



# EXPLOSION PROTECTION CERTIFICATE OF CONFORMITY

Cert No. GYJ071233X

This is to certify that the product

Transmitter

manufactured by Micro Motion, Inc.  
(Address: Boulder, Co. 80301, USA)

which model is 3500 Series

Ex marking [Ex ib] II B/II C

product standard --

drawing number --

has been inspected and certified by NEPSI, and that it conforms  
to GB3836.1 - 2000, GB3836.4 - 2000

This Approval shall remain in force until 2012.06.24

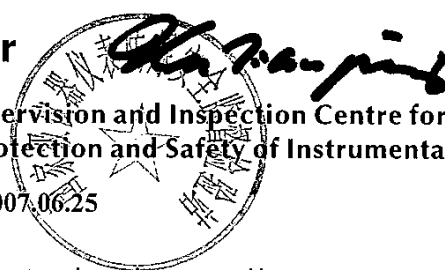
**Remarks**

1. This certificate also cover the Transmitter with the same type that manufactured by Emerson Process Management Co., Ltd. (Address: No.1277, Xin Jin Qiao Rd., Pudong).
2. When the sign "X" is placed after the certificate number, it indicates that the sensor is subject to special conditions for safe use specified in the attachment to this certificate.
3. Type detail, Intrinsically safe parameters and Special requirements for safe use specified in the attachment to this certificate.

Director

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

Issued Date 2007.06.25



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

103 Cao Bao Road  
Shanghai 200233, China

<http://www.nepsi.org.cn>  
Email: [info@nepsi.org.cn](mailto:info@nepsi.org.cn)

Tel:0086 21 64368180  
Fax:0086 21 64844580

# 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

(GYJ071233X)

(Attachment I)

## Attachment I

(Translation)

Transmitter, type 3500 series, manufactured by Micro Motion, Inc. or by Emerson Process Management Co., Ltd., have been approved by National Supervision and Inspection Centre for Explosion Protection and Safety of Instrumentation (NEPSI) in accordance with the following standards:

GB3836.1-2000 Electrical apparatus for explosive gas atmospheres  
Part 1: General requirements

GB3836.4-2000 Electrical apparatus for explosive gas atmospheres  
Part 4: Intrinsic safety "i"

The transmitter is approved with explosion marking of [Ex ib] II B/II C, the certificate number is GYJ071233X.

The permissible range of ambient temperature is -20°C to +60°C.

The types to this certificate are as below:

3500 1 2 3 4 5 6 1P 7 8

1 code: Letter R, P or N for mounting options;

2 code: Numeral 1 or 2 for power supply;

3 code: Letter for communication

4 code: Numeral for additional hardware

5 code: Numeral 3, 4, 5 or 6 for sensor interface

6 code: Letter A, B, C, D or E for terminals type

7 code: Letter for language

8 code: Letters for application software

### I . SPECIAL CONDITIONS FOR SAFE USE

1.1 The transmitter has to be installed into an enclosure, that the degree of protection of at least IP20 according to GB4208-1993 is reached.

1.2 The installation of the transmitter shall be such that the clearances between bare parts of intrinsically safe circuits and metallic enclosure parts will be at least 3 mm and between bare parts of intrinsically safe circuits and bare parts of the non-intrinsically safe circuits be at least 6mm.



1.3 For type 3500 □□□□ A1P □□, the arrangement between the terminals for connection of external intrinsically safe circuits and the terminals for connection of non-intrinsically safe circuits shall act in accord with GB3836.4-2000 clause 6.3.1.

## II. SPECIAL REQUIREMENTS

2.1 The transmitter must be located in a non-hazardous area.

2.2 The maximum voltage ( $U_m$ ) at the terminals (terminals J3 - 1 and J3 - 3) for the non-intrinsically safe circuits:  $U_m = 250V$  d.c./a.c.

2.3 Intrinsically safe parameters at terminals for the intrinsically safe circuits:

2.3.1 Transmitter for type 3500□□□□ 3□ 1P □□:

Circuits type	Gas groups	Max.output voltage $U_o$	Max.output current $I_o$	Max.output power $P_o$	Max.external parameters	
					$C_o(\mu F)$	$L_o(\mu H)$
Drive circuit J2 - A12 - C12	II B	11.4V	1.14A	1.2W	11.7	109
	II C				1.7	27.4
Pick-Off circuits J2-A8/C8 and J2-A10/C10	II B	15.6V	10mA	0.04W	3.03	$1.4 \times 10^6$
	II C				0.5	$3.55 \times 10^5$
Temperature circuit J2-C6/A6/C4	II B	15.6V	10mA	0.04W	3.03	$1.4 \times 10^6$
	II C				0.5	$3.55 \times 10^5$

2.3.2 Transmitter for type 3500□□□□ 4□ 1P □□:

Circuits type	Gas groups	Max.output voltage $U_o$	Max.output current $I_o$	Max.output power $P_o$	Max.external parameters	
					$C_o(\mu F)$	$L_o(\mu H)$
Drive circuit J2 - A12 - C12	II B	11.4V	1.14A	1.2W	11.7	109
	II C				1.7	27.4
Pick-Off circuits J2-A8/C8 and J2-A10/C10	II B	21.13V	8.45mA	0.045W	1.24	$1.9 \times 10^6$
	II C				0.18	$4.9 \times 10^5$
Temperature circuit J2-C6/A6/C4	II B	21.13V	17mA	0.090W	1.24	$4.92 \times 10^5$
	II C				0.18	$1.22 \times 10^5$

2.3.3 Transmitter for type 3500□□□□ 5□ 1P □□ or 3500□□□□ 6□ 1P □□ (terminals J2 - A4/C4 and J2 - A6/C6):

Gas groups	Max.output voltage $U_o$	Max.output current $I_o$	Max.output power $P_o$	最大外部允许参数	
				$C_o(\mu F)$	$L_o(\mu H)$
II B	17.22V	0.484A	2.05W	2.04	607
II C				0.333	151.7

2.4 Users are forbidden to change the configuration to ensure the explosion protection performance of the equipment. Any faults shall be settled with experts from the manufacturer.

2.5 During installation, operation and maintenance, users shall comply with the relevant requirements of the product instruction manual, 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 areas (other than mines)", GB3836.16-2006 "Electrical apparatus for explosive gas atmospheres Part 16: Inspection and maintenance of electrical installation (other than mines)" and GB50257-1996 "Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering".

### III. MANUFACTURER'S RESPONSIBILITY

3.1 The instruction manual shall include all the clauses mentioned above.

3.2 The manufacturer shall exactly conform to the documents approved by NEPSI.

3.3 The nameplate shall include the following:

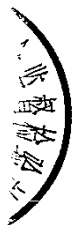
3.3.1 Intrinsically safe parameters or specification.

3.3.2 The permissible range of ambient temperature

3.3.3 Identification of NEPSI.

3.3.4 Certificate No.

3.3.5 Ex Marking



National Supervision and Inspection Centre  
For Explosion Protection and Safety of Instrumentation



June 25, 2007



# 防爆合格证

证号：GYJ071233X

由 美国高准公司  
(地址：Boulder, Co. 80301, USA)

制造的产品：

名 称 变送器

型号规格 3500 系列

防爆标志 [Ex ib] II B/II C

产品标准 —

图样编号 —

经图样及技术文件的审查和样品检验，确认上述产品符合 GB3836.1-2000、GB3836.4-2000 标准，特颁发此证。有效期自颁发日期起伍年内有效。

## 备注

1. 本证书同时适用于由艾默生过程控制有限公司(地址：浦东新金桥路 1277 号)组装生产的相同型号变送器。
2. 防爆合格证号后缀“X”表示使用时有特殊要求，见本合格证附件。
3. 认可产品型号、本安参数和产品使用注意事项见本合格证附件。

站长

国家级仪器仪表防爆安全监督检验站

颁发日期 二〇〇七年六月二十五日



本证书仅对与认可文件和样品一致的产品有效。

地址：上海市漕宝路103号  
邮编：200233

网址：www.nepsi.org.cn  
Email: info@nepsi.org.cn

电话：0086 21 64368180  
传真：0086 21 64844580

# 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

(GYJ071233X)

(Attachment I)

### GYJ071233X防爆合格证附件 I

由美国高准公司或艾默生过程控制有限公司生产的3500系列变送器，经国家级仪器仪表防爆安全监督检验站(NEPSI)检验，符合GB3836.1-2000“爆炸性气体环境用电气设备 第1部分：通用要求”和GB3836.4-2000“爆炸性气体环境用电气设备 第4部分：本质安全型“i””防爆标准规定的要求，产品防爆标志为[Ex ib] II B/ II C，防爆合格证号为GYJ071233X。

产品最大使用环境温度范围介于-20℃~+60℃之间。

本证书认可产品的具体型号如下：

3500 1 2 3 4 5 6 1P 7 8

- 1 代码：代表安装方式，包括R、P或N；
- 2 代码：代表电源类型，包括1或2；
- 3 代码：代表通信界面字符；
- 4 代码：代表附加硬件数字；
- 5 代码：代表传感器界面，包括3、4、5或6；
- 6 代码：代表端子类型，包括A、B、C、D或E；
- 7 代码：代表语言种类；
- 8 代码：代表应用软件字符。

#### 一、产品使用特殊要求

1. 该产品必须安装在防护等级在IP20以上(符合GB4208-1993标准要求)的外壳之中。
2. 本安电路裸露导体必须与外壳的金属部件之间保持大于3mm间距，与非本安电路的裸露导体必须保持大于6mm间距。
3. 对于3500  A1P 系列产品，用于连接外部本安电路接线端子与非本安电路接线端子的布置必须符合GB3836.4-2000第6.3.1条要求。



## 二、产品使用注意事项

1. 该产品必须置于不含爆炸性危险气体的非危险场所使用。
2. 该产品非本安端(端子J3 - 1和J3 - 3)最高电压:  $U_m = 250V$  d.c./a.c.
3. 该产品本安端的本安参数:

3.1 当产品型号为3500□□□□3□1P□□时:

回路类型	组别	最高输出电压 $U_o(V)$	最大输出电流 $I_o(A)$	最大输出功率 $P_o(W)$	最大外部参数	
					$C_o(\mu F)$	$L_o(\mu H)$
驱动线圈回路 端子: J2 - A12 - C12	II B	11.4	1.14	1.2	11.7	109
	II C				1.7	27.4
检测线圈回路 端子: J2-A8/C8 和 J2-A10/C10	II B	15.6	0.01	0.04	3.03	$1.4 \times 10^6$
	II C				0.5	$3.55 \times 10^5$
温度传感器回路 端子: J2-C6/A6/C4	II B	15.6	0.01	0.04	3.03	$1.4 \times 10^6$
	II C				0.5	$3.55 \times 10^5$

3.2 当产品型号为3500□□□□4□1P□□时:

回路类型	组别	最高输出电压 $U_o(V)$	最大输出电流 $I_o(A)$	最大输出功率 $P_o(W)$	最大外部允许参数	
					$C_o(\mu F)$	$L_o(\mu H)$
驱动线圈回路 端子: J2 - A12 - C12	II B	11.4	1.14	1.2	11.7	109
	II C				1.7	27.4
检测线圈回路 端子: J2-A8/C8 和 J2-A10/C10	II B	21.13	0.00845	0.045	1.24	$1.9 \times 10^6$
	II C				0.18	$4.9 \times 10^5$
温度传感器回路 端子: J2-C6/A6/C4	II B	21.13	0.017	0.090	1.24	$4.92 \times 10^5$
	II C				0.18	$1.22 \times 10^5$

3.3 产品型号为3500□□□□5□1P□□和3500□□□□6□1P□□时, 端子J2 - A4/C4和J2 - A6/C6的本安参数为:

组别	最高输出电压 $U_o(V)$	最大输出电流 $I_o(A)$	最大输出功率 $P_o(W)$	最大外部允许参数	
				$C_o(\mu F)$	$L_o(\mu H)$
II B	17.22	0.484	2.05	2.04	607
II C				0.333	151.7

4. 用户不得自行更换该产品的零部件, 应会同产品制造商共同解决运行中出现的故障, 以杜绝损坏现象的发生。



5. 产品的安装、使用和维护应同时遵守产品说明书、GB3836.13 - 1997 “爆炸性气体环境用电气设备 第13部分：爆炸性气体环境用电气设备的检修”、GB3836.15 - 2000 “爆炸性气体环境用电气设备 第15部分：危险场所电气安装（煤矿除外）”、GB3836.16 - 2006 “爆炸性气体环境用电气设备 第16部分：电气装置的检查和维修（煤矿除外）”和GB50257 - 1996 “电气装置安装工程爆炸和火灾危险环境 电气装置施工及验收规范”的有关规定。

### 三、制造厂责任

1. 产品制造厂必须将上述使用注意事项纳入该产品使用说明书；
2. 制造厂必须严格按照NEPSI认可的文件资料生产；
3. 产品铭牌中必须包括下列内容：
  - 3.1 产品的本安参数或说明；
  - 3.2 使用环境温度；
  - 3.3 NEPSI认可标志；
  - 3.4 防爆合格证号；
  - 3.5 防爆标志。

国家级仪器仪表防爆安全监督检验站

二〇〇七年六月二十五日

