicated in the equipment's label.

The supply voltage is connected to terminals L(+) and N(-).

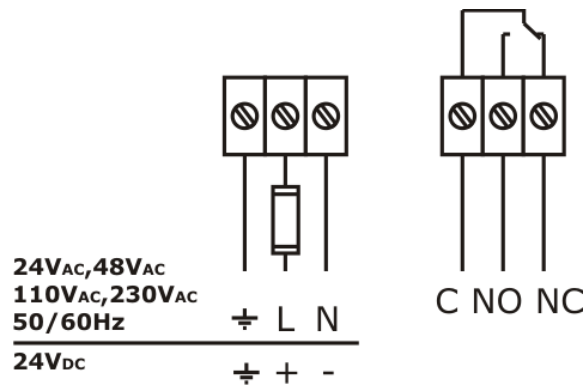
It is very important in case of continuous voltage, to respect the polarity. The device has polarity protection.

Place fuse of 0,25A in serial with the power, and fuse (max. 2 A) to protect the alarm contact.

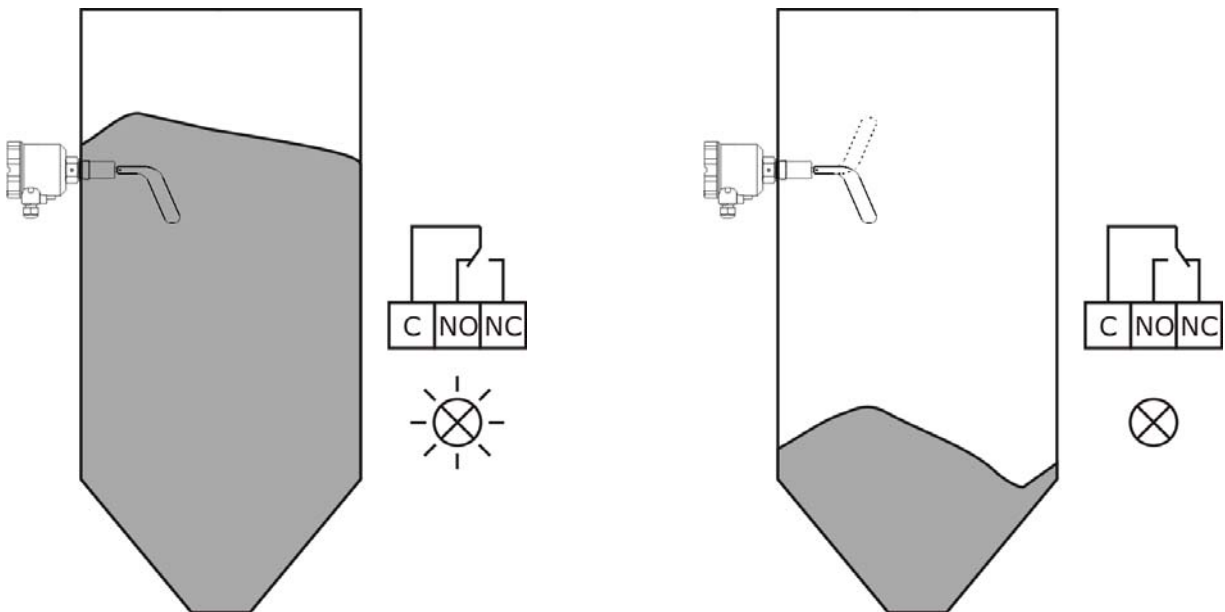
The green LED indicates that the equipment is powered.

Rotary level switch NIR has potential-free changeover contact.

Provide protection for output contact to protect the device against spikes if there are inductive loads connected.



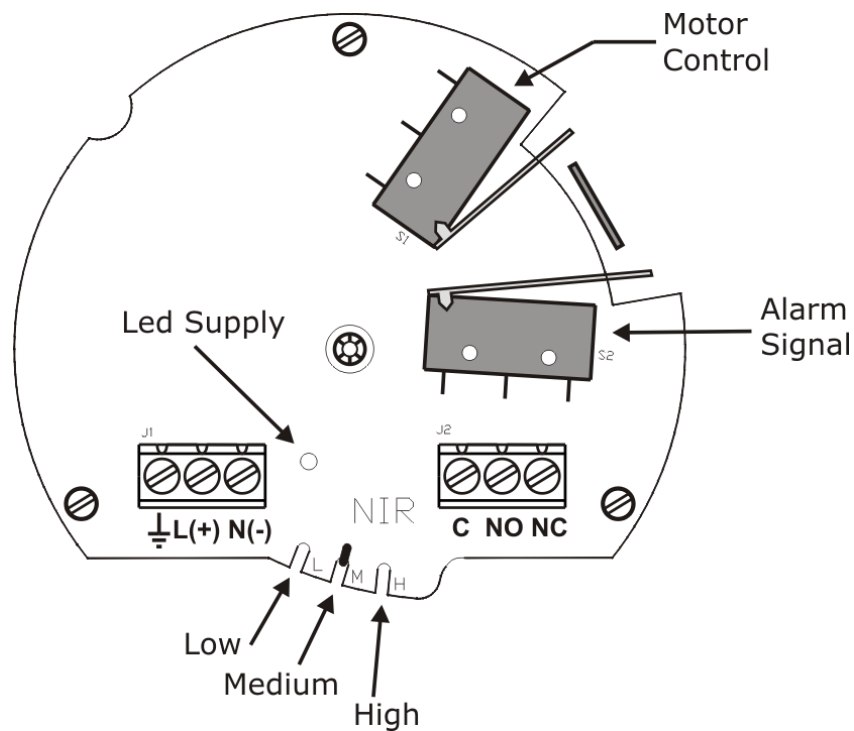
### 7.1 Signal Output



## 7.2 Sensitivity Adjustment

NIR has 3 positions of sensitivity adjustment: high, medium and low (factory setting is medium).

To adjust the sensitivity, be sure that the material reaches the rotation vane, if the motor is running it is necessary to increase the sensibility until the motor is stopped. With the optional vanes, sensitivity can be also improved.



Bulk densities with different vanes\*:

Vane type	High sensibility	Medium sensibility	Low sensibility
N y R	0,14 gr/cm <sup>3</sup>	0,185 gr/cm <sup>3</sup>	0,214 gr/cm <sup>3</sup>
V	0,038 gr/cm <sup>3</sup>	0,047 gr/cm <sup>3</sup>	0,057 gr/cm <sup>3</sup>
X	0,04 gr/cm <sup>3</sup>	0,05 gr/cm <sup>3</sup>	0,06 gr/cm <sup>3</sup>
A	0,45 gr/cm <sup>3</sup>	0,55 gr/cm <sup>3</sup>	0,65 gr/cm <sup>3</sup>

\*Approx. Data

## 8. Technical Data

---

Note: Kobold Mesura makes every attempt to ensure the accuracy of these specifications but reserves the right to change them at any time.

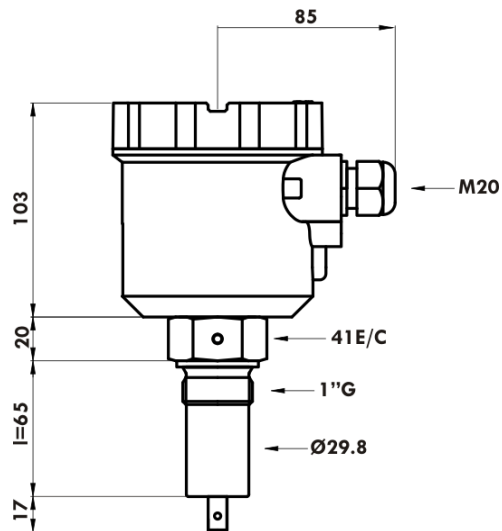
Power supply:	24 Vdc (18...36 Vdc) 24 Vac $\pm 10\%$ 50/60Hz 48 Vac $\pm 10\%$ 50/60Hz 110 Vac $\pm 10\%$ 50/60Hz 230Vac $\pm 10\%$ 50/60Hz
Electrical connection:	wire size $\varnothing 2,5 \text{ mm}^2$
Power consumption:	Max. 2VA
Contact:	SPDT max. 250Vac, 2A (125VA max.).
Conduit entry:	2 cable gland M20x1,5, ATEX version 1 cable gland and 1 plug M20x1,5 standard version
Sensibility:	Adjustable in 3 points: Low, Medium, High.
Max. grain size:	50 mm
Min. bulk density:	38 g/l depending on vane type. Others on request
Process connection:	1" G aluminum mod. NIR-94, NIR-E94 1" G st. st. 1.4305 ( AISI 303 ) 1 1/2" G st. st. 1.4305 ( AISI 303 ) 1 1/4" G st. st. 1.4305 ( AISI 303 ) Flange $\varnothing 110 \text{ mm}$ 1.4305 ( AISI 303 ) Flange $\varnothing 200 \text{ mm}$ 1.4305 ( AISI 303 )
Process temperature:	-20...+90°C -20...+200°C ( NIR-92, NIR-E92 )
Ambient temperature:	-20 ... +60°C
Pressure:	- 0.5....+0,5 bar.
Protection type:	IP66
Housing:	Polyester coated aluminum Rotatable 360°. Threaded cover
Extensions and vanes:	st. st. 1.4301 ( AISI 304 ), 1.4305 ( AISI 303 )



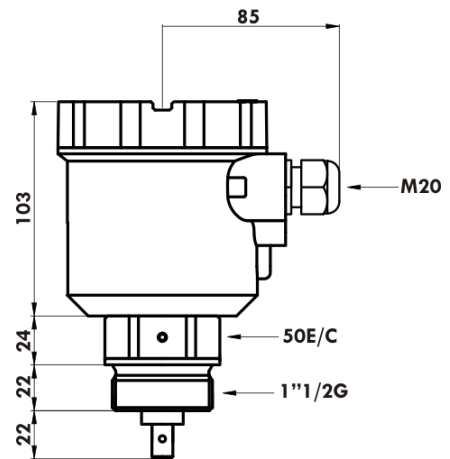
## 9. Dimensions

### 9.1 Side installation

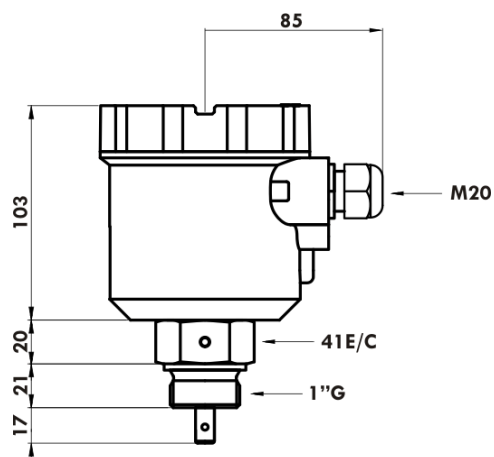
NIR-E910...G6...  
NIR-910...G6...



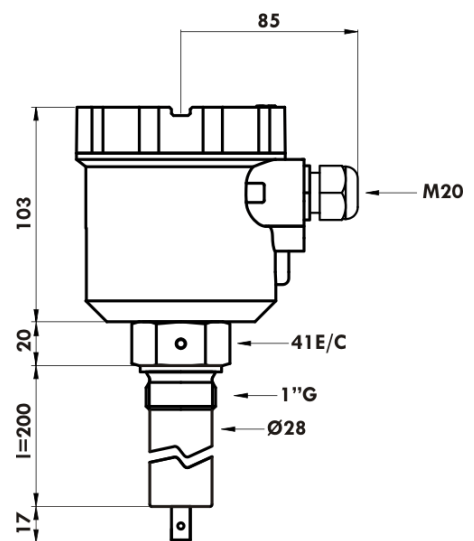
NIR-E930...G8...  
NIR-930...G8...



NIR-E940...G6...  
NIR-940...G6...

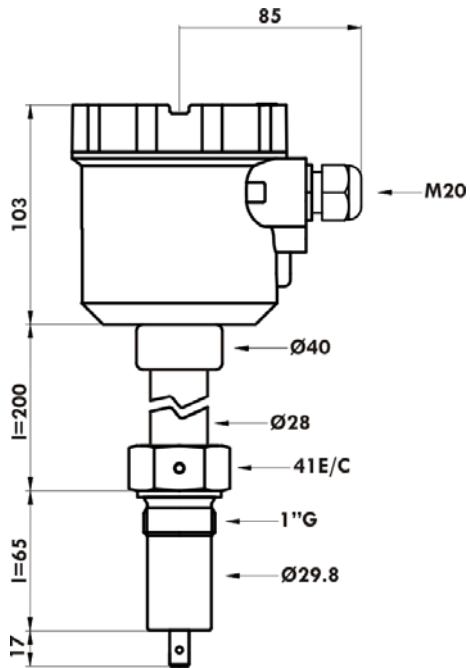


NIR-E9620...G6...  
NIR-962...G6...



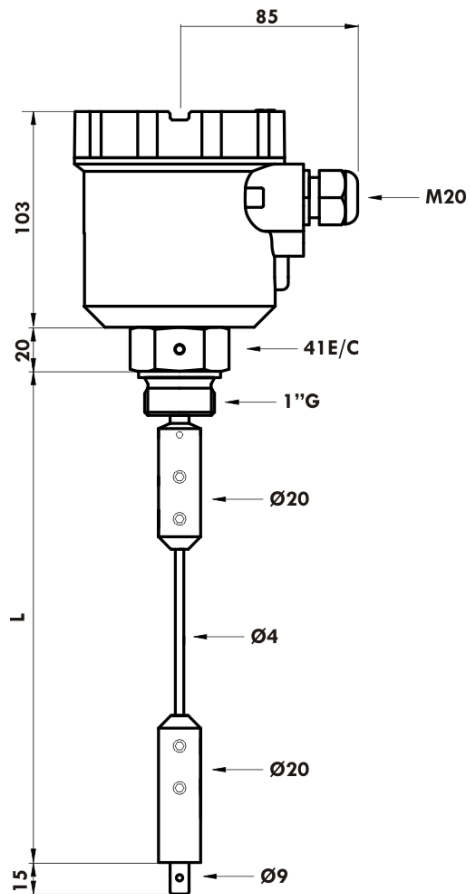
# NIR.9

## 9.2 High temperature design



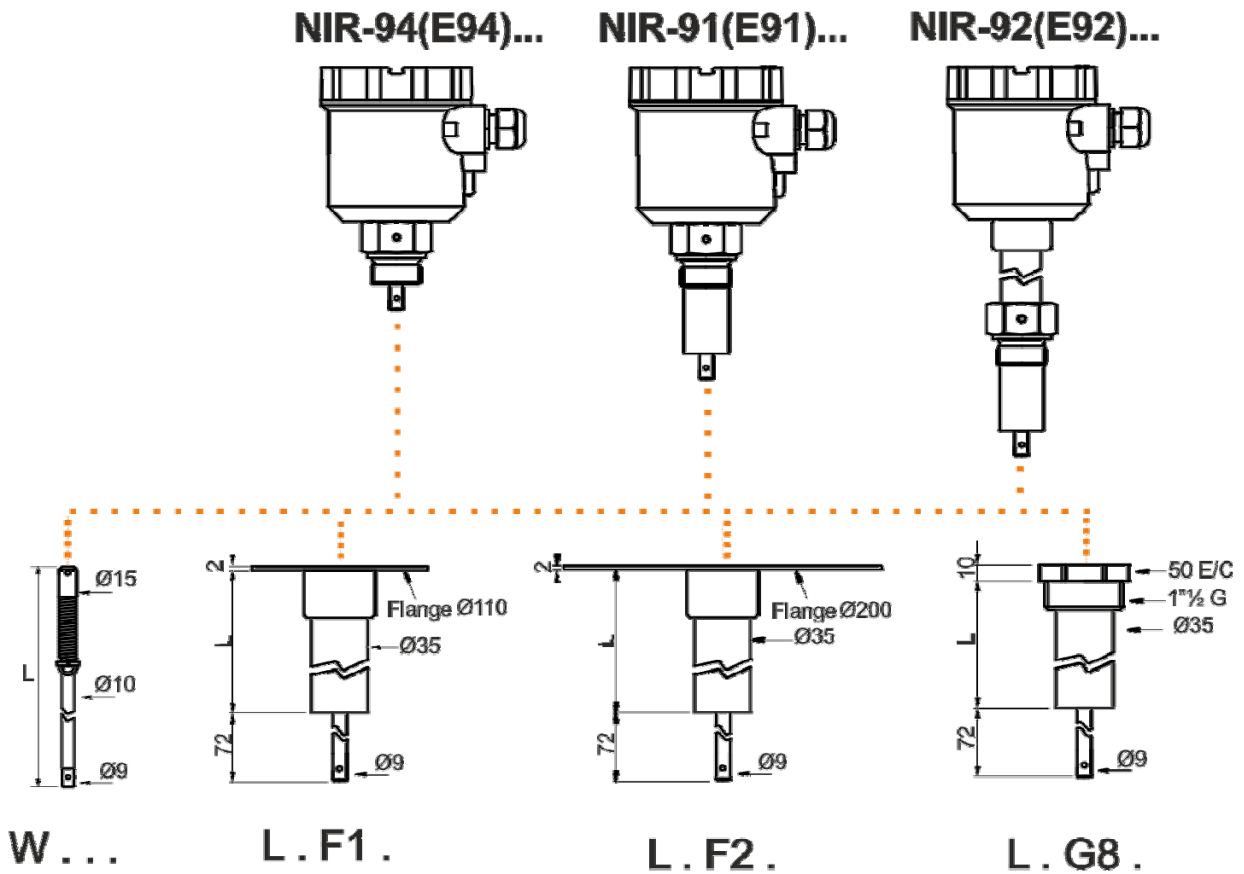
NIR-E9200...G6...  
NIR-9200...G6...

## 9.3 Top installation. Flexible cable extension



NIR-E95L0...G6...  
NIR-95L0...G6...

**9.4 Top installation. Rigid extension**



Extension type W maximum length 1.500 mm.

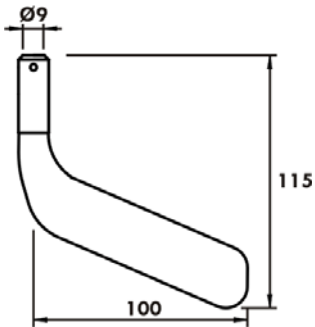
Extension type L maximum length 4000 mm.

Extension type F maximum length 10000 mm.

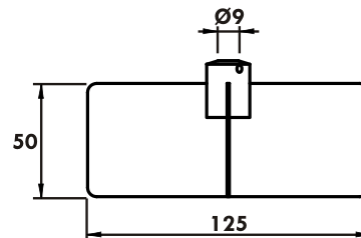
## 10. Accessories/Spare parts

### 10.1 Vanes

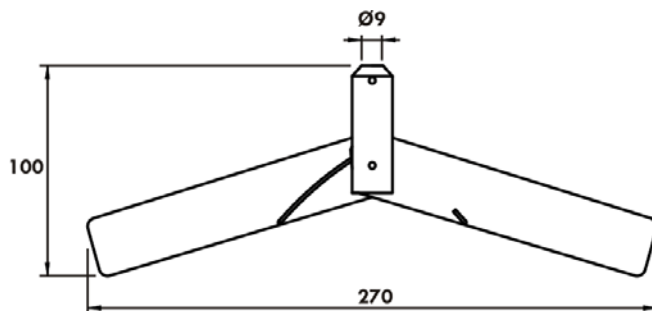
Type N (standard)



Type X

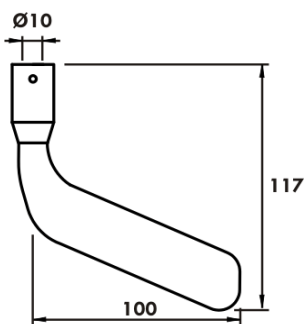


Type V

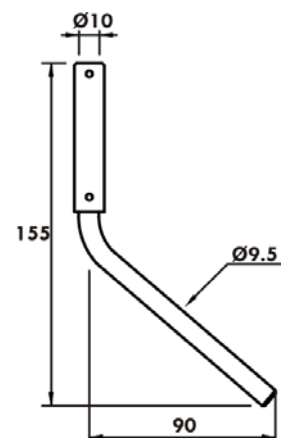


### Special vanes only for models NIR-93 and NIR-E93

Type R

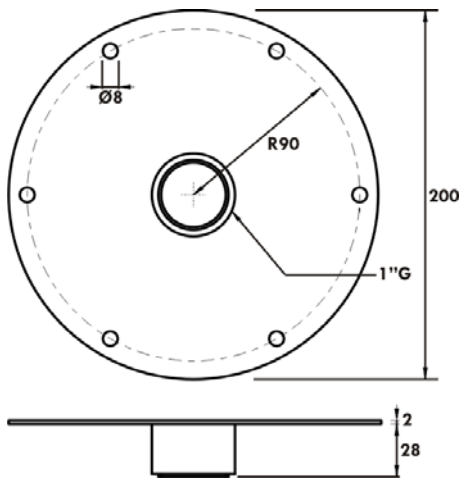


Type A

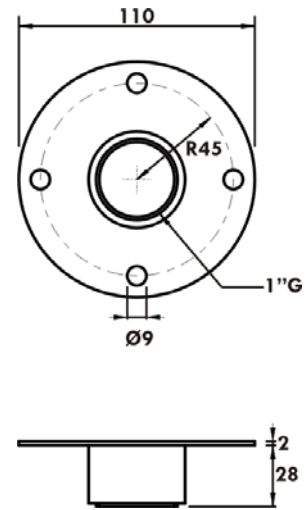


10.2 Mechanical connections:

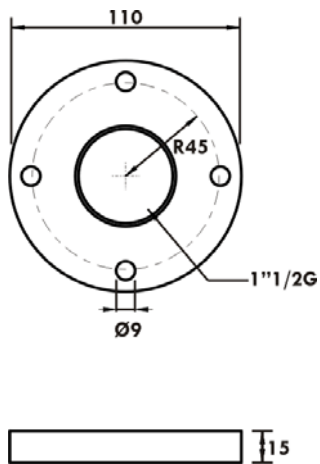
Flange type: F2



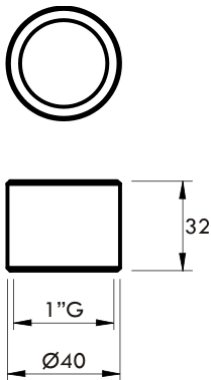
Flange type: F1



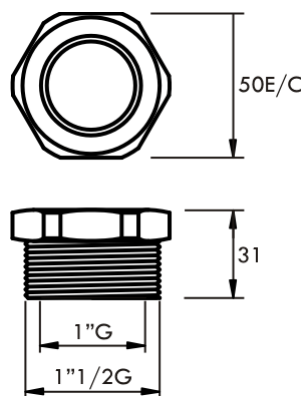
Flange type : F3 (for NIR-93/E93 only)



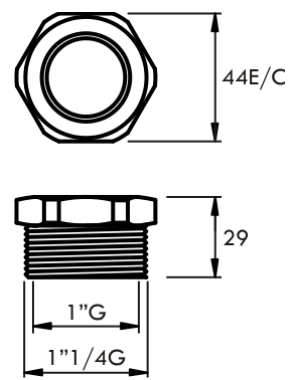
Welding sleeve: S6



Thread adapt. 1 1/2\"-1\": G8



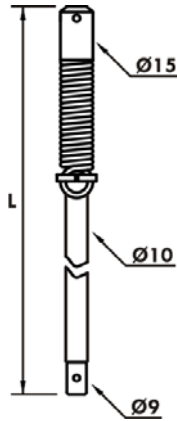
Thread adapt. 1 1/4\"-1\": G7



## 10.3 Extensions

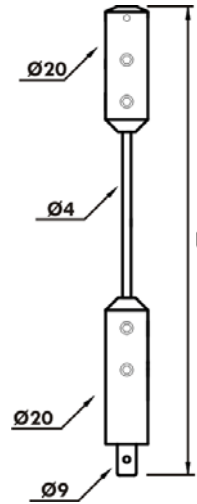
### NMZ-EW10

Extension type W with flexible union without protection pipe.  
Max. Length 1500 mm



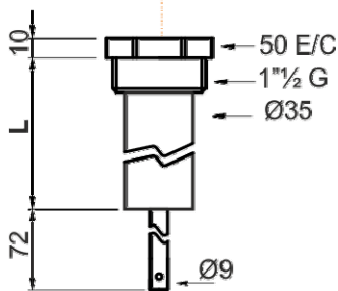
### NMZ-F10

Extension type F1 flexible cable.  
Max. Length 10000 mm



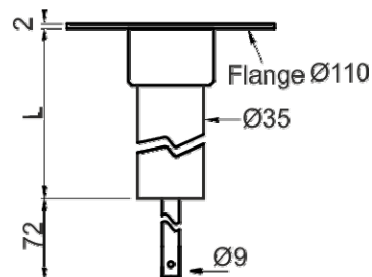
### NMZ-L80

Protection pipe type L8  
Ø35mm thread 1 1/2"GM -1"GF.  
Max. length 4000 mm



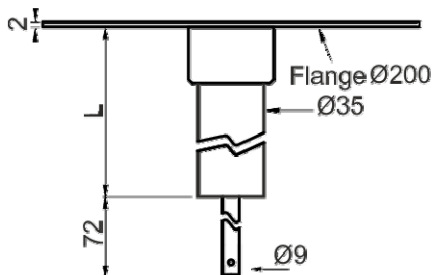
### NMZ-L10

Protection pipe type L1  
Ø35mm flange Ø110mm, 1"GF.  
Max. length. 4000 mm



### NMZ-L2

Protection pipe type L2  
Ø35mm flange Ø200mm, 1"GF.  
Max. length 4000 mm



## 11. Order Details.

Model	Extension	Vane	Mechanical connection <sup>4)</sup>	Supply	Option
<b>NIR-91</b> <b>NIR-E91 (ATEX)</b> Neck pipe l: 65 mm  <b>NIR-92</b> <b>NIR-E92 (ATEX)</b> T. max. 200°C  <b>NIR-94</b> <b>NIR-E94 (ATEX)</b> Aluminum thread	<b>0</b> = without extension  <b>W<sup>1)</sup></b> = extension without protection pipe. (until 1500 mm)  <b>L<sup>2)</sup></b> = extension with protection pipe. (until 4000 mm)  <b>Y</b> = special	<b>0</b> = without  <b>N</b> = standard  <b>V</b> = foldable  <b>X</b> = cruciform (only with F2 connection)  <b>Y</b> = special	<b>G6</b> = G 1"  <b>G7</b> = G 1 ¼"  <b>G8</b> = G 1 ½"  <b>F1</b> = flange 110mm 1" GF  <b>F2</b> = flange 200mm 1" GF  <b>YY</b> = special	<b>0</b> = 230 Vac  <b>4</b> = 110 Vac  <b>2</b> = 24 Vac  <b>5</b> = 48 Vac  <b>3</b> = 24 Vdc  <b>Y</b> = special	
<b>NIR-96</b> <b>NIR-E96 (ATEX)</b> Neck pipe l:200 mm	<b>2</b> = 200mm (reinforced version, lateral installation)  <b>Y</b> = special				<b>0</b> = without  <b>Y</b> = special
<b>NIR-95</b> <b>NIR-E95 (ATEX)</b> Flexible Cable	<b>0</b> = without extension  <b>F<sup>3)</sup></b> = extension flexible cable. (until 10 mts)	<b>V</b> = foldable  <b>X</b> = cruciform (only with F2 connection)			
<b>NIR-93</b> <b>NIR-E93 (ATEX)</b> Reinforced	<b>0</b> = without	<b>0</b> = without  <b>R</b> = reinforced  <b>A</b> = aggregate  <b>Y</b> = special	<b>G8</b> = G 1 ½"  <b>F3</b> = flange 110 mm reinforced 1 ½"GF  <b>YY</b> = special		

- 1) Only for top installation. Rigid extension without protection pipe max. 1,5 mts. Please specify length " L ".
- 2) Only for top installation. Rigid extension with protection pipe max. 4 mts. Not available with mechanical connection G6 y G7. Please specify length " L ".
- 3) Only for top installation. Flexible stainless steel cable extension max. 10 mts, (max. pull force of the cable 4 kN ). Please specify length " L ".
- 4) Please check mechanical connection in order to ensure a perfect match between mechanical connection and vane size.

## 11.1 Spare parts/Accessories model NMZ

Model	Type	Description	Option
NMZ-	A = process connections	<b>G7</b> = thread adapter st. st. 1.4305. 1 ¼" GM - 1" GF <b>G8</b> = thread adapter st. st. 1.4305. 1 ½" GM - 1"GF <b>F1</b> = flange st. st. 1.4305 Ø110mm 1" GF <b>F2</b> = flange st. st. 1.4305 Ø200mm 1" GF <b>F3</b> = flange st. st. 1.4301 Ø110 mm 1 ½" GF <b>S6</b> = welding sleeve st. st. 1.4404 1" GF <b>YY</b> = special	<b>0</b> = without <b>Y</b> = special
	D = type of vanes	<b>N0</b> = standard st. st. 1.4305 <b>V0</b> = foldable st. st. 1.4305 <b>X0</b> = cruciform st. st. 1.4305 <b>R0</b> = reinforced st. st. 1.4305 <b>A0</b> = aggregate st. st. 1.4305 <b>YY</b> = special	
	E <sup>1)</sup> = extensions	<b>L8</b> = protection pipe st. st. 1.4301, 1 ½"GM <b>L1</b> = protection pipe with F1 flange st.st. 1.4301 <b>L2</b> = protection pipe with F2 flange st. st. 1.4301 <b>W1</b> = with flexible union st. st. 1.4301 and without protection pipe <b>F1</b> = flexible cable Ø4 mm st. st. 1.4305 <b>YY</b> = special	

1) Please specify length " L ".

**Note:** st. st. 1.4404 ( AISI 316 ), 1.4305 ( AISI 303 ), 1.4301 ( AISI 304 )



## **12. Safety Instructions (ATEX)**

---

### **12.1 Area of validity**

These security instructions apply to **NIR-E9** series switch level rotating and their accessories for use in explosion-proof atmospheres conform to **CE certificate LOM 05ATEX2061**.

### **12.2 Guidelines**

These security instructions must be applied to the **NIR-E9** series used in dust explosion hazard environments, category 1/2D.

**NIR-E9** level switch has a metal housing that fits a motor with gear and all electronic and electrical control components and has also a rotating vane to detect the product.

The housing must be installed in the zone defined by category 2D.

The vane and shaft could be installed in the zone defined by category 1D.

The mechanical connection element of the **NIR-E9** will be installed in the wall separating zones 2D and 1D.

It is necessary to follow carefully the instructions from the hazardous areas where the **NIR-E9** will be installed as well as the safety instructions included in this manual.

Temperature class and/or surface temperature relates solely to a device operated at ambient temperature. On installation, the actual temperature class for process operation has to be determined.

Inlet bushing and cable glands must conform to the certification for their type in accordance with the directive.

Verify that all data written in the label of the **NIR-E9** matches data required for the installation.

Verify that there is no mechanical stress or deformation due to installation in the tank.

Remove power supply and verify that no explosion risk is present before opening cover of the housing.

Check that cover of housing is correctly mounted before applying power to the instrument.

The installation of instruments in hazardous areas must be exclusively done by trained people.

**IMPORTANT:** Verify that the instrument ground is connected to the system ground.

## **12.3 Protection against E.S.D. ( Electro Static Discharge )**

Rotating level with that can become electrically charged, must bear a warning label. Electrical charging must be avoided at all costs. Pay attention to the following:

- Avoid rubbing the device.
- Never clean the device dry.
- Do not install the device near material airflows or near steam outlets.

## **12.4 Chemical resistance**

Ensure that the device construction materials have chemical resistance sufficient to prevent mechanical deformations that may affect the device.

## **12.5 Maintenance and repairs**

The instrument does not require maintenance or servicing.  
Repairs must be only carried out by Kobold Mesura (manufacturer).

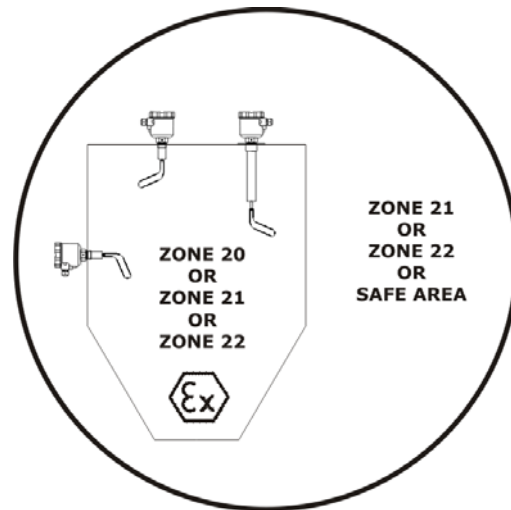
## **12.6 Storage**

Measuring instruments should be protected against humidity and dust.  
Storage temperature: -40°C....+85°C.

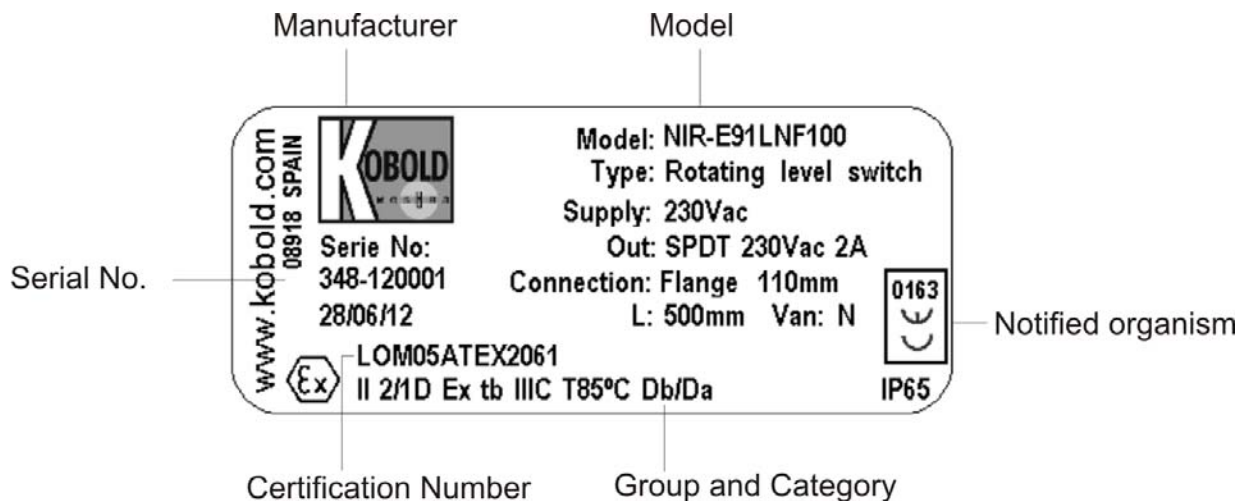
### 13. Installation in hazardous zone

In hazardous zones, NIR-E must be installed with housing in zone 21/22 (category 2) or in safety zone. Mechanical connection must be installed in the wall separating zones of category 2 and 1.

The axis and vane respectively must be installed in zone 20 (category 1). Installation must be done by ATEX expertise people.



### 14. ATEX Label Description



## 15. Declaration of conformity ( ATEX )

DT0459

### DECLARACIÓN DE CONFORMIDAD EU

EC DECLARATION OF CONFORMITY

EG-KONFORMITÄTSERLÄRUNG

DÉCLARATION DE CONFORMITÉ

DICHIARAZIONE DI CONFORMITÀ CE

**KOBOLD MESURA SLU**

**Avda. Conflent 68 nave 15, 08915 Badalona (España)**

#### Declara, bajo la propia responsabilidad, que el producto

*Declares under our sole responsibility, that the product*

*Erklärt in alleiniger Verantwortung, dass das produkt*

*Déclare sous sa seule responsabilité, que le produit*

*Dichiara sotto la propria responsabilità, che il prodotto*

Rotating vane level switch

**NIR-E9**

#### A los cuales se refiere esta declaración, son conformes a las siguiente Directivas Europeas:

*To which this declaration relates is in conformity with the following European Directives:*

*Mit folgenden Richtlinien Konform ist:*

*À auxquels se réfère cette déclaration, ils sont conformes aux Directives Européennes suivant :*

*A ai quali si riferisce questa dichiarazione, sono conformi alle direttive europee seguente:*

**EMC2014/30/EU LVD2014/35/EU ATEX2014/34/EU RoHS2011/65EU**

#### Normas armonizadas y documentos de la normativa aplicados:

*Applied harmonised standards and normative documents:*

*Angewandte harmonisierte Normen und normative Dokumente:*

*Normes harmonisées et documents normatifs appliqués :*

*Norme armonizzate e documenti normativi applicati:*

EN61010-1 :2011 EN 60079-0:2009 (acc. EN 60079-0 :2013)

EN61000-6-2 :2006 EN 60079-31:2009 (acc. EN 60079-31 :2010)

#### Certificado de examen CE de tipo

*EC-type examination certificate*

*EG-baumusterprübescheinigung*

*Attestation d'examen CE de type*

*Certificazione per esame di tipo CE*

#### Marcado

*Marking*

*Kennzeichnung*

*Inscription*

*Marchatura*

**LOM05ATEX2061**



**II 2/1D Ex tb IIIC T85°C Db/Da**

**Fabricado en: KOBOLD MESURA SLU Avda. Conflent 68 nave 15, 08915 BADALONA (Spain)**

*Made in:*

*Hergestellt in:*

*Fabriqué dans:*

*Fabbricato in:*

**Organismo notificado : LOM 0163**

*Notified organism*

*Zertifizierungsstelle*

*Organization annoncée*

*Organismo informato*

**Número notificación : LOM 05ATEX9070**

*Number notification*

*Zertifikatsnummer*

*Nombre notification*

*Notifica di numero*

Badalona sept. 2013

Gerente

## 16. Declaration of conformity

DT0459

### DECLARACIÓN DE CONFORMIDAD EU

EC DECLARATION OF CONFORMITY  
EG-KONFORMITÄTSERLÄRUNG  
DÉCLARATION DE CONFORMITÉ  
DICHIARAZIONE DI CONFORMITÀ CE

**KOBOLD MESURA SLU**  
Avda. Conflent 68 nave 15, 08915 Badalona (España)

#### Declara, bajo la propia responsabilidad, que el producto

*Declares under our sole responsibility, that the product*  
*Erklärt in alleiniger Verantwortung, dass das Produkt*  
*Déclare sous sa seule responsabilité, que le produit*  
*Dichiara sotto la propria responsabilità, che il prodotto*

Rotating vane level switch

**NIR-9**

#### A los cuales se refiere esta declaración, son conformes a las siguiente Directivas Europeas:

*To which this declaration relates is in conformity with the following European Directives:*  
*Mit folgenden Richtlinien Konform ist:*  
*À auxquels se réfère cette déclaration, ils sont conformes aux Directives Européennes suivant :*  
*A ai quali si riferisce questa dichiarazione, sono conformi alle direttive europee seguente:*

**EMC2014/30/EU LVD2014/35/EU RoHS2011/65/EU**

#### Normas armonizadas y documentos de la normativa aplicados:

*Applied harmonised standards and normative documents:*  
*Angewandte harmonisierte Normen und normative Dokumente:*  
*Normes harmonisées et documents normatifs appliqués :*  
*Norme armonizzate e documenti normativi applicati:*

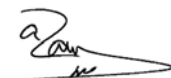
EN61010-1 :2011  
EN61000-6-2 :2006

**Fabricado en: KOBOLD MESURA SLU Avda. Conflent 68 nave 15, 08915 BADALONA (Spain)**

*Made in:*  
*Hergestellt in:*  
*Fabriqué dans:*  
*Fabbricato in:*

Badalona sept. 2013

Gerente



# 17. ATEX Certificate



LABORATORIO OFICIAL J. M. MADARIAGA



**(1) EC-TYPE EXAMINATION CERTIFICATE**

**(2) Equipment or protective system intended for use in potentially explosive atmospheres**  
 Directive 94/9/EC

**(3) EC-Type Examination Certificate number:** LOM 05ATEX2061

**(4) Equipment or Protection System** Rotary switch level controller  
 Type IRN-700-EX

**(5) Applicant:** CONTROL INSTRUMENTS MESURA S.L.

**(6) Address:** Guifré, 665 1ª  
 08912 BADALONA(BARCELONA)  
 SPAIN

**(7)** This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

**(8)** Laboratorio Oficial J.M. Madariaga (LOM), notified body number 0163 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in confidential report nr. LOM 04.224 MP

**(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:**  
 - Standards EN 50014:1997 + A1:1999 + A2:1999  
 EN 50281-1-1:1998 + A1:2002

**(10)** If the sign X is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

**(11)** This EC-Type Examination Certificate relates only to the design and construction of this specified equipment or protective system in accordance with the Directive 94/9/EC. Further requirements of the Directive applies to the manufacture and supply of this equipment or protective system. These are not covered by this certificate.

**(12) The marking of the equipment or protective system shall include the following:**  
 II 2/1 D IP65 T85 °C Ta -20/+60 °C

Madrid, 13rd May 2005

OFICIAL

Carlos Fernández Ramón  
 DIRECTOR OF THE LABORATORY

LABORATORIO OFICIAL J.M. MADARIAGA

Angel Vega Remesal  
 Head of ATEX area

(This document may only be reproduced in its entirety and without any change)  
 This Certificate is a translation from the original in Spanish. The LOM liability applies only on the Spanish text



UNIVERSIDAD POLITÉCNICA DE MADRID  
 ENSAYOS E INVESTIGACIONES DE MATERIALES Y EQUIPOS PARA ATMÓSFERAS EXPLOSIVAS Y MINERÍA  
 ( Real Decreto 334/1992 de 3 de Abril - BOE 1992-04-29 - )  
 Alenza, 2 - 28003-MADRID • ☎ (34) 91 4421386/91 3367009 • Fax:(34) 91 4419933 • ✉ lom@lom.upm.es





LABORATORIO OFICIAL J. M. MADARIAGA

(A1) SCHEDULE

(A2) EC-Type Examination Certificate: LOM 05ATEX2061

(A3) Description of equipment or protective system

Rotary switch level controller to be used in solids that is based on a head box containing electrical circuits and a motor, and a rotary spade sensor. The head box is prewired to install outside tanks or silos having a category 2D, sensor is prewired to be installed inside tanks or silos having a category 1D because it is a simple mechanical device.

These devices have a power rated voltage of 24 Vdc, and 24 to 230 Vac.

(A4) Test report nr. LOM 04.224 MP

(A5) Special conditions for safe use

None

(A6) Individual tests

None

(A7) Essential Health and Safety Requirements

Explosion safe requirements are covered by application of the standards indicated in page 1/2 of this certificate.

(A8) Descriptive documents:

Description nr.	Rev.	Date
- Description nr. DT0106	0	2005-05-04
- Part list nr. DT0107 (2 sheets)	01	2005-05-04
- Drawings nr. DT0095	0	2005-05-04
PE0185R0	0	2005-05-04
PM0382R0	0	2005-05-04
PM0368R0	0	2005-05-04
PM0370R0 (2 sheets)	0	2005-05-04
PM0380R0	0	2005-05-04



(This document may only be reproduced in its entirety and without any change)



LABORATORIO OFICIAL J. M. MADARIAGA



(1) **EC-TYPE EXAMINATION CERTIFICATE SUPPLEMENT**

(2) **Equipment or protective system intended for use in potentially explosive atmospheres**  
 Directive 94/9/EC

(3) **Supplement nr. 1 to EC-Type Examination Certificate number LOM 05ATEX2061**

(4) **Equipment or Protection System** Rotary switch level controller  
 Type IRN-700-EX... / - NIR-EX...

(5) **Applicant** KOBOLD MESURA, S.L.U.

(6) **Address** Guifré, 665  
 08918 BADALONA(BARCELONA)  
 SPAIN

(7) **Report nr.** LOM 07.059 NP

(8) **Variations included in this certificate**

- Change of the manufacturer name, before CONTROL INSTRUMENTS MESURA S.L.

- Alternative reference of type as NIR-EX...

Update of applied standards to: EN 61241-0:2006 and EN 61241-1:2004

**Type codification:**

IRN700-EX

NIR-EX

**Material**

2= stainless steel

**Neck pipe length**

0 = standard  
 2 = D=200 mm, only paddle Y

**Axis**

0 = standard  
 4 = special up to 500 mm

**Paddle**

N= standard  
 Y = Y shape  
 X = X shape

**Process connection**

G6= G 1", G7= G 1" 1/4, G8= G1" 1/2

F1 = flange 110 mm, F2 = flange 200 mm

S6 = sleeve 1"

**Power supply**

**Option**



This supplement must be an inseparable part together with the base certificate LOM 05ATEX2061

(This document may only be reproduced in its entirety and without any change)

This Certificate is a translation from the original in Spanish. The LOM liability applies only on the Spanish text







LABORATORIO OFICIAL J. M. MADARIAGA

(3) Supplement nr. 1 to EC-Type Examination Certificate number LOM 05ATEX2061

(9) Marking variations



Ex tD A21 IP65 T85 °C Ta -20°C / +60 °C

(10) Descriptive documents

Drawings nr.: DT0095R2 DT0136R2

Rev.	Date
2	2007-07-17
1	2007-07-17



Madrid, 10th September, 2007

Carlos Fernández Ramón DIRECTOR OF THE LABORATORY

Angel Vega Remesal Head of ATEX area

This supplement must be an inseparable part together with the base certificate LOM 05ATEX2061 (This document may only be reproduced in its entirety and without any change)

This Certificate is a translation from the original in Spanish. The LOM liability applies only on the Spanish text



LABORATORIO OFICIAL J. M. MADARIAGA



(1) EC-TYPE EXAMINATION CERTIFICATE SUPPLEMENT

(2) Equipment or protective system intended for use in potentially explosive atmospheres

Directive 94/9/EC

(3) Supplement nr. 2 to EC-Type Examination Certificate number LOM 05ATEX2061

(4) Component Rotary switch level controller  
Type IRN700-E... / NIR-E...

(5) Applicant KOBOLD MESURA, S.L.U.

(6) Address Guifré, 665  
08918 BADALONA(BARCELONA)  
ESPAÑA

(7) Test report nr.: LOM 09.190 MP

(8) Variations included in this certificate

- To include two new enclosures made in aluminium and stainless steel
- To include a new variant with steel cable for applications such as maximum level of long lengths
- New internal electronic circuits design
- To include a new electric motor for the movement of vanes

Type codification:

IRN700-E  
NIR-E

Version  
81 = Standard 82 = High temperature 83 = Reinforced

Sensor extension  
0 = without 2 = 200mm L = Special

Axis extension  
0 = without 4 = Special

Vane  
N = Standard V = Y shape X = X shape

Process connection  
G6 = G1", G7 = G1 1/2", G8 = G1 1/2"  
F1 = flange 110 mm, F2 = flange 200 mm  
S6 = welding sleeve

Power supply

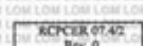
Option



This supplement must be an inseparable part together with the base certificate LOM 05ATEX2061

This Certificate is a translation from the original in Spanish. The LOM liability applies only on the Spanish text

(This document may only be reproduced in its entirety and without any change)



UNIVERSIDAD POLITÉCNICA DE MADRID  
ENSAYOS E INVESTIGACIONES DE MATERIALES Y EQUIPOS PARA ATMÓSFERAS EXPLOSIVAS Y MINERÍA  
( Real Decreto 334/1992 de 3 de Abril - BOE 1992-04-29)



Alenza, 1 - 28003 MADRID • (34) 91 4421366 / 91 3367009 • (34) 91 4419933 • lom@lom.upm.es



LABORATORIO OFICIAL J. M. MADARIAGA

(3) Supplement nr. 2 to EC-Type Examination Certificate number LOM 05ATEX2061

(9) Changes in marking

Only those that affect the type designation

(10) Descriptive documents

Description nr.:	Rev.	Date
DT0381	0	2009-05-25
DT0384R1	1	2009-07-23
Schemas nr.:		
PE0216 (3 hojas)	0	2009-02-23
PE0217	0	2009-02-23
Drawings nr.:		
DT0383R0	0	2009-06-02
PM0654R0	0	2009-03-19
PM0655R0	0	2009-03-23
PM0656R0	0	2009-03-23
PM0657R0	0	2009-03-24
PM0695R0	0	2009-06-02
PM0696R0	0	2009-06-02
PM0697R0	0	2009-06-02

OFICIAL



Madrid, 2009-07-29

Carlos Fernández Ramón  
DIRECTOR OF THE LABORATORY

Angel Vega Remesal  
Head of ATEX area

KPCPER 07/02 Rev 0

(This document may only be reproduced in its entirety and without any change)



LABORATORIO OFICIAL J. M. MADARIAGA



EC-TYPE EXAMINATION CERTIFICATE SUPPLEMENT

- (2) Equipment or protective system intended for use in potentially explosive atmospheres  
Directive 94/9/EC
- (3) Supplement nr. 3 to EC-Type Examination Certificate number **LOM 05ATEX2061**
- (4) Equipment or Protection System **Rotary switch level controller**  
Type **IRN700-E... / NIR-E... / NIR-E9...**
- (5) Manufacturer **KOBOLD MESURA, S.L.U.**
- (6) Address **Guirré, 665**  
**08918 BADALONA(BARCELONA)**  
**ESPAÑA**

(7) Test report nr. **LOM 11.555 LP**

(8) Variations included in this certificate  
Update to the standards EN 60079-0:2009 and EN 60079-31:2009  
To include a new variant named NIR-E9 having a new enclosure made in aluminum, mechanical changes and new design in electronic circuit.

Type codification is the same as variant NIR-E

(9) Changes in marking  
 II 2/D / Ex tb IIIC T85 °C Db/Da

(10) Descriptive documents

Description nr.	Rev.	Date
DT0460R1	0	2011-01-13
Schematics nr. PE0216 (sheet 1/4)	0	2011-10-27
Drawings nr. PM0893	0	2011-11-10

OFICIAL

Getafe, 2012-06-19

  
**Carlos Fernández Ramón**  
 DIRECTOR OF THE LABORATORY

  
**Angel Vega Remesal**  
 Head of ATEX area

This supplement must be an inseparable part together with the base certificate LOM 05ATEX2061  
This Certificate is a translation from the original in Spanish. The LOM liability applies only on the Spanish text.

(This document may only be reproduced in its entirety and without any change) Page 1/1

**18. Notes**

---





**Kobold Mesura S.L.U**  
Avda. Conflent 68 nave 15  
08915 Badalona  
Tel.: +34 93 460 38 83  
Fax: +34 93 460 38 76  
E-Mail: info.es@kobold.com  
Internet: www.kobold.com

**Technical data**  
**Subject to change without prior notice**

