IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx KIWA 15.0026X	Issue No: 0	Certificate history: Issue No. 0 (2016-01-21)
Status:	**Current**	Page 1 of 3	
Date of Issue:	**2016-01-21**		
Applicant:	**Hadro Techniek B.V.** Westbaan 270 2841 MC Moordrecht **The Netherlands**		
Electrical Apparatus:	**Level transmitter, Types P-05D, P-10D and P-15D**		
Optional accessory:			
Type of Protection:	**Ex d, t**		
Marking:	Ex db IIC T5 ... T1 Gb Ex tb IIIC T100 °C ... T350 °C Db		

Approved for issue on behalf of the IECEx Certification Body: Pieter van Breugel

Position: Certification Officer

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Kiwa Nederland B.V. (Unit Kiwa ExVision)
Wilmersdorf 50
7327 AC Apeldoorn
P.O. Box 137
7300 AC Apeldoorn
The Netherlands

kiwa
Partner for progress

IECEx Certificate of Conformity

Certificate No:	IECEx KIWA 15.0026X	Issue No: 0
Date of Issue:	**2016-01-21**	Page 2 of 3

Manufacturer: **Hadro Techniek B.V.**
Westbaan 270
2841 MC Moordrecht
The Netherlands

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

NL/KIWA/ExTR15.0025/00

Quality Assessment Report:

NL/DEK/QAR15.0004/00

IECEx Certificate of Conformity

Certificate No:	IECEx KIWA 15.0026X	Issue No: 0
Date of Issue:	**2016-01-21**	Page 3 of 3

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Level Transmitters type P-05D, P-10D and P-25D are used to convert the level measurement signal of magnetically activated switches (reed chain) mounted in the measuring tube into an electrical output signal. The measuring tube is for mounting to a suitable process pipe with float.

For the type designation see Annex A.

Electrical data:

Reed chain with transmitter: max. 35 Vdc, 20 mA
Reed chain with terminals: 100 - 1800 Ω

CONDITIONS OF CERTIFICATION: YES as shown below:

- The flameproof joints are not intended to be repaired
- For the relation between process temperature and temperature class / surface temperature see Annex A.

Annex:

Annex A to CoC KIWA 15.0026X.pdf

Type designation

P-aD-b-c-d-e (example: P-10D-H-2250-SH-S62L)

a: Reed distance

05	Reed per 0.5 cm
10	Reed per 1.0 cm
25	Reed per 0.25 cm

b: Transmitter

S:	Standard
H:	Hart
F:	Fieldbus
P:	Profibus
O:	Ohm out
HO:	Hart transmitter with display and optical buttons

c: Measuring length in mm (max. 6000)

d: Temperature (process temperature of the level gauge)

C:	-50 °C to -25 °C
S:	-25 °C to +160 °C
M:	+161 °C to 200 °C
H:	+201 °C to +250 °C
SH:	+251 °C to +350 °C

e: Transmitter housing

S62:	Stainless steel, entry M20x1.5
S63:	Stainless steel, entry ½" NPT
S64:	Stainless steel, entry ¾" NPT
S62L:	Stainless steel + LCD, entry M20x1.5
S63L:	Stainless steel + LCD, entry ½" NPT
S64L:	Stainless steel + LCD, entry ¾" NPT
A2:	Aluminium, entry M20x1.5
A3:	Aluminium, entry ½" NPT
A4:	Aluminium, entry ¾" NPT
A2L:	Aluminium + LCD, entry M20x1.5
A3L:	Aluminium + LCD, entry ½" NPT
A4L:	Aluminium + LCD, entry ¾" NPT
S62HO:	Stainless steel+ LCD, entry M20x1.5
S63HO:	Stainless steel + LCD, entry ½" NPT
S64HO:	Stainless steel + LCD, entry ¾" NPT
A2HO:	Aluminium + LCD, entry M20x1.5
A3HO:	Aluminium + LCD, entry ½" NPT
A4HO:	Aluminium + LCD, entry ¾" NPT

The relation between process temperature and temperature class / surface temperature is shown in the following table:

Process temperature	Temperature class (EPL Gb)	Maximum surface temperature (EPL Db)
-50 °C to -25 °C [1)]	T5	T100 °C
-24 °C to +135 °C	T4	T135 °C
+136 °C to +160 °C	T3	T160 °C
+161 °C to +200 °C [2)]	T3	T200 °C
+201 °C to +250 °C [3)]	T2	T250 °C
+251 °C to +300 °C [4)]	T2	T300 °C
+301 °C to +350 °C [4)]	T1	T350 °C

Note:
1) protection between process pipe and reed chain: 1x Armaflex or PER
2) protection between process pipe and reed chain: 1 layer of glass fiber
3) protection between process pipe and reed chain: 2 layers of glass fiber
4) level gauge fully insulated with 2 layers of glass fiber and shielding plate between process pipe and reed chain