



# EXPLOSION PROTECTION

## CERTIFICATE OF CONFORMITY

Cert NO.GYJ12.1499

This is to certify that the product

All-metal Miniature Flowmeter

manufactured by **KROHNE Messtechnik GmbH**

(Address:Ludwig - Krohne Strasse 5, Duisburg, Germany)

which model is **DK32 Series, DK34 Series**

Ex marking **Ex ia II C T1~T6 Gb**

product standard /

drawing number **ZZ 8144800100b**

has been inspected and certified by NEPSI, and that it conforms to **GB 3836.1-2010,GB 3836.4-2010**

This Approval shall remain in force until **2017.11.22**

**Remarks** 1.Conditions for safe use are specified in the attachment to this certificate.  
2.Model designation is specified in the attachment to this certificate.

Director

National Supervision and Inspection Centre for  
Explosion Protection and Safety of Instrumentation  
Issued Date **2012.11.23**

This Certificate is valid for products compatible with the documents and samples approved by NEPSI.

# 国家级仪器仪表防爆安全监督检验站

## National Supervision and Inspection Centre for Explosion Protection and Safety of Instrumentation

(GYJ12.1499)

(Attachment I)

### Attachment I to GYJ12.1499

#### [Variation I]

DK32 Series & DK34 Series All-metal Miniature Flowmeter, manufactured by Krohne Messtechnik GmbH has been certified National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation (NEPSI).

All-metal Miniature Flowmeter accords with following standards:

GB 3836.1-2010 "Explosive atmospheres Part 1: Equipment-General requirements"

GB 3836.4-2010 "Explosive atmospheres Part 4: Equipment protection by intrinsic safety"i"

All-metal Miniature Flowmeter has the Ex-marking Ex ia IIC T1~T6 Gb.

Following products are covered by this certificate.

DK a / b / c / d / A

a: 32, 34

b: RE, RA

c: K1min, K1max, K2

d: L, S

### 1. Condition for safe use

1.1 The relation among temperature class, ambient temperature and maximum temperature of process medium is as following.

Temperature class	Ambient temp.	Maximum medium temp.	
		DK32 Series	DK34 Series
T6	(-20~+40) °C	75°C	80°C
	(-20~+50) °C	70°C	70°C
	(-20~+60) °C	60°C	60°C
T5	(-20~+40) °C	100°C	100°C
	(-20~+50) °C	95°C	100°C
	(-20~+60) °C	85°C	90°C
T4	(-20~+40) °C	135°C	135°C
	(-20~+50) °C	130°C	135°C
	(-20~+60) °C	120°C	130°C
T1~T3	(-20~+40) °C	135°C	150°C
	(-20~+50) °C	130°C	140°C
	(-20~+60) °C	120°C	130°C

1.2 Intrinsic safety parameters:

$U_i=16V$   $I_i=52mA$   $P_i=169mW$   $L_i=150\mu H$   $C_i=150nF$

1.3 All-metal Miniature Flowmeter shall be connected to associated apparatus before application in



hazardous location. The connection shall comply with the instruction manual of all-metal miniature flowmeter and associated apparatus.

1.4 The cables between all-metal miniature flowmeter and associated apparatus should be shielded cables (the cables must have insulated shield). The shielded has to be grounded reliably.

1.5 End users is not permitted to change any components insides.

1.6 When installation, use and maintenance of All-metal Miniature Flowmeter, observe following standards.

GB3836.13-1997“Electrical apparatus for explosive gas atmospheres Part 13:Repair and overhaul for apparatus used in explosive gas atmospheres”

GB3836.15-2000“Electrical apparatus for explosive gas atmospheres Part 15:Electrical installations in hazardous area (other than mines)”

GB 3836.16-2006 “Electrical apparatus for explosive gas atmospheres – Part 16: Inspection and maintenance of electrical installation in hazardous areas (other than mines)

GB 50257:1996 ”Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering”

## 2. Manufacturer’s Responsibility

2.1 Special condition for safe use specified above should be included in the instruction manual.

2.2 Manufacturing should be done according to the documentation approved by NEPSI.

2.3 Any modification with influence on the type of protection should be submitted to NEPSI before application.

2.4 Following items should be added to the nameplate

- a) NEPSI log 
- b) Ex marking
- c) Number of certificate
- d) Ambient temperature range

National Supervision and Inspection Center  
for Explosion Protection and Safety of Instrumentation

Nov. 23th, 2012