EXPLOSION PROTECTION
CERTIFICATE OF CONFORMITY

Cert No. GYJ22.1053X

Manufacturer	**Endress + Hauser Flowtec AG** **(Address: CH-4153, Reinach BL, Switzerland)**
Product	**Coriolis Mass Flowmeter**
Model	**T-mass 6*F, T-mass 6*I**
Ex marking	**See the attachment to this certificate for details**
Product standard	**/**
Drawing number	**319365-0002BGB, 380010-0001BBD, 380012-0001BGF, 380104-0000ZAB, 380105-0000ZAA**

The product was found to comply with the following standard(s):
GB 3836.1-2010,GB 3836.2-2010,GB 3836.3-2010,GB 3836.4-2010,GB 3836.19-2010, GB 3836.20-2010,GB 12476.1-2013,GB 12476.4-2010,GB 12476.5-2013

Valid until: 2027.04.17

Remarks

1.Conditions for safe use are specified in the attachment(s) to this certificate.
2.Symbol "X" placed after the certification number denotes specific conditions of use, which are specified in the attachment(s) to this certificate.
3.Model designation is specified in the attachment(s) to this certificate.
4.Safe parameters specified in the attachment(s) to this certificate.
5.This certificate is also applicable for the product with the same type manufactured by Endress+Hauser Flowtec (China) Co., Ltd. (address: Su Hong Zhong Lu No.465, Suzhou-SIP, China)

Approval

Shanghai Inspection and Testing Institute of Instruments and Automation Systems Co., Ltd.
National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation
Date of issue 2022.04.18

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

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Attachment I to GYJ22.1053X

1. Description

T-mass 6*F, T-mass 6*I Series Coriolis Mass Flowmeter, manufactured by Endress+Hauser Flowtec AG, accords with following standards:

GB3836.1-2010 Explosive atmospheres-Part 1: Equipment-General requirements

GB3836.2-2010 Explosive atmospheres-Part 2: Equipment protection by flameproof enclosure "d"

GB3836.3-2010 Explosive atmospheres-Part 3: Equipment protection by increased safety "e"

GB3836.4-2010 Explosive atmospheres-Part 4: Equipment protection by intrinsic safety "i"

GB3836.19-2010 Explosive atmospheres-Part 19: Fieldbus intrinsically safe concept (FISCO)

GB3836.20-2010 Explosive atmospheres-Part 20: Equipment with equipment protection level (EPL) Ga

GB12476.1-2013 Electrical apparatus for use in the presence of combustible dust- Part 1: General requirements

GB12476.4-2010 Electrical apparatus for use in the presence of combustible dust- Part 4: Protection by intrinsic safety "iD"

GB12476.5-2013 Electrical apparatus for use in the presence of combustible dust- Part 5: Protection by enclosures "tD"

The Ex marking is shown as following section, its certificate number is GYJ22.1053X.

Type approved in this certificate is detailed as below:

T-mass 6 ***a*** F ***cc*** - ***d e f g h i k l m n o p***

T-mass 6 ***a*** I -***cc d e f g h i k l m n o p***

a indicates type of electronic;

cc indicates norminal diameter (type of sensor = F) or
insertion tube length (type of sensor = I);

d indicates material of tube/ sensor;

e indicates process connection;

f indicates seal;

g indicates surface finishing;

h indicates calibration;

i indicates additional test, certificate;

k indicates approval, including K or S;

l indicates housing, A = compact version

1 = compact version, min.Ta=-40℃

G, H, J = remote version

6, 7, 8 = remote version, min.Ta= -40℃;

m indicates cable entry (X = sensor only);

n indicates power supply,display,operation (X = sensor only);

o indicates software (X = sensor only);

p indicates signal outputs, A, B, C, D, E, H, J, K, L, M, N, P, Q, V, W,

0, 2, 3, 4, 5, 6, 7, 8, 9 = Standard signal outputs

F = Ex ia Ⅱ C, PROFIBUS PA

G = Ex ia Ⅱ C, Foundation Fieldbus

R = Ex ia Ⅱ C, HART + current output, active

S = Ex ia Ⅱ C, HART current output active, Frequency output passive

T = Ex ia Ⅱ C, HART current output passive, Frequency output passive

U = Ex ia Ⅱ C, HART + current output, passive

X =sensor only

For the details, see the instruction manual.

2. Special Conditions for Safe Use

The suffix "X" placed after the certificate number indicates that this product is subject to special conditions for safe use, that is:

2.1 The transmitter has to be integrated into the equipotential bonding. Along the intrinsically safe sensor circuits potential equalisation must exist.

2.2 The sensors may be employed only for those media, for which the wetted parts are known to be suitable (for Zone 0).

2.3 For the application of the transmitters in an ambient temperature of less than -20℃ suitable cable and cable entries certified for this condition shall be used. Entry holes which are not needed, shall be closed by stopping plugs separately certified for this purpose.

3. Conditions for Safe Use

3.1 The external earth connection facility shall be connected reliably. For the remote version, potential must be equalized along the intrinsically safe circuits between sensor and transmitter.

3.2 Medium and ambient temperatures:

3.2.1 The relationship between maximum ambient, maximum surface, medium temperatures and temperature class are as follows (for compact versions and sensor remote versions):

Temperature class	Max. medium temperature (℃)			
	T4	T3	T2	T1
Max. surface temperature	135℃	200℃	300℃	450℃
Ta max = 55℃				
T-mass 6*F**-**********	80	80	100	100
Ta max = 60℃				
T-mass 6*F**-**********	80	80	80	80
T-mass 6*I-**********	80	80	130	130

Transmitter in remote version:
Temperature class: T6
Maximum surface temperature:T85℃.

3.2.2 Medium temperature of gasket material

Gasket material	Minimum medium temperature
EPDM	-40℃
Viton,Karlrez,Nitril	-20℃

3.2.3 Ambient temperature range

Compact versions

Type	Ambient temperature range
T-Mass*****-*******A****	-20℃≤Ta≤60℃
T-Mass*****-*******1****	-40℃≤Ta≤60℃

Remote versions,transmitter and sensor

Type	Ambient temperature range
T-Mass*****-*******G/H/J****	-20℃≤Ta≤60℃
T-Mass*****-*******6/7/8****	-40℃≤Ta≤60℃

3.3 The Ex marking of this product is shown as following:

Compact versions

Type	Marking Gas	Marking Dust
T-mass 6*F**-******2)1)***F) T-mass 6*I-********2)1)*** F)	Ex d ia II C T1~T4 Gb Ex d ia II C T1~T4 Ga/Gb	Ex tD A21 IP6X T*℃
T-mass 6*F**-******2)1)*** E) T-mass 6*I-********2)1)*** E)	Ex d ia [ia Ga] II C T1~T4 Gb Ex d ia [ia Ga] II C T1~T4 Ga/Gb	Ex tD [iaD 20] A21 IP6X T*℃
T-mass 6*F**-********3)1)***F) T-mass 6*I-********3)1)***F)	Ex d e ia II C T1~T4 Gb Ex d e ia II C T1~T4 Ga/Gb	Ex tD A21 IP6X T*℃
T-mass 6*F**-********3)1)***E) T-mass 6*I-********3)1)***E)	Ex d e ia [ia Ga] II C T1~T4 Gb Ex d e ia [ia Ga] II C T1~T4 Ga/Gb	Ex tD [iaD 20] A21 IP6X T*℃

1) At this place A or 1 will be inserted

2) At this place K will be inserted

3) At this place S will be inserted

E) At this place F, G, R, S, T or U will be inserted

F) At this place A, B, C, D, E, H, J, K, L, M, N, P, Q, V, W, 0, 2, 3, 4, 5, 6, 7, 8 or 9 will be inserted

Products with last symbol in model =F or G additional marking with:

Fisco Field device

Remote versions transmitter

Type/Order code	Marking Gas	Marking Dust
T-mass 6*F**-******2)1)***E) T-mass 6*I-********2)1)*** E)	Ex d [ia Ga] II C T6 Gb	Ex tD [iaD 20] A21 IP6X T85℃
T-mass 6*F**-******2)1)*** F) T-mass 6*I-********2)1)*** F)	Ex d [ia] II C T6 Gb	Ex tD A21 IP6X T85℃
T-mass 6*F**-******3)1)***E) T-mass 6*I-********3)1)*** E)	Ex d e [ia Ga] II C T6 Gb	Ex tD [iaD 20] A21 IP6X T85℃
T-mass 6*F**-******3)1)*** F) T-mass 6*I-*******3)1)*** F)	Ex d e [ia] II C T6 Gb	Ex tD A21 IP6X T85℃

1) At this place G, H, J, 6, 7 or 8 will be inserted

2) At this place K will be inserted

3) At this place S will be inserted

E) At this place F, G, R, S, T or U will be inserted

F) At this place A, B, C, D, E, H, J, K, L, M, N, P, Q, V, W, 0, 2, 3, 4, 5, 6, 7, 8 or 9 will be inserted

Products with last symbol in model =F or G additional marking with:

Fisco Field device

Sensor

Type/Order code	Marking Gas	Marking Dust
T-mass 6*F**-******2)1)**** T-mass 6*I-********2)1)****	Ex ia II C T1~T4 Gb Ex ia II C T1~T4 Ga/Gb	Ex tD A21 T*℃

1) At this place G, H, J, 6, 7 or 8 will be inserted

2) At this place K or S will be inserted

3.4 Electric data

3.4.1 Power supply (terminal no.1(L/+) and 2(N/-))

Nominal Voltage

AC version AC 85 to 260V

DC/AC version DC 16 to 62V

or AC 20 to 55V

Max. voltage U_m AC 260V

3.4.2 Non-intrinsically safe signal circuits

Type of device	T-mass 6*F**-**********p T-mass 6*I-**********p with p = A, B, C, D, E, H, J, K, L, M, N, P, Q, V, W, 0, 2, 3, 4, 5, 6, 7, 8 or 9			
Safety Parameters	Terminals 20/21	Terminals 22/23	Terminals 24/25	Terminals 26/27
Um	260 V			
Im	500 mA			

3.4.3 Intrinsically safe signal circuits

Safety Parameter	T-mass 6*F**-**********p T-mass 6*I-**********p								
	p = F or G	p = R		p = S		p = T		p = U	
	Terminals	Terminals		Terminals		Terminals		Terminals	
	26/27	24/25	26/27	24/25	26/27	24/25	26/27	24/25	26/27
	passive	active	active	passive	active	passive	passive	passive	passive
Uo	---	21.8 V	21.8 V	---	21.8 V	---	---	---	---
Io	---	90 mA	90 mA	---	90 mA	---	---	---	---
Po	---	491mW	491mW	---	491mW	---	---	---	---
Lo IIC	---	4.1 mH	4.1 mH	---	4.1 mH	---	---	---	---
Co IIC	---	0.16 µF	0.16 µF	---	0.16 µF	---	---	---	---
Lo IIB	---	15 mH	15 mH	---	15 mH	---	---	---	---
Co IIB	---	1.16 µF	1.16 µF	---	1.16 µF	---	---	---	---
Ui	30 V	30 V	30 V	30 V	30 V	30 V	30 V	30 V	30 V
Ii	600 mA	10 mA	10 mA	500 mA	10 mA	500 mA	100 mA	100 mA	100 mA
Pi	8,5 W	300mW	300mW	0.6 W	300mW	0.6 W	1.25 W	1.25 W	1.25 W
Li	≤ 10 µH	0	0	0	0	0	0	0	0
Ci	≤ 5 nF	≤ 6 nF	≤ 6 nF	≤ 6 nF	≤ 6 nF	≤ 6 nF	≤ 6 nF	≤ 6 nF	≤ 6 nF

The communication circuits, option F and G, meet all requirements for a FISCO Field Device (GB3836.19-2010).

3.4.4 Intrinsically safe sensor circuits

Terminals/ Plugs for remote version 41, 42, 43, 44 = sensor circuit

For the connection of the remote sensor using an Endress+Hauser supplied multicore cable with a max. cable length of 100m and the following max values:

Cable inductance ⩽0.9µ H per meter

Cable capacitance ⩽1nF per meter

3.5 For cable entries, appropriate cable glands or blind plugs shall be used which are approved by ExTL in accordance with GB3836.1-2010 and GB3836.2-2010 (terminal compartment in flameproof) or GB3836.1-2010 and GB3836.3-2010 (terminal compartment in increased safety). Otherwise/alternatively Ex e cable glands specified/provided by the manufacturer which are rated at least IP67 can be used (terminal compartment in increased safety only).

3.6 For the transmitter a delay time of 10 minutes after switching off the power before opening the enclosure has to be regarded or the area known to be non hazardous.

3.7 Clean the surface of this product termly when using in combustible dust atmospheres.

3.8 The user shall not change the configuration in order to maintain/ensure the explosion protection performance of this product. Any change may impair safety.

3.9 For installation, use and maintenance of this product, the end user should observe the instruction manual and the following standards:

GB3836.13-2013 "Explosive atmospheres- Part 13:Equipment repair, overhaul and reclamation".

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

GB3836.16-2006 "Electrical apparatus for explosive gas atmospheres- Part 16:Inspection and maintenance of electrical installation (other than mines)".

GB3836.18-2010 "Explosive atmospheres-Part 18: Intrinsically safe system".

GB12476.2-2010 "Electrical apparatus for use in the presence of combustible dust- Part 2: Selection and installation". (Only if installed in dust hazardous areas)

GB50257-2014 "Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering".

GB15577-2018 "Safety regulations for dust explosion prevention and protection". (Only if installed in dust hazardous areas)

4. Manufacturer's Responsibility

4.1 Conditions for safe use and special conditions for safe use, as specified above, should be included in the documentation the user is provided with.

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

Shanghai Inspection and Testing Institute of
Instruments and Automation Systems Co., Ltd.
National Supervision and Inspection Center for
Explosion Protection and Safety of Instrumentation
2022.04.18

防爆合格证

证　号：GYJ22.1053X

制　造　商　恩德斯+豪斯公司
(地址：CH-4153, Reinach BL, Switzerland)

产品名称　质量流量计

型号规格　T-mass 6*F, T-mass 6*I

防爆标志　详见合格证附件

产品标准　/

图样编号　319365-0002BGB, 380010-0001BBD, 380012-0001BGF, 380104-0000ZAB, 380105-0000ZAA

经图样及技术文件的审查和样品检验，确认上述产品符合下列标准：
GB 3836.1-2010,GB 3836.2-2010,GB 3836.3-2010,GB 3836.4-2010,
GB 3836.19-2010,GB3836.20-2010,GB 12476.1-2013,GB 12476.4-2010,
GB 12476.5-2013
特颁发此证。

本证书有效期：2022 年 04 月 18 日至 2027 年 04 月 17 日

备注
1. 安全使用注意事项见本证书附件。
2. 证书编号后缀“X”表明产品具有安全使用特殊条件，内容见本证书附件。
3. 型号规格说明见本证书附件。
4. 电气安全参数见本证书附件。
5. 本证书同时适用于恩德斯豪斯流量仪表技术（中国）有限公司（地址：苏州工业园区苏虹中路 465 号）生产的同型号产品。

批　准

上海仪器仪表自控系统检验测试所有限公司
国家级仪器仪表防爆安全监督检验站

颁发日期二〇二二 年 四 月 十八 日

本证书仅对与认可文件和样品一致的产品有效。

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(GYJ22.1053X) (Attachment Ⅰ)

GYJ22.1053X防爆合格证附件Ⅰ

由恩德斯＋豪斯公司生产的T-mass 6*F, T-mass 6*I系列质量流量计，经检验符合下列标准：

GB3836.1-2010 爆炸性环境 第1部分：设备 通用要求
GB3836.2-2010 爆炸性环境 第2部分：由隔爆外壳“d”保护的设备
GB3836.3-2010 爆炸性环境 第3部分：由增安型“e”保护的设备
GB3836.4-2010 爆炸性环境 第4部分：由本质安全型“i”保护的设备
GB3836.19-2010 爆炸性环境 第19部分：现场总线本质安全概念（FISCO）
GB3836.20-2010 爆炸性环境 第20部分：设备保护级别（EPL）为Ga级的设备
GB12476.1-2013 可燃性粉尘环境用电气设备 第1部分：通用要求
GB12476.4-2010 可燃性粉尘环境用电气设备 第4部分：本质安全型“iD”
GB12476.5-2013 可燃性粉尘环境用电气设备 第5部分：外壳保护型“tD”

产品防爆标志如下，防爆合格证号GYJ22.1053X。

本证书认可的产品型号规格如下：

T-mass 6 ***a*** F ***cc*** - ***d e f g h i k l m n o p***

T-mass 6 ***a*** I - ***cc d e f g h i k l m n o p***

其中：***a***表示电子插件型号；

cc表示测量口径（传感器F）或插入管长度（传感器I）；

d表示测量管材质/传感器；

e表示过程连接；

f表示密封件；

g表示表面处理；

h表示校准；

i表示附加测试，证书；

k表示型号K或S；

l表示外壳，A = 一体型

1 = 一体型，Ta -40℃

G、H、J = 分离型

6、7、8 = 分离型，Ta -40℃；

m表示电缆引入装置（X表示仅传感器）；

n表示电源，显示器，操作按键（X表示仅传感器）；

o表示软件（X表示仅传感器）；

*p*表示输出信号，A、B、C、D、E、H、J、K、L、M、N、P、Q、V、W、
0、2、3、4、5、6、7、8、9 = 标准信号输出
F = Ex ia ⅡC, PROFIBUS PA
G = Ex ia ⅡC, Foundation Fieldbus
R = Ex ia ⅡC, HART current output, 有源
S = Ex ia ⅡC, HART current output, 频率输出，有源
T = Ex ia ⅡC, HART current output, 频率输出，无源
U = Ex ia ⅡC, HART current output, 无源
X =仅传感器

详见产品使用说明书。

一、产品安全使用特殊条件

产品防爆合格证号后缀“X”表示产品有安全使用特殊要求，具体内容如下：

1、质量流量计传感器和转换器的本安电路之间须等电位连接。

2、传感器位于0区使用时，其润湿部件须适用于该测量介质。

3、当环境温度低于-20℃时，须选用相应的连接电缆和经认证的电缆引入装置或堵头。

二、产品使用注意事项

1、产品外壳设有接地端子，用户在安装使用时应可靠接地。

2、产品使用环境温度和介质温度：

2.1 对于一体型质量流量计和分离型传感器，最高环境温度、最高表面温度、最高介质温度和温度组别的关系如下：

温度组别	最高介质温度（℃）			
	T4	T3	T2	T1
最高表面温度	135℃	200℃	300℃	450℃
Ta max = 55℃				
T-mass 6*F**-**********	80	80	100	100
Ta max = 60℃				
T-mass 6*F**-**********	80	80	80	80
T-mass 6*I-**********	80	80	130	130

对于分离型转换器：
温度组别：T6;
最高表面温度：T85℃。

2.2 垫片材料的最低介质温度

垫片材料	最低介质温度
EPDM	-40℃
Viton,Karlrez,Nitril	-20℃

2.3 产品使用环境温度范围

一体型

型号	环境温度范围
T-Mass*****-*******A****	-20℃≤Ta≤60℃
T-Mass*****-*******1****	-40℃≤Ta≤60℃

分离型转换器、传感器

型号	环境温度范围
T-Mass*****-*******G/H/J****	-20℃≤Ta≤60℃
T-Mass*****-*******6/7/8****	-40℃≤Ta≤60℃

3、产品防爆标志如下：

一体型

产品型号	气体环境	粉尘环境
T-mass 6*F**-******2)1)***F) T-mass 6*I-********2)1)*** F)	Ex d ia ⅡC T1~T4 Gb Ex d ia ⅡC T1~T4 Ga/Gb	Ex tD A21 IP6X T*℃
T-mass 6*F**-******2)1)*** E) T-mass 6*I-********2)1)*** E)	Ex d ia [ia Ga] ⅡC T1~T4 Gb Ex d ia [ia Ga] ⅡC T1~T4 Ga/Gb	Ex tD [iaD 20] A21 IP6X T*℃
T-mass 6*F**-********3)1)***F) T-mass 6*I-********3)1)***F)	Ex d e ia ⅡC T1~T4 Gb Ex d e ia ⅡC T1~T4 Ga/Gb	Ex tD A21 IP6X T*℃
T-mass 6*F**-********3)1)***E) T-mass 6*I-********3)1)***E)	Ex d e ia [ia Ga] ⅡC T1~T4 Gb Ex d e ia [ia Ga] ⅡC T1~T4 Ga/Gb	Ex tD [iaD 20] A21 IP6X T*℃

1)可以是A或1；

2)可以是K；

3)可以是S；

E)可以是F、G、R、S、T或U；

F)可以是A、B、C、D、E、H、J、K、L、M、N、P、Q、V、W、0、2、3、4、5、6、7、8或9。

当产品最后一位代码为F或G时，表示产品为FISCO总线设备。

分离型转换器

产品型号	气体环境	粉尘环境
T-mass 6*F**-******2)1)***E) T-mass 6*I-********2)1)*** E)	Ex d [ia Ga] ⅡC T6 Gb	Ex tD [iaD 20] A21 IP6X T85℃
T-mass 6*F**-******2)1)*** F) T-mass 6*I-********2)1)*** F)	Ex d [ia] ⅡC T6 Gb	Ex tD A21 IP6X T85℃
T-mass 6*F**-******3)1)***E) T-mass 6*I-********3)1)*** E)	Ex d e [ia Ga] ⅡC T6 Gb	Ex tD [iaD 20] A21 IP6X T85℃
T-mass 6*F**-******3)1)*** F) T-mass 6*I-*******3)1)*** F)	Ex d e [ia] ⅡC T6 Gb	Ex tD A21 IP6X T85℃

1)可以是G、H、J、6、7或8；

2)可以是K；

3)可以是S；

E)可以是F、G、R、S、T或U；

F)可以是A、B、C、D、E、H、J、K、L、M、N、P、Q、V、W、0、2、3、4、5、6、7、8或9。

当产品最后一位代码为F或G时，表示产品为FISCO总线设备。

分离型传感器

产品型号	气体环境	粉尘环境
T-mass 6*F**-******2)1)**** T-mass 6*I-********2)1)****	Ex ia ⅡC T1~T4 Gb Ex ia ⅡC T1~T4 Ga/Gb	Ex tD A21 T*℃

1)可以是G、H、J、6、7或8；

2)可以是K或S；

4、产品的电气参数如下：

4.1 供电电压（端子1(L/+)和2(N/-)）

U_n = AC 85～260V（交流型）或

= DC 16～62V或AC 20～55V（直流/交流型）

U_m = AC 260V

4.2 非本安信号电路

产品型号	T-mass 6*F**-**********p T-mass 6*I-**********p p = A, B, C, D, E, H, J, K, L, M, N, P, Q, V, W, 0, 2, 3, 4, 5, 6, 7, 8 or 9			
电气参数	端子 20/21	端子 22/23	端子 24/25	端子 26/27
Um	260 V			
Im	500 mA			

4.3 本安信号电路

安全参数	T-mass 6*F**-**********p T-mass 6*I-**********p								
	p=ForG	p = R		p = S		p = T		p = U	
	端子	端子		端子		端子		端子	
	26/27	24/25	26/27	24/25	26/27	24/25	26/27	24/25	26/27
	无源	有源	有源	无源	有源	无源	无源	无源	无源
Uo	---	21.8 V	21.8 V	---	21.8 V	---	---	---	---
Io	---	90 mA	90 mA	---	90 mA	---	---	---	---
Po	---	491mW	491mW	---	491mW	---	---	---	---
Lo IIC	---	4.1 mH	4.1 mH	---	4.1 mH	---	---	---	---
Co IIC	---	0.16μF	0.16μF	---	0.16μF	---	---	---	---
Lo IIB	---	15 mH	15 mH	---	15 mH	---	---	---	---
Co IIB	---	1.16μF	1.16μF	---	1.16μF	---	---	---	---
Ui	30 V	30 V	30 V	30 V	30 V	30 V	30 V	30 V	30 V
Ii	600 mA	10 mA	10 mA	500 mA	10 mA	500 mA	100 mA	100 mA	100 mA
Pi	8.5 W	300mW	300mW	0.6 W	300mW	0.6 W	1.25 W	1.25 W	1.25 W
Li	≤10μH	0	0	0	0	0	0	0	0
Ci	≤ 5 nF	≤ 6 nF	≤ 6 nF	≤ 6 nF	≤ 6 nF	≤ 6 nF	≤ 6 nF	≤ 6 nF	≤ 6 nF

p = F或G时，产品满足FISCO总线设备的要求。（GB3836.19-2010）

4.4 本安传感器电路

传感器电路端子为41、42、43和44。

分离型传感器与转换器之间的连接电缆为E+H公司预制电缆，其最大允许长度为100m；且分布参数为L_c≤0.9μH/米和C_c≤1nF/米。

5、产品的电缆引入口须配用经防爆检验认可的、符合GB3836.1-2010和GB3836.2-2010（隔爆型接线腔）或GB3836.1-2010和GB3836.3-2010（增安型接线腔）标准且满足相应防爆等级的电缆引入装置或堵头；当接线腔为增安型时，可使用厂家指定的Ex e电缆引入装置，安装后外壳防护等级不得低于IP67。

6、产品的转换器部分在现场维护使用时应遵循“断电源后延时10分钟开盖”的原则。

7、产品在粉尘环境使用维护时，应定期采取清洁措施，以防止表面积聚粉尘。

8、用户不得自行随意更换该产品的电气零部件，应会同产品制造商共同解决运行中出现的故障，以免影响防爆性能和损坏现象的发生。

9、产品的安装、使用和维护应同时遵守产品使用说明书、GB 3836.13-2013“爆炸性环境 第13部分：设备的修理、检修、修复和改造”、GB/T 3836.15-2017“爆炸性环境 第15部分：电气装置的设计、选型和安装”、GB/T 3836.16-2017“爆炸性环境 第16部分：电气装置的检查与维护”、GB/T 3836.18-2017“爆炸性环境 第18部分：本质安全电气系统”、GB12476.2-2010“可燃性粉尘环境用电气设备 第2部分：选型和安装”的有关规定、GB 50257-2014“电气设备安装工程爆炸和火灾危险环境电气装置施工及验收规范”及GB 15577-2018“粉尘防爆安全规程”的有关规定。

三、制造厂责任

1、产品制造厂必须将上述产品安全使用特殊条件和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。

上海仪器仪表自控系统检验测试所有限公司

国家级仪器仪表防爆安全监督检验站

二〇二二年四月十八日