



1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **CSANe 22ATEX1004** Issue: **0**

4 Equipment: **MPM426W Series Level Transmitter**

5 Applicant: **MICRO SENSOR CO., LTD.**

6 Address: **No.18 Yingda Road  
Weibin District  
Baoji City  
Shaanxi Province  
China**

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-11:2012

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 1G

Ex ia IIC T4 Ga

Ambient Range :

MPM426WPC: -30°C to +80°C (PFA Cable),

MPM426WPF: -20°C to +80°C (PUR Cable), -10°C to +70°C (PVC/PE Cable)

Signed: Michelle Halliwell

Title: Director of Operations



Project Number 80106304

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**SCHEDULE**

**EU-TYPE EXAMINATION CERTIFICATE**

**CSANe 22ATEX1004  
Issue 0**

**13 DESCRIPTION OF EQUIPMENT**

MPM426W Series Level Transmitter is a stationary intrinsically safe apparatus used for level monitoring in hazardous area. The housing of apparatus is constructed from stainless steel with an end cap made of stainless steel or antistatic plastic and it houses printed circuit boards and a piezo-resistive sensor inside, which are completely encapsulated. The apparatus supports multiple standard outputs and cable options of multiple materials for a wide range of operation temperature.

The apparatus provides five types of circuits and the output signal corresponding circuit are defined by the model configuration code as follows:

MPM426W	a	b	c	d	e	f	g
	Application	Cable	Process Connection	Measured Range	Pressure Type	Accuracy	Output Signal

The following configurator options are relevant to the IS certifications:

Configuration code 'a' represents the application of the equipment.

Configurator code	Option	Description
a - Application	PF	Fuels
	PC	Chemicals

Configuration code 'b' represents the type of cable to be used.

Configurator code	Option	Description	
b - Cable	P1	PE	For MPM426WPF only
	P2	PUR	
	P3	PVC	
	P4	PFA	For MPM426WPC only

Configuration code 'g' represents the output signal option.

Configurator code	Option	Description	Corresponding circuit
g – Output Signal	E	4-20mA	Current Output Circuit
	F	1-5V DC	Voltage Output Circuit (28VDC Power Supply)
	J	0-5V DC	
	V	0-10V DC	
	K2	0.5-4.5VDC (@ 12V~28VDC)	
	K3	0.5-4.5VDC (@ 5V~10VDC)	Voltage Output Circuit (10VDC Power Supply)
	W3	0.5-2.5VDC (@ 5V~10VDC)	
	W2	0.5-2.5VDC (@ 5V±0.1VDC)	Voltage Output Circuit (5VDC Power Supply)
	W1	0.5-2.5VDC (@ 3.3V±0.1VDC)	
	K1	0.5-4.5VDC (@ 5V±0.1VDC)	
R8	RS485, MODBUS_RTU protocol, with temperature signal	Digital Output Circuit (RS485)	

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Configurator code	Option	Description	Corresponding circuit
	R4	RS485, MODBUS_ASC II (MS custom protocol), with temperature signal	

The entity parameters for the different circuits are as follows:

Current Output Circuit (Red, Black Wires):	
Entity Parameters	Ui: 28VDC, Ii: 100mA, Pi: 0.7W, Ci: 0µF, Li: 1.44µH

Voltage Output Circuit (5VDC Power Supply):		
Power Supply (Red, Black Wires)	Voltage Output Signal (White, Black Wires)	
Input Parameters	Input Parameters	Output Parameters
Ui: 6VDC, Ii: 100mA, Pi: 0.2W, Ci: 0.318µF, Li: 1.44µH	Ui: 5.88VDC, Ii: 30mA, Pi: 0.2W, Ci: 0µF, Li: 1.44µH	Uo: 6VDC, Io: 67mA, Po: 0.1W, Co: 40µF, Lo: 7.92mH

Voltage Output Circuit (10VDC Power Supply):		
Power Supply (Red, Black Wires)	Voltage Output Signal (White, Black Wires)	
Input Parameters	Input Parameters	Output Parameters
Ui: 10VDC, Ii: 200mA, Pi: 0.56W, Ci: 0.428µF, Li: 1.44µH	Ui: 5VDC, Ii: 10mA, Pi: 0.04W, Ci: 0µF, Li: 1.44µH	Uo: 10VDC, Io: 212mA, Po: 0.53W, Co: 3µF, Lo: 0.79mH

Voltage Output Circuit (28VDC Power Supply):		
Power Supply (Red, Black Wires)	Voltage Output Signal (White, Black Wires)	
Input Parameters	Input Parameters	Output Parameters
Ui: 28VDC, Ii: 250mA, Pi: 0.9W, Ci: 66nF, Li: 1.44µH	Ui: 14VDC, Ii: 12mA, Pi: 30mW, Ci: 0nF, Li: 1.44µH	Uo: 28VDC, Io: 20mA, Po: 0.14W, Co: 83nF, Lo: 88mH

Digital Output Circuit (RS485):		
Power Supply (Red, Black wires)	RS485 (White, Yellow/Green wires)	
Input Parameters	Input Parameters	Output Parameters
Ui: 25.4VDC, Ii: 90mA, Pi: 0.56W, Ci: 13.2nF, Li: 1.44µH	Ui: 3.7VDC, Ii: 93mA, Pi: 85mW, Ci: 0nF, Li: 0µH	Uo: 6.51VDC, Io: 75mA, Po: 122mW, Co: 22µF, Lo: 6.32mH

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## SCHEDULE

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#### 14 DESCRIPTIVE DOCUMENTS

##### 14.1 Drawings

Refer to Certificate Annexe.

##### 14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	15 June 2022	R80106305A	The release of the prime certificate.

#### 15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

None

#### 16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

#### 17 CONDITIONS OF MANUFACTURE

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of CSA Group Netherlands B.V. certificates.

17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.

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# Certificate Annexe



Certificate Number: CSANe 22ATEX1004  
Equipment: MPM426W Series Level Transmitter  
Applicant: MICRO SENSOR CO., LTD.

## Issue 0

Drawing	Sheets	Rev.	Date (Stamp)	Title
MS2.580.440	1 to 2	1.0	31 May 22	MPM426WPF Level Transmitter Assembly Drawing
MS2.580.441	1 to 2	1.0	31 May 22	MPM426WPC Level Transmitter Assembly Drawing
MS8.807.419	1 of 1	1.0	31 May 22	Nameplate
MS2.580.448	1 of 1	1.0	31 May 22	Potting structure drawing
MS2.803.274DL	1 of 1	1.0	31 May 22	Current Output Circuit Schematic
MS2.803.274	1 of 1	1.0	31 May 22	Current Output Circuit PCBA
MS7.820.438	1 of 1	1.0	31 May 22	Current Output Circuit PCB
MS2.803.274W	1 to 2	1.0	31 May 22	Current Output Circuit BOM
MS2.803.277DL	1 of 1	1.0	31 May 22	Digital Output Circuit (RS485) Schematic
MS2.803.277	1 of 1	1.0	31 May 22	Digital Output Circuit (RS485) PCBA
MS7.820.441	1 of 1	1.0	31 May 22	Digital Output Circuit (RS485) PCB
MS2.803.265	1 of 1	1.0	31 May 22	Digital Temperature Integrated PCBA
MS7.820.430	1 of 1	1.0	31 May 22	Digital Temperature Integrated PCB
MS2.803.277W	1 to 2	1.0	31 May 22	Digital Output Circuit (RS485) BOM
MS2.803.275DL	1 of 1	1.0	31 May 22	Voltage Output Circuit Schematic (5VDC Power Supply)
MS2.803.275	1 of 1	1.0	31 May 22	Voltage Output Circuit PCBA (5VDC Power Supply)
MS7.820.439	1 of 1	1.0	31 May 22	Voltage Output Circuit PCB (5VDC Power Supply)
MS2.803.275W	1 of 1	1.0	31 May 22	Voltage Output Circuit BOM (5VDC Power Supply)
MS2.803.298DL	1 of 1	1.0	31 May 22	Voltage Output Circuit Schematic (10VDC Power Supply)
MS2.803.298	1 of 1	1.0	31 May 22	Voltage Output Circuit PCBA (10VDC Power Supply)
MS7.820.466	1 of 1	1.0	31 May 22	Voltage Output Circuit PCB (10VDC Power Supply)
MS2.803.298W	1 to 2	1.0	31 May 22	Voltage Output Circuit BOM (10VDC Power Supply)
MS2.803.276DL	1 of 1	1.0	31 May 22	Voltage Output Circuit Schematic (28VDC Power Supply)
MS2.803.276	1 of 1	1.0	31 May 22	Voltage Output Circuit PCBA (28VDC Power Supply)
MS7.820.440	1 of 1	1.0	31 May 22	Voltage Output Circuit PCB (28VDC Power Supply)
MS2.803.276W	1 to 2	1.0	31 May 22	Voltage Output Circuit BOM (28VDC Power Supply)

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